COUNTY OF ROANOKE, VIRGINIA
INTERIM AGREEMENT BETWEEN OWNER AND CONTRACTOR
REGARDING PRE-CONSTRUCTION SERVICES FOR THE BONSACK FIRE STATION

THIS INTERIM AGREEMENT (the "Contract") is dated and effective as of this _____ day of _____ 2023 (the "Effective Date"), by and between County of Roanoke, Virginia, hereinafter referred to as the "County" or "Owner," and G&H Contracting, Inc., hereinafter referred to as the "Contractor."

RECITALS

A. This Contract is entered into pursuant to Virginia's Public Private Education Facilities and Infrastructure Act of 2002 ("PPEA" or "the Act"), as set forth in Chapter 22.1, Title 56 of the Code of Virginia, 1950, as amended, and the County's PPEA guidelines (the "Guidelines") which have been adopted pursuant to the Act.

B. The County received solicited proposals under the PPEA and the Guidelines, including a proposal from the Contractor, for the design and construction of a new Bonsack Fire Station.

C. After reviewing the proposals, the County selected the Contractor for **pre-construction design services,** which services are the subject of this Contract.

D. It is anticipated that the Parties will enter into a subsequent agreement for construction services.

E. The legal address for the Owner and for the Contractor and the addresses for delivery of Notices and other project documents are as follows:

Owner:	County of Roanoke, Virginia
Attn:	Doug Blount, Assistant County Administrator
Address:	5204 Bernard Drive, Roanoke, VA 24018
Telephone:	(540) 777-6321
Email:	dblount@roanokecountyva.gov

Contractor:	G&H Contracting, Inc.
Attn:	Troy Henderson, Vice President
Address:	1383 Southside Drive, Salem, VA 24153
Telephone:	(540) 387-5059
Email:	thenderson@ghcontracting.com

Contractor's Virginia License#: 2705023767A FEIN_54-1504314

F. The Project is identified as and is entitled: Pre-construction Services for the

Bonsack Fire Station

General Project Description - Design of an approximately 12,100 sf. fire station building located on property owned by the County of Roanoke containing 2.2459 acres, located at 1465 Mexico Way, N.E., Roanoke City, Virginia (Tax Map No. 7110128).

G. The Virginia licensed Architect/Engineer who has been employed by the Contractor to assist in the pre-construction services is identified as:

Architect/Engineer:	Hughes Associates Architects & Engineers
Attn:	Mike Woolwine
Architect's Address:	402 Elm Avenue Roanoke, VA 24012
Telephone:	(540) 342-4002
Email:	mwoolwine@hughesae.com

H. The Project Title indicated above is required to be shown for identification purposes on all project-related material and documents including, but not limited to, Notices, Change Orders, Submittals, Requests for Information, Requests for Quotes, Field Orders, minutes of meetings, correspondence, Schedule of Values and Certificate for Payment, test reports, and related material.

I. Unless otherwise stated, capitalized terms in this Contract shall have the meaning given them in the General Conditions of the PPEA Contract set forth in Exhibit 6 (the "General Conditions").

NOW, THEREFORE, for and in consideration of the premises and mutual covenants hereinafter contained, and subject to the conditions herein set forth, the parties hereby agree as follows:

1. The foregoing recitals are incorporated herein by reference.

2. **STATEMENT OF WORK:** The Contractor agrees to furnish the pre-construction services required for the construction of the Bonsack Fire Station for a subsequently agreed-upon Guaranteed Maximum Price (which will be set forth in a future agreement); the scope such pre-construction services is further set forth in Exhibit 7. The pre-services provided by the Contractor include, but are not limited to, the development of Plans for the construction of the Bonsack Fire Station, cost estimating, value engineering, scheduling, construction phasing, constructability review, confirming the Owner's program, schematic design, design development, development of construction documents, holding design review meetings with the Owner, receiving input from subcontractors as to building systems, means and methods of construction, site plan review and approval, and project review meetings with the Owner and regulatory review agencies.

3. **CONTRACT DOCUMENTS:** This Contract shall consist of the following attached as Appendix A and are incorporated by reference:

Exhibit 1 RFP 2023-020 Conceptual Phase PPEA, dated August 1, 2022

Exhibit 2 Conceptual Phase Proposal, dated September 15, 2022

Exhibit 3 RFP 2023-020 Detailed Phase PPEA, dated October 12, 2022

Exhibit 4 Detailed Phase Proposal, dated November 28, 2022

Exhibit 5 General Conditions of the PPEA Contract

Exhibit 6 GMP Detailed Pricing (Revised 1.11.2023, and updated 2.10.23). *The Parties acknowledge, however that the pricing set forth in this exhibit will guide the development of the GMP which will be finalized and agreed upon in a future agreement.*

Exhibit 7 Scope of Pre-Construction Services and Corresponding Schedule of Values

THE GENERAL CONDITIONS OF THIS INTERIM AGREEMENT SHALL, IN ALL CASES, PREVAIL OVER ANY AND ALL INCONSISTENT TERMS AND CONDITIONS OF VOLUMES 1 and 2 OF THE CONTRACTOR'S PROPOSAL DATED SEPTEMBER 15, 2022 AND AS MODIFIED ON NOVEMBER 28, 2022, NOTWITHSTANDING THEIR INCORPORATION BY REFERENCE HEREIN-ABOVE. ANY AMBIGUITIES BETWEEN SUCH INCORPORATED DOCUMENTS AND THIS INTERIM AGREEMENT SHALL BE RESOLVED BY REFERENCE TO AND IN ACCORDANCE WITH THIS INTERIM AGREEMENT.

4. TIME FOR COMPLETION: Design work and preconstruction coordination and permitting will be completed in accordance with the project schedule (Exhibit 8).

5. COMPENSATION TO BE PAID TO THE CONTRACTOR: I The County shall pay to the Contractor the total amount of three hundred and sixty-seven thousand, nine-hundred and fifty dollars ($367,950.00) for the Contractor's performance of the pre-construction services, as detailed on Exhibit 7. These services include, but are not limited to:

(a) Schematic Design (SD)
(b) Design Development (DD)
(c) Construction Documents (CD)
(d) Amended Schedule of Value at each above Phase
(e) Amended Project Schedule, if needed

Contractor will submit bills to Owner on a monthly basis for the services completed. Monthly bills shall be calculated on a percentage basis, based upon the percentage of the phase(s) completed and the value assigned to each phase, as set forth in Exhibit 7.

As noted above, at the completion of this Interim Agreement, the Parties intend to enter into a Comprehensive Agreement for the performance of all construction work in accordance with the Contract Documents for a guaranteed maximum contract price.

6. RECORDS MAINTENANCE: The Contractor and its subcontractors shall maintain all books, documents, papers, accounting records, and any other evidence, showing information of actual time devoted to and supporting the costs incurred. Such information shall be made available at their respective offices during the normal business hours during the Contract period and for a period of three (3) years from the date of final payment from the Owner to the Contractor, for audit and inspection. Copies of such information shall be furnished to the Owner upon request.

7. AUDIT AND INSPECTION OF RECORDS: The Contractor and its subcontractors shall permit the authorized representatives of the Owner to inspect and audit all data and records of the Contractor in its subcontractors, relating to the performance of this Contract.

8. CONTRACTUAL CLAIMS: Any contractual claims shall be submitted in accordance with the contractual dispute procedures set forth in Section 47 of the General Conditions.

9. FAIR EMPLOYMENT CONTRACTING ACT: The Contractor, its agents, employees, assigns or successors, and any persons, firm, or agency of whatever nature with whom it may contract or make an agreement, shall comply with the provisions of the Virginia Fair Employment Contracting Act (Sec. 2.1-374 through Sec. 2.1-376 of the Code of Virginia, 1950 as amended), the terms of which are incorporated herein by reference.

10. NON-WAIVER: The failure of the Owner at any time to insist upon a strict performance of any of the terms, conditions, and covenants herein shall not be deemed a waiver of any subsequent breach or default in the terms, conditions, and covenants herein contained.

11. TERMINATION OF AGREEMENT:

(a) The Owner may terminate this Contract at any time for cause or convenience provided that it gives written notice of sixty (60) days to Contractor of such termination, which shall specify the effective date of such notice. In the event of such termination, Contactor shall be compensated for allowable costs through the date of written notification from the Owner to terminate.

(b) The Contractor may at any time, by giving sixty (60) days written notice specifying the effective date, terminate this Contract for cause. Cause may include, but shall not be limited to, failure by the Owner to provide payment in a timely and proper manner.

IN WITNESS WHEREOF, the parties hereto, on the day and year written below, have executed this agreement in three (3) counterparts, each of which shall, without proof or accountancy for the other counterparts, be deemed an original thereof.

CONTRACTOR:	**OWNER:** COUNTY OF ROANOKE, VIRGINIA
By:	By:
Date:	Date:
Name:	Name:
Title:	Title:
Signature:	Signature:
Phone:	Phone:
Email:	Email:

Approved as to form:

_____
County Attorney

ROANOKE COUNTY

FINANCE & MANAGEMENT SERVICES DEPARTMENT

PURCHASING DIVISION

REQUEST FOR PROPOSAL

Conceptual Phase PPEA Proposals

RFP # 2023-020

SOLICITED PPEA PROPOSALS FOR CONSTRUCTION OF BONSACK FIRE STATION

for

County of Roanoke, Virginia

OPENING DATE: September 15, 2022

OPENING TIME: 2:00 P.M.

The Request for Proposal and related documents may be obtained during normal business hours from the Purchasing Division, at the Roanoke County Administration Building, 5204 Bernard Drive, Suite 300F, Roanoke, VA 24018. This document may be viewed and/or downloaded from the County of Roanoke Purchasing Division's website at https://www.roanokecountyva.gov/bids.aspx. If you have any problems accessing the documents, you may contact Purchasing at (540) 772-2061.

A non-mandatory pre-proposal conference will be held at **2:00 P.M. on August 15, 2022** in the 4th Floor Training Center - Room 438 at the Roanoke County Administration Building 5204 Bernard Drive SW Roanoke VA 24018. **Attendance at the meeting is not mandatory, but is highly recommended.**

THIS PUBLIC BODY DOES NOT DISCRIMINATE
AGAINST FAITH-BASED ORGANIZATIONS

DATE of RFP: Monday August 1, 2022

COUNTY OF ROANOKE

REQUEST FOR PROPOSALS (RFP 2023-020)

For

SOLICITED PPEA PROPOSALS FOR CONSTRUCTION OF BONSACK FIRE STATION

1. GENERAL INFORMATION

1.1. The County of Roanoke ("Owner" or "County") is soliciting Conceptual Phase PPEA Proposals that follow the Public-Private Education Facilities and Infrastructure Act of 2002 (PPEA) Guidelines adopted by the County Board of Supervisors on May 13, 2003, and last amended and re-adopted on January 12, 2021. This solicitation is for interested teams that have experience in the design and construction of fire stations and/or similar public safety facilities. From the responses received, the Owner intends to select a qualified Proposer to provide turn-key design and construction services for the Construction of the Bonsack Fire Station. The RFP and related documents may be obtained during normal business hours from the Purchasing Division, (540) 772.2020. This document may be viewed and/or downloaded from the County of Roanoke Purchasing Division's Current Bid Opportunities website at https://www.roanokecountyva.gov/bids.aspx. If you have any problems accessing the documents, you may contact Purchasing at (540) 772.2020 or hhonaker@roanokecountyva.gov.

1.2. Background Information: The County of Roanoke is seeking a new Fire Station within the Bonsack Community to sustain and enhance emergency response services within this area of Roanoke County. Currently, this area is served by the Botetourt County Read Mountain Fire and Rescue Station, located at 43 Eastpark Drive, Roanoke, VA. The Read Mountain station has served Roanoke County and Botetourt County for the past 30 years through a joint ownership agreement between Roanoke County and Botetourt County. As of May 2020, this agreement expired, reverting sole ownership of property, building, and equipment to Botetourt County. The new fire station property, previously owned by Parkway Wesleyan Church, Inc., was approved for rezoning by Roanoke City Council on April 18, 2022. The new parcel was subdivided (Exhibit C) and purchased by the County in July 2022.

Unrestricted cash was approved in FY 2022 for land acquisition and initial architectural and engineering work. The Board of Supervisors approved bond funding for the new fire station for FY 2023.

1.3. Project Description: The new fire station will be a one-story construction with approximately 12,000 s.f. of floor space and identified as Public Service Center #12 with building-mounted signage conforming to the City of Roanoke Zoning Ordinance. The floor plan will be segregated into different uses, including a 3-bay apparatus area, administration/operations, kitchen, dining, fitness, housing, locker room, showers/laundry area, etc. The building must accommodate current and projected apparatus and staff requirements. The apparatus bays accommodate multiple vehicles, including the largest vehicle in the fleet, Tower 9. A Preliminary Space Program is provided as Exhibit G and shall be confirmed with the County by the Proposer before producing a geometric configuration of the space layout.

The 2.2469-acre site offers the ability for the improvements shown in the Development

Plan provided as Exhibit A and the proposed building elevation provided as Exhibit B, which improvements shall be constructed in substantial conformance, subject to any modification required during the comprehensive development plan review process. The site is located on the public right of way of Mexico Way, shown as Exhibit C, and has an access point to Orange Avenue with an existing traffic signal. Site access utilizes expansive concrete entrances, with on-site parking designed to accommodate a few guests/visitors, and is located to the side of the building to allow the building to be closer to the street. The remaining proposed parking spaces are located behind the building to accommodate the expected number of employees during the transitional time when staff from two overlapping shifts may be on-site.

A generator will support the building's functions in a power outage and a fueling area for Fire/EMS/Police vehicles to utilize on-site for ease of access and to remain in active service.

ECS Mid-Atlantic, LLC performed a Phase 1 Environmental Site Assessment, and subsurface exploration, laboratory testing, and geotechnical engineering analysis and are provided as Exhibit D and Exhibit E, respectively.

Balzer & Associates performed an Existing Conditions Topographic Survey and is provided as Exhibit F.

Will Serve letters were requested from local utilities, and a Stormwater Summary was developed by Balzer & Associates. These documents are provided as Exhibit H.

Site work will include the connection of water, sewer, power, stormwater management, required off-site improvements, and other utilities as necessary and installation of concrete driveways and sidewalks to provide access. The Proposer shall establish the construction schedule.

1.4. Proposals, to be considered and evaluated, must be sealed and received on or before 2:00 p.m. on September 15, 2022 in the Purchasing Division, County of Roanoke, 5204 Bernard Drive SW, Suite 300- F Roanoke VA 24018. Proposals appropriately received will be opened at this time. **Proposals received after 2:00 p.m. will not be accepted or considered.** The time of receipt shall be determined by the time clock stamp in the Purchasing Office, or if it is not working, such time shall be determined by the Purchasing official who is to open the proposals. Faxed or e-mailed proposals are not acceptable**.**

1.5. Inquiries regarding this RFP should be directed to Heath Honaker, County Purchasing Director, at (540) 283-8146 or via email at hhonaker@roanokecountyva.gov. Inquiries for information regarding procurement procedures and/or proposal submission shall be directed to the Purchasing Division. All questions must be submitted before 5:00 p.m. on September 7, 2022 If necessary, an addendum will be issued and posted to the County website on the Current Bids/RFP Requests tab at https://www.roanokecountyva.gov/bids.aspx.

1.6. Any interpretation, correction, or change of the RFP will be made by an addendum. The County Purchasing Division or its designee will issue Addenda that will be posted to the County website on the Current Bids Opportunities tab at https://www.roanokecountyva.gov/bids.aspx.

Interpretations, corrections or changes of this RFP made in any other manner will not

be binding and Offerors must not rely upon such interpretations, corrections, or changes.

Vendors may visit http://roanokecountyva.gov/list.aspx to sign up to receive emails or text message notices about bids, proposals, addendums, bid tabulation and awards. Vendors can sign up to receive notification in selected commodity/service categories. It is the vendor's responsibility to keep information current in the system in order to receive the notifications. The sign up only requires an email address and/or a cell phone number for receiving text messages (if your phone is capable) and your choice of categories. **However, each Offeror is solely responsible for ensuring that such Offeror has the current, complete version of the RFP documents, including any addenda, before submitting a proposal. The County is not responsible for any RFP obtained from any source other than the County.**

Although **'Notify Me'** will be the only way to receive automatic notification, all BIDS/RFP Information will continue to be posted on our website, and can be picked up at the Purchasing Division, 5204 Bernard Drive, Suite 300F, Roanoke, VA 24018. Phone # (540) 772.2020.

The County is not responsible for any RFP obtained from any source other than the County. Contact Heath Honaker by phone at 540-283-8146, or by email at hhonaker@roanokecountyva.gov.

1.7. The County reserves the right to reject any or all proposals, waive any informality or irregularity in any proposal received, and to be the sole judge of the merits of the respective proposals received.

1.8. The design and construction services will be performed as a single agreement with one entity. Services will include all necessary activities to design and construct a turn-key project including but not limited to: project planning, permits, fees, inspections, architecture, engineering, technology, security systems and video surveillance, alerting system, signal preemption system, and construction services to provide complete, usable, and fully operational facilities.

1.9. The successful Proposer will be selected utilizing a two-part process consisting of an initial Conceptual Phase proposal and a supplemental Detailed Phase proposal.

1.9.1. A non-mandatory pre-proposal conference will be held at **2:00 P.M. on August 15, 2022** in the 4th Floor Training Center - Room 438 at the Roanoke County Administration Building 5204 Bernard Drive SW Roanoke VA 24018. **Attendance at the meeting is not mandatory, but is highly recommended.** During the pre-proposal conference, interested proposers will meet with the County's team, which will include the Assistant County Administrator, Capital Projects Administrator, Fire Chief, and Purchasing Director to discuss the Project and staff expectations. Additional information about the County's vision for the Project will be shared during the meeting.

1.9.2. The Conceptual Phase sealed proposals will be received on or before **2:00 P.M., September 15, 2022** for furnishing the services and/or items described herein. The time of receipt shall be determined by the time clock stamp in the Purchasing office.

If proposals are hand delivered or mailed, send directly to the Purchasing

Division at the address listed above. If the Roanoke County Administration Building is closed for business at the time scheduled for the proposal opening, the sealed proposal will be accepted and opened on the next business day of the County, at the originally scheduled hour.

THIS PUBLIC BODY DOES NOT DISCRIMINATE AGAINST FAITH-BASED ORGANIZATIONS.

1.9.3. After receipt of the Conceptual Phase proposals, a shortlist will be established using the County's Evaluation Criteria and communicated via the County purchasing website. Proposers may be requested to present their Conceptual Phase proposals to the Board of Supervisors. Shortlisted proposers will be invited to submit Detailed Phase proposals.

1.9.4. The selection of the Proposer will be based upon those responsive and responsible proposals during the Conceptual Phase and Detailed Phase of the procurement process. Proposals received will be evaluated and measured by the County's Evaluation Criteria. The County intends to make a best-value selection and enter into an Interim and/or Comprehensive Agreement. The Owner anticipates entering into this agreement with the selected Proposer in December 2022. It shall be noted that time and dates written within this RFP are tentative and can be changed or altered depending on the progress of this RFP and scheduling of the parties involved in the procurement process.

1.10. The Proposer assumes design and construction risk and has direct authority over the subconsultants and subcontractors and will be responsible for construction means and methods.

2. ANTICIPATED SCOPE OF WORK

2.1. After being selected, the Proposer will execute an Interim and/or Comprehensive Agreement with the County to provide design and construction services for the Project including, but not limited to:

2.1.1. Project Management and Administration through Project leadership and overall team coordination.

2.1.2. Interdisciplinary Coordination.

2.1.3. Codes and Standard review and compliance to secure final approval of site plans and building construction documents with Roanoke City.

2.1.4. Cost Savings suggestions and Best Value recommendations.

2.1.5. Project planning and scheduling, maintaining project schedules, and attending weekly progress meetings.

2.1.6. Cash Flow development and analysis.

2.1.7. Contract and Construction Documents coordination and providing design documents and specifications to the Owner for approval.

2.1.8. Public and Private Utility providers coordination and to bring all necessary and required services to the Project.

2.1.9. As-built Drawings submission of the completed Project, and provision of operations and maintenance manuals, owner training, and attic stock materials.

3. FORMAT FOR SUBMISSIONS AT CONCEPTUAL STAGE

The County requires that proposals at the conceptual stage contain information in the following areas: (i) qualifications and experience, (ii) project characteristics, (iii) project financing, (iv) anticipated public support or opposition, or both, (v) project benefit and compatibility and (vi) such additional information as may seem prudent which is not inconsistent with the requirements of the PPEA. Information to be included in proposals at the Conceptual Stage include:

3.1. Qualification and Experience

3.1.1. Identify the legal structure of the firm or consortium of firms making the proposal. Identify the organizational structure for the Project, the management approach and how each partner and major subcontractor ($100,000 or more) in the structure fits into the overall team. All members of the private entity/offeror's team, including major subcontractors known to the proposer must be identified at the time a proposal is submitted for the Conceptual Stage. Identified team members, including major subcontractors (over $500,000), may not be substituted or replaced once a project is approved and comprehensive agreement entered into, without the written approval of the County. Include the status of the Virginia license of each partner, proposer, contractor, and major subcontractor.

3.1.2. Describe the experience of the firm or consortium of firms making the proposal and the key principals involved in the proposed Project including experience with projects of comparable size and complexity. Describe the length of time in business, business experience, public sector experience and other engagements of the firm or consortium of firms. Describe the past safety performance record and current safety capabilities of the firm or consortium of firms. Describe the past technical performance history on recent projects of comparable size and complexity, including disclosure of any legal claims and litigation, of the firm or consortium of firms. Include the identity of any firms that will provide design, construction and completion guarantees and warranties and a description of such guarantees and warranties.

3.1.2.1. Experience: The Proposer must demonstrate and provide evidence of appropriate experience for this Project for both the design and construction entities and their key personnel to be assigned to this Project. Each Project used as evidence of relevant experience shall be presented on a separate sheet to include, but not be limited to, a photograph of the completed Project, size of the facility, construction cost, date completed, major features, general contractor, the architect of record, and Owner of the facility with current contact information for a reference check.

3.1.2.2. Proposer's overall qualifications, capabilities, and experience as it relates to this Project. Explain your understanding of, and experience with, the PPEA delivery method.

3.1.2.3. The Proposer shall provide documentation on a minimum of three

PPEA projects that best demonstrates its ability to successfully perform this Project and where the Proposer was contracted directly with the project owner. Proposer must provide copy of the its DPOR contractor license and will be required to have a County business license before the contract award.

3.1.2.4. The architectural firm shall provide documentation on a minimum of three projects similar in scope, as defined in the project description that best demonstrates its ability to perform this Project successfully. A copy of the firm's current DPOR professional registration shall be provided.

3.1.2.5. If a fire station consultant is included as part of the Proposer's team, the fire station consultant shall provide documentation on a minimum of three projects similar in scope as defined in the Project description that best demonstrates its ability to perform this Project. A copy of the firm's current professional registration shall be provided.

3.1.2.6. For previous experience working together, include any project where the Proposer and lead design professional have previously worked together as a team on a Design-Build project.

3.1.2.7. Provide three referrals or references from other agencies and owners.

3.1.2.8. Experience and qualifications of the structural, mechanical, electrical, plumbing, HVAC, civil, and any specialty consulting firms participating in the design effort.

3.1.2.9. Identify proposed subcontractors and your method of subcontractor selection.

3.1.2.10. Describe each firm's position within the team and its role in this Project.

3.1.3. For each firm or major subcontractor ($100,000 or more) that will be utilized in the Project, provide a statement listing all of the firm's prior projects and clients for the past 3 years and contact information for same (names/addresses /telephone numbers). If a firm has worked on more than ten (10) projects during this period, it may limit its prior project list to ten (10), but shall first include all projects similar in scope and size to the proposed Project and, second, it shall include as many of its most recent projects as possible. Each firm or major subcontractor shall be required to submit all performance evaluation reports or other documents which are in its possession evaluating the firm's performance during the preceding three years in terms of cost, quality, schedule maintenance, safety and other matters relevant to the successful project development, operation, and completion.

Provide resumes of the key individuals who will be involved in each phase of the Project.

3.1.3.1. PPEA Project Manager: Qualifications, resume, and experience with PPEA or Design-Build Projects for the individual that will be responsible for the integration of the Project team and PPEA team

leadership. The Project Manager is the primary contact with the Owner.

3.1.3.2. Pre-Construction Services Manager: Qualifications, resume, and experience with PPEA or Design-Build projects for the individual that will perform the pre- construction services.

3.1.3.3. Design-Construction Coordinator (Design Manager): Qualifications, resume, and experience with PPEA or Design-Build projects for the individual on the construction site that will be responsible for coordinating design and construction efforts and the transition from the design phase to the construction phase.

3.1.3.4. Designer of Record: Qualifications, resume, and experience with similar projects of the individual who is responsible for the design. A copy of the individual's current professional registration shall be provided.

3.1.3.5. Fire Station Consultant: If included as part of the PPEA team, provide qualifications, resume, and experience with fire station projects of the individual who will provide professional consulting services. A copy of the individual's current professional registrations shall be provided.

3.1.3.6. Construction Project Manager: Qualifications, resume, and experience with PPEA or Design-Build projects for the individual responsible for managing the design implementation and construction execution.

3.1.3.7. Note: If one person is performing the role of more than one of these five key personnel functions, clearly state so.

3.1.4. Provide the names, addresses, and telephone numbers of persons within the firm or consortium of firms who may be contacted for further information.

3.1.5. Provide a current or most recently audited financial statement of the firm or firms and each partner with an equity interest of twenty percent or greater.

3.1.5.1. Financial Ability: The prospective Proposer team must demonstrate sufficient financial ability to perform the contract by providing evidence (a letter from surety) of the ability to acquire performance and payment bonds from a corporation included on the United States Treasury list of acceptable surety corporations to bond 100% of the value of the Project. The Proposer submitting the response must be the same entity providing the evidence of the ability to be bonded and must be the same entity that will enter into an Interim and/or Comprehensive Agreement with the Owner.

3.1.6. Identify the officers and directors of the firm or firms submitting the proposals.

3.1.7. Identify any persons known to the proposer who would be obligated to disqualify themselves from participation in any transaction arising from or in connection to the Project pursuant to The Virginia State and Local Government Conflict of Interest Act, Chapter 31 (§ 2.2-3100 et seq.) of Title

2.2.

3.1.8. Identify proposed plan for obtaining sufficient numbers of qualified workers in all trades or crafts required for the Project.

3.1.9. Provide information on any training programs, including but not limited to apprenticeship programs registered with the U.S. Department of Labor or a State Apprenticeship Council, in place for employees of the firm and employees of any member of a consortium of firms.

3.1.10. Provide information on the level of commitment by the firm or consortium of firms to use Department of Minority Business Enterprise firms in developing and implementing the Project.

3.1.11. For each firm or major subcontractor that will perform construction and/or design activities, provide the following information:

3.1.11.1. A sworn certification by an authorized representative of the firm attesting to the fact that the firm is not currently debarred or suspended by any federal, state or local government entity.

3.1.11.2. A completed qualification statement that reviews all relevant information regarding technical qualifications and capabilities, firm resources and business integrity of the firm, including but not limited to, bonding capacities, insurance coverage and firm equipment. This statement shall also include a mandatory disclosure by the firm for the past three years any of the following conduct:

A. bankruptcy filings
B. liquidated damages
C. fines, assessments or penalties
D. judgments or awards in contract disputes
E. contract defaults, contract terminations
F. license revocations, suspensions, other disciplinary actions
G. prior debarments or suspensions by a governmental entity
H. denials of prequalification, findings of non-responsibility
I. safety past performance data, including fatality incidents, "Experience Modification Rating," "Total Recordable Injury Rate" and "Total Lost Workday Incidence Rate"
J. violations of any federal, state or local criminal or civil law
K. criminal indictments or investigations
L. legal claims filed by or against the firm

3.1.12. Worker Safety Programs: Describe worker safety training programs, job-site safety programs, accident prevention programs, written safety and health plans, including incident investigation and reporting procedures.

3.2. Project Characteristics

3.2.1. Provide a description of the Project, including the conceptual design. Describe the proposed Project in sufficient detail so that type and intent of the Project, the location, and the communities that may be affected are clearly identified.

3.2.2. Identify and fully describe any work to be performed by the public entity.

3.2.3. Include a list of all federal, state and local permits and approvals required for the Project and a schedule for obtaining such permits and approvals.

3.2.4. Identify any anticipated adverse social, economic and environmental impacts of the Project. Specify the strategies or actions to mitigate known impacts of the Project. Indicate if an environmental and archaeological assessment have been completed.

3.2.5. Identify the projected positive social, economic and environmental impacts of the Project.

3.2.6. Identify the proposed schedule for the work on the Project, including the estimated time for completion.

3.2.7. Identify contingency plans for addressing public needs in the event that all or some of the Project is not completed according to projected schedule.

3.2.8. Propose allocation of risk and liability for work completed beyond the agreement's completion date, and assurances for timely completion of the Project.

3.2.9. State assumptions related to ownership, legal liability, law enforcement and operation of the Project and the existence of any restrictions on the County's use of the Project.

3.2.10. Provide information relative to phased or partial openings of the proposed Project prior to completion of the entire work.

3.2.11. Described any architectural, building engineering, or other applicable standards that the proposed Project will meet. Define applicable quality standards to be adhered to for achieving the desired project outcome(s).

3.2.12. List any other assumptions relied on for the Project to be successful.

3.2.13. List and contingencies that must occur for the Project to be successful.

3.3. Project Financing

3.3.1. Provide a preliminary estimate and estimating methodology of the cost of the work by phase, segment, or both.

3.3.2. Submit a plan for the development, financing and operation of the Project showing the anticipated schedule on which funds will be required. Describe the anticipated costs of and proposed sources and uses for such funds. Include any supporting due diligence studies, analyses or reports.

3.3.3. Include a list and discussion of assumptions underlying all major elements of the plan.

3.3.4. Identify the proposed risk factors and methods for dealing with these factors.

3.3.5. Identify any local, state or federal resources that the proposer contemplates requesting for the Project. Describe the total commitment, if any, expected from governmental sources and the timing of any anticipated commitment.

3.4. Project Benefit and Compatibility

3.4.1. Identify community benefits, including the economic impact the Project will have on the County and local community in terms of amount of tax revenue to be generated for the Commonwealth and the County, the number jobs generated for Virginia residents and level of pay and fringe benefits of such jobs, the training opportunities for apprenticeships and other training programs generated by the Project and the number and value of subcontracts generated for Virginia subcontractors.

3.4.2. Identify any anticipated public support or opposition, as well as any anticipated government support or opposition, for the Project;

3.4.3. Explain the strategy and plan that will be carried out to involve and inform the general public, business community, local governments, and governmental agencies in areas affected by the Project;

3.4.4. Describe the compatibility of the Project with local, regional, and state economic development efforts.

3.4.5. Describe the compatibility with the County's comprehensive plan, zoning ordinances, local infrastructure development plans, capital improvements budget and annual budget.

3.4.6. Provide a statement setting forth participation efforts that are intended to be undertaken in connection with this Project regarding the following types of businesses:

(i) minority-owned businesses;
(ii) women-owned businesses;
(iii) small businesses.

3.5. Additional Information

3.5.1. Project Understanding and Approach

3.5.1.1. Describe your understanding of the Project.

3.5.1.2. Identify and discuss potential problems during design and construction.

3.5.1.3. Identify and discuss methods to mitigate those problems.

3.5.1.4. Describe the work you anticipate self-performing and the work you anticipate being performed by subcontractors.

3.5.2. Approach to Project Management

3.5.2.1. Describe your approach to Change Orders.

3.5.2.2. Describe your planning, scheduling, estimating, and construction management tools.

3.5.2.3. Describe your quality control plan.

3.5.2.4. Describe your safety management.

3.5.2.5. Describe your current workload and ability to proceed promptly.

4. EVALUATION CRITERIA

Proposals will be evaluated by the Owner using the following criteria. These criteria are to be utilized in the evaluation of qualifications for development of the shortlist of those Proposers to be considered for interviews and/or negotiations.

1. Experience and qualifications
2. Financial stability
3. Proposed systems, equipment and services to be provided
4. Proposed timeline and ability to complete the Project
5. Project cost and the ability to complete Project within the budget
6. Successful completion of similar projects
7. Responsiveness and completeness of the proposal

5. CONFIDENTIAL & PROPRIETARY INFORMATION

5.1. Information submitted in the public procurement process is subject to public inspection in accordance with the Virginia Freedom of Information Act. Therefore, trade secrets or proprietary information must be clearly identified to be exempt from FOIA disclosure (Virginia Code 2.2-3700, *et seq*).

Identify the section and page number of any information in your proposal that has been identified as confidential, proprietary or a trade secret of the RFP.

Offeror shall provide one redacted copy of its proposal fit for public dissemination, in the event the County must respond to a Freedom of Information Act request. The redacted copy of Offeror's proposal shall be provided on USB Drive or other electronically transferable media and shall be redacted to protect any confidential and/or proprietary information and shall be labeled as such. Offeror shall not mark its entire proposal as confidential and/or redact the entire proposal; doing so may result in the disqualification of Offeror's proposal.

6. SUBMITTAL REQUIREMENTS

6.1. The responses shall be in a bounded document with cover letter, this RFP form, and with tabs separating the separate criteria as shown in Section 3.1 – 3.5 and all related subsections.

6.2. Interested companies should submit the RFP response (one original and seven [7] copies) to the County of Roanoke Purchasing Director, 5204 Bernard Drive, Roanoke, Virginia 24018, on or before **2:00 P.M., September 15, 2022**

6.3. Below is the proposed timeline for this RFP. It shall be noted that time and dates written within this RFP are tentative, and can be changed or altered depending on the progress of this RFP and schedule of the parties involved in the procurement process:

Activity	Date
RFP Issued	**August 1, 2022**
Non-Mandatory Pre-Proposal Meeting	**August 15, 2022**

Last Day for Questions	**September 7, 2022**
Conceptual Phase Proposals Due	**September 15, 2022**
Request for Detail Phase Proposal	**October 2022**
Detailed Phase Proposal Due	**November 2022**
Award Date	**December 2022**

SITE & ZONING SUMMARY:

SITE ADDRESS:	3645 ORANGE AVE NE ROANOKE, VA 24012
OWNER:	PARKWAY WESLEYAN CHURCH INC
OWNER ADDRESS:	3645 ORANGE AVE NE ROANOKE, VA 24012
APPLICANT:	ROANOKE COUNTY BOARD OF SUPERVISORS
TAX MAP NUMBER:	7110105
EXISTING LOT SIZE:	± 70.7850 AC.
PROPOSED LOT SIZE:	± 2.25 AC.
EXISTING ZONING DISTRICT:	INPUD
PROPOSED ZONING DISTRICT:	INPUD

ZONING AMENDMENT REQUEST SUMMARY:

1. AMENDMENT TO THE EXISTING INPUD ZONING STANDARDS FOR 2.25 ACRES OF OVERALL ± 70.78 AC TRACT

2. AMENDMENT TO REPEAL THE SIGN OVERLAY DISTRICT FOR 2.25 ACRES OF THE OVERALL ± 70.78 AC TRACT

ZONING REQUIREMENTS:

MINIMUM SIZE OF DISTRICT:	NONE
MINIMUM LOT AREA PER DWELLING UNIT (SQUARE FEET)	NONE
LOT FRONTAGE MINIMUM (FEET)	25'
SETBACKS:	
FRONT YARD MINIMUM:	0'
SIDE YARD MINIMUM:	0'
REAR YARD MINIMUM:	0'
HEIGHT MAXIMUM:	45'
USEABLE OPEN SPACE (PERCENTAGE OF LOT)	5%
ACCESSORY STRUCTURE MINIMUM SETBACK FROM REAR AND SIDE LOT LINES (FEET)	0'
MINIMUM PARKING REQUIREMENT	NONE
IMPERVIOUS SURFACE RATIO MAXIMUM (PERCENTAGE OF LOT AREA)	80%
MINIMUM TREE CANOPY (PERCENTAGE OF LOT AREA)	15%
ALLOWABLE USES:	FIRE, POLICE, OR EMERGENCY SERVICES

SIGNAGE:

ANY NEW SIGNAGE ON THE INPUD ZONED PROPERTY WILL CONFORM TO THE REQUIREMENTS OF THE CITY OF ROANOKE ZONING ORDINANCE, TABLE 668-1, FOR THE IN, INSTITUTIONAL DISTRICT.

BUILDING SUMMARY:

THE PROPOSED BUILDING SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE PROVIDED RENDERING INDICATED AS PUBLIC SERVICE CENTER #12 – EXHIBIT B ARCHITECTURAL PERSPECTIVE PREPARED BY BALZER & ASSOCAITES, INC. UNDER THE DATE OF 2/28/2022.

PREEMPTION DETECTION DEVICE:

A PREEMPTION DETECTION DEVICE SHALL BE DESIGNED AND INSTALLED BY THE DEVELOPER AT THE TIME OF COMPREHENSIVE SITE PLAN. PREEMPTION DETECTION DEVICE SHALL BE LOCATED WITHIN THE CITY OF ROANOKE RIGHT-OF-WAY AND POSITIONED ALONG MEXICO WAY BASED ON CONSIDERATION OF THE REQUIRED CLEARANCE TIMES FOR THE TRAFFIC SIGNAL LOCATED AT THE INTERSECTION OF MEXICO WAY AND ORANGE AVENUE. FUTURE SIGNAL PHASES PER THE VDOT FUNDED STARS INTERSECTION IMPROVEMENT PROJECT FOR THIS INTERSECTION, INCLUDING THE PEDESTRIAN CROSSING, SHALL BE CONSIDERED.

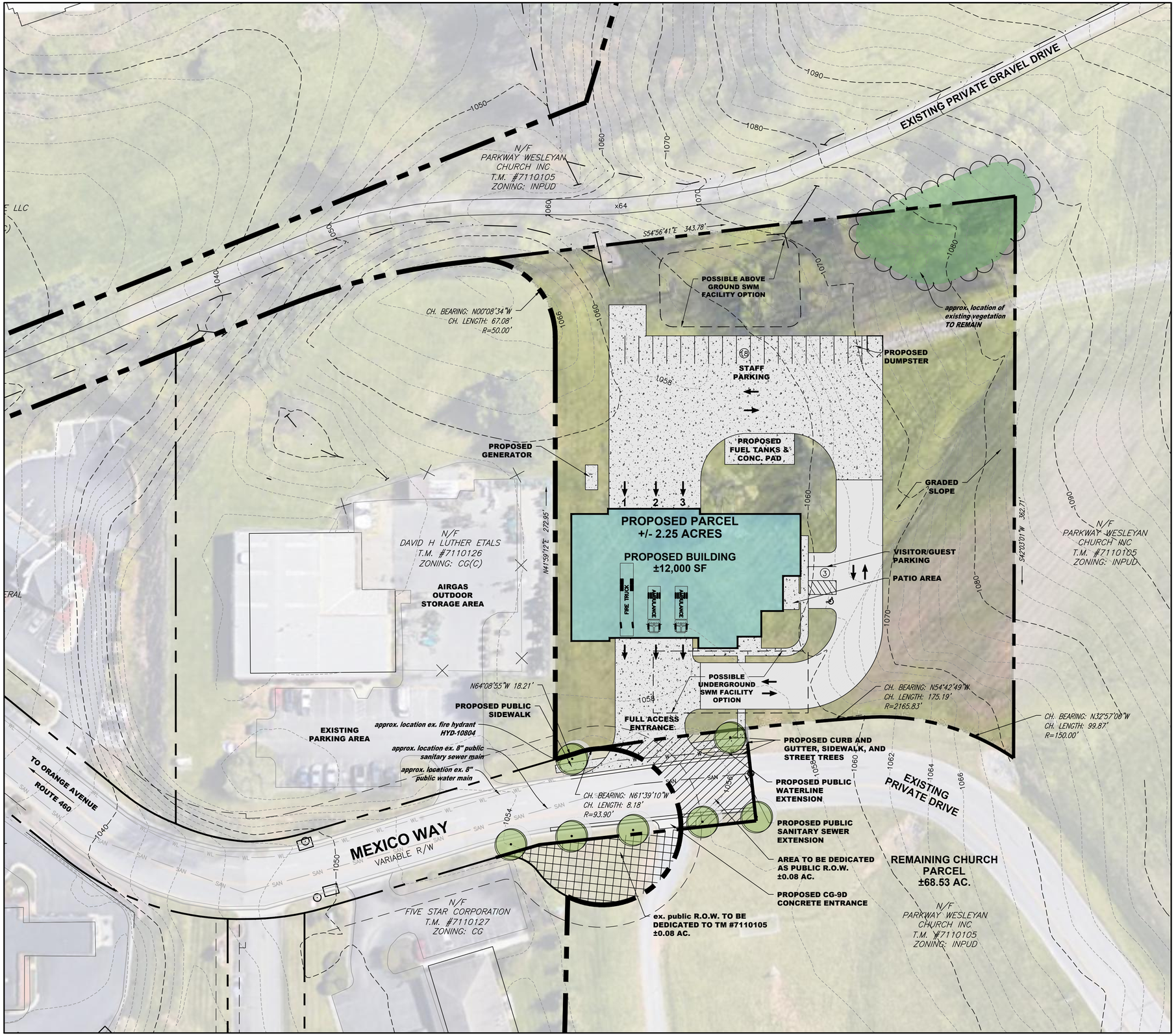
CONCEPT PLAN NOTE:

1. THIS PLAN IS FOR CONCEPTUAL PLANNING PURPOSES AND HAS BEEN PREPARED USING COMPILED INFORMATION. A CURRENT FIELD SURVEY HAS NOT BEEN PERFORMED TO VERIFY ALL EXISTING CONDITIONS ON-SITE.

2. AERIAL IMAGERY SOURCED FROM GOOGLE EARTH IMAGE, DATED NOVEMBER 2019

30 0 30 60 90

1" = 30'



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

PRELIMINARY

PUBLIC SERVICE CENTER #12 - FIRE STATION

INPUD DEVELOPMENT PLAN

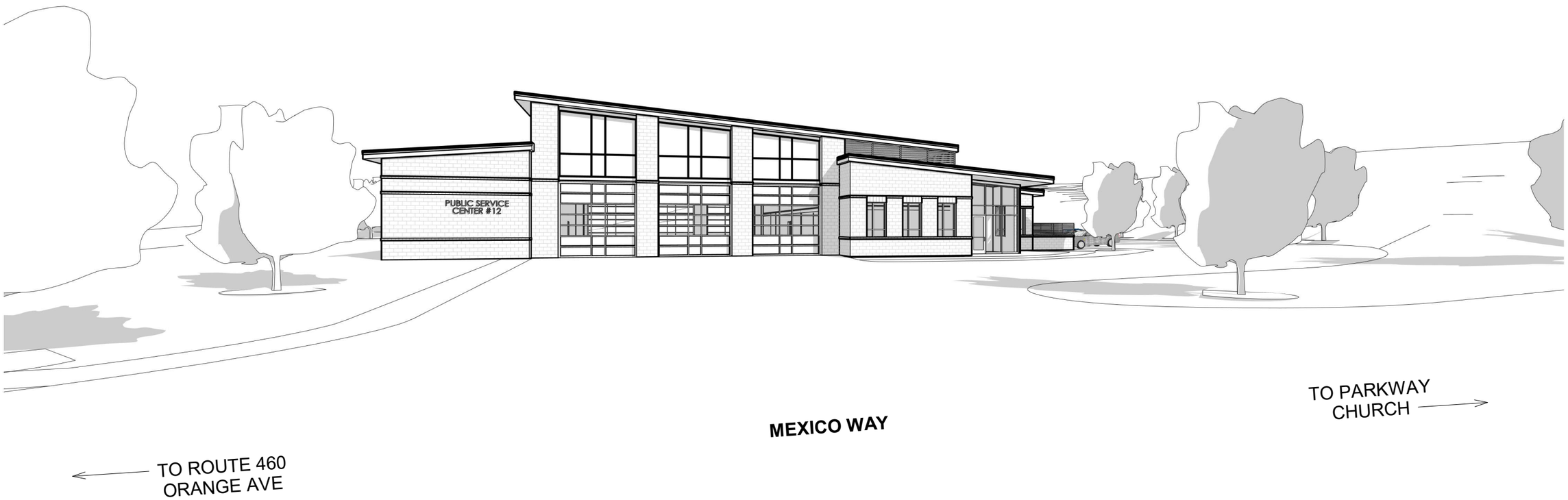
3645 ORANGE AVE NE
ROANOKE, VA 24012

DRAWN BY	KAM
DESIGNED BY	BTC
CHECKED BY	BTC
DATE	3/18/2022
SCALE	1" = 30'
REVISIONS	

EX-A

PROJECT NO. 04200086.01

J:\2020\04042000086.01 ROANOKE COUNTY FIRE STATION #12 (BORSACK/CIVIL\dwg\04200086 - ZONING BASE - Fire Station 2022-3-17.dwg PLOTTED: 3/17/2022 10:02:34 AM



PUBLIC SERVICE CENTER #12

3645 ORANGE AVE NE
ROANOKE, VA 24012

Colors represented here are affected by the type and amount of light in which they are viewed, as well as the method of printing.
Slight differences may exist between the actual color of the materials illustrated.

EXHIBIT B
ARCHITECTURAL PERSPECTIVE

NOT TO SCALE
NOT FOR CONSTRUCTION
02/28/2022
Roanoke, Virginia 04200086.01

© 2021 Balzer & Associates, Inc.

BALZER & ASSOCIATES

INST. # 220007571

KNOW ALL MEN BY THESE PRESENTS TO WIT:

THAT PARKWAY WESLEYAN CHURCH, INC. IS THE FEE SIMPLE OWNER OF THE PARCEL OF LAND SHOWN HEREON BOUNDED BY CORNERS 1 THROUGH 45 TO 1, INCLUSIVE, AND BEING PART OF THE LAND CONVEYED TO SAID OWNER BY INSTRUMENT RECORDED IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF ROANOKE, VIRGINIA BY INSTRUMENT NUMBER 040000415.

THE ABOVE DESCRIBED OWNER BY VIRTUE OF THE RECORDATION OF THIS PLAT DOES HEREBY DEDICATE TO THE CITY OF ROANOKE IN FEE SIMPLE TITLE, THE LAND SHOWN HEREON AS SET APART FOR PUBLIC STREETS BEING 0.1366 ACRE TOTAL.

THE ABOVE DESCRIBED OWNER BY VIRTUE OF THE RECORDATION OF THIS PLAT DOES HEREBY GRANT TO THE CITY OF ROANOKE THOSE CERTAIN AREAS SHOWN HEREON AS SET APART FOR USE AS PUBLIC EASEMENTS.

THE SAID OWNER HEREBY CERTIFIES THAT THE PLAT OF THE LAND AS SHOWN HEREON, AS REQUIRED BY SECTION 15.2–2240 THROUGH 15.2–2279 OF THE CODE OF VIRGINIA (1950) AS AMENDED, AND THE SUBDIVISION ORDINANCE OF THE CITY OF ROANOKE, VIRGINIA; IS ENTIRELY WITH ITS OWN FREE WILL AND CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE OWNERS OR PROPRIETORS OF THE LAND AND THE TRUSTEES IN ANY DEED OF TRUST, OR OTHER INSTRUMENT IMPOSING A LIEN UPON SUCH LAND, IF ANY THERE BE.

IN WITNESS WHEREON ARE HEREBY PLACED THE FOLLOWING SIGNATURES AND SEALS:

PARKWAY WESLEYAN CHURCH, INC.

BY: John W. Ott ITS: President

STATE OF VIRGINIA

City OF Roanoke

I, Kristine M. McGowan, A NOTARY PUBLIC IN AND FOR THE AFORESAID STATE DO HEREBY CERTIFY THAT John W. Ott, WHOSE NAME IS SIGNED TO THE FOREGOING INSTRUMENT, HAS PERSONALLY APPEARED BEFORE ME AND ACKNOWLEDGED THE SAME ON THIS 28th DAY OF June, 2022.

Kristine M. McGowan NOTARY PUBLIC REG. # 7807305

MY COMMISSION EXPIRES 8/31/2022

KRISTINE MOTKO MCGOWAN
NOTARY ID # 7807305
NOTARY PUBLIC
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES AUGUST 31, 2022

APPROVED:

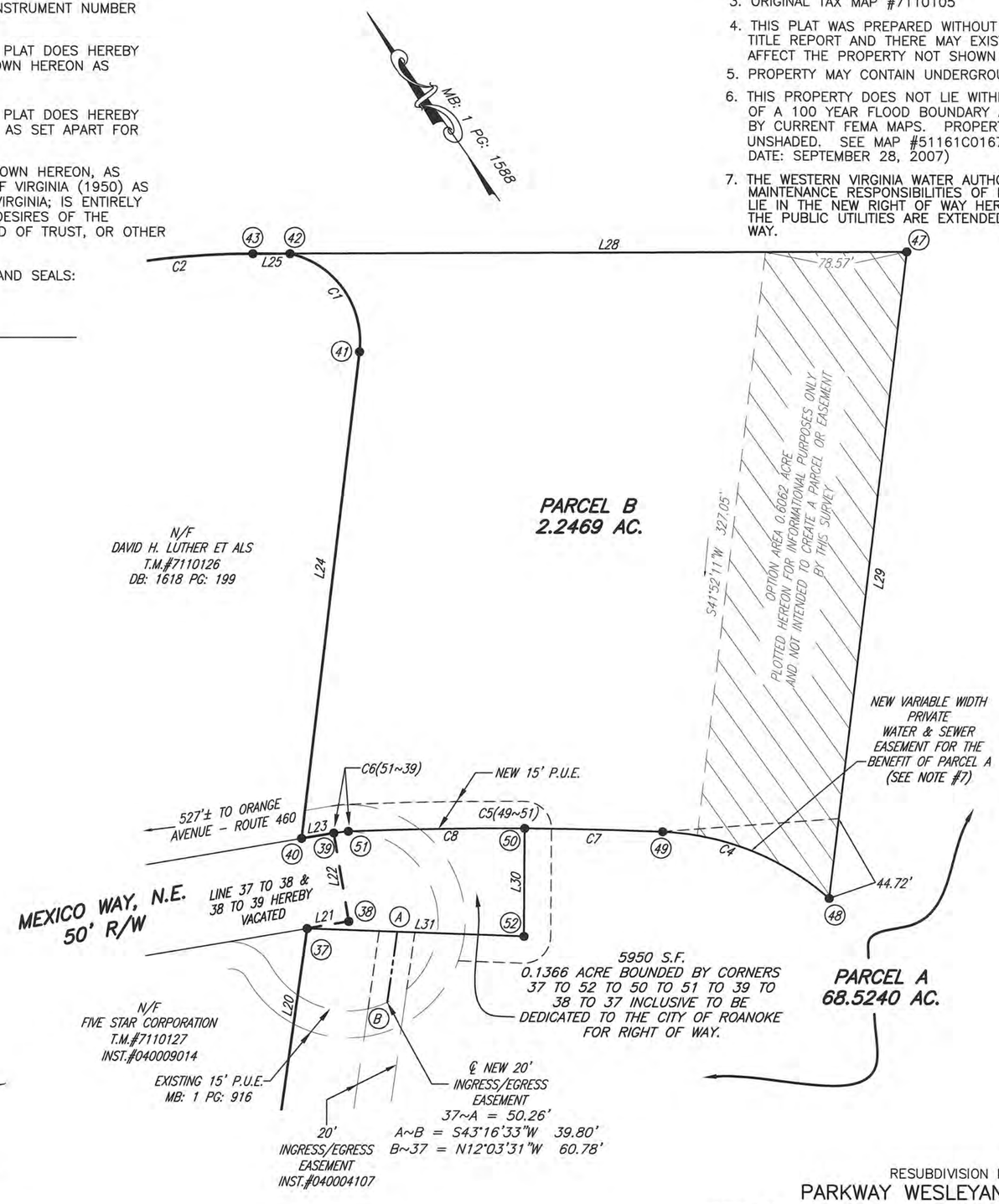
CITY ENGINEER, CITY OF ROANOKE — DATE 6/29/2022

SUBDIVISION AGENT — DATE 6/28/22

IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF CITY OF ROANOKE, VIRGINIA, THIS MAP WITH THE CERTIFICATE OF ACKNOWLEDGMENT THERETO ANNEXED IS ADMITTED TO RECORD AT 11:20 O'CLOCK A.M. ON THIS 29 DAY OF June, 2022, IN INSTRUMENT # 220007571.

TESTE: BRENDA S. HAMILTON
CLERK

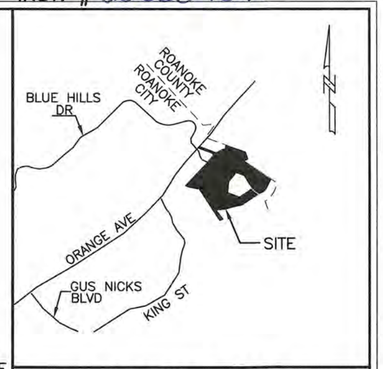
DEPUTY CLERK



THE RECORDATION OF THIS PLAT OF SUBDIVISION DOES NOT CONSTITUTE A CONVEYANCE OF LAND. ANY LOTS, PARCEL OR TRACT OF LAND SHOWN HEREON THAT IS INTENDED FOR SALE AND/OR CONVEYANCE MUST BE CONVEYED BY DEED AND SAID DEED MUST BE RECORDED IN THE OFFICE OF THE CLERK OF THE CIRCUIT COURT OF THE CITY OF ROANOKE.

NOTES:

1. OWNER OF RECORD: PARKWAY WESLEYAN CHURCH, INC.
2. LEGAL REFERENCE: 040000415
3. ORIGINAL TAX MAP #7110105
4. THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND THERE MAY EXIST ENCUMBRANCES WHICH AFFECT THE PROPERTY NOT SHOWN HEREON.
5. PROPERTY MAY CONTAIN UNDERGROUND UTILITY SERVICE LINES.
6. THIS PROPERTY DOES NOT LIE WITHIN THE LIMITS OF A 100 YEAR FLOOD BOUNDARY AS DESIGNATED BY CURRENT FEMA MAPS. PROPERTY IS IN ZONE X UNSHADED. SEE MAP #51161C0167G (REVISED DATE: SEPTEMBER 28, 2007)
7. THE WESTERN VIRGINIA WATER AUTHORITY WILL ASSUME NO MAINTENANCE RESPONSIBILITIES OF EXISTING PRIVATE UTILITIES THAT LIE IN THE NEW RIGHT OF WAY HEREBY CREATED UNTIL SUCH TIME THE PUBLIC UTILITIES ARE EXTENDED TO THE LIMITS OF SAID RIGHT OF WAY.



VICINITY MAP
NO SCALE

LEGEND
● – DEEDED CORNER

CURVE TABLE

CURVE	RADIUS	LENGTH	CHD BEARING	CHD LENGTH	DELTA
C1	50.00'	73.53'	N00°08'34"W	67.08'	84°15'28"
C2	430.00'	112.15'	N62°18'04"W	111.83'	14°56'36"
C4	150.00'	101.81'	N32°57'06"W	99.87'	38°53'18"
C5	2165.83'	175.24'	N54°42'49"W	175.19'	4°38'09"
C6	93.90'	8.18'	N61°39'10"W	8.18'	4°59'29"
C7	2165.83'	76.87'	N53°24'45"W	76.86'	2°02'01"
C8	2165.83'	98.37'	N55°43'50"W	98.36'	2°36'08"

LINE TABLE

LINE	BEARING	DISTANCE
L20	N43°16'33"E	201.61'
L21	S64°23'53"E	23.57'
L22	N25°36'07"E	50.01'
L23	N64°08'55"W	18.21'
L24	N41°59'12"E	272.95'
L28	S54°56'41"E	343.78'
L29	S42°03'01"W	362.71'
L30	S35°34'14"W	60.25'
L31	N52°41'49"W	121.06'

COORDINATE LIST(ASSUMED)

Point	Northing	Easting
37	3637786.96	11079291.02
38	3637776.77	11079312.27
39	3637821.87	11079333.88
40	3637829.81	11079317.49
41	3638032.69	11079500.09
42	3638099.77	11079499.92
43	3638111.66	11079483.06
47	3637902.32	11079781.34
48	3637632.99	11079538.40
49	3637716.79	11079484.08
50	3637762.60	11079422.36
51	3637817.99	11079341.08
52	3637713.59	11079387.31

I HEREBY CERTIFY THAT THIS PLAT IS FROM RECORDS AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DONALD S. HADDON, III, 003405

COMMONWEALTH OF VIRGINIA
Donald S. Haddon III
Lic. No. 3405
01-13-2022
LAND SURVEYOR

RESUBDIVISION PLAT FOR
PARKWAY WESLEYAN CHURCH INC.
BEING THE RESUBDIVISION OF TAX MAP NUMBER 7110105 (70.9330 ACRES)
AS SHOWN ON
BOUNDARY SURVEY FOR IWBMC, L.L.C.
MAP BOOK 1, PAGE 1588
AND A PORTION OF REVERTED TEMPORARY TURN AROUND EASEMENT
CREATING HEREON
PARCEL A (68.5240 ACRES) &
PARCEL B (2.2469 ACRES)
SITUATED ON MEXICO WAY
CITY OF ROANOKE, VIRGINIA
DATED 01–13–2022
JOB #04200086.00
SCALE: 1"=50'
SHEET 1 OF 2

PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS
ROANOKE / RICHMOND / NEW RIVER VALLEY / SHENANDOAH VALLEY / LYNCHBURG
1208 Corporate Circle / Roanoke, Virginia 24018 / Phone (540) 772-9580 / www.balzer.cc

DRAWN BY: DSH
CHECKED BY: JRM

BALZER & ASSOCIATES

(A) N/F
3675 ORANGE AVENUE, LLC
T.M.#7110122
INST.#160012790

(B) N/F
3675 ORANGE AVENUE, LLC
T.M.#7110106
INST.#120013056

(C) EVINGTON AT BONSACK
INST.#200403514

(D) N/F
INTEGRITY WINDOWS INC
T.M.#050.01-01-05.00-0000
INST.#200313257

(E) MOUNTAIN MEADOW ESTATES
PB: 19 PG: 132

(F) AUTUMN DRIVE SUBDIVISION
INST.#0200226761

(G) N/F
ALAN L. BRUMBAUGH
T.M.#050.01-01-13.01-0000
WILL INST.#201000137

(H) N/F
JOHN A. NEVILLE
T.M.#7110107
INST.#210008688

(I) N/F
KENNETH EDWARD & ALLISON J. FAY
T.M.#7110108
INST.#150002857

(J) N/F
KENNETH EDWARD & ALLISON J. FAY
T.M.#7110109
INST.#150005632

(K) N/F
PAUL E. & PATRICIA R. KNIFFEL
T.M.#7110110
INST.#0020014606

(L) N/F
SHERIDAN W. BROWN ET ALS
T.M.#7110111
INST.#110008295

(M) N/F
BONNIE S. BRIZENDINE
T.M.#7110112
DB: 1561 PG: 1374

(N) N/F
CEFOLA MICHELLE & KAREN L. MASON
T.M.#7110113
INST.#0010013111

(O) N/F
WENDELL F. & FAYE J. BROWN
T.M.#7110114
INST.#0990017317

(P) N/F
JOHN D. STRANGE
T.M.#7110116
INST.#140006309

(Q) N/F
ERNEST C. & JOYCE A. AKERS
T.M.#7110117
DB: 1439 PG: 1784

(R) N/F
ALLISON M. WILLIAMS
T.M.#7110118
INST.#200002474

(S) N/F
BOBBY R. & MARTHA LYNN COMBS
T.M.#7110119
DB: 1477 PG: 886

(T) N/F
BOBBY R. & MARTHA LYNN COMBS
T.M.#7110120
DB: 1477 PG: 886

(U) N/F
KELLI M. THROCKMARTIN
T.M.#7100401
INST.#140009156

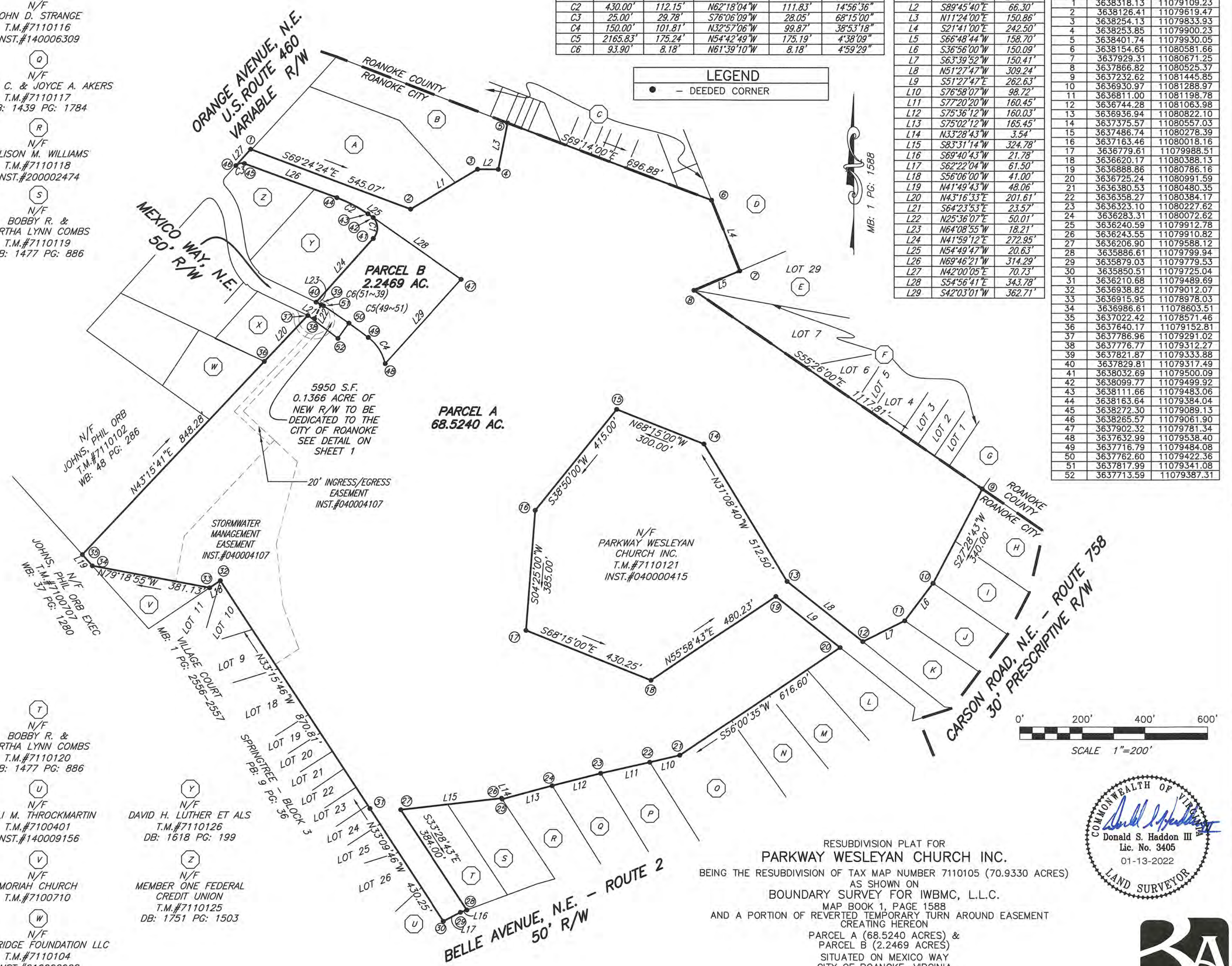
(V) N/F
MORIAH CHURCH
T.M.#7100710

(W) N/F
BLUE RIDGE FOUNDATION LLC
T.M.#7110104
INST.#210002908

(X) N/F
FIVE STAR CORPORATION
T.M.#7110127
INST.#040009014

(Y) N/F
DAVID H. LUTHER ET ALS
T.M.#7110126
DB: 1618 PG: 199

(Z) N/F
MEMBER ONE FEDERAL CREDIT UNION
T.M.#7110125
DB: 1751 PG: 1503



LEGEND
● – DEEDED CORNER

CURVE TABLE

CURVE	RADIUS	LENGTH	CHD BEARING	CHD LENGTH	DELTA
C1	50.00'	73.53'	N00°08'34"W	67.08'	84°15'28"
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C3	25.00'	29.78'	S76°06'09"W	28.05'	68°15'00"
C4	150.00'	101.81'	N32°57'06"W	99.87'	38°53'18"
C5	2165.83'	175.24'	N54°42'49"W	175.19'	4°38'09"
C6	93.90'	8.18'	N61°39'10"W	8.18'	4°59'29"

LINE TABLE

LINE	BEARING	DISTANCE
L1	N59°13'26"E	249.61'
L2	S89°45'40"E	66.30'
L3	N11°24'00"E	150.86'
L4	S21°41'00"E	242.50'
L5	S66°48'44"W	158.70'
L6	S36°56'00"W	150.09'
L7	S63°39'52"W	150.41'
L8	N51°27'47"W	309.24'
L9	S51°27'47"E	262.63'
L10	S76°58'07"W	98.72'
L11	S77°20'20"W	160.45'
L12	S75°36'12"W	160.03'
L13	S75°02'12"W	165.45'
L14	N33°28'43"W	3.54'
L15	S83°31'14"W	324.78'
L16	S69°40'43"W	21.78'
L17	S62°22'04"W	61.50'
L18	S56°06'00"W	41.00'
L19	N41°49'43"W	48.06'
L20	N43°16'33"E	201.61'
L21	S64°23'53"E	23.57'
L22	N25°36'07"E	50.01'
L23	N64°08'55"W	18.21'
L24	N41°59'12"E	272.95'
L25	N54°49'47"W	20.63'
L26	N69°46'21"W	314.29'
L27	N42°00'05"E	70.73'
L28	S54°56'41"E	343.78'
L29	S42°03'01"W	362.71'

COORDINATE LIST(ASSUMED)

Point	Northing	Easting
1	3638318.13	11079109.23
2	3638126.41	11079619.47
3	3638254.13	11079833.93
4	3638253.85	11079900.23
5	3638401.74	11079930.05
6	3638154.65	11080581.66
7	3637929.31	11080671.25
8	3637866.82	11080525.37
9	3637232.62	11081445.85
10	3636930.97	11081288.97
11	3636811.00	11081198.78
12	3636744.28	11081063.98
13	3636936.94	11080822.10
14	3637375.57	11080557.03
15	3637486.74	11080278.39
16	3637163.46	11080018.16
17	3636779.61	11079988.51
18	3636620.17	11080388.13
19	3636888.86	11080786.16
20	3636725.24	11080991.59
21	3636380.53	11080480.35
22	3636358.27	11080384.17
23	3636323.10	11080227.62
24	3636283.31	11080072.62
25	3636240.59	11079912.78
26	3636243.55	11079910.82
27	3636206.90	11079588.12
28	3635886.61	11079799.94
29	3635879.03	11079779.53
30	3635850.51	11079725.04
31	3636210.68	11079489.69
32	3636938.82	11079012.07
33	3636915.95	11078978.03
34	3636986.61	11078603.51
35	3637022.42	11078571.46
36	3637640.17	11079152.81
37	3637786.96	11079291.02
38	3637776.77	11079312.27
39	3637821.87	11079333.88
40	3637829.81	11079317.49
41	3638032.69	11079500.09
42	3638099.77	11079499.92
43	3638111.66	11079483.06
44	3638163.64	11079384.04
45	3638272.30	11079089.13
46	3638265.57	11079061.90
47	3637902.32	11079781.34
48	3637632.99	11079538.40
49	3637716.79	11079484.08
50	3637762.60	11079422.36
51	3637817.99	11079341.08
52	3637713.59	11079387.31

COMMONWEALTH OF VIRGINIA
Donald S. Haddon III
Lic. No. 3405
01-13-2022
LAND SURVEYOR

RESUBDIVISION PLAT FOR
PARKWAY WESLEYAN CHURCH INC.
BEING THE RESUBDIVISION OF TAX MAP NUMBER 7110105 (70.9330 ACRES)
AS SHOWN ON
BOUNDARY SURVEY FOR IWBMC, L.L.C.
MAP BOOK 1, PAGE 1588
AND A PORTION OF REVERTED TEMPORARY TURN AROUND EASEMENT
CREATING HEREON
PARCEL A (68.5240 ACRES) &
PARCEL B (2.2469 ACRES)
SITUATED ON MEXICO WAY
CITY OF ROANOKE, VIRGINIA
DATED 01-13-2022
JOB #04200086.00
SCALE: 1"=200'
SHEET 2 OF 2

PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS
ROANOKE / RICHMOND / NEW RIVER VALLEY / SHENANDOAH VALLEY / LYNCHBURG
1208 Corporate Circle / Roanoke, Virginia 24018 / Phone (540) 772-9580 / www.balzer.cc

DRAWN BY: DSH
CHECKED BY: JAP

BALZER & ASSOCIATES

PHASE I ENVIRONMENTAL SITE ASSESSMENT

PROPOSED BONSACK/460 FIRE STATION

3645 ORANGE AVENUE NE
ROANOKE, VIRGINIA 24012

ECS PROJECT NO. 47:14480

FOR: ROANOKE COUNTY

MAY 13, 2022

ECS Mid-Atlantic, LLC
"Setting the Standard for Service"
Geotechnical • Construction Materials • Environmental • Facilities

May 13, 2022

George Assaid, AIA
Roanoke County
1206 Kessler Mill Road
Salem, Virginia 24153

ECS Project No. 47: 14480

Reference: Phase I Environmental Site Assessment Report, Proposed Bonsack/460 Fire Station, 3645 Orange Avenue NE, Roanoke, Virginia 24012

Dear Mr. Assaid:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide you with the results of our Phase I Environmental Site Assessment (ESA) for the referenced site. ECS's services were provided in general accordance with ECS Proposal No. 47:22006-P authorized on April 20, 2022 and generally meet the requirements of ASTM E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, which ECS believes to be in accordance with EPA Standards and Practices for All Appropriate Inquiries contained in 40 CFR Part 312.

If there are questions regarding this report, or a need for further information, please contact the undersigned.

Sincerely,

ECS Mid-Atlantic, LLC

Alexandra Moon
Senior Project Manager
amoon@ecslimited.com
540-362-2000

Garnett B. Williams, C.P.G.
Principal Geologist
gwilliams@ecslimited.com
703-471-8400

Project Summary

Proposed Bonsack/460 Fire Station
3645 Orange Avenue NE
Roanoke, Virginia 24012

Report Section		No Further Action	REC	CREC	HREC	BER	Comment
4.0	User Provided Information	✔					
5.1	Federal ASTM Databases	✔					
5.2	State ASTM Databases	✔					
5.3	Additional Environmental Record Sources	✔					
6.0	Historical Use Information	✔					
7.0	Site and Area Reconnaissance	✔					
8.0	Additional Services	✔					
9.0	Interviews	✔					

ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Alexandra Moon
Senior Project Manager
May 13, 2022

Garnett B. Williams, C.P.G.
Principal Geologist
May 13, 2022

TABLE OF CONTENTS

PAGE

1.0 EXECUTIVE SUMMARY . . . 1

2.0 INTRODUCTION . . . 3

2.1 Purpose and Reason for Performing Phase I ESA . . . 3

2.2 Scope of Services . . . 3

2.3 Definitions . . . 3

2.4 Limitations . . . 4

2.5 Data Gaps . . . 5

2.6 Limiting Conditions/Deviations . . . 5

3.0 SUBJECT PROPERTY DESCRIPTION . . . 6

3.1 Subject Property Location and Legal Description . . . 6

3.2 Physical Setting and Hydrogeology . . . 6

3.3 Current Use and Description of the Site . . . 7

4.0 USER PROVIDED INFORMATION . . . 8

4.1 Title Information . . . 8

4.2 Environmental Liens or Activity and Use Limitations . . . 8

4.3 Specialized Knowledge . . . 8

4.4 Commonly Known or Reasonably Ascertainable Information . . . 8

4.5 Valuation Reduction for Environmental Issues . . . 8

4.6 Owner, Property Manager, and Occupant Information . . . 8

4.7 Degree of Obviousness . . . 9

5.0 RECORDS REVIEW . . . 10

5.1 Federal ASTM Databases . . . 11

5.1.1 Federal RCRIS - Generators . . . 11

5.2 State ASTM Databases . . . 12

5.2.1 State Leaking Tanks (LTANKS) . . . 12

5.2.2 Leaking Underground Storage Tank (LUST) List . . . 12

5.2.3 Registered Underground Storage Tank (UST) List . . . 12

5.3 Additional Environmental Record Sources . . . 12

5.3.1 Additional Non-ASTM Federal Databases . . . 12

5.3.2 Additional Non-ASTM State Databases . . . 13

5.3.3 Unmapped (Orphan) Facilities and Sites . . . 13

5.4 Regulatory Review Summary 13
6.0 HISTORICAL USE INFORMATION 14
6.1 Aerial Photograph Review 14
6.2 Sanborn Fire Insurance Map Review 15
6.3 Historical USGS Topographic Maps 15
6.4 City Directory Review 16
6.5 Property Tax Files 17
6.6 Recorded Land Title Records 17
6.7 Building Department Records 17
6.8 Zoning/Land Use Records 17
6.9 Previous Reports 17
6.10 Other Historical Sources 17
6.10.1 Local Fire Department 18
6.10.2 Local Health Department 18
6.11 Historical Use Summary 18
7.0 SITE AND AREA RECONNAISSANCE 19
7.1 Methodology 19
7.2 On-Site Features 19
7.2.1 Observed Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions 19
7.2.2 Current Uses 19
7.2.3 Past Site Uses 19
7.3 Adjoining and Nearby Properties 20
7.4 Site and Area Reconnaissance Summary 21
8.0 ADDITIONAL SERVICES 22
9.0 INTERVIEWS 23
10.0 FINDINGS AND CONCLUSIONS 24
10.1 Findings and Opinions 24
10.2 Significant Data Gaps 24
10.3 De Minimis Conditions 24
10.4 Conclusions 24
11.0 REFERENCES 26

TABLE OF APPENDICES

Appendix I: Figures

Appendix II: Interviews, Correspondence and User Questionnaire

Appendix III: Regulatory Records Documentation

Appendix IV: Historical Research Documentation

Appendix V: Site Photographs

Appendix VI: Statement of Qualifications

Appendix VII: Acronyms

1.0 EXECUTIVE SUMMARY

ECS Mid-Atlantic, LLC (ECS) was contracted by Roanoke County to perform an ASTM E1527-21, Phase I Environmental Site Assessment (ESA) of the Proposed Bonsack/460 Fire Station to be located at 3645 Orange Avenue NE in Roanoke, Virginia (i.e. subject property). This Executive Summary is an integral part of the Phase I ESA report. ECS recommends that the report be read in its entirety.

The subject property is a 2.25-acre portion of a larger 70.79 acre parent parcel identified by the City of Roanoke as parcel number 7110105 and owned by Parkway Wesleyan Church Inc.. The subject property is undeveloped grassland. Municipal water and sanitary sewer are available in the vicinity of the site.

The subject property is located in a commercial area of Roanoke, Virginia. The subject property is bound on the north by undeveloped grass and wooded land (parent parcel) with commercial developments beyond; on the east by undeveloped grassland (parent parcel); on the south by Mexico Way followed by undeveloped grasslands (parent parcel), utilized as soccer fields; and, on the west by Airgas. ECS did not identify environmental issues at adjoining or nearby properties that are believed to present a recognized environmental condition (REC) at the subject property.

Based on the records search, site reconnaissance and interviews, it appears that the subject property has remained undeveloped for over 100 years. Historical records prior to 1890 were not reasonably ascertainable for the subject property. The surrounding area has generally remained undeveloped. The parent parcel is bordered by commercial business including several bank branches, Airgas, and fueling stations. No obvious indications of RECs were identified in the historical data review for the subject property.

A regulatory database search report was provided by Environmental Data Resources, Inc. (EDR). The database search involves researching a series of Federal, State, Local, and other databases for facilities and properties that are located within specified minimum search distances from the subject property. The report did not identify the subject property on the databases researched. The EDR report identified several off-site properties within the minimum ASTM search distances. Based on our review of available public records, none of the listings are believed to represent a REC for the subject property.

ASTM E1527-21 defines a "*data gap*" as: "a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information." A *"significant data gap"* is "a data gap that affects the ability of the environmental professional to identify a recognized environmental condition." Significant data gaps that would be expected to impact our ability to render a professional opinion concerning RECs for the subject property were not identified.

We have performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E1527-21 of the Proposed Bonsack/460 Fire Station to be located at 3645 Orange Avenue NE in Roanoke, Virginia, the subject property. Any exceptions to, or deletions from, this practice are described in Section 2.6 of this report. This assessment has revealed no evidence of recognized environmental conditions, controlled recognized environmental conditions, or significant data gaps in connection with the property.

Table of Critical Dates

Item	Date
Report Issuance Date	May 13, 2022
Date of Interview with Past and Present Owners and Occupants	Not Completed
Date of Recorded Environmental Cleanup Lien Search	April 7, 2022
Date of Government Record Review Report	April 21, 2022
Date of Visual Inspection of Subject and Adjoining Properties	April 26, 2022
Earliest Date of Interviews, Lien Search, Record Reviews, and Inspections	April 7, 2022
Report Viability Date	October 4, 2022

2.0 INTRODUCTION

2.1 Purpose and Reason for Performing Phase I ESA

The purpose of the ESA was to:

- evaluate the probability of impact to the surface water, groundwater and/or soils within the property boundaries through a review of regulatory information and a reconnaissance of the subject property and vicinity;
- evaluate historical land usage to identify previous conditions that could potentially impact the environmental condition of the subject property;
- conduct all appropriate inquiry as defined by ASTM E1527-21 and 40 CFR Part 312;
- evaluate the potential for on-site and off-site contamination; and,
- provide a professional opinion regarding the potential for environmental impact at the site and a list of Recognized Environmental Conditions (RECs).

The ESA should allow the Users the opportunity to qualify for landowner liability protection under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) provided certain stipulations are met. The landowner liability protections are: an innocent landowner, a contiguous property owner, or a bona fide prospective purchaser. The User must meet the protection stipulations detailed in CERCLA to qualify as well as meet the User Obligations contained within the ASTM E1527-21 standard.

The reason for conducting this ESA is to perform all appropriate inquiries into the uses and prior ownership of the subject property for a pending real estate transaction.

2.2 Scope of Services

The environmental assessment was conducted in general accordance with ASTM E1527-21, which ECS believes to be in accordance with EPA Standards and Practices for All Appropriate Inquiry (40 CFR §312.10). The environmental assessment was conducted under the supervision or responsible charge of an individual that qualifies as an environmental professional, as defined in 40 CFR §312.10.

ECS was contracted by Roanoke County to perform an ASTM E1527-21, Phase I Environmental Site Assessment (ESA) of the Proposed Bonsack/460 Fire Station to be located at 3645 Orange Avenue NE in Roanoke, Virginia. ECS was not contracted to address non-scope considerations.

2.3 Definitions

ASTM E1527-21 defines a "*recognized environmental condition (REC)*" as "(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment." For the purposes of this definition,

"likely" is that which is neither certain nor proved, but can be expected or believed by a reasonable observer based on the logic and/or experience of the environmental professional, and/or available evidence, as stated in the report to support the opinions given therein.

ASTM E1527-21 defines a "*historical recognized environmental condition (HREC)*" as "a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). A historical recognized environmental condition is not a recognized environmental condition."

ASTM E1527-21 defines a "*controlled recognized environmental condition (CREC)*" as "recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."

ASTM E1527-21 defines a "*business environmental risk (BER)*" as "a risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice." This assessment does not include ASTM Non-Scope items or identify business environmental risks unless specifically requested by the Client, and included in Section 8.0 of this report.

ASTM E1527-21 defines a "*de minimis condition" as "a* condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a *de minimis* condition is not a recognized environmental condition nor a controlled recognized environmental condition."

2.4 Limitations

The ESA involved a reconnaissance of the subject property and contiguous properties and a review of regulatory and historical information in general accordance with the ASTM standard and EPA regulation referenced herein. No non-scope considerations or additional issues such as asbestos, radon, wetlands or mold were investigated, unless otherwise described in Section 8.0 of this report.

Note: vapor migration in the subsurface is described in Guide E2600 published by ASTM. ECS has not conducted a Vapor Encroachment Screen in accordance with the E2600 guide.

The conclusions and/or recommendations presented within this report are based upon a level of investigation consistent with the standard of care and skill exercised by members of the same profession currently practicing in the same locality under similar conditions. The intent of this assessment is to identify the potential for recognized environmental conditions in connection with the subject property; however, no environmental site assessment can completely eliminate uncertainty regarding the potential for recognized environmental conditions in connection with the

subject property. The findings of this ESA are not intended to serve as an audit for health and safety compliance issues pertaining to improvements or activities at the subject property. ECS is not liable for the discovery or elimination of hazards that may potentially cause damage, accidents or injury.

Observations, conclusions and/or recommendations pertaining to environmental conditions at the subject property are necessarily limited to conditions observed, and or materials reviewed at the time this study was undertaken. It was not the purpose of this study to determine the actual presence, degree or extent of contamination, if any, at this subject property. This could require additional exploratory work, including sampling and laboratory analysis. No warranty, expressed or implied, is made with regard to the conclusions and/or recommendations presented within this report.

This report is provided for the exclusive use of Roanoke County. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties. The use of this report by any undesignated third party or parties will be at such party's sole risk and ECS disclaims liability for any such third party use or reliance. The use of this report is subject to the same terms, conditions and scope of work reflected in this report and the associated proposal.

2.5 Data Gaps

ASTM E1527-21 defines a "*data gap*" as: "a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information." A *"significant data gap"* is "a data gap that affects the ability of the environmental professional to identify a recognized environmental condition."

Data failures (historical data gaps) were identified during the historical research of the subject property. Use of the subject property was generally documented back to 1890. Historical information was missing for various periods; however, due to the other information that was obtained about the subject property, the historical data gaps are not expected to impact our ability to render a professional opinion regarding RECs for the subject property.

Significant data gaps that would be expected to impact our ability to render a professional opinion concerning RECs for the subject property were not identified.

2.6 Limiting Conditions/Deviations

ASTM E1527-21 requires that the Environmental Professional identify limiting conditions, deletions, and deviations from the ASTM E1527-21 standard, if any, including client-imposed constraints. Limiting conditions and/or deviations from the standard practice that would be expected to impact our ability to provide a professional opinion concerning RECs for the subject property were not encountered during the performance of this Phase I ESA.

3.0 SUBJECT PROPERTY DESCRIPTION

3.1 Subject Property Location and Legal Description

Site Name	Proposed Bonsack/460 Fire Station
Property Address	3645 Orange Avenue NE
Property City, State	Roanoke, Virginia
Number of Parcels	Portion of a larger parent parcel
Property ID Number(s)	7110105
Property Size	2.25-acres of a larger 70.79 acre parcel
Property Owner of Record	Parkway Wesleyan Church Inc.
Property Legal Description	As provided on the City of Roanoke Property Report: TRACT A-1 SEC 1 RANCHO MEXICO BUSINESS PK

3.2 Physical Setting and Hydrogeology

USGS Topographic Map	
Quad Designation	Roanoke, Virginia
Date	2019
Subject Property Settings	
Average Subject Property Elevation (in feet or meters)	1,060-1,080 feet above mean sea level
General Sloping Direction	West
Bodies of Water	None
General Directions of Surface Flow	West-northwest
Presumed Direction of Groundwater Flow	West-northwest
Geologic Province	Valley and Ridge
Up-gradient Property Direction	Southeast

Nearby Properties' Setting	
General Sloping Direction	Northwest
Bodies of Water	Unnamed tributary to Glade Creek is located approximately 700 feet west of the subject site.
General Directions of Surface Flow	Curb and Gutter to below grade stormwater conveyances and sheet flow to the west.
Presumed Direction of Groundwater Flow	West

Regional influences such as changes in soil and geologic conditions, and local topography, may have an impact on groundwater flow. The actual groundwater flow direction cannot be determined without site-specific information obtained through the gauging of groundwater monitoring wells.

3.3 Current Use and Description of the Site

The subject property consists of a 2.25-acre portion of a larger 70.79-acre parcel parcel of land that is currently cleared undeveloped grassland. The subject property is located in an area that can generally be described as commercial in use.

4.0 USER PROVIDED INFORMATION

The ASTM standard includes disclosure and obligations of the User to help the Environmental Professional identify the potential for Recognized Environmental Conditions associated with the subject property. The ASTM E1527-21 User Questionnaire was submitted to and completed by George Assaid, AIA, representing Roanoke County (User of the report). Section 4.0 is based on the completed User Questionnaire. A copy of the completed User Questionnaire is included in Appendix II.

4.1 Title Information

ECS was provided with a commitment for title insurance dated April 7, 2022 and a title search report for the site. Deeds were only searched back to 1991 for the subject property and parent parcel. No environmental concerns were identified in the title documents reviewed, copies of which are included in Appendix II.

4.2 Environmental Liens or Activity and Use Limitations

ECS was neither contracted to obtain information on environmental liens or activity and use limitations, nor have we been provided with information on environmental liens or activity and use limitations for our review. It should be noted by the User of this report that if the User does not obtain activity and use limitation information, the User that is seeking to qualify for an innocent landowner, a contiguous property owner, or a bona fide prospective purchaser liability defense may lose these rights to qualify under CERCLA. If the activity and use information is provided following issuance of this report and information contained therein materially changes the outcome of this report, ECS will issue an addendum to this report. The User, however, responded that they were not aware of any AULs associated with the subject property.

4.3 Specialized Knowledge

The User indicated that they did not possess specialized knowledge of the subject property.

4.4 Commonly Known or Reasonably Ascertainable Information

The User indicated that they were not aware of commonly known environmental concerns related to the subject property.

4.5 Valuation Reduction for Environmental Issues

According to the User, the purchase price being paid for the subject property reasonably reflects the fair market value.

4.6 Owner, Property Manager, and Occupant Information

The User indicated that the site is owned and managed by Parkway Wesleyan Church Inc..

4.7 Degree of Obviousness

The User stated that they were not aware of obvious indicators that point to the presence or likely presence of contamination at the subject property.

5.0 RECORDS REVIEW

A regulatory records search of ASTM standard and supplemental databases was conducted for the subject property and is included in Appendix III. The regulatory search report in the appendix includes additional details about the regulatory databases that were reviewed. The regulatory records search involves searching a series of databases for facilities that are located within a specified distance from the subject property. The ASTM standard specifies an approximate minimum search distance from the subject property for each database. Pursuant to ASTM, the approximate minimum search distance may be reduced for each standard environmental record except for Federal NPL site list, and Federal RCRA TSD list. According to ASTM, government information obtained from nongovernmental sources may be considered current if the source updates the information at least every 90 days or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public. The following table indicates the standard environmental record sources and the approximate minimum search distances for each record.

Standard Environmental Record Sources	Approximate Minimum Search Distance Per ASTM (miles)	Subject Property	Off-Site Properties
Federal NPL	1.0	No	0
Federal Delisted NPL	0.5	No	0
Federal CERCLIS	0.5	No	0
Federal CERCLIS NFRAP	0.5	No	0
Federal RCRA CORRACTS	1.0	No	0
Federal RCRA non-CORRACTS TSD	0.5	No	0
Federal RCRA Generators	Subject Site and Adjoining Properties	No	0
Federal IC/EC	Subject Site Only	No	N/A
Federal ERNS	Subject Site Only	No	N/A
State and Tribal Hazardous Waste Sites (NPL Equivalent)	1.0	No	0
State and Tribal Hazardous Waste Sites (CERCLIS Equivalent)	0.5	No	0
State and Tribal Landfill and/or solid waste disposal sites	0.5	No	0

Standard Environmental Record Sources	Approximate Minimum Search Distance Per ASTM (miles)	Subject Property	Off-Site Properties
State and Tribal Leaking Tanks	0.5	No	2
State and Tribal Registered UST and AST	Subject Site and Adjoining Properties	No	0
State and Tribal IC/EC	Subject Site Only	No	N/A
State and Tribal Voluntary Cleanup (VCP)	0.5	No	0
State and Tribal Brownfield Sites	0.5	No	0

Based on our knowledge of the subject property and the surrounding area, ECS attempts to verify and interpret this data. While this attempt at verification is made with due diligence, ECS cannot guarantee the accuracy of the record(s) search beyond that of information provided by the regulatory report(s). ECS makes no warranty regarding the accuracy of the database report information included within the regulatory report(s).

The regulatory database search was performed by EDR and is dated April 21, 2022. ECS did not reduce the minimum ASTM search distances stipulated in the standard. The regulatory databases reviewed by ECS included supplemental databases researched by EDR.

5.1 Federal ASTM Databases

5.1.1 Federal RCRIS - Generators

RCRIS identifies facilities that generate hazardous wastes as defined by the RCRA. Very small quantity generators (VSQG) (previously identified as conditionally exempt small quantity generators or CESQGs) generate less than 100 kilograms of hazardous waste, or less than 1 kilogram of acutely hazardous waste, per month. Small quantity generators (SQGs) generate between 100 and 1,000 kilograms of hazardous waste per month. Large quantity generators (LQGs) generate more than 1,000 kilograms of hazardous waste or more than 1 kilogram of acutely hazardous waste per month.

The subject property is not listed on the RCRA database. No off-site properties within the minimum search distance of inquiry (adjoining properties) are reported by EDR as being on the Federal RCRIS Generators database. One off-site property within 0.25 miles of the subject property is reported as being on the Federal RCRIS Generators database. Additionally, one off-site property within 0.25 miles of the subject property is reported as being on the RCRA Non-Generator (Non-Gen)/No Longer Regulated (NLR) database, which lists facilities that do not currently generate hazardous wastes but were previously tracked as generators. These off-site listings are plotted more than 700 feet from the subject property and are situated in a presumed down-gradient hydrological position relative to

the subject site. Based on the distance and/or relative topographic position, these listings are not considered to be in RECs for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

5.2 State ASTM Databases

5.2.1 State Leaking Tanks (LTANKS)

The LTANKS database is a list of all reported leaking underground and above ground tanks recorded by the state.

The subject property is not listed on the LTANKS database. The database report lists two properties within the designated search radius. These off-site listings are mapped more than 700 feet from the subject property and in a presumed down-gradient hydrological position. Based on the distance and/or relative topographic position, these incidents are not considered to be RECs for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

5.2.2 Leaking Underground Storage Tank (LUST) List

The LUST list is a record of reported leaking underground storage tank incidents. The LUST list may also identify properties that have had soil and/or groundwater contamination associated with documented releases from above ground storage tanks, surface spills, and other sources. The LUST listings are discussed in the LTANKS section above.

5.2.3 Registered Underground Storage Tank (UST) List

The Registered UST List inventories underground storage tanks registered with the state. This list does not identify USTs that have not been registered or are exempt, such as home heating oil tanks and other unregulated tanks.

The subject property is not listed on the UST database. The database report did not identify any UST facilities within the ASTM-designated search radius (subject and adjoining). The database report did identify three UST facilities within 0.25 mile of the subject property. These off-site listings are mapped more than 700 feet from the subject property in a presumed down-gradient hydrologic position. Based on the distance and/or relative topographic position, these off-site listings are not considered to be a REC for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

5.3 Additional Environmental Record Sources

5.3.1 Additional Non-ASTM Federal Databases

Neither the subject property nor properties within the designated search radii are identified on the additional non-ASTM federal databases researched for this assessment.

5.3.2 Additional Non-ASTM State Databases

Neither the subject property nor properties within the designated search radii are identified on the additional non-ASTM state databases researched for this assessment.

5.3.3 Unmapped (Orphan) Facilities and Sites

One property is identified on the Orphan Summary List. These facilities are considered unmappable because the facility information in the database is insufficient and/or does not report accurate facility location. This facility was determined to be located at least 2 miles from the site and is, therefore, not considered to be a REC to the subject site.

5.4 Regulatory Review Summary

A regulatory database search report was provided by EDR. The database search involves researching a series of Federal, State, Local, and other databases for facilities and properties that are located within specified minimum search distances from the subject property. The report did not identify the subject property on the databases researched. The EDR report identified several off-site properties within the minimum ASTM search distances. Based on our review of available public records, ECS does not consider the listings to be potential sources of soil, groundwater, or vapor impact to the subject property. Therefore, ECS does not consider the listed sites to be RECs for the subject property.

6.0 HISTORICAL USE INFORMATION

6.1 Aerial Photograph Review

ECS reviewed aerial photographs of the subject property and immediately surrounding properties for evidence of former usage which may indicate potential environmental issues. The aerial photographs were obtained from EDR. The aerial photographs reviewed are dated 1947, 1956, 1960, 1968, 1982, 1995, 2006, 2009, 2012, and 2016. Aerial photographs dated prior to 1947 were not available for review from EDR. The ECS review is dependent on the quality and scale of the photographs.

The following is a description of relevant information from the aerial photographs:

Year(s)	Subject Property	Adjoining Properties	REC? (yes or no)
1947 - 1956	Due to the quality of the images, specific details are unable to be discerned. However, the property appears to be undeveloped agricultural land.	Due to the quality of the images, specific details are unable to be discerned. However, the area appears to be undeveloped agricultural land with structures to the north. A roadway is present west of the subject property.	No
1960 - 1977	A road transects the property from the north and splits into two roads to the east and south. Sparse wooded land is present in the center of the property along the road. The rest of the property is undeveloped.	The surrounding areas consist of undeveloped land with the exception of scattered residences north of the subject property. A majority of the adjoining property to the west is wooded land.	No
1982	The subject property continues to appear undeveloped. The aforementioned roads are not quite as discernible anymore.	A driveway borders the property to the north followed by scattered residential-type structures. The rest of the surrounding areas consist of predominantly undeveloped land.	No

Year(s)	Subject Property	Adjoining Properties	REC? (yes or no)
1995	The subject property appears similar to the previous imagery, with the exception of an unpaved road that transects the property from the southwest to the northeast.	North - Driveway followed by undeveloped land East - Undeveloped land South - A mixture of fields and wooded land. The southwest edge of the property is bound by a road that runs south of the subject property. West - Commercial structures	No
2006-2016	The subject property continues to be an undeveloped tract. The aforementioned road onsite is no longer discernible.	North - Driveway followed by undeveloped land East - Undeveloped land South - A road followed by fields West - Commercial structures	No

6.2 Sanborn Fire Insurance Map Review

In an effort to identify past uses, ECS utilized EDR to search for historical Sanborn Fire Insurance Maps (Sanborn) for the subject property and surrounding area. Sanborn maps were not available for this area. The absence of such maps generally indicates that the subject property is located in an area where Sanborn maps were not produced because the area was rural or it was not economically feasible. ECS does not expect the lack of Sanborn maps to impact our ability to render a professional opinion concerning the subject property given the amount of historical information obtained from our research, the USGS topographic map, aerial photographs, city directories, and other historical records obtained. A copy of the Unmapped Property report is included within Appendix IV.

6.3 Historical USGS Topographic Maps

Topographic maps are produced by the United States Geological Survey (USGS) for various time periods. ECS reviewed topographic maps of the subject property and immediately surrounding properties for evidence of former usage that may indicate potential environmental issues. The topographic maps were obtained from EDR and were dated 1890, 1891, 1929, 1933, 1962, 1963, 1968, 1977, 1978, 1984, 2013, 2016, and 2019. Topographic maps dated prior to 1890 were not available for review from EDR

The following is a description of relevant information from the topographic maps:

Year(s)	Subject Property	Adjoining Properties	REC? (yes or no)
1890-1933	The subject property is depicted as undeveloped land.	The surrounding areas are depicted as undeveloped land with a highway depicted farther west of the subject property.	No
1962-1984	Similar to previous topographic maps with the addition of an "unimproved" road that transects the subject property from north to south beginning in 1962.	North - Scattered structures East - Undeveloped land. South - Undeveloped land followed by a patch of wooded land. West - Undeveloped land followed by an unimproved road and a highway beyond.	No
2013-2019	In general, these topographic maps do not depict structures, only roads, topography and landmarks . The aforementioned road that transects the subject property is no longer depicted.	In general, structures are not depicted on these maps, only roads, topography and landmarks. The site is bound to the north, east, and south by roads. A road is depicted along the southern property boundary on the 2019 topographic map.	No

6.4 City Directory Review

One of the ASTM standard historical sources to be reviewed for previous subject property uses is local street directories, commonly known as City Directories. The purpose of the directory review is to identify past occupants of the subject property, adjoining properties, or nearby properties. In some rural areas, street directories information is limited.

ECS reviewed City Directories obtained from EDR. The subject property address utilized for the research was the parent parcel's address of 3645 Orange Avenue NE. The directories reviewed are dated 1984, 1989, 1992, 1995, 2000, 2005, 2010, 2014, and 2017. Directories dated prior to 1984 were not available for review from EDR. A copy of the City Directory report is included in Appendix IV. The parent parcel is first listed in the 1992 directory and again in the 1995 directory as a communication consultant and as Mexitronics, an electronics distribution company. By 2000, Parkway Church is identified at the site including as a Parkway food bank. Surrounding properties are listed as Airgas, various bank branches, restaurants, and residential listings. No environmental corners were identified on the City Directories reviewed.

6.5 Property Tax Files

Property tax files may include records of past ownership, appraisals, maps, sketches, photos, or other information kept by the local jurisdiction for property tax assessment purposes. According to the Roanoke City tax assessor online information, the subject property is owned by Parkway Wesleyan Church Inc.. The subject property is a 2.25-acre portion of a larger 70.79-acre parent parcel with an identification number of 7110105.

6.6 Recorded Land Title Records

Recorded land title records may include leases, land contracts, and AULs recorded by the local jurisdiction. Land title records may provide only a list of the names of previous owners and may be of limited use; however, they may provide useful information about uses or occupancy of the property when employed in combination with other sources.

ECS was provided with a commitment for title insurance dated April 7, 2022 and a title search report for the site. Deeds were only searched back to 1991 for the subject property and parent parcel. No environmental concerns were identified in the title documents reviewed, copies of which are included in Appendix II.

6.7 Building Department Records

The term building department records means those records of the local government indicating permissions of the local government to construct, alter or demolish improvements on the property.

ECS obtained a list of building permits from EDR via the Lightbox^{TM} application. No building permits were identified for the subject property or the parent parcel. The reviewed building permits for nearby properties did not indicate the presence of a REC for the subject property.

6.8 Zoning/Land Use Records

The term zoning/land use records refers to records of the local government indicating the uses permitted by the government in particular zones within its jurisdictions. ECS reviewed zoning/land use records obtained from the City of Roanoke. The subject property is currently zoned INPUD: Institutional Planed Unit Development.

6.9 Previous Reports

We have not been provided with environmental or engineering assessment reports for the subject property completed by others, nor has ECS completed similar studies or prior assessments of the subject property.

6.10 Other Historical Sources

Other credible historical sources may be reviewed to identify past uses of the subject property. These sources may include websites, county or state road maps, historical society documents, or local library information.

6.10.1 Local Fire Department

The Roanoke City Fire Department was contacted to determine if they had historical information regarding environmental issues or responses at the subject property. No information has been received at the time of the report completion. If information is received that changes the conclusions or recommendations of this report, ECS will forward the information to the Client.

6.10.2 Local Health Department

The Roanoke City Health Department was contacted to determine if they had historical information regarding environmental issues or responses at the subject property, including records of well or septic systems. No information has been received at the time of the report completion. If information is received that changes the conclusions or recommendations of this report, ECS will forward the information to the Client.

6.11 Historical Use Summary

According to historical research, the subject property has remained undeveloped for over 100 years and is currently maintained grassland and a part of a larger parent parcel owned by a church. The immediate surrounding area has generally remained undeveloped with the exception of Airgas to the west with additional commercial and retail developments beyond. The parent parcel is bordered by commercial use including several bank branches, Airgas, and fueling stations. No obvious indications of RECs were identified in the historical data review for the subject property.

7.0 SITE AND AREA RECONNAISSANCE

7.1 Methodology

Jessica Blankenship and Alexandra Moon of ECS conducted the field reconnaissance on April 26, 2022. The weather at the time of the reconnaissance was 72 degrees Fahrenheit and partly cloudy. Observations were made from a walking reconnaissance around the perimeter and along several transects across the subject property. Access or visibility limitations, if any, are discussed in Section 2.6. Subject property photographs are included in Appendix V.

7.2 On-Site Features

7.2.1 Observed Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

The site gently slopes from the east to the west. A rock lined drainage ditch is located on the northern portion of the site. The remainder of the site is undeveloped grassland. No other remarkable geologic or hydrologic conditions were observed on the premises.

7.2.2 Current Uses

The subject property is approximately 2.25-acres in size and consists of undeveloped land. Water and sewer services are available in the vicinity of the subject property through the Western Virginia Water Authority. No structures, ruins or foundations were observed on the subject property. The subject property gently slopes from east to west. No other environmentally-remarkable features, conditions or activities were observed onsite.

7.2.3 Past Site Uses

During the site reconnaissance, ECS observed the subject property for evidence of past occupancy or usage that could indicate the presence of environmental concerns. Based on current site conditions observed during the site reconnaissance, ECS did not identify evidence of past uses or occupancy that would indicate the presence of a REC for the subject property.

The table below lists pertinent features of interest that were assessed for the subject property. Pertinent features of environmental concern were not observed during the site reconnaissance.

Feature	Yes	No
Hazardous Substances and Petroleum Products in Connection with Identified Uses		✔
Hazardous Substance and Petroleum Product Containers Not in Connection with Identified Uses		✔
Drums, Totes, and Intermediate Bulk Containers		✔
Unidentified Substance Containers		✔
Underground or Aboveground Storage Tanks		✔

Feature	Yes	No
Strong, Pungent or Noxious Odors		✔
Standing Surface Water and Pools or Sumps Containing Liquids Likely to be Hazardous Substances or Petroleum Products		✔
Known or Suspect PCB-containing Equipment		✔
Stains or Corrosion to Floors, Walls or Ceilings		✔
Stained Soil or Pavement		✔
Floor Drains and Sump Pumps		✔
Pits, Ponds or Lagoons		✔
Stressed Vegetation		✔
Solid Waste Mounds or Non-natural Fill Materials		✔
Water/Wastewater Discharge		✔
Groundwater Wells		✔
Septic Systems or Cesspools		✔
Hydraulic Equipment (Elevators, Lifts, Compactors, Etc.)		✔
Dry Cleaning		✔
Specialized Industrial Equipment		✔
Onsite Emergency Electrical Generators		✔
Oil-water Separators		✔

7.3 Adjoining and Nearby Properties

Contiguous and nearby properties were observed during a walking and vehicular reconnaissance of the subject property boundary and public places. The subject property is located in a commercial area of the City of Roanoke, Virginia. The following is a summary of nearby and adjoining properties:

Direction	Description	Relative Gradient	REC
North	The subject property is bound to the north by undeveloped land followed by commercial structures.	Cross-gradient	No
East	The subject property is bound to the east by undeveloped land with the Parkway Church beyond.	Up-gradient	No

Direction	Description	Relative Gradient	REC
South	The subject property is bound to the south by a road, Mexico Way and followed by undeveloped land utilized as soccer fields.	Cross-gradient	No
West	The subject property is bound to the west by an Airgas store.	Down-gradient	No

7.4 Site and Area Reconnaissance Summary

According to our site observations and a review of adjoining and nearby properties, the subject property is undeveloped, grassland. The subject property is located in a commercial and retail area of the City of Roanoke. Details pertaining to our on-site and off-site observations are referenced previously. We did not identify RECs associated with the subject property or neighboring properties and businesses during the reconnaissance.

8.0 ADDITIONAL SERVICES

ASTM guidelines identify non-scope issues, which are beyond the scope of this practice. Non-scope issues have the potential to be business environmental risks. Some of these non-scope issues include; asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands, and mold. ECS was not authorized to assess non-scope issues in conjunction with this assessment.

9.0 INTERVIEWS

ECS was not provided with an owner contact with whom to perform an interview. The absence of an owner interview is considered to be a data gap for the Phase I ESA process; however, based on the historically undeveloped state of the property and information gained from other sources, the absence of an owner interview was not considered likely to affect our ability to render a professional opinion of the property's environmental quality.

ECS interviewed local government officials and agencies via written Freedom of Information Act requests. Information gained from such sources in included in Section 6.10.

10.0 FINDINGS AND CONCLUSIONS

10.1 Findings and Opinions

The subject property is a 2.25-acre portion of a larger 70.79 acre parent parcel identified by the City of Roanoke as parcel number 7110105 and owned by Parkway Wesleyan Church Inc.. The subject property is undeveloped grassland. Municipal water and sanitary sewer are available in the vicinity of the site.

The subject property is located in a commercial area of Roanoke, Virginia. The subject property is bound on the north by undeveloped grass and wooded land (parent parcel) with commercial developments beyond; on the east by undeveloped grassland (parent parcel); on the south by Mexico Way followed by undeveloped grasslands (parent parcel), utilized as soccer fields; and, on the west by Airgas. ECS did not identify environmental issues at adjoining or nearby properties that are believed to present a recognized environmental condition (REC) at the subject property.

Based on the records search, site reconnaissance and interviews, it appears that the subject property has remained undeveloped for over 100 years. Historical records prior to 1890 were not reasonably ascertainable for the subject property. The surrounding area has generally remained undeveloped. The parent parcel is bordered by commercial business including several bank branches, Airgas, and fueling stations. No obvious indications of RECs were identified in the historical data review for the subject property.

A regulatory database search report was provided by Environmental Data Resources, Inc. (EDR). The database search involves researching a series of Federal, State, Local, and other databases for facilities and properties that are located within specified minimum search distances from the subject property. The report did not identify the subject property on the databases researched. The EDR report identified several off-site properties within the minimum ASTM search distances. Based on our review of available public records, none of the listings are believed to represent a REC for the subject property.

10.2 Significant Data Gaps

Significant data gaps that would be expected to impact our ability to render a professional opinion concerning RECs for the subject property were not identified.

10.3 De Minimis Conditions

ECS did not identify *de minimis* conditions associated with the subject property during this assessment.

10.4 Conclusions

We have performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E1527-21 of the Proposed Bonsack/460 Fire Station to be located at 3645 Orange Avenue NE in Roanoke, Virginia, the subject property. Any exceptions to, or deletions from,

this practice are described in Section 2.6 of this report. This assessment has revealed no evidence of recognized environmental conditions, controlled recognized environmental conditions, or significant data gaps in connection with the property.

11.0 REFERENCES

ASTM E1527-21. Standard Practice for Environmental Site Assessment, Phase I Environmental Site Assessment Process.

Environmental Data Resources, Inc., The EDR Aerial Photo Decade Package (years 1947, 1956, 1960, 1968, 1982, 1995, 2006, 2009, 2012, and 2016), dated April 25, 2022.

Environmental Data Resources, Inc., The EDR Radius Map Report, dated April 21, 2022.

Environmental Data Resources, Inc., Certified Sanborn Map Report (No Coverage), dated April 21, 2022.

City of Roanoke GIS website, last accessed on May 6, 2022.

Environmental Data Resources, Inc., EDR City Directory Image Report (years 1984, 1989, 1992, 1995, 2000, 2005, 2010, 2014, and 2017), dated April 25, 2022.

Environmental Data Resources, Inc., Historical Topo Map Report (years 1890, 1891, 1929, 1933, 1962, 1963, 1968, 1977, 1978, 1984, 2013, 2016, and 2019), dated April 21, 2022.

Appendix I: Figures

Figure 1

Site Location Map
Proposed Bonsack/460 Fire Station
3645 Orange Avenue NE
Roanoke, Virginia 24012

Figure 2

USGS Topographic Map
Proposed Bonsack/460 Fire Station
3645 Orange Avenue NE
Roanoke, Virginia 24012

Figure 3
Site Plan
Proposed Bonsack/460 Fire Station
3645 Orange Avenue NE
Roanoke, Virginia 24012

Appendix II: Interviews, Correspondence and User Questionnaire

Environmental Questionnaire for User

Completion required for conformance with ASTM E 1527-13. Failure to provide this information may preclude CERCLA liability protections for the property purchaser. Please return answered form to ECS.

Site Name: Parkway Wesleyan Church - Bonsack/460 Fire Station

Name and Title of Person Completing Questionnaire (Please Print):

George Assaid

Signature of Person Completing Questionnaire:

Date: 4/21/2022

Name of Your Company and Your Contact Number (Please Print):

County of Roanoke, 540-777-6348

ASTM E 1527-13 indicates that, "Either the user shall make known to the environmental professional the reason why the user wants to have the Phase I Environmental Site Assessment performed or, if the user does not identify the purpose of the Phase I Environmental Site Assessment, the environmental professional shall assume the purpose is to qualify for an LLP to CERCLA liability and state this in the report." As the user of this ESA, what is the reason for conducting the Phase I ESA? If this question is unanswered, ECS will assume that the user's reason for the ESA is to qualify for landowner liability protections to CERCLA liability.

Please state reason for having ESA performed: Part of the due diligence phase prior to purchasing the property.

Will you provide Property Title Records and a Legal Description to ECS?

Please select one: **NO** [ ] **YES** [X]

Will you provide a 50-year chain of title abstract to ECS?

Please select one: **NO** [X] **YES** [ ]

<u>Please Send Information Promptly</u>

(1a.) Environmental liens that are filed or recorded against the site (40 CFR 312.25). ASTM E 1527-13 states that the user should perform a review of recorded land title records and judicial records for environmental liens or activity and use limitations for the site. Please forward the results of the land title record and judicial record review. If you would prefer, ECS can obtain this information from a third party provider for **an additional fee**. <u>Please let ECS know if you would like to contract ECS for this service.</u>

Please select one: **Client to Provide** [ ] **ECS to Provide for Additional Fee** [X]

ENVIRONMENTAL QUESTIONNAIRE

(1b.) **Activity and use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).** Are you aware of any activity and use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(2.) **Specialized knowledge -** As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(3.) **Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).** Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:

(a.) Do you know the past uses of the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please state uses: _____

(b.) Do you know of specific chemicals that are present or once were present at the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(c.) Do you know of spills or other chemical releases that have taken place at the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(d.) Do you know of any environmental cleanups that have taken place at the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(4.) **Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).** Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

Please select one: **NO** [ ] **YES** [X]
If no, please explain: _____

If you are aware that there is a difference, is the lower purchase price because contamination is known or believed to be present at the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(5.) **Parcel Property Owner(s) & Contact Number(s):**

A. Parkway Wesleyan Church
B. _____
C. _____
D. _____

Property Manager and Occupant(s) & Contact Number(s)

Property Manager: Lincoln Miller, Creative Tech Pastor, 540.685.5869
Occupant/Tenant: _____
Occupant/Tenant: _____

(6.) **The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).** As the user of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

ALTA COMMITMENT FOR TITLE INSURANCE

Issued By:

Fidelity National Title Insurance Company

Commitment Number:

ROA22111

NOTICE

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Fidelity National Title Insurance Company, a Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Fidelity National Title Insurance Company

By:

Michael J. Nolan, President

Attest:

Marjorie Nemzura, Secretary

Countersigned By:

Authorized Officer or Agent
Pam Easter

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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AMERICAN LAND TITLE ASSOCIATION

FIDELITY NATIONAL TITLE INSURANCE COMPANY **COMMITMENT NO. ROA22111**

Transaction Identification Data for reference only:

ISSUING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Title Officer: Pam Easter Fidelity National Title Insurance Company 310 First Street, Suite 1210 Roanoke, VA 24011 Phone: 540-982-2121 Email: Pam.Easter@fnf.com	

Order Number: ROA22111
Project Name:
Prepared For: Roanoke County Board of Supervisors

SCHEDULE A

1. Commitment Date: April 7, 2022 at 08:00 AM
2. Policy to be issued:
   (a) ALTA Owner's Policy 2006 w-VA Mod
   Proposed Insured: Roanoke County Board of Supervisors
   Proposed Policy Amount: $540,000.00
3. The estate or interest in the Land described or referred to in this Commitment is:
   Fee Simple
4. The Title is, at the Commitment Date, vested in:
   Parkway Wesleyan Church, Inc.
5. The Land is described as follows:
   SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

END OF SCHEDULE A

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EXHIBIT "A"

Legal Description

TENTATIVE LEGAL DESCRIPTION:

All that certain tract or parcel of land, lying and being in the City of Roanoke, Commonwealth of Virginia, and more particularly described as follows, to-wit:

All that certain parcel, containing 2.25 acres, more or less, as further shown and described on plat of subdivision entitled "Bonsack Fire Station.....", dated _____, prepared by _____, L.S. of Balzer & Associates, recorded in the Clerk's Office of the Circuit Court of the City of Roanoke, Virginia as Instrument No. _____.

BEING a portion of that property conveyed to Parkway Wesleyan church, Inc., a Virginia corporation, from The Carpenter's Foundation, a Virginia non-stock, non-member corporation, by Deed dated December 19, 2003 and recorded in the Clerk's Office of the Circuit Court of Roanoke City, Virginia as Instrument No. 040000415.

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SCHEDULE B, PART I
REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

2. Pay the agreed amount for the estate or interest to be insured.

3. Pay the premiums, fees, and charges for the Policy to the Company.

4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

5. The exact nature and structure of the transaction to be insured hereunder must be disclosed to the Company. This Commitment is subject to additional requirements and/or exceptions as the Company deems appropriate following such disclosure.

6. Instruments creating the estate or interest to be insured must be approved, executed and filed for record to wit:

   a. Deed from Parkway Wesleyan Church, Inc. vesting fee simple title in Roanoke County Board of Supervisors.

7. The Company must be provided with an approved form of executed Owner's Affidavit and Agreement relating to, among other items, mechanics' liens and parties in possession.

8. Pay and release of record of the property set forth under Schedule A hereof from the following item(s):

   a. Deed of Trust from Parkway Wesleyan Church, Inc., a Virginia non-stock corporation to Maryellen F. Goodlatte and Robert E. Glenn, Trustees, dated January 28, 2004, recorded as Instrument No. 040001599 to secure Wesleyan Investment Foundation, Inc. in the principal sum of $6,000,000.00.

9. With regard to Parkway Wesleyan Church, Inc., a Virginia corporation (the “Corporation”), the following is required:
   A. copy of the Corporate Charter or Articles of Incorporation;
   B. a Certificate of Incorporation and By-Laws of the corporation, and any and all amendments thereto;
   C. a Certificate of Good Standing issued by the Secretary of State for the State of Virginia;
   D. foreign corporations only: Certificate of Authority from the Commonwealth of Virginia evidencing that the Corporation is authorized to do business in the Commonwealth of Virginia; and
   E. a duly certified copy of the resolution of the Board of Directors authorizing the sale of the real property referred to herein, and directing named officers of the Corporation to execute and deliver a deed conveying title thereto.
   F. Receipt and review of appropriate resolutions and/or signing authorities for those entities/persons signing the Deed(s) and/or Power(s) of Attorney, as applicable.
   Note: This Commitment is subject to such additional exceptions as may appear upon review of said documentation.

10. Description appearing under Exhibit A hereof is tentative and subject to change and modification. Upon receipt of satisfactory acceptable description, this commitment shall be amended or otherwise modified.

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SCHEDULE B, PART I
REQUIREMENTS
(continued)

11. Plat of subdivision referenced under Scedule A must be approved by the County subdivision agent and recorded with required instrument(s) and this company must be furnished with the recording information for same.

12. If survey coverage is required, the Company will require an ALTA/NSPS LAND TITLE SURVEY. If the owner of the Land that is the subject of this transaction is in possession of a current ALTA/NSPS LAND TITLE SURVEY, the Company will require that said survey be submitted for review and approval; otherwise, a new survey, satisfactory to the Company, must be prepared by a licensed land surveyor and supplied to the Company prior to the close of escrow.

    The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

13. The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any addition premium must be paid at that time. An Owner's policy should reflect the purchase price or full value of the Land.

14. Payment of all outstanding water, sewer, and public utility charges to date of settlement.

15. Payment of all taxes, charges, and assessments, levied and assessed against the subject premises, which are due and payable.

16. Certification from settlement agent that they have made independent verification through the PACER system that the seller and/or borrowers are not in bankruptcy.

17. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

END OF SCHEDULE B, PART I

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SCHEDULE B, PART II
EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

GENERAL EXCEPTIONS

1. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the Effective Date hereof but prior to the date the Proposed Insured acquires for value of record the estate or interest or mortgage thereon covered by this Commitment.

2. Taxes or special assessments which are not shown as existing liens by the public records

3. Easements, or claims of easements, not shown by the public records.

4. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

5. Rights or claims of parties in possession not shown by the public records .

SPECIAL EXCEPTIONS

6. Those taxes and special assessments which become due and payable subsequent to Date of Policy.

7. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.

8. Easement granted to Southern Bell Telephone and Telegraph Company of Virginia by instrument dated August 10, 1911, recorded in Deed Book 57, Page 374. (Roanoke Co.)

9. Easement granted to The Chesapeake and Potomac Telephone Company of Virginia by instrument dated July 29, 1914, recorded in Deed Book 74, Page 138. (Roanoke Co.)

10. Easement granted to The Chesapeake and Potomac Telephone Company of Virginia by instrument dated May 17, 1927, recorded in Deed Book 164, Page 124. (Roanoke Co.)

11. Easement granted to Appalachian Electric Power Company by instrument dated October 20, 1931, recorded in Deed Book 207, Page 556. (Roanoke Co.)

12. Easement granted to Appalachian Electric Power Company by instrument dated August 14, 1939 recorded in Deed Book 272, page 269. (Roanoke Co.)

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SCHEDULE B, PART II
EXCEPTIONS
(continued)

13. Easement granted to Appalachian Power Company by instrument dated August 7, 1990, recorded in Deed Book 1457, Page 1759.

14. Easement granted to Appalachian Power Company by instrument dated January 14, 1987, recorded in Deed Book 1559, Page 392.

15. Drainage easement conveyed to David H. Luther, Edwin H. Luther and Frances B. Luther by instrument dated July 10, 1991, recorded in Deed Book 1643, Page 1329.

16. Terms and conditions contained in Maintenance Agreement dated February 11, 2004, recorded as Instrument no. 040004107.

17. The following matters shown on plat recorded in Map Book 1, Page 1588:
a) Paved driveway and gravel driveway leading from Rte. 460 and Mexico Way, N. E. , respectively, to adjoining property;
b) Easement fifteen feet in width for public utilities located along the cul-de-sac at the terminus of Mexico Way, N. E.;
c) Failure of the fences to not coincide with the property lines;
d) Satellite dish which appears to be appurtenant located on adjoining property;
e) Drainage easement located in the southwesterly corner of property under examination;
f) 15 foot road right-of-way to cemetery located at the westerly corner of property.

END OF SCHEDULE B, PART II

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COMMITMENT CONDITIONS

1. DEFINITIONS

(a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.

(b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.

(c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.

(d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.

(e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.

(f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.

(g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.

(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

(a) the Notice;

(b) the Commitment to Issue Policy;

(c) the Commitment Conditions;

(d) Schedule A;

(e) Schedule B, Part I-Requirements;

(f) Schedule B, Part II-Exceptions; and

(g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

(a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:

(i) comply with the Schedule B, Part I-Requirements;

(ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or

(iii) acquire the Title or create the Mortgage covered by this Commitment.

(b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.

(c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.

(d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.

(e) The Company shall not be liable for the content of the Transaction Identification Data, if any.

(f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.

(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.

(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

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(continued)

(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.

(d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.

(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.

(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

END OF CONDITIONS

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FIDELITY NATIONAL TITLE GROUP, INC.

Chicago Title, Commonwealth Land Title and Fidelity National Title Insurance Companies
Virginia Production Division

TITLE SEARCH REPORT

This Title Search Report is issued for the use of the agent to whom it is addressed. This Report is to be used only by the agent to determine the insurability of title to the property described herein in conjunction with issuance of commitments, policies and endorsements by the above named title insurers ("the Company"). The agent reviewing this Title Search Report must follow all underwriting guidelines set forth in the underwriting Manual and Bulletins issued by the Company. This is a report of matters appearing in the official land records of the county or city wherein the property is located. No search has been made for any matters recorded in the Federal District Courts. Not included in this Report are matters, such as mortgages, judgments and other liens, for which the Company has found recorded satisfactions or releases, and possible other matters which, according to custom and practice, would not appear in a title search. The amount shown in this Report for any deeds of trust, judgments and/or taxes is for informational purposes only. The recipient is responsible for confirming amounts for payoff and/or proration purposes. Use of this Title Search Report for any reason other than the issuance of a Company commitment, policy or endorsement is not authorized. The liability under this Title Search Report is limited to the liability under the policy or policies issued pursuant to this Title Search Report. This Title Search Report is not an opinion, warranty or guarantee of title. The liability under this Title Search Report shall cease and terminate six months after the ending date set forth in the Period of the Search, unless extended in writing by the Company

CASE NO: *ROA22111* **CUSTOMER:** *Roanoke County*

RECIPIENT: County of Roanoke
CASE NO: ROA22111

TITLE TO THE BELOW DESCRIBED PROPERTY IS VESTED OF RECORD IN:

Parkway Wesleyan Church, Inc., a Virginia corporation

UNDER THE FOLLOWING DEED:

GRANTOR(S): The Carpenter's Foundation, a Virginia non-stock corporation
DATED: 12/19/03 **DEED BOOK & PG./INST. NO:** 040000415

The property lies in the City of Roanoke**, Virginia. Recordation references are to the Clerk's Office of the Circuit Court thereof unless otherwise stated.**

LEGAL DESCRIPTION:

2.25 acres, being a portion of property acquired by above-referenced deed. Customer to provide new survey.

DEEDS OF TRUST:

GRANTORS: Parkway Wesleyan Church, Inc., A Virginia non-stock corporation
TRUSTEES: Maryellen F. Goodlatte and Robert E. Glenn
DATED: 1/28/2004 **DEED BOOK & PG./INST. NO:** 040001599
AMOUNT: $6,000,000.00
NAMED BENEFICIARY: Wesleyan Investment Foundation, Inc.
ASSIGNMENTS, ETC.: None of record.

JUDGMENTS: None
JUDGMENTS AGAINST PURCHASER: None

FINANCING STATEMENTS: None

TAX INFORMATION:

DELINQUENT TAXES:	None
TAXES PAID THROUGH:	2nd half 2021/2022 FY (6/30/2022)
TAXES A LIEN, BUT NOT YET DUE:	1st half 2022/23 FY due 10/5/2022
ASSESSMENT:	Land Only - $1,516,900
Annual Amount:	$5,540.40
TOWN TAXES:	None.
EXEMPTION, ROLLBACK, ETC.:	Stormwater fees included with above annual amount
TAX MAP NO.	7110105
Address:	Orange Avenue NE

PROPERTY ADDRESS (not warranted): Orange Avenue, Roanoke, VA

RESTRICTIONS: None

DEEDED EASEMENTS:

FROM: G. G. Gish
TO: Southern Bell Telephone and Telegraph Company of Virginia
DATED: 8/10/11 **DEED BOOK & PG./INST. NO:** 57-374

FROM: Nannie Gish
TO: The Chesapeake and Potomac Telephone Company of Virginia
DATED: 7/29/14 **DEED BOOK & PG./INST. NO:** 74-138

FROM: Mrs. G. G. Gish
TO: The Chesapeake and Potomac Telephone Company of Virginia
DATED: 5/17/27 **DEED BOOK & PG./INST. NO:** 164-124

FROM: J. E. Gish and Nancy J. Gish
TO: Appalachian Electric Power Company
DATED: 10/20/31 **DEED BOOK & PG./INST. NO:** 207-556

FROM: Geo. G. Gish and Evelyn L. Gish
TO: Appalachian Electric Power Company
DATED: 8/14/39 **DEED BOOK & PG./INST. NO:** 272-269

FROM: Joel Ewen
TO: Appalachian Power Company
DATED: 8/7/90 **DEED BOOK & PG./INST. NO:** 1457-1759

FROM: Joel Ewen and Petra B. Ewen
TO: Appalachian Power Company
DATED: 1/14/87 **DEED BOOK & PG./INST. NO:** 1559-392

FROM: Petra B. Ewen, Executrix of Estate of Joel J. Ewen
TO: David H. Luther, Edwin H. Luther, Frances B. Luther
DATED: 7/10/91 **DEED BOOK & PG./INST. NO:** 1643-1329

EASEMENTS SHOWN ON RECORDED PLAT OF SUBDIVISION: Map Book 1-1588

a) Paved driveway and gravel driveway leading from Rte. 460 and Mexico Way, N. E. , respectively, to adjoining property.
b) Easement fifteen feet in width for public utilities located along the cul-de-sac at the terminus of Mexico Way, N. E.
c) Several fences which do not coincide with the property lines.
d) Satellite dish which appears to be appurtenant located on adjoining property.
e) Drainage easement located in the southwest corner of property.
f) 15' road right of way to cemetery located at westerly corner of property.

SHOWN ON OTHER PLATS OF RECORD: Map Book 1, 2872 shows a resubdivsion of property into Tract A-1 (70.785 acres), Lot A-1 (1.131 acres) and Lot B-1 (1.158 acre.) It appears from Exhibit A of Purchase Contract showing "Proposed Fire Station Parcel" and "Additional Parcel", that property to be insured in not within the resubdivision area shown on this plat.

BUILDING RESTRICTION LINE SHOWN ON SUBDIVISION PLAT: None

ACCESS TO PUBLIC ROAD: Yes
ROAD MAINTENANCE AGREEMENT: None of record
OTHER MATTERS:

Rights of others in and to the use of the 15 foot road right of way leading to cemetery crossing the extreme westerly corner of the property as shown on plat of survey made by John T. Parker, L.S., dated October 4, 1996, recorded in Map Book 1-1588.

Maintenance Agreement dated 2/11/2004, between Parkway Wesleyan Church, Inc. and City of Roanoke, Virginia, of record as Instrument No. 040004107.

Please note that Deed recorded as Instrument No. 040000415 which conveys the property under examination into current owner states that approval for this acquisition was attached to the deed, however, it was not.

RELIED ON: ro00002362A
EFFECTIVE DATE: April 7, 2022 at 8:00 a.m.

Fidelity National Title Insurance Company

Debbie D. Davidson

Debbie D. Davidson

SELECTED SEARCH CRITERIA

Jurisdiction: 770 - Roanoke City Circuit Court 04/11/2022 05:28AM

		From Date	To Date
Available:	Deeds and Land Records	9/3/1991	4/7/2022

Detail Search

Search:

PARKWAY WESLEYAN CHURCH INC

PARKWAY WESLEYAN CHURCH

LR 070007452 Type: **RML 5/14/2007** Pages: **2**
Description: **INST 060017137**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110121**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

LR 070007452 Type: **RML 5/14/2007** Pages: **2**
Description: **INST 060017137**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7110121**
Reverse Party: **BANKER STEEL COMPANY LLC**

LR 070001184 Type: **RML 1/24/2007** Pages: **2**
Description: **INST 060011670**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7110121**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

LR 070001184 Type: **RML 1/24/2007** Pages: **2**
Description: **INST 060011670**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110121**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

J - 0
F/S - 0

LR 060017137 Type: **LM 10/16/2006** Pages: **3**
Description: **11.588 ACRES**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110121**
Reverse Party: **BANKER STEEL COMPANY LLC**

released

Banker Steel Co. 60,184.56 7/18/06

LR 060011670 Type: **LM 7/20/2006** Pages: **3**
Description: **11.588 ACRES**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110212**
Reverse Party: **KODIAK CONSTRUCTORS INC**

released

Stevens Interior 43,440.50 4/21/06

LR 060002319 Type: **DBS 2/14/2006** Pages: **3**
Description: **0.143 ACRE**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7110120**
Reverse Party: **COMBS, BOBBY R**

✓ acq add Parcel 0.143 AC. Belle Ave see Plat @ MB1-2872

LR 060002318 Type: **DBS 2/14/2006** Pages: **5**
Description: **PARS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110120**
Reverse Party: **COMBS, BOBBY R**

✓ 0.202 ac + 0.090 Ac. Belle Ave W1 see Plat @ MB1-2872 ESMT

LR 05002872M Type: **OPM 4/26/2005** Pages: **1**
Description: **TRACT A-1 & LOTS A-1 & B-1**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110105**
Reverse Party: **COMBS, BOBBY R**

LR 05002872M Type: **OPM 4/26/2005** Pages: **1**
Description: **TRACT A-1 & LOTS A-1 & B-1**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7110105**
Reverse Party: **COMBS, BOBBY R**

see MB1-2872 ✓

LR 050002850 Type: **CS 2/25/2005** Pages: **1**
Description: **1697-713**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7090402**
Reverse Party: **FLIPPEN, G FRANKLIN; TR**

LR 050002850 Type: **CS 2/25/2005** Pages: **1**
Description: **1697-713**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090402**
Reverse Party: **PARKWAY WESLEYAN CHURCH**

rel 1697-713

LR 050002849 Type: **CPS 2/25/2005** Pages: **2**
Description: **LTS 1 & 2 INST 040001599**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7090402**
Reverse Party: **GLENN, ROBERT E; TR**

LR 050002849 Type: **CPS 2/25/2005** Pages: **2**
Description: **LTS 1 & 2 INST 040001599**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090402**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

releases Lots 1 & 2 King St.

LR 050002378 Type: **DBS-PL 2/16/2005** Pages: **5**
Description: **LTS 1 & 2 GISH ESTATE**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090411**
Reverse Party: **PARKWAY HOUSE OF PRAYER**

Lots 1 & 2 King St. 3.386 AC & 5.4619 AC.

LR 040013371 Type: **CS 8/9/2004** Pages: **1**
Description: **INST 000000602**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7090402**
Reverse Party: **GOODLATTE, MARYELLEN F; TR**

LR 040013371 Type: **CS 8/9/2004** Pages: **1**
Description: **INST 000000602**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090402**
Reverse Party: **PARKWAY WESLEYAN CHURCH**

rel. DT on report

LR 040004107 Type: **AG-PL 3/18/2004** Pages: **7**
Description: **11.588 & 70.933 ACRES**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110121**
Reverse Party: **CITY OF ROANOKE**

✓ maint. agreement STM

LR 040001599 Type: **DTCL 2/2/2004** Pages: **7**
Description: **PARS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090402**
Reverse Party: **GOODLATTTE, MARYELLEN F; TR**

1/28/04 Maryellen & Glenn Wesleyan Inv. Found Inc. LM

LR 040000415 Type: **DBS 1/9/2004** Pages: **3**
Description: **11.588 & 70.933 ACRES**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7110121**
Reverse Party: **CARPENTER'S FOUNDATION**

deed in

LR 040000414 Type: **DOA 1/9/2004** Pages: **4**
Description: **LTS 1 & 2 INST 000000602**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090411**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

LR 040000414 Type: **DOA 1/9/2004** Pages: **4**
Description: **LTS 1 & 2 INST 000000602**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7090411**
Reverse Party: **FALLON PARK WESLEYAN CHURCH**

LR 040000414 Type: **DOA 1/9/2004** Pages: **4**
Description: **LTS 1 & 2 INST 000000602**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090411**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

LR 000000602 Type: **DOT 1/14/2000** Pages: **7**
Description: **LTS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090402**
Reverse Party: **GOODLATTE, MARYELLEN F; TR**

LR 99002040M Type: **PLD 11/24/1999** Pages: **1**
Description: **LTS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map:
Reverse Party: **CITY OF ROANOKE**

LR 99002040M Type: **PLD 11/24/1999** Pages: **1**
Description: **LTS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map:
Reverse Party: **CITY OF ROANOKE**

LR 99002039M Type: **PLD 11/24/1999** Pages: **1**
Description: **LTS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map:
Reverse Party: **CITY OF ROANOKE**

LR 99002039M Type: **PLD 11/24/1999** Pages: **1**
Description: **LTS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map:
Reverse Party: **CITY OF ROANOKE**

LR 931010724 Type: **CS 12/20/1993** Pages: **0**
Description: **1647-1854**
File: **1** Change: **0** Book: **1701** Page: **47**
Name Type: **Grantor** Pin or Map:
Reverse Party: **FALLON PARK WESLEYAN CHURCH**

LR 931010724 Type: **CS 12/20/1993** Pages: **0**
Description: **1647-1854**
File: **1** Change: **0** Book: **1701** Page: **47**
Name Type: **Grantee** Pin or Map:
Reverse Party: **FALLON PARK WESLEYAN CHURCH**

LR 931008672 Type: **DOT 11/3/1993** Pages: **0**
Description: **9.3 AC**
File: **1** Change: **0** Book: **1697** Page: **713**
Name Type: **Grantor** Pin or Map:
Reverse Party: **GLENN, ROBERT E; TR**

LR 910004021 Type: **DOT 11/1/1991** Pages: **0**
Description: **9.3 AC**
File: **1** Change: **0** Book: **1647** Page: **1854**
Name Type: **Grantor** Pin or Map:
Reverse Party: **GLENN, ROBERT E; TR**

M.B. 1, PG. 1588

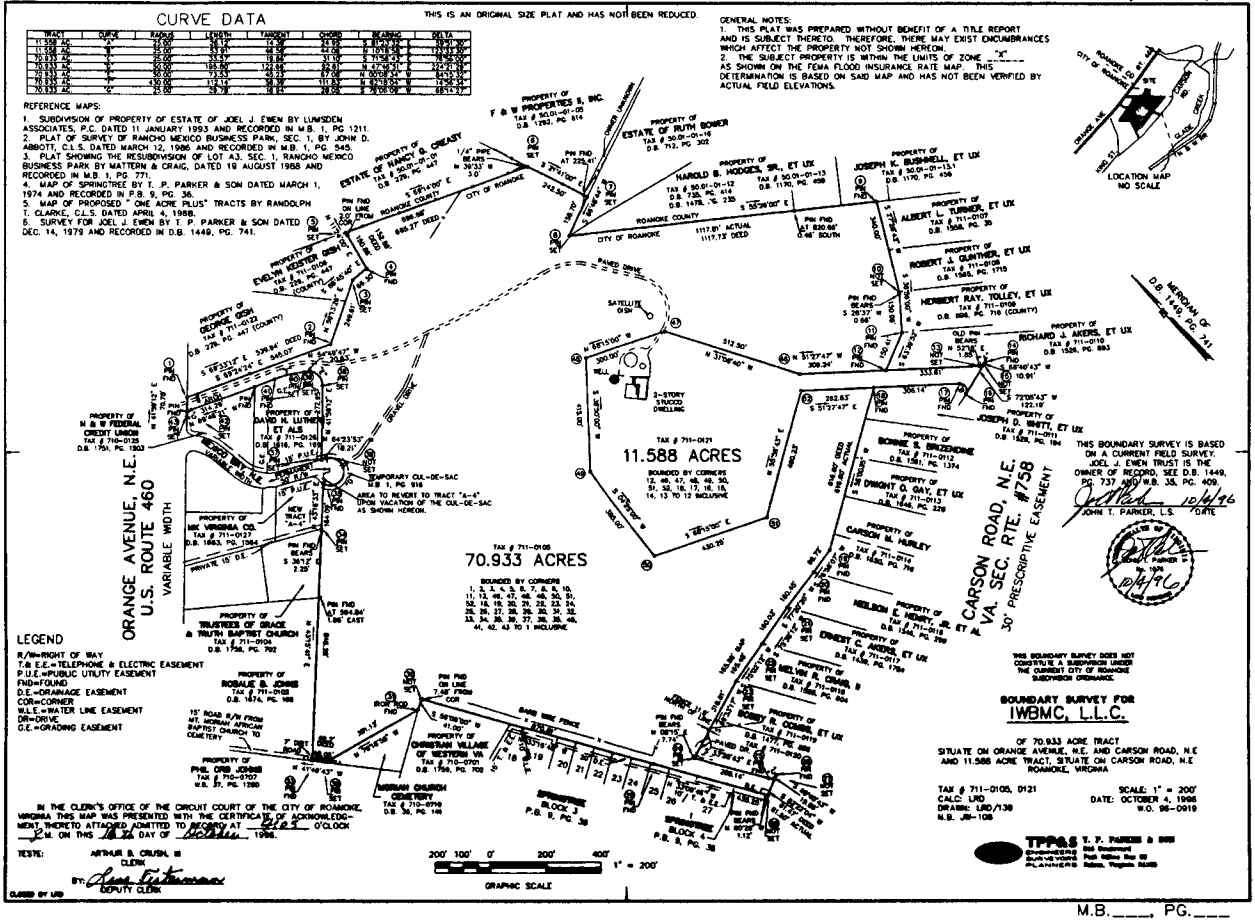
THIS IS AN ORIGINAL SIZE PLAT AND HAS NOT BEEN REDUCED.

CURVE DATA

TRACT	CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
11.588 AC.	"A"	25.00'	39.27'	24.98'	35.36'	S 89°59'00" W	90°00'00"
11.588 AC.	"B"	25.00'	39.27'	24.98'	35.36'	N 00°01'00" W	90°00'00"
70.933 AC.	"C"	25.00'	39.27'	24.98'	35.36'	N 89°59'00" E	90°00'00"
70.933 AC.	"D"	50.00'	195.50'	122.56'	92.51'	N 67°48'51" E	224°21'19"
70.933 AC.	"E"	50.00'	73.53'	45.23'	67.06'	S 00°58'34" W	84°13'12"
70.933 AC.	"F"	450.00'	112.14'	56.38'	111.83'	N 82°18'04" W	14°16'14"
70.933 AC.	"G"	25.00'	26.78'	18.24'	25.56'	S 39°09'06" W	61°21'27"

GENERAL NOTES:
1. THIS PLAT WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT AND IS SUBJECT THERETO. THEREFORE, THERE MAY EXIST ENCUMBRANCES WHICH AFFECT THE PROPERTY NOT SHOWN HEREON.
2. THE SUBJECT PROPERTY IS WITHIN THE LIMITS OF ZONE "X" AS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAP. THIS DETERMINATION IS BASED ON SAID MAP AND HAS NOT BEEN VERIFIED BY ACTUAL FIELD ELEVATIONS.

REFERENCE MAPS:
1. SUBDIVISION OF PROPERTY OF ESTATE OF JOEL J. EWEN BY LUNSDEN ASSOCIATES, P.C. DATED 11 JANUARY 1993 AND RECORDED IN M.B. 1, PG 1211.
2. PLAT OF SURVEY OF RANCHO MEXICO BUSINESS PARK, SEC. 1, BY JOHN D. ABBOTT, C.L.S. DATED MARCH 12, 1986 AND RECORDED IN M.B. 1, PG. 545.
3. PLAT SHOWING THE RESUBDIVISION OF LOT A3, SEC. 1, RANCHO MEXICO BUSINESS PARK BY MATTERN & CRAIG, DATED 19 AUGUST 1988 AND RECORDED IN M.B. 1, PG. 771.
4. MAP OF SPRINGTREE BY T. P. PARKER & SON DATED MARCH 1, 1974 AND RECORDED IN P.B. 9, PG. 36.
5. MAP OF PROPOSED " ONE ACRE PLUS" TRACTS BY RANDOLPH T. CLARKE, C.L.S. DATED APRIL 4, 1988.
6. SURVEY FOR JOEL J. EWEN BY T. P. PARKER & SON DATED DEC. 14, 1979 AND RECORDED IN D.B. 1449, PG. 741.



THIS BOUNDARY SURVEY IS BASED ON A CURRENT FIELD SURVEY. JOEL J. EWEN TRUST IS THE OWNER OF RECORD, SEE D.B. 1449, PG. 737 AND M.B. 3B, PG. 409.

JOHN T. PARKER, L.S. 10/4/96 DATE

LEGEND
R/W=RIGHT OF WAY
T.& E.E.=TELEPHONE & ELECTRIC EASEMENT
P.U.E.=PUBLIC UTILITY EASEMENT
FND=FOUND
D.E.=DRAINAGE EASEMENT
COR=CORNER
W.L.E.=WATER LINE EASEMENT
DR=DRIVE
G.E.=GRADING EASEMENT

THIS BOUNDARY SURVEY DOES NOT CONSTITUTE A SUBDIVISION UNDER THE CURRENT CITY OF ROANOKE SUBDIVISION ORDINANCE.

BOUNDARY SURVEY FOR
IWBMC, L.L.C.
OF 70.933 ACRE TRACT
SITUATE ON ORANGE AVENUE, N.E. AND CARSON ROAD, N.E
AND 11.588 ACRE TRACT, SITUATE ON CARSON ROAD, N.E
ROANOKE, VIRGINIA

TAX # 711-0105, 0121
CALC: LRD
DRAWN: LRD/130
N.B. JR-108

SCALE: 1" = 200'
DATE: OCTOBER 4, 1996
W.O. 96-0919

TPP&S
T. P. PARKER & SON
ENGINEERS
SURVEYORS
PLANNERS

IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF ROANOKE, VIRGINIA THIS MAP WAS PRESENTED WITH THE CERTIFICATE OF ACKNOWLEDGMENT THERETO ATTACHED ADMITTED TO RECORD AT 4:05 O'CLOCK P.M. ON THIS 18th DAY OF October 1996.

TESTE: ARTHUR B. CRUSH, III
CLERK
BY: DEPUTY CLERK

CLOSED BY LRD

M.B.____, PG.____

KNOW ALL MEN BY THESE PRESENTS TO WIT:

THAT BOBBY R. AND MARTHA LYNN COMBS ARE THE OWNERS OF THE PROPERTY SHOWN HEREON AS LOT A BOUNDED BY CORNERS 4 THRU 9 TO 4 INCLUSIVE, AND LOT B, BOUND BY CORNERS 1 THRU 4, 9, TO 1 INCLUSIVE, BEING THE PROPERTY CONVEYED TO SAID OWNERS BY BOBBY R. AND MARTHA LYNN COMBS BY DEED DATED OCTOBER 8, 1981 AND RECORDED IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF ROANOKE, VIRGINIA IN DEED BOOK 1477, PAGE 886.

THAT PARKWAY WESLEYAN CHURCH, INC. IS THE OWNER OF NEW TRACT A (70.934 ACRES), AS SHOWN ON MAP FOR IWBMC, L.L.C., RECORDED AS M.B. 1, PG. 1588, BEING THE PROPERTY CONVEYED TO SAID OWNER BY THE CARPENTER'S FOUNDATION, INC. BY DEED DATED DECEMBER 19, 2003 AND RECORDED IN THE AFORESAID CLERK'S OFFICE AS INSTRUMENT NUMBER 040000415.

THE SAID OWNERS HEREBY CERTIFY THAT THEY HAVE RESUBDIVIDED THE PROPERTIES OF THEIR OWN FREE WILL AND ACCORD AS REQUIRED BY SECTIONS 15.2-2240 THRU 15.2-2279 OF THE 1950 CODE OF VIRGINIA AS AMENDED TO DATE AND THE CITY OF ROANOKE SUBDIVISION ORDINANCE AS AMENDED TO DATE, AND VACATE LINES 5-6, 6-7, 7-8 AND 8-1 SHOWN DOTTED HEREON.

Bobby R. Combs 4/18/05 — BOBBY R. COMBS–OWNER, DATE, DEED BOOK 1477, PAGE 886

Martha Lynn Combs 4/18/05 — MARTHA LYNN COMBS–OWNER, DATE, DEED BOOK 1477, PAGE 886

4-18-05 — DR. JOHN W. OTT–PRESIDENT, PARKWAY WESLEYAN CHURCH, INC., INSTRUMENT NUMBER 040000415

4/18/05 — TERRY L. HALL–VICE PRESIDENT, PARKWAY WESLYEAN CHURCH, INC., INSTRUMENT NUMBER 040000415

STATE OF VIRGINIA
City OF Roanoke
TO WIT:

I, Linda C. Hogan, A NOTARY PUBLIC IN AND FOR THE AFORESAID STATE DO HEREBY CERTIFY THAT BOBBY R. COMBS, WHOSE NAME IS SIGNED TO THE FOREGOING WRITING HAS PERSONALLY APPEARED BEFORE ME AND ACKNOWLEDGED THE SAME IN MY AFORESAID JURISDICTION ON THIS 18th DAY OF April, 2005.

MY COMMISSION EXPIRES: 5-31-07 — Linda C. Hogan, NOTARY PUBLIC

STATE OF VIRGINIA
City OF Roanoke
TO WIT:

I, Linda C. Hogan, A NOTARY PUBLIC IN AND FOR THE AFORESAID STATE DO HEREBY CERTIFY THAT MARTHA LYNN COMBS, WHOSE NAME IS SIGNED TO THE FOREGOING WRITING HAS PERSONALLY APPEARED BEFORE ME AND ACKNOWLEDGED THE SAME IN MY AFORESAID JURISDICTION ON THIS 18th DAY OF April, 2005.

MY COMMISSION EXPIRES: 5-31-07 — Linda C. Hogan, NOTARY PUBLIC

STATE OF VIRGINIA
County OF Roanoke
TO WIT:

I, Donna Scruggs, A NOTARY PUBLIC IN AND FOR THE AFORESAID STATE DO HEREBY CERTIFY THAT DR. JOHN W. OTT, PRESIDENT OF PARKWAY WESLEYAN CHURCH, INC., WHOSE NAME IS SIGNED TO THE FOREGOING WRITING HAS PERSONALLY APPEARED BEFORE ME AND ACKNOWLEDGED THE SAME IN MY AFORESAID JURISDICTION ON THIS 20 DAY OF April, 2005.

MY COMMISSION EXPIRES: October 31, 2006 — Donna Scruggs, NOTARY PUBLIC

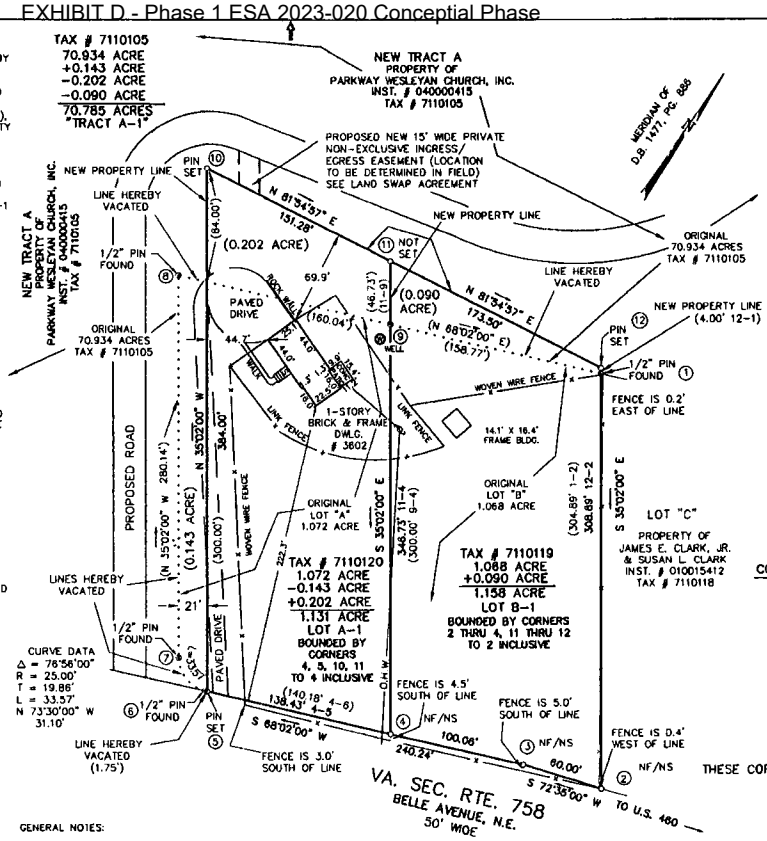
STATE OF VIRGINIA
County OF Roanoke
TO WIT:

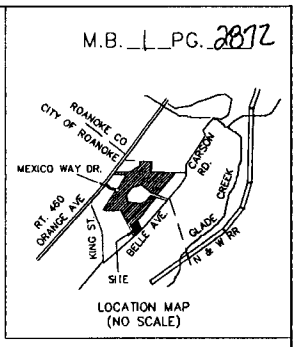
I, Donna Scruggs, A NOTARY PUBLIC IN AND FOR THE AFORESAID STATE DO HEREBY CERTIFY THAT TERRY L. HALL, VICE PRESIDENT OF PARKWAY WESLEYAN CHURCH, INC., WHOSE NAME IS SIGNED TO THE FOREGOING WRITING HAS PERSONALLY APPEARED BEFORE ME AND ACKNOWLEDGED THE SAME IN MY AFORESAID JURISDICTION ON THIS 20 DAY OF April, 2005.

MY COMMISSION EXPIRES: October 31, 2006 — Donna Scruggs, NOTARY PUBLIC

IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF ROANOKE, VIRGINIA THIS MAP WAS PRESENTED WITH THE CERTIFICATE OF ACKNOWLEDGEMENT THERETO ATTACHED ADMITTED TO RECORD AT 11:57 O'CLOCK A M. ON THIS 26th DAY OF April, 2005.

TESTE: BRENDA S. HAMILTON, CLERK
BY: Laura Bmc, DEPUTY CLERK





LOCATION MAP (NO SCALE)

LEGEND:
O.H.W.=OVERHEAD WIRE
BLDG.=BUILDING
DWLG.=DWELLING
CONC.=CONCRETE
PP=POWER POLE
NF/NS=NOT FOUND NOT SET

PROPERTIES ZONED RS-3

COORDINATES

CORNER	NORTHING	EASTING
1	4245.59	6661.79
2	3995.94	6836.81
3	3977.98	6779.56
4	3940.55	6686.77
5	3888.77	6558.38
6	3888.11	6556.76
7	3898.95	6526.94
8	4126.33	6366.13
9	4186.20	6514.55
10	4203.19	6337.95
11	4224.46	6487.72
12	4248.86	6659.50
1	4245.59	6661.79

THESE CORRDINATES ARE BASED ON AN ASSUMED DATUM

GENERAL NOTES:

1. THIS PLAT WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT AND IS SUBJECT THERETO. THEREFORE, THERE MAY EXIST ENCUMBRANCES WHICH AFFECT THE PROPERTY NOT SHOWN HEREON.
2. THE SUBJECT PROPERTY IS WITHIN THE LIMITS OF ZONE "X" AS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAP NUMBER 51161C0028D. THIS DETERMINATION IS BASED ON SAID MAP AND HAS NOT BEEN VERIFIED BY ACTUAL FIELD ELEVATIONS.
3. PIN SET BY TPP&S IS 1/2" DIAMETER BY 18" LONG REINFORCING ROD DRIVEN TO 2 INCHES ABOVE GROUND WITH PLASTIC YELLOW CAP ON TOP WITH "T.P. PARKER PROP. COR" EMBOSSED. A 3-4 FOOT METAL ORANGE ANGLE IRON IS DRIVEN BESIDE CORNER PIN.
4. THE RECORDATION OF THIS PLAT OF SUBDIVISION DOES NOT CONSTITUTE A CONVEYANCE OF LAND. ANY LOT, PARCEL OR TRACT OF LAND SHOWN HEREON THAT IS INTENDED FOR SALE AND/OR CONVEYANCE MUST BE CONVEYED BY DEED AND SAID DEED MUST BE RECORDED IN THE OFFICE OF THE CLERK OF CIRCUIT COURT OF THE CITY OF ROANOKE.

APPROVED:

R. Boyer Toussaud 4-22-05 — AGENT - CITY OF ROANOKE PLANNING COMMISSION, DATE

4-22-05 — CITY ENGINEER - CITY OF ROANOKE, DATE

COMMONWEALTH OF VIRGINIA — LINDA R. DUFFY No. 1615 — LAND SURVEYOR — 4/13/05

THIS PLAT IS BASED ON A PARTIAL SURVEY. PARKWAY WESLEYAN CHURCH, INST. NO. 040000415, AND BOBBY R. & MARTHA LYNN COMBS, D.B. 1477, PG. 886, ARE THE CURRENT OWNERS. LINES 5-10, 10-12, & 12-1 ARE BASED ON CURRENT FIELD SURVEY.

50' 25' 0' 50' 100' — GRAPHIC SCALE — 1" = 50'

CLOSED BY REC MARCH 9, 2005

PLAT OF SURVEY FOR

PARKWAY WESLEYAN CHURCH, INC. AND BOBBY R. & MARTHA LYNN COMBS

RESUBDIVIDING NEW TRACT A (70.934 ACRES), M.B. 1, PG. 1588 & LOT A (1.072 ACRE) AND LOT B (1.068 ACRE), D.B. 1477, PG. 886 CREATING HEREON TRACT A-1 (70.785 ACRES), LOT A-1 (1.131 ACRE) AND LOT B-1 (1.158 ACRE)
SITUATE ON BELLE AVENUE, N.E.
CITY OF ROANOKE, VIRGINIA

TAX NO.: 7110105, 7110119, 7110120
DRAWN: RC-2
CALC: REC

SCALE: 1" = 50'
DATE: APRIL 13, 2005
W.O.: 05-0093
N.B. JR-242

TPP&S — T. P. PARKER & SON — ENGINEERS SURVEYORS PLANNERS — 616 Boulevard, Post Office Box 20, Salem, Virginia 24153, 540-387-1183

M.B. 1 PG. 2872

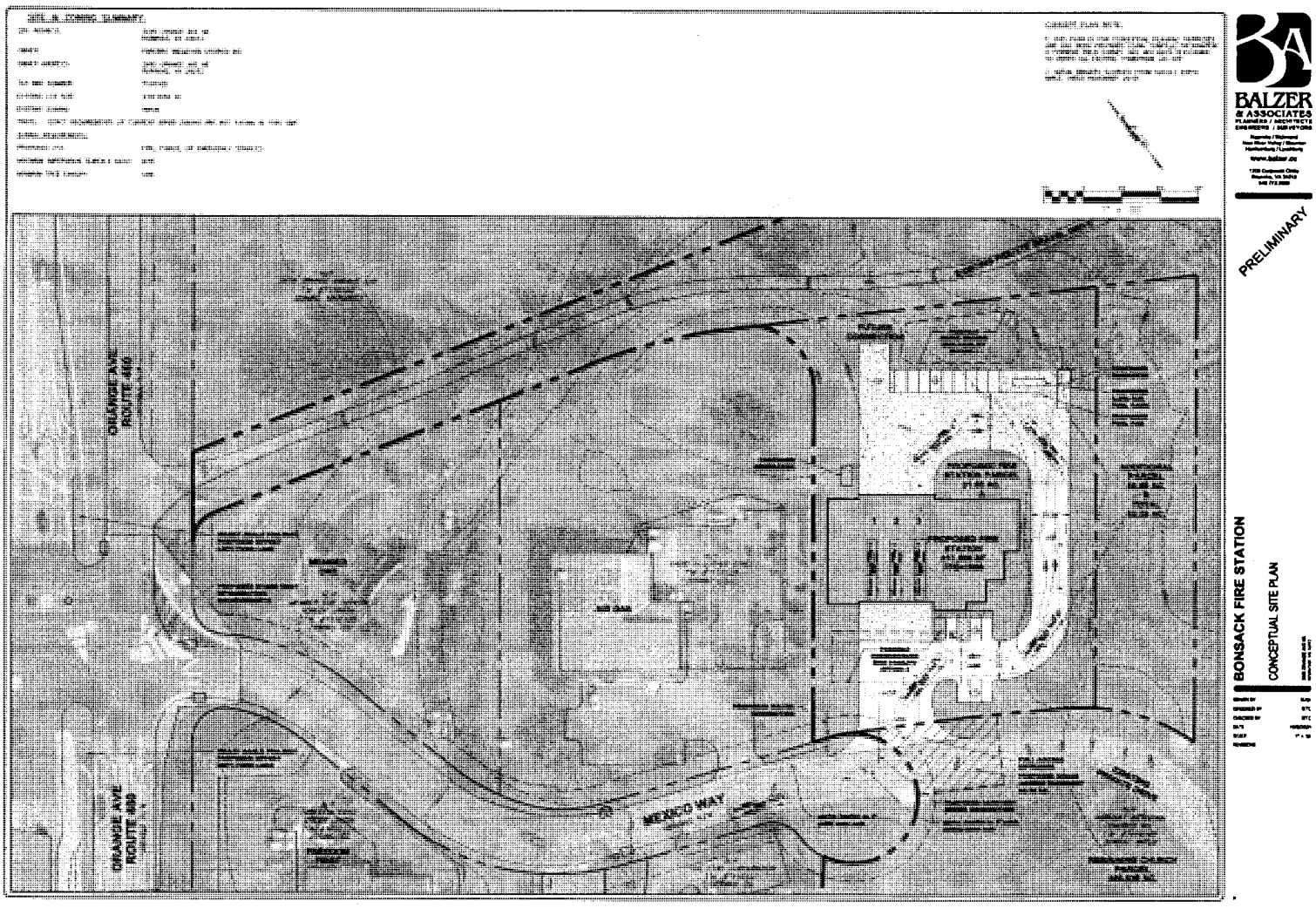

ORANGE AVE
ROUTE 460
ORANGE AVE
ROUTE 460
MEXICO WAY
BALZER
& ASSOCIATES
PRELIMINARY
BONSACK FIRE STATION
CONCEPTUAL SITE PLAN

Exhibit A

ECS MID-ATLANTIC, LLC
"Setting the Standard for Service"
Geotechnical • Construction Materials • Environmental • Facilities

April 25, 2022

City of Roanoke Fire Department
Via Email: fire-ems@roanokeva.gov

ECS Project No. 47:14480

Subject: Freedom of Information Act Request

To Whom It May Concern:

ECS Mid-Atlantic, LLC (ECS) is currently working on an environmental site assessment in Roanoke and are requesting information that you may have regarding documented environmental issues, including but not limited to underground storage tank installation or removal and responses to spills or releases of petroleum/chemical substances or hazardous materials at the subject site or in the immediate area of the site. The site is:

- Grass Parcel – 3645 Orange Avenue NE, Roanoke, Virginia
  Parcel ID: 7110105

We appreciate any information on the subject site or in the vicinity of the subject site. If you have any questions, please call me at 540-362-2000.

Respectfully,

ECS MID-ATLANTIC, LLC

Alexandra Moon

Alexandra Moon
Senior Project Manager

Appendix III: Regulatory Records Documentation

New Bonsack / 460 Fire Station
3645 Orange Avenue
Roanoke, VA 24012

Inquiry Number: 6949527.2s
April 21, 2022

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	56
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-11
Physical Setting Source Map Findings	A-13
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

3645 ORANGE AVENUE
ROANOKE, VA 24012

COORDINATES

Latitude (North):	37.3058520 - 37ˆ 18' 21.06''
Longitude (West):	79.8869880 - 79ˆ 53' 13.15''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	598637.4
UTM Y (Meters):	4129179.2
Elevation:	1058 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	13861947 ROANOKE, VA
Version Date:	2019
East Map:	13861957 STEWARTSVILLE, VA
Version Date:	2019

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20141017
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
3645 ORANGE AVENUE
ROANOKE, VA 24012

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	GETTY 71120	3542 ORANGE AVE	LUST, LTANKS, UST	Lower	715, 0.135, WNW
A2	SLEEP ESSENTIALS	3542 ORANGE AVENUE	RCRA NonGen / NLR	Lower	715, 0.135, WNW
A3	COOPER CROUSE-HINDS,	1700 BLUE HILLS DR.	RCRA-VSQG, FINDS, ECHO	Lower	728, 0.138, WNW
A4	GARDNER-DENVER M&C	1700 BLUE HILLS DR	UST	Lower	728, 0.138, WNW
B5	CHALLENGER AVE SUNOC	3745 CHALLENGER AVE	LUST	Lower	1301, 0.246, NNE
B6	CHALLENGER AVE SUNOC	3745 CHALLENGER AVE	LTANKS	Lower	1301, 0.246, NNE
B7	SAV-ON TOBACCO	3745 CHALLENGER AVE	LUST, LTANKS, UST, SPILLS, Financial Assurance	Lower	1301, 0.246, NNE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ..... National Priority List
Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ..... National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ..... Federal Facility Site Information listing
SEMS ..... Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ..... Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ..... Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

EXECUTIVE SUMMARY

Federal ERNS list

ERNS..... Emergency Response Notification System

Lists of state- and tribal hazardous waste facilities

SHWS..... This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF..... Solid Waste Management Facilities

Lists of state and tribal leaking storage tanks

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST..... Underground Storage Tank Listing
AST..... Registered Petroleum Storage Tanks
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

ENG CONTROLS..... Engineering Controls Sites Listing
INST CONTROL..... Voluntary Remediation Program Database

Lists of state and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Remediation Program

Lists of state and tribal brownfield sites

BROWNFIELDS..... Brownfields Site Specific Assessments

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register

EXECUTIVE SUMMARY

US CDL ..... National Clandestine Laboratory Register

Local Land Records

LIENS 2 ..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
SPILLS ..... Prep/Spills Database Listing
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS ..... Formerly Used Defense Sites
DOD ..... Department of Defense Sites
SCRD DRYCLEANERS ..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ..... Financial Assurance Information
EPA WATCH LIST ..... EPA WATCH LIST
2020 COR ACTION ..... 2020 Corrective Action Program List
TSCA ..... Toxic Substances Control Act
TRIS ..... Toxic Chemical Release Inventory System
SSTS ..... Section 7 Tracking Systems
ROD ..... Records Of Decision
RMP ..... Risk Management Plans
RAATS ..... RCRA Administrative Action Tracking System
PRP ..... Potentially Responsible Parties
PADS ..... PCB Activity Database System
ICIS ..... Integrated Compliance Information System
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ..... Material Licensing Tracking System
COAL ASH DOE ..... Steam-Electric Plant Operation Data
COAL ASH EPA ..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ..... PCB Transformer Registration Database
RADINFO ..... Radiation Information Database
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ..... Incident and Accident Data
CONSENT ..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV ..... Indian Reservations
FUSRAP ..... Formerly Utilized Sites Remedial Action Program
UMTRA ..... Uranium Mill Tailings Sites
LEAD SMELTERS ..... Lead Smelter Sites
US AIRS ..... Aerometric Information Retrieval System Facility Subsystem
US MINES ..... Mines Master Index File
ABANDONED MINES ..... Abandoned Mines
FINDS ..... Facility Index System/Facility Registry System
DOCKET HWC ..... Hazardous Waste Compliance Docket Listing
ECHO ..... Enforcement & Compliance History Information
UXO ..... Unexploded Ordnance Sites
FUELS PROGRAM ..... EPA Fuels Program Registered Listing
AIRS ..... Permitted Airs Facility List
NPDES ..... Comprehensive Environmental Data System
COAL ASH ..... Coal Ash Disposal Sites
DRYCLEANERS ..... Drycleaner List

EXECUTIVE SUMMARY

ENF Enforcement Actions Data
Financial Assurance Financial Assurance Information Listing
TIER 2 Tier 2 Information Listing
UIC Underground Injection Control Wells
MINES MRDS Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF Recovered Government Archive Solid Waste Facilities List
RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal RCRA generators

RCRA-VSQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-VSQG list, as provided by EDR, and dated 02/28/2022 has revealed that there is 1 RCRA-VSQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
COOPER CROUSE-HINDS,	***1700 BLUE HILLS DR.***	***WNW 1/8 - 1/4 (0.138 mi.)***	***A3***	***18***

EXECUTIVE SUMMARY

EPA ID:: VAD108251992

Lists of state and tribal leaking storage tanks

LUST: The Leaking Underground Storage Tank Database.

A review of the LUST list, as provided by EDR, has revealed that there are 3 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GETTY 71120	***3542 ORANGE AVE***	***WNW 1/8 - 1/4 (0.135 mi.)***	***A1***	***8***
Database: LUST REG WC, Date of Government Version: 06/04/2015 Date Closed: 1999-09-28 00:00:00 Date Closed: 1998-09-09 00:00:00 Pollution Control #: 00-2016 Pollution Control #: 98-1130				
CHALLENGER AVE SUNOC	3745 CHALLENGER AVE	NNE 1/8 - 1/4 (0.246 mi.)	B5	40
Database: LUST REG WC, Date of Government Version: 06/04/2015 Case Status: Closed Pollution Control #: 20152218				
SAV-ON TOBACCO	***3745 CHALLENGER AVE***	***NNE 1/8 - 1/4 (0.246 mi.)***	***B7***	***41***
Database: LUST REG WC, Date of Government Version: 06/04/2015				

LTANKS: The Leaking Tanks Database contains current Leaking petroleum tanks. The data comes from the Department of Environmental Quality.

A review of the LTANKS list, as provided by EDR, and dated 11/03/2021 has revealed that there are 3 LTANKS sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GETTY 71120	***3542 ORANGE AVE***	***WNW 1/8 - 1/4 (0.135 mi.)***	***A1***	***8***
Facility Status: Closed CEDS Facility Id: 200000093891 Pollution Complaint #: 19981130				
CHALLENGER AVE SUNOC	3745 CHALLENGER AVE	NNE 1/8 - 1/4 (0.246 mi.)	B6	41
Facility Status: Closed CEDS Facility Id: 200000090411 Pollution Complaint #: 20152218				
SAV-ON TOBACCO	***3745 CHALLENGER AVE***	***NNE 1/8 - 1/4 (0.246 mi.)***	***B7***	***41***
Facility Status: Closed CEDS Facility Id: 200000090411 Pollution Complaint #: 20052058				

EXECUTIVE SUMMARY

Lists of state and tribal registered storage tanks

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Quality's Underground Storage Tank Data Notification Information.

A review of the UST list, as provided by EDR, and dated 11/01/2021 has revealed that there are 3 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GETTY 71120 Tank Status: REM FROM GRD Facility Id: 2000644 CEDS Facility ID: 200000093891	***3542 ORANGE AVE***	***WNW 1/8 - 1/4 (0.135 mi.)***	***A1***	***8***
GARDNER-DENVER M&C Tank Status: REM FROM GRD Facility Id: 2016055 CEDS Facility ID: 200000089391	1700 BLUE HILLS DR	WNW 1/8 - 1/4 (0.138 mi.)	A4	35
SAV-ON TOBACCO Tank Status: CURR IN USE Tank Status: TEMP OUT OF USE Facility Id: 2022675 CEDS Facility ID: 200000090411	***3745 CHALLENGER AVE***	***NNE 1/8 - 1/4 (0.246 mi.)***	***B7***	***41***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 02/28/2022 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

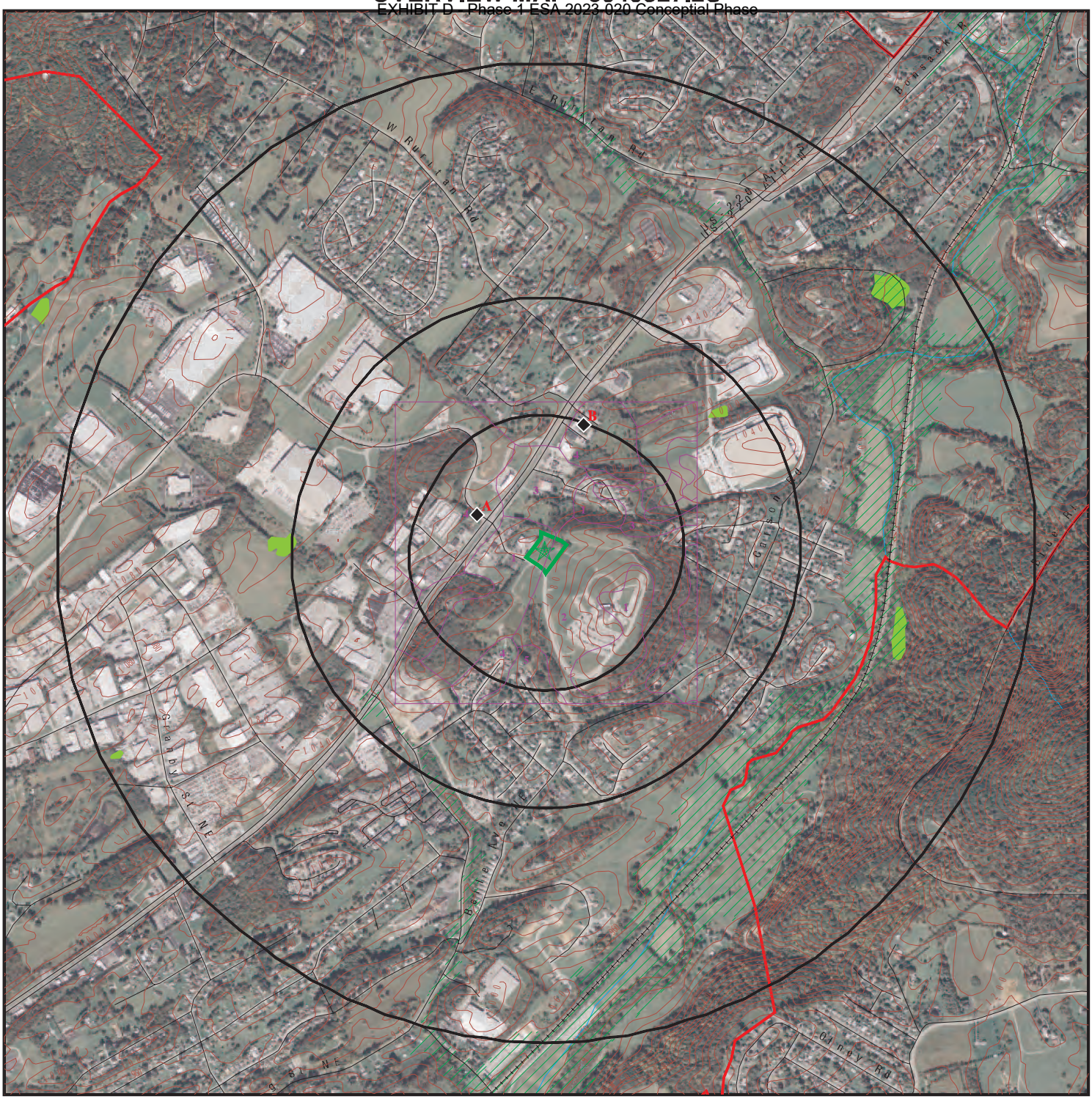
Lower Elevation	Address	Direction / Distance	Map ID	Page
SLEEP ESSENTIALS EPA ID:: VAR000512806	3542 ORANGE AVENUE	WNW 1/8 - 1/4 (0.135 mi.)	A2	14

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
NW SIGNAL SHOP	LTANKS

OVERVIEW MAP - 6949527.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

County Boundary

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	New Bonsack / 460 Fire Station	CLIENT:	ECS Mid Atlantic, LLC
ADDRESS:	3645 Orange Avenue Roanoke VA 24012	CONTACT:	Alexandra Moon
		INQUIRY #:	6949527.2s
LAT/LONG:	37.305852 / 79.886988	DATE:	April 21, 2022 9:10 am

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DETAIL MAP - 6949527.2S

Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	New Bonsack / 460 Fire Station	CLIENT:	ECS Mid Atlantic, LLC
ADDRESS:	3645 Orange Avenue Roanoke VA 24012	CONTACT:	Alexandra Moon
LAT/LONG:	37.305852 / 79.886988	INQUIRY #:	6949527.2s
		DATE:	April 21, 2022 9:12 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	1	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	3	0	NR	NR	3

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
LTANKS	0.500		0	3	0	NR	NR	3
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	3	NR	NR	NR	3
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	0	11	0	0	0	11

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A1 **WNW** **1/8-1/4** **0.135 mi.** **715 ft.**	**GETTY 71120** **3542 ORANGE AVE** **ROANOKE, VA 24012** **Site 1 of 4 in cluster A**	**LUST** **LTANKS** **UST**	**U003673960** **N/A**

Relative:
Lower

Actual:
1028 ft.

LUST REG WC:

Region:	WC
Case Status:	**Not reported**
Date Reported:	08/16/1999
Date Closed:	1999-09-28 00:00:00
Release Reported:	Not reported
Pollution Control #:	00-2016
Case Manager:	Not reported
Owner Name:	GETTY PETROLEUM MKT., INC
Owner Address:	86 DOREMUS AVENUE
Owner City,St,Zip:	NEWARK, NJ 07105
Owner Phone:	800-487-4388

Region:	WC
Case Status:	**Not reported**
Date Reported:	04/27/1998
Date Closed:	1998-09-09 00:00:00
Release Reported:	Not reported
Pollution Control #:	98-1130
Case Manager:	Not reported
Owner Name:	GETTY REALTY CORP
Owner Address:	86 DOREMUS AVENUE
Owner City,St,Zip:	NEWARK, NJ 07105
Owner Phone:	973-344-7860

LTANKS:

Name:	GETTY MART #120
Address:	3542 ORANGE AVE
City,State,Zip:	ROANOKE, VA 24012
City,State,Zip:	ROANOKE, VA 24012
Region:	BRRO-R
CEDS Facility Id:	200000093891
Case Status:	**Closed**
Pollution Complaint #:	19981130
Reported:	04/27/1998
Case Closed Date:	09/09/1998
Program:	RP Lead
Federally Regulated UST (Y/N):	Y
Regulated Petroleum UST (1):	Y
Excluded UST (1):	N
Deferred UST (1):	N
Partially Deferred UST (1):	N
Exempt 1 UST (2):	N
Exempt 2 Heating Oil UST (2):	N
Small Heating Oil AST (2):	N
Regulated AST (3):	N
Unregulated AST (3):	N
Other Y/N:	N
Unknown Y/N:	N
Other Description:	Not reported
Heating Oil Category:	Not reported

GETTY 71120 (Continued) **U003673960**

Facility:

Name:	GETTY 71120
Address:	3542 ORANGE AVE
City,State,Zip:	ROANOKE, VA 24012
Facility Id:	2000644
Facility Type:	GAS STATION
CEDS Facility ID:	200000093891

Owner:

Owner Id:	27127
Owner Name:	Getty Petroleum Marketing Inc
Owner Address:	1500 Hempstead Tpke
Owner Address2:	Not reported
Owner City, State, Zip:	East Meadow, NY 11554
Owner Type:	PRIVATE
Number of Active AST:	0
Number of Active UST:	0
Number of Inactive AST:	0
Number of Inactive UST:	4

UST:

Facility ID:	2000644
Federally Regulated:	Yes
Tank Number:	1
Tank Capacity:	10000
Tank Contents:	GASOLINE
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	1/1/1980
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	Yes
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Glass Lined

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	Yes
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Yes

GETTY 71120 (Continued) **U003673960**

Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	Yes
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	Yes
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	APT FLEXIBLE
Facility ID:	2000644
Federally Regulated:	Yes
Tank Number:	2
Tank Capacity:	5000
Tank Contents:	GASOLINE
Tank Status:	**REM FROM GRD**
Tank Type:	UST
Tank Material:	
Install Date:	1/1/1980
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	Yes
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Glass Lined
Release Detection:	
Tank Release Detection: Leak Deferred	No

GETTY 71120 (Continued) **U003673960**

Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	Yes
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Yes
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	Yes
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	Yes
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	APT FLEXIBLE
Facility ID:	2000644
Federally Regulated:	Yes
Tank Number:	3
Tank Capacity:	5000
Tank Contents:	GASOLINE
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	1/1/1980
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	Yes
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No

GETTY 71120 (Continued) **U003673960**

Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Glass Lined

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	Yes
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Yes
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	Yes
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported

Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	Yes
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	APT FLEXIBLE

Facility ID:	2000644
Federally Regulated:	Yes

Tank Number:	4
Tank Capacity:	6000
Tank Contents:	KEROSENE
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	1/1/1980
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes

GETTY 71120 (Continued) **U003673960**

Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	Yes
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Glass Lines

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	Yes
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Yes
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	Yes
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported

Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	Yes
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	APT FLEXIBLE

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A2 WNW 1/8-1/4 0.135 mi. 715 ft.	**SLEEP ESSENTIALS 3542 ORANGE AVENUE ROANOKE, VA 24012 Site 2 of 4 in cluster A**	**RCRA NonGen / NLR**	**1009400601 VAR000512806**

Relative:
Lower

Actual:
1028 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:		20080721
Handler Name:	SLEEP ESSENTIALS	
Handler Address:		3542 ORANGE AVENUE
Handler City,State,Zip:		ROANOKE, VA 24012-6427
EPA ID:		VAR000512806
Contact Name:		Not reported
Contact Address:		Not reported
Contact City,State,Zip:		Not reported
Contact Telephone:		000-000-0000 239
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		03
Land Type:		Private
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Not reported
State District Owner:		VA
State District:		2
Mailing Address:		Not reported
Mailing City,State,Zip:		00000
Owner Name:		Not reported
Owner Type:		Not reported
Operator Name:		Not reported
Operator Type:		Not reported
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		NN
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

SLEEP ESSENTIALS (Continued) **1009400601**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20080721
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE
Waste Code:	D018
Waste Description:	BENZENE

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	GETTY PETROLEUM MARKETING, INC.
Legal Status:	Private
Date Became Current:	19800101
Date Ended Current:	Not reported
Owner/Operator Address:	1500 HEMPSTEAD TPKE
Owner/Operator City,State,Zip:	EAST MEADOW, NY 11554
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	SCOTT HANLEY
Legal Status:	Private
Date Became Current:	19800101

SLEEP ESSENTIALS (Continued) **1009400601**

Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20060515
Handler Name:	GETTY PETROLEUM MARKETING, INC. #71120
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20080721
Handler Name:	SLEEP ESSENTIALS
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20080721
Handler Name:	SLEEP ESSENTIALS
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	44211
NAICS Description:	FURNITURE STORES

NAICS Code:	44711
NAICS Description:	GASOLINE STATIONS WITH CONVENIENCE STORES

SLEEP ESSENTIALS (Continued) **1009400601**

Facility Has Received Notices of Violation:

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:

Evaluation Date:	20080717
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R2KJT
Evaluation Responsible Sub-Organization:	WC
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A3 WNW 1/8-1/4 0.138 mi. 728 ft.	**COOPER CROUSE-HINDS, LLC 1700 BLUE HILLS DR. NE ROANOKE, VA 24012 Site 3 of 4 in cluster A**	**RCRA-VSQG FINDS ECHO**	**1000190577 VAD108251992**

Relative:
Lower

Actual:
1037 ft.

RCRA-VSQG:

Date Form Received by Agency:	20180205
Handler Name:	COOPER CROUSE-HINDS, LLC
Handler Address:	1700 BLUE HILLS DR. NE
Handler City,State,Zip:	ROANOKE, VA 24012
EPA ID:	VAD108251992
Contact Name:	JEFF A HENCHEL
Contact Address:	1700 BLUE HILLS DR. NE
Contact City,State,Zip:	ROANOKE, VA 24012
Contact Telephone:	540-983-1322 322
Contact Fax:	540-983-1311
Contact Email:	JEFFAHENCHEL@EATON.COM
Contact Title:	EHS MANAGER
EPA Region:	03
Land Type:	Private
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	VA
State District:	2
Mailing Address:	1700 BLUE HILLS DR. NE
Mailing City,State,Zip:	ROANOKE, VA 24012
Owner Name:	EATON CORPORATION
Owner Type:	Private
Operator Name:	RONALD G. SPAAR
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20180322
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE
Waste Code:	D002
Waste Description:	CORROSIVE WASTE
Waste Code:	D005
Waste Description:	BARIUM
Waste Code:	D006
Waste Description:	CADMIUM
Waste Code:	D007
Waste Description:	CHROMIUM
Waste Code:	D008
Waste Description:	LEAD
Waste Code:	D009
Waste Description:	MERCURY
Waste Code:	D011
Waste Description:	SILVER

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Waste Code: D018
Waste Description: BENZENE

Waste Code: D035
Waste Description: METHYL ETHYL KETONE

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	PATTY HAMILTON
Legal Status:	Private
Date Became Current:	20000701
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MARCUS HAMILTON
Legal Status:	Private
Date Became Current:	20030811
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	COOPER INDUSTRIES
Legal Status:	Private
Date Became Current:	19921101
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 4446
Owner/Operator City,State,Zip:	HOUSTON, TX 77210-4446
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	OPERNAME
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	OPERSTREET
Owner/Operator City,State,Zip:	OPERCITY, AK 99999
Owner/Operator Telephone:	215-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	OPERNAME
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	OPERSTREET
Owner/Operator City,State,Zip:	OPERCITY, AK 99999
Owner/Operator Telephone:	215-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	CRAIG ATWATER
Legal Status:	Private
Date Became Current:	20050916
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	RONALD G. SPAAR
Legal Status:	Private
Date Became Current:	20090801
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	COOPER INDUSTRIES, LTD.
Legal Status:	Private
Date Became Current:	19921101
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 4446
Owner/Operator City,State,Zip:	HOUSTON, TX 77210-4446
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Owner/Operator Indicator:	Operator
Owner/Operator Name:	CRAIG ATWATER
Legal Status:	Private
Date Became Current:	20050916
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	RONALD G. SPAAR
Legal Status:	Private
Date Became Current:	20090801
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MARCUS HAMILTON
Legal Status:	Private
Date Became Current:	20030811
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	PATTY HAMILTON
Legal Status:	Private
Date Became Current:	20000701
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	PATTY HAMILTON
Legal Status:	Private
Date Became Current:	20000701
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	PATTY HAMILTON
Legal Status:	Private
Date Became Current:	20000701
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	CRAIG ATWATER
Legal Status:	Private
Date Became Current:	20050916
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	COOPER INDUSTRIES, LTD.
Legal Status:	Private
Date Became Current:	19921101
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 4446

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Owner/Operator City,State,Zip:	HOUSTON, TX 77210-4446
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	PATTY HAMILTON
Legal Status:	Private
Date Became Current:	20000701
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	MARCUS HAMILTON
Legal Status:	Private

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Date Became Current:	20030811
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	OPERNAME
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	OPERSTREET
Owner/Operator City,State,Zip:	OPERCITY, AK 99999
Owner/Operator Telephone:	215-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	OPERNAME
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	OPERSTREET
Owner/Operator City,State,Zip:	OPERCITY, AK 99999
Owner/Operator Telephone:	215-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	OPERNAME
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	OPERSTREET
Owner/Operator City,State,Zip:	OPERCITY, AK 99999
Owner/Operator Telephone:	215-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MARCUS HAMILTON
Legal Status:	Private
Date Became Current:	20030811
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Owner/Operator Indicator:	Operator
Owner/Operator Name:	EATON CORPORATION
Legal Status:	Private
Date Became Current:	20121130
Date Ended Current:	Not reported
Owner/Operator Address:	1000 EATON BOULEVARD
Owner/Operator City,State,Zip:	CLEVELAND, OH 44122
Owner/Operator Telephone:	540-983-1310
Owner/Operator Telephone Ext:	310
Owner/Operator Fax:	540-983-1311
Owner/Operator Email:	RONGSPAAR@EATON.COM

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	EATON CORPORATION
Legal Status:	Private
Date Became Current:	20121130
Date Ended Current:	Not reported
Owner/Operator Address:	1000 EATON BOULEVARD
Owner/Operator City,State,Zip:	CLEVELAND, OH 44122
Owner/Operator Telephone:	540-983-1310
Owner/Operator Telephone Ext:	310
Owner/Operator Fax:	540-983-1311
Owner/Operator Email:	RONGSPAAR@EATON.COM

Historic Generators:

Receive Date:	19841031
Handler Name: CROUSE HINDS DIV	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20030305
Handler Name: COOPER CROUSE-HINDS	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20030305
Handler Name: COOPER CROUSE-HINDS	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20030905
Handler Name: COOPER CROUSE-HINDS	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20050922
Handler Name: COOPER CROUSE-HINDS, LLC	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	Yes
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20090811
Handler Name: COOPER CROUSE-HINDS, LLC	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Receive Date:	20180205
Handler Name:	COOPER CROUSE-HINDS, LLC
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

Receive Date:	19900301
Handler Name:	GARDNER-DENVER
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	19920227
Handler Name:	GARDNER DENVER M&C
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	19940225
Handler Name:	GARDNER DENVER MINING & CONSTRUCTION
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	33312
NAICS Description:	CONSTRUCTION MACHINERY MANUFACTURING

NAICS Code:	333131

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

NAICS Description: MINING MACHINERY AND EQUIPMENT MANUFACTURING

NAICS Code: 335122
NAICS Description: COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL ELECTRIC LIGHTING FIXTURE MANUFACTURING

NAICS Code: 335931
NAICS Description: CURRENT-CARRYING WIRING DEVICE MANUFACTURING

NAICS Code: 335932
NAICS Description: NONCURRENT-CARRYING WIRING DEVICE MANUFACTURING

NAICS Code: 42161
NAICS Description: ELECTRICAL APPARATUS AND EQUIPMENT, WIRING SUPPLIES, AND CONSTRUCTION MATERIAL WHOLESALERS

NAICS Code: 42361
NAICS Description: ELECTRICAL APPARATUS AND EQUIPMENT, WIRING SUPPLIES, AND RELATED EQUIPMENT MERCHANT WHOLESALERS

NAICS Code: 423610
NAICS Description: ELECTRICAL APPARATUS AND EQUIPMENT, WIRING SUPPLIES, AND RELATED EQUIPMENT MERCHANT WHOLESALERS

Facility Has Received Notices of Violation:

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	19910913
Actual Return to Compliance Date:	19940210
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19910913
Actual Return to Compliance Date:	19940210
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19910913
Actual Return to Compliance Date:	19940210
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19910913
Actual Return to Compliance Date:	19940210
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 19910913
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 19940210
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 19971031
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: R2KJT
Evaluation Responsible Sub-Organization: WC
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 19910913
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	19940210
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	20210204
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R2LNP
Evaluation Responsible Sub-Organization:	BR
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19910913
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	19940210
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19910913
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	19940210
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

FINDS:
Registry ID: 110001888173

Click Here:

Environmental Interest/Information System:
AFS (Aerometric Information Retrieval System (AIRS) Facility

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants.
AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.
CEDS (Virginia - Comprehensive Environmental Data System) is the Department of Environmental Quality's (DEQ) electronic data system for maintaining databases on sources of pollutants in all media.
US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
AIR MINOR

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000190577
Registry ID:	110001888173
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110001888173
Name:	GARDNER DENVER MINING & CONSTRUCTION
Address:	1700 BLUE HILLS DR
City,State,Zip:	ROANOKE, VA 24012

A4 **GARDNER-DENVER M&C** **UST** **U003676573**
WNW **1700 BLUE HILLS DR** **N/A**
1/8-1/4 **ROANOKE, VA 24012**
0.138 mi.
728 ft. **Site 4 of 4 in cluster A**

Relative:
Lower

Actual:
1037 ft.

Facility:

Name:	GARDNER-DENVER M&C
Address:	1700 BLUE HILLS DR
City,State,Zip:	ROANOKE, VA 24012
Facility Id:	2016055
Facility Type:	INDUSTRIAL
CEDS Facility ID:	200000089391

Owner:

Owner Id:	27835
Owner Name:	COOPER INDUSTRIES
Owner Address:	BOX 4446
Owner Address2:	HARRIS
Owner City, State, Zip:	HOUSTON, TX 77002
Owner Type:	COMMERCIAL
Number of Active AST:	0
Number of Active UST:	0

GARDNER-DENVER M&C (Continued) **U003676573**

Number of Inactive AST:	0
Number of Inactive UST:	4

UST:

Facility ID:	2016055
Federally Regulated:	Yes
Tank Number:	1R
Tank Capacity:	1500
Tank Contents:	DIESEL
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	5/8/1981
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Not reported

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	No
Tank Release Detection: Overfill Install	No
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	UNKNOWN
Pipe Materials: Bare Steel	No

GARDNER-DENVER M&C (Continued) **U003676573**

Pipe Materials: Galvanized Steel	Yes
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	No
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported

Facility ID:	2016055
Federally Regulated:	Yes

Tank Number:	2R
Tank Capacity:	1500
Tank Contents:	DIESEL
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	5/8/1981
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Not reported

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	No
Tank Release Detection: Overfill Install	No
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	No

GARDNER-DENVER M&C (Continued) **U003676573**

Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	UNKNOWN
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	Yes
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	No
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2016055
Federally Regulated:	Yes
Tank Number:	3R
Tank Capacity:	3000
Tank Contents:	GASOLINE
Tank Status:	**REM FROM GRD**
Tank Type:	UST
Tank Material:	
Install Date:	5/8/1981
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Not reported
Release Detection:	
Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	No
Tank Release Detection: Overfill Install	No
Tank Release Detection: Groundwater	No

GARDNER-DENVER M&C (Continued) **U003676573**

Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	UNKNOWN
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	Yes
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	No
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2016055
Federally Regulated:	Yes
Tank Number:	4R
Tank Capacity:	6000
Tank Contents:	UNKNOWN
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	5/9/1983
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Not reported

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No

GARDNER-DENVER M&C (Continued) **U003676573**

Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	No
Tank Release Detection: Overfill Install	No
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	UNKNOWN
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	Yes
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	No
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported

B5 **CHALLENGER AVE SUNOCO** **LUST** **S117622950**
NNE **3745 CHALLENGER AVE** **N/A**
1/8-1/4 **ROANOKE, VA 24012**
0.246 mi.
1301 ft. **Site 1 of 3 in cluster B**

Relative:
Lower

Actual:
1048 ft.

LUST REG WC:

Region:	WC
Case Status:	**Closed**
Date Reported:	Not reported
Date Closed:	Not reported
Release Reported:	12/04/2014
Pollution Control #:	20152218
Case Manager:	Jonathan P Newbill
Owner Name:	Not reported
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Owner Phone:	Not reported

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
B6 **NNE** **1/8-1/4** **0.246 mi.** **1301 ft.**	**CHALLENGER AVE SUNOCO** **3745 CHALLENGER AVE** **ROANOKE, VA** **Site 2 of 3 in cluster B**	**LTANKS**	**S117622614** **N/A**

Relative:
Lower

Actual:
1048 ft.

LTANKS:

Name:	CHALLENGER AVE SUNOCO
Address:	3745 CHALLENGER AVE
City,State,Zip:	ROANOKE, VA
City,State,Zip:	ROANOKE, VA
Region:	BRRO-R
CEDS Facility Id:	200000090411
Case Status:	**Closed**
Pollution Complaint #:	20152218
Reported:	12/04/2014
Case Closed Date:	12/16/2014
Program:	RP Lead
Federally Regulated UST (Y/N):	Y
Regulated Petroleum UST (1):	Y
Excluded UST (1):	N
Deferred UST (1):	N
Partially Deferred UST (1):	N
Exempt 1 UST (2):	N
Exempt 2 Heating Oil UST (2):	N
Small Heating Oil AST (2):	N
Regulated AST (3):	N
Unregulated AST (3):	N
Other Y/N:	N
Unknown Y/N:	N
Other Description:	Not reported
Heating Oil Category:	Not reported

B7 **NNE** **1/8-1/4** **0.246 mi.** **1301 ft.**	**SAV-ON TOBACCO** **3745 CHALLENGER AVE** **ROANOKE, VA 24012** **Site 3 of 3 in cluster B**	**LUST** **LTANKS** **UST** **SPILLS** **Financial Assurance**	**U003983094** **N/A**

Relative:
Lower

Actual:
1048 ft.

LUST REG WC:

Region:	WC
Case Status:	**Not reported**
Date Reported:	11/15/2004
Date Closed:	Not reported
Release Reported:	Not reported
Pollution Control #:	Not reported
Case Manager:	Not reported
Owner Name:	EMPIRE PETROLEUM CO., LLC
Owner Address:	15729 CRABBS BRANCH WAY
Owner City,St,Zip:	ROCKVILLE, MD 20855
Owner Phone:	301-921-9200

LTANKS:

Name:	FAST STOP FOOD MART
Address:	3745 CHALLENGER AVE
City,State,Zip:	ROANOKE, VA
City,State,Zip:	ROANOKE, VA
Region:	BRRO-R
CEDS Facility Id:	200000090411

SAV-ON TOBACCO (Continued) **U003983094**

Case Status:	**Closed**
Pollution Complaint #:	20052058
Reported:	11/15/2004
Case Closed Date:	08/31/2007
Program:	RP Lead
Federally Regulated UST (Y/N):	Y
Regulated Petroleum UST (1):	Y
Excluded UST (1):	N
Deferred UST (1):	N
Partially Deferred UST (1):	N
Exempt 1 UST (2):	N
Exempt 2 Heating Oil UST (2):	N
Small Heating Oil AST (2):	N
Regulated AST (3):	N
Unregulated AST (3):	N
Other Y/N:	N
Unknown Y/N:	N
Other Description:	Not reported
Heating Oil Category:	Not reported

Facility:

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
City,State,Zip:	ROANOKE, VA 24012
Facility Id:	2022675
Facility Type:	GAS STATION
CEDS Facility ID:	200000090411

Owner:

Owner Id:	41804
Owner Name:	Empire Petroleum Partners LLC
Owner Address:	8350 N Central Expressway Ste M2185
Owner Address2:	Not reported
Owner City, State, Zip:	Dallas, TX 75206
Owner Type:	COMMERCIAL
Number of Active AST:	0
Number of Active UST:	8
Number of Inactive AST:	0
Number of Inactive UST:	0

Owner Id:	50116
Owner Name:	Asim Aayan LLC
Owner Address:	3745 Challenger Avenue NE
Owner Address2:	Not reported
Owner City, State, Zip:	Roanoke, VA 24012
Owner Type:	COMMERCIAL
Number of Active AST:	0
Number of Active UST:	8
Number of Inactive AST:	0
Number of Inactive UST:	0

UST:

Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	1M
Tank Capacity:	8000

SAV-ON TOBACCO (Continued) **U003983094**

Tank Contents:	GASOLINE
Tank Status:	**CURR IN USE**
Tank Type:	UST
Tank Material:	
Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide
Release Detection:	
Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Automatic Shutoff
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No

SAV-ON TOBACCO (Continued) **U003983094**

Pipe Materials: Other Note	Not reported
Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	2M
Tank Capacity:	8000
Tank Contents:	GASOLINE
Tank Status:	**CURR IN USE**
Tank Type:	UST
Tank Material:	
Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide
Release Detection:	
Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Automatic Shutoff
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No

SAV-ON TOBACCO (Continued) **U003983094**

Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported

Facility ID:	2022675
Federally Regulated:	Yes

Tank Number:	3
Tank Capacity:	8000
Tank Contents:	GASOLINE PREMIUM
Tank Status:	**CURR IN USE**
Tank Type:	UST

Tank Material:

Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No

SAV-ON TOBACCO (Continued) **U003983094**

Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Automatic Shutoff
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	4
Tank Capacity:	8000
Tank Contents:	DIESEL
Tank Status:	**CURR IN USE**
Tank Type:	UST

Tank Material:

Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No

SAV-ON TOBACCO (Continued) **U003983094**

Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Automatic Shutoff
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	5
Tank Capacity:	8000
Tank Contents:	GASOLINE RACING
Tank Status:	**CURR IN USE**
Tank Type:	UST

Tank Material:

Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	Yes

SAV-ON TOBACCO (Continued) **U003983094**

Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	6
Tank Capacity:	10000
Tank Contents:	HEATING OIL
Tank Status:	**TEMP OUT OF USE**
Tank Type:	UST

Tank Material:

Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No

SAV-ON TOBACCO (Continued) **U003983094**

Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	7
Tank Capacity:	10000
Tank Contents:	DIESEL
Tank Status:	**TEMP OUT OF USE**
Tank Type:	UST

Tank Material:

Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No

SAV-ON TOBACCO (Continued) **U003983094**

Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported

Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported

Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	8
Tank Capacity:	10000
Tank Contents:	HEATING OIL
Tank Status:	**TEMP OUT OF USE**

SAV-ON TOBACCO (Continued) **U003983094**

Tank Type:	UST
Tank Material:	
Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide
Release Detection:	
Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported

SAV-ON TOBACCO (Continued) **U003983094**

SPILLS:

Name:	Not reported
Address:	3745 CHALLENGER AVE
City,State,Zip:	ROANOKE, VA 24012
City,State,Zip:	ROANOKE, VA 24012
Fips City/County:	161/Roanoke County
Status:	Closed
Reference Id:	253643
IR Number:	2006-W-0247
Associated IR:	Not reported
Incident Date:	03/24/2006
Call Received Date:	03/24/2006
Closure Comments:	See Site Comments for details
Threat To:	Not reported
Terrorism (Y/N):	NO
Characterize Incident:	Not reported
Incident Type:	Petroleum(Petroleum)
Incident Subtype:	Petroleum
Materials:	Oil (Fuel-Gasoline)
Effect To Receptor:	Not reported
Water Body:	Not reported
Low Quantity To Water:	Not reported
High Quantity To Water:	Not reported
Quantity Units:	Not reported
Other Receptors:	Ditch Line
RP Company:	EOC
RP Name:	Not reported
Property Owner:	Not reported
Property Company:	Not reported
Duration Of Event (Hrs):	Not reported
Impacts:	Not reported
Other Impacts:	Not reported
Steps Taken:	Not reported
Steps Taken Description:	Not reported
System Components:	Not reported
Other System Components:	Not reported
Cause Of Event:	Not reported
Corrective Action Taken:	Not reported
Weather Status:	No
Precipitation (Wet):	Not reported
Discharge Type:	Not reported
Discharge Volume:	Not reported
Unknown Discharge (Y/N):	NO
Site Name:	FAST STOP MARKET
Closure Date:	04/26/2006
Orig. Call Incident Description:	17 Gallons of Gasoline spilled and washed with a water hase into a ditch.
Original Call Material Description:	Gasoline
Original Call Location Description:	Fast Stop Market-3745 Challenger Ave-Roanoke-VA-24012-Roanoke County
Incident Ongoing at time of Call:	No
Agencies Notified (Y/N):	NO
Other Agencies:	Not reported
Permitted (Y/N):	No
Call Reported By Company Name:	Unidentified
Call Property Owner Company Name:	Not reported
Call Property Owner Name:	Not reported
Site Summary:	Not reported

SAV-ON TOBACCO (Continued) **U003983094**

VA Financial Assurance 1:

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	8000
CEDS Facility Name:	Food Mart 208
Tank Status:	CURR IN USE
Active Federally Regualted UST:	Y

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	10000
CEDS Facility Name:	Food Mart 208
Tank Status:	TEMP OUT OF USE
Active Federally Regualted UST:	Y

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	8000
CEDS Facility Name:	Food Mart 208
Tank Status:	CURR IN USE
Active Federally Regualted UST:	Y

SAV-ON TOBACCO (Continued) **U003983094**

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	8000
CEDS Facility Name:	Food Mart 208
Tank Status:	CURR IN USE
Active Federally Regualted UST:	Y

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	8000
CEDS Facility Name:	Food Mart 208
Tank Status:	CURR IN USE
Active Federally Regualted UST:	Y

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	10000
CEDS Facility Name:	Food Mart 208
Tank Status:	TEMP OUT OF USE
Active Federally Regualted UST:	Y

SAV-ON TOBACCO (Continued) **U003983094**

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	8000
CEDS Facility Name:	Food Mart 208
Tank Status:	CURR IN USE
Active Federally Regualted UST:	Y

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	10000
CEDS Facility Name:	Food Mart 208
Tank Status:	TEMP OUT OF USE
Active Federally Regualted UST:	Y

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ROANOKE	S103723005	NW SIGNAL SHOP	HOLLINS & ORANGE INTERSECTION		LTANKS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 84

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 11/19/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 11/19/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/01/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 9

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/22/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Department of Environmental Quality
Telephone: 804-698-4236
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: N/A

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Solid Waste Management Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/29/2021
Date Data Arrived at EDR: 12/01/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 84

Source: Department of Environmental Quality
Telephone: 804-698-4238
Last EDR Contact: 02/25/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Semi-Annually

Lists of state and tribal leaking storage tanks

LUST REG PD: Leaking Underground Storage Tank Sites

Leaking underground storage tank site locaitons. Includes: counties of Amelia, Brunswick, Charles City, Chesterfield, Dinwiddie, Essex, Gloucester, Goochland, Greensville, Hanover, Henrico, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northumberland, Powhatan, Prince George, Richmond, Surry, Sussex, Westmoreland; cities of Colonial Heights, Emporia, Hopewell, Petersburg.

Date of Government Version: 12/02/2014
Date Data Arrived at EDR: 12/04/2014
Date Made Active in Reports: 01/16/2015
Number of Days to Update: 43

Source: Department of Environmental Quality Piedmont Regional Office
Telephone: 804-527-5020
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Quarterly

LUST REG TD: Leaking Underground Storage Tank Sites

Leaking underground storage tank site locations. Includes: counties of Accomack, Isle of Wight, James City, Northampton, Southampton, York; cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, Williamsburg.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 09/16/2013
Number of Days to Update: 73

Source: Department of Environmental Quality Tidewater Regional Office
Telephone: trofoia@deq.vir
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

LUST REG SC: Leaking Underground Storage Tanks
Leaking underground storage tank site locations. Includes: counties of Amherst, Appomattox, Buckingham, Campbell, Charlotte, Cumberland, Halifax, Lunenburg, Mecklenburg, Nottoway, Pittsylvania, Prince Deward; cities of Danville, Lynchburg.

Date of Government Version: 09/06/2013
Date Data Arrived at EDR: 09/06/2013
Date Made Active in Reports: 09/17/2013
Number of Days to Update: 11

Source: Department of Environmental Quality, South Central Region
Telephone: 434-582-5120
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Semi-Annually

LUST REG VA: Leaking Underground Storage Tank List
Leaking underground storage tank site locations. Includes: counties of Albemarle, Augusta, Bath, Clarke, Fluvanna, Frederick, Greene, Highland, Nelson, Page, Rockbridge, Rockingham, Shenandoah, Warren; cities of Buena Vista, Charlottesville, Harrisonburg, Lexington, Staunton, Waynesboro, Winchester.

Date of Government Version: 12/06/2011
Date Data Arrived at EDR: 12/08/2011
Date Made Active in Reports: 01/16/2012
Number of Days to Update: 39

Source: Department of Environmental Quality Valley Regional Office
Telephone: 540-574-7800
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: No Update Planned

LUST REG NO: Leaking Underground Storage Tank Tracking Database
Leaking underground storage tank site locations. Includes: counties of Arlington, Caroline, Culpeper, Fairfax, Fauquier, King George, Loudoun, Louisa, Madison, Orange, Prince William, Rappahannock, Spotsylvania, Stafford; cities of Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, Manassas Park.

Date of Government Version: 05/18/2004
Date Data Arrived at EDR: 05/22/2004
Date Made Active in Reports: 07/09/2004
Number of Days to Update: 48

Source: Department of Environmental Quality Northern Regional Office
Telephone: 703-583-3800
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG WC: Leaking Underground Storage Tank List
Leaking underground storage tank site locations. Includes: counties of Alleghany, Bedford, Botetourt, Craig, Floyd, Franklin, Giles, Henry, Montgomery, Patrick, Pulaski, Roanoke; cities of Bedford, Clifton Forge, Covington, Martinsville, Radford, Roanoke, Salem.

Date of Government Version: 06/04/2015
Date Data Arrived at EDR: 06/05/2015
Date Made Active in Reports: 07/07/2015
Number of Days to Update: 32

Source: Department of Environmental Quality West Central Regional Office
Telephone: 540-562-6700
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: No Update Planned

LUST REG SW: Leaking Underground Storage Tank Database
Leaking underground storage tank site locations. Includes: counties of Bland, Buchanan, Carroll, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe; cities of Bristol, Galax, Norton.

Date of Government Version: 07/15/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 09/16/2013
Number of Days to Update: 60

Source: Department of Environmental Quality Southwest Regional Office
Telephone: 276-676-4800
Last EDR Contact: 10/11/2016
Next Scheduled EDR Contact: 01/23/2017
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

LTANKS: Leaking Petroleum Storage Tanks
Includes releases of petroleum from underground storage tanks and aboveground storage tanks.

Date of Government Version: 11/03/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/10/2022
Number of Days to Update: 80

Source: Department of Environmental Quality
Telephone: 804-698-4010
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

UST: Registered Petroleum Storage Tanks
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 11/01/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/10/2022
Number of Days to Update: 80

Source: Department of Environmental Quality
Telephone: 804-698-4010
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

AST: Registered Petroleum Storage Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 11/01/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/10/2022
Number of Days to Update: 80

Source: Department of Environmental Quality
Telephone: 804-698-4010
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 02/09/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Sites Listing

A listing of sites with Engineering Controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 01/05/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 75

Source: Department of Environmental Quality
Telephone: 804-698-4228
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

INST CONTROL: Voluntary Remediation Program Database

Sites included in the Voluntary Remediation Program database that have deed restrictions.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 01/05/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 75

Source: Department of Environmental Quality
Telephone: 804-698-4228
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VRP: Voluntary Remediation Program

The Voluntary Cleanup Program encourages owners of elected contaminated sites to take the initiative and conduct voluntary cleanups that meet state environmental standards.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 01/05/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 75

Source: Department of Environmental Quality
Telephone: 804-698-4228
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Brownfields Site Specific Assessments

To qualify for Brownfields Assessment, the site must meet the Federal definition of a Brownfields and should have contaminant issues that need to be addressed and a redevelopment plan supported by the local government and community. Virginia's Department of Environmental Quality performs brownfields assessments under a cooperative agreement with the U.S. Environmental Protection Agency at no cost to communities, property owners or, prospective purchasers. The assessment is an evaluation of environmental impacts caused by previous site uses similar to a Phase II Environmental Assessment.

Date of Government Version: 01/19/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 83

Source: Department of Environmental Quality
Telephone: 804-698-4207
Last EDR Contact: 04/20/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/10/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 0

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/15/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/24/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 11/16/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 11/16/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

PFAS: Per- and Polyfluoroalkyl Substances

PFOS and PFOA stand for perfluorooctane sulfonate and perfluorooctanoic acid, respectively. Both are fluorinated organic chemicals, part of a larger family of compounds referred to as perfluoroalkyl substances (PFASs).

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 01/06/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 74

Source: Department of Environmental Quality
Telephone: 804-698-4336
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/15/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 84

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

SPILLS BRL: Prep/Spills Database Listing
A listing of spills locations located in the Blue Ridge Regional area, Lynchburg.

Date of Government Version: 09/18/2009
Date Data Arrived at EDR: 09/18/2009
Date Made Active in Reports: 10/06/2009
Number of Days to Update: 18

Source: DEQ, Blue Ridge Regional Office
Telephone: 434-582-6218
Last EDR Contact: 11/28/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Varies

SPILLS VA: PREP Database
The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 08/08/2012
Date Data Arrived at EDR: 08/09/2012
Date Made Active in Reports: 10/05/2012
Number of Days to Update: 57

Source: Department of Environmental Quality, Valley Regional Office
Telephone: 540-574-7800
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

SPILLS TD: PREP Database
The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 09/17/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/06/2009
Number of Days to Update: 13

Source: Department of Environmental Quality, Tidewater Region
Telephone: trofoia@deq.vir
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Quarterly

SPILLS: Prep/Spills Database Listing
The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment. PREP staff often work to assist local emergency responders, other state agencies, federal agencies, and responsible parties, as may be needed, to manage pollution incidents. Oil spills, fish kills, and hazardous materials spills are examples of incidents that may involve the DEQ's PREP Program.

Date of Government Version: 08/02/2021
Date Data Arrived at EDR: 08/24/2021
Date Made Active in Reports: 11/17/2021
Number of Days to Update: 85

Source: Department of Environmental Quality
Telephone: 804-698-4287
Last EDR Contact: 02/10/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

SPILLS SW: Reportable Spills
The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 01/21/2010
Date Data Arrived at EDR: 01/22/2010
Date Made Active in Reports: 02/16/2010
Number of Days to Update: 25

Source: Department of Environmental Quality, Southwest Region
Telephone: 276-676-4839
Last EDR Contact: 07/13/2012
Next Scheduled EDR Contact: 10/29/2012
Data Release Frequency: No Update Planned

SPILLS PD: PREP Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 10/20/2009
Date Data Arrived at EDR: 10/29/2009
Date Made Active in Reports: 12/03/2009
Number of Days to Update: 35

Source: Department of Environmental Quality, Piedmont Region
Telephone: 804-527-5020
Last EDR Contact: 02/06/2012
Next Scheduled EDR Contact: 05/21/2012
Data Release Frequency: Quarterly

SPILLS NO: PREP Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/29/2009
Date Made Active in Reports: 10/30/2009
Number of Days to Update: 31

Source: Department of Environmental Quality, Northern Region
Telephone: 703-583-3864
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

SPILLS PC: Pollution Complaint Database

Pollution Complaints Database. The pollution reports contained in the PC database include the initial release reporting of Leaking Underground Storage Tanks and all other releases of petroleum to the environment as well as releases to state waters. The database is current through 12/1/93. Since that time, all spill and pollution reporting information has been collected and tracked through the DEQ regional offices.

Date of Government Version: 06/01/1996
Date Data Arrived at EDR: 10/22/1996
Date Made Active in Reports: 11/21/1996
Number of Days to Update: 30

Source: Department of Environmental Quality
Telephone: 804-698-4287
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: No Update Planned

SPILLS WC: Prep Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 09/21/2009
Date Data Arrived at EDR: 09/29/2009
Date Made Active in Reports: 10/30/2009
Number of Days to Update: 31

Source: Department of Environmental Quality, West Central Region
Telephone: 540-562-6700
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 09/01/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 43

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 10/26/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 84

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/15/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/13/2021
Date Data Arrived at EDR: 12/17/2021
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/01/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/18/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/18/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/19/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/20/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/12/2021
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 22

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 64

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/24/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 87

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 84

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/04/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/24/2022
Next Scheduled EDR Contact: 05/08/2022
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 70

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 23

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 01/31/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/03/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/21/2022
Date Data Arrived at EDR: 03/22/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 3

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/02/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/14/2021
Date Data Arrived at EDR: 12/15/2021
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 85

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/04/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/04/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 95

Source: EPA
Telephone: (215) 814-5000
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 01/10/2022
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/22/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 34

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 78

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Quarterly

AIRS: Permitted Airs Facility List

A listing of permitted Airs facilities.

Date of Government Version: 12/15/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/11/2022
Number of Days to Update: 85

Source: Department of Environmental Quality
Telephone: 804-698-4000
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Annually

CEDS: Comprehensive Environmental Data System

Virginia Water Protection Permits, Virginia Pollution Discharge System (point discharge) permits and Virginia Pollution Abatement (no point discharge) permits.

Date of Government Version: 09/14/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 09/23/2021
Number of Days to Update: 8

Source: Department of Environmental Quality
Telephone: 804-698-4077
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

COAL ASH: Coal Ash Disposal Sites

A listing of facilities with coal ash impoundments.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 05/26/2021
Date Made Active in Reports: 08/18/2021
Number of Days to Update: 84

Source: Department of Environmental Protection
Telephone: 804-698-4285
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

DRYCLEANERS: Drycleaner List

A listing of registered drycleaners.

Date of Government Version: 04/11/2022
Date Data Arrived at EDR: 04/12/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 1

Source: Department of Environmental Quality
Telephone: 804-698-4407
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

ENFORCEMENT: Enforcement Actions Data

A listing of enforcement actions.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 01/06/2022
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 48

Source: Department of Environmental Quality
Telephone: 804-698-4031
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/25/2021
Date Data Arrived at EDR: 10/28/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 83

Source: Department of Environmental Quality
Telephone: 804-698-4205
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information listing

Solid waste financial assurance information.

Date of Government Version: 01/26/2022
Date Data Arrived at EDR: 01/28/2022
Date Made Active in Reports: 01/31/2022
Number of Days to Update: 3

Source: Department of Environmental Quality
Telephone: 804-698-4123
Last EDR Contact: 01/24/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing

A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 76

Source: Department of Environmental Quality
Telephone: 804-698-4159
Last EDR Contact: 04/11/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: No Update Planned

UIC: Underground Injection Control Wells

A listing of underground injection controls wells.

Date of Government Version: 10/26/2021
Date Data Arrived at EDR: 10/27/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 84

Source: Department of Mines, Minerals and Energy
Telephone: 276-415-9700
Last EDR Contact: 04/20/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List
The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Virgina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/20/2014
Number of Days to Update: 203

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank
The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Virgina and at the Regional VA Levels.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/15/2014
Number of Days to Update: 198

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/11/2021
Date Data Arrived at EDR: 11/12/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 81

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/07/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/14/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 804-692-1900

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

NEW BONSACK / 460 FIRE STATION
3645 ORANGE AVENUE
ROANOKE, VA 24012

TARGET PROPERTY COORDINATES

Latitude (North):	37.305852 - 37ˆ 18’ 21.07’’
Longitude (West):	79.886988 - 79ˆ 53’ 13.16’’
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	598637.4
UTM Y (Meters):	4129179.2
Elevation:	1058 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	13861947 ROANOKE, VA
Version Date:	2019
East Map:	13861957 STEWARTSVILLE, VA
Version Date:	2019

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

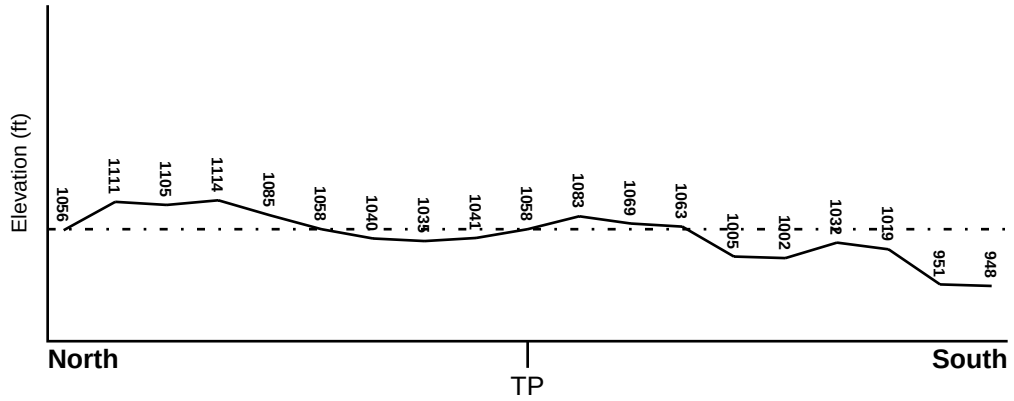
TOPOGRAPHIC INFORMATION

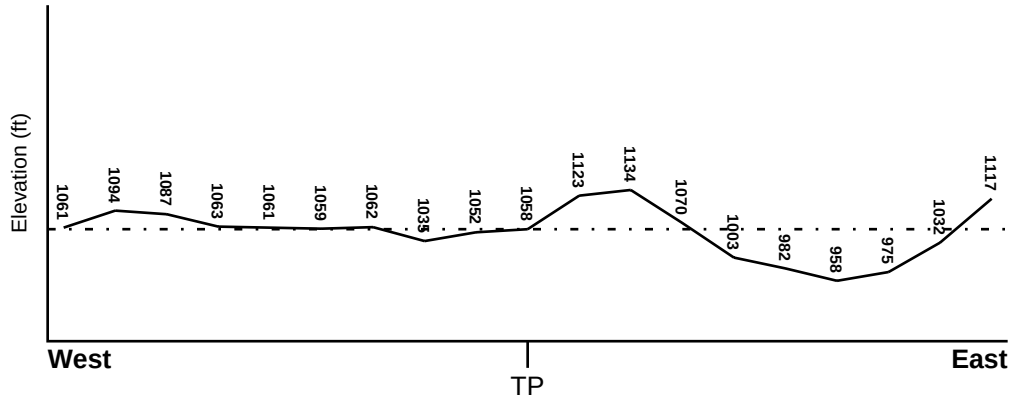
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 1058 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
51161C0167G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
51023C0480C	FEMA FIRM Flood data
51023C0460C	FEMA FIRM Flood data
51019C0265D	FEMA FIRM Flood data
51161C0186G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
ROANOKE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

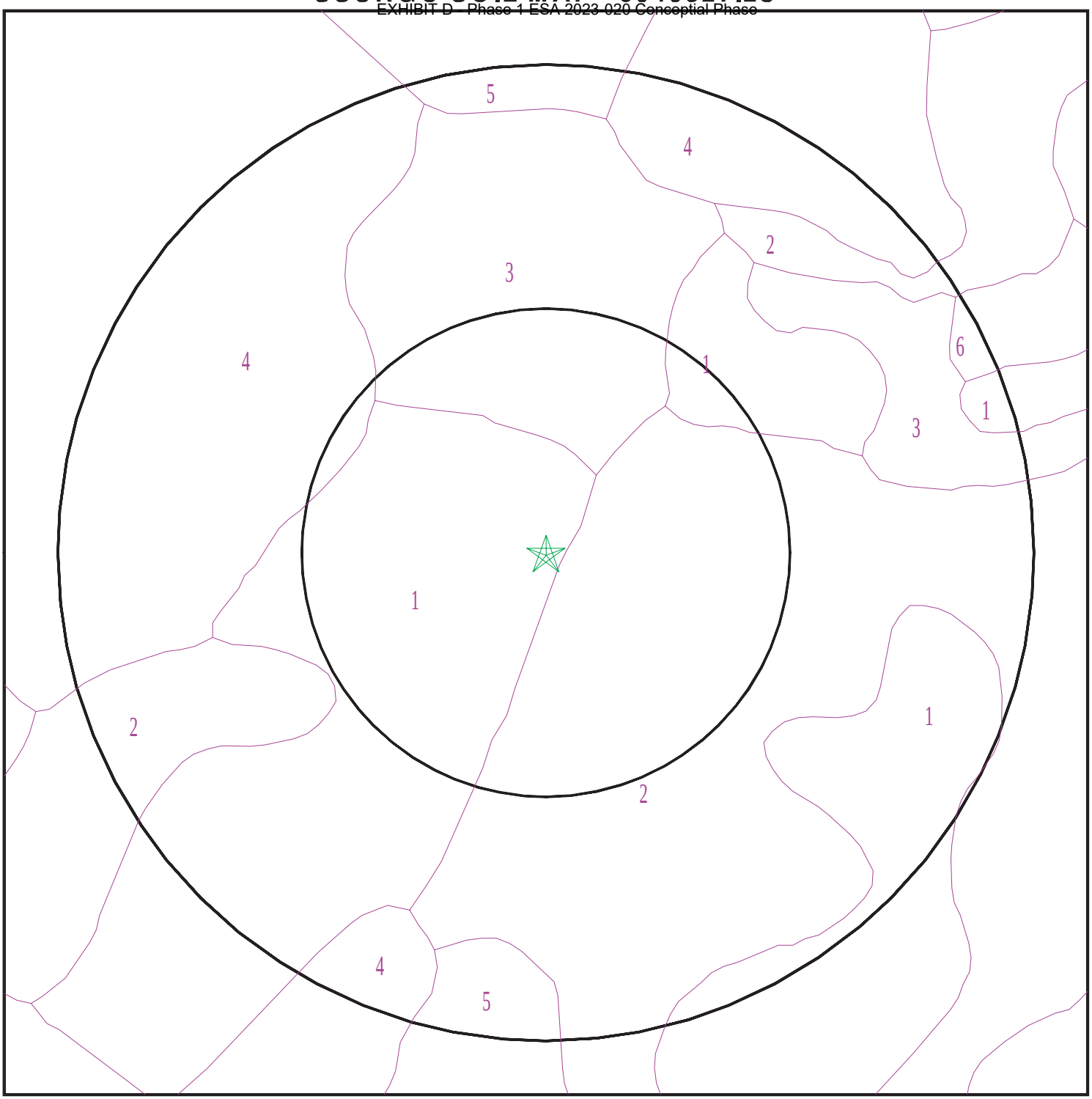
Era:	Paleozoic
System:	Cambrian
Series:	Cambrian
Code:	C *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6949527.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	New Bonsack / 460 Fire Station	CLIENT:	ECS Mid Atlantic, LLC
ADDRESS:	3645 Orange Avenue Roanoke VA 24012	CONTACT:	Alexandra Moon
LAT/LONG:	37.305852 / 79.886988	INQUIRY #:	6949527.2s
		DATE:	Apr 21, 2022 9:13 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Chiswell

Soil Surface Texture: channery silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
2	1 inches	11 inches	very channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
3	11 inches	21 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: Chiswell

Soil Surface Texture: channery silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
2	1 inches	11 inches	very channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
3	11 inches	21 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:

Soil Map ID: 3

Soil Component Name: Chiswell

Soil Surface Texture: channery silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
2	1 inches	11 inches	very channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
3	11 inches	21 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:

Soil Map ID: 4

Soil Component Name: Udorthents

Soil Surface Texture: channery silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 5

Soil Component Name: Groseclose

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 5.5 Min: 3.6
2	18 inches	61 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 5.5 Min: 3.6

Soil Map ID: 6

Soil Component Name: Groseclose

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 5.5 Min: 3.6
2	18 inches	61 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 5.5 Min: 3.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

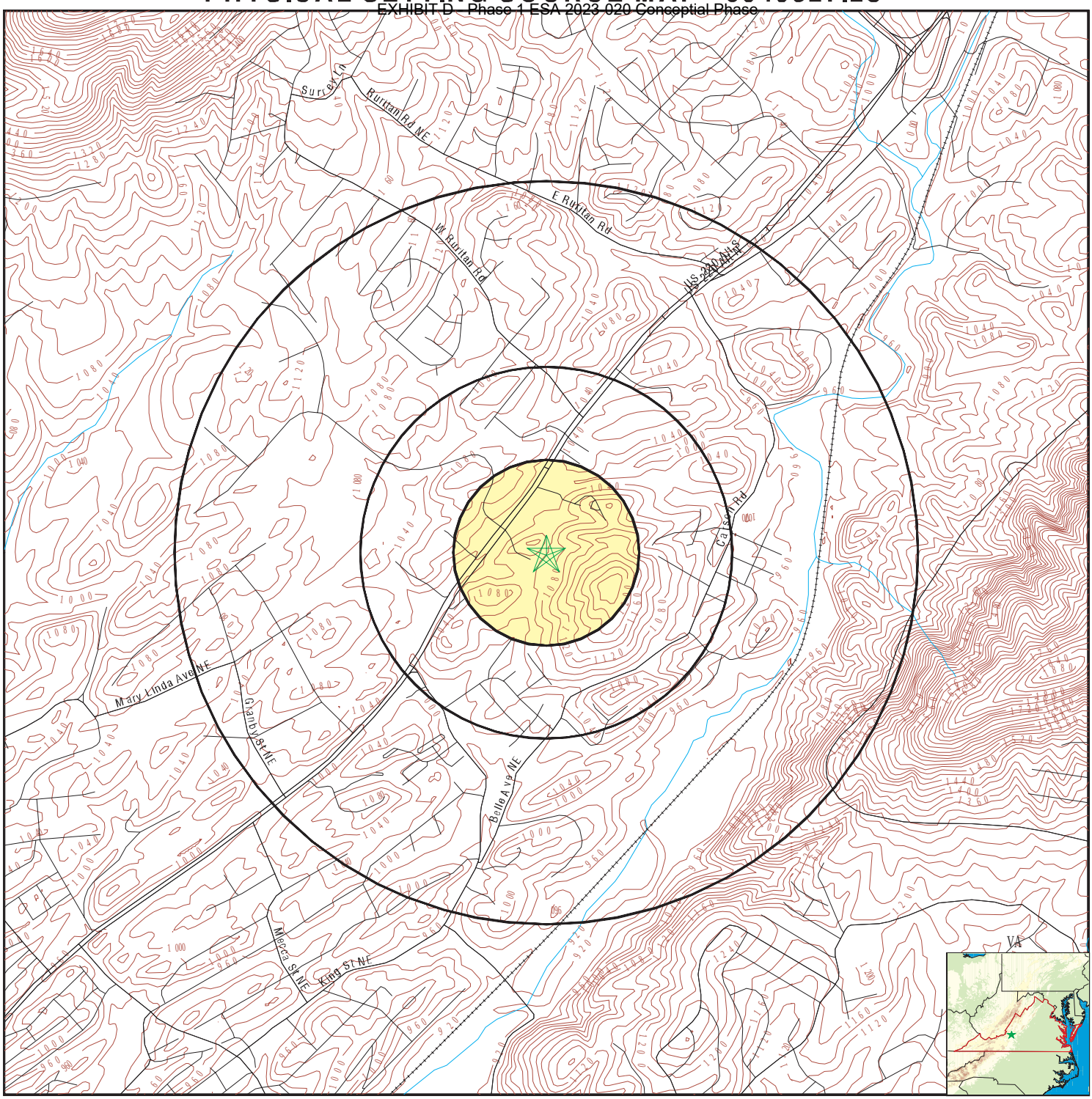
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 6949527.2s



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

N

SITE NAME:	New Bonsack / 460 Fire Station	CLIENT:	ECS Mid Atlantic, LLC
ADDRESS:	3645 Orange Avenue Roanoke VA 24012	CONTACT:	Alexandra Moon
LAT/LONG:	37.305852 / 79.886988	INQUIRY #:	6949527.2s
		DATE:	Apr 21, 2022 9:13 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

EPA Region 3 Statistical Summary Readings for Zip Code: 24012

Number of sites tested: 165.

Maximum Radon Level: 39.2 pCi/L.
Minimum Radon Level: 0.4 pCi/L.

pCi/L <4	pCi/L 4-10	pCi/L 10-20	pCi/L 20-50	pCi/L 50-100	pCi/L >100
109 (66.06%)	42 (25.45%)	11 (6.67%)	3 (1.82%)	0 (0.00%)	0 (0.00%)

Federal EPA Radon Zone for ROANOKE CITY County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Virginia Public Water Supplies
Source: Department of Health, Office of Water Programs
Telephone: 804-786-1756

OTHER STATE DATABASE INFORMATION

Virginia Oil and Gas Wells
Source: Department of Mines, Minerals and Energy
Telephone: 804-692-3200
A listing of oil and gas well locations.

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

EPA Region 3 Statistical Summary Readings
Source: Region 3 EPA
Telephone: 215-814-2082
Radon readings for Delaware, D.C., Maryland, Pennsylvania, Virginia and West Virginia.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Appendix IV: Historical Research Documentation

New Bonsack / 460 Fire Station

3645 Orange Avenue

Roanoke, VA 24012

Inquiry Number: 6949527.8

April 25, 2022

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

04/25/22

Site Name:

New Bonsack / 460 Fire Statior
3645 Orange Avenue
Roanoke, VA 24012
EDR Inquiry # 6949527.8

Client Name:

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Chantilly, VA 20151
Contact: Alexandra Moon

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: March 24, 1995	USGS/DOQQ
1982	1"=500'	Flight Date: April 01, 1982	USDA
1977	1"=500'	Flight Date: March 15, 1977	USGS
1972	1"=500'	Flight Date: April 27, 1972	USGS
1968	1"=500'	Flight Date: March 25, 1968	USGS
1960	1"=500'	Flight Date: October 18, 1960	USGS
1956	1"=500'	Flight Date: October 08, 1956	USGS
1947	1"=500'	Flight Date: March 10, 1947	USGS

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INQUIRY #: 6949527.8
YEAR: 2016
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 2012
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 2009
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 2006
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 1995
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 1982
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 1977
= 500'
N
EDR

INQUIRY #: 6949527.8

YEAR: 1972

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

INQUIRY #: 6949527.8
YEAR: 1968
= 500'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.

INQUIRY #: 6949527.8
YEAR: 1960
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 1956
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EDR

INQUIRY #: 6949527.8
YEAR: 1947
= 500'
N
EDR

New Bonsack / 460 Fire Station

3645 Orange Avenue

Roanoke, VA 24012

Inquiry Number: 6949527.3

April 21, 2022

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

04/21/22

Site Name:

New Bonsack / 460 Fire Statior
3645 Orange Avenue
Roanoke, VA 24012
EDR Inquiry # 6949527.3

Client Name:

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Chantilly, VA 20151
Contact: Alexandra Moon

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by ECS Mid Atlantic, LLC were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # CAAD-47D9-A4AC

PO # NA

Project 14480

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: CAAD-47D9-A4AC

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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New Bonsack / 460 Fire Station
3645 Orange Avenue
Roanoke, VA 24012

Inquiry Number: 6949527.4
April 21, 2022

EDR Historical Topo Map Report
with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

04/21/22

Site Name:	Client Name:
New Bonsack / 460 Fire Statior	ECS Mid Atlantic, LLC
3645 Orange Avenue	14026 Thunderbolt Place
Roanoke, VA 24012	Chantilly, VA 20151
EDR Inquiry # 6949527.4	Contact: Alexandra Moon

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by ECS Mid Atlantic, LLC were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.#	NA
Project:	14480

Coordinates:

Latitude:	37.305852 37° 18' 21" North
Longitude:	-79.886988 -79° 53' 13" West
UTM Zone:	Zone 17 North
UTM X Meters:	598635.02
UTM Y Meters:	4129383.08
Elevation:	1058.84' above sea level

Maps Provided:

2019	1962
2016	1933
2013	1929
1984	1891
1978	1890
1977	
1968	
1963	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2019 Source Sheets

Roanoke
2019
7.5-minute, 24000

Stewartsville
2019
7.5-minute, 24000

2016 Source Sheets

Roanoke
2016
7.5-minute, 24000

Stewartsville
2016
7.5-minute, 24000

2013 Source Sheets

Roanoke
2013
7.5-minute, 24000

Stewartsville
2013
7.5-minute, 24000

1984 Source Sheets

Roanoke
1984
7.5-minute, 24000
Aerial Photo Revised 1982

Stewartsville
1984
7.5-minute, 24000
Aerial Photo Revised 1982

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1978 Source Sheets

Stewartsville
1978
7.5-minute, 24000
Aerial Photo Revised 1977

Roanoke
1978
7.5-minute, 24000
Aerial Photo Revised 1977

1977 Source Sheets

Stewartsville
1977
7.5-minute, 24000
Aerial Photo Revised 1977

Roanoke
1977
7.5-minute, 24000
Aerial Photo Revised 1977

1968 Source Sheets

Roanoke
1968
7.5-minute, 24000
Aerial Photo Revised 1968

1963 Source Sheets

Stewartsville
1963
7.5-minute, 24000
Aerial Photo Revised 1960

Roanoke
1963
7.5-minute, 24000
Aerial Photo Revised 1960

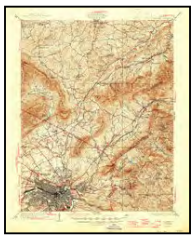
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1962 Source Sheets

Roanoke
1962
7.5-minute, 24000
Aerial Photo Revised 1960

1933 Source Sheets



Roanoke
1933
15-minute, 62500

1929 Source Sheets

Roanoke
1929
15-minute, 48000

1891 Source Sheets

Bedford
1891
30-minute, 125000

Roanoke
1891
30-minute, 125000

Topo Sheet Key

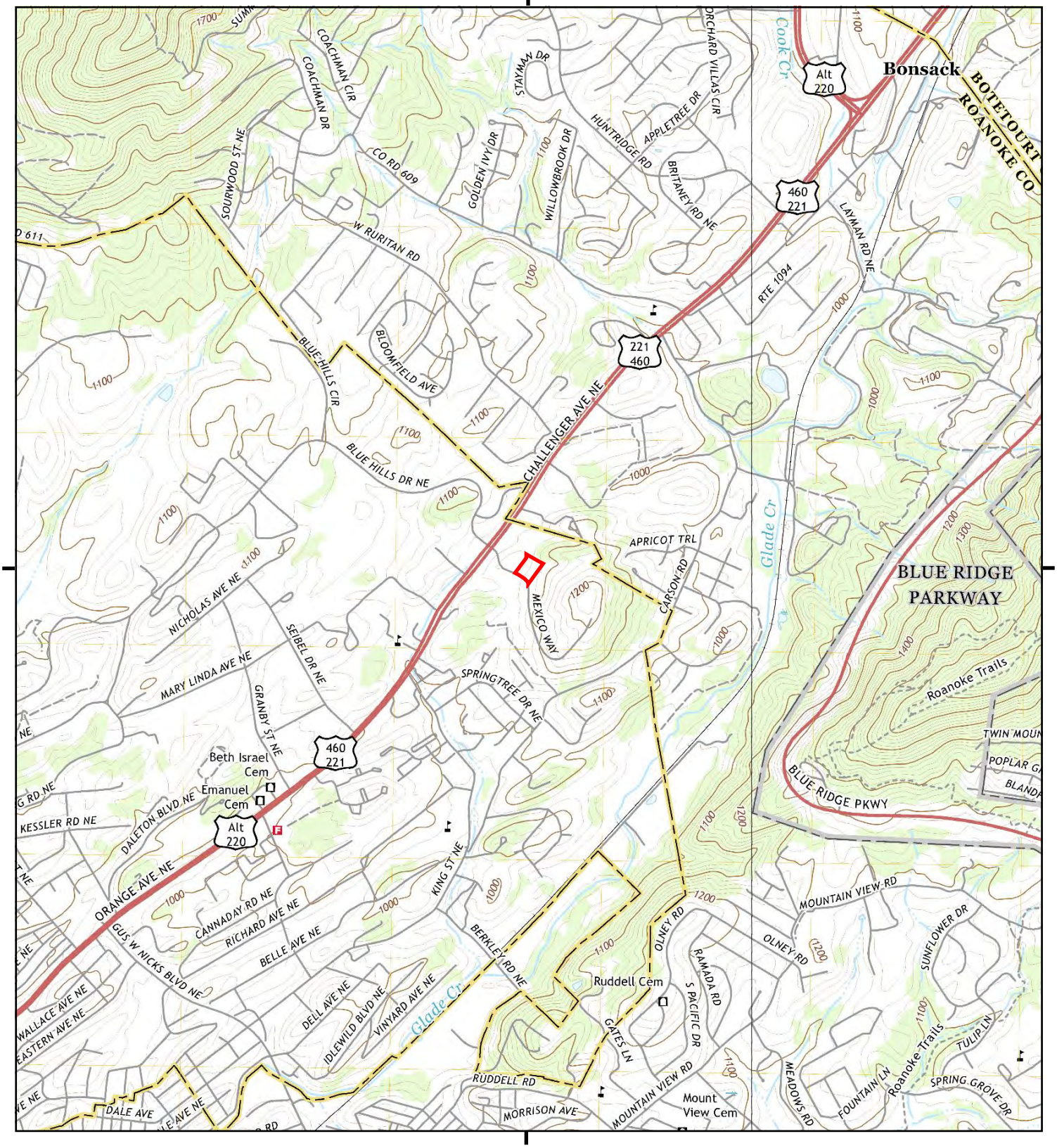
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1890 Source Sheets

Roanoke
1890
30-minute, 125000

Historical Topo Map

2019



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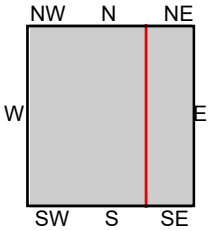


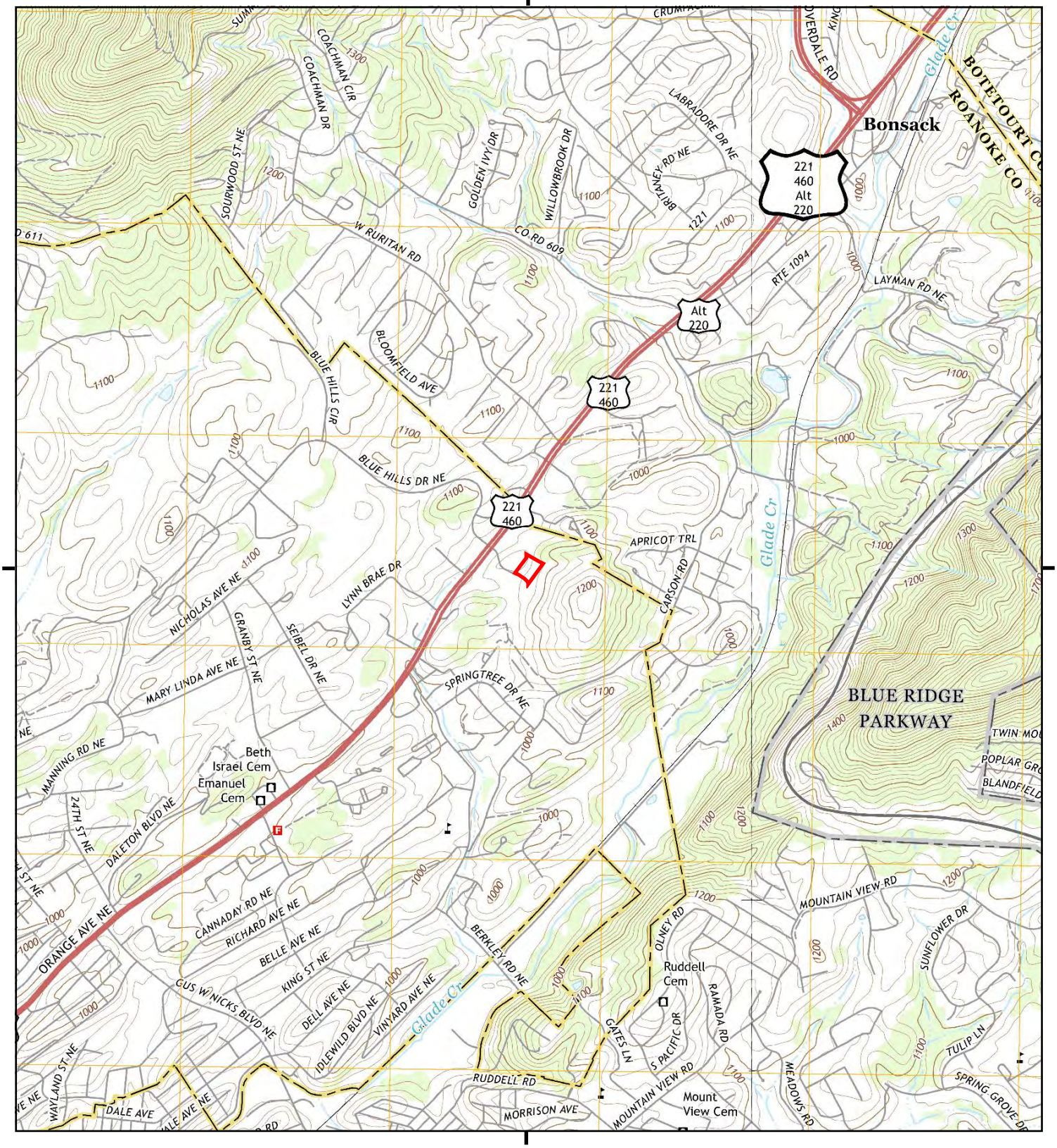
TP, Roanoke, 2019, 7.5-minute
E, Stewartsville, 2019, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

2016



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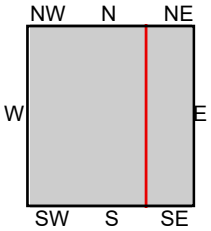


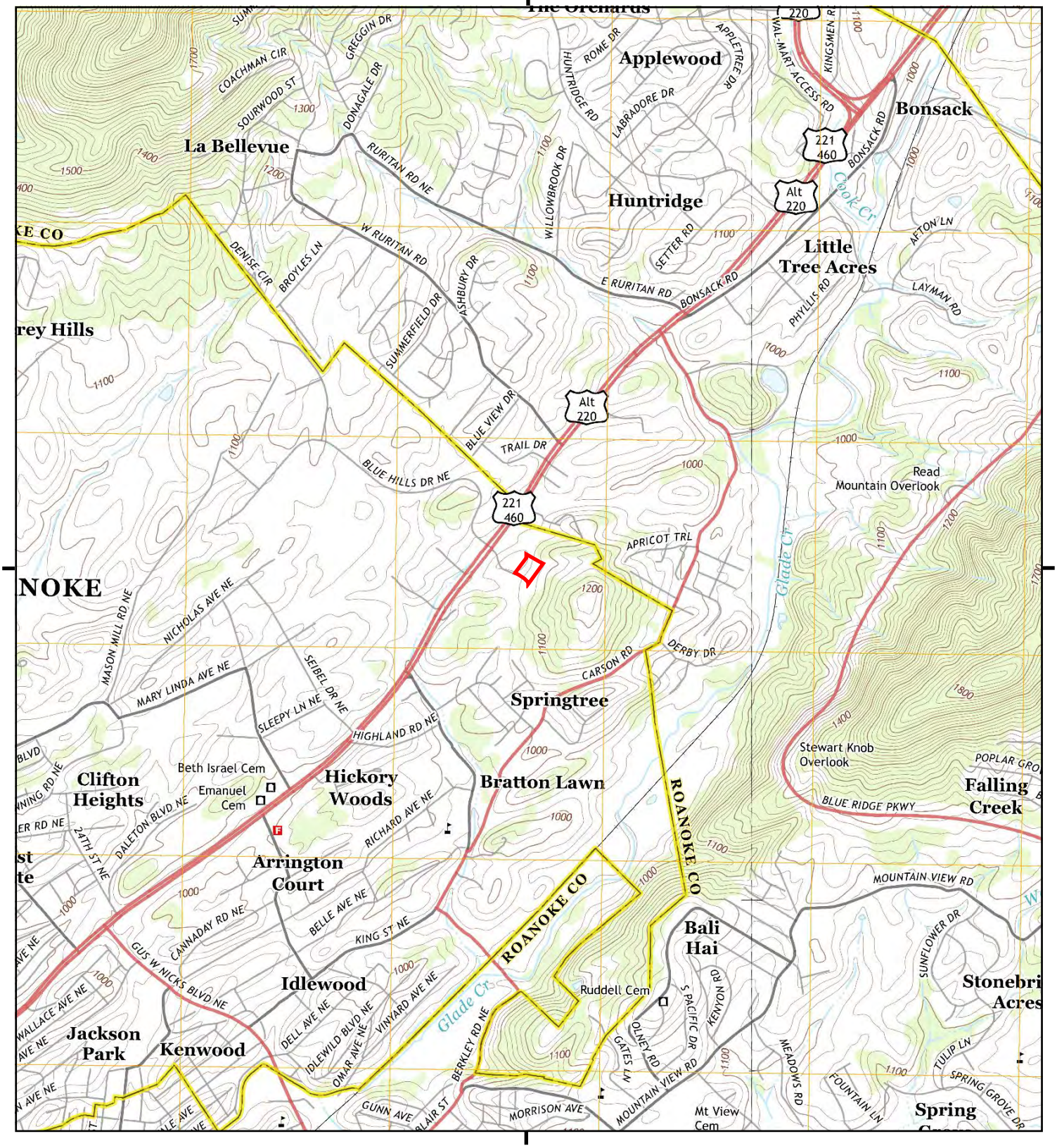
TP, Roanoke, 2016, 7.5-minute
E, Stewartsville, 2016, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

2013



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

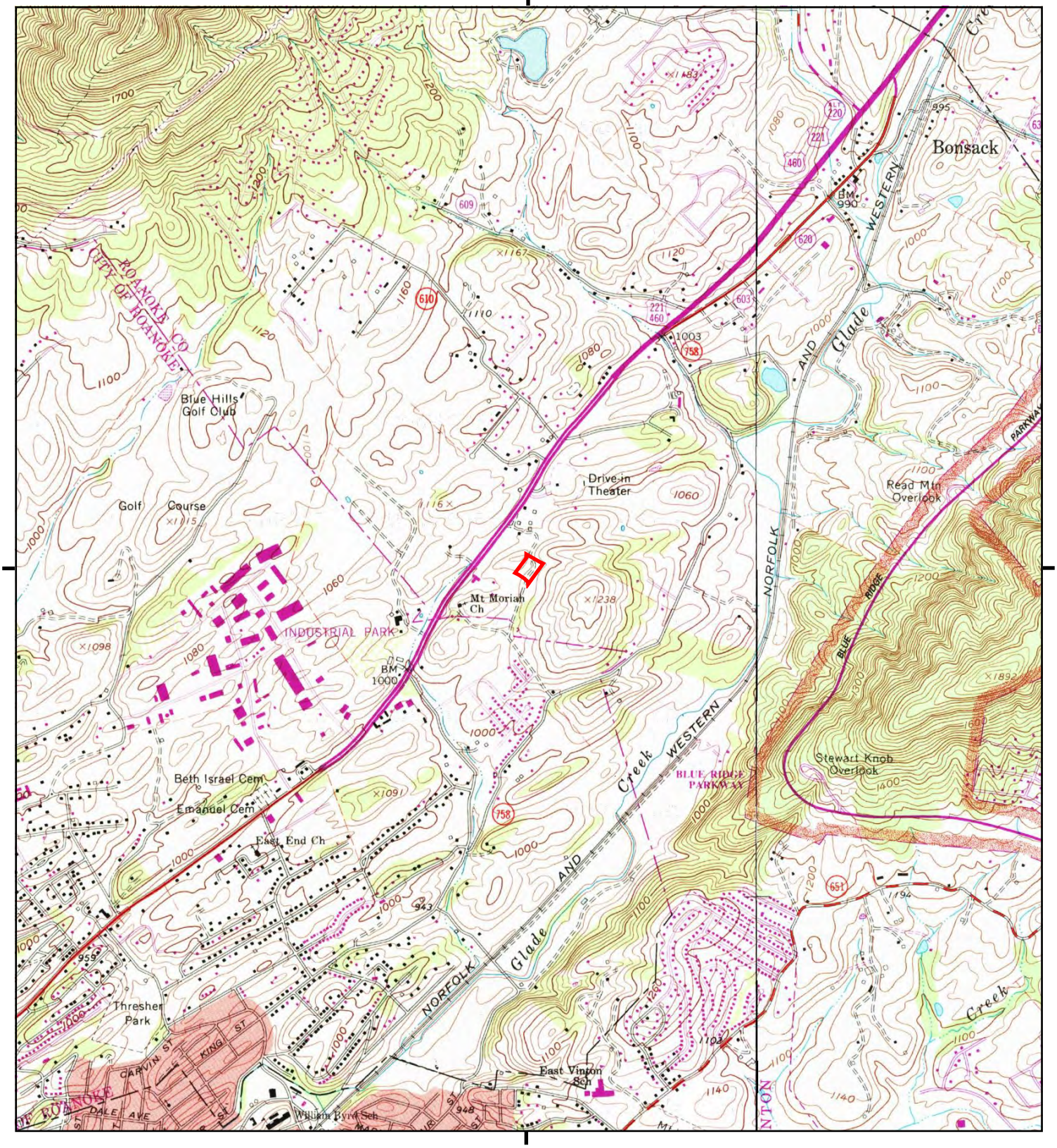
TP, Roanoke, 2013, 7.5-minute
E, Stewartsville, 2013, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

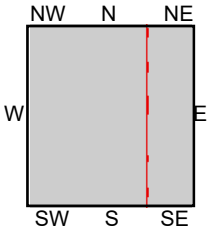
Historical Topo Map

1984



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



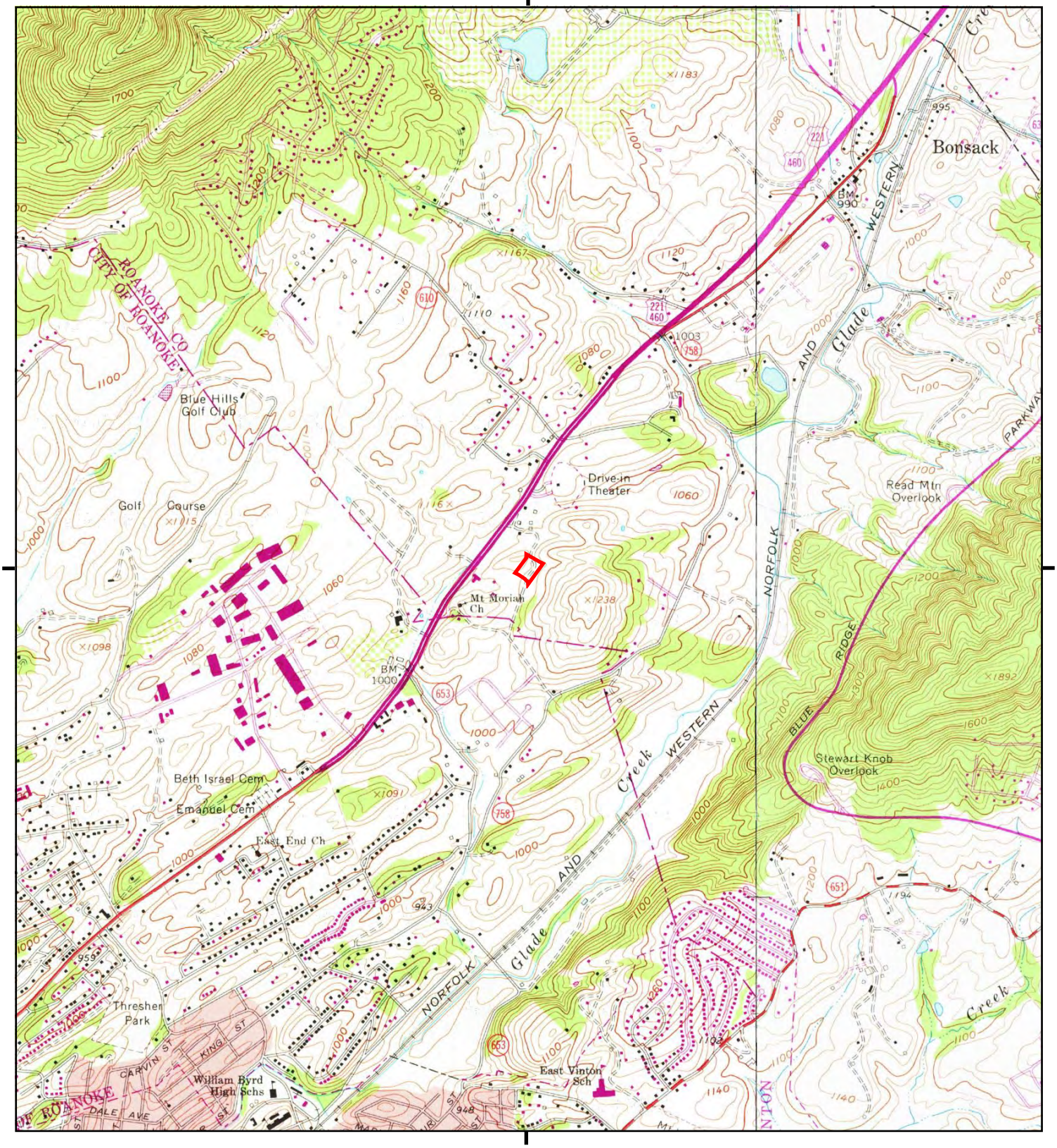
TP, Roanoke, 1984, 7.5-minute
E, Stewartsville, 1984, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

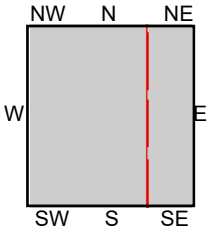
Historical Topo Map

1978



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



TP, Roanoke, 1978, 7.5-minute
E, Stewartsville, 1978, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

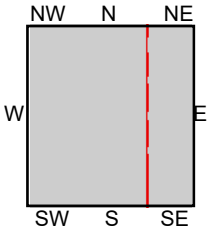
N

Historical Topo Map

1977

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



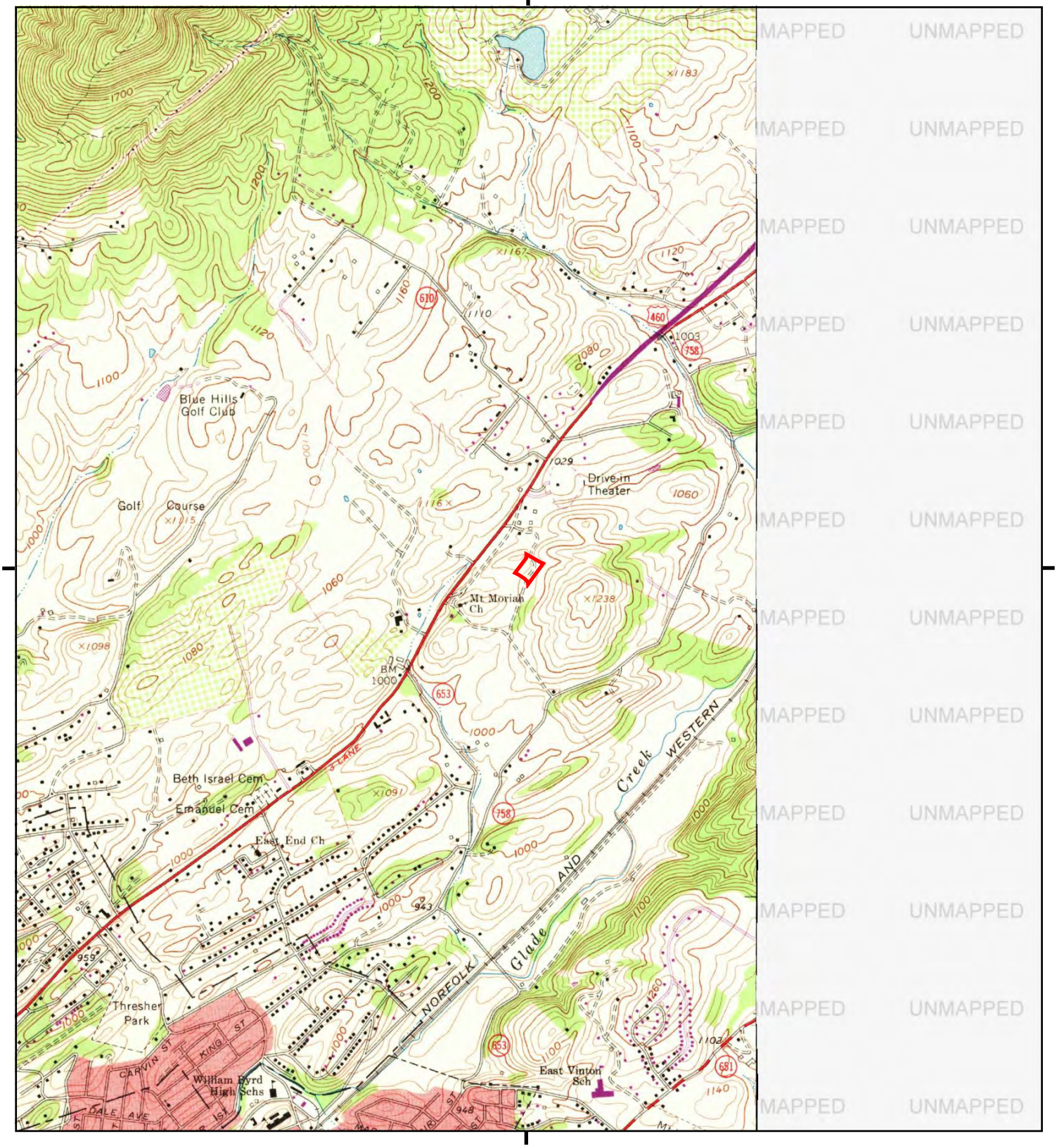
TP, Roanoke, 1977, 7.5-minute
E, Stewartsville, 1977, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

1968



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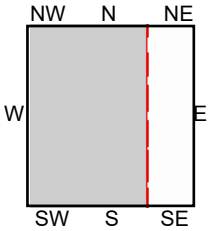


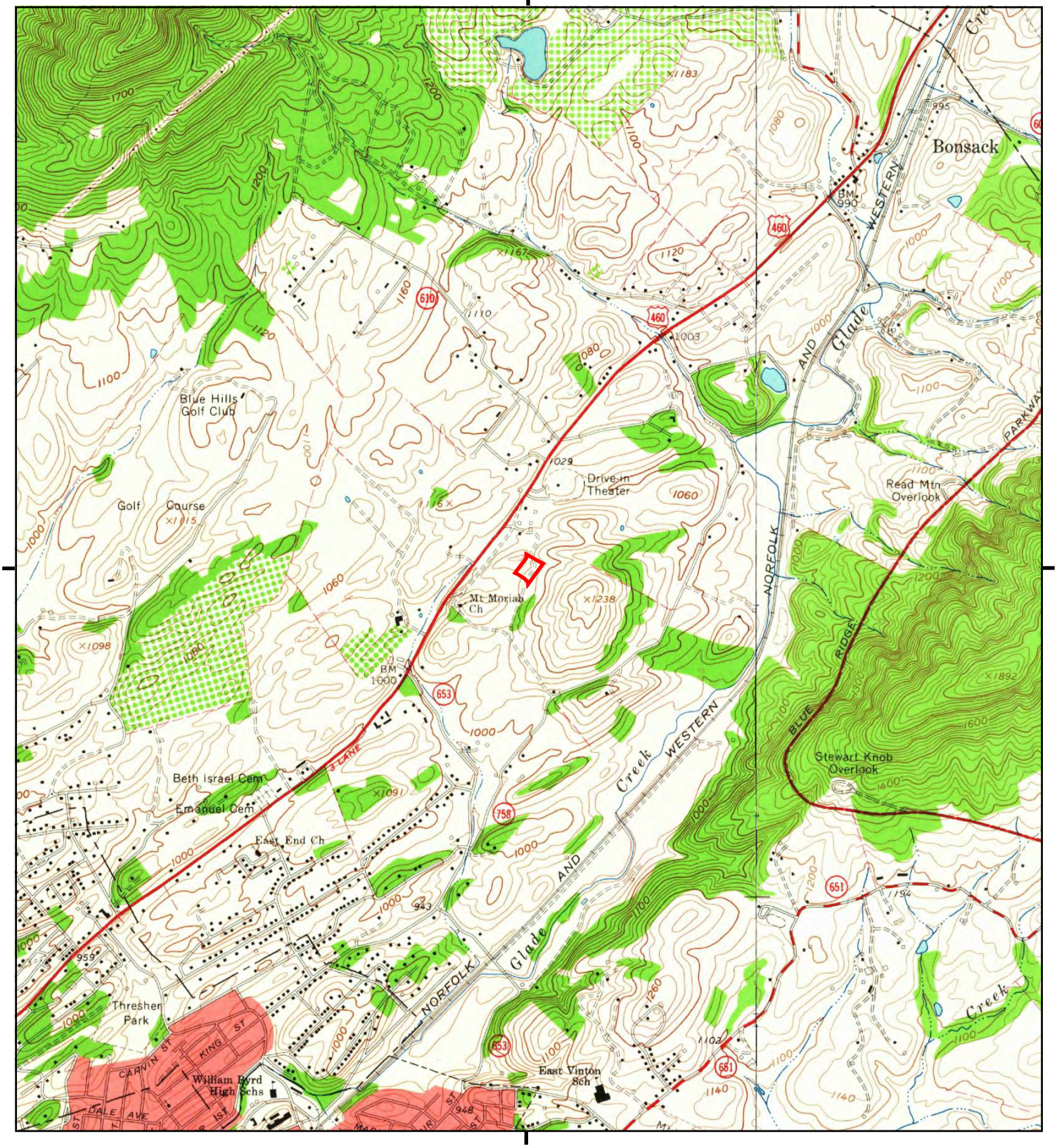
TP, Roanoke, 1968, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

1963



This report includes information from the following map sheet(s).

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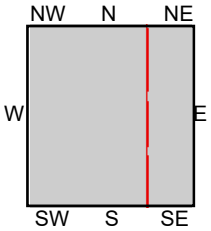


TP, Roanoke, 1963, 7.5-minute
E, Stewartsville, 1963, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

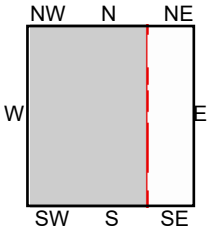
N

Historical Topo Map

1962

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



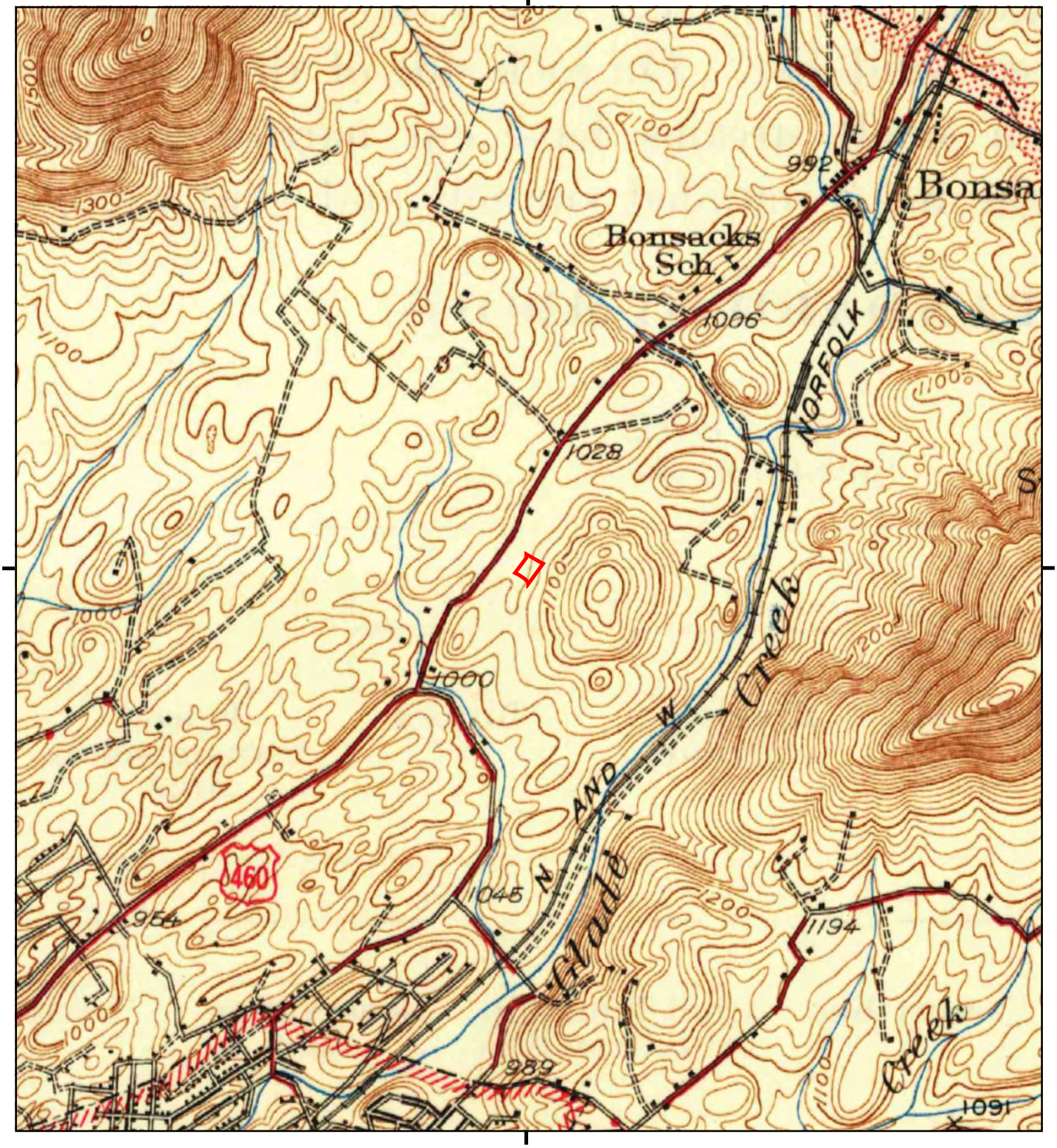
TP, Roanoke, 1962, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

1933



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0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

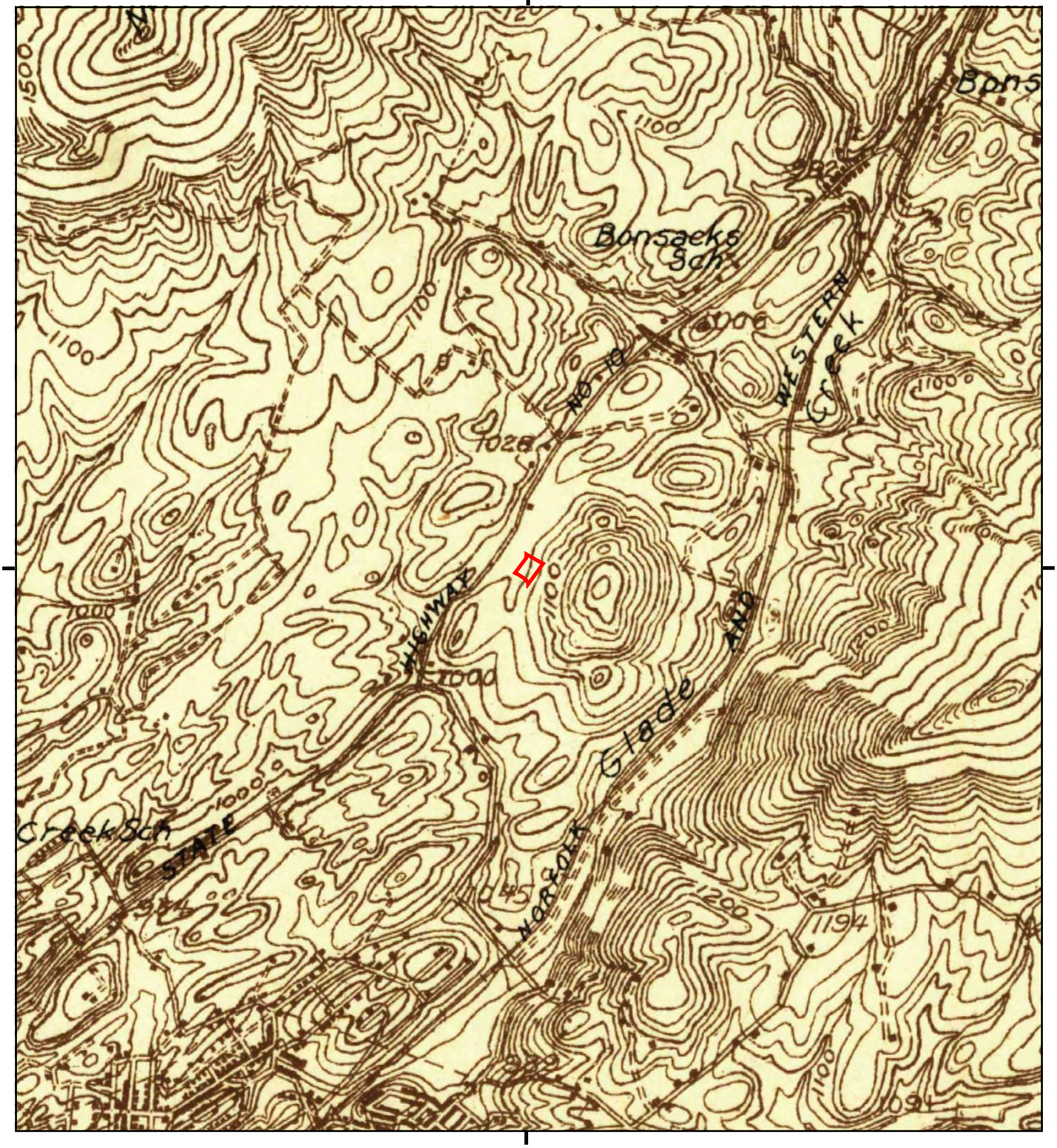
TP, Roanoke, 1933, 15-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

1929



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NW N NE
W E
SW S SE

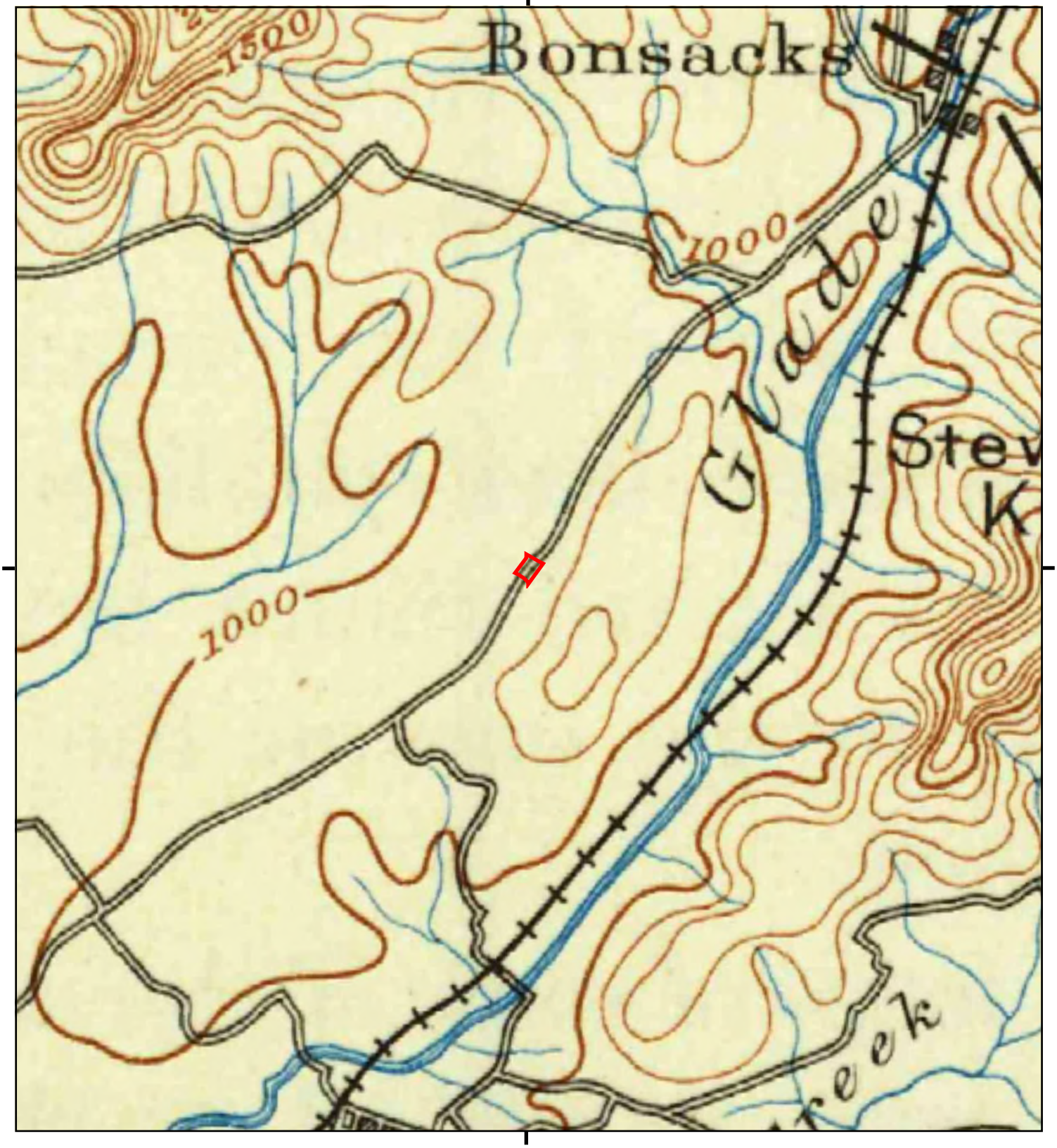
TP, Roanoke, 1929, 15-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

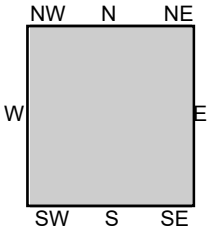
Historical Topo Map

1891



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



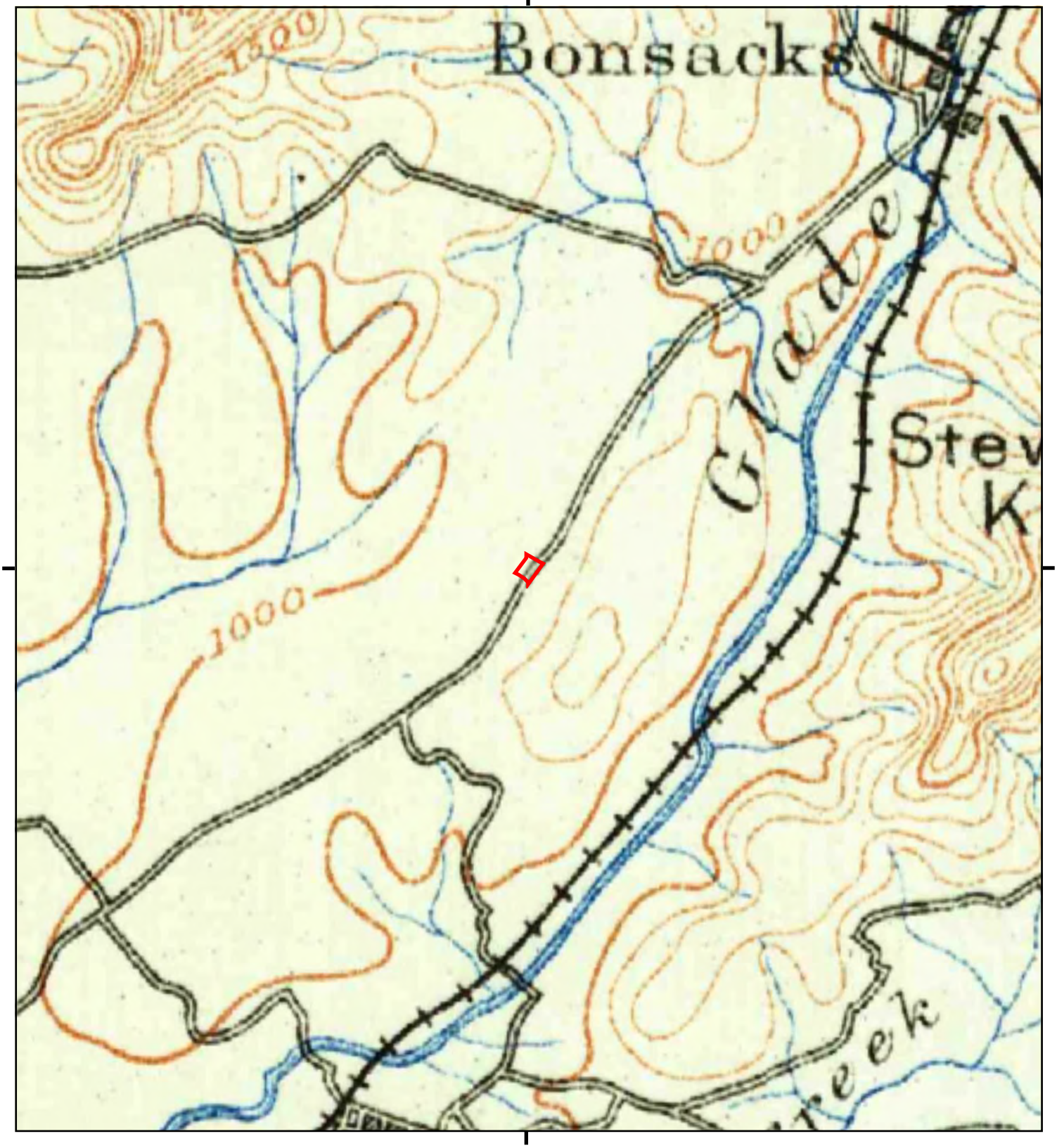
TP, Bedford, 1891, 30-minute
TP, Roanoke, 1891, 30-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

1890



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Roanoke, 1890, 30-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

New Bonsack / 460 Fire Station
3645 Orange Avenue
Roanoke, VA 24012

Inquiry Number: 6949527.10
April 25, 2022

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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Data by infoUSA®

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☑	EDR Digital Archive
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1989	☑	☐	POLK DIRECTORY CO
1984	☑	☐	POLK DIRECTORY CO
1979	☐	☐	Hill Directory Co
1974	☐	☐	Hill Directory Co
1969	☐	☐	Hill Directory Co
1964	☐	☐	Hill Directory Co

FINDINGS

TARGET PROPERTY STREET

3645 Orange Avenue
Roanoke, VA 24012

Year	CD Image	Source	
ORANGE AVE NE			
2017	pg A2	EDR Digital Archive	
2014	pg A4	EDR Digital Archive	
2010	pg A6	EDR Digital Archive	
2005	pg A8	EDR Digital Archive	
2000	pg A10	EDR Digital Archive	
1995	pg A12	EDR Digital Archive	
1992	pg A14	EDR Digital Archive	
1989	pg A15	POLK DIRECTORY CO	
1984	pg A16	POLK DIRECTORY CO	
1979	-	Hill Directory Co	Target and Adjoining not listed in Source
1974	-	Hill Directory Co	Target and Adjoining not listed in Source
1969	-	Hill Directory Co	Target and Adjoining not listed in Source
1964	-	Hill Directory Co	Target and Adjoining not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	

MEXICO WAY NE

2017	pg. A1	EDR Digital Archive	
2014	pg. A3	EDR Digital Archive	
2010	pg. A5	EDR Digital Archive	
2005	pg. A7	EDR Digital Archive	
2000	pg. A9	EDR Digital Archive	
1995	pg. A11	EDR Digital Archive	
1992	-	EDR Digital Archive	Street not listed in Source
1989	-	POLK DIRECTORY CO	Street not listed in Source
1984	-	POLK DIRECTORY CO	Street not listed in Source
1979	-	Hill Directory Co	Street not listed in Source
1974	-	Hill Directory Co	Street not listed in Source
1969	-	Hill Directory Co	Street not listed in Source
1964	-	Hill Directory Co	Street not listed in Source

City Directory Images

MEXICO WAY NE 2017

1445 MEMBERONE FCU 460 BRANCH
1454 LUCAS THERAPIES
1455 AIRGAS

ORANGE AVE NE 2017

3042	WATERWORKS OF ROANOKE
3239	460 APPLIANCE CENTER
	ANDREWS HOME FURNISHING
	MOONS AUTO BODY
3315	BUDGET INN EXPRESS
3345	GRACE & TRUTH BAPTIST CHURCH
3348	APPLE MARKET
3353	ATLANTIC CREDIT & FINANCE INC
3401	KFC
3402	MCDONALDS
	MKG ENTERPRISES
3406	RANCH DRESSINGS
	ROCKFAB KITCHEN & BATH
3410	WOODYSUSHI
3418	GOODWILL ORANGE AVENUE
3419	KROGER
	MATRIX NAILS
	WALMART NEIGHBORHOOD MARKET
	WALMART PHARMACY
3420	KEMBEL TAX SERVICE
	PHO SAIGON
3424	DIMENSIONS DINE & DANCE
	PUMP IT UP
3425	RESCUE MISSION
3428	NAILS & TOES SALON
3429	DENNYS
3430	RAINBOW CLEANERS
3432	MISHAP GAMES
3433	AT&T
	AT&T AUTHORIZED RETAILER
	HIBACHI GRILL EXPRESS
	JETR LLC
	PLANET FITTNESS
	SUPERCUTS
3434	KEMBEL TAX SERVICE
3436	BRATCHERS ICE CREAM
3442	WELLS FARGO BANK
3458	BB&T
3518	EL RODEO
3530	BURGER KING
3541	GRACE & TRUTH BAPTIST CHURCH
3545	GRACE & TRUTH BAPTIST CHURCH
3548	GREGORY P SKINNER DDS PC
3555	WENDYS
3565	VIRGINIA FIRST MORTGAGE
3645	PARKWAY WESLEYAN CHURCH INC
3675	FLOWERS & THINGS

MEXICO WAY NE 2014

1445 MEMBERONE FCU 460 BRANCH
1454 THERAPIES LUCAS
1455 AIRGAS

ORANGE AVE NE 2014

3042	WATERWORKS OF ROANOKE
3046	ROCKFAB KITCHEN & BATH
3239	460 APPLIANCE CENTER
3348	APPLE MARKET
3353	ATLANTIC CREDIT & FINANCE INC
3401	KFC
	KFC ROANOKE
3402	MCDONALDS
	THE GLEBE
3406	COMMERCIAL SOLID SURFACING
	ROCKFAB
	ROCKFAB CUSTOM GRANITE & MARBLE
	ROCKFAB KITCHEN & BATH
3418	GOODWILL ORANGE AVENUE
3419	KING STREET PROPERTYROANOKE LLC
	MATRIX NAILS
3420	PHO SAIGON
3428	NAILS & TOES SALON
3429	DENNYS
3430	RAINBOW CLEANERS
3432	COMMONWEALTH COLLECTABLES LLC
3434	KEMBEL TAX SERVICE
3436	BRATCHERS ICE CREAM
3442	WELLS FARGO
	WELLS FARGO BANK
3458	BB&T
3518	EL RODEO
	EL RODEO EL TOREO
3530	BURGER KING
3538	MONRO MUFFLER BRAKE & SERVICE
3541	GRACE & TRUTH BAPTIST CHURCH
3545	OCCUPANT UNKNOWN,
3548	SKINNER GREGORY P DDS
3555	WENDYS
3565	SUNTRUST
	VIRGINIA FIRST MORTGAGE
3675	FLOWERS & THINGS

MEXICO WAY NE 2010

1445 MEMBER ONE FEDERAL CREDIT
1454 LUCAS THERAPIES
1455 AIRGAS MID AMERICA

ORANGE AVE NE 2010

3042	WATERWORKS POOLS SPASOUTDOORS
3239	460 APPLIANCE CTR
3315	BUDGET INN
3348	APPLE MARKET CONVENIENCE STORE
3353	JOHN P FRYE LAW OFFICE
	LITTON NETWORK ACCESS SYSTS
3401	KFC
3402	MC DONALDS
3406	BENTECH
	CY ACQUISITION CORP
	ROCKFAB
	ROCKFAB KITCHEN & BATH
3418	ORANGE AVENUE GOODWILL
3419	MATRIX NAILS
3420	KEMBEL FINANCIAL SVC
3423	DOMINOS PIZZA
3424	CARIBBEAN TAN INC
	LAFINCA BAR & GRILL
	PUMP IT UP
3425	CVS PHARMACY
3428	A CUT ABOVE
3429	DENNYS
3430	RAINBOW CLEANERS
3432	ADVANCE AMERICA
3434	KEMBEL TAX SVC
3436	BRATCHERS ICE CREAM PARLOR
3442	WACHOVIA BANK
3458	BB&T
3518	EL RODEO MEXICAN RESTAURANT
3530	BURGER KING
3538	MONRO MUFFLER BRAKE & SVC
3541	GRACE & TRUTH BAPTIST CHURCH
3542	SLEEP ESSENTIALS
3545	FRYAR, JEREMY
3548	SKINNER GREGORY P DDS
3555	WENDYS
3565	SUN TRUST BANK
3645	PARKWAY WESLEYAN CHURCH
3675	FLOWERS & THINGS

MEXICO WAY NE 2005

1455 AIR GAS INC
AIR GAS MID AMERICA

ORANGE AVE NE 2005

3042	WATERWORKS OF ROANOKE INC
3239	460 APPLIANCE CENTER
	CHITTUMS TV SERVICE
3348	AMOCO FOODSHOP
	APPLE MARKET 403
3351	THE LAW OFFICE OF JOHN P FRYE PC
3353	ATLANTIC CREDIT & FINANCE INC
3401	KENTUCKY FRIED CHICKEN
	KFC
3406	CY ACQUISITION CORP
	LOWES HOME IMPROVEMENT WHSE
3412	KIMS NAIL
3419	DON, HODSON
	KROGER AT 460
	KROGER PHARMACY # 287
	MATRIX NAILS
	VOGUE CLEANERS & LAUNDRY INC
3421	SUBWAY SANDWICHES & SALADS
3422	SCRAPBOOKS GALORE & MORE
3423	DOMINOS PIZZA
3424	MOONLIGHT BUFFET
3425	CVS
	CVS PHARMACY # 7503
	ROCK CREEK MULCH
3428	SHOWTIME VIDEO
3432	ADVANCED AMERICA CASH ADVANCED CENTE
3434	VA DEPT ALCOHOLIC BEV CONTROL
3458	FIRST VIRGINIA BANK SOUTHWEST
3518	WESTERN SIZZLIN RESTAURANT
3530	SLOAN
3538	MONRO MUFFLER BRAKE INC
3541	GRACE & TRUTH BAPTIST CHURCH
3545	FRYAR, FRED F
3555	WENDYS OLD FASHIONED HAMBURGER
3565	NATIONAL BANK OF COMMERCE
3645	KODIAK CONSTRUCTORS INC
3659	GISH, E

MEXICO WAY NE 2000

1454 AMERICAN GENERAL LIFE & ACCIDENT INSURANCE COMPANY
INTERSTATE MUTUAL FIRE INS COMPANY
1455 INDUSTRIAL GAS & SUPPLY COMPANY INCORPORATED

ORANGE AVE NE 2000

3042	ROANOKE GRAVELY SALES
3239	COOKS AUTOBODY REPAIRS
	GARYS PAINT BY
3348	AMOCO FOODSHOP 403
3353	LITTON NETWORK ACCESS SYSTEMS
	NETWORK ACCESS SYSTEMS LITTON
3401	KENTUCKY FRIED CHICKEN
3402	MCDONALDS RESTAURANTS
3406	CONTRACTOR YARD INCORPORATED THE
3412	SHOWTIME VIDEO
3418	FAMILY DOLLAR STORES
3419	NBC BANK
	VOGUE CLEANERS & LAUNDRY
	WESTERN UNION ROANOKE
3420	EDWARDS SALON PRODUCTIONS
3421	SUBWAY SANDWICHES & SALADS
3423	DOMINOS PIZZA
3425	REVCO DRUG STORES
	ROCK CREEK MULCH
3429	DENNYS RESTAURANT
3442	FIRST UNION 563 7000
3530	BURGER KING REST
3538	MONRO MUFFLER BRAKE
3541	GRACE & TRUTH BAPTIST CHURC
3542	GETTYS RAJ MART
3545	FRYAR, FRED
3548	BOONE & COMPANY REALTORS
	LAYMAN JANIE S REAL ESTATE
	SKINNER GREGORY P DDS
3555	WENDYS OLD FASHIONED HAMBURGERS
3565	WACHOVIA OFFICES
3639	GISH, E L
3645	PARKWAY FOOD BANK
3659	GISH, GEORGE
	MCDANIEL, RANDALL E
3675	FLOWERS & THINGS
	THORNE JEAN DSGNR

MEXICO WAY NE 1995

1454 AMERICAN GENERAL LIFE
1455 INDUSTRIAL GAS & SUPPLY CO

ORANGE AVE NE 1995

3042	ROANOKE GRAVELY SALES
3210	MORRIS, KAREN R
3239	CHALLENGER MOTORS
	COOKS AUTOBODY REPAIRS
	OCCUPANT UNKNOWNN
	SUN RAY VIDEO
	TOMMYS COLLECTORS WORLD
3315	BLUE RIDGE MOTEL
	PATEL, D
3348	AMOCO FOOD SHOP
3353	FIBER COM INC
	NET EDGE
3401	KFC CORP
3402	MC DONALDS
3406	LOWES
3407	LINDA S WILHELM
3416	LITTLE CAESARS PIZZA
3418	SUPERX DRUG STORE
	SUPERX DRUGS ROANOKE
3419	KROGER FOOD STORES
	VOGUE CLEANERS & LAUNDRY
	WESTERN UNION
3420	EDWARDS SALON PRODUCTIONS
3422	BOX OFFICE VIDEO
3424	FOOD LION INC
3425	REVCO DISCOUNT DRUG CTR
3430	AIR LEE CLEANERS INC
3432	DYER PAINT & WALLPAPER
	REGINALD L DYER CUSTOM PAINT
3434	BOB BODINE
3442	FIRST UNION NATIONAL BANK
3530	BURGER KING
3538	MONRO MUFFLER BRAKE INC
3541	GRACE & TRUTH BAPTIST CHURCH
	OCCUPANT UNKNOWNN
3542	UNI MARTS INC
3545	PUGH, GEORGE R
3548	ANNE H HUFFMAN
	BELINDA WEST
	BOONE & CO
	CHRIS KIDD
	DIANNE FITZGERALD
	DON HILL
	DORIS EDWARDS
	HUFFMAN, ANNE
	ILSE MARIE MORGAN
	J LUTHER BURKHOLDER
	JANIE S CHEWNING
	JANIE S LAYMAN
	LUTHER BURKHOLDER

ORANGE AVE NE 1995 (Cont'd)

3548	MARK WOLFORD
	PAULA TOLLEY
	PETE WOOD
	SHIRLEY FAIRCHILD
	TOMMY WAGNER
	WANDA RICHARDS
3565	CENTRAL FIDELITY BANK
3645	COMMUNICATIONS RESEARCH INC
	MEXITRONICS
	MEXITYPE CORD
	OCCUPANT UNKNOWNN
3659	GISH, E L
	SMITH, C S
3675	FLOWERS & THINGS

ORANGE AVE NE 1992

3042	ROANOKE GRAVELY SLS
3239	CAR ENTERPRISES INC
	DALTON'S DETAIL SHOP
3315	BLUE RIDGE MOTEL
	PATEL, I D
3348	460 AMOCO FOODSHOP
3353	FIBERCOM INC
3401	KENTUCKY FRIED CHICKEN
3402	MCDONALD'S HAMBRGRS
3406	LOWE'S
	LOWE'S-CONTR SALES
3407	CRESTAR BANK 460 EAST BRANCH
3412	VALLEY VIDEO
3414	KEN'S TRAINS
	TAX DEPOT THE
3418	SUPERRX DRUGS ROANOKE
3419	SAM'S CLEANERS
	WESTERN UNION CONSUMER SERVICES
3420	EDWARDS SALON PRODTNS
3425	GREENHOUSE THE
	REVCO DRUG STORE ROANOKE
3432	DYER PAINT & WALLPAPER
	DYER REGINALD L CUSTOM PAINTING &
3434	ST ABC DEPT MARKET SQ EAST SHOP
3442	DOMINION BANK FOUR-SIXTY BR OFC
3518	PONDEROSA STEAK HOUSE
3530	BURGER KING REST #7
3538	460 POOLS
	CLARK HOME SALES
3541	BRYANT, DARRYL A
	GRACE & TRUTH BAPTIST CHURCH
3542	GETTYMART INC ROANOKE STORE
3548	BOONE & COMPANY 460 E OFFICE
	BURKHOLDER LUTHER REAL ESTATE
	CHEWNING JANIE S REAL ESTATE
	EDWARDS DORIS RL EST
	FAIRCHILD SHIRLEY REAL ESTATE
	HILL DONALD L RL EST
	HUFFMAN ANNE H RL EST
	LAYMAN JANIE S RL EST
	RICHARDS WANDA RL EST
	WOLFORD MARK A RL EST
3565	CENTRAL FIDELITY BANK EAST ROANOKE BR OFC
3645	COMMUNICATIONS RESEARCH CONSULTANTS
	EWEN, JOEL J
	MEXITRONICS
	MEXITYPE CORD
3659	GISH, E L
	SMITH, C S
3675	CARLTON, KELLY

Target Street	Cross Street	Source
✓	-	POLK DIRECTORY CO

EXHIBIT D - Phase 1 ESA 2023-020 Conceptial Phase

ORANGE AVE NE 1989

3458 First Virginia Bank-Southwest 561-8796
3502 Clark Builder-Dealer Co Inc 342-7666
Model Home
3530 Burger King No 11 345-1981
3541 Grace & Truth Baptist Church 345-7173
Naff A Preston Rev Jr
3542 Hop-In Food Stores 985-0018
3548 Boone & Company Realtors 343-5800
3565 Central Fidelity Bank 983-8200

ORANGE AVE NE 1984

3458 First Virginia Bank 387-3796
3530 Burger King No 11 345-1981
3533 Vacant
3542 Hop-In Food Stores 985-0018
Food World Inc

19

Appendix V: Site Photographs

1 - General view of subject site

2 - Overview of subject property from northern corner

3 - Wooded area on northern portion of subject property

4 - Northern edge of subject property facing west

5 - Eastern edge of subject property facing west

6 - Southernmost portion of subject property facing north

7 - Southern edge of subject property facing east

8 - South portion of subject property facing northeast

9 - Center of subject property facing south

10 - Stormwater drainage ditch

11 - Center of subject property facing west

12 - Western edge of subject property facing southwest

13 - Adjoining property to the north

14 - Road along northern edge of subject property

15 - Adjoining property to the east

16 - Road and adjoining property south of subject property

17 - Adjoining property to the west

Appendix VI: Statement of Qualifications

Engineering Consulting Services

Statement of Qualifications

2020

GUTS

INITIATIVE

CONSTRUCTION MATERIALS

FACILITIES

GEOTECHNICAL

ENVIRONMENTAL

RESILIENCE

TENACITY

COMPANY OVERVIEW

"What I like most about ECS are the people. They are experts with a wide-range of knowledge. I never hesitate using ECS on projects."

- Crystal Morphis, Founder and CEO
Creative Economic Development Consulting, LLC

2,000
employees

65+
locations

30+
years' experience

ABOUT OUR COMPANY

Engineering Consulting Services (ECS) is one of the largest and most rapidly growing engineering and consulting companies in the US. Founded in 1988, ECS is a leader in geotechnical, environmental, construction materials and facilities engineering. We are currently ranked 69 in *Engineering News-Record's* Top 500 Design Firms (April 2020) and 52 in Zweig Group's 2020 Hot Firms (June 2020).

ECS CORE SERVICES

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- Construction Materials
- Environmental
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WHY ECS? WE HAVE GRIT.

What does that mean for you? That one descriptive word defines our company culture. It sets just the right tone for what our clients can expect our team to deliver each and every day. At ECS, GRIT is made up of four characteristics: guts, resilience, initiative and tenacity. Our boots are made for working. Click here for an inside look at what we do, who we are and why we have GRIT.

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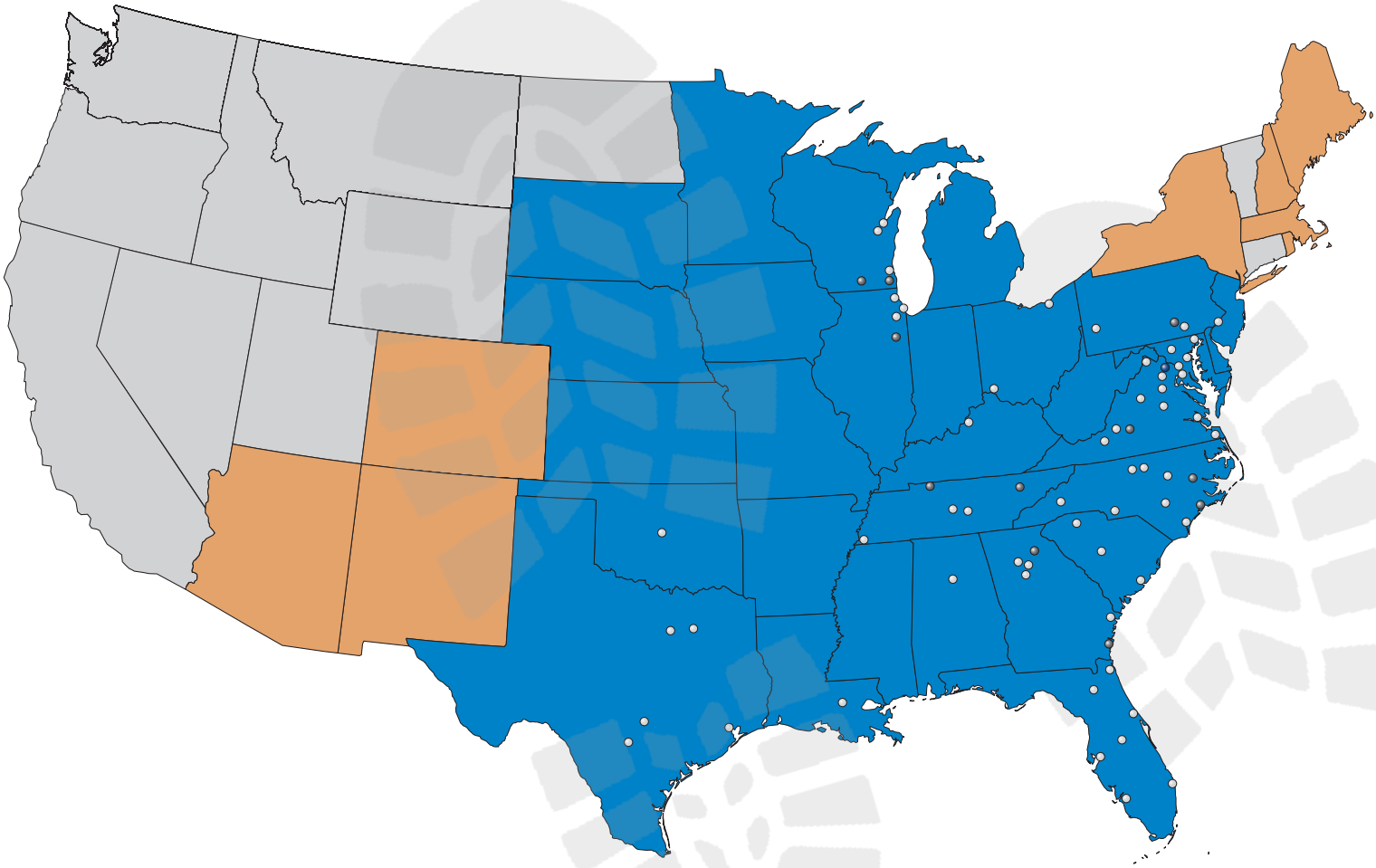

SERVICES KEY

- Environmental & Facilities
- Geotechnical, Environmental, Materials Testing & Facilities
- Geotechnical, Environmental & Facilities

OFFICES KEY

- Full Service Office
- Testing Services Only
- Corporate Headquarters

Materials Testing Service Area is approximately a 75-mile radius around each office.

DUE DILIGENCE

As part of typical commercial, industrial and residential real estate transactions, many services need to be completed prior to closing that should not be overlooked. ECS provides environmental and engineering due diligence services common to real estate transaction-driven work, including:

Environmental Due Diligence Services:

- Phase I Environmental Site Assessments (ESAs)
- Wetland and Stream Determination and Delineation Services
- Phase II Environmental Site Assessments (ESAs)
- Underground Storage Tank (UST) Assessments and Closures
- Environmental Transaction Screens (ETS)
- Regulatory Record Reviews
- HUD Assessments
- Endangered Species Assessments
- Historical and Cultural Surveys/Assessments
- Radon Assessment
- Asbestos Surveys and Abatement Design
- Lead-Based Paint Surveys and Abatement Design
- Microbial and Indoor Air Quality Assessments
- Vapor Intrusion Assessments
- Fannie Mae and Freddie Mac Assessments
- Contaminated soil management plans

Facilities Due Diligence Services:

- Accessibility Consulting
- Bank Draw Review
- Pre and Post Construction Surveys
- Property Condition Assessments (PCAs)
- Forensic Investigations
- GPR Surveys
- EIFS Services

Engineering Due Diligence Services:

- Subsurface Geotechnical Explorations
- Test Pit Evaluations
- Seismic Studies
- Cost estimating for construction
- Geologic Assessments

GARNETT B. WILLIAMS, PG
ECS MID-ATLANTIC, LLC

EDUCATION

Bachelor of Science, 1983
Geology
James Madison University

REGISTRATIONS

- Professional Geologist: VA

CERTIFICATIONS

- National Certification Program for Construction Code Inspectors
- Asbestos Inspector: VA
- Professional Wetland Delineator: VA
- e-Railsafe

MEMBERSHIPS

- Association of Groundwater Scientists and Engineers
- Virginia Association of Wetland Professionals

EXPERIENCE

Mr. Williams serves as senior environmental project manager for the Mid-Atlantic region. Responsibilities include coordinating and preparing Phase I/Phase II Environmental Site Assessments, facility audits, environmental site characterization studies, remediation feasibility studies, coordinating and implementation of corrective action plans and contaminant remediation efforts, and wetlands delineation studies, and associated environmental permitting. Mr. Williams has worked on numerous VDEQ State Lead projects since 2004 involving both petroleum and hazardous substance/waste impacted properties.

PROJECT EXPERIENCE

Blue Ridge Community College, Weyers Cave, VA - This project consisted of an emergency response mold assessment and final clearance sampling and screening following a catastrophic release of water, when a thrust joint failed on a 10-inch diameter gravity water line inside the mechanical room. The amount of water released was unknown but a substantial area of the first floor was flooded by the incident. The bulk of the impact occurred to gypsum drywall and limited areas of the wood sub-floor in the theater. Dispatched a remediation subcontractor to the site to deploy drying fans and large commercial de-humidifiers, used a FLIR Systems ThermaCAM to perform nondestructive scanning, and obtained moisture readings using a Protimeter Moisture Measuring System.

Bohler-Uddeholm, New Boston, VA - This project consists of environmental services for a former hazardous waste management unit operating under a Resource Conservation and Recovery Act Post-Closure Care Permit, and a recently identified former hazardous waste management unit undergoing investigation for potential inclusion in the existing permit at the site. Conducting semi-annual and quarterly groundwater monitoring, providing statistical analysis and reporting, coordinating and submitting reports to the Virginia Department of Environmental Quality office, preparing a permit application for renewal of the existing 30-year Post-Closure Care Permit, conducting soil and groundwater sampling, installing groundwater monitoring wells, conducting an annual review, and preparing a Spill Prevention Control and Countermeasure Plan.

Former Star City Lumber, Roanoke, VA - This project consisted of environmental services for four buildings located in a commercial/industrial area identified as first being developed as part

of the Johnson Carpet Furniture Company in 1947 with buildings being added and subtracted from the property for many years. The site was also identified as part of the Singer Furniture facility from at least 1947 to at least 2000. The Singer facility is listed at a leaking underground storage tank, a registered storage tank, and Voluntary Remediation Program listed facility. Evaluated the probability of impact to the surface water, groundwater and/or soils within the property boundaries, evaluated historical land usage to identify previous conditions, evaluated the potential for on-site and off-site contamination, conducted a Phase I Environmental Site Assessment, and provided engineering controls or appropriate placement and treatment of soils during construction.

Fort Rucker, Small Arms Ranges, Washington, DC - This project consisted of environmental services to support the U.S. Army Environmental Center in a demonstration of small arms range berm improvement technologies, to eliminate or minimize metal contamination of soil and surface water, and enable recovery of lead from spent rounds. Developed a technical sampling plan, performed site characterization studies, collected data to evaluate berm stabilization and metal containment technologies, implemented and studied engineering and environmental design controls, designed and constructed a prototypical range and berm, and installed permanent Isco stormwater samplers in the re-constructed range floor and sedimentation basin outlets.

Handley High School Additions and Renovations, Winchester, VA - This project consisted of additions and renovations to the existing 80-year-old structure to update the existing facilities and to provide additional space for classrooms, offices and activities. Conducted inspections for the presence and abatement oversight of hazardous materials, provided construction material testing and inspection services, performed laboratory tests, analyzed the field and laboratory data to develop engineering recommendations, and provided testing and observation services during construction.

Korean Orthodox Presbyterian Church, Herndon, VA - This project consisted of environmental services for a building constructed in 1965, originally used as a two-story warehouse building designed for research. The Korean Orthodox Presbyterian Church purchased the property to provide church services to the Korean and English speaking community. Conducted an asbestos and lead-based paint survey of the building, and prepared an Operations and Maintenance Plan for the asbestos-containing materials identified at the site.

Oxhampton Estates, Lorton, VA - This project consisted of environmental services on a private shotgun and small arms range previously used for recreational shooting for over 30 years. A single station shotgun trap field and a two-lane rifle/pistol range with an earthen backstop were identified on the property. Collected soil and sediment samples using hand augers and analyzed for total and

leachable concentrations of metals, determined where concentrations of lead exceeding residential screening levels had accumulated based on the distribution of lead shot fall-out from the trap range, determined which areas of the site required mixing and burial or offsite disposal of lead-impacted soils.

Port Republic Road, Harrisonburg, VA - This project consisted of a road widening to four, 12-foot lanes with curbs and gutters, a 16-foot raised median, crossovers and turn lanes at all major intersections. Additional construction includes pedestrian and bicycle accommodations to include a multi-use path for bicycles and pedestrians on the east side of the road and a sidewalk on the west side of the road. Provided a subsurface investigation and conducted laboratory testing services to support engineering and design of pavements and structures.

Rockingham County Small Arms Range, Harrisonburg, VA - This project consisted of environmental services for a small arms municipal firing range adjacent to the Rockingham County Landfill to evaluate the concentration and distribution of lead in the backstop, range floor and runoff pathways. Prepared a site specific Health and Safety Plan, collected and analyzed soil, sediment, and groundwater samples for total and leachable concentrations of metals, estimated quantities of soil requiring excavation and treatment, completed an assessment of remedial technologies, performed oversight of the treatment process and final confirmation sampling, and transported treated soils to the adjacent municipal landfill and used as cap and cover materials.

Rockingham Memorial Hospital, Harrisonburg, VA - This project consisted of the construction of a proposed six-story, 575,000-square-foot hospital building. The new hospital will feature 238 beds, a rehabilitation/fitness center, a cancer center, a nature preserve, and state-of-the art medical technology. Currently, officials are working with a group from James Madison University to create a farm on the hospital's campus that would serve organic foods to the hospital and surrounding community. Performed a comprehensive geotechnical study, conducted a geophysical investigation for sinkhole assessment, conducted a Refraction Microtremor survey for seismic site classification, and performed construction testing and inspection for bulk earthwork operations, roads, utilities, and other infrastructure.

Root Property, Augusta County, VA - This project consisted of approximately 120 acres of undeveloped agricultural land for the construction of a large scale commercial development, associated parking lots, travel ways, emergency access, and utility corridors necessary for project completion. The project involved the disturbance of 0.23 acres of emergent wetlands and approximately 1,900-linear-feet of stream through grading, and building and road construction. Completed the wetland delineation, classification, and stream assessments of over one-mi of perennial and intermittent streams utilizing the Unified Stream Methodology, participated in the

design phase and project planning to minimize impacts to the maximum extent practicable, quantified the current functionality of the aquatic system, determine the impacts of the proposed project, and calculate the required compensatory mitigation requirements, and designed all aspects of stream restoration plan.

Russell Farm, Phase I Cultural Resources Survey, Loudoun County, VA - This project consisted of the development and implementation of a Phase I cultural resources survey of the 150-acre Russell Farm tract. The project involved historic architectural evaluation, the development of a field research model meeting the Virginia Department of Historical Resources guidelines, and completion of background and archival studies. Identified and recommended 11 previously unknown archaeological sites as ineligible for the NRHP, delineated the recorded archaeological sites, and evaluated and recommended the property as not eligible for the NRHP during Phase II.

Shenandoah Gas Line Extension, Middletown, VA - This project consisted of environmental services for an eight-inch, high-pressure, liquid, natural gas pipeline along the existing Washington Gas/Shenandoah Gas easement extending 4.5-miles from Middletown north to Stephens City, Virginia. The new installation impacted areas of federally regulated waters of the U.S. Army Corps of Engineers (USACE) at 17 locations identified as palustrine emergent (PEM) wetland areas, intermittent channels with fringe PEM wetlands, intermittent channels, and two perennial stream crossings. Performed wetland and stream bed delineation, historic and archeological surveys, and a threatened and endangered species assessment, and prepared the final permit application for submission to the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality.

Virginia School for the Deaf and Blind, Environmental, Staunton, VA - This project consisted of new construction and renovations to the Virginia School for the Deaf and Blind, a state agency owned by the Board of Education providing special education services. Performed a comprehensive Asbestos Hazard Emergency Response Act survey, conducted lead-based paint surveys following Housing and Urban Development guidelines, conducted a hazardous materials survey to include polychlorinated biphenyls and radon in light, electrical fixtures, and mercury switches, and prepared an Environmental Impact Report for the Department of General Services and Department of Energy review.

Virginia School for the Deaf and Blind, Environmental Impact Report, Staunton, VA - This project consisted of environmental services for 75 acres of land for the proposed construction and renovations for the Virginia School for the Deaf and Blind, a state agency owned by the Board of Education providing special education and related services to deaf and blind children. The consolidation of the two campuses will

consist of 21 buildings consisting of dorms, classrooms, maintenance and support facilities, and faculty/administrative offices. Completed an Environmental Impact Report following the "Procedures for Environmental Impact Review of Major State Facilities," and Section 708 of the "Construction and Professional Services Manual," and provided alternatives to the proposed construction, as the intended plan adversely affected the wildlife habitat and environment.

Virginia State Lead Program, Valley View Plaza, Penn Laird, VA - This project consisted of environmental services to evaluate alternate water supply scenarios to bring clean potable water to a former abandoned gasoline/service station now operating as an antique store called Valley View Plaza. Prepared an initial Corrective Action Plan, performed engineering studies to analyze a proposed waterline extension, provided recommendations to install a replacement well with sufficient distance from the plume, coordinated bid solicitation for drilling the well and final plumbing of the water line, and monitored installation of the replacement well.

Western State Hospital, Staunton, VA - This project consisted of a proposed 246-bed hospital with a gross floor area of approximately 330,000-square-feet to replace the existing hospital to the south. The building is a multi-story structure with slab-on-grade and includes a two-story central section with a large interior courtyard. Performed a wetland delineation, conducted a Phase IA archeological survey, review of threatened and endangered species, and a final habitat assessment, completed a geotechnical study, drilled and sampled soil test borings, performed rock coring, measured shallow water table elevations, and provided engineering recommendations pertaining to subsurface conditions, foundations, paved areas, construction of stormwater ponds, and general earthwork.

Winebrenner's Crossing Tract, Archaeological Survey, Martinsburg, WV - This project consisted of a Phase I Archaeological survey of 336 acres of land on the Winebrenner's Crossing tract located in the southern portion of Berkeley County. ECS conducted the survey on an expedited project schedule and concluded work within the prescribed budget. Performed shovel testing on land with medium to high probability of producing cultural resources, conducted archival research, which produced a number of maps with previously recorded archaeological sites and architectural resources near the project area, discovered six previously unrecorded archaeological sites and three previously unrecorded archaeological locations.

ALEXANDRA MOON

SENIOR ENVIRONMENTAL PROJECT MANAGER

CERTIFICATIONS

VA: Asbestos Inspector, Asbestos Management Planner, Asbestos Project Designer, Asbestos Project Monitor

NRSB Radon Measurement Specialist

Nuclear Gauge Operation

SKILLS

Hazardous Materials Surveys

Environmental Site Assessments

Noise Monitoring and Assessments

Storage Tank Removal

Site Characterization

EDUCATION

Bachelor of Science, 2005, Geology, Radford University, Radford, VA

YEARS OF EXPERIENCE

ECS: 14 Other: 0

PROFESSIONAL PROFILE

Ms. Moon serves as a Senior Environmental Project Manager in the Roanoke, Virginia office. Her responsibilities include asbestos surveys, lead-based paint screenings, radon sampling, and microbial assessments as well as Phase I Environmental Site Assessments; Soil, Groundwater and Vapor Assessments; and noise assessments. Additional responsibilities include project management, coordinating schedules, developing budgets, authoring proposals and writing remedial strategies and reports.

PROJECT EXPERIENCE

Proposed Florida Avenue Development, Lynchburg, VA – Senior Project Manager. This project consisted of the completion of a Phase I ESA and HUD Part 58 Form on a wooded lot located in Lynchburg, Virginia prior to the acquisition and development of the site for independent living for people with disabilities.

Undisclosed Solar Project Due Diligence (Various Sites), VA – Senior Project Manager: Ms. Moon provided oversight and portfolio management of a 17 site project that included Phase I ESAs, Wetland Delineation, and Threatened and Endangered species reviews. She also assisted with report writing and client management.

City of Danville On Call Services (Various Projects), VA – Senior Project Manager: This on call service consists of completing asbestos surveys on abandoned and derelict houses and small commercial properties located in the City of Danville. If friable asbestos is identified, also providing abatement specifications, monitoring during the asbestos abatement and clearance reporting after the asbestos is removed.

Cooper Crouse and Hinds, Roanoke, VA - Provided industrial hygiene services and testing including area noise assessment and dust exposure monitoring at the Roanoke manufacturing facility.

Roanoke College, Salem, VA - Environmental Project Manager: Provided an asbestos-containing materials survey of the former Bowman Hall at Roanoke College. Ms. Moon also prepared specifications for the removal of asbestos, PCB's, and mercury.

Appendix VII: Acronyms

List of Common Acronyms

AULs	Activity and Use Limitations
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
ACM	Asbestos Containing Materials
BER	Business Environmental Risk
CORRACTS	CERCLA Corrective Action List
NPL	CERCLA National Priorities List
NFRAP	CERCLA No Further Remedial Action Planned
CERCLA	Comprehnsive Environmental Response Cleanup Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CREC	Controlled Recognized Environmental Condition
ERNS	Emergency Response Notification System
EC	Engineering Controls
HIST LF	Historical Landfill
HREC	Historical Recognized Environmental Condition
IC	Institutional Controls
LQG	Large Quantity Generator
LBP	Lead Based Paint
LTANKS	Leaking Tanks
LUST	Leaking Underground Storage Tank
REC	Recognized Environmental Condition
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
SQG	Small Quantity Generator
SWF/LF	Solid Waste Facility/Landfill
SHWS	State Hazardous Waste Sites
UST	Underground Storage Tank
USGS	United States Geological Survey

ECS Mid-Atlantic, LLC

Geotechnical Engineering Report

Bonsack Fire Station

1455 Mexico Way NE
Roanoke, Virginia

ECS Project No. 12:19596

June 9, 2022

ECS MID-ATLANTIC, LLC
"Setting the Standard for Service"
Geotechnical • Construction Materials • Environmental • Facilities

June 9, 2022

Mr. George Assaid
Roanoke County
1206 Kessler Mill Road
Salem, VA 24153

ECS Project No. 12:19596

Reference: Geotechnical Engineering Report
Bonsack Fire Station
Roanoke, Virginia

Dear Mr. Assaid:

ECS Mid-Atlantic, LLC (ECS) has completed the subsurface exploration, laboratory testing, and geotechnical engineering analyses for the above-referenced project. Our services were performed in general accordance with our agreed to scope of work. This report presents our understanding of the geotechnical aspects of the project along with the results of the field exploration and laboratory testing conducted, and our design and construction recommendations.

It has been our pleasure to be of service to Roanoke County during the design phase of this project. We would appreciate the opportunity to remain involved during the continuation of the design phase, and we would like to provide our services during construction phase operations as well to verify subsurface conditions assumed for this report. Should you have any questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,

ECS Mid-Atlantic, LLC

Brandon Quinn

Brian S Wyatt Digitally signed by Brian S Wyatt Date: 2022.06.09 13:39:42 -04'00'

COMMONWEALTH OF VIRGINIA
BRIAN S. WYATT
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PROFESSIONAL ENGINEER

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TABLE OF CONTENTS

EXECUTIVE SUMMARY 1
1.0 INTRODUCTION 2
2.0 PROJECT INFORMATION 3
2.1 Project Location/Current Site Use/Past Site Use 3
2.2 Proposed Construction 4
3.0 FIELD EXPLORATION AND LABORATORY TESTING 4
3.1 Site Geology 5
3.2 Subsurface Characterization 5
3.3 Groundwater Observations 5
3.4 Laboratory Testing 6
4.0 DESIGN RECOMMENDATIONS 6
4.1 Karst Risk Commentary 6
4.2 Foundations 6
4.3 Slabs on Grade 7
4.4 Below Grade WallS 8
4.5 Seismic Design Considerations 9
4.6 Pavements 10
4.7 Site Retaining Walls 11
5.0 SITE CONSTRUCTION RECOMMENDATIONS 13
5.1 Subgrade Preparation 13
5.1.1 Stripping and Grubbing 13
5.1.2 Proofrolling 13
5.2 Earthwork Operations 13
5.2.1 Existing Man-Placed Fill 13
5.2.2 High Plasticity Soils 13
5.2.3 Weathered Rock and Rock 14
5.2.4 Structural Fill 14
5.3 Foundation and Slab Observations 15
5.4 Utility Installations 16
6.0 CLOSING 16

APPENDICES

Appendix A – Drawings & Reports

- Site Location Diagram
- Boring Location Diagram
- Subsurface Cross-Sections

Appendix B – Field Operations

- Reference Notes for Boring Logs
- Subsurface Exploration Procedure: Standard Penetration Testing (SPT)
- B-01 through B-06, P-01 through P-04, S-01, S-02, SWM-01, and SWM-02

Appendix C – Laboratory Testing

- Laboratory Test Results Summary
- Plasticity Chart
- Grain Size Analyses
- Moisture-Density Relationship Curves
- CBR Test Results

EXECUTIVE SUMMARY

This Executive Summary is intended as a very brief overview of the primary geotechnical conditions that are expected to affect design and construction. Information gleaned from the Executive Summary should not be utilized in lieu of reading the entire geotechnical report.

- No grading plans were available at the time of this report but based on the existing grades and a finish floor elevation of 1060 feet, it appears that the maximum cuts and fills will be in the range of about 15 feet and 2 feet, respectively, to reach design grades. It is our understanding that a slope will be cut into the 2.25-acre parcel approximately 20 feet in height at a slope of 2H:1V. Auger refusal on apparent hard rock was encountered within some of our borings, and small rock outcrops were visible in some areas. Given the proposed earth work anticipated to reach site grades, rock excavation at this site will likely be required. Rock cut material used for structural fill will need to be processed and crushed prior to placement.

- The proposed structures can be supported by conventional shallow foundations consisting of column and/or strip footings bearing on the existing soils for maximum column loads of up to 150 kips. Such foundations can be designed for a net allowable bearing pressure of 2,500 psf based on anticipated design loads. The building can be designed based on a seismic site classification of C as currently configured.

- For protection against potential shrink-swell action, footings should bear at least 30 inches below final exterior grades.

- ECS should be provided with the opportunity to review our recommendations and complete additional geotechnical exploration and recommendations based on actual loading conditions and final layout.

Refer to the text of the report for site specific design and construction recommendations.

1.0 INTRODUCTION

The purpose of this study was to provide geotechnical information for the design of the foundations for the proposed construction and related infrastructure. The project will include an 11,600 square foot, three bay fire station, pavements, fuel storage, and stormwater management. The recommendations developed for this report are based on project information supplied by you.

Our services were provided in accordance with our Proposal No. 14969-P, dated February 3, 2022, as authorized by W.L. Heath Honaker on April 20, 2022, which includes our Terms and Conditions of Service.

This report contains the procedures and results of our subsurface exploration and laboratory testing programs, review of existing site conditions, engineering analyses, and recommendations for the design and construction of the project.

The report includes the following items.

a. Observations from our site reconnaissance including current site conditions, surface drainage features, and surface topographic conditions

b. A review of the published geologic conditions and their relevance to your planned development

c. A subsurface characterization and a description of the field exploration and laboratory tests performed. Groundwater concerns relative to the planned construction, if any, will be summarized.

d. Final logs of the soil borings and records of the field exploration prepared in accordance with the standard practice for geotechnical engineering. A boring location plan will be included, and the results of the laboratory tests will be plotted on the final boring logs or included on a separate test report sheet.

e. Recommended allowable soil bearing pressure(s) for conventional shallow foundations (spread footings) and estimates of predicted foundation settlement. If required, we will provide recommendations for suitable intermediate foundations/ground improvement options or deep foundations in the event estimated settlements of shallow foundations are not tolerable.

f. Recommendations for slab-on-grade construction, including recommendations for subgrade improvements, subgrade modulus, and underslab subdrainage recommendations, if necessary

g. Recommendations for site retaining walls including lateral earth pressures, sliding resistance coefficients, and allowable bearing pressures

h. Evaluation of the on-site soil characteristics encountered in the soil borings. Specifically, we will discuss the suitability of the on-site materials for reuse as engineered fill to support grade slabs and pavements. We will also include compaction requirements and suitable material guidelines.

i. Recommendations for seismic site classification in accordance with the International Building Code (IBC 2018)

j. Recommendations for design of flexible pavement (asphalt) and rigid pavement (concrete) based on laboratory CBR values

k. Recommendations for additional testing and/or consultation that might be required to complete the geotechnical assessment and related engineering for this project

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION/CURRENT SITE USE/PAST SITE USE

The site is located at 1455 Mexico Way NE within the corporate city limits of Roanoke, Virginia. At the time of our visit, the ground surface over the site was grass with scattered trees and pavement. The overall site is bounded to the south by Mexico Way, to the east by Parkway Church on the Mountain, to the west by an Airgas store, and to the north by a wooded area.

Figure 2.1.1. Site Location

At the time of our visit the site was generally grass-covered with a wooded area near the northeast corner of the site. Mexico Way runs through the southern and southwestern portions of the site. The property slopes generally from southwest to northeast, with the central section being relatively flat. A few rock outcrops less than a foot wide were visible at the ground surface. With the exception of the wooded area in the northeast, most of the site is generally open. Elevations range from +1055 msl in the southwest corner to +1086 msl in the northeast corner.

Historical images indicate the site was bisected by a dirt path running southwest to northeast from the 1990s until 2005, when some grading took place as part of the construction of the Parkway Church. A drainage ditch with riprap was installed in the northeast portion of the site between September of 2005 and April of 2006 and remains in place. Existing fill could be present on site which was not detected by the borings.

2.2 PROPOSED CONSTRUCTION

The following information explains our understanding of the planned development including proposed fire station and related infrastructure.

SUBJECT	DESIGN INFORMATION / ASSUMPTIONS
Building Footprint	Approximately 11,600 square feet in plan view
# of Stories	One-story 3 bay fire station
Usage	Public Service
Framing	Cast-in-place concrete with minor reinforced masonry
Column Loads*	150 kips
Wall Loads*	5 kips per linear foot (klf) maximum
Lowest Finish Floor Elevation	EL. 1060 ft (up to 15 feet below present site grades)

*Assumed load are based on reasonable material and product loads. If final design loads exceed our assumed loads, this report needs to be revised to update our foundation recommendations, bearing capacity, and settlement calculations.

Two options for stormwater facilities are shown on the concept plan, an above ground facility at the north end of the site or an underground facility on the southern end. Invert elevations for these facilities were not provided at the time of this report.

Pavement types may include both asphalt and concrete.

3.0 FIELD EXPLORATION AND LABORATORY TESTING

Our exploration procedures are explained in greater detail in Appendix B including the insert titled Subsurface Exploration Procedures. Our scope of work included drilling 16 borings. Our borings were located with a handheld GPS unit while referencing Google Earth aerial imaging (showing desired boring locations provided by your office) and estimating angles from existing site features. Their approximate locations are shown on the Boring Location Diagram in Appendix A.

3.1 SITE GEOLOGY

The project site is located within the Valley and Ridge Geologic Province of Virginia. Our review of the Geology of the Roanoke and Stewartsville Quadrangles, Virginia (1981) indicates the site is underlain by the Cambrian-aged Rome Formation, which consists of interbedded phyllitic mudstone, sandstone, siltstone, and conglomerate, with frequent 10 to 50-foot carbonate intervals consisting primarily of thinly laminated dolomite and phyllitic mudstone.

The carbonate rock types encountered in this geology are subject to development of karst features such as sinkholes. Carbonate materials solution in water over long periods of time, resulting in loss of rock material. The solution process typically occurs along planes of more soluble material and causes the formation of interconnected seams and cavities within carbonate formations.

3.2 SUBSURFACE CHARACTERIZATION

The subsurface conditions encountered were generally consistent with published geological mapping. The following sections provide generalized characterizations of the soil strata. Please note that the ground surface elevations were not surveyed by a licensed surveyor; these elevations are approximate based on Google-Earth©; therefore, elevation ranges are approximate +/- several feet. Please refer to the boring logs in Appendix B.

Approximate Depth (ft)	Stratum	Description	Ranges of SPT(1) N-values (bpf)
0-1.2 (Surface cover)	n/a	Topsoil 4-6”, Asphalt 6” and Gravel 8”	N/A
0.3-1.2 to 3-21.5	I	Residuum, Medium Dense to Very Dense SILTY FINE TO MEDIUM SAND (SM), Medium Dense CLAYEY FINE TO MEDIUM SAND (SC), Stiff to Hard SANDY SILT (ML), Firm to Stiff SANDY LEAN CLAY/LEAN CLAY WITH SAND (CL), Firm to Very Stiff SANDY FAT CLAY/FAT CLAY/FAT CLAY WITH SAND (CH), Dry to Wet	7 to 72
3-5.5 to 5.5-7.5	II	Weathered Rock Sampled as SILTY FINE TO MEDIUM SAND (WR), Dry	50+
5.5-21.5+	III	Hard rock, likely pinnacled when encountered at shallow depths	N/A

Notes:
(1) Standard Penetration Testing

A graphical presentation of the subsurface conditions is shown on the Subsurface Cross Section Diagrams included in Appendix A.

3.3 GROUNDWATER OBSERVATIONS

Water levels were measured in our borings in Appendix B. Groundwater was only observed in B-04 at the time of drilling and was observed at a depth of 18 feet below the ground surface, corresponding to EL. +1042 ft msl. Variations in the long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff, construction activities, and other factors.

3.4 LABORATORY TESTING

The laboratory testing consisted of selected tests performed on samples obtained during our field exploration operations. Classification and index property tests were performed on representative soil samples. The laboratory testing program included natural moisture content tests (ASTM D2216), grain size analyses tests (ASTM D6913), and Atterberg Limits tests (ASTM D4318). Standard Proctor tests (ASTM VTM-1) and California Bearing Ratio (CBR) tests (VTM-8) were performed on bulk soil samples. The results of all laboratory testing conducted are included in the Appendix of this report.

Each sample was visually classified on the basis of texture and plasticity in accordance with ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedures) and including USCS classification symbols, and ASTM D2487 Standard Practice for Classification for Engineering Purposes (Unified Soil Classification System (USCS)). After classification, the samples were grouped in the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses along with the soil descriptions. The stratification lines between strata on the logs are approximate; in situ, the transitions may be gradual.

4.0 DESIGN RECOMMENDATIONS

4.1 KARST RISK COMMENTARY

The site is mapped to be underlain by geologic parent rock which is known to be carbonate in nature. There are mapped karst features within one mile of the site. However, based on our exploration the subsurface did not exhibit karst overburden soil characteristics. Additionally, during our site reconnaissance karst surface features were not observed on the property or immediate vicinity. Therefore, we define the risk of future sinkhole development on this site as low.

4.2 FOUNDATIONS

Provided subgrades and Structural Fills are prepared as recommended in this report, the proposed structure can be supported by shallow foundations including column footings and continuous wall footings. We recommend the foundation design use the following parameters:

Design Parameter	Column Footing	Wall Footing
Net Allowable Bearing Pressure(1)	2,500 psf	2,500 psf
Acceptable Bearing Soil Material	Stiff Stratum I or II	Stiff Stratum I or II
Minimum Width	24 inches	16 inches
Minimum Interior Footing Embedment Depth (below slab or finished grade)	24 inches	18 inches
Minimum Exterior Footing Depth (below final exterior grade)(2)	30 inches	30 inches
Estimated Total Settlement (3)	Less than 1- inch	Less than 1- inch
Estimated Differential Settlement (4)	Less than ¾ inches between columns	Less than ¾ inches

Notes:

(1) Net allowable bearing pressure is the applied pressure in excess of the surrounding overburden soils above the base of the foundation.
(2) For bearing considerations and expansive soil concerns.
(3) Based on assumed structural loads. If final loads are different, ECS must be contacted to update foundation recommendations and settlement calculations.
(4) Based on maximum column/wall loads and variability in borings. Differential settlement can be re-evaluated once the foundation plans are more complete.

Potential Undercuts: Most of the soils at the foundation bearing elevation are anticipated to be suitable for support of the proposed structure. If soft or unsuitable soils are observed at the footing bearing elevations, the unsuitable soils should be undercut and removed. Any undercut should be backfilled with lean concrete ($f'_c \geq 200$ psi at 28 days) or compacted VDOT No. 21-A Stone up to the original design bottom of footing elevation; the original footing shall be constructed at the designed footing elevations. Due to karst potential on the site, we do not recommend the use of VDOT No. 57 Stone for undercut backfilling.

If shallow foundation is subject to lateral loading, the following engineering parameters can be utilized:

SOIL PARAMETER	ESTIMATED VALUE
Coefficient of Passive Earth Pressure (K_p)	2.2
Soil Moist Unit Weight (γ)	110 pcf
Cohesion (C)	800 psf
Interface Friction Angle [Concrete on Soil] (ϕ_f)	18°
Sliding Friction Coefficient [Concrete on Soil] (μ)	0.32
Passive equivalent fluid pressure	242H (psf)

4.3 SLABS ON GRADE

Provided subgrades and structural fills are prepared as discussed herein, the proposed floor slabs can be constructed as Ground Supported Slabs (or Slab-On-Grade). Based on a lowest finished floor elevation of

EL. 1060 feet, it appears that the slabs will bear on newly compacted fill or Stratum I. The following graphic depicts our soil-supported slab recommendations:

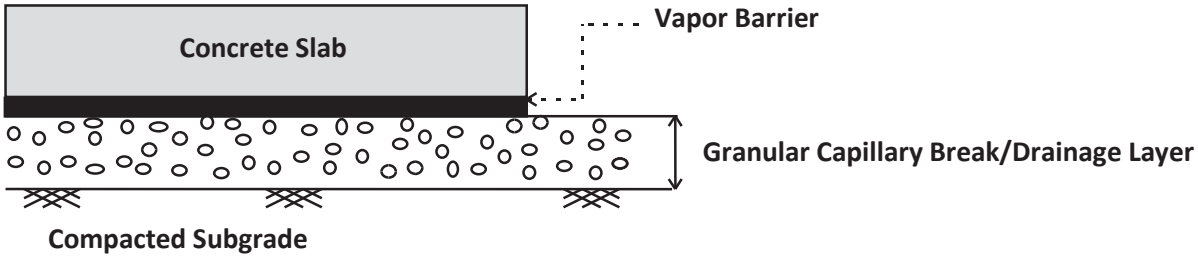


Figure 4.2.1

1. Drainage Layer Thickness: 4 inches
2. Drainage Layer Material: GRAVEL (GP, GW), SAND (SP, SW)

Soft or yielding soils may be encountered in some areas. Those soils should be removed and replaced with compacted Structural Fill in accordance with the recommendations included in this report.

Subgrade Modulus: Provided the Structural Fill and Granular Drainage Layer are constructed in accordance with our recommendations, the slab may be designed assuming a modulus of subgrade reaction, k_1 of 100 pci (lbs./cu. inch). The modulus of subgrade reaction value is based on a 1 foot by 1 foot plate load test basis.

Vapor Barrier: Before the placement of concrete, a vapor barrier may be placed on top of the granular drainage layer to provide additional protection against moisture penetration through the floor slab. When a vapor barrier is used, special attention should be given to surface curing of the slab to reduce the potential for uneven drying, curling and/or cracking of the slab. Depending on proposed flooring material types, the structural engineer and/or the architect may choose to eliminate the vapor barrier.

Slab Isolation: Soil-supported slabs should be isolated from the foundations and foundation-supported elements of the structure so that differential movement between the foundations and slab will not induce excessive shear and bending stresses in the floor slab. Where the structural configuration prevents the use of a free-floating slab such as in a drop down footing/monolithic slab configuration, the slab should be designed with suitable reinforcement and load transfer devices to preclude overstressing of the slab.

4.4 BELOW GRADE WALLS

We recommend that below grade walls be designed to withstand at-rest lateral earth pressures and surcharge loads from adjacent building foundations, and/or streets. These recommendations apply to a “drained” condition which is where there is drainage material behind below grade walls that prevents hydrostatic water pressures on the back of the below grade wall.

To accomplish a drained condition, drainage materials such as a free draining gravel, geocomposite drainage panels, weep holes, and an underslab drainage system should be used.

We recommend that walls that are restrained from movement at the top be designed for a linearly increasing lateral earth pressure. The following figure depicts our recommended at-rest lateral earth pressure condition for a "drained below-grade wall" with restrained wall top:

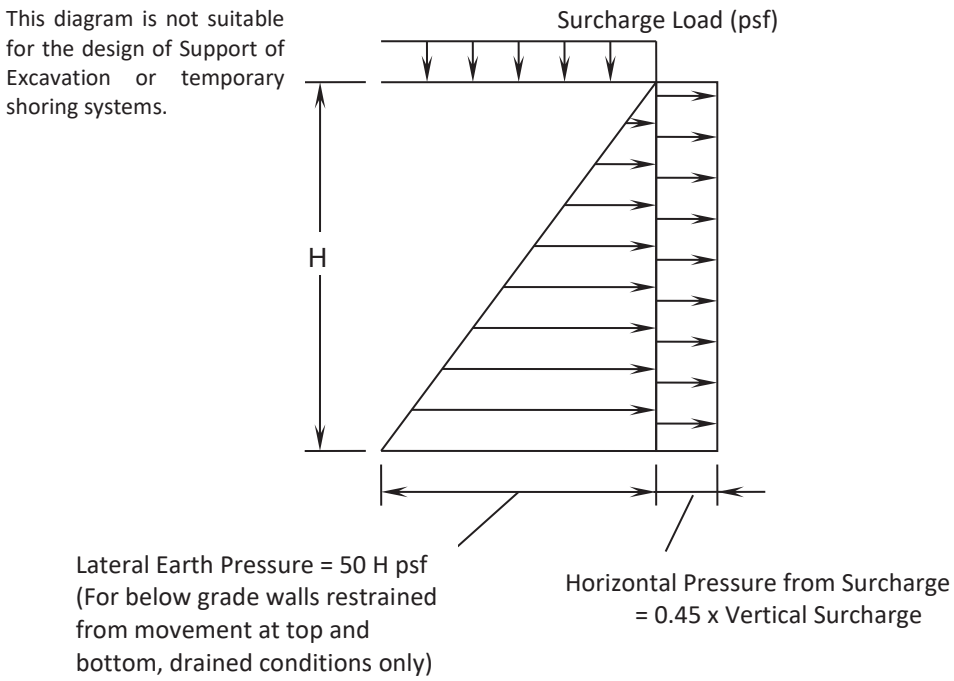


Figure 4.3.1

Surcharge loads imposed within a 45 degree slope from the base of the restrained wall should be considered in the below grade wall design. These surcharge loads should be based on an at-rest pressure coefficient, k_0, of 0.45. Care should be used to avoid the operation of heavy equipment to compact the wall backfill since it may overload and damage the wall; in addition, such loads are not typically considered in the design of below grade walls.

4.5 SEISMIC DESIGN CONSIDERATIONS

Seismic Site Classification: The International Building Code (IBC) 2015 requires site classification for seismic design based on the upper 100 feet of a soil profile. At least two methods are utilized in classifying sites, namely the shear wave velocity (v_s) method and the Standard Penetration Resistance (N-value) method. The second method (N-value) was used in classifying this site.

SEISMIC SITE CLASSIFICATION			
Site Class	**Soil Profile Name**	**Shear Wave Velocity, Vs, (ft./s)**	**N value (bpf)**
A	Hard Rock	Vs > 5,000 fps	N/A
B	Rock	2,500 < Vs ≤ 5,000 fps	N/A
C	Very dense soil and soft rock	1,200 < Vs ≤ 2,500 fps	>50

SEISMIC SITE CLASSIFICATION			
Site Class	**Soil Profile Name**	**Shear Wave Velocity, Vs, (ft./s)**	**N value (bpf)**
D	Stiff Soil Profile	600 ≤ Vs ≤ 1,200 fps	15 to 50
E	Soft Soil Profile	Vs < 600 fps	<15

Based upon our interpretation of the subsurface conditions, the appropriate Seismic Site Classification is "C" as shown in the preceding table.

Ground Motion Parameters: In addition to the seismic site classification, ECS has determined the design spectral response acceleration parameters following the IBC methodology. The Mapped Responses were estimated from the USGS website https://www.usgs.gov/natural-hazards/earthquake-hazards/design-ground-motions. The design responses for the short (0.2 sec, S_{DS}) and 1-second period (S_{D1}) are noted in bold at the far right end of the following table.

GROUND MOTION PARAMETERS [IBC 2018 Method]								
Period (sec)	**Mapped Spectral Response Accelerations (g)**		**Values of Site Coefficient for Site Class**		**Maximum Spectral Response Acceleration Adjusted for Site Class (g)**		**Design Spectral Response Acceleration (g)**	
Reference	Figures 1613.3.1 (1) & (2)		Tables 1613.3.3 (1) & (2)		Eqs. 16-37 & 16-38		Eqs. 16-39 & 16-40	
0.2	S_S	0.184	F_a	1.3	$S_{MS}=F_aS_s$	0.24	$S_{DS}=2/3\ S_{MS}$	0.16
1.0	S_1	0.063	F_v	1.5	$S_{M1}=F_vS_1$	0.094	$S_{D1}=2/3\ S_{M1}$	0.063

The Site Class definition should not be confused with the Seismic Design Category designation which the Structural Engineer typically assesses. If a higher site classification is beneficial to the project, we can provide additional testing methods that may yield more favorable results.

4.6 PAVEMENTS

Subgrade Characteristics: Based on the results of our borings, it appears that the pavement subgrades in cuts will consist mainly of SANDY LEAN CLAY (CL) and SILT (ML) material. We anticipate pavement subgrades in fill areas will consist of similar materials from on-site cuts.

California Bearing Ratio (CBR) testing was performed in our lab. The soils tested demonstrated CBR values of13.4 and 10.3, with an average of 11.9. Maximum swell was 0.57%. For design purposes, we recommend a design CBR value of 7.9, two-thirds of the average laboratory value.

Traffic Loading Information: We were not provided traffic loading information; therefore, we have assumed loadings typical of this type of project. Specifically, for Light-Duty Pavements, we have assumed 250 vehicle passes per day with 5 percent or less of light truck traffic for an EAL_{18} loading of approximately 50,000. For Heavy-Duty Pavements, we have assumed two heavy trucks in and out of each of the three

truck bays each day, for an EAL_{18} loading of approximately 230,000. When traffic loading becomes available, ECS should be contacted to revise our preliminary pavement design.

Pavement Design Recommendations: Our pavement design was performed in general accordance with the *AASHTO Guide for Design of Pavement Structures*, considering the *VDOT Guidelines for 1993 AASHTO Pavement Design.* The preliminary pavement sections below are guidelines that may or may not comply with local jurisdictional minimums.

PROPOSED PAVEMENT SECTIONS				
MATERIAL	FLEXIBLE PAVEMENT		RIGID PAVEMENT	
	Heavy Duty	Light Duty	Heavy Duty	Light Duty
Portland Cement Concrete (f'_c = 4000 psi)	-	-	6 in	4 in
Asphaltic Concrete Surface Course (SM-12.5)	1.5 in	2 in	-	-
Asphaltic Concrete Base Course (IM-19.0)	2 in	-	-	-
Graded Aggregate Base Course (AASHTO #21A/21B)	8 in	8 in	4 in	4 in

In general, heavy duty sections are areas that will be subjected to trucks, buses, or other similar vehicles including main drive lanes of the development. Light duty sections are appropriate for vehicular traffic and parking areas.

Large, front loading trash dumpsters frequently impose concentrated front wheel loads on pavements during loading. This type of loading typically results in rutting of asphalt pavement and ultimately pavement failures. For preliminary design purposes, we recommend that the pavement in trash pickup areas consist of a 6-inch thick, 4,000 psi, reinforced concrete slab over 6-inches of dense graded aggregate.

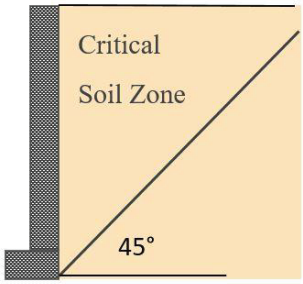
Prior to subbase placement and paving, we recommend that CBR testing of the subgrade soils (both natural and fill soils) be performed to determine the soil engineering properties for final pavement design.

4.7 SITE RETAINING WALLS

Unlike below grade walls, site retaining walls are free to rotate at the top (not restrained). For these walls the "Active" (k_a) soil condition should be used along with a triangular distribution of earth pressures. In addition, site retaining walls should be designed to withstand lateral earth pressures exerted by the backfill and any surcharge loads within the “Critical Soil Zone”. The Critical Zone is defined as the area between the back of the retaining wall footing and an imaginary line projected upward and rearward at a 45-degree angle (see figure below).

The lateral earth pressures developed behind site retaining walls are a function of the backfill soil type, backfill slope angle, and any surcharge loads. For the design of site retaining walls, we recommend the soil parameters provided below.

RETAINING WALL BACKFILL IN THE CRITICAL SOIL ZONE	
Soil Parameter	**Estimated Value**
Soil Classification	Silty SAND (SM) or more granular
Fines Content	Max. 20%>#200 Sieve
Coefficient of Active Earth Pressure (K_a)	0.31
Retained Soil Moist Unit Weight (γ)	125 pcf
Cohesion (C)	0 psf
Angle of Internal Friction (ϕ)	32°
Friction Coefficient [Concrete on Soil] (μ)	0.40
Active Equivalent Fluid Pressure	39H (psf)



FOUNDATION SOILS	
Soil Parameter	**Estimated value**
Allowable Soil Bearing Pressure	2,500 psf
Minimum Wall Embedment Below Grade	30 inches
Coefficient of Passive Earth Pressure (K_p)	2.2
Soil Moist Unit Weight (γ)	110 pcf
Cohesion (C)	800 psf
Interface Friction Angle [Concrete on Soil] (ϕ_f)	18°
Sliding Friction Coefficient [Concrete on Soil] (μ)	0.3
Passive Equivalent Fluid Pressure	240H (psf)

It is critical that the soils used for backfill of the retaining walls meet the soil parameters recommended above. If the soils available do not meet those parameters, then ECS should be contacted to provide revised values, and to confirm that only suitable soils will be used for wall backfill.

Care should be used to avoid the operation of heavy equipment to compact the wall backfill since it may overload and damage the wall. In addition, such loads are not typically considered in the design of site retaining walls, and are not provided for in our recommendations.

Wall Drainage: Retaining walls should be provided with a wall and foundation drainage system to relieve hydrostatic pressures which may develop behind the walls. This system should consist of weepholes through the wall and/or a 4-inch perforated, closed joint drain line located along the backside of the walls above the top of the footing. The drain line should be surrounded by a minimum of 6 inches of AASHTO #57 Stone wrapped with an approved non-woven geotextile, such as Mirafi 140-N or equivalent. Wall drains can consist of a 12-inch wide zone of free draining gravel, such as AASHTO #57 Stone, employed directly behind the wall and separated from the soils beyond with a non-woven geotextile. Alternatively, the wall drain can consist of a suitable geocomposite drainage board material. The wall drain should be hydraulically connected to the foundation drain.

5.0 SITE CONSTRUCTION RECOMMENDATIONS

5.1 SUBGRADE PREPARATION

5.1.1 Stripping and Grubbing

The subgrade preparation should consist of stripping all vegetation, rootmat, topsoil, existing fill, and any soft or unsuitable materials from the 5-foot expanded building and 2-foot expanded pavement limits, and 5 feet beyond the toe of Structural Fills. Borings performed in "undisturbed" areas of the site contained an observed 4 to 6 inches of topsoil. Deeper topsoil or organic laden soils may be present in wet, low-lying, and poorly drained areas. In wooded areas, the root balls may extend as deep as about 2 feet and will require additional localized stripping depth to completely remove the organicsECS should be retained to verify that topsoil and unsuitable surficial materials have been removed prior to the placement of structural fill or construction of structures.

5.1.2 Proofrolling

Prior to fill placement or other construction on subgrades, the subgrades should be evaluated by an ECS field technician. The exposed subgrade should be thoroughly proofrolled with construction equipment having a minimum axle load of 10 tons [e.g. fully loaded tandem-axle dump truck]. Proofrolling should be traversed in two perpendicular directions with overlapping passes of the vehicle under the observation of an ECS technician. This procedure is intended to assist in identifying any localized yielding materials.

Where proofrolling identifies areas that are unstable or "pumping" subgrade those areas should be repaired prior to the placement of any subsequent Structural Fill or other construction materials. Methods of stabilization include undercutting, moisture conditioning, or chemical stabilization. The situation should be discussed with ECS to determine the appropriate procedure. Test pits may be excavated to explore the shallow subsurface materials to help in determining the cause of the observed unstable materials, and to assist in the evaluation of appropriate remedial actions to stabilize the subgrade.

5.2 EARTHWORK OPERATIONS

5.2.1 Existing Man-Placed Fill

Fill Removal in Building Areas: No onsite fill was encountered in our boring but may be encountered in unexplored areas. If encountered, all existing fill should be removed from below the planned pavement and building areas.

5.2.2 High Plasticity Soils

High plasticity soils are prevalent in the site vicinity. Ideally, such soils would be excluded from reuse as fill and be undercut and replaced in cut subgrades for slabs, pavements, and footings to avoid the potential for moisture-related volume change or instability when wet; however, we anticipate this would not be practical for the subject site. Therefore, it should be recognized that high plasticity soils are moisture sensitive and may be problematic during construction activities. Care should be taken to provide adequate drainage and maintenance of exposed subgrades. Due to the risk of shrink-swell, or moisture-related

volume change, we have provided a footing embedment depth recommendation in **Section 4.2 Foundations**.

5.2.3 Weathered Rock and Rock

Based on boring data obtained during the exploration, we anticipate that materials requiring difficult or rock excavation techniques will be encountered during site grading and excavation to planned subgrades. It is our understanding that that a slope will be cut into the 2.25-acre parcel approximately 20 feet in height at a slope of 2H:1V. Auger refusal on apparent hard rock was encountered within some of our borings. Borings S-01 and P-02 in an area of proposed cut refused on hard rock at depths of 5.5 and 7.5 feet, respectively. Given the proposed earth work anticipated to reach site grades, rock excavation at this site will likely be required. Rock cut material used for structural fill will need to be processed and crushed prior to placement.

The excavation of weathered rock and rock can have a substantial impact on the cost and schedule of the proposed construction. This discussion considers two general classes of materials for purposes of describing excavatability. Residuum and weathered rock will be used as the terms for the materials to be excavated.

In mass excavations for general site work, overburden soils with standard penetration test N-values of 40 bpf or less can usually be removed with conventional earth excavation equipment. Residual soils or soft weathered (Saprolitic) rock with N-values of 40 to 50 bpf can generally be removed with conventional earth moving equipment after first being loosened with a large single-tooth ripper attached to a large crawler tractor. Harder, less weathered rock will generally require the use of a large single-tooth ripper, dozers, and/or track-mounted backhoes for excavation. However, materials exhibiting N-values of 50 blows or greater for 6 inch of penetration, typically defined as refusal material, will be more difficult to excavate and generally require blasting and other rock excavation techniques. The actual excavatability of the bedrock material will be greatly controlled by in-situ jointing and bedding and may vary from location to location.

In confined excavations, such as utility trenches, excavation of dense residual soils typically requires the use of large track-mounted backhoes. Excavation of harder phases of weathered rock typically requires the use of large track-mounted backhoes, pneumatic spades, or light blasting. Refusal materials (apparent rock) normally require blasting in trench excavations. Blasting in utility trenches should be done carefully to avoid damage to the surrounding materials. When the material to be excavated requires blasting, the contractor should comply with the jurisdictional requirements.

5.2.4 Structural Fill

Prior to placement of Structural Fill, representative bulk samples (about 50 pounds) of on-site and/or off-site borrow should be submitted to ECS for laboratory testing, which will typically include Atterberg limits, natural moisture content, grain-size distribution, and moisture-density relationships (i.e., Proctors) for compaction. Import materials should be tested prior to being hauled to the site to determine if they meet project specifications. Alternatively, Proctor data from other accredited laboratories can be submitted if the test results are within the last 90 days.

Satisfactory Structural Fill Materials: Materials satisfactory for use as Structural Fill should consist of inorganic soils with the following engineering properties and compaction requirements.

STRUCTURAL FILL INDEX PROPERTIES	
Subject	**Property**
Building and Pavement Areas (Borrow Soils)	LL < 50, PI<25
Building and Pavement Areas (On-site Soils)	LL < 60, PI < 30
Max. Particle Size	4 inches
Max. organic content	3% by dry weight

STRUCTURAL FILL COMPACTION REQUIREMENTS	
Subject	**Requirement**
Compaction Standard	Standard Proctor, ASTM D698
Required Compaction	95% of Max. Dry Density
Moisture Content	+/-3 % points of the soil's optimum value
Loose Thickness	8 inches prior to compaction

Aggregates/Blast Rock: The gradation of the material removed by ripping or blasting is typically quite varied. Excavated rock and weathered rock are generally only suitable for use in the deeper parts of embankment fills, or outside the zone of Structural Fill.

When rock or intact weathered rock fragments are placed in non-structural areas, we recommend that the rock fragments be spread out evenly in layers. Many times the rock needs to be choked off with rock fines, and/or soil, so that voids between the rock fragments are filled. Where the material exhibits large voids between rock fragments, a geotextile may need to be placed over the rock prior to placement of additional materials. In general, the larger rock fragments should be placed at the bottom of the fill, but no fragment should exceed 1.5 feet in its maximum dimension. Between 2 feet and 10 feet below the final subgrade elevation, no rock fragment should exceed 8 inches in its maximum dimension. Within 2 feet of the subgrade elevation, no rock fragment should exceed 4 inches in maximum dimension.

In some situations, it can be cost effective to use an onsite rock crusher to produce material that meets the requirements of Structural Fill materials.

Fill Placement: Fill materials should not be placed on frozen soils, on frost-heaved soils, and/or on excessively wet soils. Borrow fill materials should not contain frozen materials at the time of placement, and all frozen or frost-heaved soils should be removed prior to placement of Structural Fill or other fill soils and aggregates. Excessively wet soils or aggregates should be scarified, aerated, and moisture conditioned.

5.3 FOUNDATION AND SLAB OBSERVATIONS

Protection of Foundation Excavations: Exposure to the environment may weaken the soils at the footing bearing level if the foundation excavations remain open for too long a time. Therefore, foundation

concrete should be placed the same day that excavations are made. If the bearing soils are softened by surface water intrusion or exposure, the softened soils must be removed from the foundation excavation bottom immediately prior to placement of concrete. If the excavation must remain open overnight, or if rainfall becomes imminent while the bearing soils are exposed, a 1 to 3-inch thick "mud mat" of "lean" concrete should be placed on the bearing soils before the placement of reinforcing steel.

Footing Subgrade Observations: Most of the soils at the foundation bearing elevation are anticipated to be suitable for support of the proposed structure. It is important to have ECS observe the foundation subgrade prior to placing foundation concrete, to confirm the bearing soils are what was anticipated.

Slab Subgrade Verification: Prior to placement of a drainage layer, the subgrade should be prepared in accordance with the recommendations found in **Section 5.1.2 Proofrolling**.

5.4 UTILITY INSTALLATIONS

Utility Subgrades: The soils encountered in our exploration are expected to be generally suitable for support of utility pipes. The pipe subgrades should be observed and probed for stability by ECS. Any loose or unsuitable materials encountered should be removed and replaced with suitable compacted Structural Fill, or pipe stone bedding material.

Utility Backfilling: The granular bedding material (AASHTO #57 stone) should be at least 4 inches thick, but not less than that specified by the civil engineer's project drawings and specifications. We recommend that the bedding materials be placed up to the springline of the pipe. Fill placed for support of the utilities, as well as backfill over the utilities, should satisfy the requirements for Structural Fill and Fill Placement.

Excavation Safety: All excavations and slopes should be constructed and maintained in accordance with OSHA excavation safety standards. The contractor is solely responsible for designing, constructing, and maintaining stable temporary excavations and slopes. The contractor's responsible person, as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. ECS is providing this information solely as a service to our client. ECS is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

6.0 CLOSING

ECS has prepared this report to guide the geotechnical-related design and construction aspects of the project. We performed these services in accordance with the standard of care expected of professionals in the industry performing similar services on projects of like size and complexity at this time in the region. No other representation, expressed or implied, and no warranty or guarantee is included or intended in this report.

The description of the proposed project is based on information provided to ECS by our client. If any of this information is inaccurate or changes, either because of our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted so we can review our

recommendations and provide additional or alternate recommendations that reflect the proposed construction.

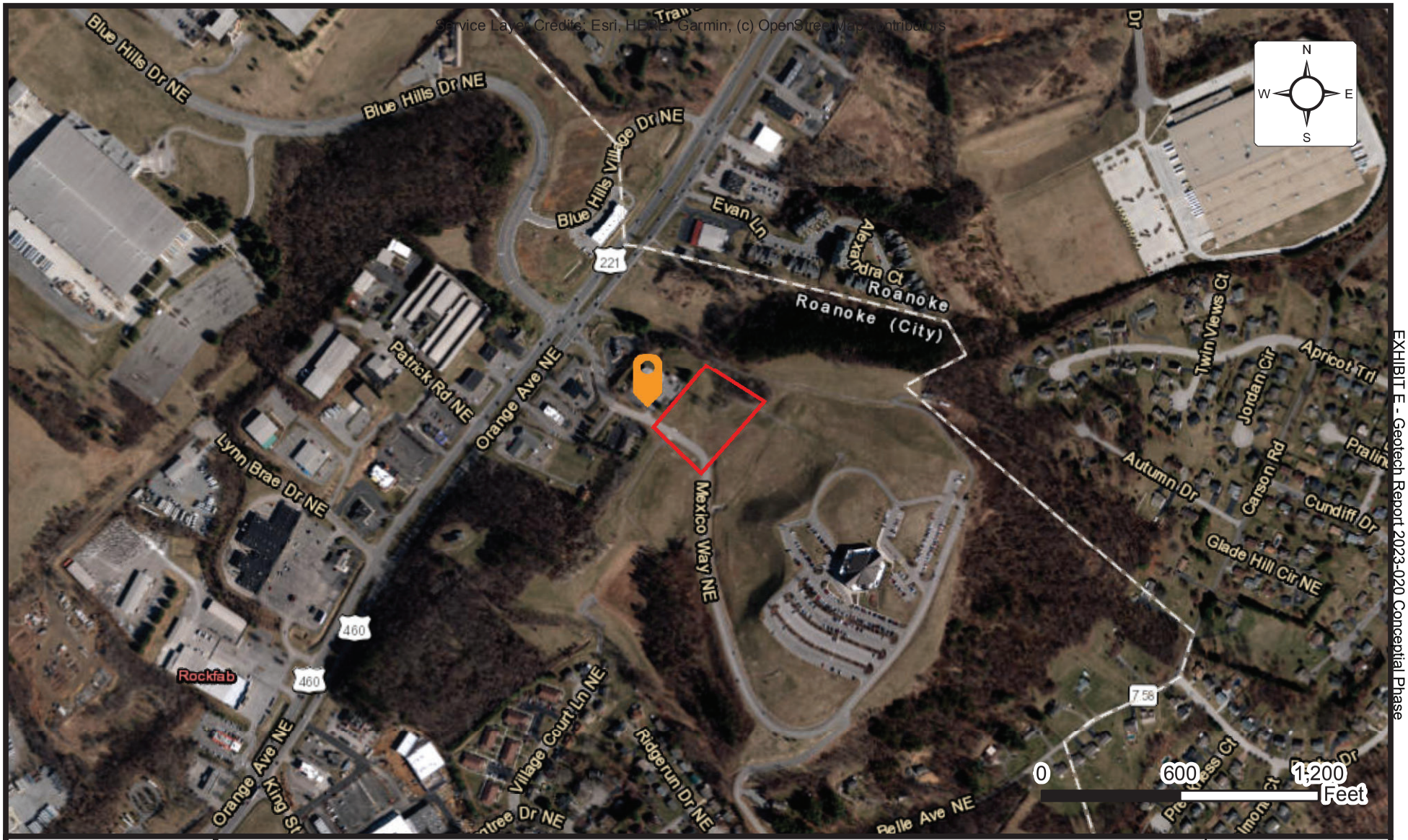
We recommend that ECS review the project plans and specifications so we can confirm that those plans/specifications are in accordance with the recommendations of this geotechnical report.

Field observations, and quality assurance testing during earthwork and foundation installation are an extension of, and integral to, the geotechnical design. We recommend that ECS be retained to apply our expertise throughout the geotechnical phases of construction, and to provide consultation and recommendation should issues arise.

ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.

APPENDIX A – Diagrams & Reports

Site Location Diagram
Boring Location Diagram
Subsurface Cross-Sections



SITE LOCATION DIAGRAM
BONSACK FIRE STATION

1455 MEXICO WAY NE, ROANOKE, VIRGINIA
ROANOKE COUNTY - PARKS & RECREATION

ENGINEER	BSW
SCALE	AS NOTED
PROJECT NO.	12:19596
SHEET	1 OF 1
DATE	5/23/2022

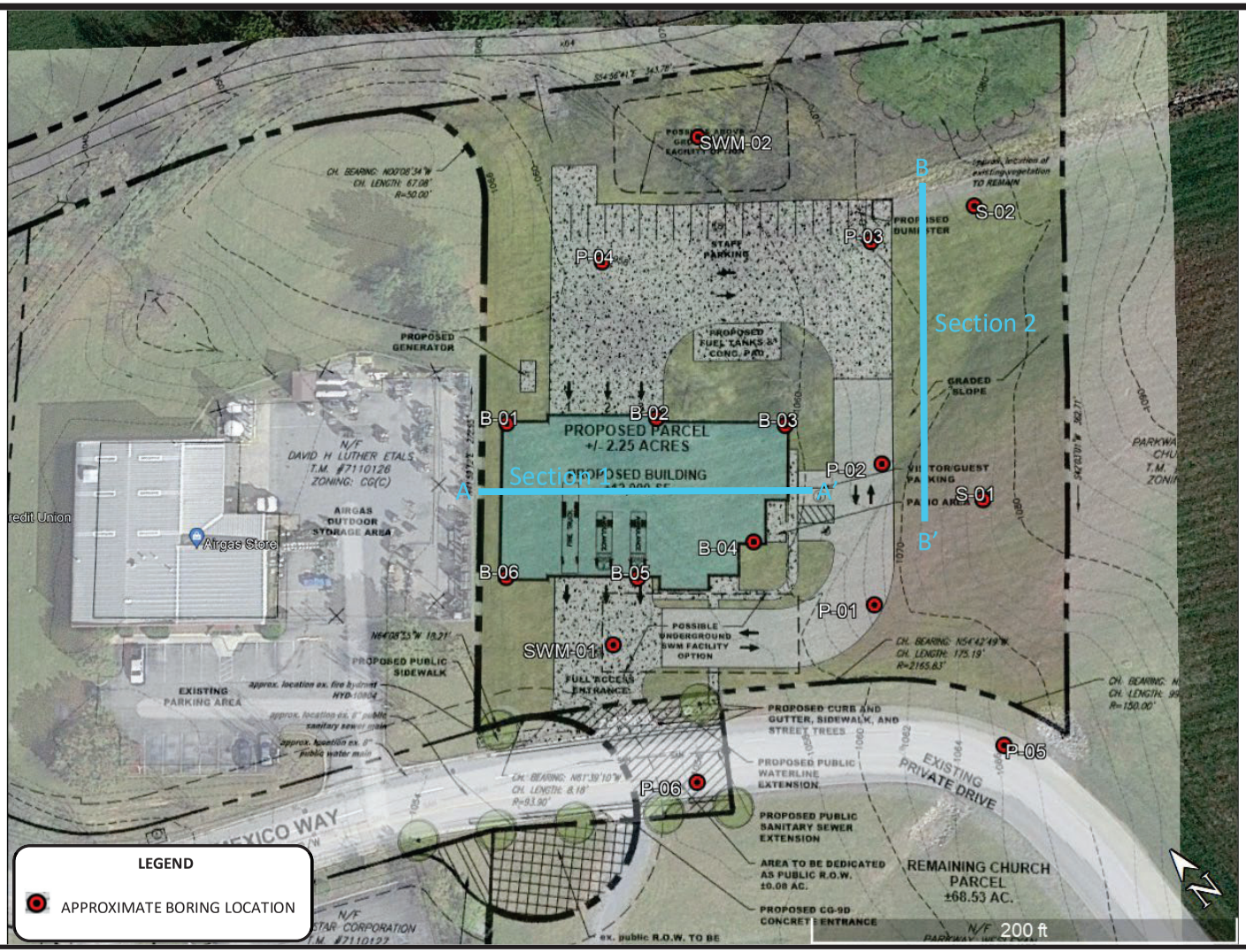


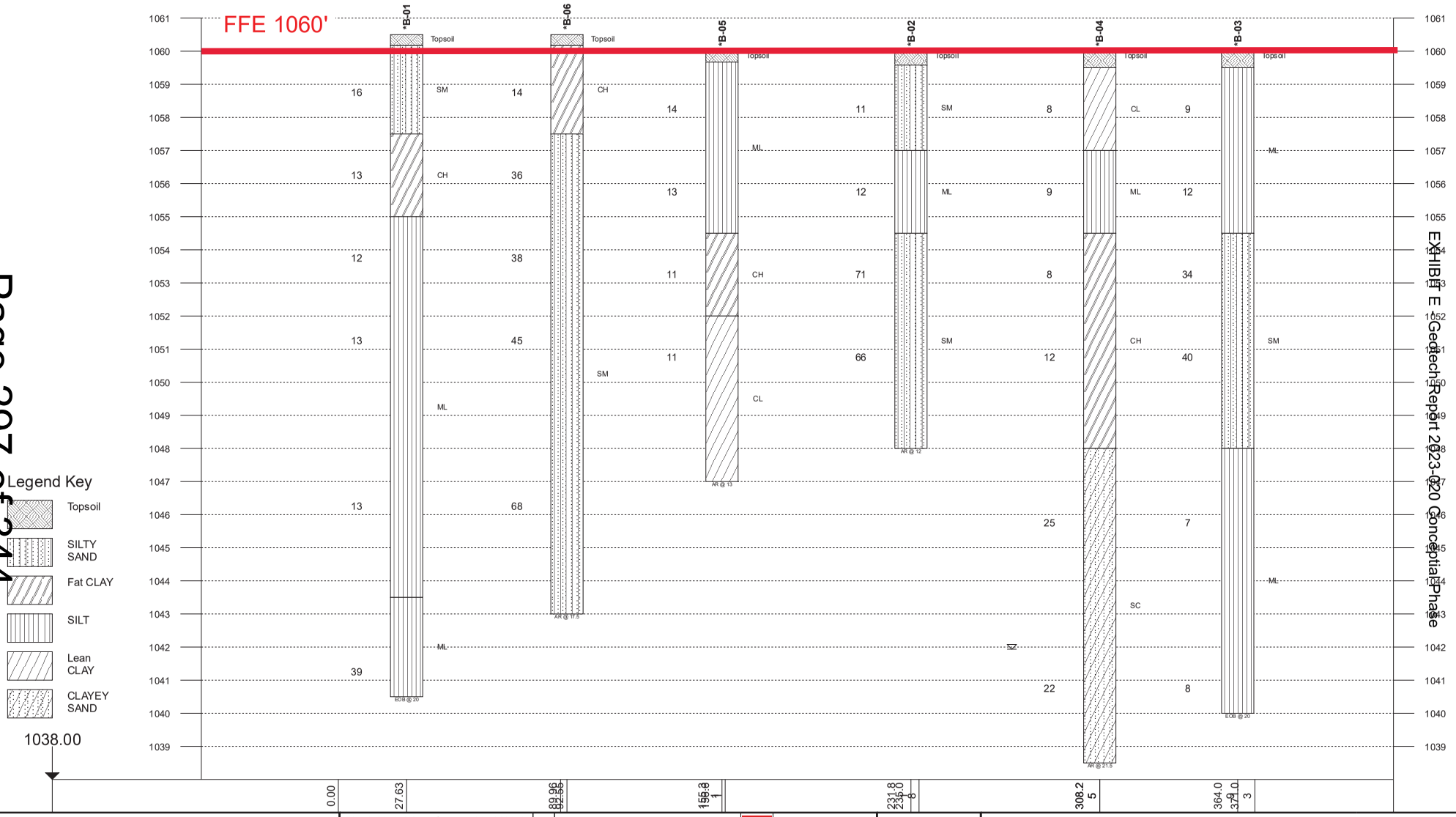
EXHIBIT E - Geotech Report 2023-020 Conceptial Phase

BORING LOCATION DIAGRAM
BONSACK FIRE STATION

1455 MEXICO WAY NE, ROANOKE, VA

ROANOKE COUNTY – PARKS AND RECREATION

ENGINEER	BSW
SCALE	AS NOTED
PROJECT NO.	12:19596
SHEET	1 OF 1
DATE	06/07/2022



Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

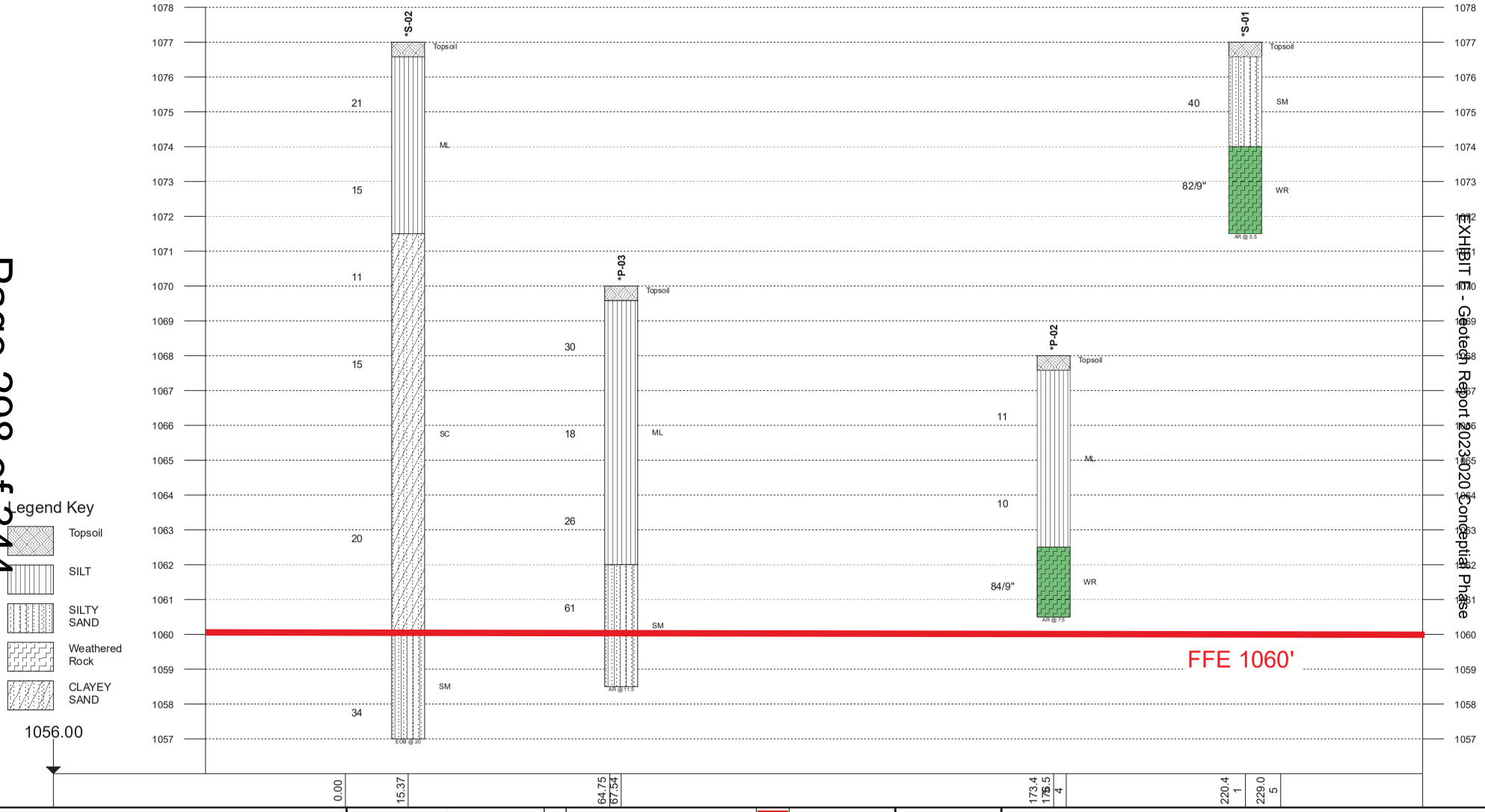
Plastic Limit Water Content Liquid Limit	WL (First Encountered)	Fill
[FINES CONTENT %]	WL (Completion)	Possible Fill
BOTTOM OF CASING	WL (Seasonal High Water)	Probable Fill
LOSS OF CIRCULATION	WL (Stabilized)	Rock

ECS

GENERALIZED SUBSURFACE SOIL PROFILE Section line 1 A-A'

Bonsack Fire Station
Roanoke County - Parks & Recreation
1455 Mexico Way NE, Roanoke, Virginia 24012

Project No: 12:19596 Date: 06/08/2022



Legend Key

- Topsoil
- SILT
- SILTY SAND
- Weathered Rock
- CLAYEY SAND

1056.00

Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit Water Content Liquid Limit
[FINES CONTENT %]
BOTTOM OF CASING
LOSS OF CIRCULATION

WL (First Encountered)
WL (Completion)
WL (Seasonal High Water)
WL (Stabilized)

Fill
Possible Fill
Probable Fill
Rock

ECS

GENERALIZED SUBSURFACE SOIL PROFILE Section line 2 B-B'

Bonsack Fire Station
Roanoke County - Parks & Recreation
1455 Mexico Way NE, Roanoke, Virginia 24012

Project No: 12:19596 Date: 06/08/2022

APPENDIX B – Field Operations

Reference Notes for Boring Logs
Subsurface Exploration Procedure: Standard Penetration Testing (SPT)
Boring Logs B-01 through B-06, P-01 through P-04, S-01, S-02, SWM-01, and SWM-02

REFERENCE NOTES FOR BORING LOGS

MATERIAL[1,2]

	ASPHALT
	CONCRETE
	GRAVEL
	TOPSOIL
	VOID
	BRICK
	AGGREGATE BASE COURSE
GW	WELL-GRADED GRAVEL gravel-sand mixtures, little or no fines
GP	POORLY-GRADED GRAVEL gravel-sand mixtures, little or no fines
GM	SILTY GRAVEL gravel-sand-silt mixtures
GC	CLAYEY GRAVEL gravel-sand-clay mixtures
SW	WELL-GRADED SAND gravelly sand, little or no fines
SP	POORLY-GRADED SAND gravelly sand, little or no fines
SM	SILTY SAND sand-silt mixtures
SC	CLAYEY SAND sand-clay mixtures
ML	SILT non-plastic to medium plasticity
MH	ELASTIC SILT high plasticity
CL	LEAN CLAY low to medium plasticity
CH	FAT CLAY high plasticity
OL	ORGANIC SILT or CLAY non-plastic to low plasticity
OH	ORGANIC SILT or CLAY high plasticity
PT	PEAT highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS

SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION

DESIGNATION		PARTICLE SIZES
Boulders		12 inches (300 mm) or larger
Cobbles		3 inches to 12 inches (75 mm to 300 mm)
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")		<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS

UNCONFINED COMPRESSIVE STRENGTH, QP[4]	SPT[5] (BPF)	CONSISTENCY[7] (COHESIVE)
<0.25	<2	Very Soft
0.25 - <0.50	2 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

RELATIVE AMOUNT[7]	COARSE GRAINED (%)[8]	FINE GRAINED (%)[8]
Trace	≤5	≤5
With	10 - 20	10 - 25
Adjective *(ex: "Silty")*	25 - 45	30 - 45

GRAVELS, SANDS & NON-COHESIVE SILTS

SPT[5]	DENSITY
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

WATER LEVELS[6]

- WL (First Encountered)
- WL (Completion)
- WL (Seasonal High Water)
- WL (Stabilized)

FILL AND ROCK

FILL | POSSIBLE FILL | PROBABLE FILL | ROCK

[1]Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

[2]To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

[3]Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

[4]Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

[5]Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

[6]The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

[7]Minor deviation from ASTM D 2488-17 Note 14.

[8]Percentages are estimated to the nearest 5% per ASTM D 2488-17.

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SUBSURFACE EXPLORATION PROCEDURE: STANDARD PENETRATION TESTING (SPT) ASTM D 1586 Split-Barrel Sampling

Standard Penetration Testing, or **SPT**, is the most frequently used subsurface exploration test performed worldwide. This test provides samples for identification purposes, as well as a measure of penetration resistance, or N-value. The N-Value, or blow counts, when corrected and correlated, can approximate engineering properties of soils used for geotechnical design and engineering purposes.

SPT Procedure:

- Involves driving a hollow tube (split-spoon) into the ground by dropping a 140-lb hammer a height of 30-inches at desired depth
- Recording the number of hammer blows required to drive split-spoon a distance of 12 inches (in 3 or 4 Increments of 6 inches each)
- Auger is advanced* and an additional SPT is performed
- One SPT test is typically performed for every two to five feet
- Obtain two-inch diameter soil sample

**Drilling Methods May Vary—* The predominant drilling methods used for SPT are open hole fluid rotary drilling and hollow-stem auger drilling.

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-01**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

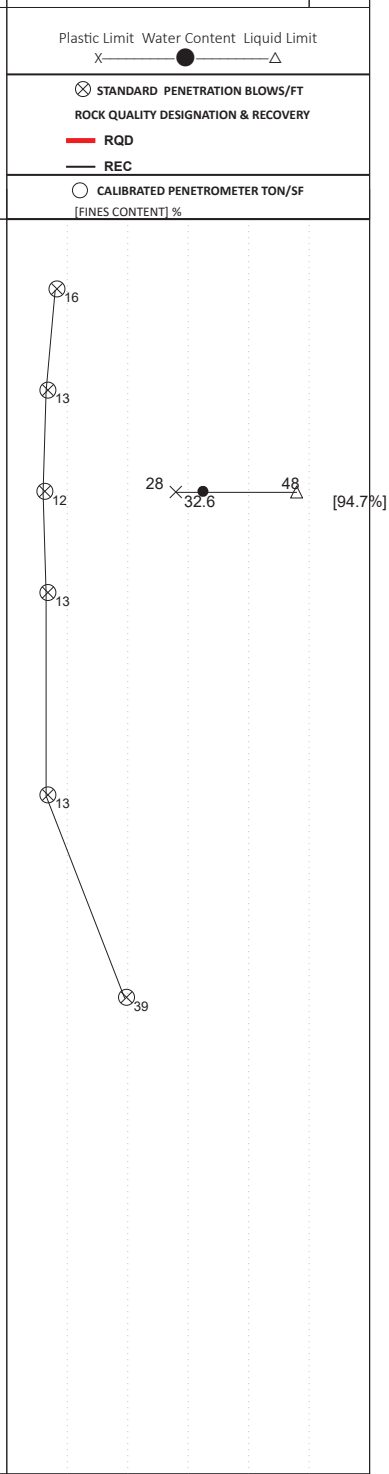
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637937.6	**11079438.3**		**1060.50**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[4.00"]			
	S-1	SS	18	14	(SM) Residuum, SILTY FINE TO MEDIUM SAND, contains rock fragments, purple brown, moist, medium dense			6-7-9 (16)
	S-2	SS	18	15	(CH) FAT CLAY WITH SAND, purple brown, moist, stiff		1056	3-6-7 (13)
5								
	S-3	SS	18	18	(ML) SILT, yellow brown, moist to wet, medium dense			4-5-7 (12)
	S-4	SS	18	18			1051	3-5-8 (13)
10								
	S-5	SS	18	18			1046	3-5-8 (13)
15								
	S-6	SS	18	17	(ML) SANDY SILT, contains rock fragments, red brown, moist, hard		1041	7-14-25 (39)
20					**END OF BORING AT 20 FT**			
25							1036	
30							1031	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **11.30**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-02**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

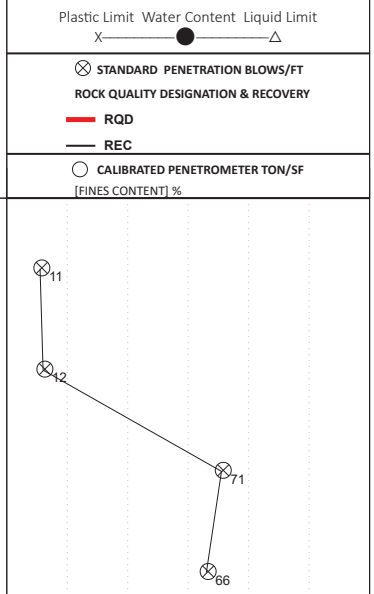
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637891.6	**11079498.4**		**1060.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	15	(SM) Residuum, SILTY FINE TO MEDIUM SAND, contains rock fragments, purple, moist, medium dense			3-5-6 (11)
	S-2	SS	18	15	(ML) SANDY SILT, contains rock fragments, purple, moist, stiff			4-6-6 (12)
5							1055	
	S-3	SS	18	14	(SM) SILTY MEDIUM SAND, contains rock fragments, purple, dry, very dense			9-44-27 (71)
	S-4	SS	18	13				10-37-29 (66)
10							1050	
					AUGER REFUSAL AT 12 FT			
15							1045	
20							1040	
25							1035	
30							1030	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **4.40**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4"HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-03**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

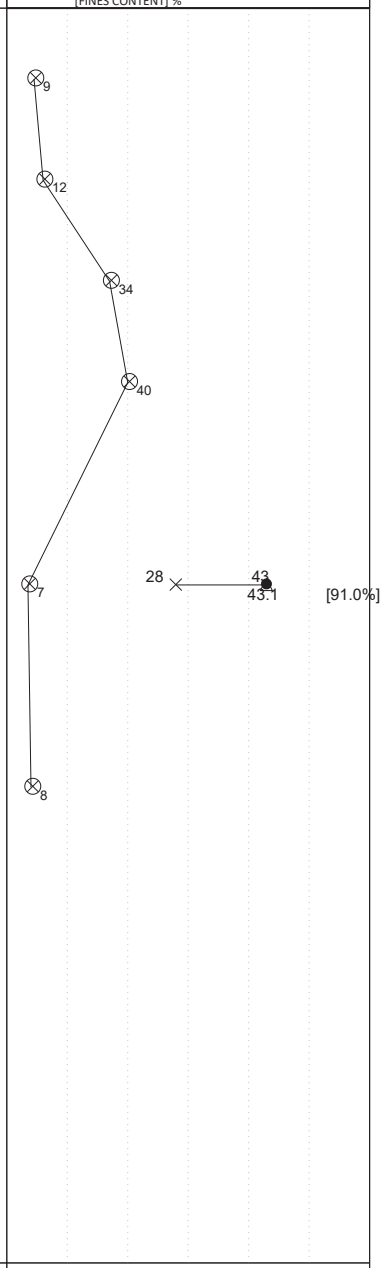
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637846.4	**11079546.0**		**1060.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[6.00"]			
	S-1	SS	18	16	(ML) Residuum, SANDY SILT, contains mica, medium brown, moist, stiff			3-4-5 (9)
	S-2	SS	18	15				5-6-6 (12)
5							1055	
	S-3	SS	18	17	(SM) SILTY FINE TO MEDIUM SAND, contains rock fragments, orange, moist, dense			8-12-22 (34)
	S-4	SS	18	17				8-16-24 (40)
10							1050	
					(ML) SILT, contains rock fragments, light brown, wet, firm			
	S-5	SS	18	16				2-3-4 (7)
15							1045	
	S-6	SS	18	18				3-4-4 (8)
20					**END OF BORING AT 20 FT**		1040	
25							1035	
30							1030	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **8.90**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4"HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-04**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

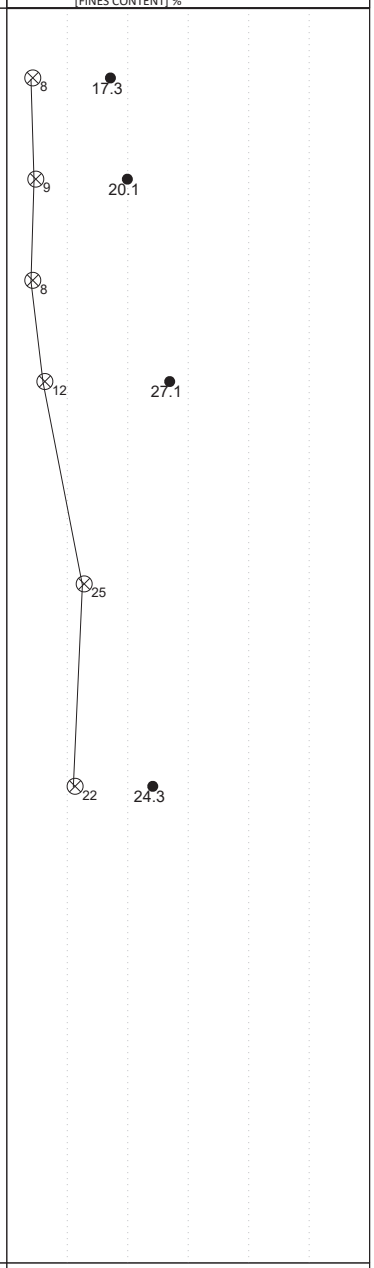
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637813.9	**11079496.3**		**1060.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[6.00"]			
	S-1	SS	18	16	(CL) Residuum, SANDY LEAN CLAY, contains rock fragments, gray brown, moist, firm			5-4-4 (8)
	S-2	SS	18	15	(ML) SANDY SILT, trace clay, contains rock fragments, gray brown, moist, stiff			6-4-5 (9)
5							1055	
	S-3	SS	18	16	(CH) SANDY FAT CLAY, contains rock fragments, orange brown and gray brown, moist, firm to stiff			3-4-4 (8)
	S-4	SS	18	15				4-5-7 (12)
10							1050	
	S-5	SS	18	15	(SC) CLAYEY FINE TO MEDIUM SAND, purple to orange brown, moist to wet, medium dense			8-16-9 (25)
15							1045	
	S-6	SS	18	16				4-6-16 (22)
20							1040	
					AUGER REFUSAL AT 21.5 FT			
25							1035	
30							1030	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**18.00**	BORING STARTED:	**May 12 2022**	CAVE IN DEPTH:	**15.60**
WL (Completion)		BORING COMPLETED:	**May 12 2022**	HAMMER TYPE:	**Manual**
WL (Seasonal High Water)		EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD:	**2 1/4" HSA**
WL (Stabilized)					

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-05**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637836.3	**11079439.8**		**1060.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[4.00"]			
	S-1	SS	18	17	(ML) Residuum, SANDY SILT, trace clay, contains rock fragments, gray brown, moist, stiff			3-6-8 (14)
	S-2	SS	18	16				4-5-8 (13)
5							1055	
	S-3	SS	18	15	(CH) FAT CLAY, trace sand, red brown, moist, stiff			4-4-7 (11)
	S-4	SS	18	14	(CL) LEAN CLAY WITH SAND, contains rock fragments, purple brown and orange brown, moist, stiff			3-6-5 (11)
10							1050	
					AUGER REFUSAL AT 13 FT			
15							1045	
20							1040	
25							1035	
30							1030	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

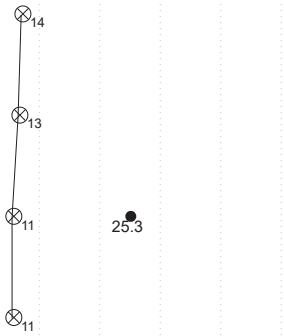
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**	CAVE IN DEPTH: **6.20**	
WL (Completion)	BORING COMPLETED: **May 13 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-06**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637876.4	**11079390.5**		**1060.50**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[4.00"]			
	S-1	SS	18	14	(CH) Residuum, FAT CLAY WITH SAND, contains roots, medium brown, moist, stiff			3-6-8 (14)
	S-2	SS	18	16	(SM) SILTY MEDIUM SAND, contains rock fragments, purple brown to orange brown, moist, dense to very dense		1056	7-14-22 (36)
5	S-3	SS	18	15				9-14-24 (38)
	S-4	SS	18	16			1051	10-17-28 (45)
10								
	S-5	SS	18	16			1046	9-26-42 (68)
15					AUGER REFUSAL AT 17.5 FT			
20							1041	
25							1036	
30							1031	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

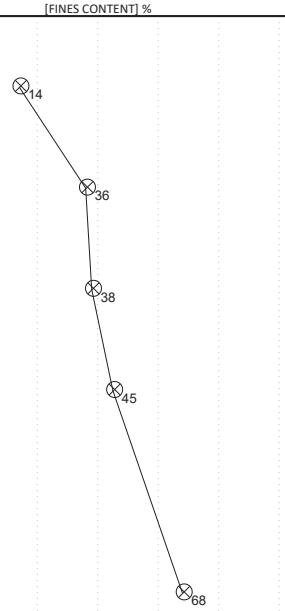
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **7.90**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-01**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637752.8	**11079522.2**		**1066.50**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	15	(CL) Residuum, SANDY LEAN CLAY, contains rock fragments, medium gray, dry, dense to very dense			3-10-21 (31)
	S-2	SS	18	14			1062	12-24-48 (72)
5	D3S-66	BG1	108					
	S-3	BG1 SS	18	16	(CL) LEAN CLAY WITH SAND, orange brown and purple brown, moist, dense to very dense			8-16-22 (38)
	S-4	SS	18	15			1057	14-21-38 (59)
10					**END OF BORING AT 10 FT**			
15							1052	
20							1047	
25							1042	
30							1037	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

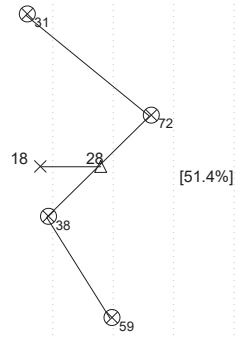
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**	CAVE IN DEPTH: **5.50**	
WL (Completion)	BORING COMPLETED: **May 13 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-02**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637804.8	**11079570.3**		**1068.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	15	(ML) Residuum, SANDY SILT, contains rock fragments, medium brown, moist, stiff			4-5-6 (11)
	S-2	SS	18	14				6-5-5 (10)
5							1063	
	S-3	SS	15	6	(WR) WEATHERED ROCK SAMPLED AS SILTY FINE TO MEDIUM SAND, contains significant rock fragments, medium gray, dry, very dense [Weathered ROCK]			12-34-50/3" (84/9")
					AUGER REFUSAL AT 7.5 FT			
10							1058	
15							1053	
20							1048	
25							1043	
30							1038	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

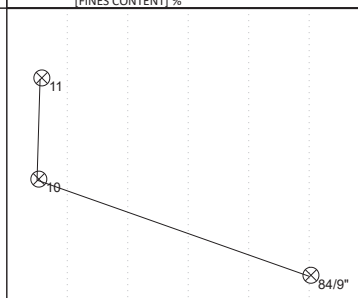
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**	CAVE IN DEPTH: **3.40**	
WL (Completion)	BORING COMPLETED: **May 13 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BORE HOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-03**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

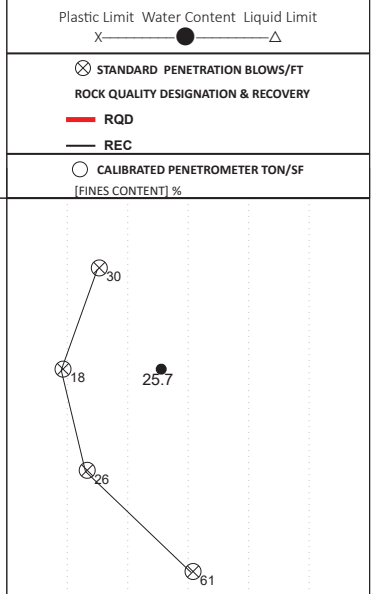
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637886.9	**11079638.4**		**1070.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	16	(ML) Residuum, SANDY SILT, contains rock fragments, purple brown to orange brown, moist, very stiff			6-12-18 (30)
	S-2	SS	18	15				4-8-10 (18)
5							1065	
	S-3	SS	18	15				8-10-16 (26)
	S-4	SS	18	16	(SM) SILTY MEDIUM SAND, contains rock fragments, purple brown, moist, very dense			10-22-39 (61)
10							1060	
					AUGER REFUSAL AT 11.5 FT			
15							1055	
20							1050	
25							1045	
30							1040	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**	CAVE IN DEPTH: **6.10**	
WL (Completion)	BORING COMPLETED: **May 13 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-04**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

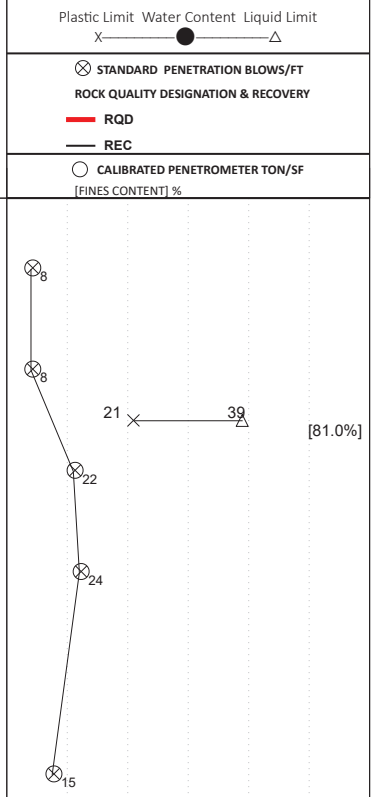
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637972.0	**11079529.3**		**1060.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[6.00"]			
	S-1	SS	18	10	(SM) Residuum, SILTY FINE TO MEDIUM SAND, contains rock fragments, purple brown, moist, loose			8-4-4 (8)
	S-2	SS	18	15	(CL) LEAN CLAY WITH SAND, purple brown, moist, firm			3-4-4 (8)
5	D3S-67	BG1	108				1055	
	S-3	BG1 SS	18	16	(CL) SANDY LEAN CLAY, red brown, moist, very stiff			6-10-12 (22)
	S-4	SS	18	17				8-11-13 (24)
10							1050	
	S-5	SS	18	16	(CL) LEAN CLAY WITH SAND, contains rock fragments, red brown, moist, stiff			5-7-8 (15)
15					**END OF BORING AT 15 FT**		1045	
20							1040	
25							1035	
30							1030	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **7.40**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-05**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637663.9	**11079526.9**		**1066.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Asphalt Thickness[6.00"]			
					Gravel Thickness[8.00"]			
					(GP) GRAVEL			
					END OF BORING AT 1.2 FT			
5							1061	
10							1056	
15							1051	
20							1046	
25							1041	
30							1036	

Plastic Limit Water Content Liquid Limit
X——●——△

⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	BORING STARTED: **May 13 2022**		CAVE IN DEPTH:
▼ WL (Completion)	BORING COMPLETED: **May 13 2022**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-06**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637738.9	**11079399.9**		**1056.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Asphalt Thickness[6.00"]			
					Gravel Thickness[8.00"]			
					(GP) GRAVEL			
					END OF BORING AT 1.2 FT			
5							1051	
10							1046	
15							1041	
20							1036	
25							1031	
30							1026	

Plastic Limit Water Content Liquid Limit
X——●——△

⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	BORING STARTED: **May 13 2022**		CAVE IN DEPTH:
▼ WL (Completion)	BORING COMPLETED: **May 13 2022**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**S-01**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637757.5	**11079595.2**		**1077.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	12	(SM) Residuum, SILTY FINE TO MEDIUM SAND, contains rock fragments, purple brown, moist, dense			5-17-23 (40)
	S-2	SS	15	10	(WR) WEATHERED ROCK SAMPLED AS SILTY FINE TO MEDIUM SAND, contains rock fragments, purple brown, moist, very dense [Weathered ROCK]			12-32-50/3" (82/9")
5					**AUGER REFUSAL AT 5.5 FT**		1072	
10							1067	
15							1062	
20							1057	
25							1052	
30							1047	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

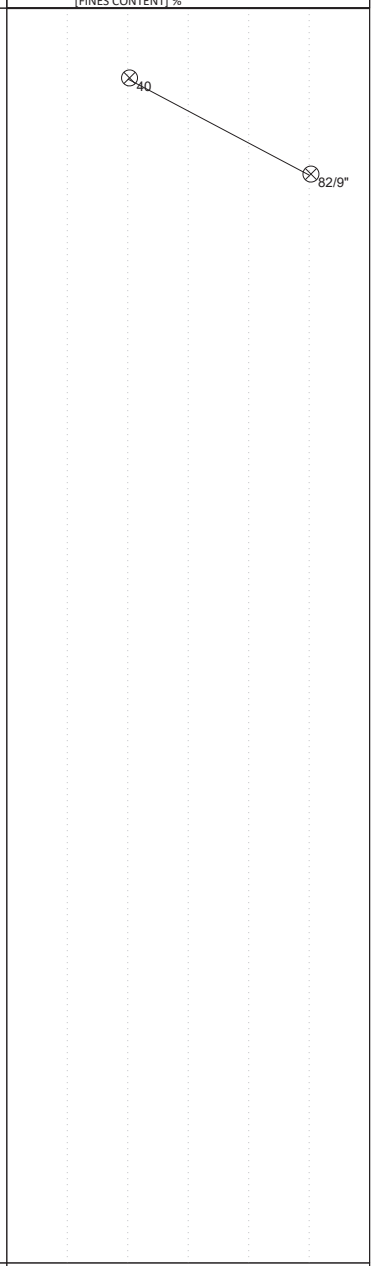
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**		CAVE IN DEPTH:
WL (Completion)	BORING COMPLETED: **May 13 2022**		HAMMER TYPE: **Manual**
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**S-02**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

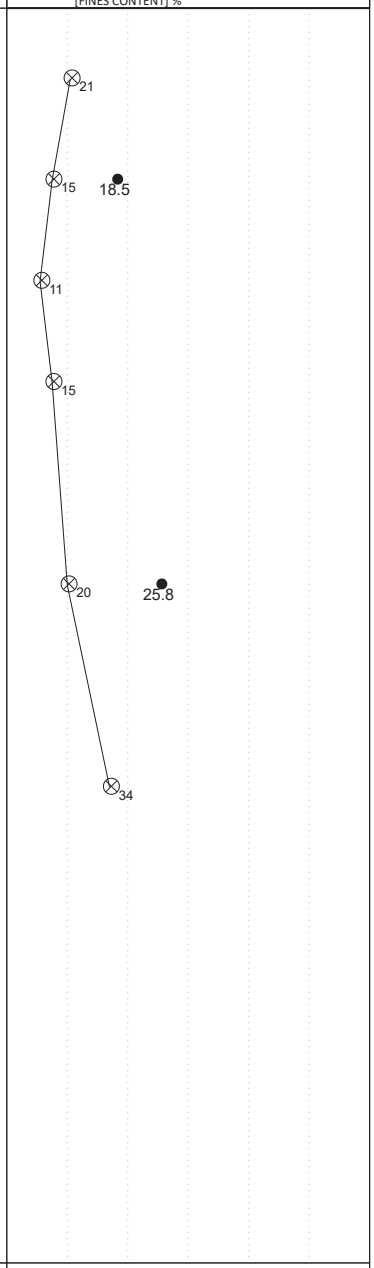
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637871.8	**11079686.5**		**1077.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	16	(ML) Residuum, SANDY SILT, contains rock fragments, medium brown, moist, very stiff to stiff			8-9-12 (21)
	S-2	SS	18	15				6-7-8 (15)
5							1072	
	S-3	SS	18	17	(ML) SILT WITH SAND, contains rock fragments, yellow brown, moist, stiff to very stiff			3-5-6 (11)
	S-4	SS	18	18				4-6-9 (15)
10							1067	
	S-5	SS	18	16				5-6-14 (20)
15							1062	
	S-6	SS	18	18	(SM) SILTY FINE TO MEDIUM SAND, trace clay, purple brown, moist, dense			7-13-21 (34)
20					**END OF BORING AT 20 FT**		1057	
25							1052	
30							1047	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**		CAVE IN DEPTH:
WL (Completion)	BORING COMPLETED: **May 13 2022**		HAMMER TYPE: **Manual**
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**SWM-01**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

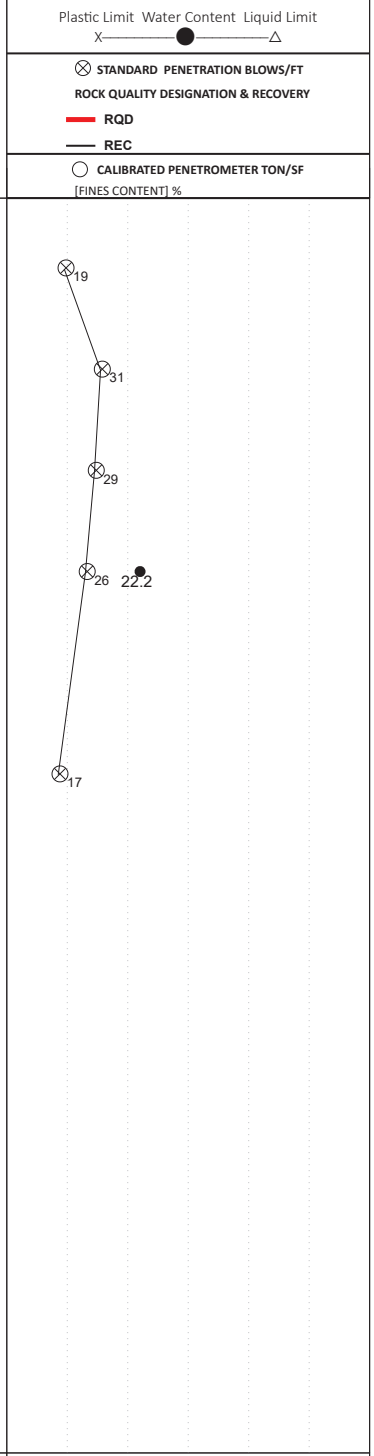
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637818.0	**11079409.9**		**1057.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[4.00"]			
	S-1	SS	18	16	(ML) Residuum, SILT WITH SAND, contains rock fragments, orange brown and gray brown, moist, medium dense to dense			6-8-11 (19)
	S-2	SS	18	15				7-12-19 (31)
5							1052	
	S-3	SS	18	15	(ML) SANDY SILT, red brown, moist, very stiff			8-13-16 (29)
	S-4	SS	18	16				6-10-16 (26)
10							1047	
	S-5	SS	18	15	(SM) SILTY FINE TO MEDIUM SAND, orange, moist, medium dense			5-7-10 (17)
15					**END OF BORING AT 15 FT**		1042	
20							1037	
25							1032	
30							1027	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **6.70**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**SWM-02**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637990.7	**11079606.4**		**1061.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[6.00"]			
	S-1	SS	18	16	(ML) Residuum, SANDY SILT, medium brown, moist, stiff			5-6-6 (12)
	S-2	SS	18	15				6-4-5 (9)
5							1056	
	S-3	SS	18	15	(CL) SANDY LEAN CLAY, red brown and tan brown, moist, stiff			3-5-6 (11)
	S-4	SS	18	16	(CL) LEAN CLAY WITH SAND, red brown, moist, very stiff			4-7-9 (16)
10							1051	
	S-5	SS	18	18	(CL) LEAN CLAY, trace sand, red brown, moist, firm			3-3-4 (7)
15					**END OF BORING AT 15 FT**		1046	
20							1041	
25							1036	
30							1031	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

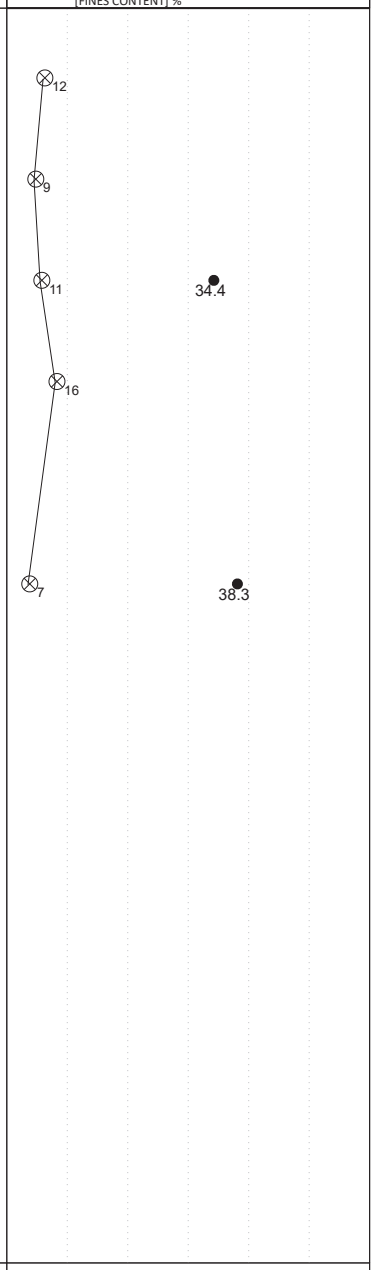
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **6.30**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

APPENDIX C – Laboratory Testing

Laboratory Test Results Summary
Plasticity Chart
Grain Size Analyses
Moisture-Density Relationship Curves
CBR Test Results

Laboratory Testing Summary

Sample Location	Sample Number	Depth (feet)	^MC (%)	Soil Type	Atterberg Limits			**Percent Passing No. 200 Sieve	Moisture - Density		CBR (%)		#Organic Content (%)
					LL	PL	PI		<Maximum Density (pcf)	<Optimum Moisture (%)	0.1 in.	0.2 in.	
B-01	S-3	6-7.5	32.6	ML	48	28	20	94.7					
B-03	S-5	13.5-15	43.1	ML	43	28	15	91.0					
B-04	S-1	1-2.5	17.3										
B-04	S-2	3.5-5	20.1										
B-04	S-4	8.5-10	27.1										
B-04	S-6	18.5-20	24.3										
B-05	S-3	6-7.5	25.3										
P-01	D3S-66	1-10		CL	28	18	10	51.4	114.2	15.5	13.4	16.4	
P-03	S-2	3.5-5	25.7										
P-04	D3S-67	1-10		CL	39	21	18	81.0	105.5	18.7	10.3	9.3	

Notes: See test reports for test method, ^ASTM D2216-19, *ASTM D2488, **ASTM D1140-17, #ASTM D2974-20e1 < See test report for D4718 corrected values

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content

Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation

Project No.: 12:19596
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received
JGeil	JMurphy	JMurphy	5/17/2022

Laboratory Testing Summary

Sample Location	Sample Number	Depth (feet)	^MC (%)	Soil Type	Atterberg Limits			**Percent Passing No. 200 Sieve	Moisture - Density		CBR (%)		#Organic Content (%)
					LL	PL	PI		<Maximum Density (pcf)	<Optimum Moisture (%)	0.1 in.	0.2 in.	
S-02	S-2	3.5-5	18.5										
S-02	S-5	13.5-15	25.8										
SWM-01	S-4	8.5-10	22.2										
SWM-02	S-3	6-7.5	34.4										
SWM-02	S-5	13.5-15	38.3										

Notes: See test reports for test method, ^ASTM D2216-19, *ASTM D2488, **ASTM D1140-17, #ASTM D2974-20e1 < See test report for D4718 corrected values

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content

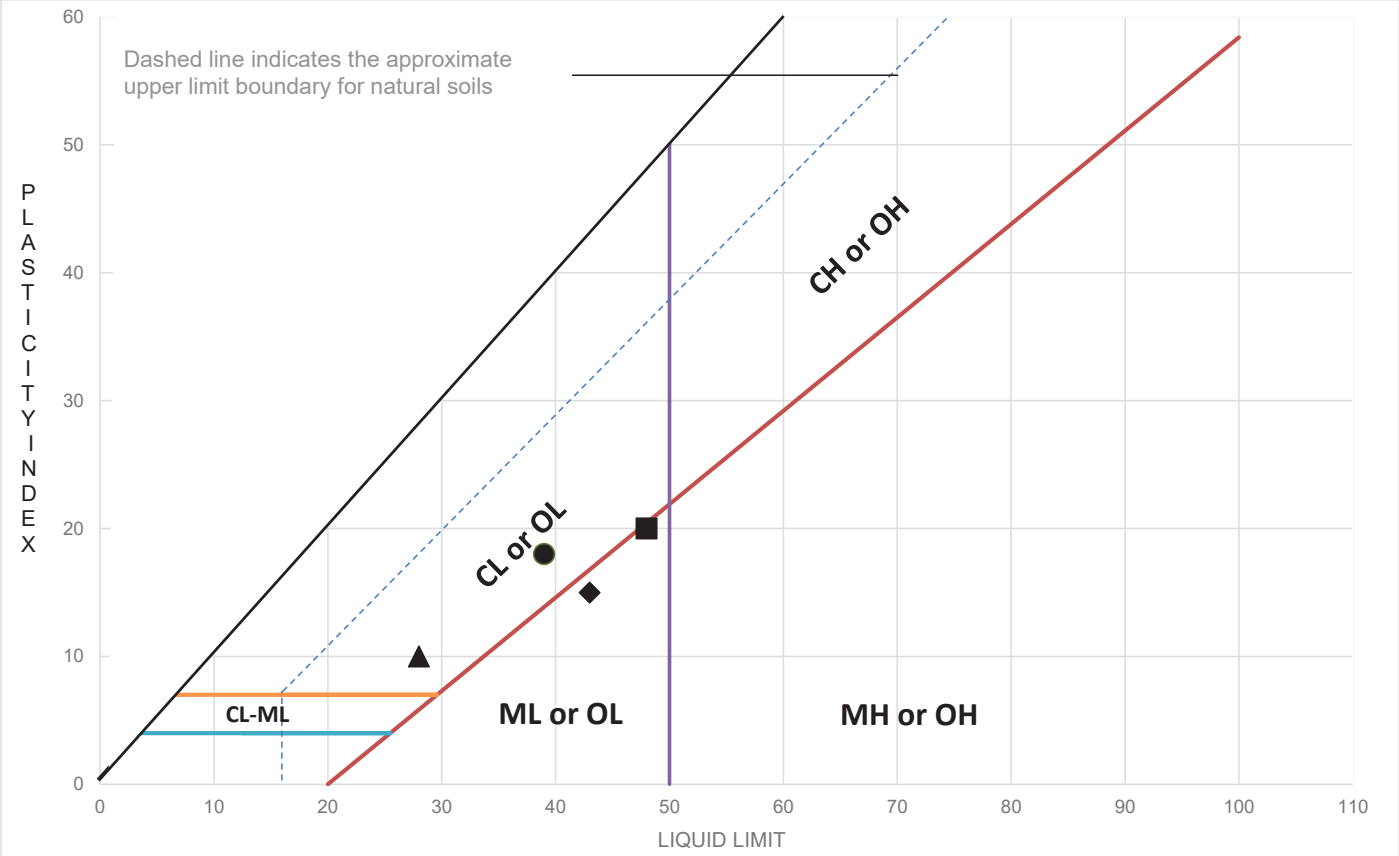
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation

Project No.: 12:19596
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received
JGeil	JMurphy	JMurphy	

LIQUID AND PLASTIC LIMITS TEST REPORT



TEST RESULTS (ASTM D4318-10 (MULTIPOINT TEST))

	Sample Location	Sample Number	Sample Depth (ft)	LL	PL	PI	%<#40	%<#200	AASHTO	USCS	Material Description
■	B-01	S-3	6-7.5	48	28	20	99.8	94.7	A-7-6	ML	Yellow Brown SILT
◆	B-03	S-5	13.5-15	43	28	15	94.6	91.0	A-7-6	ML	Orange Brown SILT
▲	P-01	D3S-66	1-10	28	18	10	63.4	51.4	A-4	CL	Purple Brown SANDY LEAN CLAY with Gravel
●	P-04	D3S-67	1-10	39	21	18	86.5	81.0	A-6	CL	Brown LEAN CLAY with Sand

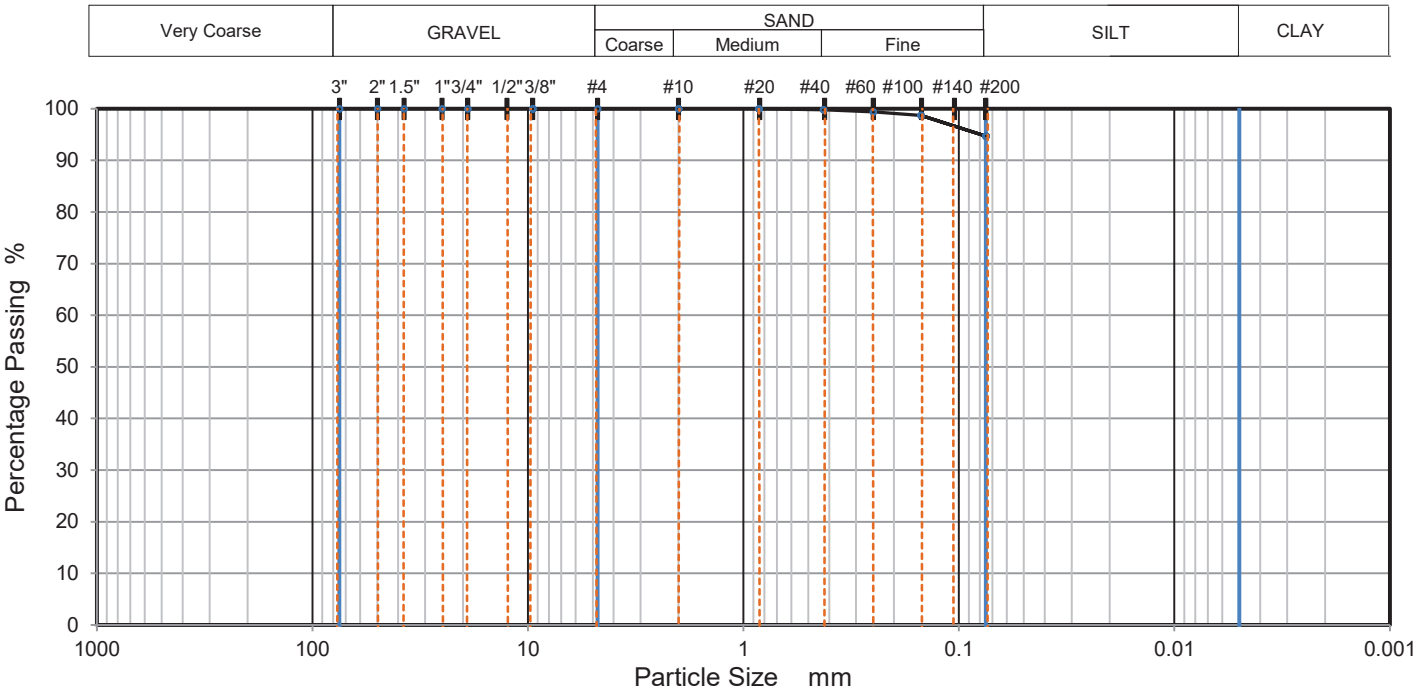
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation

Project No.: 12:19596
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received
JGeil	JMurphy	JMurphy	5/17/2022

PARTICLE SIZE DISTRIBUTION



TEST RESULTS (ASTM D6913M-17-METHOD A)

Sieving		Hydrometer Sedimentation	
Particle Size	% Passing	Particle Size mm	% Passing
3"	100		
2"	100		
1 1/2"	100		
1"	100		
3/4"	100		
3/8"	100		
#4	100		
#10	100		
#20	100		
#40	100		
#60	99		
#100	99		
#200	95		

Dry Mass of sample, g	48.6

Sample Proportions	% dry mass
Very coarse, >3" sieve	0
Gravel, 3" to # 4 sieve	0
Coarse Sand, #4 to #10 sieve	0
Medium Sand, #10 to #40	0
Fine Sand, #40 to #200	5
Fines <#200	95

USCS	ML	Liquid Limit	48	D90		D50		D10	
AASHTO	A-7-6	Plastic Limit	28	D85		D30		Cu	
USCS Group Name	Silt	Plasticity Index	20	D60		D15		Cc	

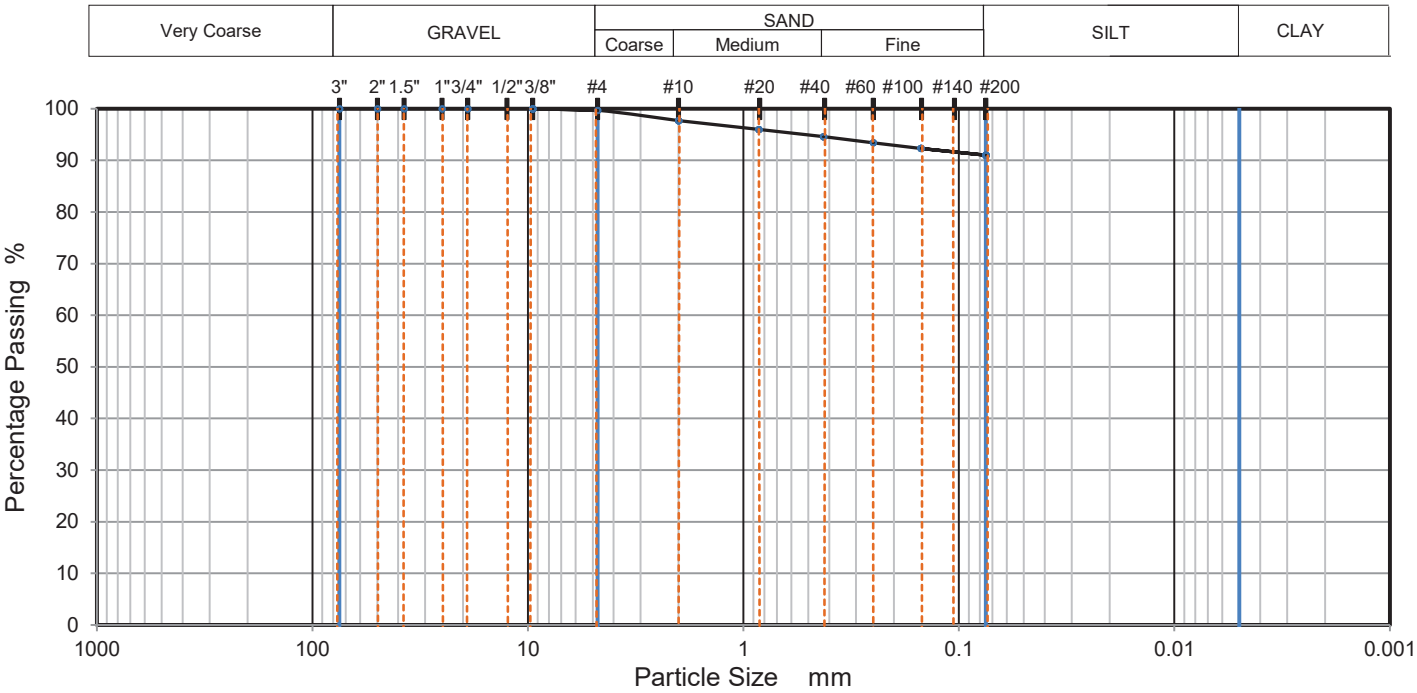
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample Description: Yellow Brown SILT
Sample Source: B-01

Project No.: 12:19596
Depth (ft): 6 - 7.5
Sample No.: S-3
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

PARTICLE SIZE DISTRIBUTION



TEST RESULTS (ASTM D6913M-17-METHOD A)

Sieving		Hydrometer Sedimentation	
Particle Size	% Passing	Particle Size mm	% Passing
3"	100		
2"	100		
1 1/2"	100		
1"	100		
3/4"	100		
3/8"	100		
#4	100		
#10	98		
#20	96		
#40	95		
#60	93		
#100	92		
#200	91		

Dry Mass of sample, g: 57.9

Sample Proportions	% dry mass
Very coarse, >3" sieve	0
Gravel, 3" to # 4 sieve	0
Coarse Sand, #4 to #10 sieve	2
Medium Sand, #10 to #40	3
Fine Sand, #40 to #200	4
Fines <#200	91

USCS	ML	Liquid Limit	43	D90		D50		D10	
AASHTO	A-7-6	Plastic Limit	28	D85		D30		Cu	
USCS Group Name	Silt	Plasticity Index	15	D60		D15		Cc	

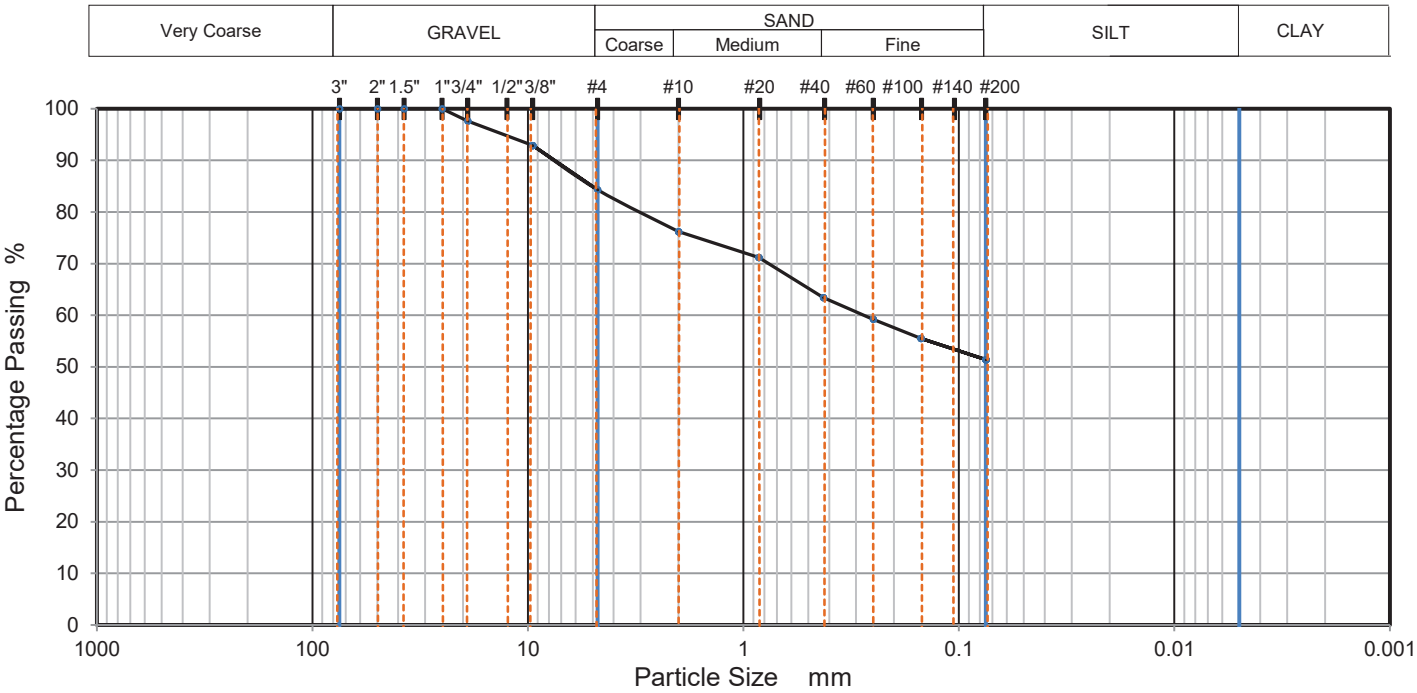
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample Description: Orange Brown SILT
Sample Source: B-03

Project No.: 12:19596
Depth (ft): 13.5 - 15
Sample No.: S-5
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

PARTICLE SIZE DISTRIBUTION



TEST RESULTS (ASTM D6913M-17-METHOD A)

Sieving		Hydrometer Sedimentation	
Particle Size	% Passing	Particle Size mm	% Passing
3"	100		
2"	100		
1 1/2"	100		
1"	100		
3/4"	98		
3/8"	93		
#4	84		
#10	76		
#20	71		
#40	63		
#60	59		
#100	56		
#200	51		

Dry Mass of sample, g	31210.0

Sample Proportions	% dry mass
Very coarse, >3" sieve	0
Gravel, 3" to # 4 sieve	16
Coarse Sand, #4 to #10 sieve	8
Medium Sand, #10 to #40	13
Fine Sand, #40 to #200	12
Fines <#200	51

USCS	CL	Liquid Limit	28	D90	7.520	D50		D10	
AASHTO	A-4	Plastic Limit	18	D85	5.026	D30		Cu	
USCS Group Name	Sandy lean clay with gravel	Plasticity Index	10	D60	0.277	D15		Cc	

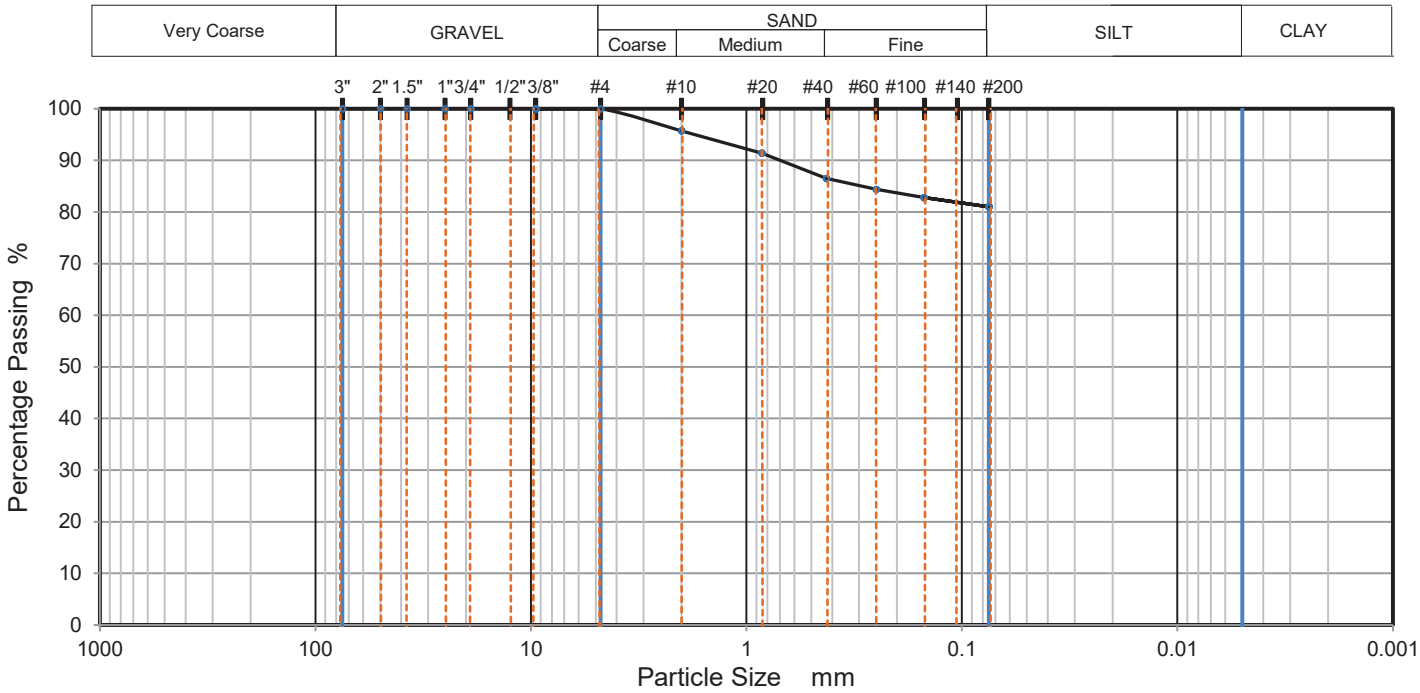
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample Description: Purple Brown SANDY LEAN CLAY with Gravel
Sample Source: P-01

Project No.: 12:19596
Depth (ft): 1 - 10
Sample No.: D3S-66
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

PARTICLE SIZE DISTRIBUTION



TEST RESULTS (ASTM D6913M-17-METHOD A)

Sieving		Hydrometer Sedimentation	
Particle Size	% Passing	Particle Size mm	% Passing
3"	100		
2"	100		
1 1/2"	100		
1"	100		
3/4"	100		
3/8"	100		
#4	100		
#10	96		
#20	91		
#40	87		
#60	84		
#100	83		
#200	81		

Dry Mass of sample, g	100.7

Sample Proportions	% dry mass
Very coarse, >3" sieve	0
Gravel, 3" to # 4 sieve	0
Coarse Sand, #4 to #10 sieve	4
Medium Sand, #10 to #40	9
Fine Sand, #40 to #200	6
Fines <#200	81

USCS	CL	Liquid Limit	39	D90	0.697	D50		D10	
AASHTO	A-6	Plastic Limit	21	D85	0.291	D30		Cu	
USCS Group Name	Lean clay with sand	Plasticity Index	18	D60		D15		Cc	

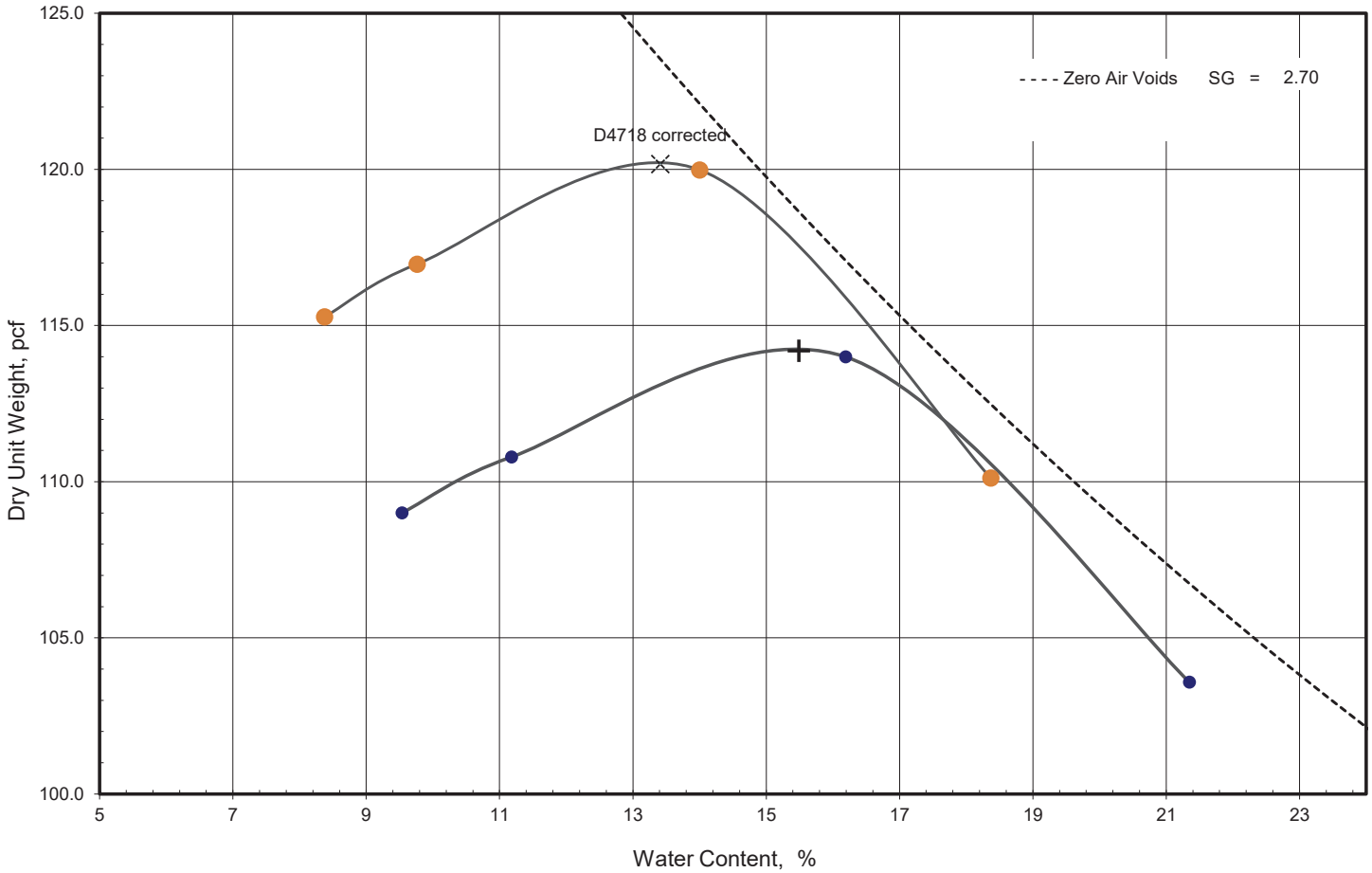
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample Description: Brown LEAN CLAY with Sand
Sample Source: P-04

Project No.: 12:19596
Depth (ft): 1 - 10
Sample No.: D3S-67
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

Laboratory Compaction Characteristics of Soil Using Standard Effort



Optimum Moisture Content		**15.5**	%
Maximum Dry Unit Weight		**114.2**	pcf
Corrected Opt. Moisture Content		13.4	%
Corrected Max. Dry Density		120.2	pcf
Cumulative material retained on:	3/4 in. sieve	2.4	%
	3/8 in. sieve	7.1	%
	#4 sieve	15.7	%

15.67 % retained on #4 sieve.

Preparation	ASTM dry preparation method	
Type of rammer	Manual - 5.5lbf (24.5N)	
Test Specfication / Method	VTM-1	
Specific gravity - D854 water pycnometer	2.70	Historical
Coarse Aggregate Specific Gravity -	2.70	Historical

Soil Description	Nat. Moist. %	Liquid Limit	Plasticity Index	%< #200	USCS	AASHTO
Purple Brown SANDY LEAN CLAY with Gravel		28	10	51.4	CL	A-4

Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample / Source P-01
Test Reference/No.:

Project No.: 12:19596
Depth (ft.): 1 - 10
Sample No.: D3S-66
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
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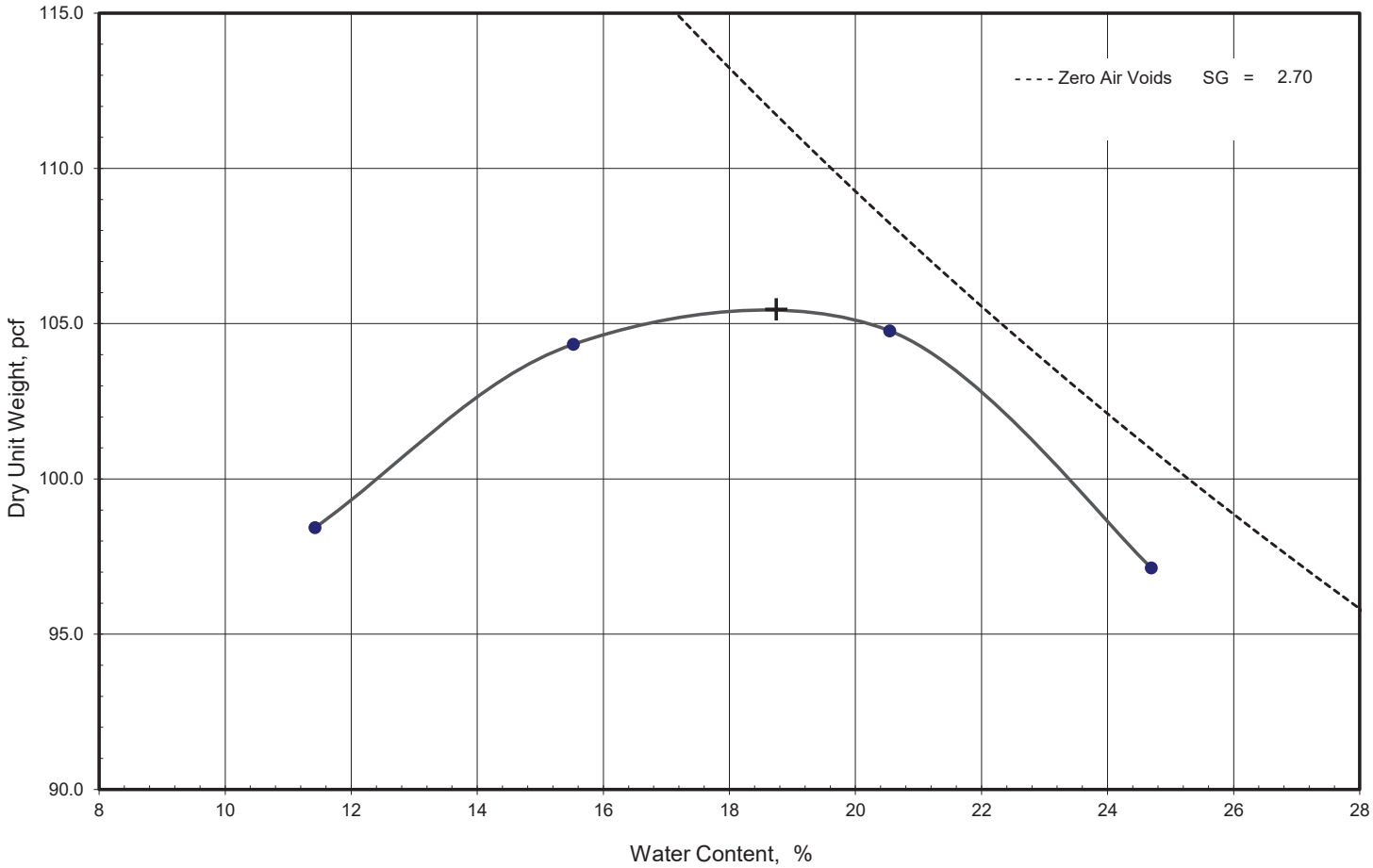
Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

Laboratory Compaction Characteristics of Soil Using Standard Effort



Optimum Moisture Content		**18.7**	%
Maximum Dry Unit Weight		**105.5**	pcf
Cumulative material retained on:	3/4 in. sieve	0.0	%
	3/8 in. sieve	0.0	%
	#4 sieve	0.0	%

Preparation	ASTM dry preparation method	
Type of rammer	Manual - 5.5lbf (24.5N)	
Test Specfication / Method	VTM-1	
Specific gravity - D854 water pycnometer	2.70	Historical
Coarse Aggregate Specific Gravity -		

Soil Description	Nat. Moist. %	Liquid Limit	Plasticity Index	%< #200	USCS	AASHTO
Brown LEAN CLAY with Sand		39	18	81.0	CL	A-6

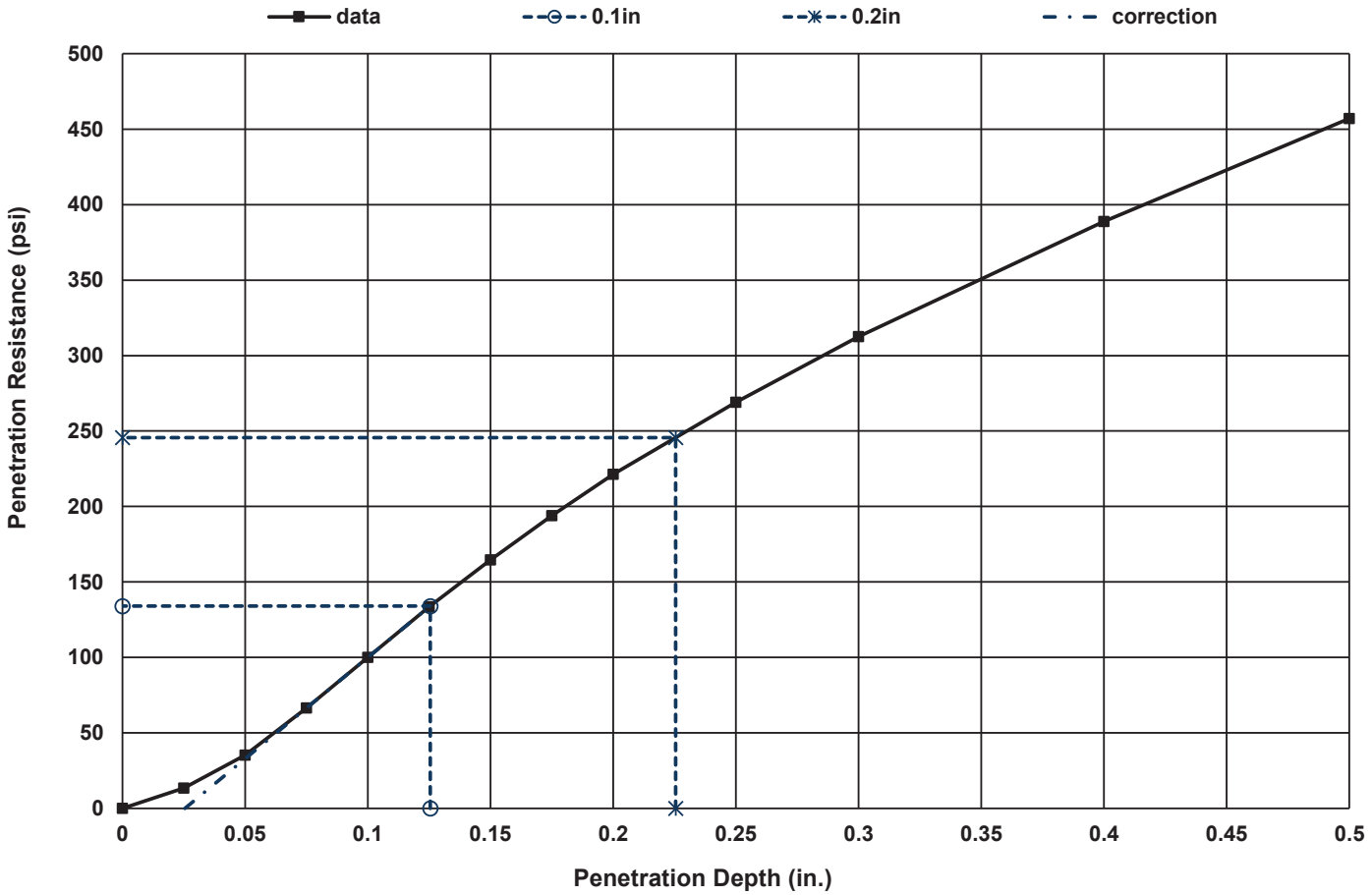
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample / Source P-04
Test Reference/No.:

Project No.: 12:19596
Depth (ft.): 1 - 10
Sample No.: D3S-67
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

California Bearing Ratios (CBR) of Laboratory-Compacted Soils



TEST RESULTS (VTM-8)

Molded			Soaked			CBR (%)		Linearty Correction (in.)	Surcharge (lbs.)	Swell (%)
Density (pcf)	Percent of Max. Dens.	Moisture (%)	Density (pcf)	Percent of Max. Dens.	Moisture (%)	0.1 in.	0.2 in.			
117.4	97.7	14.5	115.9	96.4	15.9	13.4	16.4	0.03	10	0.11

Material Description	AASHTO	USCS	MAX. Dens. (pcf)	Optimum Moisture (%)	LL	PI	% Fines	% Gravel
Purple Brown SANDY LEAN CLAY with Gravel	A-4	CL	120.2	13.4	28	10	51.4	15.7

Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample / Source P-01
Test Reference/No.: 1

Project No.: 12:19596
Depth (ft.): 1 - 10
Sample No.: D3S-66
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
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Tested by	Checked by	Approved by	Date Received	Remarks
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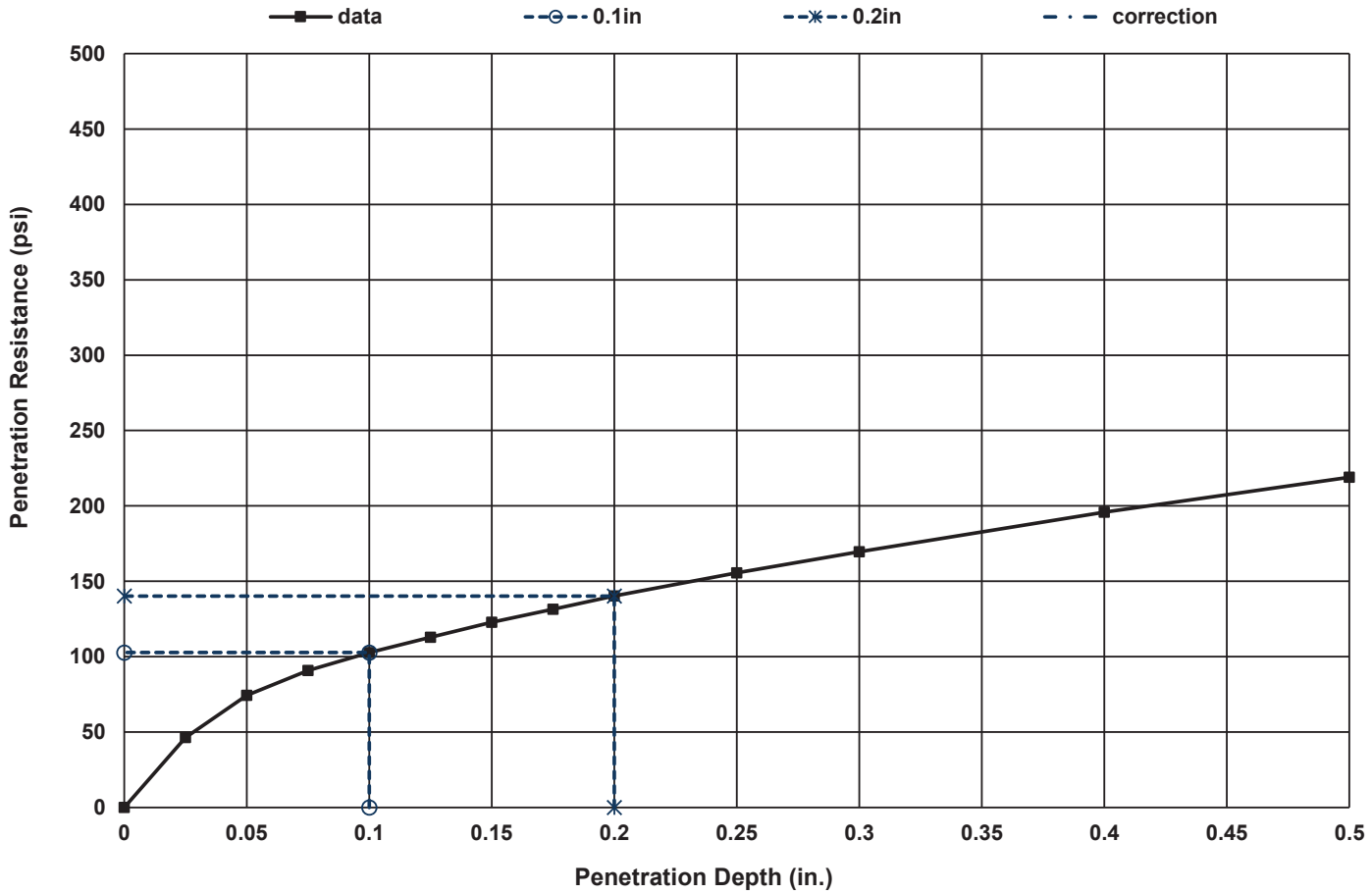
California Bearing Ratios (CBR) of Laboratory-Compacted Soils



TEST RESULTS (VTM-8)

Molded			Soaked			CBR (%)		Linearty Correction (in.)	Surcharge (lbs.)	Swell (%)
Density (pcf)	Percent of Max. Dens.	Moisture (%)	Density (pcf)	Percent of Max. Dens.	Moisture (%)	0.1 in.	0.2 in.			
107.5	101.9	17.2	104.3	98.9	20.1	10.3	9.3	0.00	10	0.57

Material Description	AASHTO	USCS	MAX. Dens. (pcf)	Optimum Moisture (%)	LL	PI	% Fines	% Gravel
Brown LEAN CLAY with Sand	A-6	CL	105.5	18.7	39	18	81.0	0.0

Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample / Source P-04
Test Reference/No.: 1

Project No.: 12:19596
Depth (ft.): 1 - 10
Sample No.: D3S-67
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
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Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N67°40'16"W	18.21'

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHD BEARING	CHD LENGTH	DELTA
C1	50.00'	73.53'	N03°39'55"W	67.08'	84°15'28"
C2	150.00'	101.81'	N36°28'27"W	99.87'	38°53'18"
C3	2165.83'	175.24'	N58°14'10"W	175.19'	4°38'09"
C4	93.90'	8.18'	N65°10'31"W	8.18'	4°59'29"

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Roanoke, VA 24018
540.772.9580

PRELIMINARY

PUBLIC SERVICE CENTER #12

EXISTING CONDITIONS

3645 ORANGE AVE NE
ROANOKE, VA 24012

DRAWN BY	KAM
DESIGNED BY	KAM
CHECKED BY	BTC
DATE	5/24/2022
SCALE	1" = 20'
REVISIONS	

J:\2020\04042020086.00 ROANOKE DD COST ESTIMATING - NDN\CIVIL\dwg\04200086.00 Base.dwg PLOTTED: 5/24/2022 3:17:04 PM

EX-A

PROJECT NO. 04200086.00

BONSACK/460 FIRE STATION
PRELIMINARY PROGRAMMING & DESIGN CONSIDERATIONS

Building Architecture:

Single Story Station

- Station Staffing
  - Six full-time personnel
    - Engine
    - EMS Medic Unit
    - Utility
  - Two part-time personnel
    - EMS Medic Unit
  - Station personnel totals
    - 24 personnel
      - Three different shifts with six personnel on each shift A, B, C and includes two PT personnel for an additional EMS Medical Unit

- Open Floor Plan
  - Ease of transition
  - Efficient travel lines throughout the building
  - Preference is to have egress doors leading into the apparatus bay to be push/pull without a latch if allowed

- Mezzanine
  - Located above Clean Quarters
  - Storage area
  - HVAC equipment
  - Double door access
  - Comm/IT
  - Water heater
  - Similar layout to Co. 1

- NFPA 13 Sprinkler System
  - Provide sprinkler head protection cages where needed

- Dirty Quarters – located on one side of the apparatus bays, away from Clean Quarters
  - Weight room
    - 750 S.F. minimum
    - Flooring
      - Concrete with rubber gym floor covering
    - Exterior entrance door
      - Large double opening door for better insulation
      - Concrete pad at exterior entry
    - Windows on exterior wall
    - Include Locution Alert – visual and audio
    - Pullup bars are permanent outside
    - Ceiling fans

        - Mirrors
        - Wall protection for lower 4 feet
        - Power and cable outlets for elevated hanging TV
        - Large window to the apparatus bay
        - Electrical in the floor and walls for workout equipment
        - Phone Jack
        - Exercise Equipment
            - Treadmill
            - Stair Stepper
            - Rowing Machine
            - Stationary Bike
            - Squat Rack (2)
            - Bench (2)
            - Dumbbells 5lbs to 100lbs plus rack
            - Plate Tree
            - Jump Box 30" x 24"

    - Bay Toilet
        - Watercloset
        - Urinal
        - Lavatory
        - Locate near the Weight Room

    - PPE Gear Storage
        - 24" width Gear grid lockers, a total of 30 (which includes three for travel in personnel from other stations)
        - Extra exhaust/ventilation due to moisture and odor concerns
        - Exhaust fan controlled by a timer with manual override
        - Electrical outlets throughout

    - Air Room
        - Station Compressor
        - Cascade/compressor system SCBA
        - SCBA air compressor in a separate room from the gear extractor and dryer because the heat off of the dryer will make the compressor less efficient

    - Decon Room
        - Location to be close to PPE Storage
        - Full standup shower in proximity to Decon Room and PPE Storage
        - Gear washer and dryer
            - Provide plumbing and electrical connections
        - Slop sink
        - Large floor drain/grate against a wall for washing off equipment and with pegs to hang equipment so it can dry

    - Sprinkler Room
        - Located on the first floor

- Shop
  - Minimum 200 S.F.
  - Workbench
  - Storage and area for flammable liquids
  - Pre-piped air shores

- Electric Room
  - Locate on Mezzanine?

- Apparatus Bays
  - Three Bays – 80' Deep
    - Fast Open Roll Up Fire Station Doors
    - Approximately 14'-8" door height
    - Large floor drains centered per apparatus bay (see Co. 2, Co. 5 & Co.9)
    - Diesel exhaust removal for apparatus
      - Similar to Co.1 and Res 2 but with a quieter fan
    - Spacing between apparatus by doors approximately 6 feet
      - Wider spaces between bay doors (like Co. 1) so you can open truck doors easily and not so close together that to get in one truck, the other truck doors need to be closed
      - USB and USB-C charging ports in some of the electrical outlets
    - Battery charging station
      - Rip-n-run
      - Electrical to handle Zoll/life pak/portables/TIC/SCBA/flashlight/etc.
      - Approximately 25 S.F.
    - Multiple water hookups with hose reels for hoses with one (1) faucet located somewhere in the Bay with a standard garden hose connection
    - Planned electrical drops at each Bay near the engineer side
    - Phones on both sides of the Bay
    - Two BAF ceiling fans
    - Area designed for printer/stereo/multiple batteries charging spaces
    - Minimize overhead obstructions
    - Radiant heating
      - Consider hydronic radiant floor heating
    - 1 ½" water connections for attaching hose line to clean bay floors/equipment
    - Water fountain with bottle filler near Weight Room
    - Wash alcove with floor grates and water supply

  - Hose Tower
    - 35 feet high hose drying rack
    - Dedicated nook for hose rack for storage
    - Prefer to have the hose tower in the middle of the work area, against the wall where it is still under the peak of the roof
    - Consider pricing hose tower as an option
      - If there is no hose tower, a hose dryer is required

  - Dirty Storage/Lawn Mower Storage
    - Exterior entrance

        - Flammable container, ladders, push mowers, riding mowers, weed eaters, fuels
        - Easy access through a double door to the exterior. Same as Co. 1

- Clean Quarters – located on the opposite side of apparatus bays, away from Dirty Quarters
    - Vestibule
        - Toilet Room with water closet and lavatory
        - Doorbell throughout station

    - Kitchen/Dining
        - Open floor plan from Kitchen to Dining and Day Room
        - Large commercial 3-compartment stainless steel sink
        - Commercial grade cabinets
        - Stainless steel Countertops and backsplash (full height)
        - Gas range top and griddle with hood
        - Electric double wall oven
        - Microwave
        - Large dishwasher
        - Garbage disposal
        - Island with bar seats
        - Under and over cabinet lights
        - 3 refrigerators
        - 3 large pantries (three shifts at the station, each shift would have its own food pantry (3' wide x 3' deep in a convenient location, possibly located across the hall into nook IT/Day Room)
        - With 3 large pantries, we do not need a whole lot of cabinets (St. 1 has way too many)
        - Planned coffee area, cabinet with water supply
        - Cast iron skillet hanging area
        - Magnetic knife holder
        - Ice machine
        - Movable stainless steel prep table

    - Captain's Office
        - Captain's desk with computer
        - Window into Apparatus Bay with shade
        - Storage cabinets, bookshelf, small individual mailboxes
        - File cabinets for 24 personnel (we would prefer to find another location for the files)
        - Large dry erase board
        - TV with AV and ethernet connection
        - Additional computers (3 preferred)

    - Bunkrooms (see PDF of preferred layout)
        - 7 Individual dorm rooms
        - Warm Sheet = two beds per dorm room
        - Desk w/ chair between the beds to double as a nightstand

        - Wall outlets with USB beside beds to be raised above desk height for easy access for cell phone charging
        - Ceiling Fan
        - Carpet floors
        - Efficient travel lanes from Bunkrooms to Apparatus Bays
        - If 7 dorm rooms are cost prohibitive, possibly consider a large bunk room with:
            - Individual cubicles
                - Do not extend to ceiling height to allow for airflow and use of one thermostat
            - Provide the same furnishings as in the individual dorm rooms
            - Provide sliding doors so that personnel can have privacy

- Changing Rooms (see attached PDF)
    - Located across from Bunkrooms and beside the bathroom
    - 7 large wardrobes per changing room
        - Size similar to St. 2
        - Total of 21 wardrobes (7 each per Changing Room)
    - Bench centered in the changing room
    - Smooth tile flooring similar to Co. 2

- Restrooms (see PDF layout)
    - Single sink with water closet and walk-in shower
    - No shower curtain or doors (like St. 1)
    - Small bench
    - Do not attach Toilets to the dorm rooms
    - Recommend a minimum of 3 full bathrooms and two ½ baths (Vestibule and Bay area)
    - Have at least one urinal possibly located in the toilet in the Bay

- Day Room
    - AV hookup
    - Dimmable overhead lights
    - TV electric and cable connection mounted behind wall mounted TV. (no visible wires)
    - Large window looking into apparatus bays
    - Stadium seating with a walkway between (preferred)
        - Space for seven recliners (alternate)
    - Provide solid blocking in the wall for hanging heavy items (TV, etc.)
    - Dry erase board, and a camera for Zoom calls separate from a computer located for ease of training (unless a training room can be included in the space program; preferred)
    - Provide AV connections so a laptop can be connected to the TV
    - Several recessed floor outlets

- Janitor
    - Located centrally between living quarters and kitchen
    - Floor drain
    - Storage for janitorial supplies

        - Slop sink and low tub for bucket filling
        - Exhaust fan

    - Laundry
        - Cabinets with Countertop
        - Slop sink
        - Ample storage for supplies
        - Washer and dryer

    - Patio
        - Covered Patio
        - Gas hookup for grill
        - Patio furniture

    - EMS Storage Room
        - Adjacent to the bays

- Architectural
    - No automatic unlocking doors (like Co. 10 and Station 1)
    - Low maintenance flooring in high traffic areas (Corridors, Kitchen, Day Room)
        - Epoxy resin
        - Polished concrete
        - Stained concrete
    - Windows
        - Aluminum storefront type
        - Provide aluminum storefront type operable windows in Dorm Rooms
    - Wall corners
        - Covered with stainless steel
    - Water fountains to include bottle filler
    - Ceilings
        - Generally, 2 x 2 reveal edge acoustical tile ceilings and/or gypsum board ceilings are anticipated for most non-apparatus bay areas.

- Electrical
    - LED lighting throughout with dimmable controls in certain locations
        - Provide dimmable controls in Day Room, Training Room, Captain's Office, Dorm Rooms
        - Simple operating light switches
        - No motion sensors
    - USB-USB-C Charging ports incorporated with outlets
    - Doorbell to be programmed into Locution
        - Audible in all occupied spaces and have individual tones for different doors

- AV/Technology/Security/Phone
    - Radio/dispatch speakers throughout the building for all occupied rooms
    - Security cameras covering the exterior of the structure, linked to the Office and Captain's Bunkroom
    - Exterior phone linked to dispatch – 911 box

- No automatic unlocking doors like Co. 10 and Co. 1

- Plumbing
  - Simple operating faucets
    - No motion sensors on lavatories, water closets, urinals
  - No waterless urinals
  - Individual shut-offs for bathrooms
    - Manifold system

- HVAC
  - Chiller/Boiler with digital valves
  - Thermostats that personnel can control – BAS system (understood that every room is not realistic)
  - With boiler/chiller, consider ductless units as a backup in the Day Room, Kitchen/Dining areas, Captain's Office, Training Room, Dorm Rooms.
  - Chiller – consider placing it by the bunkrooms or the electrical room and turning it longways from the building. Either location would consider a wall built or some other sound insulation around the unit for noise reduction. Would like outdoor units in an area close to the clean side of the building but far enough away so it will not disturb personnel when operating.
  - Consideration should be given to providing gas radiant tube heaters in the apparatus bays that would not be connected to the boiler.

- Training Props
  - Incorporated into hose tower
  - FDC/Standpipe
  - Ladder crash zones inside and out
  - 2nd story locking window (door) for bailouts to the exterior of the building

- Building Exterior
  - Design Look = Fire Station
  - Focused Front Entrance
  - Large signage with Roanoke County Fire and Rescue Station #___
  - Arched apparatus bay entrances
  - Pitched roof with standing seam metal (preferred) or architectural roof shingles
  - Awning or roofed area over walk areas and entrances
  - Banners outside of bays with apparatus listed (semi-permanent)
  - Dusk to Dawn lighting on building and parking areas

- Site
  - Concrete pad for all truck traffic areas
  - Commercial dumpster area
  - Parking spaces for 20
  - Fuel Island in the direction of travel
    - Driver fill-ups are on the vehicle's driver's side
    - Ability to fuel trucks without backing up
  - Station Generator
    - Locate generator away from sleeping quarters
    - Fueled from a direct line to fuel island tank to confirm fresh diesel

- Bollards located on both the inside and outside of bay doors
- Building-mounted sign
  - Back lite
- Fire Hydrant
  - Non-metered
  - Installed on-site for easy access for fire trucks to fill up

Roanoke County Public Service Center #12

Stormwater Summary

City and State stormwater management regulations will need to be addressed on-site for the proposed development. In the existing condition, a portion of the runoff drains north to an existing drainage low. The remaining runoff drains south towards the public right-of-way of Mexico Way where it is collected existing drainage inlets and conveyed through the storm sewer system.

Since runoff is currently draining in two directions, the detained runoff from the proposed development can be discharge in to either of the existing drainage areas.

Option A is to detain the stormwater runoff in the rear of the site using either an above ground detention pond, or an underground storage facility. The runoff would then be discharged to the north to the existing drainage low. The City of Roanoke would prefer the development to utilize this option as it would not direct any additional flow to the already over-capacity storm sewer system in Mexico Way. Further calculations would be required to determine the exact volume required in the stormwater management facility and if an above ground detention pond is a viable option.

Option B is to detain the stormwater runoff in the front of the site using an underground storage facility. A new storm sewer system would be required to convey the detained runoff from the site to the existing storm sewer system located approximately 200 ft from the site.

In both above options, stormwater quality requirements would need to be addressed as well. If an underground storage facility is utilized, a portion of the water quality requirements can be addressed on-site. The remaining requirements would need to be addressed using other on-site methods, or by purchasing off-site nutrient credits.

Appalachian Power Company
PO Box 2021
Roanoke, VA 24022-2121

Kyle Mitchell
Balzer & Associates
1208 Corporate Circle
Roanoke VA 24018

May 11, 2022

RE: Power Availability for the proposed Public Service Center #12 to be located at the end of Mexico Way NE

Dear Mr. Mitchell,

Appalachian Power Company (APCO) has a 3 phase 34.5 KV underground circuit across the road from the property. This can be intercepted and extended to the new parcel to serve the needs of the customer, subject to company policies and the current Tariff on file with the Virginia State Corporation Commission.

Sincerely,
Keith A. Freeman

Keith A. Freeman
Customer Design Supervisor NE
Roanoke Customer Design
(540) 427-3643 off
(540) 427-3727 fax
kafreeman@aep.com

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AEP: America's Energy Partner ®

Roanoke Gas
519 Kimball Avenue, N.E.
P.O. Box 13007
Roanoke, Virginia 24030
540-777-4427

May 5th, 2022

Subject: Mexico Way NE Gas Availability

Mr. Kyle Mitchell
Engineer
Blazer & Associates

Roanoke Gas Company has a 2" Plastic gas main that is located on the east side of (Along Mexico Way NE) which is located in Roanoke City, Virginia. The gas pressure on this main is approximately 40-45 psi.

To determine whether there will be any cost to the builder to install a gas service to the new building, I will need to compare the cost of installing the service to the expected revenue from the project. A cost estimate will be performed when requested by the customer.

The builder may contact me to start the service installation planning process when the time comes.

If you have any other questions, please let me know.

Sincerely,

CJ Boothe
Director of Operations
540-777-3816
Email address: Christopher_Boothe@roanokegas.com

Kyle Mitchell

From: Draper, Jeffrey B <jeffrey.b.draper@verizon.com>
Sent: Monday, May 16, 2022 12:13 PM
To: Kyle Mitchell
Cc: roscoe.a.asbury.jr@verizon.com
Subject: Re: [E] FW: Public Service Center #12 - Will Serve Letter

Good morning Kyle,
Unfortunately we do not provide will-serve letters anymore, as there are multiple carriers that can provide service in the Roanoke area. Verizon does have fiber and copper on Mexico Way NE, your customer can order any service Verizon offers in the area at that location.

Jeffrey Draper
Supervisor Outside Plant Engineering
O 5402657501
4843 Oakland Blvd
Roanoke, VA 24012

On Mon, May 16, 2022 at 10:20 AM Kyle Mitchell <kmitchell@balzer.cc> wrote:

Jeff,

We are working on a project in the City of Roanoke located at the end of Mexico Way. See attached proposed concept plan and architectural perspective.

Can you please provide us a will serve letter for the new building? Let me know if you need any additional information from me to facilitate this.

Thanks,

Kyle Mitchell

Balzer & Associates

Envisioning tomorrow. Designing today.

Planners / Architects / Engineers / Surveyors

Roanoke / Richmond / New River Valley / Shenandoah Valley

WESTERN VIRGINIA WATER AUTHORITY
540.853.5700 | info@westernvawater.org

Engineering Services
601 South Jefferson St, Suite 300
Roanoke, VA 24011
540-853-5700

Availability Letter #
22-240

Property Information		**Project Information**	
Availability #	22-240	Date prepared	5/10/2022
Address	0 Mexico Way NE/ 3645 Orange Ave NE	Acct code	Roanoke City
Tax Map #	Parent Parcel 7110105	Project type	Commercial
Contact	BALZER & ASSOCIATES, INC.		NC SC
Phone #	Kyle Mitchell/540-772-9580	Project Name	Public Service Center #12
LOC / CUST #		Project Status	Conceptual
Prepared by:	**Margaret Pearson - Utility Planner 540-283-2996**		

This letter has been generated without an approved plan or plat.

Based on the information that has been provided to the Western Virginia Water Authority, public water and sewer can be made available to this proposed parcel under certain conditions as outlined below. The design engineer is responsible to verify the water and sewer requirements for any development. All costs associated with the design and construction of the public water and sewer improvements required to serve this new parcel will be the responsibility of the owner/developer. A more detailed Availability Letter outlining specific fees associated with connecting to the public water and sewer systems will be provided in conjunction with the site plan review process.

WATER:
Water can be provided to the property by connectiin to the existing 8" public water main located in MEXICO WAY NE. The hydraulic grade line of the existing 8" waterline is HGL 1329. It is the owner/developers responsibility to ensure that the existing water system can provide the necessary flow and pressure required for the proposed development on this parcel. Depending on how Property is developed the internal water service could be either private or public, and this would be determined at the time of site plan approval.

SEWER:
Sewer can be provided to the Property by connecting to the existing 8”public sanitary main located in MEXICO WAY NE.
Depending on how Property is developed the sewer service could be either private or public, and this would be determined at the time of site plan approval.

SEE PAGE 2 FOR WVWA DEVELOPMENT POLICIES & PROCEDURES

Additional Information

- Once plans are submitted to the locality for review, all WVWA comments will be included as part of the localities review and approval process.
- Fixture counts will be required to properly size the requested meter and to set the availability fees for this project.
  Fixture Count Worksheet
- Fee amounts are listed in the approved Rate and Fee Schedule, as amended. This fee will be collected following issuance of an Availability Letter.
  WVWA Rates & Fees
- Any wastewater which contains fats, oils & grease (FOG) shall only be discharged into the Authority's sanitary sewer system.
  FOG Application
  Fats, Oils & Grease (FOG) Policy
- Hydrant flow tests will be performed at the cost of the developer for any hydrant flow test data requested.
  Fire flow requirements will be determined by the localities and it is the developer's responsibility to submit any hydraulic modeling for the localities approval
  Hydrant Flow Test Application

  Additional links below:
  WVWA homepage
  General Business Rules & Regulations
  WVWA Regional Design & Construction Standards
  Plan Review Checklist
  WVWA Warranty Agreement
  Inflow & Infiltration inspection

BONSACK FIRE STATION

Solicited PPEA Proposal for Construction - *Conceptual Phase*

RFP# 2023-020

Volume I

September 15, 2022 | 2:00 PM

G&H Contracting INCORPORATED Salem, Virginia

September 15, 2022

ATTN: Heath Honaker, County Purchasing Director
Purchasing Division
Roanoke County Administration Building
5204 Bernard Drive, Suite 300 F
Roanoke, VA 24018

Re: Solicited PPEA Proposals for Construction of Bonsack Fire Station
RFP# 2023-020

Dear Heath,

Thank you for your time in considering G&H Contracting, Inc. for your new fire station. We submit this proposal which is exemplary of our team's experience, skills, and unique fire station and public safety experience.

Our design team leader is one we have worked with on the County's last two fire stations, Hughes Associates A&E. Together, we have assembled a design team consisting of Day & Kinder Consulting Engineers, PLLC (structural engineering), Stewart Cooper Newell Architects (fire station design consultant), and Ascent Engineering (mechanical/electrical/plumbing/fire protection engineering).

This PPEA team brings together a group that affords Roanoke County the opportunity that the PPEA method of delivery was created for. This team will provide the most functional, efficient, affordable facility delivered earlier than your typical procurement process. And **as the general contractor that has built 5 of the last 6 new fire stations in the Roanoke Valley** (7 of last 10 if you include NRV) over the last 15 years, it's pretty good odds we'd have been the lowest bidder anyway.

This proposal will show that each member of our team's qualifications and experience cannot be matched when it comes to life safety facilities. Each discipline is unparallel at their knowledge and technical expertise. This PPEA process will allow our team to collaborate in the preconstruction phase, providing the highest value cradle to grave to supply Roanoke County with the right systems, equipment, and services.

Financially, G&H Contracting is incredibly stable and has remained so throughout these interesting times. Our budgets and timelines have remained stable as well. G&H Contracting's long-term commitment to responsibility and integrity has made us work extremely hard and has taught us how to adjust and pivot at new speeds. We are also cognizant of what projects we know are the right fit. Using that formula, we are completing successful projects meeting our obligations across the board and we are better for it.

The Bonsack Fire Station is that next successful project.

Sincerely,

Troy Henderson, Vice President G&H Contracting
THenderson@ghcontracting.com

Roanoke City Fire Station #7

During construction G&H Contracting helped incorporate aspects from the previous 90-year-old station. In the foyer entrance of the building, concrete squares from the demolished station were placed in the brick wall to pay homage.

TABLE OF CONTENTS

3.1. Qualification & Experience 1

3.1.1. Legal & Organizational Structure 1

3.1.2. Team Experience & Management Structure..... 2

Past Safety Performance & Capabilities 9

Past Technical Performance on Recent Projects 9

Principals Involved with the Project 15

Guarantees & Warranties 15

Similar Project Experience 15

Understanding of PPEA Delivery Method 15

Lead PPEA Project Experience 16

A/E Project Experience 24

Fire Station Consultant Project Experience 27

Lead PPEA & A/E Design-Build Experience 31

References 31

Remaining Team Project Experience 32

Subcontractors Selection Process 36

3.1.3. Completed Projects in the Last 3 Years 36

PPEA Team Resumes 37

3.1.4. Points of Contact for Further Information 41

3.1.5. Financial Statement 42

Surety Letter 42

3.1.6 Submitting Officers 43

3.1.7. Conflict of Interest Statements 43

3.1.8. Plan to Obtain Trade/Craft Workers 43

3.1.9. Availability of Training/Apprenticeship Programs 43

3.1.10. Commitment to DMBE Firms 43

3.1.11. Statements of Non-Debarment/Suspension 43

Qualification Statement 44

3.1.12. Worker Safety Program 44

Green page numbers denote items to be found in **Volume II, Redacted Proprietary Information.**

3.2. Project Characteristics 46
3.2.1. Project Description 46
3.2.2. Work Performed by Roanoke County 46
32.3. Permits, Approvals, & Schedule 46
3.2.4. Adverse Impacts of Project 47
3.2.5. Positive Impacts of Project 47
3.2.6. Project Schedule 47
3.2.7. Contingency Plans 48
3.2.8. Risk & Liability Allocation 48
3.2.9. Assumptions & Restrictions 48
3.2.10. Phased or Partial Openings 48
3.2.11. Applicable Standards & Quality Control 48
3.2.12. Assumptions for Success 49
3.2.13. Contingencies for Success 49

3.3. Project Financing 51
3.3.1. Preliminary Estimate & Methodology 51
3.3.2. Plan for Development, Financing, & Operation 51
3.3.3. Plan: *Assumptions of Major Elements* 51
3.3.4. Plan: *Risk Factors and Methods of Resolve* 51
3.3.5. Federal/State/Local Resources 51

3.4. Project Benefit & Compatibility 53
3.4.1. Community Benefits & Economic Impact 53
3.4.2. Public & Government Support or Opposition..... 53
3.4.3. Strategy & Plan to Disperse Information 53
3.4.4. Compatibility with Economic Development Efforts 53
3.4.5. Compatibility with Roanoke County 53
3.4.6. Participation with SWaM Businesses..... 53

3.5. Additional Information 53
3.5.1. Project Understanding & Approach 53
3.5.2. Approach to Project Management 53
Projects in Progress List 56
RFP Form 56
Addedum #1 57

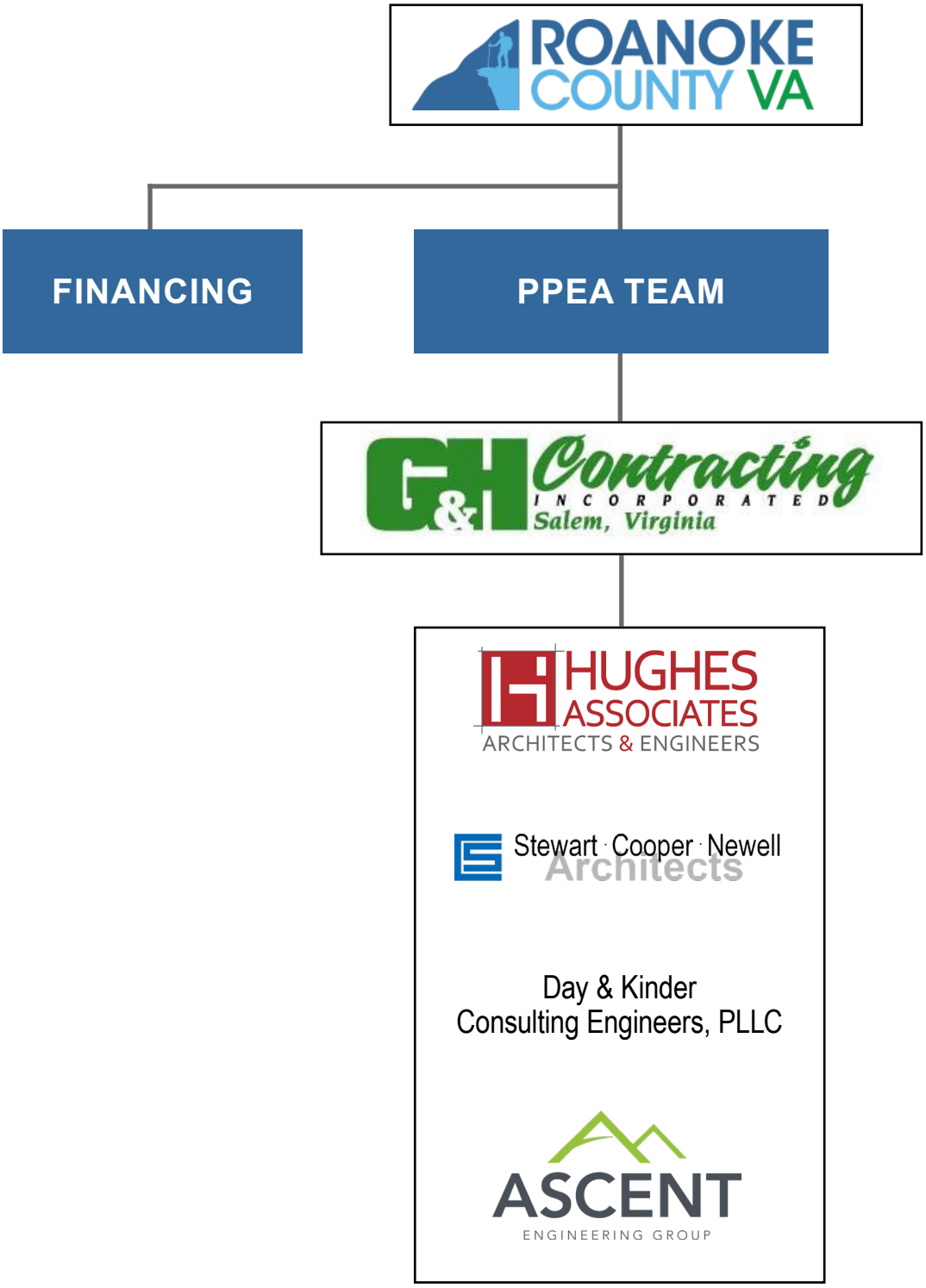
Green page numbers denote items to be found in **Volume II, Redacted Proprietary Information.**

3.1

QUALIFICATION & EXPERIENCE

3.1. Qualification & Experience

3.1.1. Legal & Organizational Structure



3.1. Qualification & Experience

3.1.2. Team Experience & Management Structure

G&H Contracting has assembled a veteran Fire Station and EMS facilities team for the Bonsack Fire Station. G&H has worked with **Hughes Associates A&E** on a wide range of projects, including Design-Build. Together, we have fine-tuned our working relationship regarding all forms of communication, quality assurance, efficiency, and overcoming challenges. **Stewart Cooper Newell Architects** is one of the top fire station/public safety consultants in the country and are a sought-after resource for the latest trends and knowledge. Currently working with Hughes Associates A&E on a new fire station in Waynesboro, their team has been cohesively working together since 2007. **Day & Kinder Consulting Engineers** and **Ascent Engineering Group** have become go-to consultants in their disciplines by many municipalities and have a wealth of fire station/public safety experience dating back to their establishments.

ROANOKE COUNTY VA

G&H Contracting INCORPORATED Salem, Virginia

Troy Henderson, LEED AP

HUGHES ASSOCIATES ARCHITECTS & ENGINEERS

Earle H.Shumate, Assoc. AIA
John R. Garrett, AIA
Mark J. Ayles. P.E.

Stewart · Cooper · Newell Architects

Ken C. Newell, AIA
Jim R. Stumbo, AIA

Day & Kinder Consulting Engineers, PLLC

Jay F. Kinder, P.E.

ASCENT ENGINEERING GROUP

Benji C. Linkous, P.E.
Boyd G. Headley, P.E.
Randy O. Spencer, P.E.
Randy W. Daniels, NFPA

G&H CONTRACTING

began in 1989 as a family-run construction company and has remained a family-owned and operated business for 33 years. Today, the leadership and vision of the first and second generation of G&H family members has built the company from placing concrete slabs for other general contractors to completing construction projects in excess of $30 million. We offer our clients a broad range of services including construction management, design-build contracting, and building construction. Since our establishment, G&H Contracting has been guided by three core principles

Commitment: To a quality, cost-effective project delivered in a timely manner.

Character: Providing a client experience that fosters trust. Providing a community experience that fosters trust.

Communication: Effective and clear communication to assure our client's needs are heard and expectations are met.

VA DPOR# 2705023767

11

& FACILITIES

Our Services

Preconstruction Services	General Contracting	Self-Perform Trades
Project Budget	Project Management	Concrete
Scheduling Analysis	Job Cost Accounting	Structural & Misc. Steel Erection
Constructability Analysis	Permitting	Drywall/Framing
Value Engineering	Submittal Review & Distribution	Rough & Finish Carpentry
Site Evaluation & Layout	Progress Meetings	Doors & Hardware
	Scheduling Reviews	Installation
	Site Supervision/Coordination	Acoustic Ceiling
	Quality Control	Specialties & Accessories
	Project Closeout	

HUGHES ASSOCIATES ARCHITECTS & ENGINEERS

has a legacy that stretches back to 1985 and is a collaborative community of professionals dedicated to positively impacting the way communities live, learn, work, and play. Through the years, we have grown and expanded our services with the addition of an in-house civil engineering department, a trained acoustician, interior design, and the addition of a number of experienced senior architects.

Today, Hughes Associates A&E is a recognized leader in the region for our innovative approach to the planning and design of State and Local Facilities, K-12, Higher Education, Healthcare, Public Safety, Multifamily , Senior Living, Industrial/Manufacturing, Worship Centers, Commercial & Retail, and Single Family Housing.

Our success has been built upon our mission and philosophy "to Listen to our client's ideas and goals; Relate to the context of place, culture, and identity; and Create innovative designs."

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
ROANOKE, VA

Our Services

Architecture	Engineering	Interior Design	Consulting
Master Planning	Civil Engineering	Interior Architecture & Design Services	ADA Compliance Reviews
Programming & Schematic Design	Rezoning	Strategic Programming & Planning	Code Reviews
Facility Assessments/ Evaluations	Site Analysis	Improve Corporate Brand Identity, Efficiency, & Productivity	Change of Use
Historical Preservation	Site Selection	Articulate Conceptual Business Strategies in Spatial Arrangement	Bank Loan Draw Evaluations
Roof Evaluations	Site Planning	Create People-Centric Environments through Spatial Order, Furniture, Lighting, & Display Art	Building Code Compliance Reviews
Sustainable Design/LEED	Stormwater Management		Tax Credit Applications
Construction Administration	Sustainable Site Design		

Size of Firm

Our staff of 17 allows our proposed team to remain constant from start to finish; this provides continuity and accountability for keeping this project on schedule and within your proposed budget.

W. Michael Woolwine | President & Civil Designer
Mark J. Ayles, P.E., M. ASCE | Vice President & Civil Engineer
Alan Downie, AIA, LEED AP | Vice President & Architect

Licensed Architects 8
Designers 3
Civil Engineers 1
Revit/AutoCAD Technicians 3
Administration & Marketing 3

VA DPOR# 0405000489

Stewart · Cooper · Newell Architects

OFFICE LOCATION

719 E. Second Avenue
Gastonia, NC 28054
P: (704) 865-6311
F: (704) 865-0046
E: info@scn-architects.com

COMPANY PROFILE

VA DPOR# 0407006764

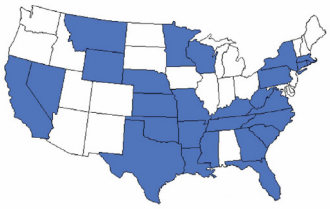
NC Entity: S Corporation
Established: 1971
Staff: 19 Employees

- 7 Registered Architects
- 3 Project Managers
- 1 Construction Administrator
- 2 Production Support
- 1 Architect Intern
- 4 Administrative Staff

WEBSITE

www.fire-station.com

Public Safety designs in 27 States:



50TH ANNIVERSARY 1971 2021 Stewart•Cooper•Newell Architects

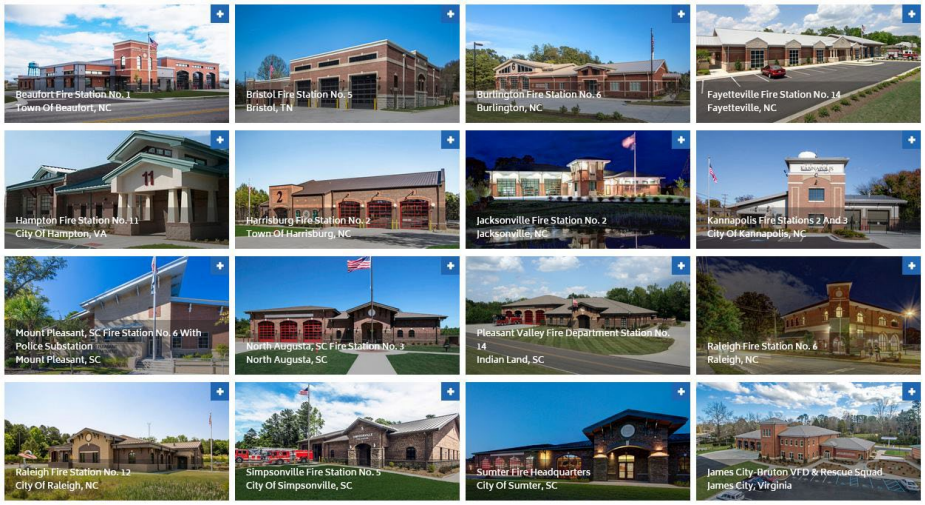
STEWART COOPER NEWELL ARCHITECTS, P.A.

has been providing its clients with quality architectural design services since 1971. As a firm, our goal is to provide excellence in planning, design and construction administration while keeping in mind our client's budget and schedule. Since the founding of the firm, we have enjoyed steady growth in all of our studios and have had the opportunity to work on many different project types across numerous industries.

Today, our multi-disciplined staff specializes in several areas, most notably Government and Public Safety Facilities, including Fire/EMS Stations, Training Centers, Government Complexes, Law Enforcement Facilities, Detention Centers, 911/EOC Communication Facilities and Court Facilities. Beyond architectural design, we offer our clients services in Master Planning, Space Needs Studies, Long Range Planning, Feasibility Studies, Interior Design and Renovation.

Stewart-Cooper-Newell Architects understands the science of designing Public Safety Training Centers and other Government facilities. In the past 50 years, we have consulted on the design of over **400 Fire Stations, Law Enforcement Facilities, Training Centers and 911/EOC Projects in 27 states**. Our specialized expertise has helped many cities and counties better the morale of their emergency medical personnel, firefighters and law enforcement officers; decrease insurance rates, and provide better protection for their citizens.

Our firm is led by three Partners with distinct, overlapping specialties. James C. Stewart (Chairman and Secretary), a Clemson University alumnus, is the founding Principal and has successfully overseen hundreds of Government and Law Enforcement projects throughout the southeastern U.S. in his five decades as a practicing architect. Kenneth C. Newell (President), a graduate of NC State University and UNC Charlotte, has been with the firm for 28 years. Considered a leading expert on the design of modern Fire Stations, Ken has consulted on over 275 Public Safety Facility projects, nationwide. James R. Stumbo (Vice President) a graduate from the University of Tennessee, has been with the firm for 17 years and plays a critical role in the firm's design and planning efforts for Public Safety Training Centers and Law Enforcement projects. Jim also serves as the firm's Information Technology expert, overseeing all of the office's technology resources and systems. Together, their shared dedication to offering local and regional clients excellence in design regardless of project size, type or budget remains the firm's bedrock, driving motivation.



Fire Station Design Project List

Stewart · Cooper · Newell Architects

North Roanoke County Fire Department

Danville VA Fire Department Headquarters & 911

Vinton, VA Fire and Rescue

Hampton Fire Station 11

Virginia Beach, VA First Landing Fire and Rescue

Since **Stewart Cooper Newell's** establishment in 1971, we have consulted on the design over 400 Public Safety Facility Projects, including over **100 Fire Station Projects in the past eight years alone**. For that reason, the following list is not exhaustive. Additional examples will be provided upon request.

Roanoke County, VA - North Roanoke Fire Station
Virginia Beach, VA - First Landing Substation
Chesterfield, VA Fire Station
Vinton, VA Fire & Rescue Station (Renovation & Addition)
Waukesha, WI Fire Stations (2)
Grand Island, NE Fire Station
Raymond, NE Fire Station
White House, TN Fire Station
Evergreen, MT Fire Station
Denton, TX Fire Department Headquarters
Murray, KY Public Safety Facility
St. Charles, MO Fire Station & E-911 Facility
Manhattan, KS Fire Stations (2)
Gordon County, GA Fire Substation
Berwyn, PA Fire Department (Needs Assessment)
Rock Hill, SC Fire Stations (5)
Greenville, SC North Main Fire Substation
York, SC Fire Station
Hilton Head Island, SC Fire Substations (5)
Weaverville, NC Fire Station
Cherryville, NC Fire Department Headquarters
Asheville, NC Fire Stations (2)
North Port, FL Fire Substations (3)
Waxhaw, NC Fire Station
Morehead City, NC Fire Station
Washington, NC Fire & Rescue Station
Lincoln County, NC EMS Headquarters
Fayetteville, NC Fire Station No. 14
Fayetteville, NC Fire Station No. 15
Fayetteville, NC Fire Station No. 19
Wake County, NC - Garner Fire/EMS Station
Wake County, NC - Durrant Road EMS Station
Kitty Hawk, NC Fire Station
Apex, NC Fire Station
Thomasville, NC Fire Station
Orange County, NC EMS Study 7 Design
Lewisville, NC Fire Station
Candler, NC - Upper Hominy Fire Station
Winston-Salem, NC Fire Station No. 19
Winston-Salem, NC Fire Station No. 20
Charlotte Douglas International Airport ARFF Station (LEED Silver)
Carrboro, NC Fire Station No. 2 (Designed to meet LEED standards)

Jay F. Kinder, Jr., P.E.
Partner | Structural Engineer

P.O. BOX 20187
3959 ELECTRIC ROAD, SUITE 348
ROANOKE, VIRGINIA 24018
PHONE: 540 774-5706
FAX: 540 772-3266

VA DPOR# 0413000005

DAY & KINDER CONSULTING ENGINEERS, PLLC

was first established in 1994 as Day-Williams Consulting Engineers by Eric W. Day when Mr. Day merged with the firm of Richard L. Williams Consulting Engineers. Mr. Day was joined by James F. Kinder, Jr. in 1997 and the firm operates today as Day & Kinder Consulting Engineers, PLLC. In keeping with the demands of the area, the Firm provides a comprehensive range of structural engineering services to clients in both the public and private sectors throughout Virginia and neighboring states.

Services

The Firm's primary discipline is the field of Structural Engineering. A list of the engineering services that the Firm provides includes feasibility studies, structural investigations, estimates of probable cost, preliminary planning, engineering design, preparation of contract documents, and review of construction. Completed projects include the design of new facilities and renovations of and additions to previously constructed buildings, with construction budgets ranging to 25 million dollars.

Philosophy

Day & Kinder Consulting Engineers takes pride in their abilities to meet the needs of their clients, and especially in the ability to meet budget and scheduling requirements. It is the policy of the Firm to provide first-class service at a reasonable cost, with client satisfaction being a major goal. As a result of this philosophy, the Firm has served many of its clients on a repeat basis for over twenty-five years.

Technology

The Firm utilizes computer design and drafting in the completion of its projects and the Principals of the Firm have been instrumental in the development of standardizing techniques for computer applications. AutoCad format is used to produce construction drawings for all projects.

Offices in Roanoke and Richmond, VA

DPOR# 0405000475

26 Employees
17 Engineers and Designers
7 Licensed Professional Engineers
7 LEED Accredited Professionals
1 RCDD
1 CEM (Certified Energy Manager)
SWaM# 9348S (Certified Small)

Capabilities and Skills:
Assement Studies
Audio/Video Systems
Building Automation Systems (BAS/EMS)
Building Project Design
Building Renovations
Closed Circuit Television
Construction Management
Controls
Economic Evaluations
Electrical Engineering
Electrical Power
Energy Management/Conservation
Equipment Replacement Design
Exterior Lighting Design
Feasibility Studies
Fire/Security/Alarm Systems
Fire Protection Engineering
Heating, Ventilating & Air Conditioning
Indoor Air Quality
Interior Lighting Design
Intra-Building Communications Systems
Lighting Consultation
Low Voltage Systems
Mechanical Engineering
Media Retrieval Systems
Photovoltaic Systems
Plan Review
Plumbing Engineering
Pre-Planning Studies
Refrigeration
Site Power Distribution
Site Lighting
Sports Field Lighting
Thermal Storage
Utilities
WAN/LAN Systems

ASCENT
ENGINEERING GROUP

Ascent Engineering Group, Inc.

was established in 1959 specializing in engineering and design of **Mechanical, Electrical, Plumbing, Fire Protection and Information Technology Systems for Public Safety facilities of all types**. We are also specialized in the design of local government facilities, health care facilities, commercial buildings, animal care facilities and retirement facilities. Ascent provides planning, design and consulting engineering services to Owners, architects and other engineers. Professional Engineering service constitutes the entire activity for the firm, which produces plans, specifications, studies, reports, energy analysis and construction administration services.

HOW WE DO IT

We believe in conducting business with honesty, integrity, and excellence. Our goal is not to do what is best for us, but rather what is best for the Owner. Ascent has no financial interest in the construction industry, or the manufacturing or sale of equipment. For new construction or renovation projects, we provide all of the engineering necessary for the cost-effective design, installation and operation of the mechanical and electrical systems. Ascent is an equal opportunity employer.

COMMITMENT TO CONSULTING

Ascent committed to our high performance design approach, but also in the consulting engineering profession as a whole. This dedication to the business is a direct reflection of the Principals' commitment to the engineering profession and its creed of service to the public.

Safety

Safety is top priority at G&H Contracting and is accounted for in all phases of our projects. We have a comprehensive safety program managed and overseen by our Safety Manager and retired RCPS Principal, Danny Guard and implemented by our OSHA certified project superintendents. Safety also occupies the minds of our preconstruction and project management teams, then communicated to our subcontractors. For every project, we want to be conscious of any potential safety concerns, such as means of entrance, egress, and job site circulation. G&H has a great safety track record, with an EMR of .91.

G&H Safety is a Focus Four approach to mitigate the four most common claims, which are falls, strains, struck by, and vehicle collisions. We also have a strategy for Return to Work program (RTW) and our five year loss ratio is below industry standards, despite a higher capacity of risk for self-performance.

Past Technical Performance on Recent Projects

G&H Contracting has built **11 life safety facilities** throughout Southwest Virginia, delivering them on schedule, within budget, and exceeding our clients' expectations. Our familiarity with fire and EMS stations, mixed with open communication with the Owner and design teams, have resulted in a well-informed project team delivering well-planned projects.

Please see our team's statements of great legal standing with **Claims, Litigation, and Debarment/Suspension** on the following pages.

September 7, 2022

Dear Mr. Honaker,

There has been no litigation, criminal investigation, or conviction, governmental or regulatory action pending, nor threatened, against G & H Contracting affecting our ability to provide services on your project.

We are not in any way prohibited, disbarred or banned from pursuing or performing work with any federal, state, or local government entity.

All of our firm's licenses, accreditations and necessary certifications are current and in-good-standing with the appropriate agencies. No personnel on our staff has ever had their license revoked or suspended.

Troy Henderson, LEED AP
Vice President | Project Manager

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS

September 7, 2022

Dear Mr. Honaker,

There has been no litigation, criminal investigation, or conviction, governmental or regulatory action pending, nor threatened, against Hughes Associates A&E affecting our ability to provide services on your project.

We are not in any way prohibited, disbarred or banned from pursuing or performing work with any federal, state, or local government entity.

All of our firm's licenses, accreditations and necessary certifications are current and in-good-standing with the appropriate agencies. No personnel on our staff has ever had their license revoked or suspended.

W. Michael Woolwine
President | Civil Designer

656 ELM AVENUE, SW | ROANOKE, VA 24016 | 540.342.4002 | HUGHESAE.COM

Stewart · Cooper · Newell
Architects

September 6, 2022

To Whom it May Concern:

There has been no litigation, criminal investigation, or conviction, governmental or regulatory action pending, nor threatened, against Stewart-Cooper-Newell Architects affecting our ability to provide services on your project.

We are not in any way prohibited, disbarred or banned from pursuing or performing work with any federal, state, or local government entity.

All of our firm's licenses, accreditations and necessary certifications are current and in-good-standing with the appropriate agencies. No architect on our staff has ever had their architectural license revoked or suspended.

James Stumbo, AIA, LEED AP BD+C, NFPA
Vice President

architecture
needs assessment
master planning
interiors
consulting

James C. Stewart, AIA | Kenneth C. Newell, AIA | James R. Stumbo, AIA
719 East Second Avenue • Gastonia, NC 28054
P: 704.865.6311
F: 704.865.0046
1.800.671.0621 www.scn-architects.com

DAY & KINDER CONSULTING ENGINEERS, PLLC

P.O. BOX 20187 ♦ 3959 ELECTRIC ROAD, SUITE 348 ♦ ROANOKE, VA ♦ 24018
PHONE: 540 774-5706 ♦ EMAIL: jay@dayandkinder.com

. ♦ JAMES F. KINDER, JR. P.E.

September 7, 2022

Dear Mr. Honaker,

There has been no litigation, criminal investigation, or conviction, governmental or regulatory action pending, nor threatened, against Day & Kinder Consulting Engineers affecting our ability to provide services on your project.

We are not in any way prohibited, disbarred or banned from pursuing or performing work with any federal, state, or local government entity.

All of our firm's licenses, accreditations and necessary certifications are current and in-good-standing with the appropriate agencies. No personnel on our staff has ever had their license revoked or suspended.

James F. Kinder, Jr., P.E.
Partner | Structural Engineer

September 7, 2022

Dear Mr. Honaker,

There has been no litigation, criminal investigation, or conviction, governmental or regulatory action pending, nor threatened, against Ascent Engineering Group affecting our ability to provide services on your project.

We are not in any way prohibited, disbarred or banned from pursuing or performing work with any federal, state, or local government entity.

All of our firm's licenses, accreditations and necessary certifications are current and in-good-standing with the appropriate agencies. No personnel on our staff has ever had their license revoked or suspended.

Benjamin Linkous, P.E., LEED AP
President | Electrical Engineer

Principals Involved in the Proposed Project

Please see our **Team Resumes** on pages 32 and 37.

Guarantees and Warranties

G&H standardizes warranties and guarantees per typical project specifications for one year, but seeks to accommodate an advanced level of service. It is extremely common for G&H to respond and remain involved after the one year warranty period for many items, as our Clients are typically people we come to know, or already know, on an extensive basis. We are, and have always been, a responsible service provider.

Similar Project Experience

G& H Contracting and Hughes Associates A&E completed the 10,500 SF, $2.6 million Vinton Fire and Public Safety Building in 2008 and the 16,500 SF, $3.3 million North Roanoke County Fire Station #1 in 2010. Both facilities included Day & Kinder Consulting Engineers as the structural engineer and Stewart Cooper Newell Architects as the fire station consultant.

G&H Contracting has delivered 11 life safety facilities throughout Southwest Virginia.

Understanding of the PPEA Delivery Method

Currently working on the $17.9 million Christiansburg Park PPEA project, G&H understands that the PPEA delivery method:

- **Saves Time** utilizing the design-build delivery system
- **Saves Money** by saving time in getting the contractor involved early in design and planning, especially considering our level of experience and our ability to successfully build these projects previously using the public bid process
- **Eliminates Upfront Costs** as the PPEA team provides conceptual designs, cost estimates, and time schedules without financial commitment from the Owner
- **Provides a Guaranteed Maximum Price** using input from the locality and puts the financial risk on the contractor

G&H has followed this process with great interest and attention and is aware of the intricacies of the PPEA process.

G&H Contracting INCORPORATED Salem, Virginia

PPEA CHRISTIANSBURG PARK

Christiansburg, Virginia

Client:
Town of Christiansburg

Contact:
Brad Epperley
Director of Parks & Recreation
540-382-2349, 2001
bepperley@christiansburg.org

PPEA Team:
Hill Studio
Faulconer Construction
G&H Contracting
("Vertical Contractor")

Completion Date: Spring 2023
Construction Cost: $17,995,000
Total Size: 63 Acres
Project Type: Municipal/Recreational

Using the PPEA Delivery Method, the new Christiansburg Park is a 2-phase project and includes the new construction of:

- (4) Athletic Fields
- (3) Large Pavilions
- Splash Pad/Water Park
- Universal Design Playground with Fitness Course
- Small and Large Dog Parks
- Two Miles of Trails and Greenspace

ROANOKE CITY FIRE & EMS STATION #7

Roanoke, Virginia

Client:
Roanoke City

Contact:
Terry Kemp, Architect
(540) 853-2735

Project Team:
SFCS
with
G&H Contracting

Completion Date: February 2021
Construction Cost: $5,997,732
Total Square Footage: 15,700 SF
Project Type: Public Safety

The Roanoke Fire and EMS Station 7 is the new construction of a two-story building. During construction G&H Contracting, Inc. helped incorporate aspects from the previous 90-year-old station. In the foyer entrance of the building, concrete squares from the demolished station were placed in the brick wall to pay homage. In the lounge area the front of a retired fire truck was used to frame the flat screen TV. The apparatus bay is equipped with a total of six overhead doors to provide quick and easy movement.

CITY OF ROANOKE FIRE & EMS STATION #3

Roanoke, Virginia

Client:
Roanoke City

Contact:
Terry Kemp, Architect
(540) 853-2735

Project Team:
RRMM
with
G&H Contracting

Completion Date: June 2009
Construction Cost: $1,898,345
Total Square Footage: 8,000 SF
Project Type: Public Safety

This public safety building was Roanoke City's first LEED certified public facility. Station #3 achieved LEED Gold and sustainable features include recycled wastewater and rainwater harvesting systems as well as pervious concrete.

This building includes a large apparatus bay with four total overhead doors. The remainder of the building houses staff. Here they can utilize offices, a kitchen, training, and living areas.

ROANOKE CITY FIRE & EMS STATION #5

Roanoke, Virginia

Client:
Roanoke City

Contact:
Terry Kemp, Architect
(540) 853-2735

Project Team:
CR Architecture & Design
with
G&H Contracting

Completion Date: July 2010
Construction Cost: $3,388,115
Total Square Footage: 13,400 SF
Project Type: Public Safety

Roanoke City's Station 5 is LEED Gold certified. A rainwater harvesting system and a permeable paver parking lot are a few of the green site features. Other sustainable features include high efficiency lighting systems, automated HVAC and lighting system controls and high efficiency heating, ventilating, and air conditioning systems.

The two-story 13,400 square foot facility houses a community meeting room for neighborhood organizations, training room, offices , living quarters, kitchen, exercise room and central dispatch/alarm. The apparatus bay holds four engines. This area uses radiant heating.

CLIFTON FORGE RESCUE STATION

Clifton Forge, Virginia

Client:
Clifton Forge

Contact:
Captain Matt Booze
(540) 862-3076

Project Team:
Reynolds Architects
with
G&H Contracting

Completion Date: December 2020
Construction Cost: $1,592,376
Total Square Footage: 9,000 SF
Project Type: Public Safety

The Clifton Forge Rescue Station is a pre-engineered metal building designed to house both male and female staff. The 4,200 square foot apparatus bay includes 6 overhead doors to provide plenty of access to all vehicles. The remaining 4,800 square foot consists of bunkrooms, office space, kitchen, and training rooms.

G&H Contracting INCORPORATED Salem, Virginia

LEXINGTON FIRE DEPARTMENT

Lexington, Virginia

Client:
Town of Lexington

Contact:
Fire Chief Ty Dickerson
(540) 463-3210

Design Team:
Reynolds Architects &
Frazier & Associates
with
G&H Contracting

Completion Date: 2009
Total Square Footage: 18,000 SF
Project Type: Public Safety

This classic style, two-story public safety building features 6 drive-thru apparatus bays that houses 12 emergency vehicles. The second-floor houses separate living quarters for male and female emergency personnel, a kitchen, training room and office space. A day room, storage space and restrooms make up the first floor. This project also received the Shenandoah Valley Conservation Award.

BLACKSBURG FIRE STATION #3

Blacksburg, Virginia

Client:
Town of Blacksburg

Contact:
Fire Chief Keith Botle
(540) 961-1175

Design Team:
Reynolds Architects
with
G&H Contracting

Completion Date: March 2016
Construction Cost: $1,363,400
Total Square Footage: 11,482 SF
Project Type: Public Safety

The Blacksburg Fire Station is the new construction of a two-story, 11,482 square foot building. This was an extension of the Blacksburg Airport and includes 6 bays for fire trucks. Half of the building was brick veneer with the remaining portion being metal building panels. A metal roof was also installed for a sleek look. The station has rooms for five on-call members and includes laundry facilities, a day room with kitchen, exercise facility, and fire pole.

ELLISTON VOLUNTEER FIRE DEPARTMENT

Elliston, Virginia

Client:
Montgomery County

Contact:
Fire Chief Clyde Hodges
(540) 268-1055

Design Team:
Montgomery County Engineers
with
G&H Contracting

Completion Date: March 2012
Construction Cost: $1,621,000
Total Square Footage: 16,552 SF
Project Type: Public Safety

The Montgomery County Elliston Volunteer Fire Station contains a radiant heat slab in the apparatus bay instead of a traditional forced-air system. The fire station's apparatus bay also includes (6) double-stacked bays.

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS

NORTH ROANOKE COUNTY FIRE STATION #1

Roanoke, Virginia

Client:
Roanoke County

Contact:
Chief Todd Maxey (Ret.)
Now with Blue Ridge Safety and Health
(540) 793-0764

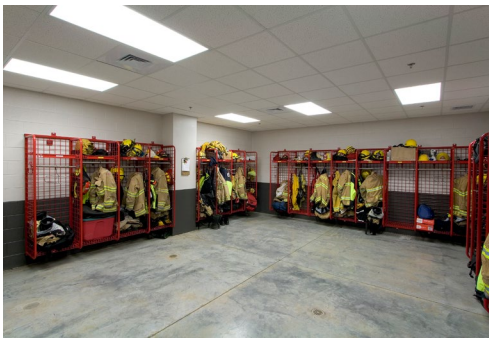
Design Team:
Hughes Associates A&E &
Stewart Cooper Newell Architects
with
Day & Kinder Consulting Engineers
(Structural Engineer)
Mann & Associates
(Mechanical Engineer)
William R. Jennings, Jr. Consulting
Engineers (Electrical Engineer)
G&H Contracting
(General Contractor)

Completion Date: May 2010
Construction Cost: $3,371,401
Total Square Footage: 16,470 SF
Project Type: Public Safety

This new fire station, the first in Roanoke County since the 1970s, is a one-story pre-engineered metal building structure wrapped in a stone and brick façade. With 16,470 sf enclosed, the building program includes three double-loaded drive-through apparatus bays, decontamination and tool maintenance facilities, and training areas on two levels.

The residential quarters for 12 firefighters plus supervisors include a common bunkroom, private baths, fitness training room, dayroom, dining room, kitchen and laundry. Business spaces include offices for a captain, battalion chief and EMS, a conference/training room, public lobby, and public toilets.

Most of the 9.7 acre site has been left undeveloped with stands of deciduous and evergreen trees dotting a rocky hillside. A new screen of plantings hides the new building from its neighbors. Site paved areas are a combination of heavy-duty asphalt and reinforced concrete. Mechanical units and dumpsters have been screened from view with enclosures matching the building's façade.



HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS

VINTON FIRE STATION & PUBLIC SAFETY BUILDING

Vinton, Virginia

Client:
Roanoke County

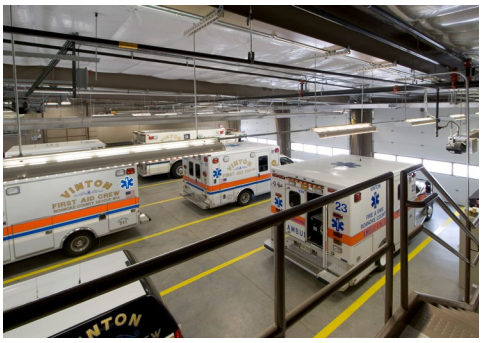
Contact:
Chief Todd Maxey (Ret.)
Now with Blue Ridge Safety and Health
(540) 793-0764

Design Team:
Hughes Associates A&E &
Stewart Cooper Newell Architects
with
Day & Kinder Consulting Engineers
(Structural Engineer)
Mann & Associates
(Mechanical Engineer)
William R. Jennings, Jr. Consulting
Engineers (Electrical Engineer)
G&H Contracting
(General Contractor)

Completion Date: May 2008
Construction Cost: $2,686,908
Total Square Footage: 10,500 SF
Project Type: Public Safety

The Vinton Public Safety Building is a 10,500 sf facility to house the town's rescue squad, volunteers and paid staff. It is attached to the existing Vinton Firehouse. Hughes Associates A&E worked with nationally recognized fire station consultant Stewart Cooper Newell Architects on the Vinton Public Safety Building project.

The project included (4) apparatus bays (three double-stacked, one single-stacked), individual bunk rooms, rescue offices, radio and satellite communications rooms, dayroom, kitchen and dining facilities, fitness center, fitness facility (shared with adjacent Firehouse), decontamination room, shop, rescue training platforms, public entrance lobby to serve fire and rescue, community meeting room, new parking, turn-out areas, emergency generator, and related site work.



HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS

ALTAVISTA VOLUNTEER FIRE COMPANY

Altavista, Virginia

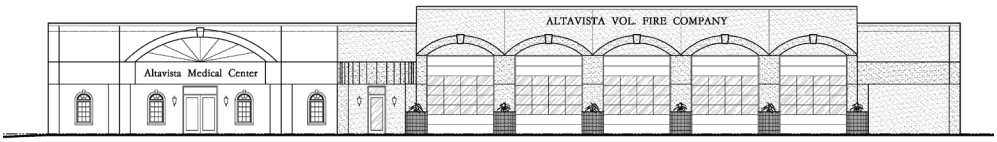
Client:
Altavista Vol. Fire Company

Contact:
Chief John E. Tucker
434-369-5281

Design Team:
Hughes Associates A&E & with
Moore's Electrical & Mechanical (MEP)
Witt Construction (General Contractor)

Completion Date: 2005
Construction Cost: $550,000
Total Square Footage: 16,000 SF
Project Type: Public Safety

The project included alterations and renovations of an existing Food Lion grocery store into a 16,000 SF fire station. The building includes five (5) apparatus bays with accessory storage spaces; EMS and radio control offices; administrative offices; serving kitchen; assembly hall; recreation room; weight and fitness room; dorm room; and toilet facilities equipped with showers and locker rooms. Hughes Associates Architects provided complete planning, architectural design, and construction administration services.



Fire Department Headquarters
911 and Emergency Operations Center

danville, va

CONTACT:

David Eagle,

Previous Danville Fire Chief

Current Williamsburg Fire Chief

P: (434) 489-8427

ROLE:

Architect of Record

SCOPE:

Site Planning, Programming, Concept and Schematic Design, Historic Site Preservation, Construction Documents, Construction Administration

SIZE:

Fire HQ and EOC - 38,800 SF

DATE:

2015

COST:

$7.3 Million

www.fire-station.com

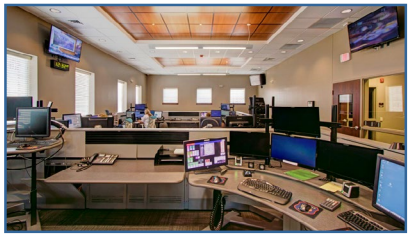
The fire station headquarters rich in symbolism and displays; illustrates how the integration of memorials, museums and historical content within a fire station can foster relationships, tell the story of a department and community, and honor the fire-fighting profession - all while being cost effective.

The project site contained one and a half city blocks of crumbling buildings and contained two exposed stream channels. Cobblestones, hidden below the asphalt, were used as hardscaping material for exterior sidewalks and the interior floor of a glass box museum.

The glass box museum protrudes from the front face and provides enhanced views for passing vehicles or pedestrians.

Stream channels were left exposed to compliment the lawn and green-spaces enjoyed by current fire-fighters on the rear patio. Reclaimed timber framing was used to create the grid ceiling in the museum and main central corridors of the station while reclaimed brick were used as the base for the curving front reception desk.

The exterior aesthetic features reflect design elements and principals found in the surrounding buildings; while the interior of the station contains all the spaces and features of a state of the art fire station.



Stewart · Cooper · Newell
Architects

Toano Fire Station No. 1 - Bruton Volunteer Fire Department

james city county, va

CONTACT:

David Nice, Fire Chief
James City - Bruton VFD
3135 Forge Rd, Toano, VA 23168
P. (757) 566-3032
E. knice
@davidnicebuilders.com

ROLE:

Consulting Architect

SCOPE:

Site Planning, Programming, Concept and Schematic Design, Peer Review

SIZE:

24,300 SF

DATE:

2016

COST:

$5,557,554

www.fire-station.com

The Toano Fire Station #1 was designed as a facility supporting both volunteer and career staff, built on a tight site immediately behind the original existing station. Guernsey-Tingle and SCNA worked closely with the County to design a facility that reflects the history of the site as a center of community life (a high school occupied the site in the early 1900s), and to honor the sacrifice of the volunteer department that constructed the existing facility.

The original station remained in operation while the new station was built. The new, 2-story building provides a high performance facility for volunteer and career staff and rescue squad personnel operations and training, and simultaneously provides greatly improved facilities for community use with its community/training room and associated commercial kitchen facility.

The station also includes new parking and a new site entry allowing vehicle return to the rear of the station, a new fueling facility for support of county vehicles at the upper end of James City county, and a water supply station, which provides water to local contractors

Stewart · Cooper · Newell
Architects

Skyland Fire & Rescue - Valley Springs Fire Station No. 4

biltmore forest, nc

CONTACT:

Dennis Presley, Fire Chief
(828) 606-7335
dpresley@skylandfire.com

ROLE:

Architect of Record

SCOPE:

Schematic Design, Design Development, Construction Documents

SIZE:

7,852 SF

DATE:

2014

COST:

$613,000

www.fire-station.com

Skyland Fire and Rescue -- Valley Springs Fire Station No. 4 is located in the town of Biltmore Forest, adjacent to the well-known Biltmore Estate and Gardens.

The site is situated between an exclusive residential community Biltmore Farms, which borders the Biltmore Estate and the Blue Ridge Parkway visible at the rear of the property. In donating the property to the Fire Department for use of their Fire Station, the Cecil family current owners of the estate and Biltmore Farms only requested that the building respect and blend with the timeless architecture of the surrounding community and the estate.

With a razor thin budget to build the station, the 7,800 sf two drive-thru bay station was designed with a slight taste of the French Tutor style although much of the board and batten trim was removed for budget concerns by the owner. The compact design has a central spine corridor serving three offices along with a combined Dining / Day-room and kitchen.

Further down the corridor are six sleep rooms, an exercise room and combination lavatory and shower area. A short hall leads off the main corridor at two locations to provide direct and quick access to the apparatus bays.

Stewart · Cooper · Newell
Architects

Shallotte Fire Department

shallotte, nc

CONTACT:

Paul Dunwell, Fire Chief
125 Wall Street
Shallotte, NC 28470
(910) 754-6262
pdunwell@atmc.net

ROLE:

Architect of Record

SCOPE:

Programming, Concept and Schematic Design, Construction Documents, Construction Administration

SIZE:

6,031 SF

DATE:

2007

COST:

$1.18 Million

www.fire-station.com

This station was designed for a small, coastal-area town to upgrade their inadequate existing facility. The new station was designed to be budget-conscious while still addressing the needs of the growing department. The new facility houses two back-in bays with the ability to be modified for future drive-through capability if the town chooses to acquire an adjacent property. The rest of the facility offers multiple offices and records areas, a dayroom and kitchen facilities, an exercise room and dorms for crew members.

The exterior makes use of subtle material choices that match the local architecture but are marked by their durability and low maintenance requirements. The exterior walls and glazing are also rated for impact resistance, in order to withstand the occasional hurricane or severe storm.

The building is flanked by staff parking and minimal landscaping, due to the limited available lot size. The Town chose to approach the project by keeping the station close to the town center, not just for response time but also in an effort to begin developing a central, civic campus. This station represented the first step in that direction.

Stewart · Cooper · Newell Architects

Team Design-Build Experience

G&H Contracting and Hughes Associates A&E have worked with New River Electrical Corporation on two design-build expansions to their corporate headquarters in Cloverdale, Virginia. In 2008, our team completed a two-story expansion to their single-story offices.

Currently, our team is in the final stages of a 7,513 SF, two-story expansion that includes an open floor plan with a conference room, closed offices on the perimeter, work room, additional bathrooms, a window in every office, and a new patio with seating and a fire pit.

References

Paul Ely, Capital Project Manager
Virginia Tech
230 Sterrett Facilities Rm. 90G
Blacksburg, VA 24061
(540) 231-3689

Mark Johnson, CEO
YMCA of Roanoke Valley
520 Church Avenue
Roanoke, VA 24016
(540) 527-9622 x3102

Dr. Martin Misicko, Vice President of Facilities
Carilion Clinic
1906 Belleview Avenue
Roanoke, VA 24014
(540) 981-7024

Mark J. Ayles, P.E., M. ASCE

Vice President | Civil Engineer

Mark joined Hughes Associates A&E in 2007 and brings experience in public sector work from his position with the Virginia Department of Transportation. While in the Salem Residency as the Assistant Resident Engineer/Transportation Engineer, Mark was responsible for all engineering related activities including review and VDOT approval of public and private land development activities in Botetourt, Craig, and Roanoke Counties. He is knowledgeable in all aspects of roadway geometrics and land development, including stormwater management, erosion and sediment control, pavement design, drainage design, utility design, traffic analysis, and flood studies.

REGISTRATION

VA Professional Engineer, 0402034160

EDUCATION

Virginia Tech, Civil Engineering, 1995

Public Safety/Municipal

- North Roanoke County Fire and Rescue Station #1, Roanoke, VA
- City of Waynesboro, West End Fire Station (Currently in Design) Waynesboro, VA
- City of Roanoke Public Works Service Center Improvements to Buildings and Site, Roanoke, VA
- Virginia Department of Agriculture and Consumer Services Site Improvements, Lynchburg and Wytheville, VA
- Town of Blacksburg Transit Facility Expansion, Blacksburg, VA
- Sherwood Memorial Park New Building, Site Improvements, and Infrastructure, Salem, VA
- Virginia Department of Transportation, Statewide in VA
- Salem District Term Contract Projects in 2009, 2011-2012, 2014-2016, 2018
- Residency Combo Building, Fuel Island, and Chemical Storage Facility Master Plan, Lexington, VA
- Study for Traffic Operations Facility, Staunton, VA
- Study for Virginia State Police Facility, Richmond, VA

James F. Kinder, Jr., P.E.

Day & Kinder Consulting Engineers, LLC

Partner | Structural Engineer

Jay Kinder joined Day & Kinder Consulting Engineers, PLLC in 1997 as a Partner. With over 35 years of professional design experience, Jay's expertise includes structural design for steel, concrete, and wood structures. Jay works with all building types including academic, healthcare, commercial, religious, industrial, and residential. Jay also has extensive professional experience in the evaluation and renovation of both existing and historic facilities. Additionally, Jay has expertise in the evaluation and remediation of structures damaged by the forces of nature such as wind, fire, flood, and earthquakes.

REGISTRATION

VA Professional Engineer, 0402015761

EDUCATION

Virginia Tech,Bachelor of Science, Civil Engineering, 1979

Public Safety/Municipal

- Williamson Road Fire Station - Roanoke, VA
- City of Waynesboro, West End Fire Station (Currently in Design) Waynesboro, VA
- Read Mountain Fire and Rescue , Building Addition, Botetourt County, VA
- Scruggs Fire Station, New Fire Station, Franklin County, VA
- Melrose Fire Station, Roanoke, VA
- Snowshoe Fire Station, New Fire Station, Snowshoe, WVA
- North Roanoke County Fire and Rescue Station #1, Roanoke, VA
- Rocky Mount Fire and Rescue Station - Rocky Mount, VA
- Lexington Fire Station - Lexington, VA
- Craig County Fire Department, New Fire Station, Craig County, VA
- Consolidated Training, New Fire and Rescue Training Facility, Salem, VA
- Carilion, Life Guard Hanger - Moneta, VA

Benjamin C. Linkous, P.E., LEED AP

MEP Principal-in-Charge | Electrical Engineer

Benjie has worked on numerous project types in his tenure at the firm, many of those being Public Safety facilities. Many of those projects include renovation, historic preservation and adaptive reuse type work. However, he also has experience with healthcare facilities, commercial buildings, animal care facilities, retirement facilities and local government facilities, His role has been multi-faceted, from principal-in-charge to project manager, designer and construction administration. Because of this, he is well qualified to service any project and in any role needed.

Public Safety/Municipal

- Orlean Fire Station #21 - New Construction, Fauquier Co. VA
- Warrenton EMS/Fire Department - Tufts Building Standby Generator, Fauquier Co. VA
- Glade Hill Fire Station - New Construction, Franklin Co., VA
- Leesburg Fire Station #20 - Additions and Renovations; LEED Silver, Loudon Co. VA
- Kirkpatrick Fire and Rescue Station - New Construction; LEED Silver, Loudon Co. VA
- Round Hill Fire Station - New Construction; Targeting LEED Silver, Loudon Co. VA
- Manassas Fire Station #21 - New Construction, Manassas, VA
- Edsall Road Fire Station - New Construction; Pursuing LEED Silver, Fairfax, VA
- Scotts Run Fire Station - New Construction, Fairfax, VA
- Fairview Fire Station#32 - New Construction; Net Zero, Fairfax, VA
- Tyson's Fire Station #29 - New Construction, Fairfax, VA
- Kingstowne Consolidated Police and Fire Facility - New Construction, Fairfax, VA
- Williamson Road Fire Station; New Construction; LEED Gold, Roanoke, VA

REGISTRATION

VA Professional Engineer, 0402040708

EDUCATION

Virginia Tech,Bachelor of Science, Electrical Engineering, 2000

Boyd G. Headley, P.E., LEED AP

Project Manager | Mechanical Engineer

Boyd is a specialist in the areas of HVAC Design Engineering, Energy Management, Controls, Plumbing, Mechanical Project Closeout, and Commissioning (CX). He is the Senior Mechanical Engineer for the firm and has extensive experience with numerous project types and system types, including historic renovations.

Public Safety/Municipal

- Glade Hill Fire Station - New Construction, Franklin Co., VA
- Leesburg Fire Station #20 - Additions and Renovations; LEED Silver, Loudon Co. VA
- Round Hill Fire Station - New Construction; Targeting LEED Silver, Loudon Co. VA
- Edsall Road Fire Station - New Construction; Pursuing LEED Silver, Fairfax, VA
- Scotts Run Fire Station - New Construction, Fairfax, VA
- Fairview Fire Station#32 - New Construction; Net Zero, Fairfax, VA
- Tyson's Fire Station #29 - New Construction, Fairfax, VA
- Kingstowne Consolidated Police and Fire Facility - New Construction, Fairfax, VA
- Manassas Fire Station #21 - New Construction, Manassas, VA
- Henrico County Fire Station #19 - Commissioning; LEED Gold, Henrico, VA
- Williamson Road Fire Station; New Construction; LEED Gold, Roanoke, VA

REGISTRATION

VA Professional Engineer, 0402021922

Randy O. Spencer, P.E., RCDD

Electrical Engineer

Randy has experience with new construction, additions, and renovations for Public Safety facilities of many sizes. Other experience includes indoor/outdoor recreational facilities, public libraries, airport renovations, data centers, black box theaters, fire stations, and police stations (state of the art technology for support systems, investigative services, and forensics). Randy specializes in data communications, lighting design and maximizing energy efficiency.

Public Safety/Municipal

- Orlean Fire Station #21 - New Construction, Fauquier Co. VA
- Leesburg Fire Station #20 - Additions and Renovations; LEED Silver, Loudon Co. VA
- Kirkpatrick Fire and Rescue Station - New Construction; LEED Silver, Loudon Co. VA
- Round Hill Fire Station - New Construction; Targeting LEED Silver, Loudon Co. VA
- Manassas Fire Station #21 - New Construction, Manassas, VA
- Edsall Road Fire Station - New Construction; Pursuing LEED Silver, Fairfax, VA
- Scotts Run Fire Station - New Construction, Fairfax, VA
- Williamson Road Fire Station; New Construction; LEED Gold, Roanoke, VA

REGISTRATION

VA Professional Engineer, 0402029321

EDUCATION

Old Dominion University, Bachelor of Science in Electrical Engineering & Computer Science, 1988

Randy W. Daniels, ASPE, ICC, NFPA

Vice President of Operations | Plumbing and Fire Protection

With more than 36 years experience, Randy has worked on multiple public safety facilities. His role has varied from project manager, cost control liaison, and construction administration. Randy has experience with implementation and coordination of all MEP trades; however, he specialized in all aspects of plumbing and fire protection. Because of this, Randy is well qualified to service any project type from design through construction.

Public Safety/Municipal

- Glade Hill Fire Station - New Construction, Franklin Co., VA
- Orlean Fire Station #21 - New Construction, Fauquier Co. VA
- Leesburg Fire Station #20 - Additions and Renovations; LEED Silver, Loudon Co. VA
- Kirkpatrick Fire and Rescue Station - New Construction; LEED Silver, Loudon Co. VA
- Round Hill Fire Station - New Construction; Targeting LEED Silver, Loudon Co. VA
- Edsall Road Fire Station - New Construction; Pursuing LEED Silver, Fairfax, VA
- Scotts Run Fire Station - New Construction, Fairfax, VA
- Fairview Fire Station#32 - New Construction; Net Zero, Fairfax, VA
- Kingstowne Consolidated Police and Fire Facility - New Construction, Fairfax, VA
- Manassas Fire Station #21 - New Construction, Manassas, VA
- Williamson Road Fire Station; New Construction; LEED Gold, Roanoke, VA

EDUCATION

Virginia Tech, Bachelor of Science in Building Construction, 1991

Fire Station Design Project List

Scotts Run Fire Station #44

Orlean Volunteer Fire Station #11

Leesburg Fire Station #20

Kirkpatrick Fire and Rescue Station #27

Round Hill Fire Station #4

At **Ascent Engineering Group, Inc.**, extensive thought is put into the design of every system to assure good engineering solutions and to prevent conflicts between system components and building features, to the best of our ability. Owner requirements are translated and resolved from design development to completion, focusing on continuous improvement in all processes and advocating decisions based on fact. We are familiar with Federal, State, and Local codes, laws, and regulations governing the work.

Abingdon Fire Station - Abingdon, VA

Virginia Department of General Services Fire Station #10 - Condition Assessment Study

Edsall Road Fire Station #26 - New Construction; Pursing LEED Silver Certification, Temporary Facility, Fairfax County, VA

Fairview Fire Station #32 - New Construction, Fairfax County, VA

Kingstowne Consolidated Facility (Combined Police Station/Fire Department) - New Construction; Pursing LEED Silver Certification, Fairfax County, VA

Scotts Run Fire Station #44 - New Construction, Fairfax County, VA

Woodlawn Fire Station - Value Engineering Study, Fairfax County, VA

Tysons Fire Station #29 And Bus Transit Facility - New Construction, Value Engineering Services, Fairfax County, VA

Orlean Fire Station #11 - New Construction Fauquier County, VA

Remington Volunteer Fire And Rescue Department - Building Condition Assessment, Fauquier County, VA

Warrenton Ems/Fire Department - Tufts Building Standby Generator, Fauquier County, VA

Glade Hill Fire Station - New Construction, Franklin County, VA

Henrico Fire Station #15 - Roof Replacement, Henrico County, VA

Henrico Fire Station #19 - F&E Commissioning of MEP Systems, Henrico County, VA

Kirkpatrick Fire And Rescue Station - New Construction; LEED Silver, Loudoun County, VA

Leesburg Fire Station #20 - Additions And Renovations; LEED Silver, Loudoun County, VA

Round Hill Fire Station - New Construction, Loudoun County, VA

Manassas Fire Station #521 - New Construction, Mannassas, VA

Williamson Road Fire Station - New Construction, LEED Gold, Roanoke City, VA

Spotsylvania County Fire Station #6 - Expansion / Renovation and Bunkroom Addition, Spotsylvania County, VA

Subcontractor Selection Process

G&H is familiar with the local community of subcontractors that may work on this project. Part of our subcontractor process is to select subs that are financially stable and reasonable, deliver high quality work, have a great safety record, and can work within the scope of the project.

The selection of quality workers is more difficult in today's times due to the talent that has exited the workforce. This is another reason G&H looks to self-perform as many tasks as possible, as to offer more control and mitigate risk. G&H competes frequently in the public bidding process to attract new subcontractor opportunities and to expand our database of available relationships. G&H is also developing future resources via the Registered Apprenticeship Program with Roanoke City, Roanoke County, and City of Salem Schools for future sustainability.

G&H is very cognizant of paying trade partners timely, and carries and excellent reputation for such, to create successful working relationships.

The PPEA process affords our input to "methods and means" to determine best practices, materials, vendors, and local trades to make accessibility, constructability, affordability, and workforce availability all prevalent to ensure a successful project in a demanding environment.

3.1.3. Completed Projects List in the Last 3 Years

Roanoke Fire-EMS #7 – Grandin $6,021,000
Terry, City of Roanoke, 540-853-2735

Commonwealth Center for Advanced Technology – Henry County $6,159,000
Mark Heath, Martinsville Henry County Econ. Development, 276-403-5940

Melrose Library – Roanoke City $3,582,000
Terry Kemp, City of Roanoke, 540-853-2735

Blue Ridge Health & Wellness – Salem, VA $2,250,000
Colleen McClean, Practice Manager, 540-205-3351

Bridgewater College Library – Bridgewater, VA. $9,048,000
Kristy Rhea, VP of IT & CIO Bridgewater College, 540-828-5741

Daleville Town Center Apartments – Daleville, VA $5,389,000, Andy Kelderhouse, President Fralin & Waldron, 540-266-3711

Glebe Memory Care Facility – Daleville, VA $4,450,000
Ellen D'Ardenne, Executive Director, 540-591-2100

Northstar Ministry Center – Blacksburg, VA $6,038,000
Jeff Noble, Lead Pastor, 540-443-0099

Cardinal Glass Expansion – Vinton $4,585,000
Contact relocated to Florida

Hollins University Student Housing – Roanoke $3,355,000
Dr. Kerri Edmonds, Exec. VP & COO, 540-362-6630

Colonial Elementary School – Blue Ridge $21,613,000
Andy Dewease, Director of Operations BCPS, 540-473-8363

Salem High School – Salem $27,247,000
Dr. Forrest Jones, Director of Operation Salem City Schools, 540-375-3030

Our Lady of the Valley – Roanoke $5,960,000
John Albert, Dir. Of Development CSM, 540-563-4565

Bank of Botetourt – Vinton $1,062,000
Andy Shotwell, Senior VP, 540-591-5000

RDG Filings – Salem $3,659,000
Jonathon Elliott, CEO, 415-317-9171

Tinker Creek Transfer Station – Roanoke $3,785,000
Jeremy Garrett, Dir. Operations Technical Services, 540-857-5050

CONTACT INFORMATION
Office: (540) 387-5059
Email: thenderson@ghcontracting.com

CERTIFICATIONS
LEED AP

EDUCATION
Virginia Tech, Bachelor of Arts in Communications, 2002

WORK EXPERIENCE
2002 - Present
G&H Contracting
Vice President & Project Manager

PROFESSIONAL AFFILIATIONS
Association General Contractors of Virginia State Board

Salem YMCA-Advisory Board Member

Roanoke County Education Foundation-Trustee 2012-2016

2009 Leadership Roanoke Valley Graduate

Salem Rotarian

Snyder Nursing Home Trustee

Chairman Roanoke County Planning Commission, 2019

Troy Henderson, LEED AP

PPEA Project Manager, Pre-Construction Manager, & Construction Project Manager

Troy has been with G&H Contracting for 20 years and brings significant expertise to any project. Mr. Henderson's experience includes all facets of construction, pre-construction, value engineering, scheduling buyout, and budget control. He has managed various negotiated private endeavors as well as publicly bid projects. His energy, excitement, and dedication to his family's business and his community have created resounding relationships with all types of clients including private, public, and healthcare stakeholders. Troy is a graduate of Virginia Tech and is certified as a LEED AP.

Public Safety/Municipal
- North Roanoke County Fire Station #1, Roanoke VA
- Blacksburg Fire Station, Blacksburg, VA
- Clifton Forge Rescue Station, Clifton Forge, VA
- Craig County Fire Department, Craig County, VA
- Elliston Volunteer Fire Department, Elliston, VA
- Lexington Fire Department, Lexington, VA
- Lexington Police Department, Lexington, VA
- Melrose Fire Station #5, Roanoke City, VA
- Williamson Road Fire & EMS Station #3, Roanoke City, VA
- Roanoke City Fire & EMS Station #7 (Grandin), Roanoke, VA
- Vinton Fire & Rescue, Vinton, VA
- STARS – Statewide Area Radio System

Roanoke County Municipal Projects
- Burlington Elementary School
- Masons Cove Elementary School
- Department of Social Services Phase II
- Glenvar Library

CONTACT INFORMATION
Office: (540) 342-4002
Email: eshumate@hughesae.com

EDUCATION
University of Virginia, Bachelor of Architecture, 1981

WORK EXPERIENCE
2005 - Present
Hughes Associates Architects & Engineers
Senior Designer

1982 - 2004
Building Specialists, Inc.
Vice President

PROFESSIONAL AFFILIATIONS
Associate American Institute of Architects
Blue Ridge Chapter Board
Past Directors Member

Roanoke Regional Home Builders Association
Member | Director

Construction Specifications Institute
Blue Ridge Chapter
Past Director and President

Virginia State Board for Contractors
Past Member and Chairman

RRHBA Remodelors' Council
Past Chairman

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS

Earle H. Shumate, Associate AIA, LEED AP

Design-Construction Coordinator (Design Manager)

Creative and innovative design solutions are a hallmark of Earle's work. With over 22 years experience at a design-build firm before joining Hughes Associates A&E in 2005, he is able to integrate his extensive knowledge of construction with the aesthetic sense of a mature designer. He works closely with clients to help them focus on both their programmatic needs and aesthetic desires. Incorporating the philosophy that good design does not have to be expensive, his goal in every project is to create durable and sustainable spaces that inspire their users, improve operational efficiencies, and meet budget and scheduling goals during construction.

Public Safety/Municipal
- North Roanoke County Fire and Rescue Station #1, Roanoke, VA
- City of Waynesboro, West End Fire Station (Currently in Design) Waynesboro, VA
- Vinton Volunteer Rescue Squad – New Station, Vinton, VA
- Blacksburg Volunteer Rescue Squad – Station Master Plan, Blacksburg, VA
- Town of Stuart – New Fire/Rescue Station, Stuart, VA
- City of Roanoke – Roanoke City Mills Re-use Feasibility Study, Roanoke, VA
- VDOT Traffic Operations Center & State Police Offices Master Plan, Richmond, VA
- Pulaski Public Safety Building - Program and Site Evaluations, Pulaski, VA

K-12 Education
- William Byrd High School - Renovations and Additions, Roanoke, VA
- Fallon Park Elementary School - New Construction, Roanoke, VA
- Round Hill Elementary School – 4 Phase Expansion and Renovation, Roanoke, VA
- Roanoke City Public Schools, Security Vestibules - Roanoke, VA
  - Morningside Elementary School, including Modifications to Admin & Library
  - Forest Park Elementary School
  - Highland Park Elementary School
  - Preston Park Elementary School

CONTACT INFORMATION
Office: (540) 342-4002
Email: jgarrett@hughesae.com

REGISTRATION
2006, Virginia Licensed Architect #12569

EDUCATION
Virginia Tech, Bachelor of Architecture, 2006

WORK EXPERIENCE
2019 - Present
Hughes Associates Architects & Engineers
Project Architect

2017 - 2019
SFCS
Project Architect

2015 - 2016
Virginia A&E
Project Architect

2014 - 2015
Flying Mouse Brewery
Architectural Consultant

2010 - 2015
Spectrum Design
Project Architect

2006 - 2009
RRMM
Project Architect

John R. Garrett, AIA, NCARB, LEED AP

Designer of Record

John has over 22 years of experience in design and construction document production. He has depth of understanding in how to translate the project vision into the drawings and specifications that graphically and technically represent the project for construction. He has the experience to think creatively to solve a problem, schedule a path for the project, and develop project budgets and manpower predictions. John is proficient in the technical design aspect as well as having the interpersonal skills to communicate clearly with his clients.

Public Safety/Municipal
- Roanoke City Fire Station #3 - Roanoke, VA*
- Town of Blacksburg Transit Facility Additions and Renovations - Blacksburg, VA
- Virginia Employment Commission Roof Replacement - Covington, VA
- Lynchburg Police Station, Misc. Rooms - Lynchburg, VA*

Virginia Department of Transportation
- Term Contract projects from 2015, 2016, 2018-Current – Salem District
- Buchanan AHQ New Office Building - Buchanan, VA
- Chemical Storage Building - Roof Replacement - Millboro, VA
- Equipment Storage/Office - Roof Replacement - Moscow, VA
- Re-roof Chemical Storage Building - Fancy Hill AHQ, Salem, VA
- Salem District Shop Heating System, Salem, VA
- ADA Improvements - Lynchburg, VA*
- Chemical Storage Building Study & New Construction - Culpeper, VA*
- Combo Building - Various Locations in Lynchburg District - Charlotte Court House, Phenix, and Halifax*
- Residency Building Roof Replacement & Interior Renovation – Charlottesville, VA*
- Residency Office Building - Farmville, VA*
- Shop Building, Training Room - Lynchburg, VA*
- Truck Shed - Keene, VA*

K-12 Education
- William Byrd High School - Roanoke, Virginia
- Morningside Elementary School Addition - Roanoke, VA
- Masons Cove Elementary School - Roanoke County, VA*
- Green Valley Elementary School - Roanoke County, VA*
- Burlington Elementary School - Roanoke County, VA*
- Price's Fork Elementary School - Montgomery County, VA*
- Glenvar High School - Roanoke County, VA*

** Indicates projects delivered under a previous employer*

Stewart · Cooper · Newell Architects

Kenneth C. Newell, AIA, LEED AP BD+C

Fire Station/Public Safety Consultant

A Principal and Partner with Stewart Cooper Newell Architects since 1994, Ken has been directly involved in over 275 of the firm's 350+ Fire/EMS and Public Safety projects. Ken is a graduate of North Carolina State University and the University of North Carolina at Charlotte. A highly rated presenter who regularly speaks at various national and state fire conferences. He also contributes frequently to national and regional Fire/EMS publications. Over the last two decades, he has earned a respected reputation around the United States in efficient, effective and budget-conscious design and programming of Fire and Rescue Stations as well as Police Departments.

Public Safety/Municipal

- Chesterfield, VA Fire Station No. 8
- Spartanburg, SC Fire Department Headquarters and Admin
- Greenville, NC Fire Station No. 7 and Dispatch
- Hemby Bridge, NC Fire Department
- Waxhaw, NC VFD Sub-Station
- Mills River, NC Fire and Rescue
- Danville, VA Fire Department
- Portsmouth, VA Cradock Fire Station 11
- Hampton, VA Fire Station No. 11
- Henrico County, VA Fire Stations No. 10 & 13
- Kannapolis, NC Fire Station No. 2 & 3
- Harrisburg, NC Fire Station No. 2 & 3

REGISTRATION

VA Licensed Architect, 2003 - 0401012718

EDUCATION

North Carolina State University,
Bachelor of Architecture, 1988

University of North Carolina at Charlotte,
Bachelor of Architecture, 1986

Stewart · Cooper · Newell Architects

Jim R. Stumbo, AIA, LEED AP BD+C

Fire Station/Public Safety Consultant

Jim joined Stewart Cooper Newell Architects more than twenty years ago, and became a partner and principal in 2002. His design experience includes a variety of Public Safety and municipal buildings and complexes, as well as various community projects. He has developed a national reputation for his expertise in the design of Fire Stations and for his work on Public Safety Training Facilities. Jim Stumbo has written professional articles on design for regional Fire publications, and teaches design courses at regional and national Fire Station design conferences.

Public Safety/Municipal

- Orange County, NC EMS & Medical Examination Quarters
- North Augusta, SC Public Safety Headquarters
- Waterstone, SC Fire & EMS
- Radford, VA Fire & Rescue
- Williamsburg, VA Police Department
- City of Radford, VA Fire Station
- Portsmouth, VA Cradock Fire Station #11
- Chesterfield County, VA Fire Station 5
- Hampton, VA Fire Training Facility
- Fairfax County, VA Merrifield Fire Station
- City of Richmond, VA Fire Stations 8, 19, 20, 21

EDUCATION

North Carolina State University,
Bachelor of Architecture, 1986

3.1.4. Points of Contact for Further Information

G&H Contracting, Inc.
Troy Henderson, Project Manager
1383 Southside Drive
Salem, VA 24153
(540) 387-5059
THenderson@GHContracting.com

Hughes Associates Architects & Engineers
Earle Shumate, Senior Designer
656 Elm Ave SW
Roanoke, VA 24016
(540) 342-4002
EShumate@HughesAE.com

3.1.5. Financial Statement

Please see **Volume II, Redacted Proprietary Information**, for our Financial Statement.

THE CINCINNATI INSURANCE COMPANIES

The Cincinnati Insurance Company ▪ The Cincinnati Indemnity Company
The Cincinnati Casualty Company ▪ The Cincinnati Specialty Underwriters Insurance Company

March 2, 2022

RE: G&H Contracting, Inc. - Surety Prequalification

To Whom It May Concern:

We are privileged to be the Surety for G & H Contracting, Inc. since 1999 and consider this company to be one of our most valued clients. The Cincinnati Insurance Company has an A.M. Best Rating of "A+" (Superior), and is listed as an approved surety company in the Circular 570, and is licensed to do business in all 50 states.

The management team of G & H Contracting, Inc. demonstrates excellence and added value to the projects they undertake. They have earned the respect of The Cincinnati Insurance Company, owners, architects and engineers through the years. Without question, we can recommend this company to you and we think that you will quickly see the high degree of professionalism and expertise they offer.

G & H Contracting, Inc. is financially sound and has the ability and financial capacity to bond single projects in the $40,000,000 single job range with an aggregate of $80,000,000. These are parameters not absolutes and The Cincinnati Insurance Company is willing to consider an increase in this program.

Should G & H Contracting, Inc. be awarded a contract for this project, the execution of any performance and/or payment bonds would be subject to a review of the final contract terms, conditions, and financing by our client and The Cincinnati Insurance Company and we assume no liability to third parties or to you if for any reason we do not execute such bonds.

Sincerely,

Chris Rittenhouse

Chris Rittenhouse
Bond Field Director
The Cincinnati Insurance Company

Mailing Address: P.O. Box 145496 · Cincinnati, Ohio 45250-5496 ▪ Headquarters: 6200 S. Gilmore Road · Fairfield, Ohio 45014-5141
cinfin.com ▪ 513-870-2000

3.1.6. Submitting Officers

G&H Contracting - Troy Henderson, Vice President

Hughes Associates A&E - Michael Woolwine, President | Mark Ayles, Vice President

Stewart Cooper Newel Architects - Ken Newell, President | Jim Stumbo, Vice President

Day & Kinder Consulting Engineers - Jay Kinder, Partner

Ascent Engineering Group - Benji Linkous, President | Randy Daniels, VP of Operations

3.1.7. Conflict of Interest Statements

None of our team members have a conflicts of interests with this project.

3.1.8. Plan to Obtain Trade/Craft Workers

G&H ensures bid participation by inviting many subcontractors from our bidder database. Based on our current projects and our knowledge of the current construction climate, we do not anticipate any difficulty finding a sufficient number of workers in all trades/crafts for this project.

3.1.9. Availability of Training/Apprenticeship Programs

G&H is a founder of the Registered Apprenticeship Program in the Roanoke Valley and work alongside Jamie Soltis, Assistant Superintendent with Salem City Schools at (540) 312-8991.

3.1.10. Commitment to DMBE Firms

G&H Contracting has formed strong, long-lasting relationships with companies of all sizes and backgrounds across the Construction and Architecture & Engineering industries. Working with small and diverse businesses promotes growth in the community, leads to prompt and personal communication, and builds stronger bonds and familiarity with the project team.

As you will notice, G&H Contracting, Hughes Associates A&E, Stewart Cooper Newell Architects, Day & Kinder Consulting Engineers, and Ascent Engineering Group **are all small businesses** with which we have strong and long-lasting relationships. Our project team has developed seamless ways of working together and has learned to anticipate and adapt to the needs of other project team members. Our team has the optimal amount of members to deliver high-quality services without the excessive amount of involvement that can occur with larger corporate entities.

3.1.11. Statements of Non-Debarment/Suspension

Please see our team's statements of great legal standing with **Claims, Litigation, and Debarment/Suspension** on pages 10-14.

Qualification Statement

Please see **Volume II, Redacted Proprietary Information**, for our Qualification Statement.

3.1.12. Worker Safety Program

G&H requires workers to participate in safety education programs such as OSHA 10-hour, OSHA 30-hour, Focus Four via Builders Mutual, and in-house Tool Talks compiled by our Safety Committee which is attended by field staff, supervision, project management, and executive staff.

G&H has also been a long-time participant in OSHA's Complimentary Compliance program.

3.2

PROJECT CHARACTERISTICS

3.2. Project Characteristics

3.2.1. Project Description

The G&H PPEA team will provide turn-key design and construction services for the new Bonsack Fire Station located on Mexico Way near Parkway Wesleyan Church, in partnership with Roanoke County. This will be a 12,000 SF station with three apparatus bays, admin/ operations, kitchen, dining, fitness, housing, locker rooms, showers, and laundry.

The scope of work for the project includes:

- Financing (Optional)
- Site Design
- Facility Design
- Permitting
- Construction
- Business Planning
- Business Operation

Roanoke County will fund the construction directly. G&H Contracting will deliver the facility within 17 months including design and construction This will save about 3 months from a traditional project schedule, not including municipality durations for procurements.

3.2.2. Work Performed by Roanoke County

Before entering into an agreement, we request that Roanoke County:

- Select Points of Contact for all aspects of contracts, financing, management, design, and construction.
- Select a committee to work with our team to program, provide feedback on conceptual plans, budgeting, community needs, and regulatory agency requirements.
- Provide reasonable access to the proposed site

The following work will be required of Roanoke County:

- Review PPEA proposals
- Serve as an Admin to the PPEA process
- Negotiate the Interim or Comprehensive Agreement
- Perform standard permitting and review
- Fund the construction of the fire station

3.2.3. Permits, Approvals, & Schedule

Permits and approvals include, but are not limited to the following:

- Roanoke City Plan Review
- Zoning Permit
- Building, Structural, MEP, and Fire Protection Permits
- Building plans will be submitted to Roanoke City for building permit
- Land disturbance permit will be issued following the site plan approval
- Stormwater management requirements, including any environmental permits will be issued through the development plans
- Virginia Department of Health

Schedule

In the Schematic Design, Preliminary Design, and Final Design Stages, Roanoke County will review and Roanoke City will issue the necessary permits (each review should take three weeks). Following these stages, our team will meet with Roanoke County for a design kick-off

meeting for the Schematic Design Phase to discuss the details of the project. Following this format, by the start of each proceeding phase, our teams will be aligned and on the same level of understanding.

3.2.4. Adverse Impacts of Project

G&H does not anticipate significant adverse social, economic or environmental impacts of this project. Any complications will be mitigated by compliance with any applicable federal, state, and county regulations and/or guidelines.

Looking ahead, our team is prepared to address any potential impacts which may include utility connection issues, inefficiencies with traffic circulation, or any disruptions with the surrounding business. Due to the site being in a relatively clear area and having worked in much more restricted and challenging areas, our team can offer quick and intelligent solutions to any issues.

ECS Mid-Atlantic, LLC performed a Phase 1 Environmental Site Assessment, and subsurface exploration, laboratory testing, and geotechnical engineering analysis.

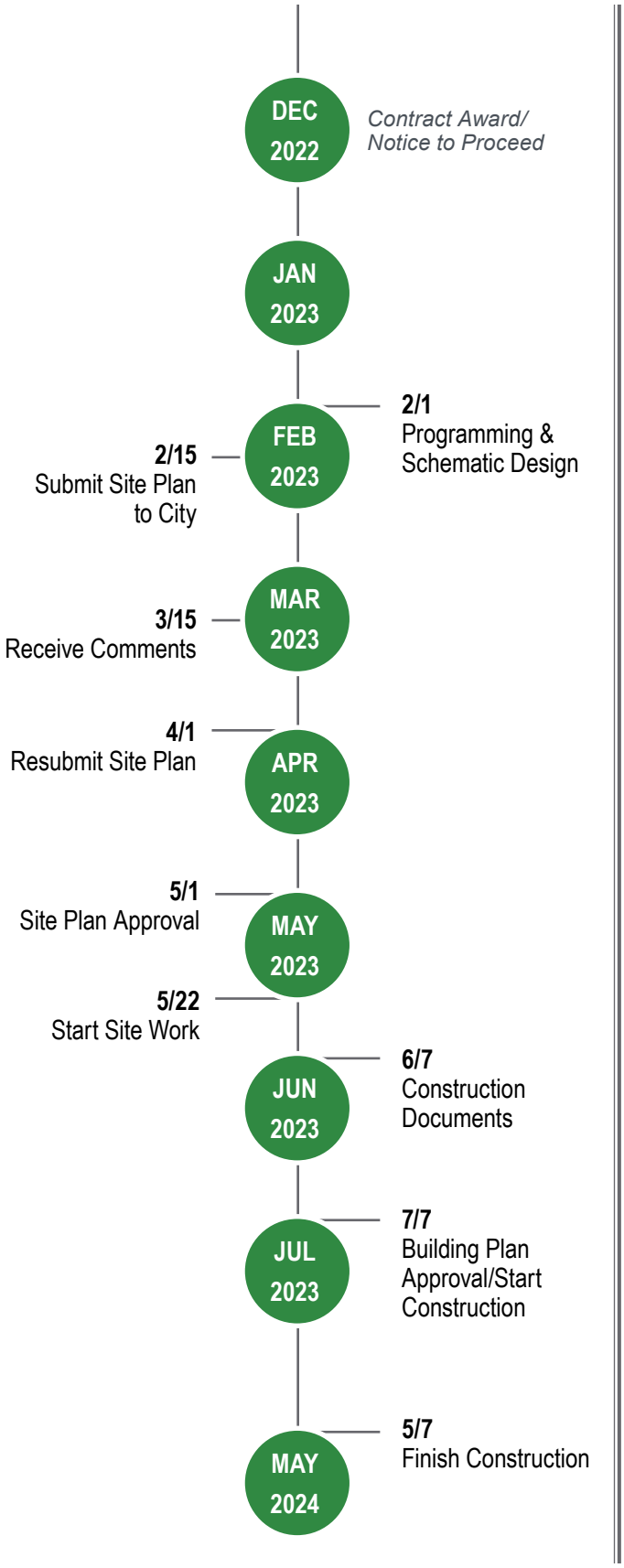
3.2.5. Positive Impacts of Project

The new Bonsack Fire Station will be a positive force for change in the community. The most prominent positive impacts we anticipate are:

- A fire station that will meet your life safety needs for the Bonsack area
- Increased satisfaction and job efficiency of fire and rescue teams
- An updated facility to use for life safety related educational opportunities
- A long-lasting, energy efficient building with reduced life cycle costs
- An environmentally conscious facility using the latest trends in design, equipment, materials, and operational efficiency
- Tax dollars and time saved using the PPEA delivery method
- High Community Support

3.2.6. Project Schedule

Please see our **Project Schedule** to the right.



3.2.7. Contingency Plans

G&H will help develop any contingency plans if needed, but we have never approached a project with a back up plan for failure. Our projects must be delivered and are accustomed to doing so.

3.2.8. Risk & Liability Allocation

G&H Contracting and Hughes Associates A&E are directly responsible for any delays in design and/or construction, as we carry all design, development, and constructions risks as will be part of the comprehensive agreement and guaranteed maximum price. Prior to the start of the project, G&H may have a performance and completion bond in place. Our team assumes responsibility and guarantees the timely completion of all of our responsibilities.

Ownership

G&H Contracting understands that Roanoke County owns the land for the new fire station. At a later time, full legal liability for the property will reside with Roanoke County and they will be responsible for its security and insurance. During the design-build phase, G&H will assume the aforementioned legal liabilities as typically held on site. Any inclusions will be listed into the Comprehensive Agreement.

Law Enforcement

Upon occupancy, Roanoke County will have full responsibility for enforcing all laws pertaining to the property.

Restrictions

Our team does not have any restrictions.

Operation

Upon occupancy, standard warranties will be transferred to Roanoke County, who will also assume responsibility for all expenses and services associated with the building and site.

3.2.9. Assumptions & Restrictions

Roanoke County will own the fire station and will have the same rights and responsibilities for the new fire station as it does for any other County facility.

3.2.10. Phased or Partial Openings

There are no anticipated partial or phased openings for this project.

3.2.11. Applicable Standards & Quality Control

Preliminary Concepts and Exhibits were developed for the project. Per requirements, we will substantially conform to these exhibits and the design team will enhance the project with required standards and review quality control.

3.2.12. Assumptions for Success

Our assumptions relied on for a successful project are:

- Adequate funding will be available in a timely manner
- We assume there will not be another global pandemic outbreak
- Inflation will be present, but not as volatile as earlier in the year
- Government approvals will occur in a reasonable amount of time
- Due to the site being clear with access to utilities, we do not assume any unmitigatable conditions are present

3.2.13. Contingencies for Success

Depending on the financing structure, either G&H or Roanoke County must secure project funds.

- Roanoke County may include financial contingencies for design/program modifications that may impact construction
- Roanoke County may include a construction financial contingency

3.3

PROJECT FINANCING

3.3. Project Financing

3.3.1. Preliminary Estimate & Methodology

Please see **Volume II, Redacted Proprietary Information**, for our Preliminary Estimate and Methodology.

3.3.2. Plan for Development, Financing, and Operation

Please see **Volume II, Redacted Proprietary Information**, for our Plan.

3.3.3. Plan: *Assumptions of Major Elements*

G&H Contracting will not furnish or equip the facility outside or normal construction provided items.

3.3.4. Plan: *Risk Factors & Methods of Resolve*

The construction risk on this project resides with G&H Contacting through the Comprehensive Agreement. The construction risk will be mitigated by several factors:

- The soils are not expected to pose an unmitigatable risk to the budget or schedule, based on preliminary research
- The construction schedule is planned to avoid exposure to lengthy weather delays by securing the site during more preferable climate
- G&H has substantial experience in the development and construction of fire stations
- G&H has chosen a team with extensive fire station experience
- G&H is in great standing with our bonding company and can supply a payment and performance bond

Roanoke County is responsible for equipping the facility and startup operations.

3.3.5. Federal/State/Local Resources

Financial support required for the project will come from Roanoke County. State or federal government resources are welcome if the County has access to those resources for the development of public safety facilities.

Please see **Volume II, Redacted Proprietary Information**, for our detailed Project Estimate and Draw Schedule.

3.4

PROJECT BENEFIT & COMPATIBILITY

3.4. Project Benefit & Compatibility

3.4.1. Community Benefits & Economic Impact

The Bonsack community will directly benefit from the new fire station with increased response times and, possibly, a decrease in severity of negative events. The PPEA process typically shortens project delivery time over traditional public capital project procurements of similar size and scope. This overall efficiency as a method results in taxpayer savings to be allocated toward other efforts by Roanoke County.

Our team intends to maximize participation among local contractors and other service providers, including SWaM businesses. The new facility may also attract outside fire and rescue talent looking to relocate or start a new career at a new and improved fire station. Our project team, as well as all involved in the designing and building of this project will directly benefit.

3.4.2. Public & Government Support or Opposition

Our team believes the new fire station will garner strong support from the community and local government alike. Citizens will feel more confident in the County to keep them protected and the County will have a new station to use within an under-served area.

More financially conservative individuals who don't see the need for a new fire station may oppose this project.

3.4.3. Strategy & Plan to Disperse Information

Designing and building a new fire station is exciting for the community and local government. Our team may present this project at local government sessions, at public events, or to the community with assistance from Roanoke County. Our team is available for Roanoke County meetings, Board of Supervisor meetings, or any other special events to better discuss the PPEA process or anything related to programming, schedule, cost, financials, and/or design. For other milestones of the project, such as groundbreakings, topping-off ceremony, or ribbon cuttings, our team will work with Roanoke County to ensure these are successful and positive experiences.

3.4.4. Compatibility with Economic Development Efforts

This project aligns very well with local, regional, and state economic development efforts and, yet again, highlights Roanoke County's ongoing efforts to improve its citizen's way of life.

3.4.5. Compatibility with Roanoke County

The Bonsack Fire Station is compatible with the County's comprehensive plan and will be designed, constructed, and operated consistent with all environmental, land use, building code, and design standard ordinances and regulations. There will be no major impacts to the County's infrastructure and transportation plans. The County is the best resource regarding impacts on capital improvement and capital budget plans.

3.4.6. Participation with SWaM Businesses

G&H Contracting has formed strong, long-lasting relationships with companies of all sizes and backgrounds across the Architecture & Engineering and Construction industries. Working with small and diverse businesses promotes growth in the community, leads to prompt and personal communication, and builds stronger bonds and familiarity with the project team.

As you will notice, G&H Contracting, Hughes Associates A&E, Stewart Cooper Newell Architects, Day & Kinder Consulting Engineers, and Ascent Engineering Group **are all small businesses** with which we have strong and long-lasting relationships. Our project team has developed seamless ways of working together and learned to anticipate and adapt to the needs of other project team members. Our team has the optimal amount of members to deliver high-quality services without the excessive amount of involvement that can occur with larger corporate entities.

3.5

ADDITIONAL INFORMATION

3.5. Additional Information

3.5.1. Project Understanding & Approach

Project Understanding

Our understanding of the project is not just our vast experience with Life Safety projects. Our understanding goes beyond brick and mortar. We understand the value and the task at hand building a County project on a City property. We understand the Inpud zoning category and what that entails from a land use perspective. We understand the community and the traffic through that corridor and how important a project this to the area businesses and residents.

Potential Problems During Design and Constructions

We understand potential traffic issues in this area as well as in-road utilities that will have to be adjusted with minimal impact to neighboring locations on Mexico Way and potential environmental impacts in this area. All can be mitigated along with additional problems that typically come along in this line of work. These are problems we're accustomed to. We are also quite familiar now with items we have not been accustomed to like escalating cost issues, "holding prices" and supply chain issues in the modern era and how to control.

Methods to Mitigate Problems

With up front planning, proper communication, and pre-construction processes these can be much more easily mitigated with this contract model as opposed to traditional Design/Bid/Build. We can start earlier, make adjustments and respond to ever-changing challenges.

Work Performed by G&H Contracting

G&H will, as typically done, self perform foundation concrete work and slabs on grade. We will handle all misc./finish carpentry and blocking, doors and hardware and specialties supply and installation as well as many other various items in between that is short in labor supply. We may if need be complete site work grading and utilities and steel erection if in short supply of available labor forces. Items such as masonry/mechanical/electrical will be outsourced.

3.5.2. Approach to Project Management

Approach to Change Orders

Project Management approach to Change Orders is based upon requests to modify the scope of work. So in order to minimize the design team and contractor must work well together and have extensive experience with the task at hand and provide a detailed established scope of work that is communicated to the owner and confirmed acceptance of such. From there change orders are only derived in two instances. Environmental pre-existing unknown conditions that can be accounted for in the contract in advance, or Owner requested modifications that can be protected and allocated for as a contingency in the project.

Tools for Planning, Scheduling, Estimating, and Construction Management

Our people are our greatest tools for planning, scheduling, estimating and management. We complement and outfit these people with tools to assist in all phases. We use integrated software internally that can be linked externally via vehicles like Procore (a collaborative software) that serves contractors, designers and owners.

Quality Control

Quality control is made up of internal and external forces. Municipal and Special inspection services, regular designer/contractor/Owner meetings and progress reviews and internally we have high degree of pride and responsibility to provide quality work combined with years of expertise and service to know what has to be done to exceed contractual obligations that is the minimum.

Safety Management

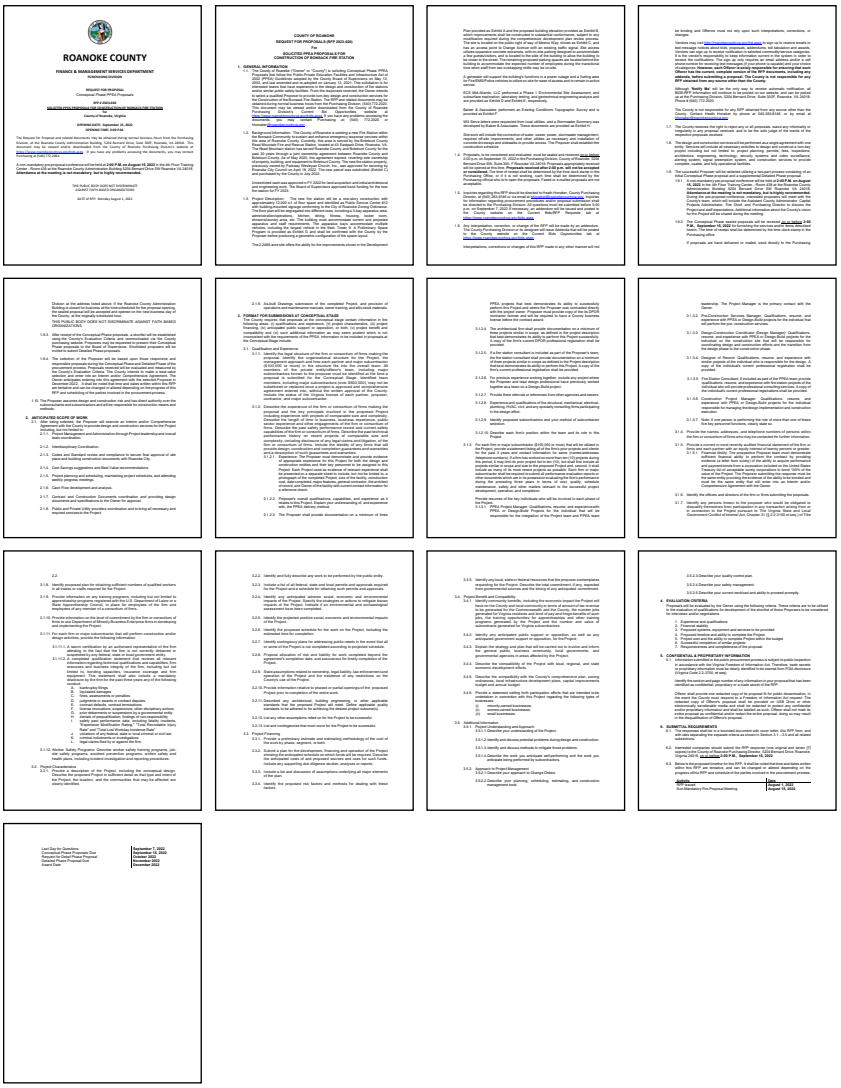
Please see **Safety** on Page 9.

Current Workload and Ability to Proceed Promptly

Our current capacity fits well to a December hire date with construction to follow after. While G&H is blessed with an extremely healthy backlog this project times itself to be a very good fit for preconstruction services to start end of the year along with very good timing considering construction will quickly follow. We can proceed with either portion as needed.

Please see **Volume II, Redacted Proprietary Information**, for our Projects in Progress.

RFP Form Issued August 1, 2022



ROANOKE COUNTY

FINANCE & MANAGEMENT SERVICES DEPARTMENT

REQUEST FOR PROPOSAL

Conceptual Phase PPEA Proposals

RFP # 2022-035

SOLICITED PPEA PROPOSALS FOR CONSTRUCTION OF BONSACK FIRE STATION

County of Roanoke, Virginia

OPENING DATE: September 15, 2022

OPENING TIME: 2:00 P.M.

COUNTY OF ROANOKE

REQUEST FOR PROPOSALS (RFP 2022-035)

For

SOLICITED PPEA PROPOSALS FOR

CONSTRUCTION OF BONSACK FIRE STATION

1. GENERAL INFORMATION

1.1. The County of Roanoke ("County" or "County") is soliciting Conceptual Phase PPEA Proposals that follow the Public-Private Education Facilities and Infrastructure Act of 2002 (Virginia Code Ann. §56-575.1 et seq.) ("PPEA"), as amended, effective July 1, 2022, and had amended and re-adopted on January 12, 2021. This solicitation is for interested teams that have experience in the design and construction of fire stations and have the ability to provide the County with a turnkey facility for a fixed price.

In order to qualified Proposer to provide turn-key design and construction services for the Bonsack Fire Station ("Project"). The Request for Proposal documents may be obtained during normal business hours from the Purchasing Division, (540) 772-2030, Fax (540) 772-2035, Purchasing Division, 5204 Bernard Drive, Suite 300F, Roanoke, VA 24018 Purchasing Division Current Bid Opportunities website at https://www.roanokecounty.net/bids/ or you have any problems accessing the documents, you may contact Purchasing at (540) 772-2030 or bidding@roanokecounty.net.

A non-mandatory pre-proposal conference will be held at **2:00 P.M. on August 15, 2022** in the 6th Floor Training Center, Room 606 of the Roanoke County Administration Building 5204 Bernard Drive 606 Roanoke VA 24018. **Attendance at the meeting is not mandatory, but is highly recommended.**

THIS PAGE BEGIN EVEN NOT UNDERNEATH AGAINST FAUTH BASED ORGANIZATIONS

DATE OF RFP: Monday August 1, 2022

Division at the address listed above. If the Roanoke County Administration Building is closed for business, at the time scheduled for the proposal opening, the sealed proposal will be accepted and opened on the next business day. (if the County is closed for business)

THIS PAGE BEGIN EVEN NOT UNDERNEATH AGAINST FAUTH BASED ORGANIZATIONS

1.9.3. After receipt of the Conceptual Phase proposals, a shortlist will be established using the County's Evaluation Criteria and communicated via the County Purchasing Website. Only those Proposers shortlisted will be invited to submit Phase proposals in the Request for Sealed Bids. Shortlisted proposers will be notified by email or phone.

1.9.4. The selection of the Proposer will be based upon those responsive and responsible proposals during the Conceptual Phase and Detailed Phase of the procurement process. Proposals received will be evaluated and measured by the County's Evaluation Criteria. The Proposer will be notified of selection and enter into an Interim and/or Comprehensive Agreement. The Comprehensive Agreement will be in place by the end of the calendar year December 2022. It shall be noted that time and dates written within this RFP are approximate and may be subject to change at the discretion of the County of this RFP and scheduling of the parties involved in the procurement process.

1.10. The Proposer assumes design and construction risk and has direct authority over the subcontractors and subcontractors and shall be responsible for construction means and methods.

2. ANTICIPATED SCOPE OF WORK

2.1. Upon Shortlisted, the Proposer will execute an Interim and/or Comprehensive Agreement with the County to provide design and construction services for the Project in accordance with the PPEA.

2.1.1. Project Management and Administration through Project leadership and overall team coordination.

2.1.2. Interdisciplinary Coordination.

2.1.3. Codes and Standard review and compliance to secure final approval of site plans and building construction documents with Roanoke Co.

2.1.4. Cost Savings suggestions and Best Value recommendations.

2.1.5. Project planning and scheduling, maintaining project schedules, and attending weekly progress meetings.

2.1.6. Cost Flow development and analysis.

2.1.7. Contract and Construction Documents coordination and providing design documents and specifications to the Owner for approval.

2.1.8. Public and Private Utility providers coordination and to bring all necessary and required services to the Project.

2.1.9. As-built Drawings submission of the completed Project, and provision of operations and maintenance manuals, warranty tracking, and all in-kind materials.

3. FORMAT FOR SUBMISSIONS AT CONCEPTUAL STAGE

The County requests that proposals at the conceptual stage contain information in the following format. Proposers may include other supplemental documentation, (iii) project financing, (iv) anticipated public support or opposition, or both, (v) project benefit and compatibility, (vi) project schedule, and (vii) any other information deemed critical to consideration of the proposal. Information to be included in proposals at the Conceptual Stage include:

3.1. Qualification and Experience

3.1.1. Identify the legal structure of the firm or consortium of firms making the proposal. Identify the principal members of the firm or firms, the management approach and the most senior and major subcontractors. Identify the principal members of the firm or firms, the management approach and the most senior and major subcontractors. Identify the principal members of the private entity/offeror's team, including major subcontractors (over $500,000), may not be changed from those listed in the proposal to submitted for the Conceptual Stage. Identified team members, including major subcontractors (over $500,000), may not be changed without the County's written approval. Any proposed changes in the management approach and/or key personnel, without first written approval of the County, include the status of the Virginia licensed of each partner, proposed, subcontractor, and/or consultant.

3.1.2. Describe the experience of the firm or consortium of firms making the proposal and the key principals involved in the proposed Project. Describe the length of time in business, business experience, public sector experience and other engagements of the firm or consortium of firms, the length of time the principal members have been in business, the capabilities of the firm or consortium of firms. Describe the past technical competence of the firm or consortium of firms in providing services consistently, including attainment of any legal claims and litigation, of the firm or consortium of firms, and describe the security of any firm that will have direct access to County facilities, including criminal background checks and a description of such guarantees and warranties.

3.1.3. Provide a list of all projects in progress and provide evidence of appropriate experience for this Project for both the design and construction entities and their key personnel to be assigned to this Project. Provide a description of the proposed Project team, including the presentation in a separate sheet to include, but not be limited to, a description of the proposed Project team, the proposed Project manager and, dates completed major features, general contractor, the architect and engineer, and the owner of the facility with current contact information for a reference check.

3.1.4. Proposer's overall qualifications, capabilities, and experience as it relates to this Project. Explain your understanding of, and experience with, the PPEA delivery method.

3.1.5. The Proposer shall provide documentation on a minimum of three PPEA projects that best demonstrates its ability to successfully perform this Project and where the Proposer was contracted directly with the project owner. Proposer must provide copy of the its DPOR professional registration shall be provided. Proposer must have a County business license before the contract award.

3.1.6. The architectural firm shall provide documentation on a minimum of three projects similar in scope, as defined in the Project description, that best demonstrate its ability to successfully perform this Project. A copy of the firm's current DPOR professional registration shall be provided.

3.1.7. If a fire station consultant is included as part of the Proposer's team, the firm shall provide documentation on a minimum of three projects of these projects similar in scope as defined in the Project description that best demonstrate its ability to successfully perform this Project. A copy of the firm's current professional registration shall be provided.

3.1.8. For previous experience working together, include any project where the Proposer and lead design professional have previously worked together as a team on a Design-Build project.

3.1.9. Provide three referrals or references from other agencies and owners.

3.1.10. Describe the experience of the firm or consortium of firms making the proposal and the key principals involved in the proposed Project. Describe the length of time in business, business experience, public sector experience and other engagements of the firm or consortium of firms, the length of time the principal members have been in business, the capabilities of the firm or consortium of firms. Describe the past technical competence of the firm or consortium of firms in providing services consistently, including attainment of any legal claims and litigation, of the firm or consortium of firms, and describe the security of any firm that will have direct access to County facilities, including criminal background checks and a description of such guarantees and warranties.

3.1.11. Provide a list of all projects in progress and provide evidence of appropriate experience for this Project for both the design and construction entities and their key personnel to be assigned to this Project. Provide a description of the proposed Project team, including the presentation in a separate sheet to include, but not be limited to, a description of the proposed Project team, the proposed Project manager and, dates completed major features, general contractor, the architect and engineer, and the owner of the facility with current contact information for a reference check.

3.1.12. Proposer's overall qualifications, capabilities, and experience as it relates to this Project. Explain your understanding of, and experience with, the PPEA delivery method.

3.1.13. The Proposer shall provide documentation on a minimum of three

3.2. Identify the proposed plan for obtaining sufficient numbers of qualified workers in all trades or crafts required for the Project.

3.1.16. Provide information on any training programs, including but not limited to apprenticeship programs registered with the U.S. Department of Labor or a State Apprenticeship Council, in place for employees of the firm and subcontractors for the proposed Project.

3.1.18. Provide information on the level of commitment by the firm or consortium of firms to use Department of Minority Business Enterprise firms in developing and implementing the Project.

3.1.19. For each firm or major subcontractor that will perform construction and/or design activities, provide the following information:

3.1.19.1. A sworn certification by an authorized representative of the firm stating that the firm is in, or, if it is a subcontractor, is being established in any federal, state or local government entity.

3.1.19.2. Identify any legal claims or litigation, and provide the information regarding technical qualifications and capabilities, firm security, and guarantees and warranties, of the firm, including but limited to, licensing capacities, insurance coverage and firm equipment. This statement shall also include a mandatory disclosure of any of the last three years any of the following events:

A. Bankruptcy filings;
B. Significant fines;
C. Significant liquidated damages;
D. Significant penalties;
E. Judgments against a contract dispute;
F. contract defaults, contract terminations;
G. Any administrative or judicial proceedings, disciplinary actions, prior debarments or suspensions by a governmental entity;
H. Issues of prequalification, findings of nonresponsibility;
I. Any "Exceptions" to the "Standard Form Certificate" "Experience Modification Rating" "Total Recordable Injury Rate" "Lost Workday Case Rate" "Lost Workday Rate";
J. violations of any federal, state or local criminal or civil law
K. Pending litigation against the firm;
L. legal claims filed by or against the firm.

3.1.19.3. Worker Safety Programs. Describe worker safety training programs, job site safety programs, accident prevention programs, actions safety and health plans, including incident investigation and reporting procedures.

3.2. Proposed Project

3.2.1. Provide a description of the Project, including the conceptual design. Describe the proposed Project in sufficient detail so that type and extent of the Project, and the communities that may be affected and directly benefited.

3.2.2. Identify and fully describe any work to be performed by the public entity.

3.2.3. Include a list of all federal, state and local permits and approvals required for the Project and a schedule for obtaining such permits and approvals.

3.2.4. Identify any anticipated adverse social, economic and environmental impacts of the Project. Specify mitigation strategies or actions to mitigate these impacts of the Project. Indicate if an environmental and archaeological assessment has been completed.

3.2.5. Identify the projected positive social, economic and environmental impacts of the Project.

3.2.6. Identify the proposed schedule for the work on the Project, including the estimated time for completion.

3.2.7. Identify contingency plans for addressing public needs in the event that all or some of the Project is not completed according to projected schedule.

3.2.8. Propose allocation of risk and liability for work completed beyond the point at which the contract is awarded for the development phase of the Project.

3.2.9. Risks/assumptions related to ownership, legal liability, law enforcement and operation of the Project and the existence of any restrictions on the use of adjacent property.

3.2.10. Provide information relative to planned or partial openings of the proposed Project prior to completion of the entire work.

3.2.11. Describe any architectural, building engineering, or other applicable standards that the proposed Project will meet. Define applicable quality standards to be adhered to for achieving the desired project outcome(s).

3.2.12. List any other assumptions relied on for the Project to be successful.

3.2.13. List and contingencies that must occur for the Project to be successful.

3.3. Project Financing

3.3.1. Provide a preliminary estimate and estimating methodology of the cost of the work by phases, segment, or tasks.

3.3.2. Submit a plan for the development, financing and operation of the Project showing the anticipated schedule on which funds will be required. Describe the anticipated costs of and proposed sources and uses for such funds. Describe any proposed debt, equity, and cash flow commitments.

3.3.3. Include a list and discussion of assumptions underlying all major elements of the plan.

3.3.4. Identify the proposed risk factors and methods for dealing with these factors.

3.3.5. Identify any local, state or federal resources that the proposer contemplates seeking for this Project. Specify any anticipated cash or in-kind contributions from governmental sources and the timing of any anticipated commitment.

3.4. Project Benefit and Compatibility.

3.4.1. Identify community benefits, including the economic impact the Project will have on the County and local community in terms of amount of tax revenue to be generated, the number and type of jobs created by the Project, jobs generated for Virginia residents, and level of pay and fringe benefits of each category of employee, and the impact on the County's ability to meet its programs generated by the Project and the number and value of enhancements generated.

3.4.2. Identify any anticipated public support or opposition, as well as any anticipated government support or opposition, for the Project.

3.4.3. Explain the strategy and plan that will be carried out to involve and inform the general public, business community, community organizations, and governmental agencies in areas affected by the Project.

3.4.4. Describe the compatibility of the Project with local, regional, and state economic development efforts.

3.4.5. Describe the compatibility with the County's comprehensive plan, zoning ordinance, capital improvements programs, development plans, capital improvements budget and annual budget.

3.4.6. Provide a statement setting forth participation efforts that are intended to be undertaken in connection with this Project regarding the following types of business:

(i) minority owned businesses;
(ii) women owned businesses;
(iii) small businesses.

3.5. Additional Information

3.5.1. Project Understanding and Approach

3.5.1.1. Describe your understanding of the Project.

3.5.1.2. Identify and discuss potential problems during design and construction.

3.5.1.3. Identify and discuss methods to mitigate those problems.

3.5.1.4. Describe the work you anticipate self-performing and the work you anticipate being performed by subcontractors.

3.5.2. Approach to Project Management

3.5.2.1. Describe your approach to Design-Criteria.

3.5.2.2. Describe your planning, scheduling, estimating, and construction management tools.

3.5.2.3. Describe your quality control plan.

3.5.2.4. Describe your safety management.

3.5.2.5. Describe your current workload and ability to proceed promptly.

4. EVALUATION CRITERIA

Proposals will be evaluated by the Owner using the following criteria. These criteria are to be utilized in the evaluation of proposals and in the development of the shortlist of these Proposers to be considered for interviews and/or negotiations.

1. Experience and qualifications
2. Project approach
3. Proposed systems, equipment and services to be provided
4. Proposed timeline and ability to complete the Project
5. Proposed financial plan and ability to complete the Project within the budget
6. Successful completion of similar projects
7. Responsiveness and completeness of the proposal

6. CONFIDENTIAL & PROPRIETARY INFORMATION

6.1. Proposals submitted in response to this solicitation is subject to public inspection in accordance with the Virginia Freedom of Information Act. Therefore, trade secrets or confidential proprietary information should be identified to be exempt from FOIA disclosure (Virginia Code § 2.2-3705).

Identify the section and page number of any information in your proposal that has been identified as confidential, proprietary or a trade secret of the RFP.

Offeror shall provide one redacted copy of its proposal if for public dissemination, in the event the County must respond to a Freedom of Information Act request. The redacted copy shall be in Adobe PDF format, on a CD-ROM, and shall be electronically launchable media and shall be redacted to protect any confidential information or information deemed exempt from FOIA. Offeror may mark the entire proposal as confidential and/or redact the entire proposal, doing so may result in the disqualification of Offeror's proposal.

6. SUBMITTAL REQUIREMENTS

6.1. The responses shall be in a bounded document with cover letter, this RFP form, and the following including the separate volume as shown in Section 3.1, 3.5 and all attachments, subsections.

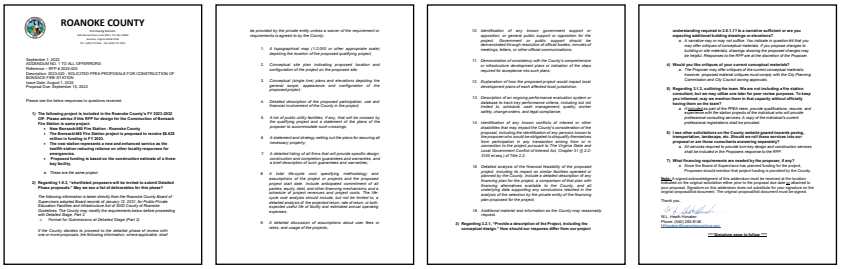
6.2. Interested companies should submit their RFP response (one original and seven (7) copies) in a sealed envelope addressed to Purchasing, 5204 Bernard Drive, Roanoke, Virginia 24018. **Deadline: 2:00 P.M., September 15, 2022**

6.3. Believe the proposed timeline for the RFP. It shall be noted that time and dates written within this RFP are tentative, and can be changed at, almost depending on the progress of the RFP and scheduled of the parties involved in the procurement process.

Event	**Date**
Non-Mandatory Pre-Proposal Meeting	**August 15, 2022**

Last Day for Questions	**September 7, 2022**
Conceptual Phase Proposals Due	**September 15, 2022**
Request for Detail Phase Proposal	**October 2022**
Detail Phase Proposal Due	**November 2022**
Award Date	**December 2022**

Addendum #1 dated September 1, 2022



ROANOKE COUNTY

Roanoke County Administration Center
5204 Bernard Drive, SW
Roanoke, Virginia 24018-0798
Tel. (540) 772-2004 - Fax (540) 772-4004

September 1, 2022
ADDENDUM #1 TO ALL OFFERORS:
Reference: RFP # 2023-020
Description: 2023-020 - SOLICITED PPEA PROPOSALS FOR CONSTRUCTION OF
Addendum # 1 Signature Page
Issue Date: August 31, 2022
Proposal Due: September 15, 2022

Please see the below responses to questions received.

1) **The following project is included in the Roanoke County's FY 2023-2032 Capital Plan: "Bonsack Fire Station" for design for the Construction of Bonsack Fire Station is same project?**
- **New Bonsack/450 Fire Station - Roanoke County**
- **The new station is a new project is proposed to receive $8.425 million in funding in FY 2023.**
- **The new station represents a new and enhanced service as the fourth station reducing reliance on other locality responses for emergencies.**
- **Current Cost Modeling is based on the construction estimate of a three-bay facility.**

a. *These are the same project.*

2) **Regarding 1.8.3, "shortlisted proposers will be invited to submit Detailed Phase proposals." May we see a list of deliverables for this phase?**

The following information is taken directly from the Roanoke County Board of Supervisors Adopted Capital Improvement Plan (CIP) for Public Schools Education Facilities and Infrastructure Act of 2002 County of Roanoke Guidelines. The County may modify the requirements below before proceeding with Phase 2 of the PPEA.

a. *Format for Submissions at Detailed Stage (Part 2)*

If the County decides to proceed to the detailed phase of review with one or more proposals, the following information, where applicable, shall be provided by the private entity unless a waiver of the requirement or requirements is agreed to by the County:

1. *A topographical map (1:2,000 or other appropriate scale) depicting the location of the proposed qualifying project.*
2. *Conceptual site plan indicating proposed location and configuration of the project on the proposed site.*
3. *Conceptual (single line) plans and elevations depicting the general scope, appearance and configuration of the proposed project.*
4. *Detailed description of the proposed participation, use and financial involvement of the County in the project.*
5. *A list of public utility facilities, if any, that will be crossed by the qualifying project and a statement of the plans of the proposer to accommodate such crossings.*
6. *A statement and strategy setting out the plans for securing all necessary property.*
7. *A detailed listing of all firms that will provide specific design, construction, maintenance and financing services required, and a brief description of such guarantees and warranties.*
8. *A total life-cycle cost specifying methodology and assumptions of the project or projects and the proposed project start date. Include anticipated commitment of all resources of the private entity to complete the project, and an estimate of project revenues and project costs. The life-cycle cost analysis should include, but not be limited to, a breakdown of the anticipated costs of planning, permitting, expected useful life of facility and estimated annual operating expenses.*
9. *A detailed discussion of assumptions about user fees or rates, and usage of the projects.*
10. *Identification of any known government support or participation in the project, including a description of the extent of such support. Such support should be demonstrated through resolution of official bodies, minutes of meetings, letters, or other official communications.*
11. *Demonstration of consistency with the County's comprehensive or infrastructure development plans or indication of the steps required for acceptance into such plans.*
12. *Explanation of how the proposed project would impact local development plans of each affected local jurisdiction.*
13. *Description of an ongoing performance evaluation system or plan for the project, including performance measures, but not limited to, schedule, cash management, quality, worker safety, change orders, and legal compliance.*
14. *Identification of any known conflicts of interest or other disabilities that may impact the County's consideration of the project. Proposers shall disclose any such conflicts of interest. Proposers who would be obligated to disqualify themselves from participation in any transaction arising from or in connection with the project pursuant to the Virginia State and Local Government Conflict of Interest Act, Chapter 31 § 2.2-3100 et seq.) of Title 2.2.*
15. *Detailed analysis of the financial feasibility of the proposed project, including its impact on similar facilities operated or planned by the County. Such analysis should include a detailed discussion of the funding sources, a detailed financial plan, financing alternatives available to the County, and all underlying data supporting any conclusions reached in the analysis of the selection by the private entity of the financing plan proposed for the project.*
16. *Additional material and information as the County may reasonably request.*

3) **Regarding 3.2.1, "Provide a description of the Project, including the conceptual design." How should our response differ from our project understanding required in 3.5.1.1? Is a narrative sufficient or are you expected to provide more than a narrative description?**

a. *It is a narrative and a short description of the project. You may also offer a map or diagram if you feel it would be helpful. You indicate in question #5 that you may offer critiques of conceptual materials. If you propose changes to building or site materials, drawings showing the proposed changes may be helpful. Responses to the RFP are at the discretion of the Proposer.*

4) **Would you like critiques of your current conceptual materials?**
- *The Proposer may offer critiques of the current conceptual materials. Proposers should be prepared to discuss the project with the City Planning Commission and City Council among approvals.*

5) **Regarding 3.1.3, outlining the team. We are not including a fire station consultant, but we may utilize one later for peer review purposes. To keep you informed, may we mention them in that capacity without officially hiring them at this time?**
- *Proposers as part of the PPEA Intro provide qualifications, resume, and experience with the station projects of the individual who will provide peer review services for the County. The individual's current professional registrations shall be provided.*

6) **I see other solicitations on the County website geared towards paving, transportation, landscape, etc. Should we not share services into our proposal or are these consultants answering separately?**
- *Any and all subcontracts and subcontracted transportation services shall be included in the Proposers response to the RFP.*

7) **What financing requirements are needed by the proposer, if any?**
- *Show the Board of Supervisors has planned funding for the project. Proposers should mention that project funding is provided by the County.*

Note: A signed acknowledgement of this addendum must be received at the location indicated on the original solicitation either prior to the proposal due date or attached to your proposal. Failure to acknowledge receipt of this addendum may result in rejection of the original proposal/bid document. The original proposal/bid document must be signed.

Thank you,

Will Cantrell
Phone: (540) 772-2004
Email: wcantrell@roanokecountyva.gov

***Signature page to follow ***

2023-020 - SOLICITED PPEA PROPOSALS FOR CONSTRUCTION OF

Addendum # 1 Signature Page

Sign Name: _____ Print Name: Troy Henderson

Name of Firm: G&H Contracting Date: 9/14/2022

THANK YOU

On behalf of G&H Contracting and the rest of our team, thank you again for your time in reviewing our information. A large part of the G&H's success story can be attributed to repeat business from strong relationships. I look forward to hearing from you and hope we can continue to provide Roanoke County with the services they deserve.

Sincerely,
Troy

G&H Contracting, Inc.
1383 Southside Drive
Salem, VA 24153
Phone: (540) 387-5059

For more information, visit:
www.GHContracting.com

Exhibit 3 to Interim Agreement 2023-020

COUNTY OF ROANOKE

REQUEST FOR PROPOSALS (RFP 2023-020)

For

DETAILED STAGE (PART 2) PPEA PROPOSALS FOR CONSTRUCTION OF BONSACK FIRE STATION

1. GENERAL INFORMATION

1.1. The County of Roanoke ("Owner" or "County") is soliciting Detailed Stage (Part 2) PPEA Proposals that follow the Public-Private Education Facilities and Infrastructure Act of 2002 (PPEA) Guidelines adopted by the County Board of Supervisors on May 13, 2003, and last amended and re-adopted on January 12, 2021. On August 15, 2022, the County received two Conceptual Stage (Part 1) proposals which were subsequently reviewed and evaluated by the County's evaluation committee. In accordance with the County PPEA Guidelines, the Board of Supervisors approved proceeding with competitive negotiations, allowing for the solicitation of Detailed Stage (Part 2) proposals from Branch Builds, Inc. and G&H Contracting Incorporated. This solicitation is only for those Proposers that submitted Conceptual Stage proposals in response to RFP 2023-020. From the responses received, the Owner intends to select a qualified Proposer to provide turn-key design and construction services for the Construction of the Bonsack Fire Station. The RFP and related documents may be obtained during normal business hours from the Purchasing Division, (540) 772.2020. This document may be viewed and/or downloaded from the County of Roanoke Purchasing Division's Current Bid Opportunities website at https://www.roanokecountyva.gov/bids.aspx. If you have any problems accessing the documents, you may contact Purchasing at (540) 772.2020 or hhonaker@roanokecountyva.gov.

1.2. Background Information: The County of Roanoke is seeking a new Fire Station within the Bonsack Community to sustain and enhance emergency response services within this area of Roanoke County. Currently, this area is served by the Botetourt County Read Mountain Fire and Rescue Station, located at 43 Eastpark Drive, Roanoke, VA. The Read Mountain station has served Roanoke County and Botetourt County for the past 30 years through a joint ownership agreement between Roanoke County and Botetourt County. As of May 2020, this agreement expired, reverting sole ownership of property, building, and equipment to Botetourt County. The new fire station property, previously owned by Parkway Wesleyan Church, Inc., was approved for rezoning by Roanoke City Council on April 18, 2022. The new parcel was subdivided (Exhibit C) and purchased by the County in July 2022.

Project Description: The new fire station will be a one-story construction with approximately 12,000 s.f. +/- of floor space and identified as Public Service Center #12 with building-mounted signage conforming to the City of Roanoke Zoning Ordinance. The floor plan will be segregated into different uses, including a 3-bay apparatus area,

administration/operations, kitchen, dining, fitness, housing, locker room, showers/laundry area, etc. The building must accommodate current and projected apparatus and staff requirements. The apparatus bays accommodate multiple vehicles, including the largest vehicle in the fleet, Tower 9. A concept floor plan of a similar fire station is provided as Exhibit K. This plan is provided for informational purposes to show the segregation of the dirty areas, apparatus bays, and clean areas. The plan does not adhere to the project program requirements and does not necessarily represent the desired layout. A Preliminary Space Program is provided as Exhibit G and shall be confirmed with the County by the Proposer before producing a geometric configuration of the space layout.

The 2.2469-acre site offers the ability for the improvements shown in the Development Plan provided as Exhibit A and the proposed building elevation provided as Exhibit B, which improvements shall be constructed in substantial conformance, subject to any modification required during the comprehensive development plan review process. The site is located on the public right of way of Mexico Way, shown as Exhibit C, and has an access point to Orange Avenue with an existing traffic signal. Site access utilizes expansive concrete entrances, with on-site parking designed to accommodate a few guests/visitors, and is located to the side of the building to allow the building to be closer to the street. The remaining proposed parking spaces are located behind the building to accommodate the expected number of employees during the transitional time when staff from two overlapping shifts may be on-site.

A generator will support the building's functions in a power outage, and a fueling area for Fire/EMS/Police vehicles to utilize on-site for ease of access and to remain in active service.

ECS Mid-Atlantic, LLC performed a Phase 1 Environmental Site Assessment and subsurface exploration, laboratory testing, and geotechnical engineering analysis and are provided as Exhibit D and Exhibit E, respectively.

Balzer & Associates performed an Existing Conditions Topographic Survey, which is provided as Exhibit F.

Will Serve letters were requested from local utilities, and a Stormwater Summary was developed by Balzer & Associates. These documents are provided as Exhibit H.

Site work will include the connection of water, sewer, power, stormwater management, required off-site improvements, and other utilities as necessary, and installation of concrete driveways and sidewalks to provide access. The Proposer shall establish the construction schedule.

1.3. Proposals to be considered and evaluated must be sealed and received <u>on or before</u> 2:00 p.m. on November 28, 2022 in the Purchasing Division, County of Roanoke, 5204 Bernard Drive SW, Suite 300- F Roanoke VA 24018. Proposals appropriately received will be opened at this time. **Proposals received after 2:00 p.m. will not be accepted or considered.** The time of receipt shall be determined by the time clock stamp in the Purchasing Office, or if it is not working, such time shall be determined by the Purchasing official who is to open the proposals. Faxed or emailed proposals are not acceptable**.**

1.4. Inquiries regarding this RFP should be directed to Heath Honaker, County Purchasing Director, at (540) 283-8146 or via email at hhonaker@roanokecountyva.gov. Inquiries for information regarding procurement procedures and/or proposal submission shall be directed to the Purchasing Division. All questions must be submitted before 5:00 p.m. on November 17, 2022. If necessary, an addendum will be issued and posted to the County website on the Current Bids/RFP Requests tab at https://www.roanokecountyva.gov/bids.aspx.

1.5. Any interpretation, correction, or change of the RFP will be made by an addendum. The County Purchasing Division or its designee will issue Addenda that will be posted to the County website on the Current Bids Opportunities tab at https://www.roanokecountyva.gov/bids.aspx.

Interpretations, corrections, or changes of this RFP made in any other manner will not be binding, and Proposers must not rely upon such interpretations, corrections, or changes.

Vendors may visit http://roanokecountyva.gov/list.aspx to sign up to receive emails or text message notices about bids, proposals, addendums, bid tabulation, and awards. Vendors can sign up to receive notification in selected commodity/service categories. It is the vendor's responsibility to keep information current in the system in order to receive the notifications. The sign up only requires an email address and/or a cell phone number for receiving text messages (if your phone is capable) and your choice of categories. **However, each Proposer is solely responsible for ensuring that such Proposer has the current, complete version of the RFP documents, including any addenda, before submitting a proposal. The County is not responsible for any RFP obtained from any source other than the County.**

Although **'Notify Me'** will be the only way to receive automatic notification, all BIDS/RFP Information will continue to be posted on our website and can be picked up at the Purchasing Division, 5204 Bernard Drive, Suite 300F, Roanoke, VA 24018. Phone # (540) 772.2020.

The County is not responsible for any RFP obtained from any source other than the County. Contact Heath Honaker by phone at 540-283-8146 or by email at hhonaker@roanokecountyva.gov.

1.6. The County reserves the right to reject any or all proposals, waive any informality or irregularity in any proposal received, and to be the sole judge of the merits of the respective proposals received.

1.7. The design and construction services will be performed as a single agreement with one entity. Services will include all necessary activities to design and construct a turn-key project including but not limited to: project planning, permits, fees, inspections, architecture, engineering, technology, security systems and video surveillance, alerting system, signal preemption system, required off-site improvements, and construction services to provide complete, usable, and fully operational facilities.

1.8. The successful Proposer will be selected utilizing a two-part process consisting of an initial Conceptual Stage (Part 1) proposal and a supplemental Detailed Stage (Part 2) proposal.

1.8.1. The Detailed Stage (Part 2 sealed proposals will be received on or before **2:00 p.m., November 28, 2022** for furnishing the services and/or items described herein. The time of receipt shall be determined by the time clock stamp in the Purchasing office.

If proposals are hand delivered or mailed, send them directly to the Purchasing Division at the address listed above. If the Roanoke County Administration Building is closed for business at the time scheduled for the proposal opening, the sealed proposal will be accepted and opened on the next business day of the County at the originally scheduled hour.

THIS PUBLIC BODY DOES NOT DISCRIMINATE AGAINST FAITH-BASED ORGANIZATIONS.

1.8.2. After receipt of the Detailed Stage proposals, the County will evaluate the proposals. Proposers may be requested to present their Detailed Stage proposals to the County staff and/or the Board of Supervisors.

1.8.3. The selection of the Proposer will be based on those responsive and responsible proposals during the Conceptual Stage and Detailed Stage of the procurement process. Proposals received will be evaluated and measured by the County's Evaluation Criteria. The County intends to make a best-value selection and enter into an Interim and/or Comprehensive Agreement. The Owner anticipates entering into this agreement with the selected Proposer in December 2022. It shall be noted that time and dates written within this RFP are tentative and can be changed or altered depending on the progress of this RFP and scheduling of the parties involved in the procurement process.

1.9. The Proposer assumes design and construction risk and has direct authority over the subconsultants and subcontractors and will be responsible for construction means and methods.

2. ANTICIPATED SCOPE OF WORK

2.1. After being selected, the Proposer will execute an Interim and/or Comprehensive Agreement with the County to provide design and construction services for the Project, including, but not limited to:

2.1.1. Project Management and Administration through Project leadership and overall team coordination.

2.1.2. Interdisciplinary Coordination.

2.1.3. Codes and Standard review and compliance to secure final approval of site plans and building construction documents with Roanoke City.

2.1.4. Cost Savings suggestions and Best Value recommendations.

2.1.5. Project planning and scheduling, maintaining project schedules, and attending weekly progress meetings.

2.1.6. Cash Flow development and analysis.

2.1.7. Contract and Construction Documents coordination and providing design documents and specifications to the Owner for approval.

2.1.8. Public and Private Utility providers coordination and to bring all necessary and required services to the Project.

2.1.9. As-built Drawings submission of the completed Project, and provision of operations and maintenance manuals, owner training, and attic stock materials.

3. FORMAT FOR SUBMISSIONS AT THE DETAILED STAGE (PART 2)

The County requires that proposals provided by Proposers at the Detailed Stage (Part 2) contain the following information and shall be organized as follows:

3.1. TABLE OF CONTENTS

3.1.1. Proposals shall include a Table of Contents with all pages numbered.

3.2. TAB 1 - INTRODUCTION

3.2.1. Cover Letter on company letterhead, signed by the person(s) authorized to enter into contracts on behalf of the Proposer.

3.2.2. Executive Summary.

3.2.3. Proposal Signature Sheet.

3.2.4. Proprietary/Confidential Information Identification.

3.2.5. Document any changes to the Conceptual Stage proposal, if applicable.

3.3. TAB 2 – CONCEPTUAL PROJECT PLANS

3.3.1. Provide a site plan with topography at an appropriate scale depicting the location and configuration of the fire station and its amenities on the County owned site and identify locations and types of required off-site improvements.

3.3.2. Provide, at a minimum, single-line floor plans and exterior elevations depicting the proposed Project's general scope, appearance, and configuration.

3.3.3. Provide detailed descriptions of each of the following proposed systems:

3.3.3.1. Pervious and impervious site pavements
3.3.3.2. Retaining wall type, if applicable
3.3.3.3. Footings and foundations
3.3.3.4. Structural systems
3.3.3.5. Floor construction
3.3.3.6. Exterior wall construction/composition
3.3.3.7. Interior wall construction/composition
3.3.3.8. Exterior and windows and doors
3.3.3.9. Roofing type(s)
3.3.3.10. Mechanical screening
3.3.3.11. HVAC system types and locations

3.3.3.12. Other mechanical systems
3.3.3.13. Electrical sizes and general components
3.3.3.14. Plumbing piping
3.3.3.15. Plumbing fixtures
3.3.3.16. Interior finishes

3.4. TAB 3 – ADDITIVE FACILITY ENHANCEMENTS

3.4.1. Provide any proposed facility enhancements above the minimum facility requirements. Include a narrative summary of the additional capital, operating costs, usage, and income benefits associated with any proposed facility enhancements.

3.5. TAB 4 – GUARANTEES AND WARRANTIES

3.5.1. Include a detailed listing of all firms that will provide design, construction, and completion guarantees and warranties and a brief description of the guarantees and warranties.

3.6. TAB 5 – PROPOSED COUNTY RESPONSIBILITIES

3.6.1. Identify other public improvements required of the County to complete the Project.

3.7. TAB 6 – PERFORMANCE MANAGEMENT

3.7.1. Provide a description of an ongoing evaluation system of the Project to track key performance criteria, including schedules, cash management, quality, worker safety, change orders, and legal compliance.

3.8. TAB 7 – PROJECT COST AND SCHEDULE

3.8.1. Provide total life-cycle costs, methodology, assumptions of the Project, and the proposed project start date. The life-cycle cost analysis should include a detailed analysis of the projected return, rate of return, or both; the expected useful life of the facilities; and estimated annual operating expenses.

3.8.2. Provide an anticipated schedule of values that represent the Project from beginning to end and the entire project cost. Values should include but are not limited to Site Construction, Off-site Construction including signal preemption, Building Construction, Builder's Risk Insurance, Permits, Utility Connection Fees, Inspections and Testing, Furniture, Fixtures & Equipment, Architecture/Engineering Fees and Expenses, Surveys, Geotechnical, General Contractor Fee and any additional values to provide a turn-key project. Identify other Owner required expenses excluded from the submitted schedule of values.

3.8.3. Provide a schedule for the initiation of and completion of the Project to include the proposed major responsibilities and timeline for activities to be performed by all parties

3.8.4. Provide a list of proposed value-added or value-engineering options for consideration by the Owner.

3.9. TAB 8 – CONFLICTS OF INTEREST

3.9.1. Identify the executive management and the officers and directors of the firm or firms submitting the proposal. In addition, identification of any known conflicts of interest or other disabilities that may impact the County's consideration of

the proposal, including the identification of any persons known to the Proposer who would be obligated to disqualify themselves from participation in any transaction arising from or in connection to the Project pursuant to the Virginia State and Local Government Conflict of Interest Act, Chapter 31 (§ 2.2-3100 et seq.) of Title 2.2.

3.10. TAB 9 – CONFORMANCE WITH THE ETHICS IN PUBLIC CONTRACTING

3.10.1. Acknowledge conformance with the Ethics in Public Contracting provisions of Va. Code §§ 2.2-4367 through 2.2-4377.

3.11. TAB 10 – ADDITIONAL INFORMATION

3.11.1. Proposers should use this Tab to include additional information the Proposer deems necessary and appropriate and otherwise not identified in Tabs 1 through 9.

4. PROPOSAL EVALUATION AND SELECTION CRITERIA

Some or all of the following items may be considered in the evaluation and selection of the Offeror. All relevant information from both the Conceptual Stage and the Detailed Stage may be considered. The County reserves the right at all times to reject any proposal at any time for any reason.

1. Qualifications and experience
2. Project characteristics
3. Financial Stability
4. Proposed systems, equipment, and services to be provided
5. Proposed timeline and ability to complete the Project
6. Project cost and the ability to complete Project within the budget
7. Successful completion of similar projects
8. Responsiveness and completeness of the proposal

5. CONFIDENTIAL & PROPRIETARY INFORMATION

5.1. Information submitted in the public procurement process is subject to public inspection in accordance with the Virginia Freedom of Information Act. Therefore, trade secrets or proprietary information must be clearly identified to be exempt from FOIA disclosure (Virginia Code 2.2-3700, *et seq*).

Identify the section and page number of any information in your proposal that has been identified as confidential, proprietary or a trade secret of the RFP.

Proposer shall provide one redacted copy of its proposal fit for public dissemination in the event the County must respond to a Freedom of Information Act request. The redacted copy of the Proposer's proposal shall be provided on USB Drive or other electronically transferable media and shall be redacted to protect any confidential and/or proprietary information and shall be labeled as such. Proposer shall not mark its entire proposal as confidential and/or redact the entire proposal; doing so may result in the disqualification of Proposer's proposal.

6. SUBMITTAL REQUIREMENTS

6.1. The responses shall be in a bounded document with a cover letter, this RFP form, and with tabs separating the different criteria as shown in Sections 3.1 – 3.11 and all related

subsections.

6.2. Proposers should submit the RFP response (one original and seven [7] copies) to the County of Roanoke Purchasing Director, 5204 Bernard Drive, Roanoke, Virginia 24018, on or before **2:00 p.m., November 28, 2022**

6.3. The Owner is not liable for any costs incurred by any Proposer in connection with this RFP. The expenses incurred by the Proposer in the preparation, submission, and presentation of the proposal are the sole responsibility of the Proposer.

6.4. Below is the proposed timeline for this RFP. It shall be noted that the time and dates written within this RFP are tentative and can be changed or altered depending on the progress of this RFP and the schedule of the parties involved in the procurement process:

Activity	Date
Issue Request for Detailed Stage Proposals	**October 12, 2022**
Last Day for Question on RFP	**November 17, 2022**
Detailed Stage Proposals Due	**November 28, 2022**
BOS Approval for Proposer Negotiations	**December 2022**
BOS Approval of Interim or Comprehensive Agreement	**January 2023**
Construction Substantial Completion	**July 1, 2024**
Final Completion	**August 1, 2024**

7. ATTACHMENTS

Exhibit A	Development Plan
Exhibit B	Building Elevation
Exhibit C	Subdivision Plat
Exhibit D	Phase 1 ESA
Exhibit E	Geotechnical Report
Exhibit F	Topographic Survey
Exhibit G	Preliminary Program – Design Considerations
Exhibit H	Utility Availability
Exhibit I	Roanoke County PPEA Guidelines
Exhibit J	**Comprehensive Agreement Draft- To Be Provided at a Future Date**
Exhibit K	Floor Plan Example of a Similar Fire Station

SITE & ZONING SUMMARY:

SITE ADDRESS:	3645 ORANGE AVE NE ROANOKE, VA 24012
OWNER:	PARKWAY WESLEYAN CHURCH INC
OWNER ADDRESS:	3645 ORANGE AVE NE ROANOKE, VA 24012
APPLICANT:	ROANOKE COUNTY BOARD OF SUPERVISORS
TAX MAP NUMBER:	7110105
EXISTING LOT SIZE:	± 70.7850 AC.
PROPOSED LOT SIZE:	± 2.25 AC.
EXISTING ZONING DISTRICT:	INPUD
PROPOSED ZONING DISTRICT:	INPUD

ZONING AMENDMENT REQUEST SUMMARY:

1. AMENDMENT TO THE EXISTING INPUD ZONING STANDARDS FOR 2.25 ACRES OF OVERALL ± 70.78 AC TRACT

2. AMENDMENT TO REPEAL THE SIGN OVERLAY DISTRICT FOR 2.25 ACRES OF THE OVERALL ± 70.78 AC TRACT

ZONING REQUIREMENTS:

MINIMUM SIZE OF DISTRICT:	NONE
MINIMUM LOT AREA PER DWELLING UNIT (SQUARE FEET)	NONE
LOT FRONTAGE MINIMUM (FEET)	25'
SETBACKS:	
FRONT YARD MINIMUM:	0'
SIDE YARD MINIMUM:	0'
REAR YARD MINIMUM:	0'
HEIGHT MAXIMUM:	45'
USEABLE OPEN SPACE (PERCENTAGE OF LOT)	5%
ACCESSORY STRUCTURE MINIMUM SETBACK FROM REAR AND SIDE LOT LINES (FEET)	0'
MINIMUM PARKING REQUIREMENT	NONE
IMPERVIOUS SURFACE RATIO MAXIMUM (PERCENTAGE OF LOT AREA)	80%
MINIMUM TREE CANOPY (PERCENTAGE OF LOT AREA)	15%
ALLOWABLE USES:	FIRE, POLICE, OR EMERGENCY SERVICES

SIGNAGE:

ANY NEW SIGNAGE ON THE INPUD ZONED PROPERTY WILL CONFORM TO THE REQUIREMENTS OF THE CITY OF ROANOKE ZONING ORDINANCE, TABLE 668-1, FOR THE IN, INSTITUTIONAL DISTRICT.

BUILDING SUMMARY:

THE PROPOSED BUILDING SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE PROVIDED RENDERING INDICATED AS PUBLIC SERVICE CENTER #12 – EXHIBIT B ARCHITECTURAL PERSPECTIVE PREPARED BY BALZER & ASSOCAITES, INC. UNDER THE DATE OF 2/28/2022.

PREEMPTION DETECTION DEVICE:

A PREEMPTION DETECTION DEVICE SHALL BE DESIGNED AND INSTALLED BY THE DEVELOPER AT THE TIME OF COMPREHENSIVE SITE PLAN. PREEMPTION DETECTION DEVICE SHALL BE LOCATED WITHIN THE CITY OF ROANOKE RIGHT-OF-WAY AND POSITIONED ALONG MEXICO WAY BASED ON CONSIDERATION OF THE REQUIRED CLEARANCE TIMES FOR THE TRAFFIC SIGNAL LOCATED AT THE INTERSECTION OF MEXICO WAY AND ORANGE AVENUE. FUTURE SIGNAL PHASES PER THE VDOT FUNDED STARS INTERSECTION IMPROVEMENT PROJECT FOR THIS INTERSECTION, INCLUDING THE PEDESTRIAN CROSSING, SHALL BE CONSIDERED.

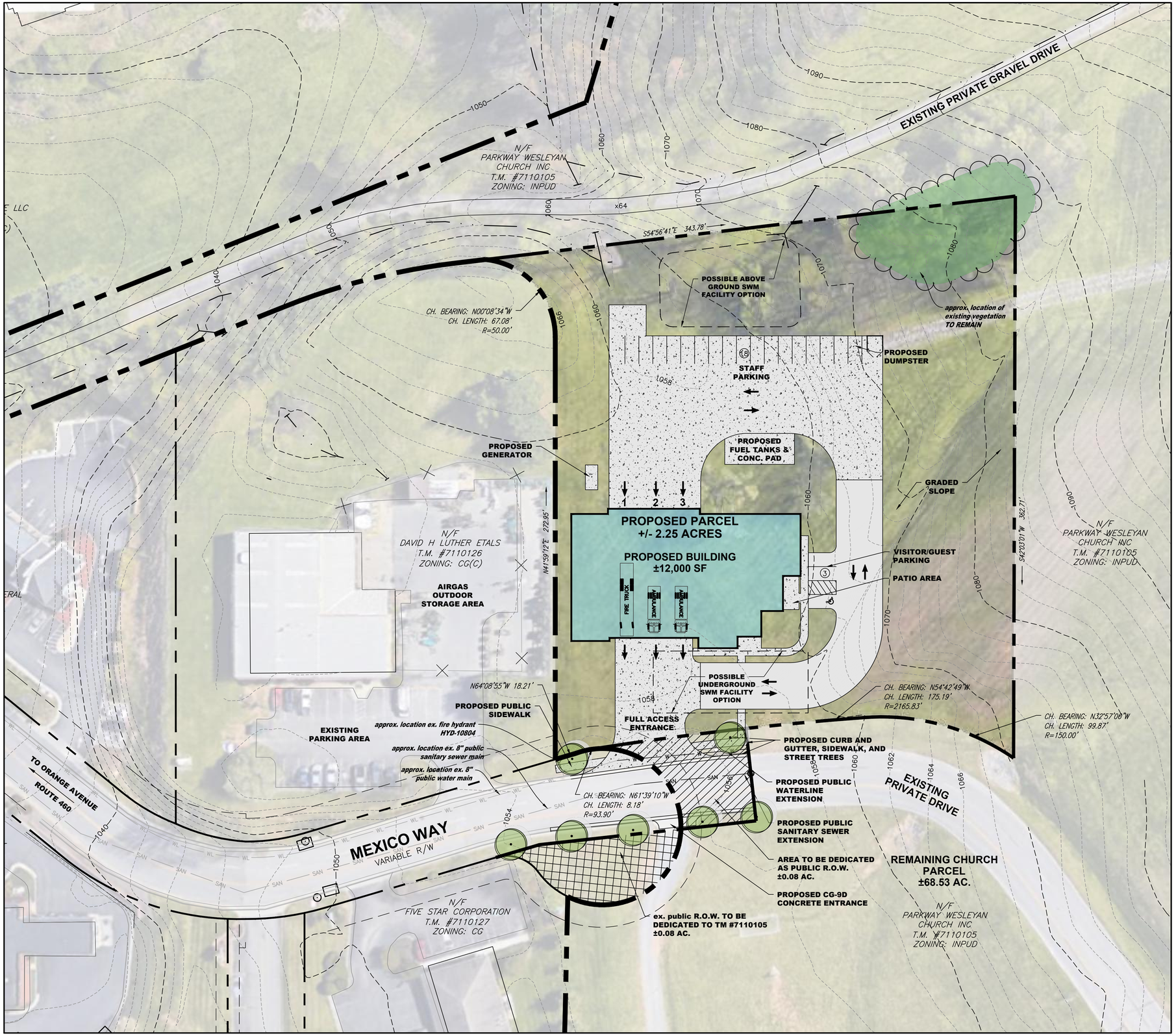
CONCEPT PLAN NOTE:

1. THIS PLAN IS FOR CONCEPTUAL PLANNING PURPOSES AND HAS BEEN PREPARED USING COMPILED INFORMATION. A CURRENT FIELD SURVEY HAS NOT BEEN PERFORMED TO VERIFY ALL EXISTING CONDITIONS ON-SITE.

2. AERIAL IMAGERY SOURCED FROM GOOGLE EARTH IMAGE, DATED NOVEMBER 2019

30 0 30 60 90

1" = 30'



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

PRELIMINARY

PUBLIC SERVICE CENTER #12 - FIRE STATION

INPUD DEVELOPMENT PLAN

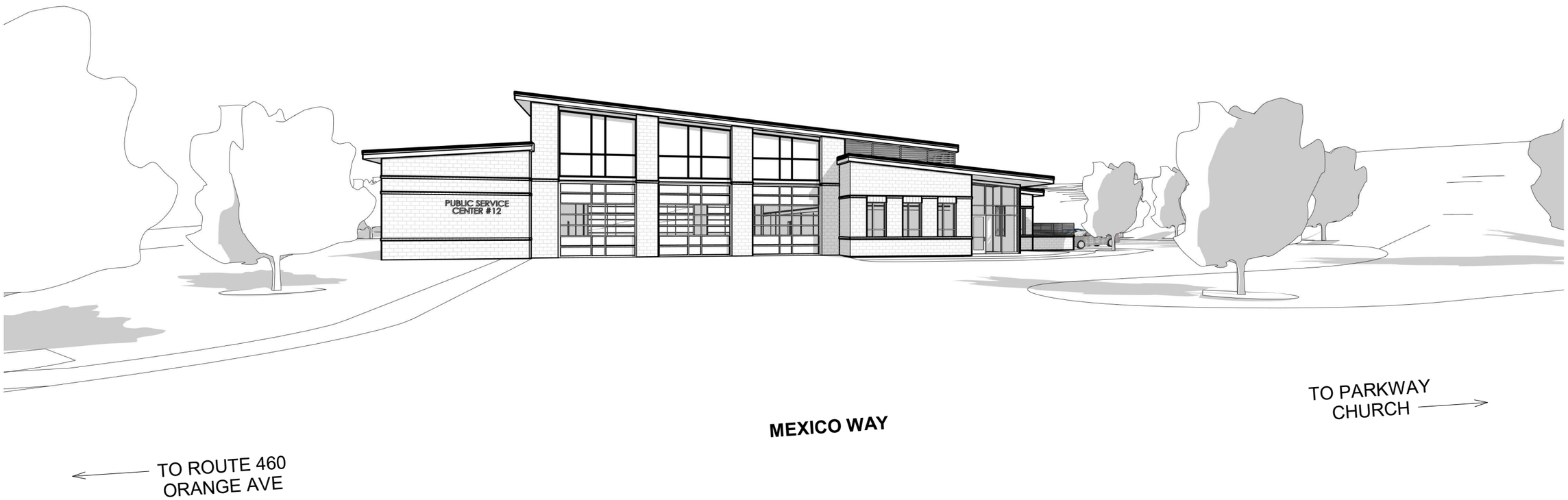
3645 ORANGE AVE NE
ROANOKE, VA 24012

DRAWN BY	KAM
DESIGNED BY	BTC
CHECKED BY	BTC
DATE	3/18/2022
SCALE	1" = 30'
REVISIONS	

EX-A

PROJECT NO. 04200086.01

J:\2020\04042000086.01 ROANOKE COUNTY FIRE STATION #12 (BORSACK/CIVIL\dwg\04200086 - ZONING BASE - Fire Station 2022-3-17.dwg PLOTTED: 3/17/2022 10:02:34 AM



PUBLIC SERVICE CENTER #12

3645 ORANGE AVE NE
ROANOKE, VA 24012

Colors represented here are affected by the type and amount of light in which they are viewed, as well as the method of printing.
Slight differences may exist between the actual color of the materials illustrated.

EXHIBIT B
ARCHITECTURAL PERSPECTIVE

NOT TO SCALE
NOT FOR CONSTRUCTION

02/28/2022

Roanoke, Virginia 04200086.01

© 2021 Balzer & Associates, Inc.

BALZER & ASSOCIATES

INST. # 220007571

KNOW ALL MEN BY THESE PRESENTS TO WIT:

THAT PARKWAY WESLEYAN CHURCH, INC. IS THE FEE SIMPLE OWNER OF THE PARCEL OF LAND SHOWN HEREON BOUNDED BY CORNERS 1 THROUGH 45 TO 1, INCLUSIVE, AND BEING PART OF THE LAND CONVEYED TO SAID OWNER BY INSTRUMENT RECORDED IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF ROANOKE, VIRGINIA BY INSTRUMENT NUMBER 040000415.

THE ABOVE DESCRIBED OWNER BY VIRTUE OF THE RECORDATION OF THIS PLAT DOES HEREBY DEDICATE TO THE CITY OF ROANOKE IN FEE SIMPLE TITLE, THE LAND SHOWN HEREON AS SET APART FOR PUBLIC STREETS BEING 0.1366 ACRE TOTAL.

THE ABOVE DESCRIBED OWNER BY VIRTUE OF THE RECORDATION OF THIS PLAT DOES HEREBY GRANT TO THE CITY OF ROANOKE THOSE CERTAIN AREAS SHOWN HEREON AS SET APART FOR USE AS PUBLIC EASEMENTS.

THE SAID OWNER HEREBY CERTIFIES THAT THE PLAT OF THE LAND AS SHOWN HEREON, AS REQUIRED BY SECTION 15.2–2240 THROUGH 15.2–2279 OF THE CODE OF VIRGINIA (1950) AS AMENDED, AND THE SUBDIVISION ORDINANCE OF THE CITY OF ROANOKE, VIRGINIA; IS ENTIRELY WITH ITS OWN FREE WILL AND CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE OWNERS OR PROPRIETORS OF THE LAND AND THE TRUSTEES IN ANY DEED OF TRUST, OR OTHER INSTRUMENT IMPOSING A LIEN UPON SUCH LAND, IF ANY THERE BE.

IN WITNESS WHEREON ARE HEREBY PLACED THE FOLLOWING SIGNATURES AND SEALS:

PARKWAY WESLEYAN CHURCH, INC.

BY: John W. Ott ITS: President

STATE OF VIRGINIA

City OF Roanoke

I, Kristine M. McGowan, A NOTARY PUBLIC IN AND FOR THE AFORESAID STATE DO HEREBY CERTIFY THAT John W. Ott, WHOSE NAME IS SIGNED TO THE FOREGOING INSTRUMENT, HAS PERSONALLY APPEARED BEFORE ME AND ACKNOWLEDGED THE SAME ON THIS 28th DAY OF June, 2022.

Kristine M. McGowan NOTARY PUBLIC REG. # 7807305

MY COMMISSION EXPIRES 8/31/2022

KRISTINE MOTKO MCGOWAN
NOTARY ID # 7807305
NOTARY PUBLIC
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES AUGUST 31, 2022

APPROVED:

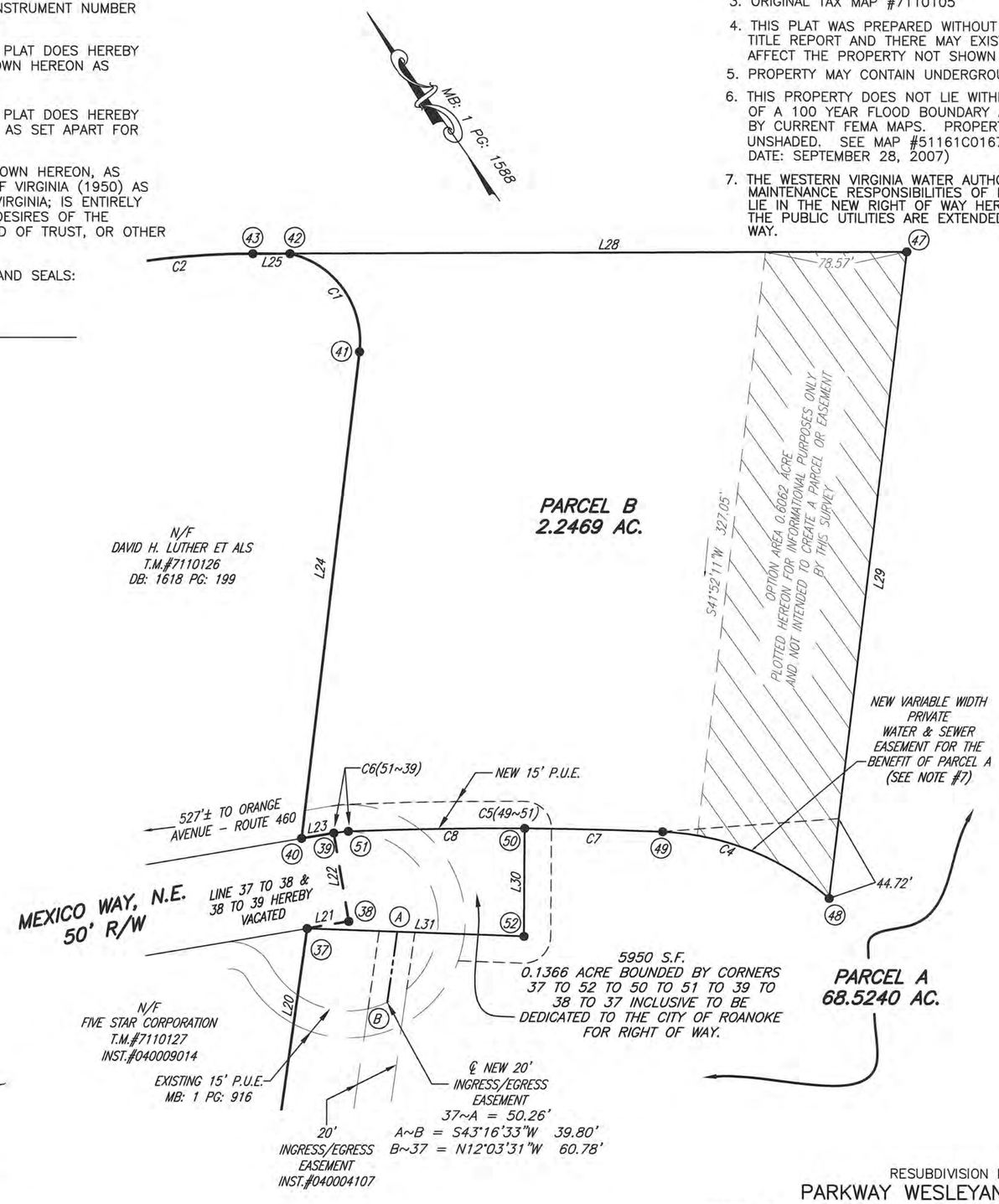
CITY ENGINEER, CITY OF ROANOKE — DATE 6/29/2022

SUBDIVISION AGENT — DATE 6/28/22

IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF CITY OF ROANOKE, VIRGINIA, THIS MAP WITH THE CERTIFICATE OF ACKNOWLEDGMENT THERETO ANNEXED IS ADMITTED TO RECORD AT 11:20 O'CLOCK A.M. ON THIS 29 DAY OF June, 2022, IN INSTRUMENT # 220007571.

TESTE: BRENDA S. HAMILTON
CLERK

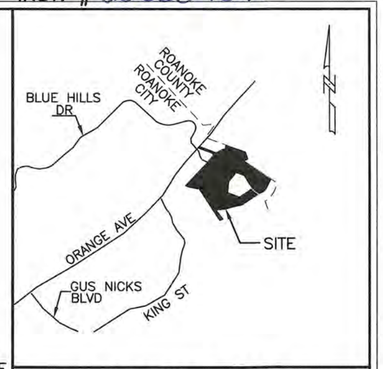
Janet L. Collier
DEPUTY CLERK



THE RECORDATION OF THIS PLAT OF SUBDIVISION DOES NOT CONSTITUTE A CONVEYANCE OF LAND. ANY LOTS, PARCEL OR TRACT OF LAND SHOWN HEREON THAT IS INTENDED FOR SALE AND/OR CONVEYANCE MUST BE CONVEYED BY DEED AND SAID DEED MUST BE RECORDED IN THE OFFICE OF THE CLERK OF THE CIRCUIT COURT OF THE CITY OF ROANOKE.

NOTES:

1. OWNER OF RECORD: PARKWAY WESLEYAN CHURCH, INC.
2. LEGAL REFERENCE: 040000415
3. ORIGINAL TAX MAP #7110105
4. THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND THERE MAY EXIST ENCUMBRANCES WHICH AFFECT THE PROPERTY NOT SHOWN HEREON.
5. PROPERTY MAY CONTAIN UNDERGROUND UTILITY SERVICE LINES.
6. THIS PROPERTY DOES NOT LIE WITHIN THE LIMITS OF A 100 YEAR FLOOD BOUNDARY AS DESIGNATED BY CURRENT FEMA MAPS. PROPERTY IS IN ZONE X UNSHADED. SEE MAP #51161C0167G (REVISED DATE: SEPTEMBER 28, 2007)
7. THE WESTERN VIRGINIA WATER AUTHORITY WILL ASSUME NO MAINTENANCE RESPONSIBILITIES OF EXISTING PRIVATE UTILITIES THAT LIE IN THE NEW RIGHT OF WAY HEREBY CREATED UNTIL SUCH TIME THE PUBLIC UTILITIES ARE EXTENDED TO THE LIMITS OF SAID RIGHT OF WAY.



VICINITY MAP
NO SCALE

LEGEND
● – DEEDED CORNER

CURVE TABLE

CURVE	RADIUS	LENGTH	CHD BEARING	CHD LENGTH	DELTA
C1	50.00'	73.53'	N00°08'34"W	67.08'	84°15'28"
C2	430.00'	112.15'	N62°18'04"W	111.83'	14°56'36"
C4	150.00'	101.81'	N32°57'06"W	99.87'	38°53'18"
C5	2165.83'	175.24'	N54°42'49"W	175.19'	4°38'09"
C6	93.90'	8.18'	N61°39'10"W	8.18'	4°59'29"
C7	2165.83'	76.87'	N53°24'45"W	76.86'	2°02'01"
C8	2165.83'	98.37'	N55°43'50"W	98.36'	2°36'08"

LINE TABLE

LINE	BEARING	DISTANCE
L20	N43°16'33"E	201.61'
L21	S64°23'53"E	23.57'
L22	N25°36'07"E	50.01'
L23	N64°08'55"W	18.21'
L24	N41°59'12"E	272.95'
L28	S54°56'41"E	343.78'
L29	S42°03'01"W	362.71'
L30	S35°34'14"W	60.25'
L31	N52°41'49"W	121.06'

COORDINATE LIST(ASSUMED)

Point	Northing	Easting
37	3637786.96	11079291.02
38	3637776.77	11079312.27
39	3637821.87	11079333.88
40	3637829.81	11079317.49
41	3638032.69	11079500.09
42	3638099.77	11079499.92
43	3638111.66	11079483.06
47	3637902.32	11079781.34
48	3637632.99	11079538.40
49	3637716.79	11079484.08
50	3637762.60	11079422.36
51	3637817.99	11079341.08
52	3637713.59	11079387.31

I HEREBY CERTIFY THAT THIS PLAT IS FROM RECORDS AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Donald S. Haddon III
DONALD S. HADDON, III, 003405

COMMONWEALTH OF VIRGINIA
Donald S. Haddon III
Lic. No. 3405
01-13-2022
LAND SURVEYOR

RESUBDIVISION PLAT FOR
PARKWAY WESLEYAN CHURCH INC.
BEING THE RESUBDIVISION OF TAX MAP NUMBER 7110105 (70.9330 ACRES)
AS SHOWN ON
BOUNDARY SURVEY FOR IWBMC, L.L.C.
MAP BOOK 1, PAGE 1588
AND A PORTION OF REVERTED TEMPORARY TURN AROUND EASEMENT
CREATING HEREON
PARCEL A (68.5240 ACRES) &
PARCEL B (2.2469 ACRES)
SITUATED ON MEXICO WAY
CITY OF ROANOKE, VIRGINIA
DATED 01–13–2022
JOB #04200086.00
SCALE: 1"=50'
SHEET 1 OF 2

PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS
ROANOKE / RICHMOND / NEW RIVER VALLEY / SHENANDOAH VALLEY / LYNCHBURG
1208 Corporate Circle / Roanoke, Virginia 24018 / Phone (540) 772-9580 / www.balzer.cc

DRAWN BY: DSH
CHECKED BY: JRM

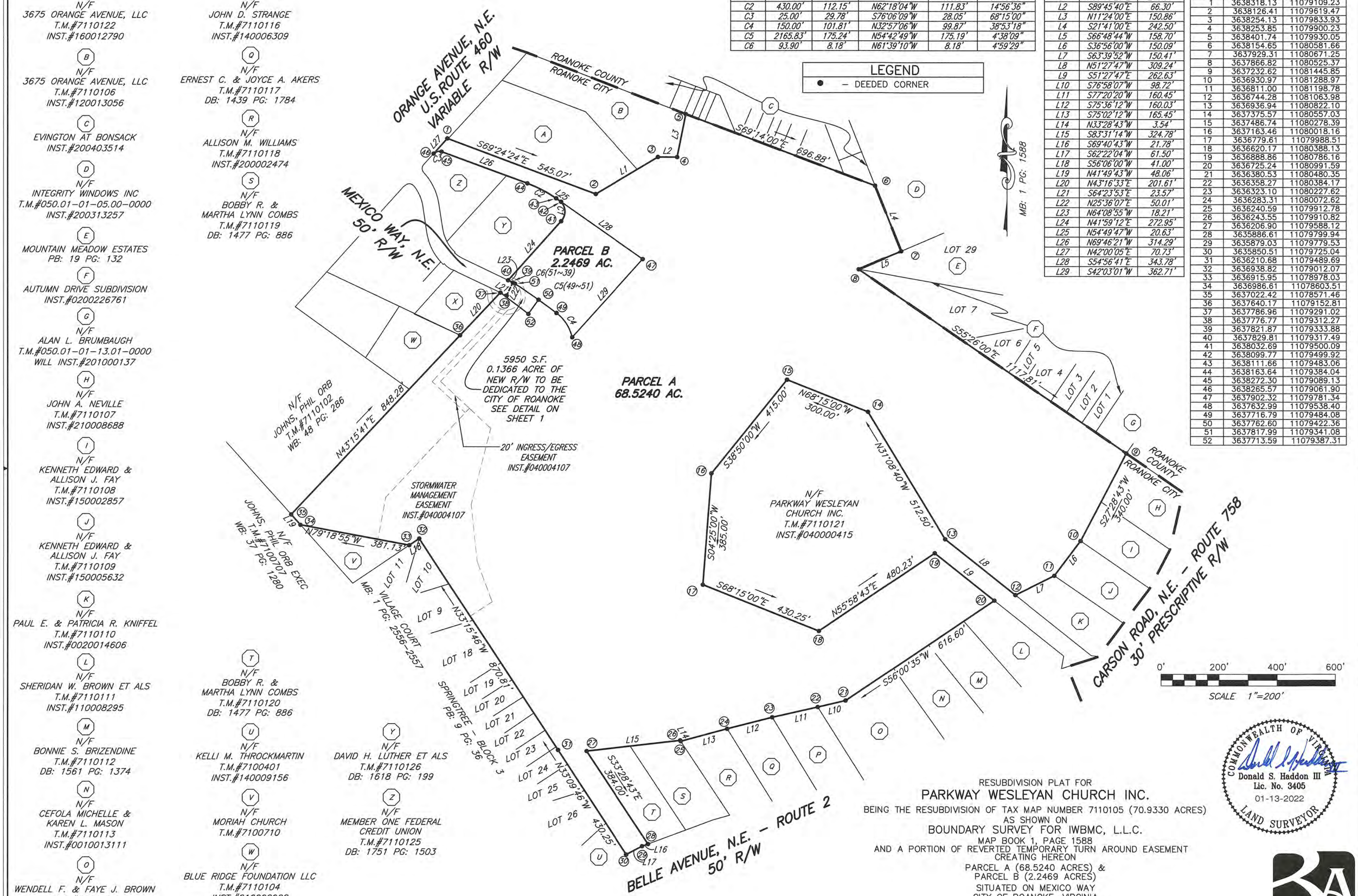
BALZER & ASSOCIATES

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHD BEARING	CHD LENGTH	DELTA
C1	50.00'	73.53'	N00°08'34"W	67.08'	84°15'28"
C2	430.00'	112.15'	N62°18'04"W	111.83'	14°56'36"
C3	25.00'	29.78'	S76°06'09"W	28.05'	68°15'00"
C4	150.00'	101.81'	N32°57'06"W	99.87'	38°53'18"
C5	2165.83'	175.24'	N54°42'49"W	175.19'	4°38'09"
C6	93.90'	8.18'	N61°39'10"W	8.18'	4°59'29"

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N59°13'26"E	249.61'
L2	S89°45'40"E	66.30'
L3	N11°24'00"E	150.86'
L4	S21°41'00"E	242.50'
L5	S66°48'44"W	158.70'
L6	S36°56'00"W	150.09'
L7	S63°39'52"W	150.41'
L8	N51°27'47"W	309.24'
L9	S51°27'47"E	262.63'
L10	S76°58'07"W	98.72'
L11	S77°20'20"W	160.45'
L12	S75°36'12"W	160.03'
L13	S75°02'12"W	165.45'
L14	N33°28'43"W	3.54'
L15	S83°31'14"W	324.78'
L16	S69°40'43"W	21.78'
L17	S62°22'04"W	61.50'
L18	S56°06'00"W	41.00'
L19	N41°49'43"W	48.06'
L20	N43°16'33"E	201.61'
L21	S64°23'53"E	23.57'
L22	N25°36'07"E	50.01'
L23	N64°08'55"W	18.21'
L24	N41°59'12"E	272.95'
L25	N54°49'47"W	20.63'
L26	N69°46'21"W	314.29'
L27	N42°00'05"E	70.73'
L28	S54°56'41"E	343.78'
L29	S42°03'01"W	362.71'

COORDINATE LIST(ASSUMED)		
Point	Northing	Easting
1	3638318.13	11079109.23
2	3638126.41	11079619.47
3	3638254.13	11079833.93
4	3638253.85	11079900.23
5	3638401.74	11079930.05
6	3638154.65	11080581.66
7	3637929.31	11080671.25
8	3637866.82	11080525.37
9	3637232.62	11081445.85
10	3636930.97	11081288.97
11	3636811.00	11081198.78
12	3636744.28	11081063.98
13	3636936.94	11080822.10
14	3637375.57	11080557.03
15	3637486.74	11080278.39
16	3637163.46	11080018.16
17	3636779.61	11079988.51
18	3636620.17	11080388.13
19	3636888.86	11080786.16
20	3636725.24	11080991.59
21	3636380.53	11080480.35
22	3636358.27	11080384.17
23	3636323.10	11080227.62
24	3636283.31	11080072.62
25	3636240.59	11079912.78
26	3636243.55	11079910.82
27	3636206.90	11079588.12
28	3635886.61	11079799.94
29	3635879.03	11079779.53
30	3635850.51	11079725.04
31	3636210.68	11079489.69
32	3636938.82	11079012.07
33	3636915.95	11078978.03
34	3636986.61	11078603.51
35	3637022.42	11078571.46
36	3637640.17	11079152.81
37	3637786.96	11079291.02
38	3637776.77	11079312.27
39	3637821.87	11079333.88
40	3637829.81	11079317.49
41	3638032.69	11079500.09
42	3638099.77	11079499.92
43	3638111.66	11079483.06
44	3638163.64	11079384.04
45	3638272.30	11079089.13
46	3638265.57	11079061.90
47	3637902.32	11079781.34
48	3637632.99	11079538.40
49	3637716.79	11079484.08
50	3637762.60	11079422.36
51	3637817.99	11079341.08
52	3637713.59	11079387.31

LEGEND
● – DEEDED CORNER



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JOB #04200086.00
SCALE: 1"=200'
SHEET 2 OF 2

PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS
ROANOKE / RICHMOND / NEW RIVER VALLEY / SHENANDOAH VALLEY / LYNCHBURG
1208 Corporate Circle / Roanoke, Virginia 24018 / Phone (540) 772-9580 / www.balzer.cc

DRAWN BY: DSH
CHECKED BY: JAP

BALZER & ASSOCIATES

PHASE I ENVIRONMENTAL SITE ASSESSMENT

PROPOSED BONSACK/460 FIRE STATION

3645 ORANGE AVENUE NE
ROANOKE, VIRGINIA 24012

ECS PROJECT NO. 47:14480

FOR: ROANOKE COUNTY

MAY 13, 2022

ECS Mid-Atlantic, LLC
"Setting the Standard for Service"
Geotechnical • Construction Materials • Environmental • Facilities

May 13, 2022

George Assaid, AIA
Roanoke County
1206 Kessler Mill Road
Salem, Virginia 24153

ECS Project No. 47: 14480

Reference: Phase I Environmental Site Assessment Report, Proposed Bonsack/460 Fire Station, 3645 Orange Avenue NE, Roanoke, Virginia 24012

Dear Mr. Assaid:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide you with the results of our Phase I Environmental Site Assessment (ESA) for the referenced site. ECS's services were provided in general accordance with ECS Proposal No. 47:22006-P authorized on April 20, 2022 and generally meet the requirements of ASTM E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, which ECS believes to be in accordance with EPA Standards and Practices for All Appropriate Inquiries contained in 40 CFR Part 312.

If there are questions regarding this report, or a need for further information, please contact the undersigned.

Sincerely,

ECS Mid-Atlantic, LLC

Alexandra Moon
Senior Project Manager
amoon@ecslimited.com
540-362-2000

Garnett B. Williams, C.P.G.
Principal Geologist
gwilliams@ecslimited.com
703-471-8400

Project Summary

Proposed Bonsack/460 Fire Station
3645 Orange Avenue NE
Roanoke, Virginia 24012

Report Section		No Further Action	REC	CREC	HREC	BER	Comment
4.0	User Provided Information	✔					
5.1	Federal ASTM Databases	✔					
5.2	State ASTM Databases	✔					
5.3	Additional Environmental Record Sources	✔					
6.0	Historical Use Information	✔					
7.0	Site and Area Reconnaissance	✔					
8.0	Additional Services	✔					
9.0	Interviews	✔					

ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Alexandra Moon
Senior Project Manager
May 13, 2022

Garnett B. Williams, C.P.G.
Principal Geologist
May 13, 2022

TABLE OF CONTENTS PAGE

1.0 EXECUTIVE SUMMARY 1

2.0 INTRODUCTION 3

2.1 Purpose and Reason for Performing Phase I ESA 3

2.2 Scope of Services 3

2.3 Definitions 3

2.4 Limitations 4

2.5 Data Gaps 5

2.6 Limiting Conditions/Deviations 5

3.0 SUBJECT PROPERTY DESCRIPTION 6

3.1 Subject Property Location and Legal Description 6

3.2 Physical Setting and Hydrogeology 6

3.3 Current Use and Description of the Site 7

4.0 USER PROVIDED INFORMATION 8

4.1 Title Information 8

4.2 Environmental Liens or Activity and Use Limitations 8

4.3 Specialized Knowledge 8

4.4 Commonly Known or Reasonably Ascertainable Information 8

4.5 Valuation Reduction for Environmental Issues 8

4.6 Owner, Property Manager, and Occupant Information 8

4.7 Degree of Obviousness 9

5.0 RECORDS REVIEW 10

5.1 Federal ASTM Databases 11

5.1.1 Federal RCRIS - Generators 11

5.2 State ASTM Databases 12

5.2.1 State Leaking Tanks (LTANKS) 12

5.2.2 Leaking Underground Storage Tank (LUST) List 12

5.2.3 Registered Underground Storage Tank (UST) List 12

5.3 Additional Environmental Record Sources 12

5.3.1 Additional Non-ASTM Federal Databases 12

5.3.2 Additional Non-ASTM State Databases 13

5.3.3 Unmapped (Orphan) Facilities and Sites 13

5.4 Regulatory Review Summary 13
6.0 HISTORICAL USE INFORMATION 14
6.1 Aerial Photograph Review 14
6.2 Sanborn Fire Insurance Map Review 15
6.3 Historical USGS Topographic Maps 15
6.4 City Directory Review 16
6.5 Property Tax Files 17
6.6 Recorded Land Title Records 17
6.7 Building Department Records 17
6.8 Zoning/Land Use Records 17
6.9 Previous Reports 17
6.10 Other Historical Sources 17
6.10.1 Local Fire Department 18
6.10.2 Local Health Department 18
6.11 Historical Use Summary 18
7.0 SITE AND AREA RECONNAISSANCE 19
7.1 Methodology 19
7.2 On-Site Features 19
7.2.1 Observed Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions 19
7.2.2 Current Uses 19
7.2.3 Past Site Uses 19
7.3 Adjoining and Nearby Properties 20
7.4 Site and Area Reconnaissance Summary 21
8.0 ADDITIONAL SERVICES 22
9.0 INTERVIEWS 23
10.0 FINDINGS AND CONCLUSIONS 24
10.1 Findings and Opinions 24
10.2 Significant Data Gaps 24
10.3 De Minimis Conditions 24
10.4 Conclusions 24
11.0 REFERENCES 26

TABLE OF APPENDICES

Appendix I: Figures

Appendix II: Interviews, Correspondence and User Questionnaire

Appendix III: Regulatory Records Documentation

Appendix IV: Historical Research Documentation

Appendix V: Site Photographs

Appendix VI: Statement of Qualifications

Appendix VII: Acronyms

1.0 EXECUTIVE SUMMARY

ECS Mid-Atlantic, LLC (ECS) was contracted by Roanoke County to perform an ASTM E1527-21, Phase I Environmental Site Assessment (ESA) of the Proposed Bonsack/460 Fire Station to be located at 3645 Orange Avenue NE in Roanoke, Virginia (i.e. subject property). This Executive Summary is an integral part of the Phase I ESA report. ECS recommends that the report be read in its entirety.

The subject property is a 2.25-acre portion of a larger 70.79 acre parent parcel identified by the City of Roanoke as parcel number 7110105 and owned by Parkway Wesleyan Church Inc.. The subject property is undeveloped grassland. Municipal water and sanitary sewer are available in the vicinity of the site.

The subject property is located in a commercial area of Roanoke, Virginia. The subject property is bound on the north by undeveloped grass and wooded land (parent parcel) with commercial developments beyond; on the east by undeveloped grassland (parent parcel); on the south by Mexico Way followed by undeveloped grasslands (parent parcel), utilized as soccer fields; and, on the west by Airgas. ECS did not identify environmental issues at adjoining or nearby properties that are believed to present a recognized environmental condition (REC) at the subject property.

Based on the records search, site reconnaissance and interviews, it appears that the subject property has remained undeveloped for over 100 years. Historical records prior to 1890 were not reasonably ascertainable for the subject property. The surrounding area has generally remained undeveloped. The parent parcel is bordered by commercial business including several bank branches, Airgas, and fueling stations. No obvious indications of RECs were identified in the historical data review for the subject property.

A regulatory database search report was provided by Environmental Data Resources, Inc. (EDR). The database search involves researching a series of Federal, State, Local, and other databases for facilities and properties that are located within specified minimum search distances from the subject property. The report did not identify the subject property on the databases researched. The EDR report identified several off-site properties within the minimum ASTM search distances. Based on our review of available public records, none of the listings are believed to represent a REC for the subject property.

ASTM E1527-21 defines a "*data gap*" as: "a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information." A *"significant data gap"* is "a data gap that affects the ability of the environmental professional to identify a recognized environmental condition." Significant data gaps that would be expected to impact our ability to render a professional opinion concerning RECs for the subject property were not identified.

We have performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E1527-21 of the Proposed Bonsack/460 Fire Station to be located at 3645 Orange Avenue NE in Roanoke, Virginia, the subject property. Any exceptions to, or deletions from, this practice are described in Section 2.6 of this report. This assessment has revealed no evidence of recognized environmental conditions, controlled recognized environmental conditions, or significant data gaps in connection with the property.

Table of Critical Dates

Item	Date
Report Issuance Date	May 13, 2022
Date of Interview with Past and Present Owners and Occupants	Not Completed
Date of Recorded Environmental Cleanup Lien Search	April 7, 2022
Date of Government Record Review Report	April 21, 2022
Date of Visual Inspection of Subject and Adjoining Properties	April 26, 2022
Earliest Date of Interviews, Lien Search, Record Reviews, and Inspections	April 7, 2022
Report Viability Date	October 4, 2022

2.0 INTRODUCTION

2.1 Purpose and Reason for Performing Phase I ESA

The purpose of the ESA was to:

- evaluate the probability of impact to the surface water, groundwater and/or soils within the property boundaries through a review of regulatory information and a reconnaissance of the subject property and vicinity;
- evaluate historical land usage to identify previous conditions that could potentially impact the environmental condition of the subject property;
- conduct all appropriate inquiry as defined by ASTM E1527-21 and 40 CFR Part 312;
- evaluate the potential for on-site and off-site contamination; and,
- provide a professional opinion regarding the potential for environmental impact at the site and a list of Recognized Environmental Conditions (RECs).

The ESA should allow the Users the opportunity to qualify for landowner liability protection under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) provided certain stipulations are met. The landowner liability protections are: an innocent landowner, a contiguous property owner, or a bona fide prospective purchaser. The User must meet the protection stipulations detailed in CERCLA to qualify as well as meet the User Obligations contained within the ASTM E1527-21 standard.

The reason for conducting this ESA is to perform all appropriate inquiries into the uses and prior ownership of the subject property for a pending real estate transaction.

2.2 Scope of Services

The environmental assessment was conducted in general accordance with ASTM E1527-21, which ECS believes to be in accordance with EPA Standards and Practices for All Appropriate Inquiry (40 CFR §312.10). The environmental assessment was conducted under the supervision or responsible charge of an individual that qualifies as an environmental professional, as defined in 40 CFR §312.10.

ECS was contracted by Roanoke County to perform an ASTM E1527-21, Phase I Environmental Site Assessment (ESA) of the Proposed Bonsack/460 Fire Station to be located at 3645 Orange Avenue NE in Roanoke, Virginia. ECS was not contracted to address non-scope considerations.

2.3 Definitions

ASTM E1527-21 defines a "*recognized environmental condition (REC)*" as "(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment." For the purposes of this definition,

"likely" is that which is neither certain nor proved, but can be expected or believed by a reasonable observer based on the logic and/or experience of the environmental professional, and/or available evidence, as stated in the report to support the opinions given therein.

ASTM E1527-21 defines a "*historical recognized environmental condition (HREC)*" as "a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). A historical recognized environmental condition is not a recognized environmental condition."

ASTM E1527-21 defines a "*controlled recognized environmental condition (CREC)*" as "recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."

ASTM E1527-21 defines a "*business environmental risk (BER)*" as "a risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice." This assessment does not include ASTM Non-Scope items or identify business environmental risks unless specifically requested by the Client, and included in Section 8.0 of this report.

ASTM E1527-21 defines a "*de minimis condition" as "a* condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a *de minimis* condition is not a recognized environmental condition nor a controlled recognized environmental condition."

2.4 Limitations

The ESA involved a reconnaissance of the subject property and contiguous properties and a review of regulatory and historical information in general accordance with the ASTM standard and EPA regulation referenced herein. No non-scope considerations or additional issues such as asbestos, radon, wetlands or mold were investigated, unless otherwise described in Section 8.0 of this report.

Note: vapor migration in the subsurface is described in Guide E2600 published by ASTM. ECS has not conducted a Vapor Encroachment Screen in accordance with the E2600 guide.

The conclusions and/or recommendations presented within this report are based upon a level of investigation consistent with the standard of care and skill exercised by members of the same profession currently practicing in the same locality under similar conditions. The intent of this assessment is to identify the potential for recognized environmental conditions in connection with the subject property; however, no environmental site assessment can completely eliminate uncertainty regarding the potential for recognized environmental conditions in connection with the

subject property. The findings of this ESA are not intended to serve as an audit for health and safety compliance issues pertaining to improvements or activities at the subject property. ECS is not liable for the discovery or elimination of hazards that may potentially cause damage, accidents or injury.

Observations, conclusions and/or recommendations pertaining to environmental conditions at the subject property are necessarily limited to conditions observed, and or materials reviewed at the time this study was undertaken. It was not the purpose of this study to determine the actual presence, degree or extent of contamination, if any, at this subject property. This could require additional exploratory work, including sampling and laboratory analysis. No warranty, expressed or implied, is made with regard to the conclusions and/or recommendations presented within this report.

This report is provided for the exclusive use of Roanoke County. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties. The use of this report by any undesignated third party or parties will be at such party's sole risk and ECS disclaims liability for any such third party use or reliance. The use of this report is subject to the same terms, conditions and scope of work reflected in this report and the associated proposal.

2.5 Data Gaps

ASTM E1527-21 defines a "*data gap*" as: "a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information." A *"significant data gap"* is "a data gap that affects the ability of the environmental professional to identify a recognized environmental condition."

Data failures (historical data gaps) were identified during the historical research of the subject property. Use of the subject property was generally documented back to 1890. Historical information was missing for various periods; however, due to the other information that was obtained about the subject property, the historical data gaps are not expected to impact our ability to render a professional opinion regarding RECs for the subject property.

Significant data gaps that would be expected to impact our ability to render a professional opinion concerning RECs for the subject property were not identified.

2.6 Limiting Conditions/Deviations

ASTM E1527-21 requires that the Environmental Professional identify limiting conditions, deletions, and deviations from the ASTM E1527-21 standard, if any, including client-imposed constraints. Limiting conditions and/or deviations from the standard practice that would be expected to impact our ability to provide a professional opinion concerning RECs for the subject property were not encountered during the performance of this Phase I ESA.

3.0 SUBJECT PROPERTY DESCRIPTION

3.1 Subject Property Location and Legal Description

Site Name	Proposed Bonsack/460 Fire Station
Property Address	3645 Orange Avenue NE
Property City, State	Roanoke, Virginia
Number of Parcels	Portion of a larger parent parcel
Property ID Number(s)	7110105
Property Size	2.25-acres of a larger 70.79 acre parcel
Property Owner of Record	Parkway Wesleyan Church Inc.
Property Legal Description	As provided on the City of Roanoke Property Report: TRACT A-1 SEC 1 RANCHO MEXICO BUSINESS PK

3.2 Physical Setting and Hydrogeology

USGS Topographic Map	
Quad Designation	Roanoke, Virginia
Date	2019
Subject Property Settings	
Average Subject Property Elevation (in feet or meters)	1,060-1,080 feet above mean sea level
General Sloping Direction	West
Bodies of Water	None
General Directions of Surface Flow	West-northwest
Presumed Direction of Groundwater Flow	West-northwest
Geologic Province	Valley and Ridge
Up-gradient Property Direction	Southeast

Nearby Properties' Setting	
General Sloping Direction	Northwest
Bodies of Water	Unnamed tributary to Glade Creek is located approximately 700 feet west of the subject site.
General Directions of Surface Flow	Curb and Gutter to below grade stormwater conveyances and sheet flow to the west.
Presumed Direction of Groundwater Flow	West

Regional influences such as changes in soil and geologic conditions, and local topography, may have an impact on groundwater flow. The actual groundwater flow direction cannot be determined without site-specific information obtained through the gauging of groundwater monitoring wells.

3.3 Current Use and Description of the Site

The subject property consists of a 2.25-acre portion of a larger 70.79-acre parcel parcel of land that is currently cleared undeveloped grassland. The subject property is located in an area that can generally be described as commercial in use.

4.0 USER PROVIDED INFORMATION

The ASTM standard includes disclosure and obligations of the User to help the Environmental Professional identify the potential for Recognized Environmental Conditions associated with the subject property. The ASTM E1527-21 User Questionnaire was submitted to and completed by George Assaid, AIA, representing Roanoke County (User of the report). Section 4.0 is based on the completed User Questionnaire. A copy of the completed User Questionnaire is included in Appendix II.

4.1 Title Information

ECS was provided with a commitment for title insurance dated April 7, 2022 and a title search report for the site. Deeds were only searched back to 1991 for the subject property and parent parcel. No environmental concerns were identified in the title documents reviewed, copies of which are included in Appendix II.

4.2 Environmental Liens or Activity and Use Limitations

ECS was neither contracted to obtain information on environmental liens or activity and use limitations, nor have we been provided with information on environmental liens or activity and use limitations for our review. It should be noted by the User of this report that if the User does not obtain activity and use limitation information, the User that is seeking to qualify for an innocent landowner, a contiguous property owner, or a bona fide prospective purchaser liability defense may lose these rights to qualify under CERCLA. If the activity and use information is provided following issuance of this report and information contained therein materially changes the outcome of this report, ECS will issue an addendum to this report. The User, however, responded that they were not aware of any AULs associated with the subject property.

4.3 Specialized Knowledge

The User indicated that they did not possess specialized knowledge of the subject property.

4.4 Commonly Known or Reasonably Ascertainable Information

The User indicated that they were not aware of commonly known environmental concerns related to the subject property.

4.5 Valuation Reduction for Environmental Issues

According to the User, the purchase price being paid for the subject property reasonably reflects the fair market value.

4.6 Owner, Property Manager, and Occupant Information

The User indicated that the site is owned and managed by Parkway Wesleyan Church Inc..

4.7 Degree of Obviousness

The User stated that they were not aware of obvious indicators that point to the presence or likely presence of contamination at the subject property.

5.0 RECORDS REVIEW

A regulatory records search of ASTM standard and supplemental databases was conducted for the subject property and is included in Appendix III. The regulatory search report in the appendix includes additional details about the regulatory databases that were reviewed. The regulatory records search involves searching a series of databases for facilities that are located within a specified distance from the subject property. The ASTM standard specifies an approximate minimum search distance from the subject property for each database. Pursuant to ASTM, the approximate minimum search distance may be reduced for each standard environmental record except for Federal NPL site list, and Federal RCRA TSD list. According to ASTM, government information obtained from nongovernmental sources may be considered current if the source updates the information at least every 90 days or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public. The following table indicates the standard environmental record sources and the approximate minimum search distances for each record.

Standard Environmental Record Sources	Approximate Minimum Search Distance Per ASTM (miles)	Subject Property	Off-Site Properties
Federal NPL	1.0	No	0
Federal Delisted NPL	0.5	No	0
Federal CERCLIS	0.5	No	0
Federal CERCLIS NFRAP	0.5	No	0
Federal RCRA CORRACTS	1.0	No	0
Federal RCRA non-CORRACTS TSD	0.5	No	0
Federal RCRA Generators	Subject Site and Adjoining Properties	No	0
Federal IC/EC	Subject Site Only	No	N/A
Federal ERNS	Subject Site Only	No	N/A
State and Tribal Hazardous Waste Sites (NPL Equivalent)	1.0	No	0
State and Tribal Hazardous Waste Sites (CERCLIS Equivalent)	0.5	No	0
State and Tribal Landfill and/or solid waste disposal sites	0.5	No	0

Standard Environmental Record Sources	Approximate Minimum Search Distance Per ASTM (miles)	Subject Property	Off-Site Properties
State and Tribal Leaking Tanks	0.5	No	2
State and Tribal Registered UST and AST	Subject Site and Adjoining Properties	No	0
State and Tribal IC/EC	Subject Site Only	No	N/A
State and Tribal Voluntary Cleanup (VCP)	0.5	No	0
State and Tribal Brownfield Sites	0.5	No	0

Based on our knowledge of the subject property and the surrounding area, ECS attempts to verify and interpret this data. While this attempt at verification is made with due diligence, ECS cannot guarantee the accuracy of the record(s) search beyond that of information provided by the regulatory report(s). ECS makes no warranty regarding the accuracy of the database report information included within the regulatory report(s).

The regulatory database search was performed by EDR and is dated April 21, 2022. ECS did not reduce the minimum ASTM search distances stipulated in the standard. The regulatory databases reviewed by ECS included supplemental databases researched by EDR.

5.1 Federal ASTM Databases

5.1.1 Federal RCRIS - Generators

RCRIS identifies facilities that generate hazardous wastes as defined by the RCRA. Very small quantity generators (VSQG) (previously identified as conditionally exempt small quantity generators or CESQGs) generate less than 100 kilograms of hazardous waste, or less than 1 kilogram of acutely hazardous waste, per month. Small quantity generators (SQGs) generate between 100 and 1,000 kilograms of hazardous waste per month. Large quantity generators (LQGs) generate more than 1,000 kilograms of hazardous waste or more than 1 kilogram of acutely hazardous waste per month.

The subject property is not listed on the RCRA database. No off-site properties within the minimum search distance of inquiry (adjoining properties) are reported by EDR as being on the Federal RCRIS Generators database. One off-site property within 0.25 miles of the subject property is reported as being on the Federal RCRIS Generators database. Additionally, one off-site property within 0.25 miles of the subject property is reported as being on the RCRA Non-Generator (Non-Gen)/No Longer Regulated (NLR) database, which lists facilities that do not currently generate hazardous wastes but were previously tracked as generators. These off-site listings are plotted more than 700 feet from the subject property and are situated in a presumed down-gradient hydrological position relative to

the subject site. Based on the distance and/or relative topographic position, these listings are not considered to be in RECs for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

5.2 State ASTM Databases

5.2.1 State Leaking Tanks (LTANKS)

The LTANKS database is a list of all reported leaking underground and above ground tanks recorded by the state.

The subject property is not listed on the LTANKS database. The database report lists two properties within the designated search radius. These off-site listings are mapped more than 700 feet from the subject property and in a presumed down-gradient hydrological position. Based on the distance and/or relative topographic position, these incidents are not considered to be RECs for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

5.2.2 Leaking Underground Storage Tank (LUST) List

The LUST list is a record of reported leaking underground storage tank incidents. The LUST list may also identify properties that have had soil and/or groundwater contamination associated with documented releases from above ground storage tanks, surface spills, and other sources. The LUST listings are discussed in the LTANKS section above.

5.2.3 Registered Underground Storage Tank (UST) List

The Registered UST List inventories underground storage tanks registered with the state. This list does not identify USTs that have not been registered or are exempt, such as home heating oil tanks and other unregulated tanks.

The subject property is not listed on the UST database. The database report did not identify any UST facilities within the ASTM-designated search radius (subject and adjoining). The database report did identify three UST facilities within 0.25 mile of the subject property. These off-site listings are mapped more than 700 feet from the subject property in a presumed down-gradient hydrologic position. Based on the distance and/or relative topographic position, these off-site listings are not considered to be a REC for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

5.3 Additional Environmental Record Sources

5.3.1 Additional Non-ASTM Federal Databases

Neither the subject property nor properties within the designated search radii are identified on the additional non-ASTM federal databases researched for this assessment.

5.3.2 Additional Non-ASTM State Databases

Neither the subject property nor properties within the designated search radii are identified on the additional non-ASTM state databases researched for this assessment.

5.3.3 Unmapped (Orphan) Facilities and Sites

One property is identified on the Orphan Summary List. These facilities are considered unmappable because the facility information in the database is insufficient and/or does not report accurate facility location. This facility was determined to be located at least 2 miles from the site and is, therefore, not considered to be a REC to the subject site.

5.4 Regulatory Review Summary

A regulatory database search report was provided by EDR. The database search involves researching a series of Federal, State, Local, and other databases for facilities and properties that are located within specified minimum search distances from the subject property. The report did not identify the subject property on the databases researched. The EDR report identified several off-site properties within the minimum ASTM search distances. Based on our review of available public records, ECS does not consider the listings to be potential sources of soil, groundwater, or vapor impact to the subject property. Therefore, ECS does not consider the listed sites to be RECs for the subject property.

6.0 HISTORICAL USE INFORMATION

6.1 Aerial Photograph Review

ECS reviewed aerial photographs of the subject property and immediately surrounding properties for evidence of former usage which may indicate potential environmental issues. The aerial photographs were obtained from EDR. The aerial photographs reviewed are dated 1947, 1956, 1960, 1968, 1982, 1995, 2006, 2009, 2012, and 2016. Aerial photographs dated prior to 1947 were not available for review from EDR. The ECS review is dependent on the quality and scale of the photographs.

The following is a description of relevant information from the aerial photographs:

Year(s)	Subject Property	Adjoining Properties	REC? (yes or no)
1947 - 1956	Due to the quality of the images, specific details are unable to be discerned. However, the property appears to be undeveloped agricultural land.	Due to the quality of the images, specific details are unable to be discerned. However, the area appears to be undeveloped agricultural land with structures to the north. A roadway is present west of the subject property.	No
1960 - 1977	A road transects the property from the north and splits into two roads to the east and south. Sparse wooded land is present in the center of the property along the road. The rest of the property is undeveloped.	The surrounding areas consist of undeveloped land with the exception of scattered residences north of the subject property. A majority of the adjoining property to the west is wooded land.	No
1982	The subject property continues to appear undeveloped. The aforementioned roads are not quite as discernible anymore.	A driveway borders the property to the north followed by scattered residential-type structures. The rest of the surrounding areas consist of predominantly undeveloped land.	No

Year(s)	Subject Property	Adjoining Properties	REC? (yes or no)
1995	The subject property appears similar to the previous imagery, with the exception of an unpaved road that transects the property from the southwest to the northeast.	North - Driveway followed by undeveloped land East - Undeveloped land South - A mixture of fields and wooded land. The southwest edge of the property is bound by a road that runs south of the subject property. West - Commercial structures	No
2006-2016	The subject property continues to be an undeveloped tract. The aforementioned road onsite is no longer discernible.	North - Driveway followed by undeveloped land East - Undeveloped land South - A road followed by fields West - Commercial structures	No

6.2 Sanborn Fire Insurance Map Review

In an effort to identify past uses, ECS utilized EDR to search for historical Sanborn Fire Insurance Maps (Sanborn) for the subject property and surrounding area. Sanborn maps were not available for this area. The absence of such maps generally indicates that the subject property is located in an area where Sanborn maps were not produced because the area was rural or it was not economically feasible. ECS does not expect the lack of Sanborn maps to impact our ability to render a professional opinion concerning the subject property given the amount of historical information obtained from our research, the USGS topographic map, aerial photographs, city directories, and other historical records obtained. A copy of the Unmapped Property report is included within Appendix IV.

6.3 Historical USGS Topographic Maps

Topographic maps are produced by the United States Geological Survey (USGS) for various time periods. ECS reviewed topographic maps of the subject property and immediately surrounding properties for evidence of former usage that may indicate potential environmental issues. The topographic maps were obtained from EDR and were dated 1890, 1891, 1929, 1933, 1962, 1963, 1968, 1977, 1978, 1984, 2013, 2016, and 2019. Topographic maps dated prior to 1890 were not available for review from EDR

The following is a description of relevant information from the topographic maps:

Year(s)	Subject Property	Adjoining Properties	REC? (yes or no)
1890-1933	The subject property is depicted as undeveloped land.	The surrounding areas are depicted as undeveloped land with a highway depicted farther west of the subject property.	No
1962-1984	Similar to previous topographic maps with the addition of an "unimproved" road that transects the subject property from north to south beginning in 1962.	North - Scattered structures East - Undeveloped land. South - Undeveloped land followed by a patch of wooded land. West - Undeveloped land followed by an unimproved road and a highway beyond.	No
2013-2019	In general, these topographic maps do not depict structures, only roads, topography and landmarks . The aforementioned road that transects the subject property is no longer depicted.	In general, structures are not depicted on these maps, only roads, topography and landmarks. The site is bound to the north, east, and south by roads. A road is depicted along the southern property boundary on the 2019 topographic map.	No

6.4 City Directory Review

One of the ASTM standard historical sources to be reviewed for previous subject property uses is local street directories, commonly known as City Directories. The purpose of the directory review is to identify past occupants of the subject property, adjoining properties, or nearby properties. In some rural areas, street directories information is limited.

ECS reviewed City Directories obtained from EDR. The subject property address utilized for the research was the parent parcel's address of 3645 Orange Avenue NE. The directories reviewed are dated 1984, 1989, 1992, 1995, 2000, 2005, 2010, 2014, and 2017. Directories dated prior to 1984 were not available for review from EDR. A copy of the City Directory report is included in Appendix IV. The parent parcel is first listed in the 1992 directory and again in the 1995 directory as a communication consultant and as Mexitronics, an electronics distribution company. By 2000, Parkway Church is identified at the site including as a Parkway food bank. Surrounding properties are listed as Airgas, various bank branches, restaurants, and residential listings. No environmental corners were identified on the City Directories reviewed.

6.5 Property Tax Files

Property tax files may include records of past ownership, appraisals, maps, sketches, photos, or other information kept by the local jurisdiction for property tax assessment purposes. According to the Roanoke City tax assessor online information, the subject property is owned by Parkway Wesleyan Church Inc.. The subject property is a 2.25-acre portion of a larger 70.79-acre parent parcel with an identification number of 7110105.

6.6 Recorded Land Title Records

Recorded land title records may include leases, land contracts, and AULs recorded by the local jurisdiction. Land title records may provide only a list of the names of previous owners and may be of limited use; however, they may provide useful information about uses or occupancy of the property when employed in combination with other sources.

ECS was provided with a commitment for title insurance dated April 7, 2022 and a title search report for the site. Deeds were only searched back to 1991 for the subject property and parent parcel. No environmental concerns were identified in the title documents reviewed, copies of which are included in Appendix II.

6.7 Building Department Records

The term building department records means those records of the local government indicating permissions of the local government to construct, alter or demolish improvements on the property.

ECS obtained a list of building permits from EDR via the Lightbox^{TM} application. No building permits were identified for the subject property or the parent parcel. The reviewed building permits for nearby properties did not indicate the presence of a REC for the subject property.

6.8 Zoning/Land Use Records

The term zoning/land use records refers to records of the local government indicating the uses permitted by the government in particular zones within its jurisdictions. ECS reviewed zoning/land use records obtained from the City of Roanoke. The subject property is currently zoned INPUD: Institutional Planed Unit Development.

6.9 Previous Reports

We have not been provided with environmental or engineering assessment reports for the subject property completed by others, nor has ECS completed similar studies or prior assessments of the subject property.

6.10 Other Historical Sources

Other credible historical sources may be reviewed to identify past uses of the subject property. These sources may include websites, county or state road maps, historical society documents, or local library information.

6.10.1 Local Fire Department

The Roanoke City Fire Department was contacted to determine if they had historical information regarding environmental issues or responses at the subject property. No information has been received at the time of the report completion. If information is received that changes the conclusions or recommendations of this report, ECS will forward the information to the Client.

6.10.2 Local Health Department

The Roanoke City Health Department was contacted to determine if they had historical information regarding environmental issues or responses at the subject property, including records of well or septic systems. No information has been received at the time of the report completion. If information is received that changes the conclusions or recommendations of this report, ECS will forward the information to the Client.

6.11 Historical Use Summary

According to historical research, the subject property has remained undeveloped for over 100 years and is currently maintained grassland and a part of a larger parent parcel owned by a church. The immediate surrounding area has generally remained undeveloped with the exception of Airgas to the west with additional commercial and retail developments beyond. The parent parcel is bordered by commercial use including several bank branches, Airgas, and fueling stations. No obvious indications of RECs were identified in the historical data review for the subject property.

7.0 SITE AND AREA RECONNAISSANCE

7.1 Methodology

Jessica Blankenship and Alexandra Moon of ECS conducted the field reconnaissance on April 26, 2022. The weather at the time of the reconnaissance was 72 degrees Fahrenheit and partly cloudy. Observations were made from a walking reconnaissance around the perimeter and along several transects across the subject property. Access or visibility limitations, if any, are discussed in Section 2.6. Subject property photographs are included in Appendix V.

7.2 On-Site Features

7.2.1 Observed Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

The site gently slopes from the east to the west. A rock lined drainage ditch is located on the northern portion of the site. The remainder of the site is undeveloped grassland. No other remarkable geologic or hydrologic conditions were observed on the premises.

7.2.2 Current Uses

The subject property is approximately 2.25-acres in size and consists of undeveloped land. Water and sewer services are available in the vicinity of the subject property through the Western Virginia Water Authority. No structures, ruins or foundations were observed on the subject property. The subject property gently slopes from east to west. No other environmentally-remarkable features, conditions or activities were observed onsite.

7.2.3 Past Site Uses

During the site reconnaissance, ECS observed the subject property for evidence of past occupancy or usage that could indicate the presence of environmental concerns. Based on current site conditions observed during the site reconnaissance, ECS did not identify evidence of past uses or occupancy that would indicate the presence of a REC for the subject property.

The table below lists pertinent features of interest that were assessed for the subject property. Pertinent features of environmental concern were not observed during the site reconnaissance.

Feature	Yes	No
Hazardous Substances and Petroleum Products in Connection with Identified Uses		✔
Hazardous Substance and Petroleum Product Containers Not in Connection with Identified Uses		✔
Drums, Totes, and Intermediate Bulk Containers		✔
Unidentified Substance Containers		✔
Underground or Aboveground Storage Tanks		✔

Feature	Yes	No
Strong, Pungent or Noxious Odors		✔
Standing Surface Water and Pools or Sumps Containing Liquids Likely to be Hazardous Substances or Petroleum Products		✔
Known or Suspect PCB-containing Equipment		✔
Stains or Corrosion to Floors, Walls or Ceilings		✔
Stained Soil or Pavement		✔
Floor Drains and Sump Pumps		✔
Pits, Ponds or Lagoons		✔
Stressed Vegetation		✔
Solid Waste Mounds or Non-natural Fill Materials		✔
Water/Wastewater Discharge		✔
Groundwater Wells		✔
Septic Systems or Cesspools		✔
Hydraulic Equipment (Elevators, Lifts, Compactors, Etc.)		✔
Dry Cleaning		✔
Specialized Industrial Equipment		✔
Onsite Emergency Electrical Generators		✔
Oil-water Separators		✔

7.3 Adjoining and Nearby Properties

Contiguous and nearby properties were observed during a walking and vehicular reconnaissance of the subject property boundary and public places. The subject property is located in a commercial area of the City of Roanoke, Virginia. The following is a summary of nearby and adjoining properties:

Direction	Description	Relative Gradient	REC
North	The subject property is bound to the north by undeveloped land followed by commercial structures.	Cross-gradient	No
East	The subject property is bound to the east by undeveloped land with the Parkway Church beyond.	Up-gradient	No

Direction	Description	Relative Gradient	REC
South	The subject property is bound to the south by a road, Mexico Way and followed by undeveloped land utilized as soccer fields.	Cross-gradient	No
West	The subject property is bound to the west by an Airgas store.	Down-gradient	No

7.4 Site and Area Reconnaissance Summary

According to our site observations and a review of adjoining and nearby properties, the subject property is undeveloped, grassland. The subject property is located in a commercial and retail area of the City of Roanoke. Details pertaining to our on-site and off-site observations are referenced previously. We did not identify RECs associated with the subject property or neighboring properties and businesses during the reconnaissance.

8.0 ADDITIONAL SERVICES

ASTM guidelines identify non-scope issues, which are beyond the scope of this practice. Non-scope issues have the potential to be business environmental risks. Some of these non-scope issues include; asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands, and mold. ECS was not authorized to assess non-scope issues in conjunction with this assessment.

9.0 INTERVIEWS

ECS was not provided with an owner contact with whom to perform an interview. The absence of an owner interview is considered to be a data gap for the Phase I ESA process; however, based on the historically undeveloped state of the property and information gained from other sources, the absence of an owner interview was not considered likely to affect our ability to render a professional opinion of the property's environmental quality.

ECS interviewed local government officials and agencies via written Freedom of Information Act requests. Information gained from such sources in included in Section 6.10.

10.0 FINDINGS AND CONCLUSIONS

10.1 Findings and Opinions

The subject property is a 2.25-acre portion of a larger 70.79 acre parent parcel identified by the City of Roanoke as parcel number 7110105 and owned by Parkway Wesleyan Church Inc.. The subject property is undeveloped grassland. Municipal water and sanitary sewer are available in the vicinity of the site.

The subject property is located in a commercial area of Roanoke, Virginia. The subject property is bound on the north by undeveloped grass and wooded land (parent parcel) with commercial developments beyond; on the east by undeveloped grassland (parent parcel); on the south by Mexico Way followed by undeveloped grasslands (parent parcel), utilized as soccer fields; and, on the west by Airgas. ECS did not identify environmental issues at adjoining or nearby properties that are believed to present a recognized environmental condition (REC) at the subject property.

Based on the records search, site reconnaissance and interviews, it appears that the subject property has remained undeveloped for over 100 years. Historical records prior to 1890 were not reasonably ascertainable for the subject property. The surrounding area has generally remained undeveloped. The parent parcel is bordered by commercial business including several bank branches, Airgas, and fueling stations. No obvious indications of RECs were identified in the historical data review for the subject property.

A regulatory database search report was provided by Environmental Data Resources, Inc. (EDR). The database search involves researching a series of Federal, State, Local, and other databases for facilities and properties that are located within specified minimum search distances from the subject property. The report did not identify the subject property on the databases researched. The EDR report identified several off-site properties within the minimum ASTM search distances. Based on our review of available public records, none of the listings are believed to represent a REC for the subject property.

10.2 Significant Data Gaps

Significant data gaps that would be expected to impact our ability to render a professional opinion concerning RECs for the subject property were not identified.

10.3 De Minimis Conditions

ECS did not identify *de minimis* conditions associated with the subject property during this assessment.

10.4 Conclusions

We have performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E1527-21 of the Proposed Bonsack/460 Fire Station to be located at 3645 Orange Avenue NE in Roanoke, Virginia, the subject property. Any exceptions to, or deletions from,

this practice are described in Section 2.6 of this report. This assessment has revealed no evidence of recognized environmental conditions, controlled recognized environmental conditions, or significant data gaps in connection with the property.

11.0 REFERENCES

ASTM E1527-21. Standard Practice for Environmental Site Assessment, Phase I Environmental Site Assessment Process.

Environmental Data Resources, Inc., The EDR Aerial Photo Decade Package (years 1947, 1956, 1960, 1968, 1982, 1995, 2006, 2009, 2012, and 2016), dated April 25, 2022.

Environmental Data Resources, Inc., The EDR Radius Map Report, dated April 21, 2022.

Environmental Data Resources, Inc., Certified Sanborn Map Report (No Coverage), dated April 21, 2022.

City of Roanoke GIS website, last accessed on May 6, 2022.

Environmental Data Resources, Inc., EDR City Directory Image Report (years 1984, 1989, 1992, 1995, 2000, 2005, 2010, 2014, and 2017), dated April 25, 2022.

Environmental Data Resources, Inc., Historical Topo Map Report (years 1890, 1891, 1929, 1933, 1962, 1963, 1968, 1977, 1978, 1984, 2013, 2016, and 2019), dated April 21, 2022.

Appendix I: Figures

Figure 1

Site Location Map
Proposed Bonsack/460 Fire Station
3645 Orange Avenue NE
Roanoke, Virginia 24012

Figure 2

USGS Topographic Map
Proposed Bonsack/460 Fire Station
3645 Orange Avenue NE
Roanoke, Virginia 24012

Figure 3

Site Plan

Proposed Bonsack/460 Fire Station

3645 Orange Avenue NE

Roanoke, Virginia 24012

Appendix II: Interviews, Correspondence and User Questionnaire

Environmental Questionnaire for User

Completion required for conformance with ASTM E 1527-13. Failure to provide this information may preclude CERCLA liability protections for the property purchaser. Please return answered form to ECS.

Site Name: Parkway Wesleyan Church - Bonsack/460 Fire Station

Name and Title of Person Completing Questionnaire (Please Print):

George Assaid

Signature of Person Completing Questionnaire:

Date: 4/21/2022

Name of Your Company and Your Contact Number (Please Print):

County of Roanoke, 540-777-6348

ASTM E 1527-13 indicates that, "Either the user shall make known to the environmental professional the reason why the user wants to have the Phase I Environmental Site Assessment performed or, if the user does not identify the purpose of the Phase I Environmental Site Assessment, the environmental professional shall assume the purpose is to qualify for an LLP to CERCLA liability and state this in the report." As the user of this ESA, what is the reason for conducting the Phase I ESA? If this question is unanswered, ECS will assume that the user's reason for the ESA is to qualify for landowner liability protections to CERCLA liability.

Please state reason for having ESA performed: Part of the due diligence phase prior to purchasing the property.

Will you provide Property Title Records and a Legal Description to ECS?

Please select one: **NO** [ ] **YES** [X]

Will you provide a 50-year chain of title abstract to ECS?

Please select one: **NO** [X] **YES** [ ]

Please Send Information Promptly

(1a.) Environmental liens that are filed or recorded against the site (40 CFR 312.25). ASTM E 1527-13 states that the user should perform a review of recorded land title records and judicial records for environmental liens or activity and use limitations for the site. Please forward the results of the land title record and judicial record review. If you would prefer, ECS can obtain this information from a third party provider for **an additional fee**. Please let ECS know if you would like to contract ECS for this service.

Please select one: **Client to Provide** [ ] **ECS to Provide for Additional Fee** [X]

ENVIRONMENTAL QUESTIONNAIRE

(1b.) **Activity and use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).** Are you aware of any activity and use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(2.) **Specialized knowledge -** As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(3.) **Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).** Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:

(a.) Do you know the past uses of the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please state uses: _____

(b.) Do you know of specific chemicals that are present or once were present at the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(c.) Do you know of spills or other chemical releases that have taken place at the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(d.) Do you know of any environmental cleanups that have taken place at the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(4.) **Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).** Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

Please select one: **NO** [ ] **YES** [X]
If no, please explain: _____

If you are aware that there is a difference, is the lower purchase price because contamination is known or believed to be present at the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

(5.) **Parcel Property Owner(s) & Contact Number(s):**

A. Parkway Wesleyan Church
B. _____
C. _____
D. _____

Property Manager and Occupant(s) & Contact Number(s)

Property Manager: Lincoln Miller, Creative Tech Pastor, 540.685.5869
Occupant/Tenant: _____
Occupant/Tenant: _____

(6.) **The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).** As the user of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Please select one: **NO** [X] **YES** [ ]
If yes, please explain: _____

ALTA COMMITMENT FOR TITLE INSURANCE

Issued By:

Fidelity National Title Insurance Company

Commitment Number:

ROA22111

NOTICE

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Fidelity National Title Insurance Company, a Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Fidelity National Title Insurance Company

By:

Michael J. Nolan, President

Attest:

Marjorie Nemzura, Secretary

Countersigned By:

Authorized Officer or Agent
Pam Easter

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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AMERICAN LAND TITLE ASSOCIATION

FIDELITY NATIONAL TITLE INSURANCE COMPANY **COMMITMENT NO. ROA22111**

Transaction Identification Data for reference only:

ISSUING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Title Officer: Pam Easter Fidelity National Title Insurance Company 310 First Street, Suite 1210 Roanoke, VA 24011 Phone: 540-982-2121 Email: Pam.Easter@fnf.com	

Order Number: ROA22111
Project Name:
Prepared For: Roanoke County Board of Supervisors

SCHEDULE A

1. Commitment Date: April 7, 2022 at 08:00 AM
2. Policy to be issued:
   (a) ALTA Owner's Policy 2006 w-VA Mod
   Proposed Insured: Roanoke County Board of Supervisors
   Proposed Policy Amount: $540,000.00
3. The estate or interest in the Land described or referred to in this Commitment is:

   Fee Simple
4. The Title is, at the Commitment Date, vested in:

   Parkway Wesleyan Church, Inc.
5. The Land is described as follows:

   SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

END OF SCHEDULE A

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EXHIBIT "A"

Legal Description

TENTATIVE LEGAL DESCRIPTION:

All that certain tract or parcel of land, lying and being in the City of Roanoke, Commonwealth of Virginia, and more particularly described as follows, to-wit:

All that certain parcel, containing 2.25 acres, more or less, as further shown and described on plat of subdivision entitled "Bonsack Fire Station.....", dated _____, prepared by _____, L.S. of Balzer & Associates, recorded in the Clerk's Office of the Circuit Court of the City of Roanoke, Virginia as Instrument No. _____.

BEING a portion of that property conveyed to Parkway Wesleyan church, Inc., a Virginia corporation, from The Carpenter's Foundation, a Virginia non-stock, non-member corporation, by Deed dated December 19, 2003 and recorded in the Clerk's Office of the Circuit Court of Roanoke City, Virginia as Instrument No. 040000415.

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SCHEDULE B, PART I
REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

2. Pay the agreed amount for the estate or interest to be insured.

3. Pay the premiums, fees, and charges for the Policy to the Company.

4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

5. The exact nature and structure of the transaction to be insured hereunder must be disclosed to the Company. This Commitment is subject to additional requirements and/or exceptions as the Company deems appropriate following such disclosure.

6. Instruments creating the estate or interest to be insured must be approved, executed and filed for record to wit:

   a. Deed from Parkway Wesleyan Church, Inc. vesting fee simple title in Roanoke County Board of Supervisors.

7. The Company must be provided with an approved form of executed Owner's Affidavit and Agreement relating to, among other items, mechanics' liens and parties in possession.

8. Pay and release of record of the property set forth under Schedule A hereof from the following item(s):

   a. Deed of Trust from Parkway Wesleyan Church, Inc., a Virginia non-stock corporation to Maryellen F. Goodlatte and Robert E. Glenn, Trustees, dated January 28, 2004, recorded as Instrument No. 040001599 to secure Wesleyan Investment Foundation, Inc. in the principal sum of $6,000,000.00.

9. With regard to Parkway Wesleyan Church, Inc., a Virginia corporation (the “Corporation”), the following is required:
   A. copy of the Corporate Charter or Articles of Incorporation;
   B. a Certificate of Incorporation and By-Laws of the corporation, and any and all amendments thereto;
   C. a Certificate of Good Standing issued by the Secretary of State for the State of Virginia;
   D. foreign corporations only: Certificate of Authority from the Commonwealth of Virginia evidencing that the Corporation is authorized to do business in the Commonwealth of Virginia; and
   E. a duly certified copy of the resolution of the Board of Directors authorizing the sale of the real property referred to herein, and directing named officers of the Corporation to execute and deliver a deed conveying title thereto.
   F. Receipt and review of appropriate resolutions and/or signing authorities for those entities/persons signing the Deed(s) and/or Power(s) of Attorney, as applicable.
   Note: This Commitment is subject to such additional exceptions as may appear upon review of said documentation.

10. Description appearing under Exhibit A hereof is tentative and subject to change and modification. Upon receipt of satisfactory acceptable description, this commitment shall be amended or otherwise modified.

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SCHEDULE B, PART I
REQUIREMENTS
(continued)

11. Plat of subdivision referenced under Scedule A must be approved by the County subdivision agent and recorded with required instrument(s) and this company must be furnished with the recording information for same.

12. If survey coverage is required, the Company will require an ALTA/NSPS LAND TITLE SURVEY. If the owner of the Land that is the subject of this transaction is in possession of a current ALTA/NSPS LAND TITLE SURVEY, the Company will require that said survey be submitted for review and approval; otherwise, a new survey, satisfactory to the Company, must be prepared by a licensed land surveyor and supplied to the Company prior to the close of escrow.

    The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

13. The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any addition premium must be paid at that time. An Owner's policy should reflect the purchase price or full value of the Land.

14. Payment of all outstanding water, sewer, and public utility charges to date of settlement.

15. Payment of all taxes, charges, and assessments, levied and assessed against the subject premises, which are due and payable.

16. Certification from settlement agent that they have made independent verification through the PACER system that the seller and/or borrowers are not in bankruptcy.

17. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

END OF SCHEDULE B, PART I

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SCHEDULE B, PART II
EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

GENERAL EXCEPTIONS

1. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the Effective Date hereof but prior to the date the Proposed Insured acquires for value of record the estate or interest or mortgage thereon covered by this Commitment.

2. Taxes or special assessments which are not shown as existing liens by the public records

3. Easements, or claims of easements, not shown by the public records.

4. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

5. Rights or claims of parties in possession not shown by the public records .

SPECIAL EXCEPTIONS

6. Those taxes and special assessments which become due and payable subsequent to Date of Policy.

7. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.

8. Easement granted to Southern Bell Telephone and Telegraph Company of Virginia by instrument dated August 10, 1911, recorded in Deed Book 57, Page 374. (Roanoke Co.)

9. Easement granted to The Chesapeake and Potomac Telephone Company of Virginia by instrument dated July 29, 1914, recorded in Deed Book 74, Page 138. (Roanoke Co.)

10. Easement granted to The Chesapeake and Potomac Telephone Company of Virginia by instrument dated May 17, 1927, recorded in Deed Book 164, Page 124. (Roanoke Co.)

11. Easement granted to Appalachian Electric Power Company by instrument dated October 20, 1931, recorded in Deed Book 207, Page 556. (Roanoke Co.)

12. Easement granted to Appalachian Electric Power Company by instrument dated August 14, 1939 recorded in Deed Book 272, page 269. (Roanoke Co.)

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SCHEDULE B, PART II
EXCEPTIONS
(continued)

13. Easement granted to Appalachian Power Company by instrument dated August 7, 1990, recorded in Deed Book 1457, Page 1759.

14. Easement granted to Appalachian Power Company by instrument dated January 14, 1987, recorded in Deed Book 1559, Page 392.

15. Drainage easement conveyed to David H. Luther, Edwin H. Luther and Frances B. Luther by instrument dated July 10, 1991, recorded in Deed Book 1643, Page 1329.

16. Terms and conditions contained in Maintenance Agreement dated February 11, 2004, recorded as Instrument no. 040004107.

17. The following matters shown on plat recorded in Map Book 1, Page 1588:
a) Paved driveway and gravel driveway leading from Rte. 460 and Mexico Way, N. E. , respectively, to adjoining property;
b) Easement fifteen feet in width for public utilities located along the cul-de-sac at the terminus of Mexico Way, N. E.;
c) Failure of the fences to not coincide with the property lines;
d) Satellite dish which appears to be appurtenant located on adjoining property;
e) Drainage easement located in the southwesterly corner of property under examination;
f) 15 foot road right-of-way to cemetery located at the westerly corner of property.

END OF SCHEDULE B, PART II

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COMMITMENT CONDITIONS

1. DEFINITIONS

(a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.

(b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.

(c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.

(d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.

(e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.

(f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.

(g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.

(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

(a) the Notice;

(b) the Commitment to Issue Policy;

(c) the Commitment Conditions;

(d) Schedule A;

(e) Schedule B, Part I-Requirements;

(f) Schedule B, Part II-Exceptions; and

(g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

(a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:

(i) comply with the Schedule B, Part I-Requirements;

(ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or

(iii) acquire the Title or create the Mortgage covered by this Commitment.

(b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.

(c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.

(d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.

(e) The Company shall not be liable for the content of the Transaction Identification Data, if any.

(f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.

(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.

(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

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(continued)

(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.

(d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.

(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.

(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

END OF CONDITIONS

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FIDELITY NATIONAL TITLE GROUP, INC.

Chicago Title, Commonwealth Land Title and Fidelity National Title Insurance Companies

Virginia Production Division

TITLE SEARCH REPORT

This Title Search Report is issued for the use of the agent to whom it is addressed. This Report is to be used only by the agent to determine the insurability of title to the property described herein in conjunction with issuance of commitments, policies and endorsements by the above named title insurers ("the Company"). The agent reviewing this Title Search Report must follow all underwriting guidelines set forth in the underwriting Manual and Bulletins issued by the Company. This is a report of matters appearing in the official land records of the county or city wherein the property is located. No search has been made for any matters recorded in the Federal District Courts. Not included in this Report are matters, such as mortgages, judgments and other liens, for which the Company has found recorded satisfactions or releases, and possible other matters which, according to custom and practice, would not appear in a title search. The amount shown in this Report for any deeds of trust, judgments and/or taxes is for informational purposes only. The recipient is responsible for confirming amounts for payoff and/or proration purposes. Use of this Title Search Report for any reason other than the issuance of a Company commitment, policy or endorsement is not authorized. The liability under this Title Search Report is limited to the liability under the policy or policies issued pursuant to this Title Search Report. This Title Search Report is not an opinion, warranty or guarantee of title. The liability under this Title Search Report shall cease and terminate six months after the ending date set forth in the Period of the Search, unless extended in writing by the Company

CASE NO: *ROA22111* **CUSTOMER:** *Roanoke County*

RECIPIENT: County of Roanoke
CASE NO: ROA22111

TITLE TO THE BELOW DESCRIBED PROPERTY IS VESTED OF RECORD IN:

Parkway Wesleyan Church, Inc., a Virginia corporation

UNDER THE FOLLOWING DEED:

GRANTOR(S): The Carpenter's Foundation, a Virginia non-stock corporation
DATED: 12/19/03 **DEED BOOK & PG./INST. NO:** 040000415

The property lies in the City of Roanoke**, Virginia. Recordation references are to the Clerk's Office of the Circuit Court thereof unless otherwise stated.**

LEGAL DESCRIPTION:

2.25 acres, being a portion of property acquired by above-referenced deed. Customer to provide new survey.

DEEDS OF TRUST:

GRANTORS: Parkway Wesleyan Church, Inc., A Virginia non-stock corporation
TRUSTEES: Maryellen F. Goodlatte and Robert E. Glenn
DATED: 1/28/2004 **DEED BOOK & PG./INST. NO:** 040001599
AMOUNT: $6,000,000.00
NAMED BENEFICIARY: Wesleyan Investment Foundation, Inc.
ASSIGNMENTS, ETC.: None of record.

JUDGMENTS: None
JUDGMENTS AGAINST PURCHASER: None

FINANCING STATEMENTS: None

TAX INFORMATION:

DELINQUENT TAXES:	None
TAXES PAID THROUGH:	2nd half 2021/2022 FY (6/30/2022)
TAXES A LIEN, BUT NOT YET DUE:	1st half 2022/23 FY due 10/5/2022
ASSESSMENT:	Land Only - $1,516,900
Annual Amount:	$5,540.40
TOWN TAXES:	None.
EXEMPTION, ROLLBACK, ETC.:	Stormwater fees included with above annual amount
TAX MAP NO.	7110105
Address:	Orange Avenue NE

PROPERTY ADDRESS (not warranted): Orange Avenue, Roanoke, VA

RESTRICTIONS: None

DEEDED EASEMENTS:

FROM: G. G. Gish
TO: Southern Bell Telephone and Telegraph Company of Virginia
DATED: 8/10/11 **DEED BOOK & PG./INST. NO:** 57-374

FROM: Nannie Gish
TO: The Chesapeake and Potomac Telephone Company of Virginia
DATED: 7/29/14 **DEED BOOK & PG./INST. NO:** 74-138

FROM: Mrs. G. G. Gish
TO: The Chesapeake and Potomac Telephone Company of Virginia
DATED: 5/17/27 **DEED BOOK & PG./INST. NO:** 164-124

FROM: J. E. Gish and Nancy J. Gish
TO: Appalachian Electric Power Company
DATED: 10/20/31 **DEED BOOK & PG./INST. NO:** 207-556

FROM: Geo. G. Gish and Evelyn L. Gish
TO: Appalachian Electric Power Company
DATED: 8/14/39 **DEED BOOK & PG./INST. NO:** 272-269

FROM: Joel Ewen
TO: Appalachian Power Company
DATED: 8/7/90 **DEED BOOK & PG./INST. NO:** 1457-1759

FROM: Joel Ewen and Petra B. Ewen
TO: Appalachian Power Company
DATED: 1/14/87 **DEED BOOK & PG./INST. NO:** 1559-392

FROM: Petra B. Ewen, Executrix of Estate of Joel J. Ewen
TO: David H. Luther, Edwin H. Luther, Frances B. Luther
DATED: 7/10/91 **DEED BOOK & PG./INST. NO:** 1643-1329

EASEMENTS SHOWN ON RECORDED PLAT OF SUBDIVISION: Map Book 1-1588

a) Paved driveway and gravel driveway leading from Rte. 460 and Mexico Way, N. E. , respectively, to adjoining property.
b) Easement fifteen feet in width for public utilities located along the cul-de-sac at the terminus of Mexico Way, N. E.
c) Several fences which do not coincide with the property lines.
d) Satellite dish which appears to be appurtenant located on adjoining property.
e) Drainage easement located in the southwest corner of property.
f) 15' road right of way to cemetery located at westerly corner of property.

SHOWN ON OTHER PLATS OF RECORD: Map Book 1, 2872 shows a resubdivsion of property into Tract A-1 (70.785 acres), Lot A-1 (1.131 acres) and Lot B-1 (1.158 acre.) It appears from Exhibit A of Purchase Contract showing "Proposed Fire Station Parcel" and "Additional Parcel", that property to be insured in not within the resubdivision area shown on this plat.

BUILDING RESTRICTION LINE SHOWN ON SUBDIVISION PLAT: None

ACCESS TO PUBLIC ROAD: Yes
ROAD MAINTENANCE AGREEMENT: None of record
OTHER MATTERS:

Rights of others in and to the use of the 15 foot road right of way leading to cemetery crossing the extreme westerly corner of the property as shown on plat of survey made by John T. Parker, L.S., dated October 4, 1996, recorded in Map Book 1-1588.

Maintenance Agreement dated 2/11/2004, between Parkway Wesleyan Church, Inc. and City of Roanoke, Virginia, of record as Instrument No. 040004107.

Please note that Deed recorded as Instrument No. 040000415 which conveys the property under examination into current owner states that approval for this acquisition was attached to the deed, however, it was not.

RELIED ON: ro00002362A
EFFECTIVE DATE: April 7, 2022 at 8:00 a.m.

Fidelity National Title Insurance Company

Debbie D. Davidson

Debbie D. Davidson

SELECTED SEARCH CRITERIA

Jurisdiction: 770 - Roanoke City Circuit Court 04/11/2022 05:28AM

		From Date	To Date
Available:	Deeds and Land Records	9/3/1991	4/7/2022

Detail Search

Search:

PARKWAY WESLEYAN CHURCH INC

PARKWAY WESLEYAN CHURCH

LR 070007452 Type: **RML 5/14/2007** Pages: **2**
Description: **INST 060017137**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110121**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

LR 070007452 Type: **RML 5/14/2007** Pages: **2**
Description: **INST 060017137**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7110121**
Reverse Party: **BANKER STEEL COMPANY LLC**

LR 070001184 Type: **RML 1/24/2007** Pages: **2**
Description: **INST 060011670**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7110121**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

LR 070001184 Type: **RML 1/24/2007** Pages: **2**
Description: **INST 060011670**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110121**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

J - 0
F/S - 0

LR 060017137 Type: **LM 10/16/2006** Pages: **3**
Description: **11.588 ACRES**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110121**
Reverse Party: **BANKER STEEL COMPANY LLC**

released

Banker Steel Co. 60,184.56 7/18/06

LR 060011670 Type: **LM 7/20/2006** Pages: **3**
Description: **11.588 ACRES**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110212**
Reverse Party: **KODIAK CONSTRUCTORS INC**

released

Stevens Interior 43,440.50 4/21/06

LR 060002319 Type: **DBS 2/14/2006** Pages: **3**
Description: **0.143 ACRE**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7110120**
Reverse Party: **COMBS, BOBBY R**

✓ acq add Parcel 0.143 AC. Belle Ave see Plat @ MB1-2872

LR 060002318 Type: **DBS 2/14/2006** Pages: **5**
Description: **PARS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110120**
Reverse Party: **COMBS, BOBBY R**

✓ 0.202 ac + 0.090 AC. Belle Ave W1 see Plat @ MB1-2872 ESMT

LR 05002872M Type: **OPM 4/26/2005** Pages: **1**
Description: **TRACT A-1 & LOTS A-1 & B-1**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110105**
Reverse Party: **COMBS, BOBBY R**

LR 05002872M Type: **OPM 4/26/2005** Pages: **1**
Description: **TRACT A-1 & LOTS A-1 & B-1**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7110105**
Reverse Party: **COMBS, BOBBY R**

see MB1-2872 ✓

LR 050002850 Type: **CS 2/25/2005** Pages: **1**
Description: **1697-713**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7090402**
Reverse Party: **FLIPPEN, G FRANKLIN; TR**

LR 050002850 Type: **CS 2/25/2005** Pages: **1**
Description: **1697-713**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090402**
Reverse Party: **PARKWAY WESLEYAN CHURCH**

rel 1697-713

LR 050002849 Type: **CPS 2/25/2005** Pages: **2**
Description: **LTS 1 & 2 INST 040001599**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7090402**
Reverse Party: **GLENN, ROBERT E; TR**

LR 050002849 Type: **CPS 2/25/2005** Pages: **2**
Description: **LTS 1 & 2 INST 040001599**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090402**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

releases Lots 1 & 2 King St.

LR 050002378 Type: **DBS-PL 2/16/2005** Pages: **5**
Description: **LTS 1 & 2 GISH ESTATE**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090411**
Reverse Party: **PARKWAY HOUSE OF PRAYER**

Lots 1 & 2 King St. 3.386 AC & 5.4619 AC.

LR 040013371 Type: **CS 8/9/2004** Pages: **1**
Description: **INST 000000602**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7090402**
Reverse Party: **GOODLATTE, MARYELLEN F; TR**

LR 040013371 Type: **CS 8/9/2004** Pages: **1**
Description: **INST 000000602**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090402**
Reverse Party: **PARKWAY WESLEYAN CHURCH**

rel. DT on report

LR 040004107 Type: **AG-PL 3/18/2004** Pages: **7**
Description: **11.588 & 70.933 ACRES**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7110121**
Reverse Party: **CITY OF ROANOKE**

✓ maint. agreement STM

LR 040001599 Type: **DTCL 2/2/2004** Pages: **7**
Description: **PARS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090402**
Reverse Party: **GOODLATTTE, MARYELLEN F; TR**

1/28/04 Maryellen & Glenn Wesleyan Inv. Found Inc. LM

LR 040000415 Type: **DBS 1/9/2004** Pages: **3**
Description: **11.588 & 70.933 ACRES**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7110121**
Reverse Party: **CARPENTER'S FOUNDATION**

deed in

LR 040000414 Type: **DOA 1/9/2004** Pages: **4**
Description: **LTS 1 & 2 INST 000000602**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090411**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

LR 040000414 Type: **DOA 1/9/2004** Pages: **4**
Description: **LTS 1 & 2 INST 000000602**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map: **7090411**
Reverse Party: **FALLON PARK WESLEYAN CHURCH**

LR 040000414 Type: **DOA 1/9/2004** Pages: **4**
Description: **LTS 1 & 2 INST 000000602**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090411**
Reverse Party: **PARKWAY WESLEYAN CHURCH INC**

LR 000000602 Type: **DOT 1/14/2000** Pages: **7**
Description: **LTS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map: **7090402**
Reverse Party: **GOODLATTE, MARYELLEN F; TR**

LR 99002040M Type: **PLD 11/24/1999** Pages: **1**
Description: **LTS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map:
Reverse Party: **CITY OF ROANOKE**

LR 99002040M Type: **PLD 11/24/1999** Pages: **1**
Description: **LTS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map:
Reverse Party: **CITY OF ROANOKE**

LR 99002039M Type: **PLD 11/24/1999** Pages: **1**
Description: **LTS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantee** Pin or Map:
Reverse Party: **CITY OF ROANOKE**

LR 99002039M Type: **PLD 11/24/1999** Pages: **1**
Description: **LTS 1 & 2**
File: **1** Change: **0** Book: Page:
Name Type: **Grantor** Pin or Map:
Reverse Party: **CITY OF ROANOKE**

LR 931010724 Type: **CS 12/20/1993** Pages: **0**
Description: **1647-1854**
File: **1** Change: **0** Book: **1701** Page: **47**
Name Type: **Grantor** Pin or Map:
Reverse Party: **FALLON PARK WESLEYAN CHURCH**

LR 931010724 Type: **CS 12/20/1993** Pages: **0**
Description: **1647-1854**
File: **1** Change: **0** Book: **1701** Page: **47**
Name Type: **Grantee** Pin or Map:
Reverse Party: **FALLON PARK WESLEYAN CHURCH**

LR 931008672 Type: **DOT 11/3/1993** Pages: **0**
Description: **9.3 AC**
File: **1** Change: **0** Book: **1697** Page: **713**
Name Type: **Grantor** Pin or Map:
Reverse Party: **GLENN, ROBERT E; TR**

LR 910004021 Type: **DOT 11/1/1991** Pages: **0**
Description: **9.3 AC**
File: **1** Change: **0** Book: **1647** Page: **1854**
Name Type: **Grantor** Pin or Map:
Reverse Party: **GLENN, ROBERT E; TR**

M.B. 1, PG. 1588

THIS IS AN ORIGINAL SIZE PLAT AND HAS NOT BEEN REDUCED.

CURVE DATA

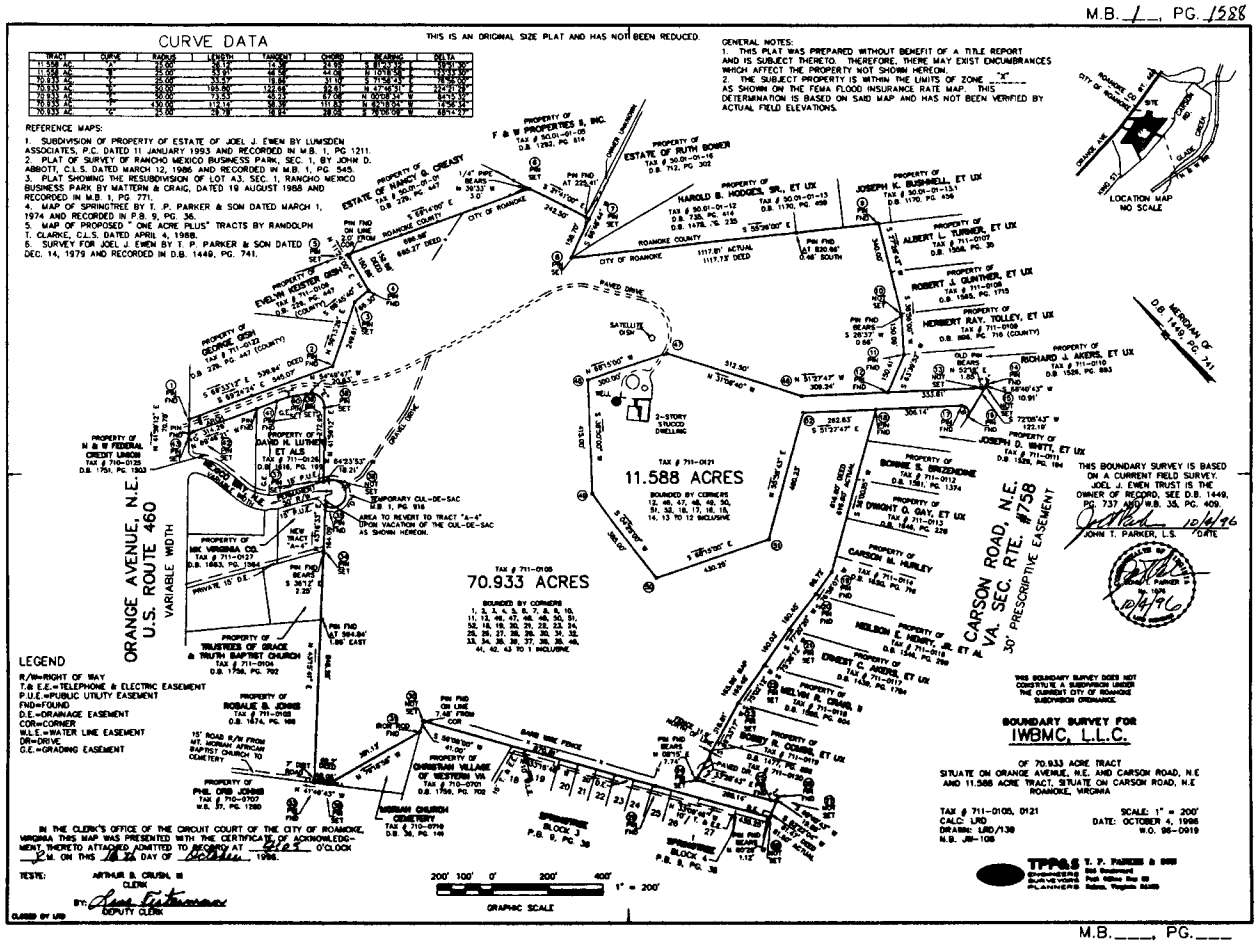
TRACT	CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
11.588 AC.	"A"	25.00	39.27	25.00	35.36	S 89°59'00" E	90°00'00"
11.588 AC.	"B"	25.00	39.27	25.00	35.36	N 0°01'00" E	90°00'00"
70.933 AC.	"C"	25.00	39.27	25.00	35.36	N 89°59'00" W	90°00'00"
70.933 AC.	"D"	25.00	39.27	25.00	35.36	S 0°01'00" W	90°00'00"
70.933 AC.	"E"	50.00	195.50	122.55	92.51	N 67°48'51" E	224°21'19"
70.933 AC.	"F"	50.00	73.53	45.23	67.06	N 00°58'34" W	84°33'10"
70.933 AC.	"G"	450.00	112.14	56.38	111.83	N 82°18'04" W	14°16'14"
70.933 AC.	"H"	25.00	24.78	13.74	23.90	S 39°09'00" W	56°47'37"

REFERENCE MAPS:

1. SUBDIVISION OF PROPERTY OF ESTATE OF JOEL J. EWEN BY LUMSDEN ASSOCIATES, P.C. DATED 11 JANUARY 1993 AND RECORDED IN M.B. 1, PG 1211.
2. PLAT OF SURVEY OF RANCHO MEXICO BUSINESS PARK, SEC. 1, BY JOHN D. ABBOTT, C.L.S. DATED MARCH 12, 1986 AND RECORDED IN M.B. 1, PG. 545.
3. PLAT SHOWING THE RESUBDIVISION OF LOT A3, SEC. 1, RANCHO MEXICO BUSINESS PARK BY MATTERN & CRAIG, DATED 19 AUGUST 1988 AND RECORDED IN M.B. 1, PG. 771.
4. MAP OF SPRINGTREE BY T. P. PARKER & SON DATED MARCH 1, 1974 AND RECORDED IN P.B. 9, PG. 36.
5. MAP OF PROPOSED " ONE ACRE PLUS" TRACTS BY RANDOLPH T. CLARKE, C.L.S. DATED APRIL 4, 1988.
6. SURVEY FOR JOEL J. EWEN BY T. P. PARKER & SON DATED DEC. 14, 1979 AND RECORDED IN D.B. 1449, PG. 741.

GENERAL NOTES:

1. THIS PLAT WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT AND IS SUBJECT THERETO. THEREFORE, THERE MAY EXIST ENCUMBRANCES WHICH AFFECT THE PROPERTY NOT SHOWN HEREON.
2. THE SUBJECT PROPERTY IS WITHIN THE LIMITS OF ZONE "X" AS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAP. THIS DETERMINATION IS BASED ON SAID MAP AND HAS NOT BEEN VERIFIED BY ACTUAL FIELD ELEVATIONS.



THIS BOUNDARY SURVEY IS BASED ON A CURRENT FIELD SURVEY. JOEL J. EWEN TRUST IS THE OWNER OF RECORD, SEE D.B. 1449, PG. 737 AND M.B. 33, PG. 409.

JOHN T. PARKER, L.S. 10/4/96 DATE

THIS BOUNDARY SURVEY DOES NOT CONSTITUTE A SUBDIVISION UNDER THE CURRENT CITY OF ROANOKE SUBDIVISION ORDINANCE.

LEGEND

R/W=RIGHT OF WAY
T.& E.E.=TELEPHONE & ELECTRIC EASEMENT
P.U.E.=PUBLIC UTILITY EASEMENT
FND=FOUND
D.E.=DRAINAGE EASEMENT
COR=CORNER
W.L.E.=WATER LINE EASEMENT
DR=DRIVE
G.E.=GRADING EASEMENT

BOUNDARY SURVEY FOR IWBMC, L.L.C.

OF 70.933 ACRE TRACT
SITUATE ON ORANGE AVENUE, N.E. AND CARSON ROAD, N.E
AND 11.588 ACRE TRACT, SITUATE ON CARSON ROAD, N.E
ROANOKE, VIRGINIA

TAX # 711-0105, 0121
CALC: LRD
DRAWN: LRD/L30
N.B. JR-108

SCALE: 1" = 200'
DATE: OCTOBER 4, 1996
W.O. 96-0919

TPP&S T. P. PARKER & SON
ENGINEERS SURVEYORS PLANNERS

IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF ROANOKE, VIRGINIA THIS MAP WAS PRESENTED WITH THE CERTIFICATE OF ACKNOWLEDGMENT THERETO ATTACHED ADMITTED TO RECORD AT 4:05 O'CLOCK P.M. ON THIS 18th DAY OF October 1996.

TESTE: ARTHUR B. CRUSH, III
CLERK
BY: DEPUTY CLERK

200' 100' 0' 200' 400'
1" = 200'
GRAPHIC SCALE

M.B.____, PG.____

KNOW ALL MEN BY THESE PRESENTS TO WIT:

THAT BOBBY R. AND MARTHA LYNN COMBS ARE THE OWNERS OF THE PROPERTY SHOWN HEREON AS LOT A BOUNDED BY CORNERS 4 THRU 9 TO 4 INCLUSIVE, AND LOT B, BOUND BY CORNERS 1 THRU 4, 9, TO 1 INCLUSIVE, BEING THE PROPERTY CONVEYED TO SAID OWNERS BY BOBBY R. AND MARTHA LYNN COMBS BY DEED DATED OCTOBER 8, 1981 AND RECORDED IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF ROANOKE, VIRGINIA IN DEED BOOK 1477, PAGE 886.

THAT PARKWAY WESLEYAN CHURCH, INC. IS THE OWNER OF NEW TRACT A (70.934 ACRES), AS SHOWN ON MAP FOR IWBMC, L.L.C., RECORDED AS M.B. 1, PG. 1588, BEING THE PROPERTY CONVEYED TO SAID OWNER BY THE CARPENTER'S FOUNDATION, INC. BY DEED DATED DECEMBER 19, 2003 AND RECORDED IN THE AFORESAID CLERK'S OFFICE AS INSTRUMENT NUMBER 040000415.

THE SAID OWNERS HEREBY CERTIFY THAT THEY HAVE RESUBDIVIDED THE PROPERTIES OF THEIR OWN FREE WILL AND ACCORD AS REQUIRED BY SECTIONS 15.2-2240 THRU 15.2-2279 OF THE 1950 CODE OF VIRGINIA AS AMENDED TO DATE AND THE CITY OF ROANOKE SUBDIVISION ORDINANCE AS AMENDED TO DATE, AND VACATE LINES 5-6, 6-7, 7-8 AND 8-1 SHOWN DOTTED HEREON.

Bobby R. Combs 4/18/05 — BOBBY R. COMBS–OWNER, DATE, DEED BOOK 1477, PAGE 886

Martha Lynn Combs 4/18/05 — MARTHA LYNN COMBS–OWNER, DATE, DEED BOOK 1477, PAGE 886

4-18-05 — Dr. John W. Ott - President — DR. JOHN W. OTT–PRESIDENT, PARKWAY WESLEYAN CHURCH, INC., INSTRUMENT NUMBER 040000415

4/18/05 — Terry L. Hall Vice President — TERRY L. HALL–VICE PRESIDENT, PARKWAY WESLYEAN CHURCH, INC., INSTRUMENT NUMBER 040000415

STATE OF VIRGINIA
City OF Roanoke TO WIT:

I, Linda C. Hogan, A NOTARY PUBLIC IN AND FOR THE AFORESAID STATE DO HEREBY CERTIFY THAT BOBBY R. COMBS, WHOSE NAME IS SIGNED TO THE FOREGOING WRITING HAS PERSONALLY APPEARED BEFORE ME AND ACKNOWLEDGED THE SAME IN MY AFORESAID JURISDICTION ON THIS 18th DAY OF April, 2005.

MY COMMISSION EXPIRES: 5-31-07 — Linda C. Hogan, NOTARY PUBLIC

STATE OF VIRGINIA
City OF Roanoke TO WIT:

I, Linda C. Hogan, A NOTARY PUBLIC IN AND FOR THE AFORESAID STATE DO HEREBY CERTIFY THAT MARTHA LYNN COMBS, WHOSE NAME IS SIGNED TO THE FOREGOING WRITING HAS PERSONALLY APPEARED BEFORE ME AND ACKNOWLEDGED THE SAME IN MY AFORESAID JURISDICTION ON THIS 18th DAY OF April, 2005.

MY COMMISSION EXPIRES: 5-31-07 — Linda C. Hogan, NOTARY PUBLIC

STATE OF VIRGINIA
County OF Roanoke TO WIT:

I, Donna Scruggs, A NOTARY PUBLIC IN AND FOR THE AFORESAID STATE DO HEREBY CERTIFY THAT DR. JOHN W. OTT, PRESIDENT OF PARKWAY WESLEYAN CHURCH, INC., WHOSE NAME IS SIGNED TO THE FOREGOING WRITING HAS PERSONALLY APPEARED BEFORE ME AND ACKNOWLEDGED THE SAME IN MY AFORESAID JURISDICTION ON THIS 20 DAY OF April, 2005.

MY COMMISSION EXPIRES: October 31, 2006 — Donna Scruggs, NOTARY PUBLIC

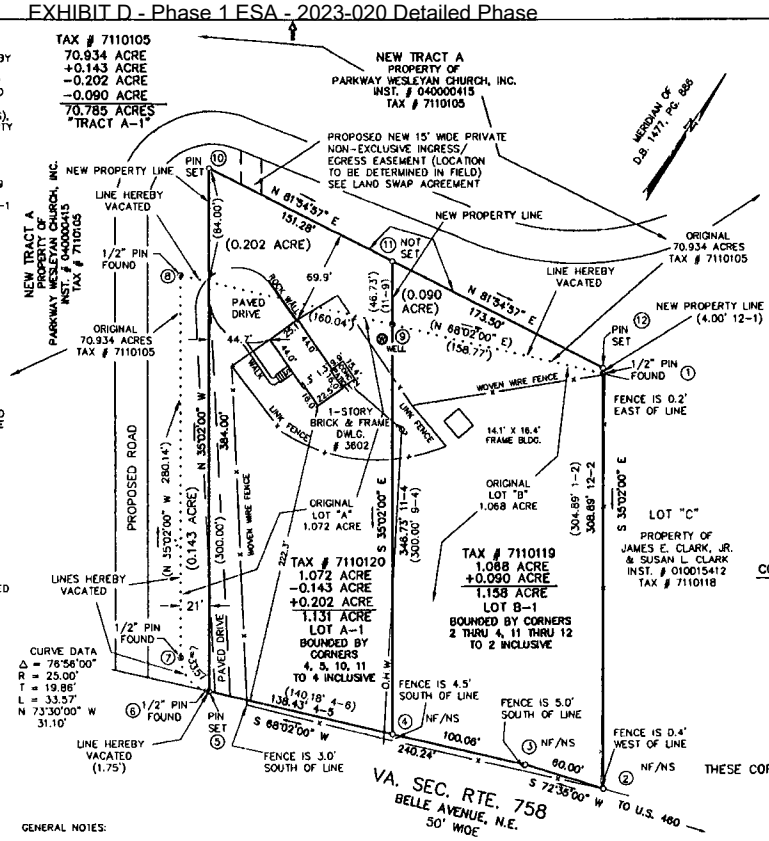
STATE OF VIRGINIA
County OF Roanoke TO WIT:

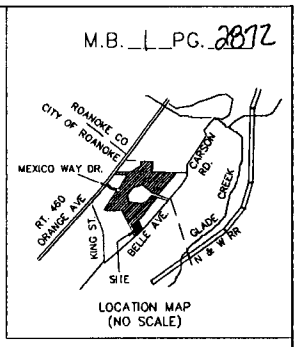
I, Donna Scruggs, A NOTARY PUBLIC IN AND FOR THE AFORESAID STATE DO HEREBY CERTIFY THAT TERRY L. HALL, VICE PRESIDENT OF PARKWAY WESLEYAN CHURCH, INC., WHOSE NAME IS SIGNED TO THE FOREGOING WRITING HAS PERSONALLY APPEARED BEFORE ME AND ACKNOWLEDGED THE SAME IN MY AFORESAID JURISDICTION ON THIS 20 DAY OF April, 2005.

MY COMMISSION EXPIRES: October 31, 2006 — Donna Scruggs, NOTARY PUBLIC

IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF ROANOKE, VIRGINIA THIS MAP WAS PRESENTED WITH THE CERTIFICATE OF ACKNOWLEDGEMENT THERETO ATTACHED ADMITTED TO RECORD AT 11:57 O'CLOCK A.M. ON THIS 26th DAY OF April, 2005.

TESTE: BRENDA S. HAMILTON, CLERK
BY: Laura Bone, DEPUTY CLERK





LOCATION MAP (NO SCALE)

LEGEND:
O.H.W.=OVERHEAD WIRE
BLDG.=BUILDING
DWLG.=DWELLING
CONC.=CONCRETE
PP=POWER POLE
NF/NS=NOT FOUND NOT SET

PROPERTIES ZONED RS-3

COORDINATES

CORNER	NORTHING	EASTING
1	4245.59	6661.79
2	3995.94	6836.81
3	3977.98	6779.56
4	3940.55	6686.77
5	3888.77	6558.38
6	3888.11	6556.76
7	3898.95	6526.94
8	4126.33	6366.13
9	4186.20	6514.55
10	4203.19	6337.95
11	4224.46	6487.72
12	4248.86	6659.50
1	4245.59	6661.79

THESE CORRDINATES ARE BASED ON AN ASSUMED DATUM

GENERAL NOTES:

1. THIS PLAT WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT AND IS SUBJECT THERETO. THEREFORE, THERE MAY EXIST ENCUMBRANCES WHICH AFFECT THE PROPERTY NOT SHOWN HEREON.
2. THE SUBJECT PROPERTY IS WITHIN THE LIMITS OF ZONE "X" AS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAP NUMBER 51161C0028D. THIS DETERMINATION IS BASED ON SAID MAP AND HAS NOT BEEN VERIFIED BY ACTUAL FIELD ELEVATIONS.
3. PIN SET BY TPP&S IS 1/2" DIAMETER BY 18" LONG REINFORCING ROD DRIVEN TO 2 INCHES ABOVE GROUND WITH PLASTIC YELLOW CAP ON TOP WITH "T.P. PARKER PROP. COR" EMBOSSED. A 3-4 FOOT METAL ORANGE ANGLE IRON IS DRIVEN BESIDE CORNER PIN.
4. THE RECORDATION OF THIS PLAT OF SUBDIVISION DOES NOT CONSTITUTE A CONVEYANCE OF LAND. ANY LOT, PARCEL OR TRACT OF LAND SHOWN HEREON THAT IS INTENDED FOR SALE AND/OR CONVEYANCE MUST BE CONVEYED BY DEED AND SAID DEED MUST BE RECORDED IN THE OFFICE OF THE CLERK OF CIRCUIT COURT OF THE CITY OF ROANOKE.

COMMONWEALTH OF VIRGINIA — LINDA R. DUFFY No. 1615 — LAND SURVEYOR — 4/13/05

PLAT OF SURVEY FOR

PARKWAY WESLEYAN CHURCH, INC. AND BOBBY R. & MARTHA LYNN COMBS

RESUBDIVIDING NEW TRACT A (70.934 ACRES), M.B. 1, PG. 1588 & LOT A (1.072 ACRE) AND LOT B (1.068 ACRE), D.B. 1477, PG. 886 CREATING HEREON TRACT A-1 (70.785 ACRES), LOT A-1 (1.131 ACRE) AND LOT B-1 (1.158 ACRE)
SITUATE ON BELLE AVENUE, N.E.
CITY OF ROANOKE, VIRGINIA

TAX NO.: 7110105, 7110119, 7110120
DRAWN: RC-2
CALC: REC

SCALE: 1" = 50'
DATE: APRIL 13, 2005
W.O.: 05-0093
N.B. JR-242

TPP&S — T. P. PARKER & SON — ENGINEERS SURVEYORS PLANNERS — 616 Boulevard, Post Office Box 20, Salem, Virginia 24153, 540-387-1183

APPROVED:

R. Boyer Toussaint 4-22-05 — AGENT - CITY OF ROANOKE PLANNING COMMISSION, DATE

4-22-05 — CITY ENGINEER - CITY OF ROANOKE, DATE

THIS PLAT IS BASED ON A PARTIAL SURVEY. PARKWAY WESLEYAN CHURCH, INST. NO. 040000415, AND BOBBY R. & MARTHA LYNN COMBS, D.B. 1477, PG. 886, ARE THE CURRENT OWNERS. LINES 5-10, 10-12, & 12-1 ARE BASED ON CURRENT FIELD SURVEY.

50' 25' 0' 50' 100' — 1" = 50' — GRAPHIC SCALE

CLOSED BY REC MARCH 9, 2005

M.B. 1 PG. 2872

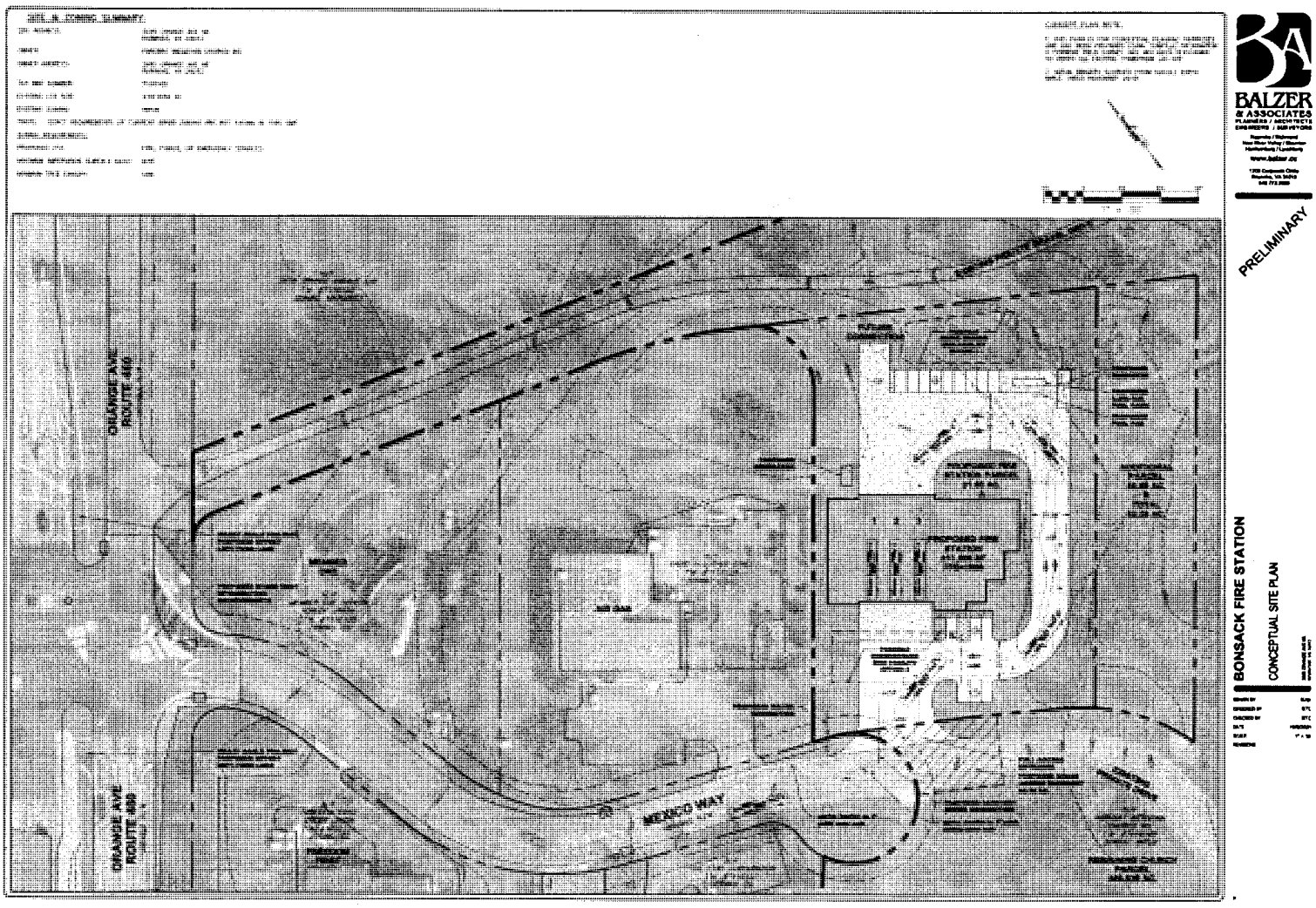

ORANGE AVE
ROUTE 460
ORANGE AVE
ROUTE 460
MEXICO WAY
BALZER
& ASSOCIATES
PRELIMINARY
BONSACK FIRE STATION
CONCEPTUAL SITE PLAN

Exhibit A

ECS MID-ATLANTIC, LLC
"Setting the Standard for Service"
Geotechnical • Construction Materials • Environmental • Facilities

April 25, 2022

City of Roanoke Fire Department
Via Email: fire-ems@roanokeva.gov

ECS Project No. 47:14480

Subject: Freedom of Information Act Request

To Whom It May Concern:

ECS Mid-Atlantic, LLC (ECS) is currently working on an environmental site assessment in Roanoke and are requesting information that you may have regarding documented environmental issues, including but not limited to underground storage tank installation or removal and responses to spills or releases of petroleum/chemical substances or hazardous materials at the subject site or in the immediate area of the site. The site is:

- Grass Parcel – 3645 Orange Avenue NE, Roanoke, Virginia
  Parcel ID: 7110105

We appreciate any information on the subject site or in the vicinity of the subject site. If you have any questions, please call me at 540-362-2000.

Respectfully,

ECS MID-ATLANTIC, LLC

Alexandra Moon

Alexandra Moon
Senior Project Manager

Appendix III: Regulatory Records Documentation

New Bonsack / 460 Fire Station
3645 Orange Avenue
Roanoke, VA 24012

Inquiry Number: 6949527.2s
April 21, 2022

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	56
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-11
Physical Setting Source Map Findings	A-13
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

3645 ORANGE AVENUE
ROANOKE, VA 24012

COORDINATES

Latitude (North):	37.3058520 - 37ˆ 18' 21.06''
Longitude (West):	79.8869880 - 79ˆ 53' 13.15''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	598637.4
UTM Y (Meters):	4129179.2
Elevation:	1058 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	13861947 ROANOKE, VA
Version Date:	2019
East Map:	13861957 STEWARTSVILLE, VA
Version Date:	2019

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20141017
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
3645 ORANGE AVENUE
ROANOKE, VA 24012

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	GETTY 71120	3542 ORANGE AVE	LUST, LTANKS, UST	Lower	715, 0.135, WNW
A2	SLEEP ESSENTIALS	3542 ORANGE AVENUE	RCRA NonGen / NLR	Lower	715, 0.135, WNW
A3	COOPER CROUSE-HINDS,	1700 BLUE HILLS DR.	RCRA-VSQG, FINDS, ECHO	Lower	728, 0.138, WNW
A4	GARDNER-DENVER M&C	1700 BLUE HILLS DR	UST	Lower	728, 0.138, WNW
B5	CHALLENGER AVE SUNOC	3745 CHALLENGER AVE	LUST	Lower	1301, 0.246, NNE
B6	CHALLENGER AVE SUNOC	3745 CHALLENGER AVE	LTANKS	Lower	1301, 0.246, NNE
B7	SAV-ON TOBACCO	3745 CHALLENGER AVE	LUST, LTANKS, UST, SPILLS, Financial Assurance	Lower	1301, 0.246, NNE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ..... National Priority List
Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ..... National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ..... Federal Facility Site Information listing
SEMS ..... Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ..... Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ..... Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

EXECUTIVE SUMMARY

Federal ERNS list

ERNS..... Emergency Response Notification System

Lists of state- and tribal hazardous waste facilities

SHWS..... This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF..... Solid Waste Management Facilities

Lists of state and tribal leaking storage tanks

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST..... Underground Storage Tank Listing
AST..... Registered Petroleum Storage Tanks
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

ENG CONTROLS..... Engineering Controls Sites Listing
INST CONTROL..... Voluntary Remediation Program Database

Lists of state and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Remediation Program

Lists of state and tribal brownfield sites

BROWNFIELDS..... Brownfields Site Specific Assessments

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register

EXECUTIVE SUMMARY

US CDL	National Clandestine Laboratory Register

Local Land Records

LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
SPILLS	Prep/Spills Database Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
ECHO	Enforcement & Compliance History Information
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
AIRS	Permitted Airs Facility List
NPDES	Comprehensive Environmental Data System
COAL ASH	Coal Ash Disposal Sites
DRYCLEANERS	Drycleaner List

EXECUTIVE SUMMARY

ENF Enforcement Actions Data
Financial Assurance Financial Assurance Information Listing
TIER 2 Tier 2 Information Listing
UIC Underground Injection Control Wells
MINES MRDS Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF Recovered Government Archive Solid Waste Facilities List
RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal RCRA generators

RCRA-VSQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-VSQG list, as provided by EDR, and dated 02/28/2022 has revealed that there is 1 RCRA-VSQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
COOPER CROUSE-HINDS,	***1700 BLUE HILLS DR.***	***WNW 1/8 - 1/4 (0.138 mi.)***	***A3***	***18***

EXECUTIVE SUMMARY

EPA ID:: VAD108251992

Lists of state and tribal leaking storage tanks

LUST: The Leaking Underground Storage Tank Database.

A review of the LUST list, as provided by EDR, has revealed that there are 3 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GETTY 71120	***3542 ORANGE AVE***	***WNW 1/8 - 1/4 (0.135 mi.)***	***A1***	***8***
Database: LUST REG WC, Date of Government Version: 06/04/2015 Date Closed: 1999-09-28 00:00:00 Date Closed: 1998-09-09 00:00:00 Pollution Control #: 00-2016 Pollution Control #: 98-1130				
CHALLENGER AVE SUNOC	3745 CHALLENGER AVE	NNE 1/8 - 1/4 (0.246 mi.)	B5	40
Database: LUST REG WC, Date of Government Version: 06/04/2015 Case Status: Closed Pollution Control #: 20152218				
SAV-ON TOBACCO	***3745 CHALLENGER AVE***	***NNE 1/8 - 1/4 (0.246 mi.)***	***B7***	***41***
Database: LUST REG WC, Date of Government Version: 06/04/2015				

LTANKS: The Leaking Tanks Database contains current Leaking petroleum tanks. The data comes from the Department of Environmental Quality.

A review of the LTANKS list, as provided by EDR, and dated 11/03/2021 has revealed that there are 3 LTANKS sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GETTY 71120	***3542 ORANGE AVE***	***WNW 1/8 - 1/4 (0.135 mi.)***	***A1***	***8***
Facility Status: Closed CEDS Facility Id: 200000093891 Pollution Complaint #: 19981130				
CHALLENGER AVE SUNOC	3745 CHALLENGER AVE	NNE 1/8 - 1/4 (0.246 mi.)	B6	41
Facility Status: Closed CEDS Facility Id: 200000090411 Pollution Complaint #: 20152218				
SAV-ON TOBACCO	***3745 CHALLENGER AVE***	***NNE 1/8 - 1/4 (0.246 mi.)***	***B7***	***41***
Facility Status: Closed CEDS Facility Id: 200000090411 Pollution Complaint #: 20052058				

EXECUTIVE SUMMARY

Lists of state and tribal registered storage tanks

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Quality's Underground Storage Tank Data Notification Information.

A review of the UST list, as provided by EDR, and dated 11/01/2021 has revealed that there are 3 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GETTY 71120 Tank Status: REM FROM GRD Facility Id: 2000644 CEDS Facility ID: 200000093891	***3542 ORANGE AVE***	***WNW 1/8 - 1/4 (0.135 mi.)***	***A1***	***8***
GARDNER-DENVER M&C Tank Status: REM FROM GRD Facility Id: 2016055 CEDS Facility ID: 200000089391	1700 BLUE HILLS DR	WNW 1/8 - 1/4 (0.138 mi.)	A4	35
SAV-ON TOBACCO Tank Status: CURR IN USE Tank Status: TEMP OUT OF USE Facility Id: 2022675 CEDS Facility ID: 200000090411	***3745 CHALLENGER AVE***	***NNE 1/8 - 1/4 (0.246 mi.)***	***B7***	***41***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 02/28/2022 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

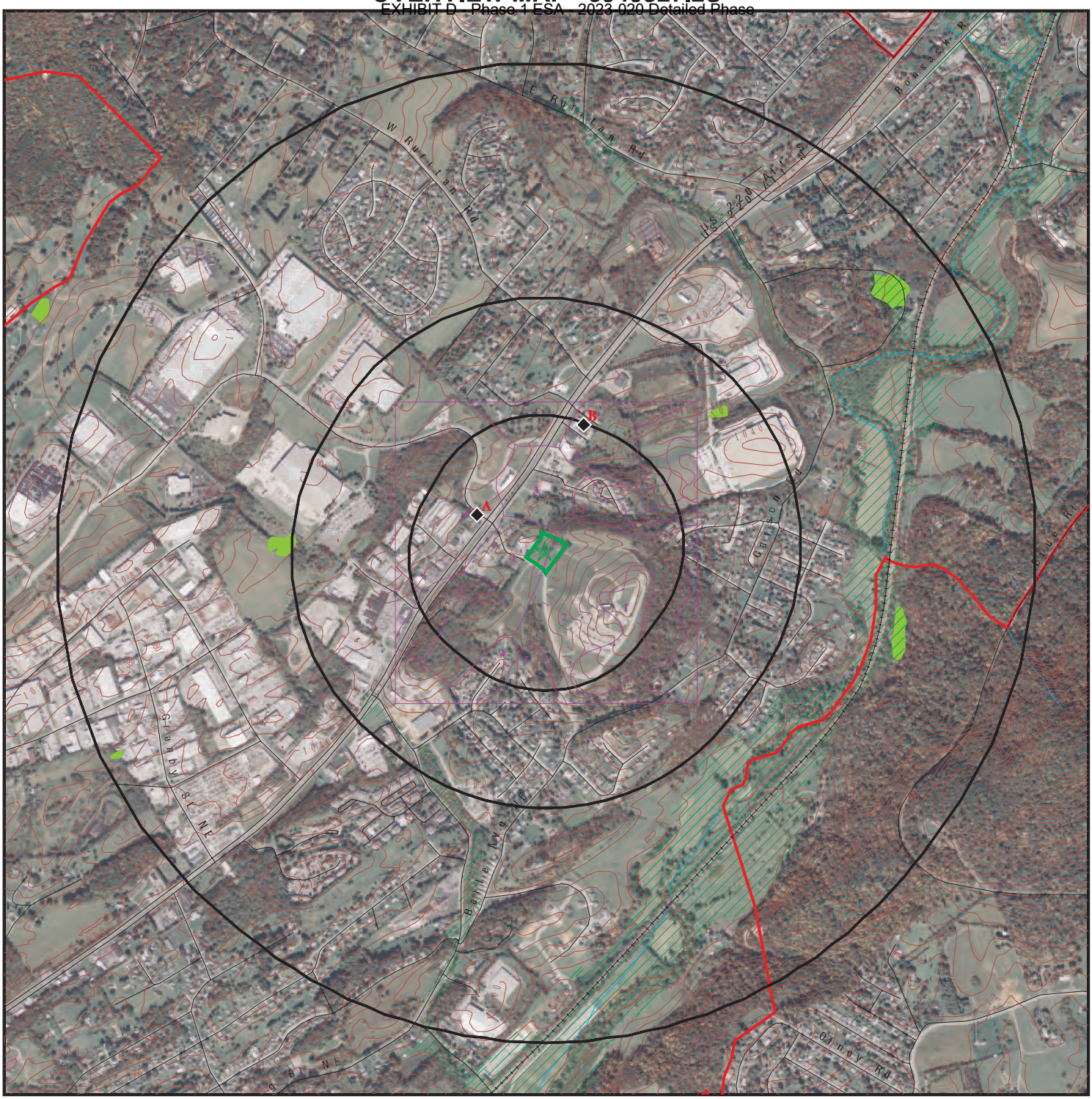
Lower Elevation	Address	Direction / Distance	Map ID	Page
SLEEP ESSENTIALS EPA ID:: VAR000512806	3542 ORANGE AVENUE	WNW 1/8 - 1/4 (0.135 mi.)	A2	14

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
NW SIGNAL SHOP	LTANKS

OVERVIEW MAP - 6949527.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

County Boundary

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	New Bonsack / 460 Fire Station	CLIENT:	ECS Mid Atlantic, LLC
ADDRESS:	3645 Orange Avenue Roanoke VA 24012	CONTACT:	Alexandra Moon
LAT/LONG:	37.305852 / 79.886988	INQUIRY #:	6949527.2s
		DATE:	April 21, 2022 9:10 am

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DETAIL MAP - 6949527.2S

EXHIBIT D - Phase 1 ESA - 2023-020 Detailed Phase

Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	New Bonsack / 460 Fire Station	CLIENT:	ECS Mid Atlantic, LLC
ADDRESS:	3645 Orange Avenue Roanoke VA 24012	CONTACT:	Alexandra Moon
LAT/LONG:	37.305852 / 79.886988	INQUIRY #:	6949527.2s
		DATE:	April 21, 2022 9:12 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	1	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	3	0	NR	NR	3

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
LTANKS	0.500		0	3	0	NR	NR	3
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	3	NR	NR	NR	3
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	0	11	0	0	0	11

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A1 WNW 1/8-1/4 0.135 mi. 715 ft.	**GETTY 71120 3542 ORANGE AVE ROANOKE, VA 24012** **Site 1 of 4 in cluster A**	**LUST LTANKS UST**	**U003673960 N/A**

Relative:
Lower

Actual:
1028 ft.

LUST REG WC:

Region:	WC
Case Status:	**Not reported**
Date Reported:	08/16/1999
Date Closed:	1999-09-28 00:00:00
Release Reported:	Not reported
Pollution Control #:	00-2016
Case Manager:	Not reported
Owner Name:	GETTY PETROLEUM MKT., INC
Owner Address:	86 DOREMUS AVENUE
Owner City,St,Zip:	NEWARK, NJ 07105
Owner Phone:	800-487-4388

Region:	WC
Case Status:	**Not reported**
Date Reported:	04/27/1998
Date Closed:	1998-09-09 00:00:00
Release Reported:	Not reported
Pollution Control #:	98-1130
Case Manager:	Not reported
Owner Name:	GETTY REALTY CORP
Owner Address:	86 DOREMUS AVENUE
Owner City,St,Zip:	NEWARK, NJ 07105
Owner Phone:	973-344-7860

LTANKS:

Name:	GETTY MART #120
Address:	3542 ORANGE AVE
City,State,Zip:	ROANOKE, VA 24012
City,State,Zip:	ROANOKE, VA 24012
Region:	BRRO-R
CEDS Facility Id:	200000093891
Case Status:	**Closed**
Pollution Complaint #:	19981130
Reported:	04/27/1998
Case Closed Date:	09/09/1998
Program:	RP Lead
Federally Regulated UST (Y/N):	Y
Regulated Petroleum UST (1):	Y
Excluded UST (1):	N
Deferred UST (1):	N
Partially Deferred UST (1):	N
Exempt 1 UST (2):	N
Exempt 2 Heating Oil UST (2):	N
Small Heating Oil AST (2):	N
Regulated AST (3):	N
Unregulated AST (3):	N
Other Y/N:	N
Unknown Y/N:	N
Other Description:	Not reported
Heating Oil Category:	Not reported

GETTY 71120 (Continued) **U003673960**

Facility:

Name:	GETTY 71120
Address:	3542 ORANGE AVE
City,State,Zip:	ROANOKE, VA 24012
Facility Id:	2000644
Facility Type:	GAS STATION
CEDS Facility ID:	200000093891

Owner:

Owner Id:	27127
Owner Name:	Getty Petroleum Marketing Inc
Owner Address:	1500 Hempstead Tpke
Owner Address2:	Not reported
Owner City, State, Zip:	East Meadow, NY 11554
Owner Type:	PRIVATE
Number of Active AST:	0
Number of Active UST:	0
Number of Inactive AST:	0
Number of Inactive UST:	4

UST:

Facility ID:	2000644
Federally Regulated:	Yes
Tank Number:	1
Tank Capacity:	10000
Tank Contents:	GASOLINE
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	1/1/1980
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	Yes
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Glass Lined

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	Yes
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Yes

GETTY 71120 (Continued) **U003673960**

Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	Yes
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	Yes
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	APT FLEXIBLE
Facility ID:	2000644
Federally Regulated:	Yes
Tank Number:	2
Tank Capacity:	5000
Tank Contents:	GASOLINE
Tank Status:	**REM FROM GRD**
Tank Type:	UST
Tank Material:	
Install Date:	1/1/1980
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	Yes
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Glass Lined
Release Detection:	
Tank Release Detection: Leak Deferred	No

GETTY 71120 (Continued) **U003673960**

Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	Yes
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Yes
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	Yes
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	Yes
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	APT FLEXIBLE
Facility ID:	2000644
Federally Regulated:	Yes
Tank Number:	3
Tank Capacity:	5000
Tank Contents:	GASOLINE
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	1/1/1980
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	Yes
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No

GETTY 71120 (Continued) **U003673960**

Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Glass Lined

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	Yes
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Yes
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	Yes
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported

Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	Yes
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	APT FLEXIBLE

Facility ID:	2000644
Federally Regulated:	Yes

Tank Number:	4
Tank Capacity:	6000
Tank Contents:	KEROSENE
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	1/1/1980
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes

GETTY 71120 (Continued) **U003673960**

Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	Yes
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Glass Lines

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	Yes
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Yes
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	Yes
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported

Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	Yes
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	APT FLEXIBLE

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A2 **WNW** **1/8-1/4** **0.135 mi.** **715 ft.**	**SLEEP ESSENTIALS** **3542 ORANGE AVENUE** **ROANOKE, VA 24012** **Site 2 of 4 in cluster A**	**RCRA NonGen / NLR**	**1009400601** **VAR000512806**

Relative:
Lower

Actual:
1028 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:		20080721
Handler Name:	SLEEP ESSENTIALS	
Handler Address:		3542 ORANGE AVENUE
Handler City,State,Zip:		ROANOKE, VA 24012-6427
EPA ID:		VAR000512806
Contact Name:		Not reported
Contact Address:		Not reported
Contact City,State,Zip:		Not reported
Contact Telephone:		000-000-0000 239
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		03
Land Type:		Private
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Not reported
State District Owner:		VA
State District:		2
Mailing Address:		Not reported
Mailing City,State,Zip:		00000
Owner Name:		Not reported
Owner Type:		Not reported
Operator Name:		Not reported
Operator Type:		Not reported
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		NN
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

SLEEP ESSENTIALS (Continued) **1009400601**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20080721
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE
Waste Code:	D018
Waste Description:	BENZENE

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	GETTY PETROLEUM MARKETING, INC.
Legal Status:	Private
Date Became Current:	19800101
Date Ended Current:	Not reported
Owner/Operator Address:	1500 HEMPSTEAD TPKE
Owner/Operator City,State,Zip:	EAST MEADOW, NY 11554
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	SCOTT HANLEY
Legal Status:	Private
Date Became Current:	19800101

SLEEP ESSENTIALS (Continued) **1009400601**

Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20060515
Handler Name:	GETTY PETROLEUM MARKETING, INC. #71120
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20080721
Handler Name:	SLEEP ESSENTIALS
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20080721
Handler Name:	SLEEP ESSENTIALS
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	44211
NAICS Description:	FURNITURE STORES

NAICS Code:	44711
NAICS Description:	GASOLINE STATIONS WITH CONVENIENCE STORES

SLEEP ESSENTIALS (Continued) **1009400601**

Facility Has Received Notices of Violation:

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:

Evaluation Date:	20080717
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R2KJT
Evaluation Responsible Sub-Organization:	WC
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A3 WNW 1/8-1/4 0.138 mi. 728 ft.	**COOPER CROUSE-HINDS, LLC 1700 BLUE HILLS DR. NE ROANOKE, VA 24012 Site 3 of 4 in cluster A**	**RCRA-VSQG FINDS ECHO**	**1000190577 VAD108251992**

Relative:
Lower

Actual:
1037 ft.

RCRA-VSQG:

Date Form Received by Agency:	20180205
Handler Name:	COOPER CROUSE-HINDS, LLC
Handler Address:	1700 BLUE HILLS DR. NE
Handler City,State,Zip:	ROANOKE, VA 24012
EPA ID:	VAD108251992
Contact Name:	JEFF A HENCHEL
Contact Address:	1700 BLUE HILLS DR. NE
Contact City,State,Zip:	ROANOKE, VA 24012
Contact Telephone:	540-983-1322 322
Contact Fax:	540-983-1311
Contact Email:	JEFFAHENCHEL@EATON.COM
Contact Title:	EHS MANAGER
EPA Region:	03
Land Type:	Private
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	VA
State District:	2
Mailing Address:	1700 BLUE HILLS DR. NE
Mailing City,State,Zip:	ROANOKE, VA 24012
Owner Name:	EATON CORPORATION
Owner Type:	Private
Operator Name:	RONALD G. SPAAR
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20180322
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE
Waste Code:	D002
Waste Description:	CORROSIVE WASTE
Waste Code:	D005
Waste Description:	BARIUM
Waste Code:	D006
Waste Description:	CADMIUM
Waste Code:	D007
Waste Description:	CHROMIUM
Waste Code:	D008
Waste Description:	LEAD
Waste Code:	D009
Waste Description:	MERCURY
Waste Code:	D011
Waste Description:	SILVER

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Waste Code: D018
Waste Description: BENZENE

Waste Code: D035
Waste Description: METHYL ETHYL KETONE

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	PATTY HAMILTON
Legal Status:	Private
Date Became Current:	20000701
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MARCUS HAMILTON
Legal Status:	Private
Date Became Current:	20030811
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	COOPER INDUSTRIES
Legal Status:	Private
Date Became Current:	19921101
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 4446
Owner/Operator City,State,Zip:	HOUSTON, TX 77210-4446
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	OPERNAME
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	OPERSTREET
Owner/Operator City,State,Zip:	OPERCITY, AK 99999
Owner/Operator Telephone:	215-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	OPERNAME
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	OPERSTREET
Owner/Operator City,State,Zip:	OPERCITY, AK 99999
Owner/Operator Telephone:	215-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	CRAIG ATWATER
Legal Status:	Private
Date Became Current:	20050916
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	RONALD G. SPAAR
Legal Status:	Private
Date Became Current:	20090801
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	COOPER INDUSTRIES, LTD.
Legal Status:	Private
Date Became Current:	19921101
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 4446
Owner/Operator City,State,Zip:	HOUSTON, TX 77210-4446
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Owner/Operator Indicator:	Operator
Owner/Operator Name:	CRAIG ATWATER
Legal Status:	Private
Date Became Current:	20050916
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	RONALD G. SPAAR
Legal Status:	Private
Date Became Current:	20090801
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MARCUS HAMILTON
Legal Status:	Private
Date Became Current:	20030811
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	PATTY HAMILTON
Legal Status:	Private
Date Became Current:	20000701
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	PATTY HAMILTON
Legal Status:	Private
Date Became Current:	20000701
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	PATTY HAMILTON
Legal Status:	Private
Date Became Current:	20000701
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	CRAIG ATWATER
Legal Status:	Private
Date Became Current:	20050916
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	COOPER INDUSTRIES, LTD.
Legal Status:	Private
Date Became Current:	19921101
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 4446

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Owner/Operator City,State,Zip:	HOUSTON, TX 77210-4446
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	PATTY HAMILTON
Legal Status:	Private
Date Became Current:	20000701
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	MARCUS HAMILTON
Legal Status:	Private

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Date Became Current:	20030811
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	OPERNAME
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	OPERSTREET
Owner/Operator City,State,Zip:	OPERCITY, AK 99999
Owner/Operator Telephone:	215-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	OPERNAME
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	OPERSTREET
Owner/Operator City,State,Zip:	OPERCITY, AK 99999
Owner/Operator Telephone:	215-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	OPERNAME
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	OPERSTREET
Owner/Operator City,State,Zip:	OPERCITY, AK 99999
Owner/Operator Telephone:	215-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MARCUS HAMILTON
Legal Status:	Private
Date Became Current:	20030811
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Owner/Operator Indicator:	Operator
Owner/Operator Name:	EATON CORPORATION
Legal Status:	Private
Date Became Current:	20121130
Date Ended Current:	Not reported
Owner/Operator Address:	1000 EATON BOULEVARD
Owner/Operator City,State,Zip:	CLEVELAND, OH 44122
Owner/Operator Telephone:	540-983-1310
Owner/Operator Telephone Ext:	310
Owner/Operator Fax:	540-983-1311
Owner/Operator Email:	RONGSPAAR@EATON.COM

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CROUSE HINDS DIV OF COOPER IND
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	600 TRAVIS STE 5800
Owner/Operator City,State,Zip:	HOUSTON, TX 77002-1001
Owner/Operator Telephone:	713-209-8400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	EATON CORPORATION
Legal Status:	Private
Date Became Current:	20121130
Date Ended Current:	Not reported
Owner/Operator Address:	1000 EATON BOULEVARD
Owner/Operator City,State,Zip:	CLEVELAND, OH 44122
Owner/Operator Telephone:	540-983-1310
Owner/Operator Telephone Ext:	310
Owner/Operator Fax:	540-983-1311
Owner/Operator Email:	RONGSPAAR@EATON.COM

Historic Generators:

Receive Date:	19841031
Handler Name: CROUSE HINDS DIV	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20030305
Handler Name: COOPER CROUSE-HINDS	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	VA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20030305
Handler Name: COOPER CROUSE-HINDS
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: VA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20030905
Handler Name: COOPER CROUSE-HINDS
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: VA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20050922
Handler Name: COOPER CROUSE-HINDS, LLC
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: VA
Large Quantity Handler of Universal Waste: Yes
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20090811
Handler Name: COOPER CROUSE-HINDS, LLC
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: VA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Receive Date: 20180205
Handler Name: COOPER CROUSE-HINDS, LLC
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: VA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 19900301
Handler Name: GARDNER-DENVER
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19920227
Handler Name: GARDNER DENVER M&C
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19940225
Handler Name: GARDNER DENVER MINING & CONSTRUCTION
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 33312
NAICS Description: CONSTRUCTION MACHINERY MANUFACTURING

NAICS Code: 333131

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

NAICS Description: MINING MACHINERY AND EQUIPMENT MANUFACTURING

NAICS Code: 335122
NAICS Description: COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL ELECTRIC LIGHTING FIXTURE MANUFACTURING

NAICS Code: 335931
NAICS Description: CURRENT-CARRYING WIRING DEVICE MANUFACTURING

NAICS Code: 335932
NAICS Description: NONCURRENT-CARRYING WIRING DEVICE MANUFACTURING

NAICS Code: 42161
NAICS Description: ELECTRICAL APPARATUS AND EQUIPMENT, WIRING SUPPLIES, AND CONSTRUCTION MATERIAL WHOLESALERS

NAICS Code: 42361
NAICS Description: ELECTRICAL APPARATUS AND EQUIPMENT, WIRING SUPPLIES, AND RELATED EQUIPMENT MERCHANT WHOLESALERS

NAICS Code: 423610
NAICS Description: ELECTRICAL APPARATUS AND EQUIPMENT, WIRING SUPPLIES, AND RELATED EQUIPMENT MERCHANT WHOLESALERS

Facility Has Received Notices of Violation:

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	19910913
Actual Return to Compliance Date:	19940210
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19910913
Actual Return to Compliance Date:	19940210
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19910913
Actual Return to Compliance Date:	19940210
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19910913
Actual Return to Compliance Date:	19940210
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 19910913
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 19940210
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 19971031
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: R2KJT
Evaluation Responsible Sub-Organization: WC
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 19910913
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	19940210
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	20210204
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R2LNP
Evaluation Responsible Sub-Organization:	BR
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19910913
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	19940210
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19910913
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	19940210
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

FINDS:
Registry ID: 110001888173

Click Here:

Environmental Interest/Information System:
AFS (Aerometric Information Retrieval System (AIRS) Facility

COOPER CROUSE-HINDS, LLC (Continued) **1000190577**

Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.
CEDS (Virginia - Comprehensive Environmental Data System) is the Department of Environmental Quality's (DEQ) electronic data system for maintaining databases on sources of pollutants in all media.
US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
AIR MINOR

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000190577
Registry ID:	110001888173
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110001888173
Name:	GARDNER DENVER MINING & CONSTRUCTION
Address:	1700 BLUE HILLS DR
City,State,Zip:	ROANOKE, VA 24012

A4 WNW 1/8-1/4 0.138 mi. 728 ft. | **GARDNER-DENVER M&C** **1700 BLUE HILLS DR** **ROANOKE, VA 24012** | **UST** | **U003676573** **N/A**

Site 4 of 4 in cluster A

Relative: Lower
Actual: 1037 ft.

Facility:

Name:	GARDNER-DENVER M&C
Address:	1700 BLUE HILLS DR
City,State,Zip:	ROANOKE, VA 24012
Facility Id:	2016055
Facility Type:	INDUSTRIAL
CEDS Facility ID:	200000089391

Owner:

Owner Id:	27835
Owner Name:	COOPER INDUSTRIES
Owner Address:	BOX 4446
Owner Address2:	HARRIS
Owner City, State, Zip:	HOUSTON, TX 77002
Owner Type:	COMMERCIAL
Number of Active AST:	0
Number of Active UST:	0

GARDNER-DENVER M&C (Continued) **U003676573**

Number of Inactive AST:	0
Number of Inactive UST:	4

UST:

Facility ID:	2016055
Federally Regulated:	Yes
Tank Number:	1R
Tank Capacity:	1500
Tank Contents:	DIESEL
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	5/8/1981
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Not reported

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	No
Tank Release Detection: Overfill Install	No
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	UNKNOWN
Pipe Materials: Bare Steel	No

GARDNER-DENVER M&C (Continued) **U003676573**

Pipe Materials: Galvanized Steel	Yes
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	No
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported

Facility ID:	2016055
Federally Regulated:	Yes

Tank Number:	2R
Tank Capacity:	1500
Tank Contents:	DIESEL
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	5/8/1981
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Not reported

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	No
Tank Release Detection: Overfill Install	No
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	No

GARDNER-DENVER M&C (Continued) **U003676573**

Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	UNKNOWN
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	Yes
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	No
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2016055
Federally Regulated:	Yes
Tank Number:	3R
Tank Capacity:	3000
Tank Contents:	GASOLINE
Tank Status:	**REM FROM GRD**
Tank Type:	UST
Tank Material:	
Install Date:	5/8/1981
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Not reported
Release Detection:	
Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	No
Tank Release Detection: Overfill Install	No
Tank Release Detection: Groundwater	No

GARDNER-DENVER M&C (Continued) **U003676573**

Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	UNKNOWN
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	Yes
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	No
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2016055
Federally Regulated:	Yes
Tank Number:	4R
Tank Capacity:	6000
Tank Contents:	UNKNOWN
Tank Status:	**REM FROM GRD**
Tank Type:	UST

Tank Material:

Install Date:	5/9/1983
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	Yes
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	No
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	No
Tank Materials: Other Note	Not reported

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No

GARDNER-DENVER M&C (Continued) **U003676573**

Tank Release Detection: Auto Gauge	No
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	No
Tank Release Detection: Overfill Install	No
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	No
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	UNKNOWN
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	Yes
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	No
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported

B5 **CHALLENGER AVE SUNOCO** **LUST** **S117622950**
NNE **3745 CHALLENGER AVE** **N/A**
1/8-1/4 **ROANOKE, VA 24012**
0.246 mi.
1301 ft. **Site 1 of 3 in cluster B**

Relative:
Lower

Actual:
1048 ft.

LUST REG WC:

Region:	WC
Case Status:	**Closed**
Date Reported:	Not reported
Date Closed:	Not reported
Release Reported:	12/04/2014
Pollution Control #:	20152218
Case Manager:	Jonathan P Newbill
Owner Name:	Not reported
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Owner Phone:	Not reported

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
B6 **NNE** **1/8-1/4** **0.246 mi.** **1301 ft.**	**CHALLENGER AVE SUNOCO** **3745 CHALLENGER AVE** **ROANOKE, VA** **Site 2 of 3 in cluster B**	**LTANKS**	**S117622614** **N/A**

Relative:
Lower

Actual:
1048 ft.

LTANKS:

Name:	CHALLENGER AVE SUNOCO
Address:	3745 CHALLENGER AVE
City,State,Zip:	ROANOKE, VA
City,State,Zip:	ROANOKE, VA
Region:	BRRO-R
CEDS Facility Id:	200000090411
Case Status:	**Closed**
Pollution Complaint #:	20152218
Reported:	12/04/2014
Case Closed Date:	12/16/2014
Program:	RP Lead
Federally Regulated UST (Y/N):	Y
Regulated Petroleum UST (1):	Y
Excluded UST (1):	N
Deferred UST (1):	N
Partially Deferred UST (1):	N
Exempt 1 UST (2):	N
Exempt 2 Heating Oil UST (2):	N
Small Heating Oil AST (2):	N
Regulated AST (3):	N
Unregulated AST (3):	N
Other Y/N:	N
Unknown Y/N:	N
Other Description:	Not reported
Heating Oil Category:	Not reported

B7 **NNE** **1/8-1/4** **0.246 mi.** **1301 ft.**	**SAV-ON TOBACCO** **3745 CHALLENGER AVE** **ROANOKE, VA 24012** **Site 3 of 3 in cluster B**	**LUST** **LTANKS** **UST** **SPILLS** **Financial Assurance**	**U003983094** **N/A**

Relative:
Lower

Actual:
1048 ft.

LUST REG WC:

Region:	WC
Case Status:	**Not reported**
Date Reported:	11/15/2004
Date Closed:	Not reported
Release Reported:	Not reported
Pollution Control #:	Not reported
Case Manager:	Not reported
Owner Name:	EMPIRE PETROLEUM CO., LLC
Owner Address:	15729 CRABBS BRANCH WAY
Owner City,St,Zip:	ROCKVILLE, MD 20855
Owner Phone:	301-921-9200

LTANKS:

Name:	FAST STOP FOOD MART
Address:	3745 CHALLENGER AVE
City,State,Zip:	ROANOKE, VA
City,State,Zip:	ROANOKE, VA
Region:	BRRO-R
CEDS Facility Id:	200000090411

SAV-ON TOBACCO (Continued) **U003983094**

Case Status:	**Closed**
Pollution Complaint #:	20052058
Reported:	11/15/2004
Case Closed Date:	08/31/2007
Program:	RP Lead
Federally Regulated UST (Y/N):	Y
Regulated Petroleum UST (1):	Y
Excluded UST (1):	N
Deferred UST (1):	N
Partially Deferred UST (1):	N
Exempt 1 UST (2):	N
Exempt 2 Heating Oil UST (2):	N
Small Heating Oil AST (2):	N
Regulated AST (3):	N
Unregulated AST (3):	N
Other Y/N:	N
Unknown Y/N:	N
Other Description:	Not reported
Heating Oil Category:	Not reported

Facility:

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
City,State,Zip:	ROANOKE, VA 24012
Facility Id:	2022675
Facility Type:	GAS STATION
CEDS Facility ID:	200000090411

Owner:

Owner Id:	41804
Owner Name:	Empire Petroleum Partners LLC
Owner Address:	8350 N Central Expressway Ste M2185
Owner Address2:	Not reported
Owner City, State, Zip:	Dallas, TX 75206
Owner Type:	COMMERCIAL
Number of Active AST:	0
Number of Active UST:	8
Number of Inactive AST:	0
Number of Inactive UST:	0

Owner Id:	50116
Owner Name:	Asim Aayan LLC
Owner Address:	3745 Challenger Avenue NE
Owner Address2:	Not reported
Owner City, State, Zip:	Roanoke, VA 24012
Owner Type:	COMMERCIAL
Number of Active AST:	0
Number of Active UST:	8
Number of Inactive AST:	0
Number of Inactive UST:	0

UST:

Facility ID:	2022675
Federally Regulated:	Yes

Tank Number:	1M
Tank Capacity:	8000

SAV-ON TOBACCO (Continued) **U003983094**

Tank Contents:	GASOLINE
Tank Status:	**CURR IN USE**
Tank Type:	UST
Tank Material:	
Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide
Release Detection:	
Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Automatic Shutoff
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No

SAV-ON TOBACCO (Continued) **U003983094**

Pipe Materials: Other Note	Not reported
Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	2M
Tank Capacity:	8000
Tank Contents:	GASOLINE
Tank Status:	**CURR IN USE**
Tank Type:	UST
Tank Material:	
Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide
Release Detection:	
Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Automatic Shutoff
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No

SAV-ON TOBACCO (Continued) **U003983094**

Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported

Facility ID:	2022675
Federally Regulated:	Yes

Tank Number:	3
Tank Capacity:	8000
Tank Contents:	GASOLINE PREMIUM
Tank Status:	**CURR IN USE**
Tank Type:	UST

Tank Material:

Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No

SAV-ON TOBACCO (Continued) **U003983094**

Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Automatic Shutoff
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	4
Tank Capacity:	8000
Tank Contents:	DIESEL
Tank Status:	**CURR IN USE**
Tank Type:	UST

Tank Material:

Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No

SAV-ON TOBACCO (Continued) **U003983094**

Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Automatic Shutoff
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	5
Tank Capacity:	8000
Tank Contents:	GASOLINE RACING
Tank Status:	**CURR IN USE**
Tank Type:	UST

Tank Material:

Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	Yes

SAV-ON TOBACCO (Continued) **U003983094**

Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	6
Tank Capacity:	10000
Tank Contents:	HEATING OIL
Tank Status:	**TEMP OUT OF USE**
Tank Type:	UST

Tank Material:

Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No

SAV-ON TOBACCO (Continued) **U003983094**

Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported
Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	7
Tank Capacity:	10000
Tank Contents:	DIESEL
Tank Status:	**TEMP OUT OF USE**
Tank Type:	UST

Tank Material:

Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No

SAV-ON TOBACCO (Continued) **U003983094**

Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide

Release Detection:

Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	No
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	No
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported

Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported

Facility ID:	2022675
Federally Regulated:	Yes
Tank Number:	8
Tank Capacity:	10000
Tank Contents:	HEATING OIL
Tank Status:	**TEMP OUT OF USE**

SAV-ON TOBACCO (Continued) **U003983094**

Tank Type:	UST
Tank Material:	
Install Date:	4/1/1988
Tank Materials: Bare Steel	No
Tank Materials: Cath Protect Steel	No
Tank Materials: Epoxy Steel	No
Tank Materials: Fiberglass	No
Tank Materials: Concrete	No
Tank Materials: Composite	Yes
Tank Materials: Double Walled	No
Tank Materials: Lined Interior	No
Tank Materials: Excav Liner	No
Tank Materials: Insulated Tank Jacket	No
Tank Materials: Repaired	No
Tank Materials: Unknown	No
Tank Materials: Other	Yes
Tank Materials: Other Note	Buff-Hide
Release Detection:	
Tank Release Detection: Leak Deferred	No
Tank Release Detection: Manual Gauge	Yes
Tank Release Detection: Auto Gauge	Yes
Tank Release Detection:Tank Tightness	No
Tank Release Detection: Vapor Monitor	No
Tank Release Detection: Inventory	Yes
Tank Release Detection: Stat Invent Recon	No
Tank Release Detection: Spill Install	Yes
Tank Release Detection: Overfill Install	Not reported
Tank Release Detection: Groundwater	No
Tank Release Detection: Int Sec Containment	No
Tank Release Detection: Int Double Walled	No
Tank Release Detection: Other Method	No
Tank Release Detection: Other Note	Not reported
Pipe Release Detection: Leak Deferred	Not reported
Pipe Release Detection: Autoleak	Not reported
Pipe Release Detection: Line Tightness	Yes
Pipe Release Detection: Stat Invent Recon	No
Pipe Release Detection: Groundwater	No
Pipe Release Detection: Int Sec Containment	No
Pipe Release Det: Interior Double Walled	No
Pipe Release Detection: Other Method	No
Pipe Release Detection: Other Note	Not reported
Pipe Type:	PRESSURE
Pipe Materials: Bare Steel	No
Pipe Materials: Galvanized Steel	No
Pipe Materials: Copper	No
Pipe Materials: Fiberglass	Yes
Pipe Materials: Cath Protect	No
Pipe Materials: Double Walled	No
Pipe Materials: Sec Containment	No
Pipe Materials: Repaired	No
Pipe Materials: Unknown	No
Pipe Materials: Other	No
Pipe Materials: Other Note	Not reported

SAV-ON TOBACCO (Continued) **U003983094**

SPILLS:

Name:	Not reported
Address:	3745 CHALLENGER AVE
City,State,Zip:	ROANOKE, VA 24012
City,State,Zip:	ROANOKE, VA 24012
Fips City/County:	161/Roanoke County
Status:	Closed
Reference Id:	253643
IR Number:	2006-W-0247
Associated IR:	Not reported
Incident Date:	03/24/2006
Call Received Date:	03/24/2006
Closure Comments:	See Site Comments for details
Threat To:	Not reported
Terrorism (Y/N):	NO
Characterize Incident:	Not reported
Incident Type:	Petroleum(Petroleum)
Incident Subtype:	Petroleum
Materials:	Oil (Fuel-Gasoline)
Effect To Receptor:	Not reported
Water Body:	Not reported
Low Quantity To Water:	Not reported
High Quantity To Water:	Not reported
Quantity Units:	Not reported
Other Receptors:	Ditch Line
RP Company:	EOC
RP Name:	Not reported
Property Owner:	Not reported
Property Company:	Not reported
Duration Of Event (Hrs):	Not reported
Impacts:	Not reported
Other Impacts:	Not reported
Steps Taken:	Not reported
Steps Taken Description:	Not reported
System Components:	Not reported
Other System Components:	Not reported
Cause Of Event:	Not reported
Corrective Action Taken:	Not reported
Weather Status:	No
Precipitation (Wet):	Not reported
Discharge Type:	Not reported
Discharge Volume:	Not reported
Unknown Discharge (Y/N):	NO
Site Name:	FAST STOP MARKET
Closure Date:	04/26/2006
Orig. Call Incident Description:	17 Gallons of Gasoline spilled and washed with a water hase into a ditch.
Original Call Material Description:	Gasoline
Original Call Location Description:	Fast Stop Market-3745 Challenger Ave-Roanoke-VA-24012-Roanoke County
Incident Ongoing at time of Call:	No
Agencies Notified (Y/N):	NO
Other Agencies:	Not reported
Permitted (Y/N):	No
Call Reported By Company Name:	Unidentified
Call Property Owner Company Name:	Not reported
Call Property Owner Name:	Not reported
Site Summary:	Not reported

SAV-ON TOBACCO (Continued) **U003983094**

VA Financial Assurance 1:

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	8000
CEDS Facility Name:	Food Mart 208
Tank Status:	CURR IN USE
Active Federally Regualted UST:	Y

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	10000
CEDS Facility Name:	Food Mart 208
Tank Status:	TEMP OUT OF USE
Active Federally Regualted UST:	Y

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	8000
CEDS Facility Name:	Food Mart 208
Tank Status:	CURR IN USE
Active Federally Regualted UST:	Y

SAV-ON TOBACCO (Continued) **U003983094**

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	8000
CEDS Facility Name:	Food Mart 208
Tank Status:	CURR IN USE
Active Federally Regualted UST:	Y

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	8000
CEDS Facility Name:	Food Mart 208
Tank Status:	CURR IN USE
Active Federally Regualted UST:	Y

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	10000
CEDS Facility Name:	Food Mart 208
Tank Status:	TEMP OUT OF USE
Active Federally Regualted UST:	Y

SAV-ON TOBACCO (Continued) **U003983094**

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	8000
CEDS Facility Name:	Food Mart 208
Tank Status:	CURR IN USE
Active Federally Regualted UST:	Y

Name:	SAV-ON TOBACCO
Address:	3745 CHALLENGER AVE
Address 2:	Not reported
City,State,Zip:	ROANOKE, VA 24012
Facility ID:	2022675
Owner Name:	Asim Aayan LLC
ROF Own Id:	50116
Tank Type:	UST
Mechanism:	Not reported
Gallonage:	Not reported
Per Occurence:	Not reported
Third Party:	Not reported
Annual Aggregate:	Not reported
In Compliance:	Not reported
Total Capacity:	10000
CEDS Facility Name:	Food Mart 208
Tank Status:	TEMP OUT OF USE
Active Federally Regualted UST:	Y

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ROANOKE	S103723005	NW SIGNAL SHOP	HOLLINS & ORANGE INTERSECTION		LTANKS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 84

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 11/19/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 11/19/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/01/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 9

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/22/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Department of Environmental Quality
Telephone: 804-698-4236
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: N/A

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Solid Waste Management Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/29/2021
Date Data Arrived at EDR: 12/01/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 84

Source: Department of Environmental Quality
Telephone: 804-698-4238
Last EDR Contact: 02/25/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Semi-Annually

Lists of state and tribal leaking storage tanks

LUST REG PD: Leaking Underground Storage Tank Sites

Leaking underground storage tank site locaitons. Includes: counties of Amelia, Brunswick, Charles City, Chesterfield, Dinwiddie, Essex, Gloucester, Goochland, Greensville, Hanover, Henrico, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northumberland, Powhatan, Prince George, Richmond, Surry, Sussex, Westmoreland; cities of Colonial Heights, Emporia, Hopewell, Petersburg.

Date of Government Version: 12/02/2014
Date Data Arrived at EDR: 12/04/2014
Date Made Active in Reports: 01/16/2015
Number of Days to Update: 43

Source: Department of Environmental Quality Piedmont Regional Office
Telephone: 804-527-5020
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Quarterly

LUST REG TD: Leaking Underground Storage Tank Sites

Leaking underground storage tank site locations. Includes: counties of Accomack, Isle of Wight, James City, Northampton, Southampton, York; cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, Williamsburg.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 09/16/2013
Number of Days to Update: 73

Source: Department of Environmental Quality Tidewater Regional Office
Telephone: trofoia@deq.vir
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

LUST REG SC: Leaking Underground Storage Tanks
Leaking underground storage tank site locations. Includes: counties of Amherst, Appomattox, Buckingham, Campbell, Charlotte, Cumberland, Halifax, Lunenburg, Mecklenburg, Nottoway, Pittsylvania, Prince Deward; cities of Danville, Lynchburg.

Date of Government Version: 09/06/2013
Date Data Arrived at EDR: 09/06/2013
Date Made Active in Reports: 09/17/2013
Number of Days to Update: 11

Source: Department of Environmental Quality, South Central Region
Telephone: 434-582-5120
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Semi-Annually

LUST REG VA: Leaking Underground Storage Tank List
Leaking underground storage tank site locations. Includes: counties of Albemarle, Augusta, Bath, Clarke, Fluvanna, Frederick, Greene, Highland, Nelson, Page, Rockbridge, Rockingham, Shenandoah, Warren; cities of Buena Vista, Charlottesville, Harrisonburg, Lexington, Staunton, Waynesboro, Winchester.

Date of Government Version: 12/06/2011
Date Data Arrived at EDR: 12/08/2011
Date Made Active in Reports: 01/16/2012
Number of Days to Update: 39

Source: Department of Environmental Quality Valley Regional Office
Telephone: 540-574-7800
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: No Update Planned

LUST REG NO: Leaking Underground Storage Tank Tracking Database
Leaking underground storage tank site locations. Includes: counties of Arlington, Caroline, Culpeper, Fairfax, Fauquier, King George, Loudoun, Louisa, Madison, Orange, Prince William, Rappahannock, Spotsylvania, Stafford; cities of Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, Manassas Park.

Date of Government Version: 05/18/2004
Date Data Arrived at EDR: 05/22/2004
Date Made Active in Reports: 07/09/2004
Number of Days to Update: 48

Source: Department of Environmental Quality Northern Regional Office
Telephone: 703-583-3800
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG WC: Leaking Underground Storage Tank List
Leaking underground storage tank site locations. Includes: counties of Alleghany, Bedford, Botetourt, Craig, Floyd, Franklin, Giles, Henry, Montgomery, Patrick, Pulaski, Roanoke; cities of Bedford, Clifton Forge, Covington, Martinsville, Radford, Roanoke, Salem.

Date of Government Version: 06/04/2015
Date Data Arrived at EDR: 06/05/2015
Date Made Active in Reports: 07/07/2015
Number of Days to Update: 32

Source: Department of Environmental Quality West Central Regional Office
Telephone: 540-562-6700
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: No Update Planned

LUST REG SW: Leaking Underground Storage Tank Database
Leaking underground storage tank site locations. Includes: counties of Bland, Buchanan, Carroll, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe; cities of Bristol, Galax, Norton.

Date of Government Version: 07/15/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 09/16/2013
Number of Days to Update: 60

Source: Department of Environmental Quality Southwest Regional Office
Telephone: 276-676-4800
Last EDR Contact: 10/11/2016
Next Scheduled EDR Contact: 01/23/2017
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

LTANKS: Leaking Petroleum Storage Tanks
Includes releases of petroleum from underground storage tanks and aboveground storage tanks.

Date of Government Version: 11/03/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/10/2022
Number of Days to Update: 80

Source: Department of Environmental Quality
Telephone: 804-698-4010
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

UST: Registered Petroleum Storage Tanks
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 11/01/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/10/2022
Number of Days to Update: 80

Source: Department of Environmental Quality
Telephone: 804-698-4010
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

AST: Registered Petroleum Storage Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 11/01/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/10/2022
Number of Days to Update: 80

Source: Department of Environmental Quality
Telephone: 804-698-4010
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 02/09/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Sites Listing
A listing of sites with Engineering Controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 01/05/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 75
Source: Department of Environmental Quality
Telephone: 804-698-4228
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

INST CONTROL: Voluntary Remediation Program Database
Sites included in the Voluntary Remediation Program database that have deed restrictions.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 01/05/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 75
Source: Department of Environmental Quality
Telephone: 804-698-4228
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VRP: Voluntary Remediation Program
The Voluntary Cleanup Program encourages owners of elected contaminated sites to take the initiative and conduct voluntary cleanups that meet state environmental standards.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 01/05/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 75
Source: Department of Environmental Quality
Telephone: 804-698-4228
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Brownfields Site Specific Assessments

To qualify for Brownfields Assessment, the site must meet the Federal definition of a Brownfields and should have contaminant issues that need to be addressed and a redevelopment plan supported by the local government and community. Virginia's Department of Environmental Quality performs brownfields assessments under a cooperative agreement with the U.S. Environmental Protection Agency at no cost to communities, property owners or, prospective purchasers. The assessment is an evaluation of environmental impacts caused by previous site uses similar to a Phase II Environmental Assessment.

Date of Government Version: 01/19/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 83

Source: Department of Environmental Quality
Telephone: 804-698-4207
Last EDR Contact: 04/20/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/10/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 0

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/15/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/24/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 11/16/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 11/16/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

PFAS: Per- and Polyfluoroalkyl Substances

PFOS and PFOA stand for perfluorooctane sulfonate and perfluorooctanoic acid, respectively. Both are fluorinated organic chemicals, part of a larger family of compounds referred to as perfluoroalkyl substances (PFASs).

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 01/06/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 74

Source: Department of Environmental Quality
Telephone: 804-698-4336
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/15/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 84

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

SPILLS BRL: Prep/Spills Database Listing

A listing of spills locations located in the Blue Ridge Regional area, Lynchburg.

Date of Government Version: 09/18/2009
Date Data Arrived at EDR: 09/18/2009
Date Made Active in Reports: 10/06/2009
Number of Days to Update: 18

Source: DEQ, Blue Ridge Regional Office
Telephone: 434-582-6218
Last EDR Contact: 11/28/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Varies

SPILLS VA: PREP Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 08/08/2012
Date Data Arrived at EDR: 08/09/2012
Date Made Active in Reports: 10/05/2012
Number of Days to Update: 57

Source: Department of Environmental Quality, Valley Regional Office
Telephone: 540-574-7800
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

SPILLS TD: PREP Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 09/17/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/06/2009
Number of Days to Update: 13

Source: Department of Environmental Quality, Tidewater Region
Telephone: trofoia@deq.vir
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Quarterly

SPILLS: Prep/Spills Database Listing

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment. PREP staff often work to assist local emergency responders, other state agencies, federal agencies, and responsible parties, as may be needed, to manage pollution incidents. Oil spills, fish kills, and hazardous materials spills are examples of incidents that may involve the DEQ's PREP Program.

Date of Government Version: 08/02/2021
Date Data Arrived at EDR: 08/24/2021
Date Made Active in Reports: 11/17/2021
Number of Days to Update: 85

Source: Department of Environmental Quality
Telephone: 804-698-4287
Last EDR Contact: 02/10/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

SPILLS SW: Reportable Spills

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 01/21/2010
Date Data Arrived at EDR: 01/22/2010
Date Made Active in Reports: 02/16/2010
Number of Days to Update: 25

Source: Department of Environmental Quality, Southwest Region
Telephone: 276-676-4839
Last EDR Contact: 07/13/2012
Next Scheduled EDR Contact: 10/29/2012
Data Release Frequency: No Update Planned

SPILLS PD: PREP Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 10/20/2009
Date Data Arrived at EDR: 10/29/2009
Date Made Active in Reports: 12/03/2009
Number of Days to Update: 35

Source: Department of Environmental Quality, Piedmont Region
Telephone: 804-527-5020
Last EDR Contact: 02/06/2012
Next Scheduled EDR Contact: 05/21/2012
Data Release Frequency: Quarterly

SPILLS NO: PREP Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/29/2009
Date Made Active in Reports: 10/30/2009
Number of Days to Update: 31

Source: Department of Environmental Quality, Northern Region
Telephone: 703-583-3864
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

SPILLS PC: Pollution Complaint Database

Pollution Complaints Database. The pollution reports contained in the PC database include the initial release reporting of Leaking Underground Storage Tanks and all other releases of petroleum to the environment as well as releases to state waters. The database is current through 12/1/93. Since that time, all spill and pollution reporting information has been collected and tracked through the DEQ regional offices.

Date of Government Version: 06/01/1996
Date Data Arrived at EDR: 10/22/1996
Date Made Active in Reports: 11/21/1996
Number of Days to Update: 30

Source: Department of Environmental Quality
Telephone: 804-698-4287
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: No Update Planned

SPILLS WC: Prep Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 09/21/2009
Date Data Arrived at EDR: 09/29/2009
Date Made Active in Reports: 10/30/2009
Number of Days to Update: 31

Source: Department of Environmental Quality, West Central Region
Telephone: 540-562-6700
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 09/01/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 43

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 10/26/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 84

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/15/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/13/2021
Date Data Arrived at EDR: 12/17/2021
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/01/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/18/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/18/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/19/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/20/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/12/2021
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 22

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 64

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/24/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 87

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 84

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/04/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/24/2022
Next Scheduled EDR Contact: 05/08/2022
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 70

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 23

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 01/31/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/03/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/21/2022
Date Data Arrived at EDR: 03/22/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 3

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/02/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/14/2021
Date Data Arrived at EDR: 12/15/2021
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 85

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/04/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/04/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 95

Source: EPA
Telephone: (215) 814-5000
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 01/10/2022
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/22/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 34

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 78

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Quarterly

AIRS: Permitted Airs Facility List

A listing of permitted Airs facilities.

Date of Government Version: 12/15/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/11/2022
Number of Days to Update: 85

Source: Department of Environmental Quality
Telephone: 804-698-4000
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Annually

CEDS: Comprehensive Environmental Data System

Virginia Water Protection Permits, Virginia Pollution Discharge System (point discharge) permits and Virginia Pollution Abatement (no point discharge) permits.

Date of Government Version: 09/14/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 09/23/2021
Number of Days to Update: 8

Source: Department of Environmental Quality
Telephone: 804-698-4077
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

COAL ASH: Coal Ash Disposal Sites

A listing of facilities with coal ash impoundments.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 05/26/2021
Date Made Active in Reports: 08/18/2021
Number of Days to Update: 84

Source: Department of Environmental Protection
Telephone: 804-698-4285
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

DRYCLEANERS: Drycleaner List

A listing of registered drycleaners.

Date of Government Version: 04/11/2022
Date Data Arrived at EDR: 04/12/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 1

Source: Department of Environmental Quality
Telephone: 804-698-4407
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

ENFORCEMENT: Enforcement Actions Data

A listing of enforcement actions.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 01/06/2022
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 48

Source: Department of Environmental Quality
Telephone: 804-698-4031
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/25/2021
Date Data Arrived at EDR: 10/28/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 83

Source: Department of Environmental Quality
Telephone: 804-698-4205
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information listing

Solid waste financial assurance information.

Date of Government Version: 01/26/2022
Date Data Arrived at EDR: 01/28/2022
Date Made Active in Reports: 01/31/2022
Number of Days to Update: 3

Source: Department of Environmental Quality
Telephone: 804-698-4123
Last EDR Contact: 01/24/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing

A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 76

Source: Department of Environmental Quality
Telephone: 804-698-4159
Last EDR Contact: 04/11/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: No Update Planned

UIC: Underground Injection Control Wells

A listing of underground injection controls wells.

Date of Government Version: 10/26/2021
Date Data Arrived at EDR: 10/27/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 84

Source: Department of Mines, Minerals and Energy
Telephone: 276-415-9700
Last EDR Contact: 04/20/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List
The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Virgina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/20/2014
Number of Days to Update: 203

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank
The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Virgina and at the Regional VA Levels.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/15/2014
Number of Days to Update: 198

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/11/2021
Date Data Arrived at EDR: 11/12/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 81

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/07/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/14/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 804-692-1900

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

NEW BONSACK / 460 FIRE STATION
3645 ORANGE AVENUE
ROANOKE, VA 24012

TARGET PROPERTY COORDINATES

Latitude (North):	37.305852 - 37ˆ 18’ 21.07’’
Longitude (West):	79.886988 - 79ˆ 53’ 13.16’’
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	598637.4
UTM Y (Meters):	4129179.2
Elevation:	1058 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	13861947 ROANOKE, VA
Version Date:	2019
East Map:	13861957 STEWARTSVILLE, VA
Version Date:	2019

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

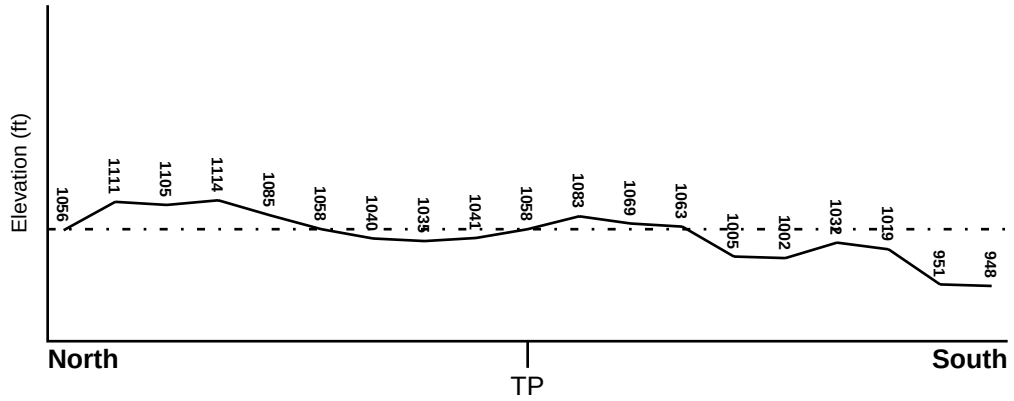
TOPOGRAPHIC INFORMATION

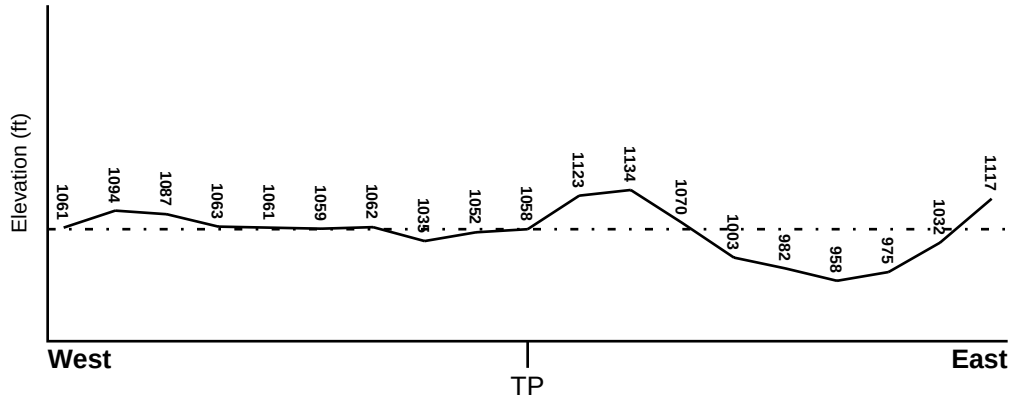
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 1058 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
51161C0167G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
51023C0480C	FEMA FIRM Flood data
51023C0460C	FEMA FIRM Flood data
51019C0265D	FEMA FIRM Flood data
51161C0186G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
ROANOKE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

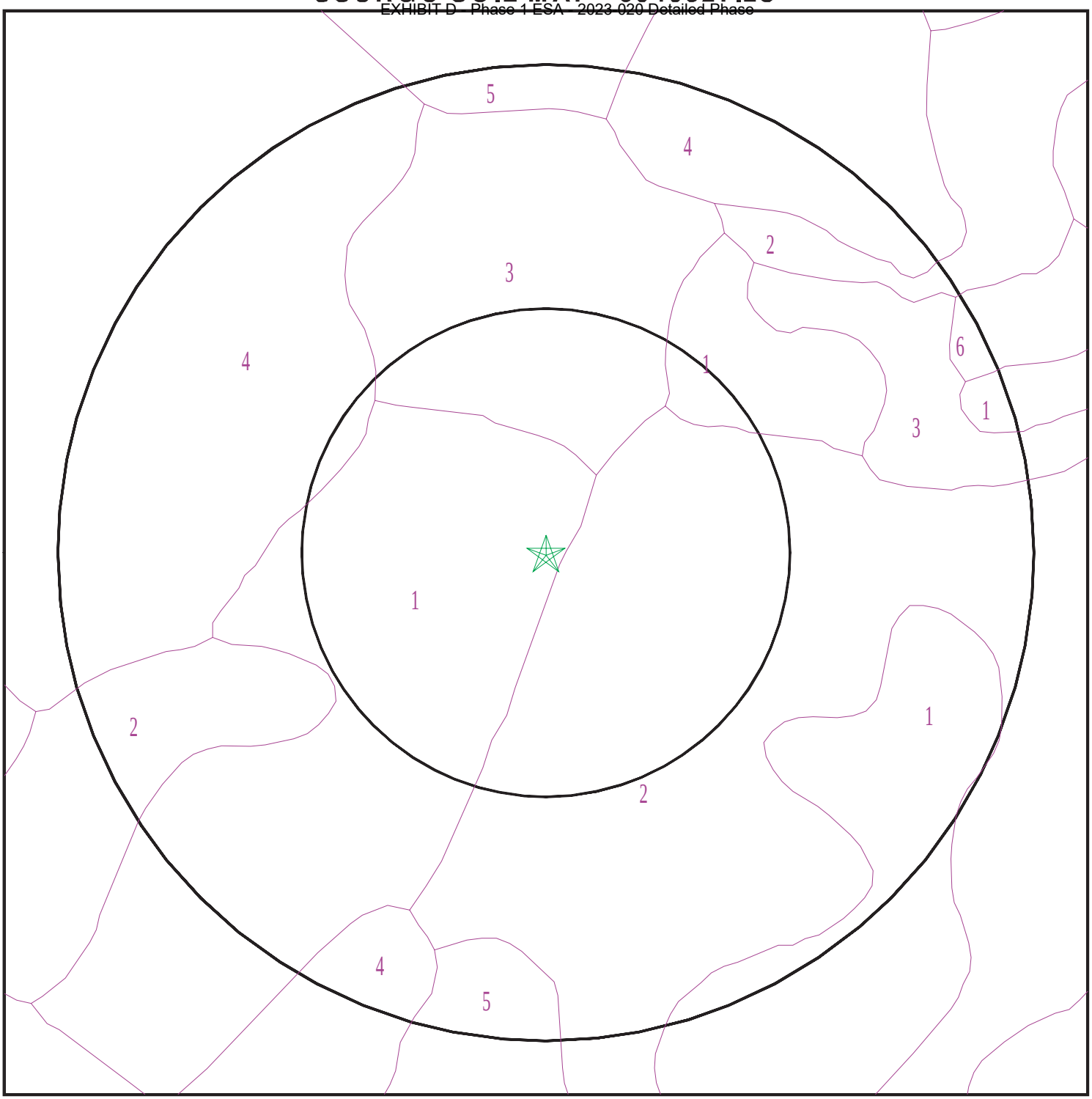
Era:	Paleozoic
System:	Cambrian
Series:	Cambrian
Code:	C *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6949527.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	New Bonsack / 460 Fire Station	CLIENT:	ECS Mid Atlantic, LLC
ADDRESS:	3645 Orange Avenue Roanoke VA 24012	CONTACT:	Alexandra Moon
LAT/LONG:	37.305852 / 79.886988	INQUIRY #:	6949527.2s
		DATE:	April 21, 2022 9:13 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Chiswell

Soil Surface Texture: channery silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
2	1 inches	11 inches	very channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
3	11 inches	21 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: Chiswell

Soil Surface Texture: channery silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
2	1 inches	11 inches	very channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
3	11 inches	21 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:

Soil Map ID: 3

Soil Component Name: Chiswell

Soil Surface Texture: channery silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**		
1	0 inches	1 inches	channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
2	1 inches	11 inches	very channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:
3	11 inches	21 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0.42	Max: Min:

Soil Map ID: 4

Soil Component Name: Udorthents

Soil Surface Texture: channery silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 5

Soil Component Name: Groseclose

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 5.5 Min: 3.6
2	18 inches	61 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 5.5 Min: 3.6

Soil Map ID: 6

Soil Component Name: Groseclose

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 5.5 Min: 3.6
2	18 inches	61 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 5.5 Min: 3.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

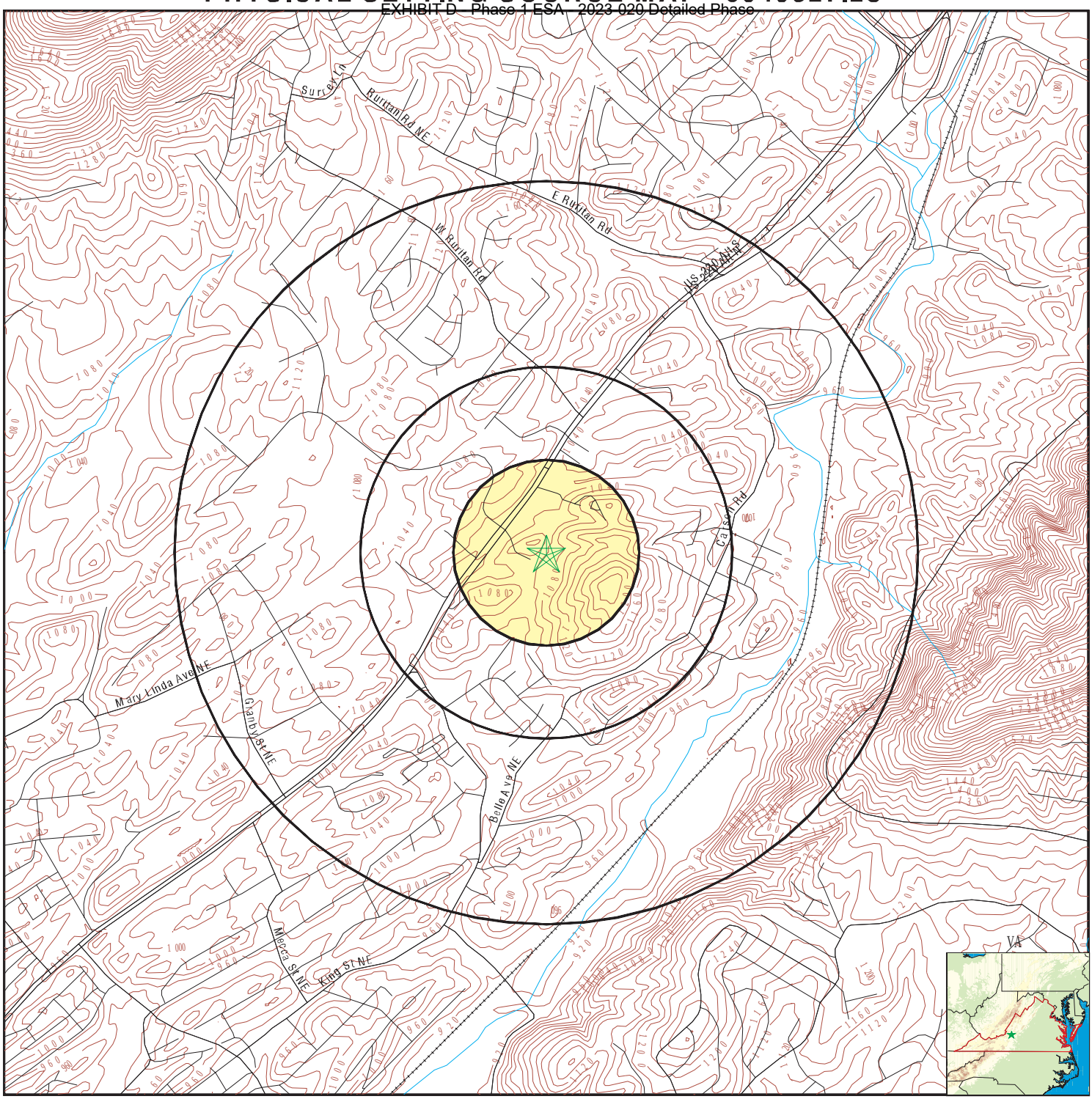
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 6949527.2s



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

N

SITE NAME:	New Bonsack / 460 Fire Station	CLIENT:	ECS Mid Atlantic, LLC
ADDRESS:	3645 Orange Avenue Roanoke VA 24012	CONTACT:	Alexandra Moon
LAT/LONG:	37.305852 / 79.886988	INQUIRY #:	6949527.2s
		DATE:	April 21, 2022 9:13 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

EPA Region 3 Statistical Summary Readings for Zip Code: 24012

Number of sites tested: 165.

Maximum Radon Level: 39.2 pCi/L.
Minimum Radon Level: 0.4 pCi/L.

pCi/L <4	pCi/L 4-10	pCi/L 10-20	pCi/L 20-50	pCi/L 50-100	pCi/L >100
109 (66.06%)	42 (25.45%)	11 (6.67%)	3 (1.82%)	0 (0.00%)	0 (0.00%)

Federal EPA Radon Zone for ROANOKE CITY County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Virginia Public Water Supplies
Source: Department of Health, Office of Water Programs
Telephone: 804-786-1756

OTHER STATE DATABASE INFORMATION

Virginia Oil and Gas Wells
Source: Department of Mines, Minerals and Energy
Telephone: 804-692-3200
A listing of oil and gas well locations.

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

EPA Region 3 Statistical Summary Readings
Source: Region 3 EPA
Telephone: 215-814-2082
Radon readings for Delaware, D.C., Maryland, Pennsylvania, Virginia and West Virginia.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Appendix IV: Historical Research Documentation

New Bonsack / 460 Fire Station

3645 Orange Avenue

Roanoke, VA 24012

Inquiry Number: 6949527.8

April 25, 2022

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

04/25/22

Site Name:

New Bonsack / 460 Fire Statior
3645 Orange Avenue
Roanoke, VA 24012
EDR Inquiry # 6949527.8

Client Name:

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Chantilly, VA 20151
Contact: Alexandra Moon

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	***Scale***	***Details***	***Source***
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: March 24, 1995	USGS/DOQQ
1982	1"=500'	Flight Date: April 01, 1982	USDA
1977	1"=500'	Flight Date: March 15, 1977	USGS
1972	1"=500'	Flight Date: April 27, 1972	USGS
1968	1"=500'	Flight Date: March 25, 1968	USGS
1960	1"=500'	Flight Date: October 18, 1960	USGS
1956	1"=500'	Flight Date: October 08, 1956	USGS
1947	1"=500'	Flight Date: March 10, 1947	USGS

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INQUIRY #: 6949527.8
YEAR: 2016
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 2012
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 2009
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 2006
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 1995
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 1982
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 1977
= 500'
N
EDR

INQUIRY #: 6949527.8

YEAR: 1972

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

INQUIRY #: 6949527.8

YEAR: 1968

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

INQUIRY #: 6949527.8
YEAR: 1960
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 1956
= 500'
N
EDR

INQUIRY #: 6949527.8
YEAR: 1947
= 500'
N
EDR

New Bonsack / 460 Fire Station

3645 Orange Avenue

Roanoke, VA 24012

Inquiry Number: 6949527.3

April 21, 2022

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

04/21/22

Site Name:	Client Name:
New Bonsack / 460 Fire Statior	ECS Mid Atlantic, LLC
3645 Orange Avenue	14026 Thunderbolt Place
Roanoke, VA 24012	Chantilly, VA 20151
EDR Inquiry # 6949527.3	Contact: Alexandra Moon

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by ECS Mid Atlantic, LLC were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # CAAD-47D9-A4AC

PO # NA

Project 14480

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: CAAD-47D9-A4AC

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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New Bonsack / 460 Fire Station

3645 Orange Avenue

Roanoke, VA 24012

Inquiry Number: 6949527.4

April 21, 2022

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

04/21/22

Site Name:	Client Name:
New Bonsack / 460 Fire Statior	ECS Mid Atlantic, LLC
3645 Orange Avenue	14026 Thunderbolt Place
Roanoke, VA 24012	Chantilly, VA 20151
EDR Inquiry # 6949527.4	Contact: Alexandra Moon

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by ECS Mid Atlantic, LLC were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.#	NA
Project:	14480

Coordinates:

Latitude:	37.305852 37° 18' 21" North
Longitude:	-79.886988 -79° 53' 13" West
UTM Zone:	Zone 17 North
UTM X Meters:	598635.02
UTM Y Meters:	4129383.08
Elevation:	1058.84' above sea level

Maps Provided:

2019	1962
2016	1933
2013	1929
1984	1891
1978	1890
1977	
1968	
1963	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2019 Source Sheets

Roanoke
2019
7.5-minute, 24000

Stewartsville
2019
7.5-minute, 24000

2016 Source Sheets

Roanoke
2016
7.5-minute, 24000

Stewartsville
2016
7.5-minute, 24000

2013 Source Sheets

Roanoke
2013
7.5-minute, 24000

Stewartsville
2013
7.5-minute, 24000

1984 Source Sheets

Roanoke
1984
7.5-minute, 24000
Aerial Photo Revised 1982

Stewartsville
1984
7.5-minute, 24000
Aerial Photo Revised 1982

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1978 Source Sheets

Stewartsville
1978
7.5-minute, 24000
Aerial Photo Revised 1977

Roanoke
1978
7.5-minute, 24000
Aerial Photo Revised 1977

1977 Source Sheets

Stewartsville
1977
7.5-minute, 24000
Aerial Photo Revised 1977

Roanoke
1977
7.5-minute, 24000
Aerial Photo Revised 1977

1968 Source Sheets

Roanoke
1968
7.5-minute, 24000
Aerial Photo Revised 1968

1963 Source Sheets

Stewartsville
1963
7.5-minute, 24000
Aerial Photo Revised 1960

Roanoke
1963
7.5-minute, 24000
Aerial Photo Revised 1960

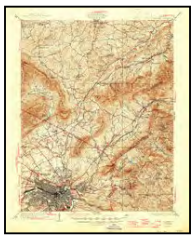
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1962 Source Sheets

Roanoke
1962
7.5-minute, 24000
Aerial Photo Revised 1960

1933 Source Sheets



Roanoke
1933
15-minute, 62500

1929 Source Sheets

Roanoke
1929
15-minute, 48000

1891 Source Sheets

Bedford
1891
30-minute, 125000

Roanoke
1891
30-minute, 125000

Topo Sheet Key

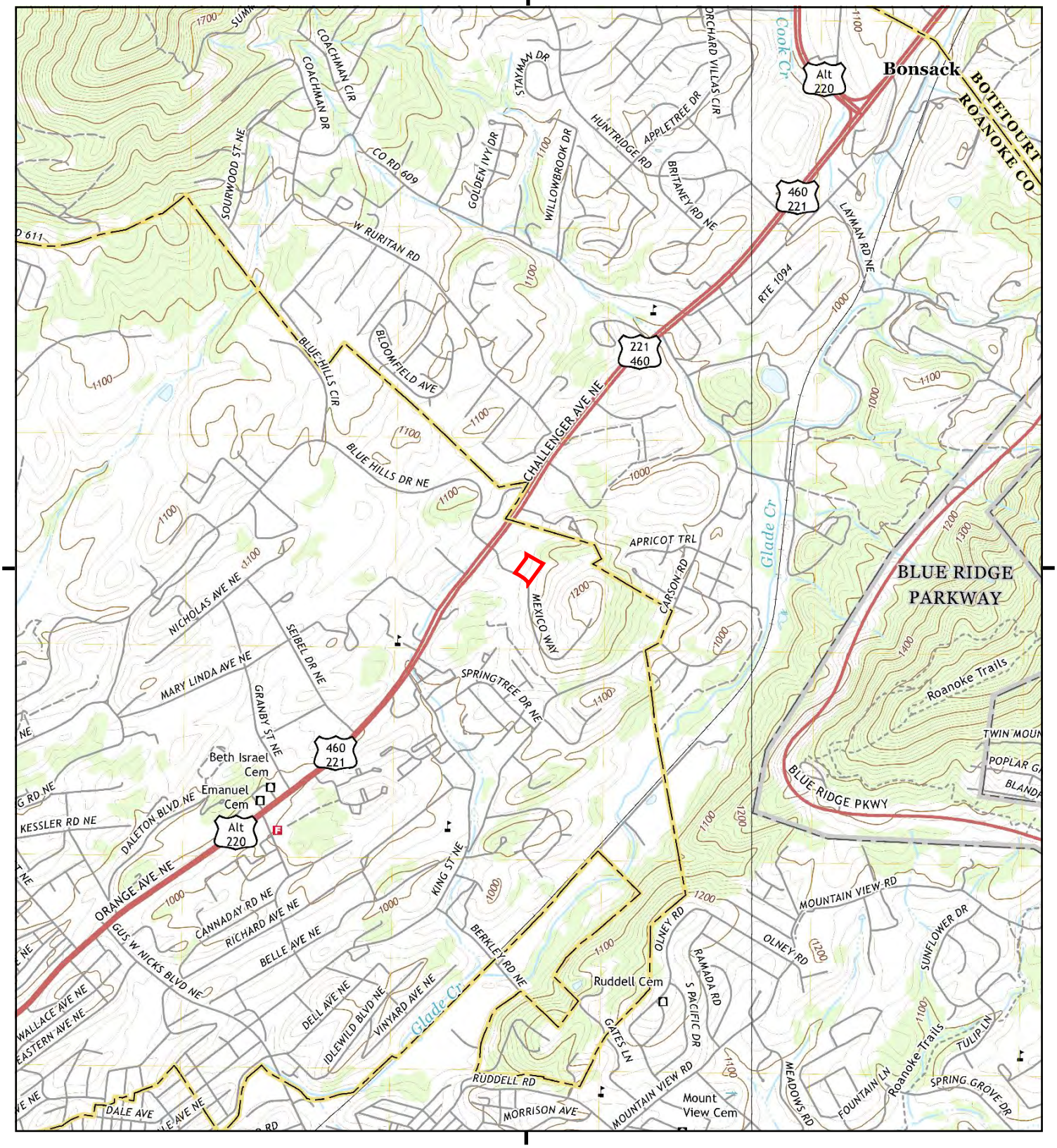
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1890 Source Sheets

Roanoke
1890
30-minute, 125000

Historical Topo Map

2019



This report includes information from the following map sheet(s).

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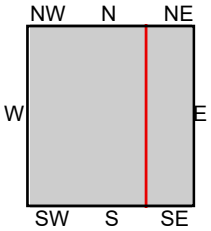


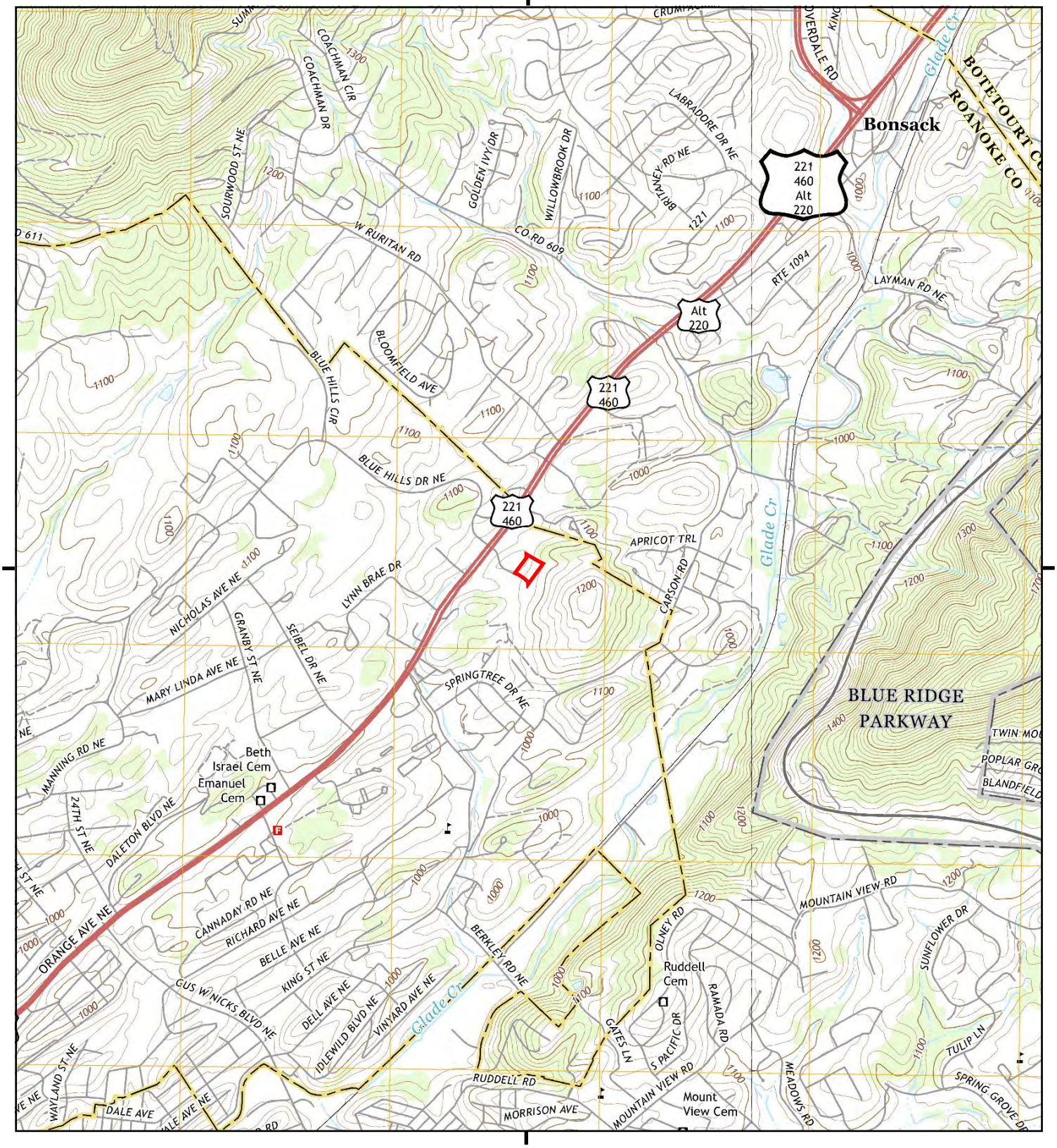
TP, Roanoke, 2019, 7.5-minute
E, Stewartsville, 2019, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

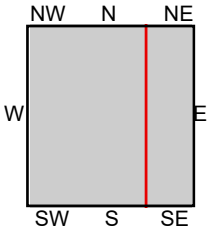
Historical Topo Map

2016



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



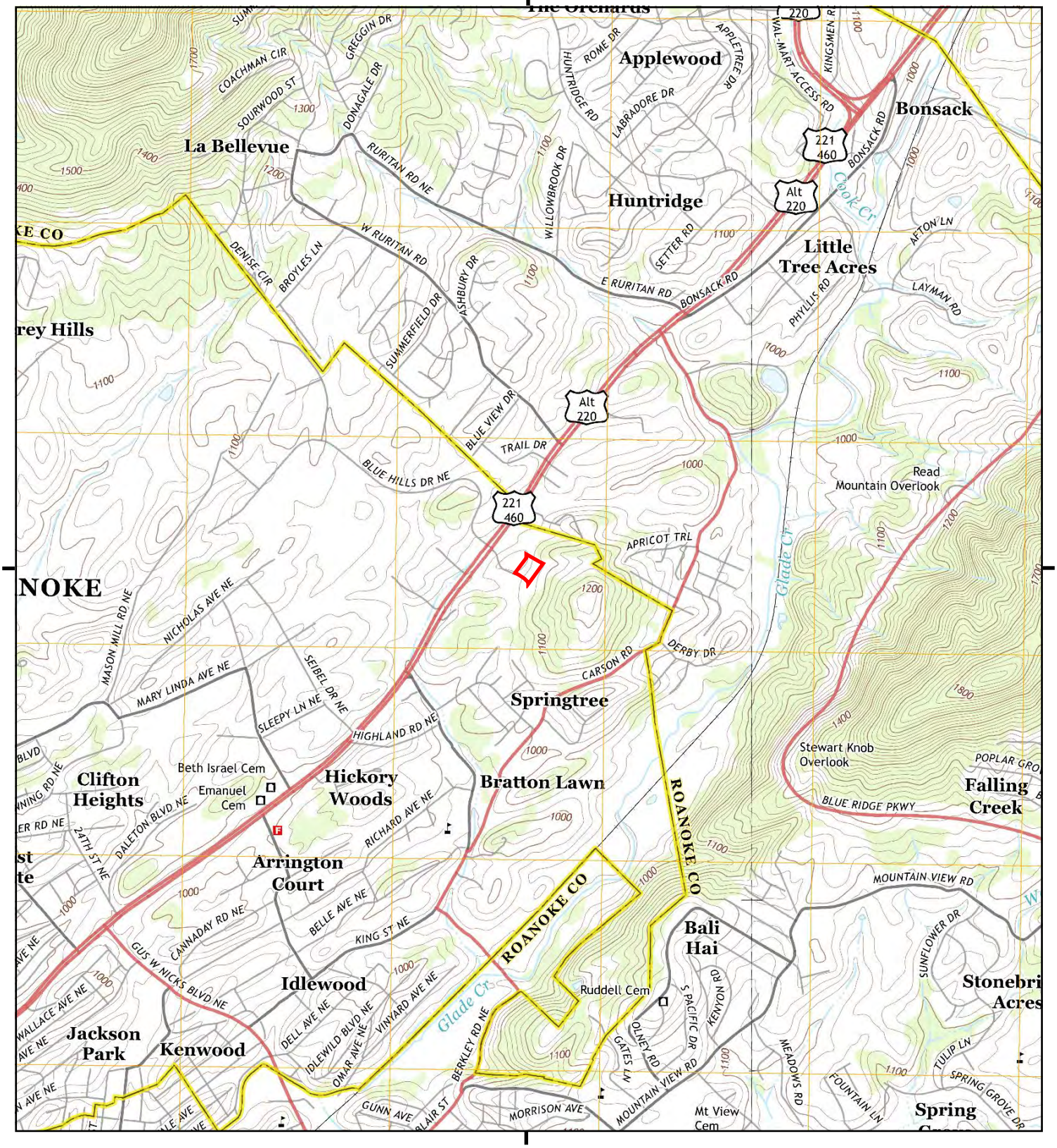
TP, Roanoke, 2016, 7.5-minute
E, Stewartsville, 2016, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

2013



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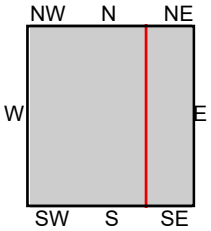
0 Miles 0.25 0.5 1 1.5



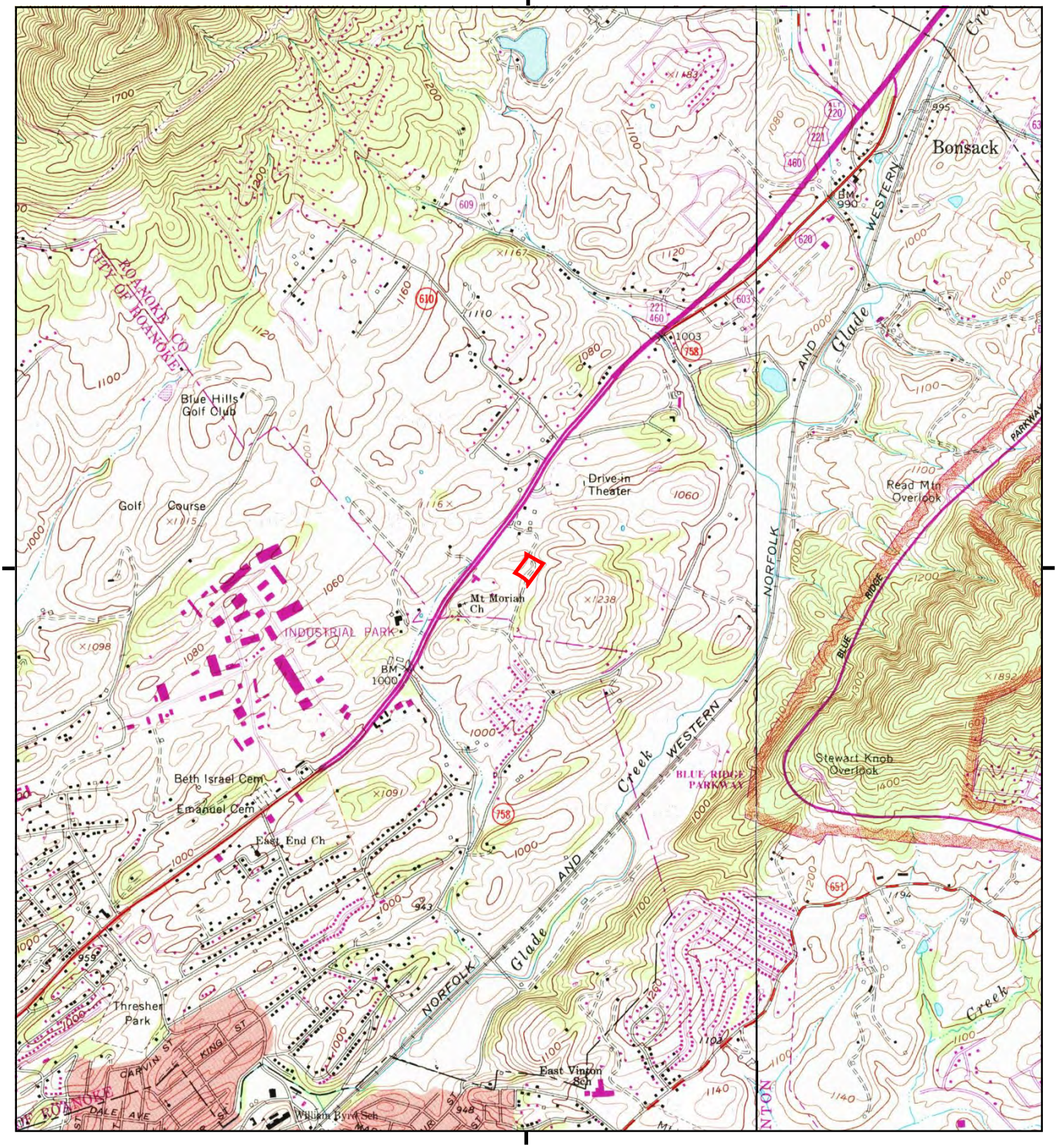
TP, Roanoke, 2013, 7.5-minute
E, Stewartsville, 2013, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

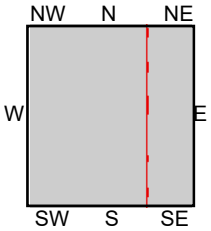
Historical Topo Map

1984



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



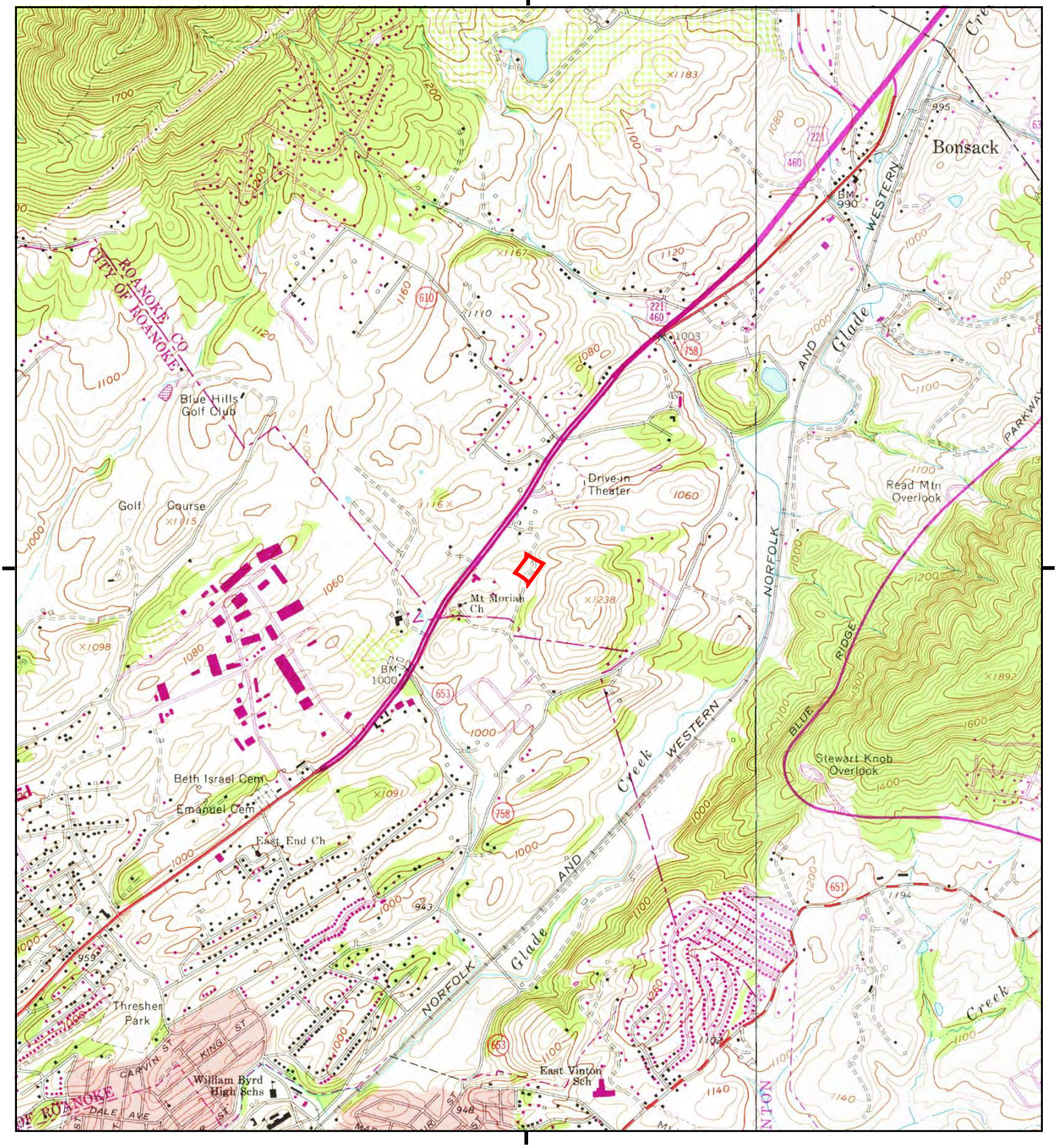
TP, Roanoke, 1984, 7.5-minute
E, Stewartsville, 1984, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

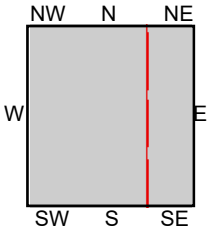
Historical Topo Map

1978



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



TP, Roanoke, 1978, 7.5-minute
E, Stewartsville, 1978, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

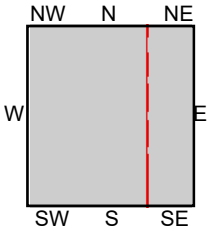
N

Historical Topo Map

1977

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



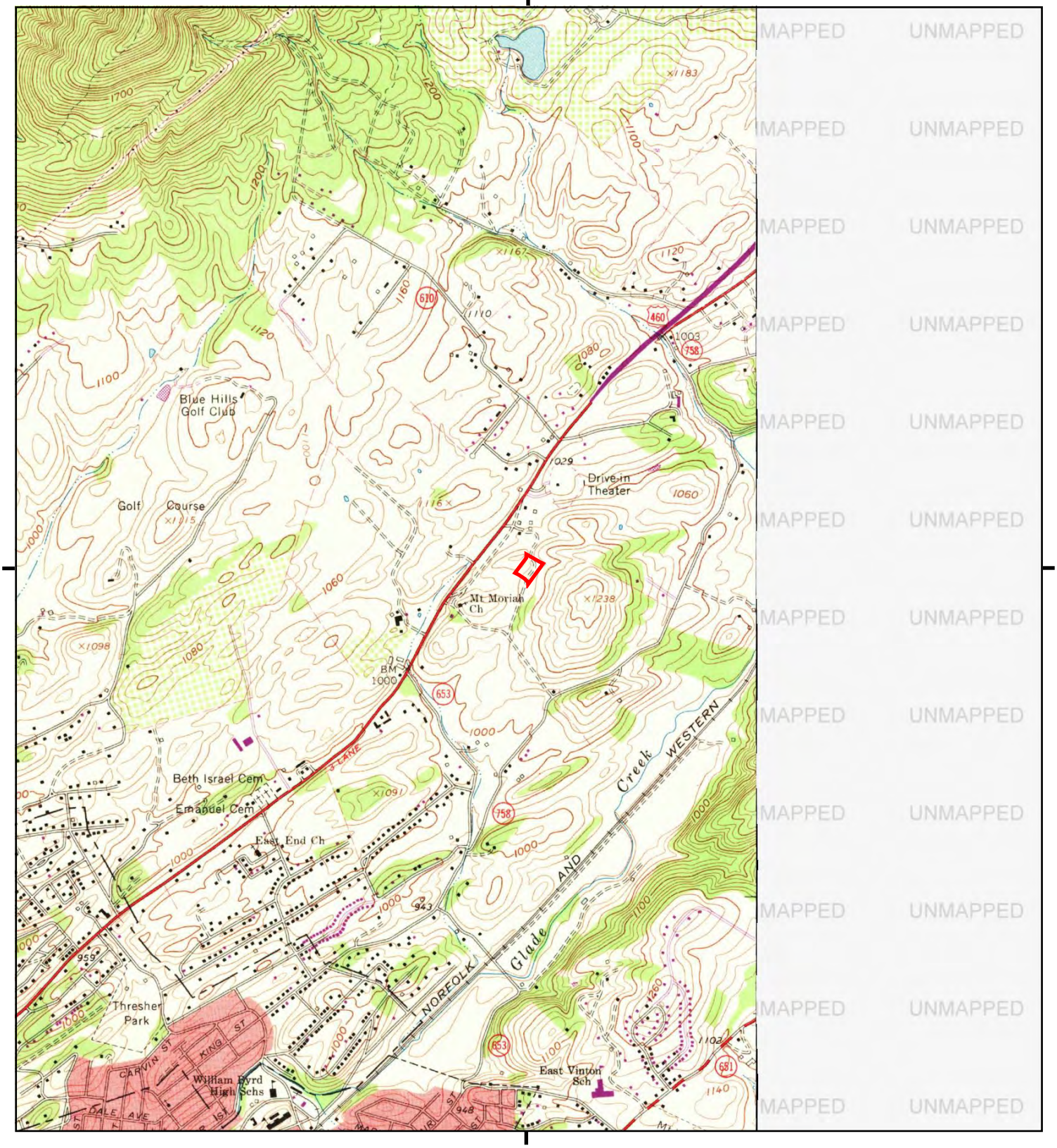
TP, Roanoke, 1977, 7.5-minute
E, Stewartsville, 1977, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

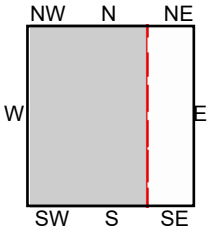
Historical Topo Map

1968



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



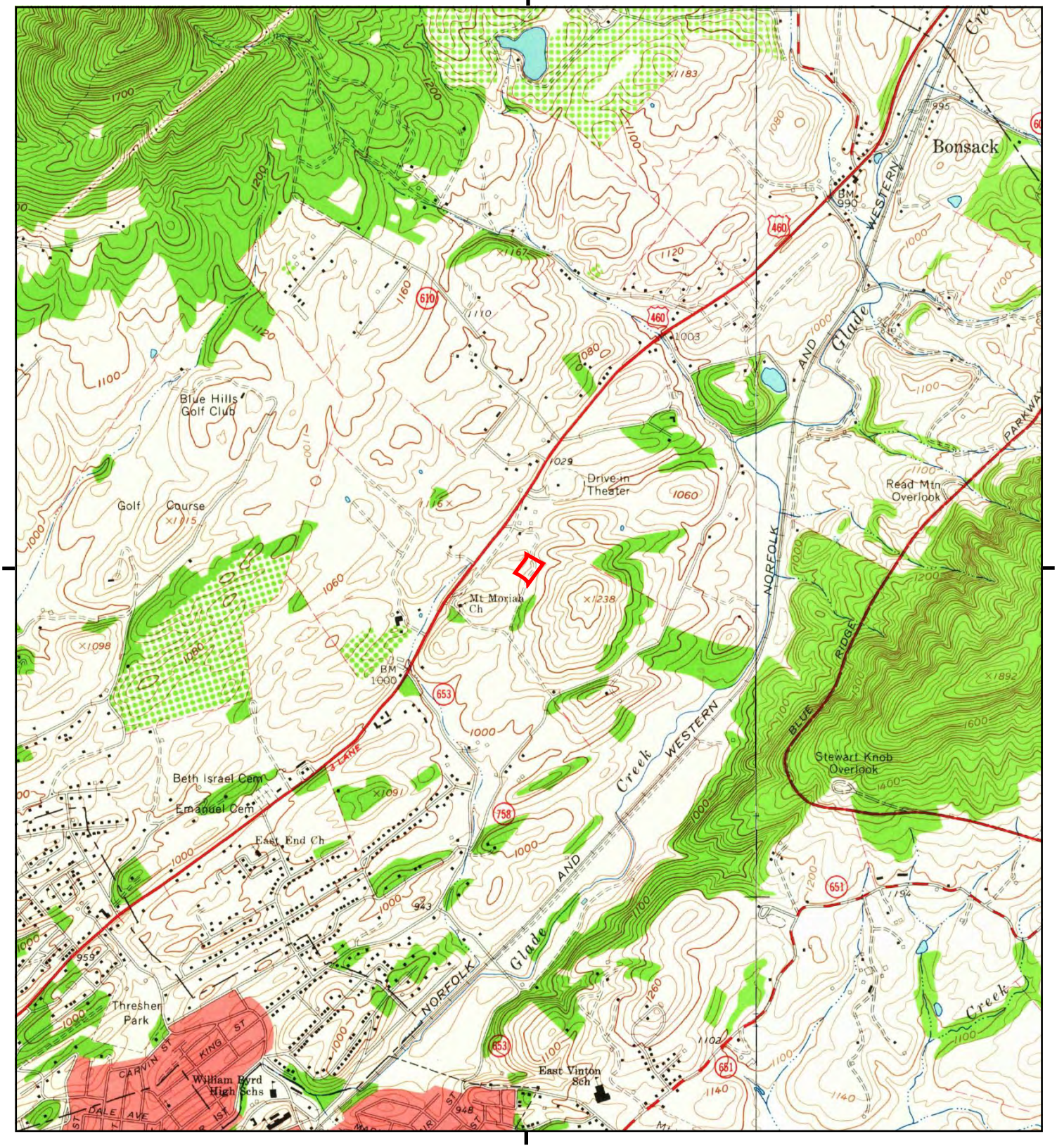
TP, Roanoke, 1968, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

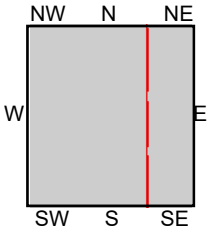
Historical Topo Map

1963



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



TP, Roanoke, 1963, 7.5-minute
E, Stewartsville, 1963, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

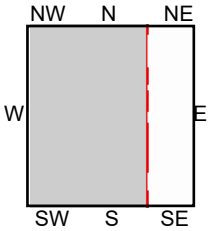
N

Historical Topo Map

1962

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



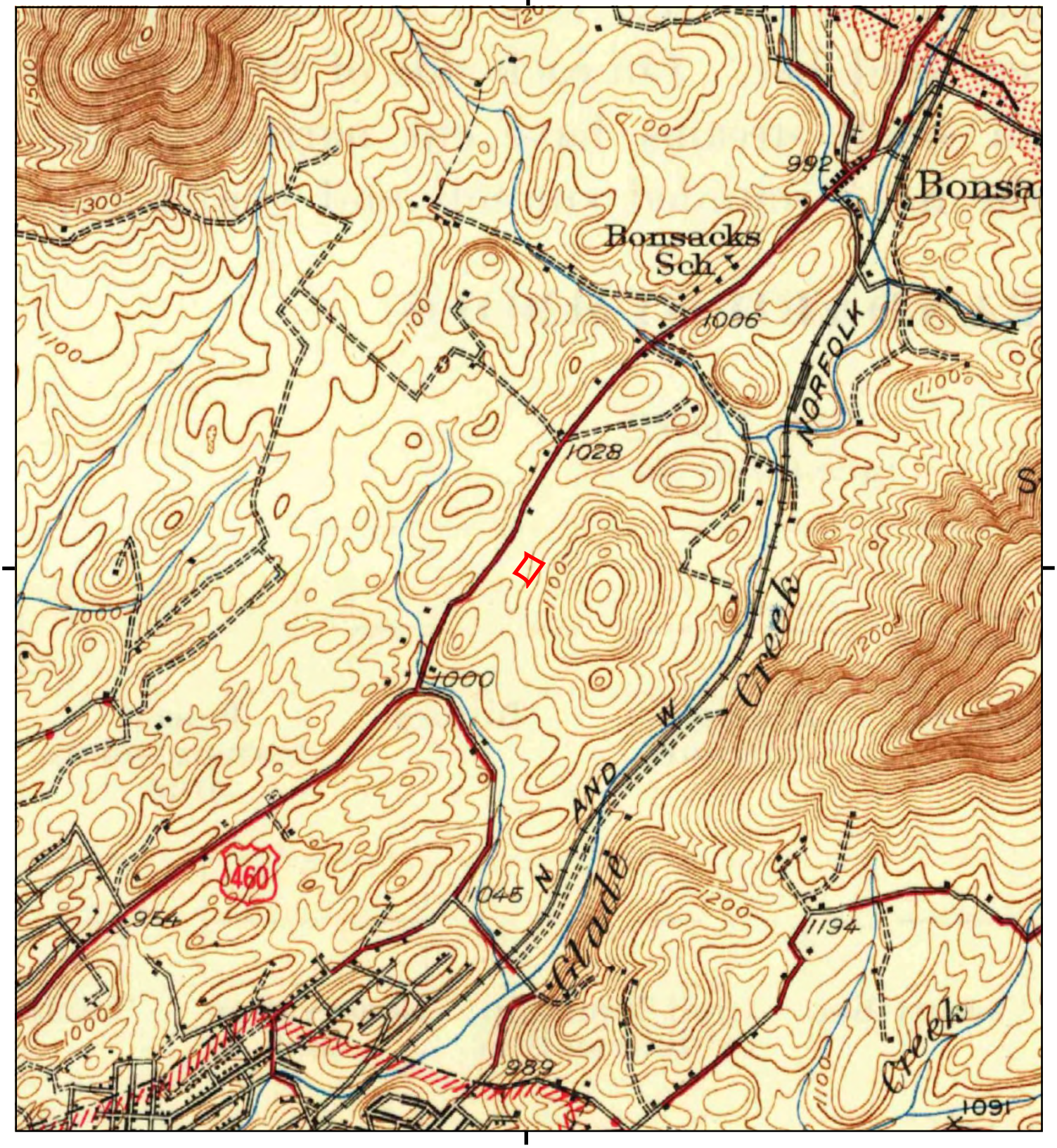
TP, Roanoke, 1962, 7.5-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

1933



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

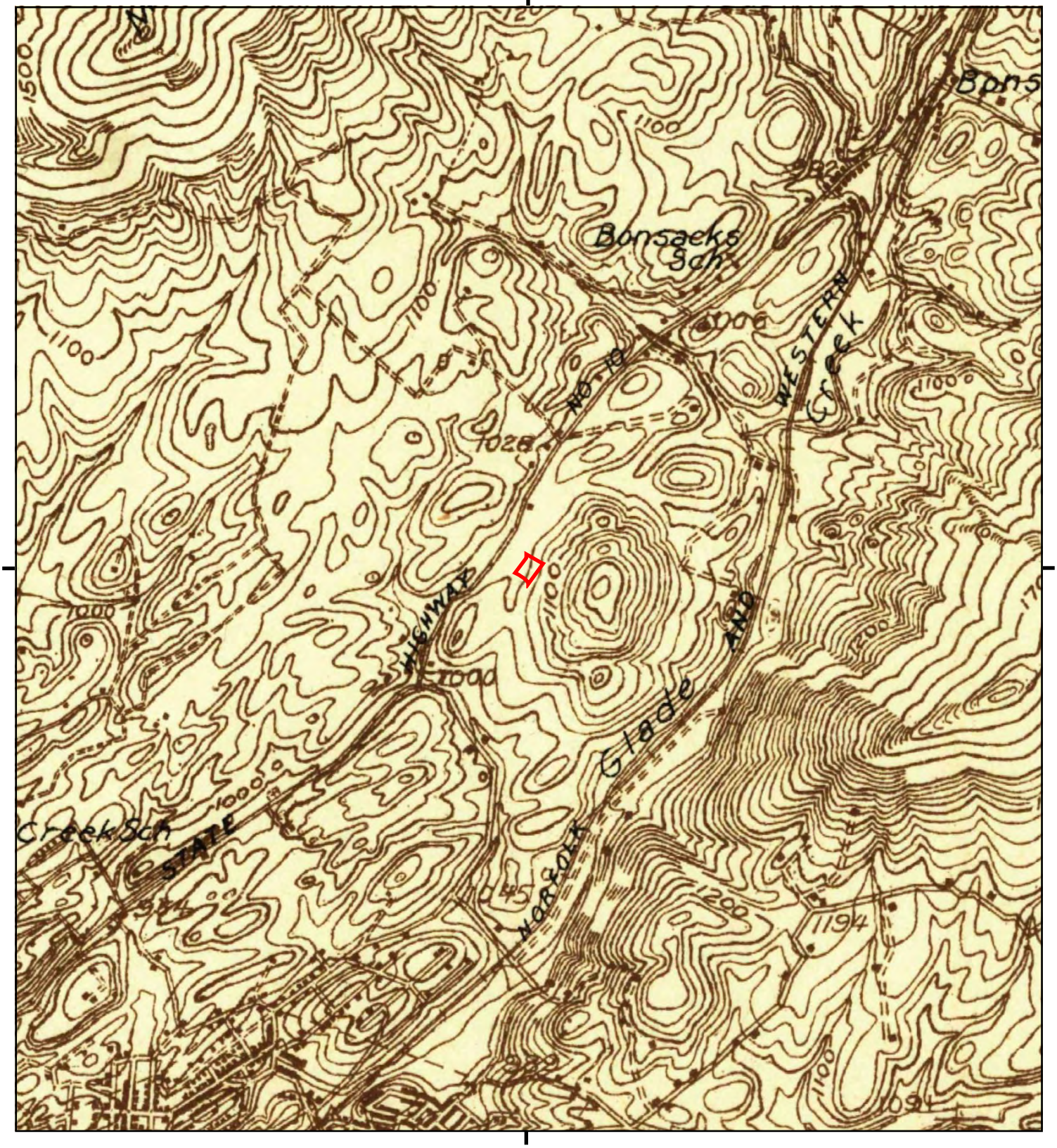
TP, Roanoke, 1933, 15-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

1929



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

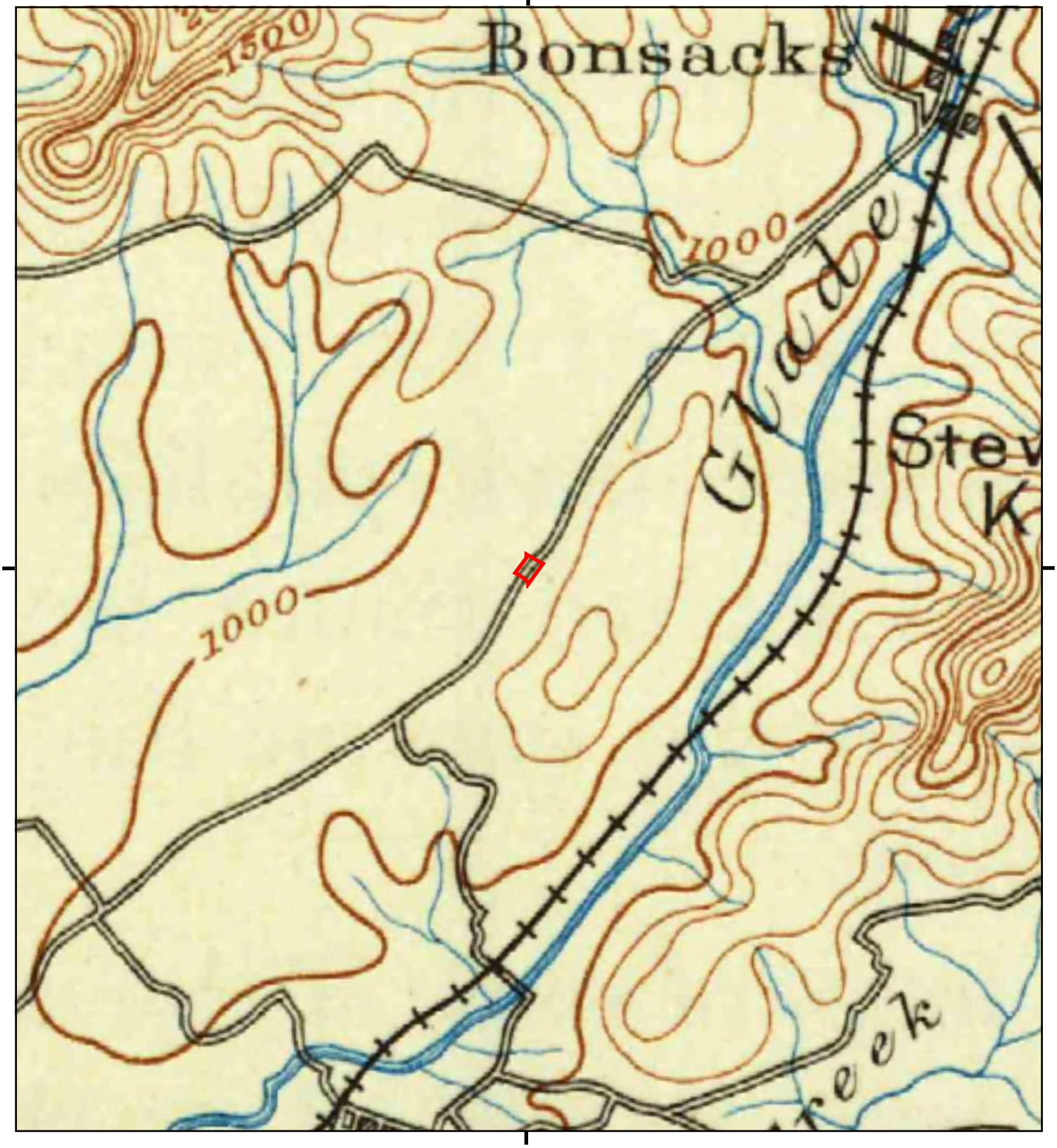
TP, Roanoke, 1929, 15-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

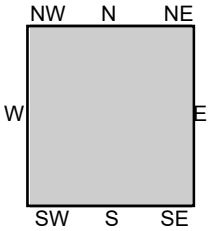
Historical Topo Map

1891



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



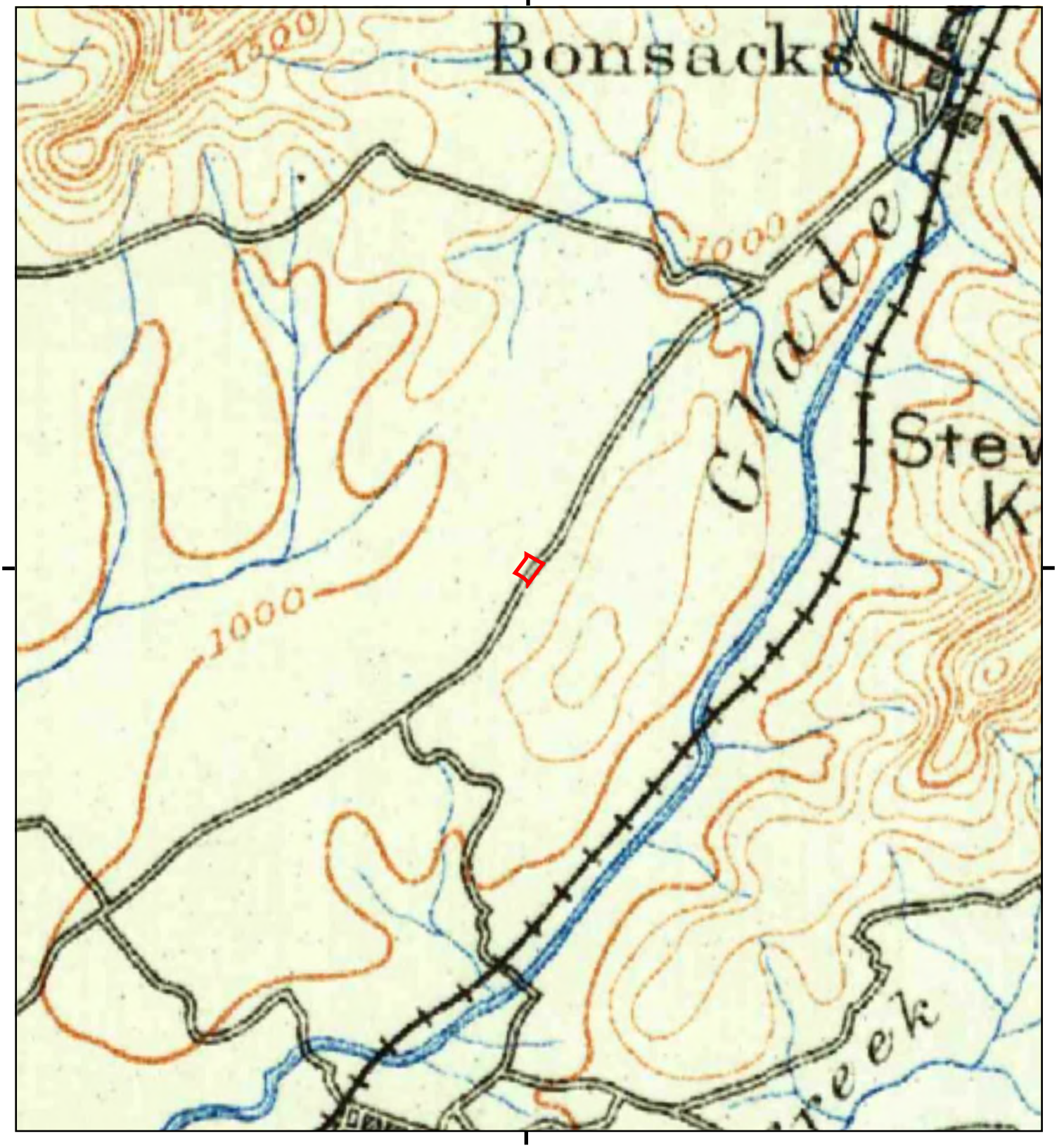
TP, Bedford, 1891, 30-minute
TP, Roanoke, 1891, 30-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

Historical Topo Map

1890



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Roanoke, 1890, 30-minute

SITE NAME: New Bonsack / 460 Fire Station
ADDRESS: 3645 Orange Avenue
Roanoke, VA 24012
CLIENT: ECS Mid Atlantic, LLC

N

New Bonsack / 460 Fire Station
3645 Orange Avenue
Roanoke, VA 24012

Inquiry Number: 6949527.10
April 25, 2022

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☑	EDR Digital Archive
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1989	☑	☐	POLK DIRECTORY CO
1984	☑	☐	POLK DIRECTORY CO
1979	☐	☐	Hill Directory Co
1974	☐	☐	Hill Directory Co
1969	☐	☐	Hill Directory Co
1964	☐	☐	Hill Directory Co

FINDINGS

TARGET PROPERTY STREET

3645 Orange Avenue
Roanoke, VA 24012

Year	CD Image	Source	
ORANGE AVE NE			
2017	pg A2	EDR Digital Archive	
2014	pg A4	EDR Digital Archive	
2010	pg A6	EDR Digital Archive	
2005	pg A8	EDR Digital Archive	
2000	pg A10	EDR Digital Archive	
1995	pg A12	EDR Digital Archive	
1992	pg A14	EDR Digital Archive	
1989	pg A15	POLK DIRECTORY CO	
1984	pg A16	POLK DIRECTORY CO	
1979	-	Hill Directory Co	Target and Adjoining not listed in Source
1974	-	Hill Directory Co	Target and Adjoining not listed in Source
1969	-	Hill Directory Co	Target and Adjoining not listed in Source
1964	-	Hill Directory Co	Target and Adjoining not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	

MEXICO WAY NE

2017	pg. A1	EDR Digital Archive	
2014	pg. A3	EDR Digital Archive	
2010	pg. A5	EDR Digital Archive	
2005	pg. A7	EDR Digital Archive	
2000	pg. A9	EDR Digital Archive	
1995	pg. A11	EDR Digital Archive	
1992	-	EDR Digital Archive	Street not listed in Source
1989	-	POLK DIRECTORY CO	Street not listed in Source
1984	-	POLK DIRECTORY CO	Street not listed in Source
1979	-	Hill Directory Co	Street not listed in Source
1974	-	Hill Directory Co	Street not listed in Source
1969	-	Hill Directory Co	Street not listed in Source
1964	-	Hill Directory Co	Street not listed in Source

City Directory Images

MEXICO WAY NE 2017

1445 MEMBERONE FCU 460 BRANCH
1454 LUCAS THERAPIES
1455 AIRGAS

ORANGE AVE NE 2017

3042	WATERWORKS OF ROANOKE
3239	460 APPLIANCE CENTER
	ANDREWS HOME FURNISHING
	MOONS AUTO BODY
3315	BUDGET INN EXPRESS
3345	GRACE & TRUTH BAPTIST CHURCH
3348	APPLE MARKET
3353	ATLANTIC CREDIT & FINANCE INC
3401	KFC
3402	MCDONALDS
	MKG ENTERPRISES
3406	RANCH DRESSINGS
	ROCKFAB KITCHEN & BATH
3410	WOODYSUSHI
3418	GOODWILL ORANGE AVENUE
3419	KROGER
	MATRIX NAILS
	WALMART NEIGHBORHOOD MARKET
	WALMART PHARMACY
3420	KEMBEL TAX SERVICE
	PHO SAIGON
3424	DIMENSIONS DINE & DANCE
	PUMP IT UP
3425	RESCUE MISSION
3428	NAILS & TOES SALON
3429	DENNYS
3430	RAINBOW CLEANERS
3432	MISHAP GAMES
3433	AT&T
	AT&T AUTHORIZED RETAILER
	HIBACHI GRILL EXPRESS
	JETR LLC
	PLANET FITTNESS
	SUPERCUTS
3434	KEMBEL TAX SERVICE
3436	BRATCHERS ICE CREAM
3442	WELLS FARGO BANK
3458	BB&T
3518	EL RODEO
3530	BURGER KING
3541	GRACE & TRUTH BAPTIST CHURCH
3545	GRACE & TRUTH BAPTIST CHURCH
3548	GREGORY P SKINNER DDS PC
3555	WENDYS
3565	VIRGINIA FIRST MORTGAGE
3645	PARKWAY WESLEYAN CHURCH INC
3675	FLOWERS & THINGS

MEXICO WAY NE 2014

1445 MEMBERONE FCU 460 BRANCH
1454 THERAPIES LUCAS
1455 AIRGAS

ORANGE AVE NE 2014

3042	WATERWORKS OF ROANOKE
3046	ROCKFAB KITCHEN & BATH
3239	460 APPLIANCE CENTER
3348	APPLE MARKET
3353	ATLANTIC CREDIT & FINANCE INC
3401	KFC
	KFC ROANOKE
3402	MCDONALDS
	THE GLEBE
3406	COMMERCIAL SOLID SURFACING
	ROCKFAB
	ROCKFAB CUSTOM GRANITE & MARBLE
	ROCKFAB KITCHEN & BATH
3418	GOODWILL ORANGE AVENUE
3419	KING STREET PROPERTYROANOKE LLC
	MATRIX NAILS
3420	PHO SAIGON
3428	NAILS & TOES SALON
3429	DENNYS
3430	RAINBOW CLEANERS
3432	COMMONWEALTH COLLECTABLES LLC
3434	KEMBEL TAX SERVICE
3436	BRATCHERS ICE CREAM
3442	WELLS FARGO
	WELLS FARGO BANK
3458	BB&T
3518	EL RODEO
	EL RODEO EL TOREO
3530	BURGER KING
3538	MONRO MUFFLER BRAKE & SERVICE
3541	GRACE & TRUTH BAPTIST CHURCH
3545	OCCUPANT UNKNOWN,
3548	SKINNER GREGORY P DDS
3555	WENDYS
3565	SUNTRUST
	VIRGINIA FIRST MORTGAGE
3675	FLOWERS & THINGS

MEXICO WAY NE 2010

1445 MEMBER ONE FEDERAL CREDIT
1454 LUCAS THERAPIES
1455 AIRGAS MID AMERICA

ORANGE AVE NE 2010

3042	WATERWORKS POOLS SPASOUTDOORS
3239	460 APPLIANCE CTR
3315	BUDGET INN
3348	APPLE MARKET CONVENIENCE STORE
3353	JOHN P FRYE LAW OFFICE
	LITTON NETWORK ACCESS SYSTS
3401	KFC
3402	MC DONALDS
3406	BENTECH
	CY ACQUISITION CORP
	ROCKFAB
	ROCKFAB KITCHEN & BATH
3418	ORANGE AVENUE GOODWILL
3419	MATRIX NAILS
3420	KEMBEL FINANCIAL SVC
3423	DOMINOS PIZZA
3424	CARIBBEAN TAN INC
	LAFINCA BAR & GRILL
	PUMP IT UP
3425	CVS PHARMACY
3428	A CUT ABOVE
3429	DENNYS
3430	RAINBOW CLEANERS
3432	ADVANCE AMERICA
3434	KEMBEL TAX SVC
3436	BRATCHERS ICE CREAM PARLOR
3442	WACHOVIA BANK
3458	BB&T
3518	EL RODEO MEXICAN RESTAURANT
3530	BURGER KING
3538	MONRO MUFFLER BRAKE & SVC
3541	GRACE & TRUTH BAPTIST CHURCH
3542	SLEEP ESSENTIALS
3545	FRYAR, JEREMY
3548	SKINNER GREGORY P DDS
3555	WENDYS
3565	SUN TRUST BANK
3645	PARKWAY WESLEYAN CHURCH
3675	FLOWERS & THINGS

MEXICO WAY NE 2005

1455 AIR GAS INC
AIR GAS MID AMERICA

ORANGE AVE NE 2005

3042	WATERWORKS OF ROANOKE INC
3239	460 APPLIANCE CENTER
	CHITTUMS TV SERVICE
3348	AMOCO FOODSHOP
	APPLE MARKET 403
3351	THE LAW OFFICE OF JOHN P FRYE PC
3353	ATLANTIC CREDIT & FINANCE INC
3401	KENTUCKY FRIED CHICKEN
	KFC
3406	CY ACQUISITION CORP
	LOWES HOME IMPROVEMENT WHSE
3412	KIMS NAIL
3419	DON, HODSON
	KROGER AT 460
	KROGER PHARMACY # 287
	MATRIX NAILS
	VOGUE CLEANERS & LAUNDRY INC
3421	SUBWAY SANDWICHES & SALADS
3422	SCRAPBOOKS GALORE & MORE
3423	DOMINOS PIZZA
3424	MOONLIGHT BUFFET
3425	CVS
	CVS PHARMACY # 7503
	ROCK CREEK MULCH
3428	SHOWTIME VIDEO
3432	ADVANCED AMERICA CASH ADVANCED CENTE
3434	VA DEPT ALCOHOLIC BEV CONTROL
3458	FIRST VIRGINIA BANK SOUTHWEST
3518	WESTERN SIZZLIN RESTAURANT
3530	SLOAN
3538	MONRO MUFFLER BRAKE INC
3541	GRACE & TRUTH BAPTIST CHURCH
3545	FRYAR, FRED F
3555	WENDYS OLD FASHIONED HAMBURGER
3565	NATIONAL BANK OF COMMERCE
3645	KODIAK CONSTRUCTORS INC
3659	GISH, E

MEXICO WAY NE 2000

1454 AMERICAN GENERAL LIFE & ACCIDENT INSURANCE COMPANY
INTERSTATE MUTUAL FIRE INS COMPANY
1455 INDUSTRIAL GAS & SUPPLY COMPANY INCORPORATED

ORANGE AVE NE 2000

3042	ROANOKE GRAVELY SALES
3239	COOKS AUTOBODY REPAIRS
	GARYS PAINT BY
3348	AMOCO FOODSHOP 403
3353	LITTON NETWORK ACCESS SYSTEMS
	NETWORK ACCESS SYSTEMS LITTON
3401	KENTUCKY FRIED CHICKEN
3402	MCDONALDS RESTAURANTS
3406	CONTRACTOR YARD INCORPORATED THE
3412	SHOWTIME VIDEO
3418	FAMILY DOLLAR STORES
3419	NBC BANK
	VOGUE CLEANERS & LAUNDRY
	WESTERN UNION ROANOKE
3420	EDWARDS SALON PRODUCTIONS
3421	SUBWAY SANDWICHES & SALADS
3423	DOMINOS PIZZA
3425	REVCO DRUG STORES
	ROCK CREEK MULCH
3429	DENNYS RESTAURANT
3442	FIRST UNION 563 7000
3530	BURGER KING REST
3538	MONRO MUFFLER BRAKE
3541	GRACE & TRUTH BAPTIST CHURC
3542	GETTYS RAJ MART
3545	FRYAR, FRED
3548	BOONE & COMPANY REALTORS
	LAYMAN JANIE S REAL ESTATE
	SKINNER GREGORY P DDS
3555	WENDYS OLD FASHIONED HAMBURGERS
3565	WACHOVIA OFFICES
3639	GISH, E L
3645	PARKWAY FOOD BANK
3659	GISH, GEORGE
	MCDANIEL, RANDALL E
3675	FLOWERS & THINGS
	THORNE JEAN DSGNR

MEXICO WAY NE 1995

1454 AMERICAN GENERAL LIFE
1455 INDUSTRIAL GAS & SUPPLY CO

ORANGE AVE NE 1995

3042	ROANOKE GRAVELY SALES
3210	MORRIS, KAREN R
3239	CHALLENGER MOTORS
	COOKS AUTOBODY REPAIRS
	OCCUPANT UNKNOWNN
	SUN RAY VIDEO
	TOMMYS COLLECTORS WORLD
3315	BLUE RIDGE MOTEL
	PATEL, D
3348	AMOCO FOOD SHOP
3353	FIBER COM INC
	NET EDGE
3401	KFC CORP
3402	MC DONALDS
3406	LOWES
3407	LINDA S WILHELM
3416	LITTLE CAESARS PIZZA
3418	SUPERX DRUG STORE
	SUPERX DRUGS ROANOKE
3419	KROGER FOOD STORES
	VOGUE CLEANERS & LAUNDRY
	WESTERN UNION
3420	EDWARDS SALON PRODUCTIONS
3422	BOX OFFICE VIDEO
3424	FOOD LION INC
3425	REVCO DISCOUNT DRUG CTR
3430	AIR LEE CLEANERS INC
3432	DYER PAINT & WALLPAPER
	REGINALD L DYER CUSTOM PAINT
3434	BOB BODINE
3442	FIRST UNION NATIONAL BANK
3530	BURGER KING
3538	MONRO MUFFLER BRAKE INC
3541	GRACE & TRUTH BAPTIST CHURCH
	OCCUPANT UNKNOWNN
3542	UNI MARTS INC
3545	PUGH, GEORGE R
3548	ANNE H HUFFMAN
	BELINDA WEST
	BOONE & CO
	CHRIS KIDD
	DIANNE FITZGERALD
	DON HILL
	DORIS EDWARDS
	HUFFMAN, ANNE
	ILSE MARIE MORGAN
	J LUTHER BURKHOLDER
	JANIE S CHEWNING
	JANIE S LAYMAN
	LUTHER BURKHOLDER

ORANGE AVE NE 1995 (Cont'd)

3548	MARK WOLFORD
	PAULA TOLLEY
	PETE WOOD
	SHIRLEY FAIRCHILD
	TOMMY WAGNER
	WANDA RICHARDS
3565	CENTRAL FIDELITY BANK
3645	COMMUNICATIONS RESEARCH INC
	MEXITRONICS
	MEXITYPE CORD
	OCCUPANT UNKNOWNN
3659	GISH, E L
	SMITH, C S
3675	FLOWERS & THINGS

ORANGE AVE NE 1992

3042	ROANOKE GRAVELY SLS
3239	CAR ENTERPRISES INC
	DALTON'S DETAIL SHOP
3315	BLUE RIDGE MOTEL
	PATEL, I D
3348	460 AMOCO FOODSHOP
3353	FIBERCOM INC
3401	KENTUCKY FRIED CHICKEN
3402	MCDONALD'S HAMBRGRS
3406	LOWE'S
	LOWE'S-CONTR SALES
3407	CRESTAR BANK 460 EAST BRANCH
3412	VALLEY VIDEO
3414	KEN'S TRAINS
	TAX DEPOT THE
3418	SUPERRX DRUGS ROANOKE
3419	SAM'S CLEANERS
	WESTERN UNION CONSUMER SERVICES
3420	EDWARDS SALON PRODTNS
3425	GREENHOUSE THE
	REVCO DRUG STORE ROANOKE
3432	DYER PAINT & WALLPAPER
	DYER REGINALD L CUSTOM PAINTING &
3434	ST ABC DEPT MARKET SQ EAST SHOP
3442	DOMINION BANK FOUR-SIXTY BR OFC
3518	PONDEROSA STEAK HOUSE
3530	BURGER KING REST #7
3538	460 POOLS
	CLARK HOME SALES
3541	BRYANT, DARRYL A
	GRACE & TRUTH BAPTIST CHURCH
3542	GETTYMART INC ROANOKE STORE
3548	BOONE & COMPANY 460 E OFFICE
	BURKHOLDER LUTHER REAL ESTATE
	CHEWNING JANIE S REAL ESTATE
	EDWARDS DORIS RL EST
	FAIRCHILD SHIRLEY REAL ESTATE
	HILL DONALD L RL EST
	HUFFMAN ANNE H RL EST
	LAYMAN JANIE S RL EST
	RICHARDS WANDA RL EST
	WOLFORD MARK A RL EST
3565	CENTRAL FIDELITY BANK EAST ROANOKE BR OFC
3645	COMMUNICATIONS RESEARCH CONSULTANTS
	EWEN, JOEL J
	MEXITRONICS
	MEXITYPE CORD
3659	GISH, E L
	SMITH, C S
3675	CARLTON, KELLY

Target Street	Cross Street	Source
✓	-	POLK DIRECTORY CO

ORANGE AVE NE 1989

3458 First Virginia Bank-Southwest 561-8796
3502 Clark Builder-Dealer Co Inc 342-7666
Model Home
3530 Burger King No 11 345-1981
3541 Grace & Truth Baptist Church 345-7173
Naff A Preston Rev Jr
3542 Hop-In Food Stores 985-0018
3548 Boone & Company Realtors 343-5800
3565 Central Fidelity Bank 983-8200

Target Street	Cross Street	Source
✓	-	POLK DIRECTORY CO

ORANGE AVE NE 1984

3458 First Virginia Bank 387-5796
3530 Burger King No 11 345-1981
3533 Vacant
3542 Hop-In Food Stores 985-0018
Food World Inc

19

Appendix V: Site Photographs

1 - General view of subject site

2 - Overview of subject property from northern corner

3 - Wooded area on northern portion of subject property

4 - Northern edge of subject property facing west

5 - Eastern edge of subject property facing west

6 - Southernmost portion of subject property facing north

7 - Southern edge of subject property facing east

8 - South portion of subject property facing northeast

9 - Center of subject property facing south

10 - Stormwater drainage ditch

11 - Center of subject property facing west

12 - Western edge of subject property facing southwest

13 - Adjoining property to the north

14 - Road along northern edge of subject property

15 - Adjoining property to the east

16 - Road and adjoining property south of subject property

17 - Adjoining property to the west

Appendix VI: Statement of Qualifications

Statement of Qualifications

2020

GUTS

CONSTRUCTION MATERIALS

INITIATIVE

FACILITIES

GEOTECHNICAL

RESILIENCE

ENVIRONMENTAL

TENACITY

COMPANY OVERVIEW

"What I like most about ECS are the people. They are experts with a wide-range of knowledge. I never hesitate using ECS on projects."

- Crystal Morphis, Founder and CEO
Creative Economic Development Consulting, LLC

2,000
employees

65+
locations

30+
years' experience

ABOUT OUR COMPANY

Engineering Consulting Services (ECS) is one of the largest and most rapidly growing engineering and consulting companies in the US. Founded in 1988, ECS is a leader in geotechnical, environmental, construction materials and facilities engineering. We are currently ranked 69 in *Engineering News-Record's* Top 500 Design Firms (April 2020) and 52 in Zweig Group's 2020 Hot Firms (June 2020).

ECS CORE SERVICES

- Geotechnical
- Construction Materials
- Environmental
- Facilities

ECS FOOTPRINT

Whether your project requires local project management, specialty expertise or both, we have you covered. ECS provides the best of both worlds - the attention your projects deserve from our local team, coupled with abundant staffing and technical resources. With 2,000 employees, ECS has grown to more than 65 locations spread across the Mid-Atlantic, Midwest, Southeast and Southwest.

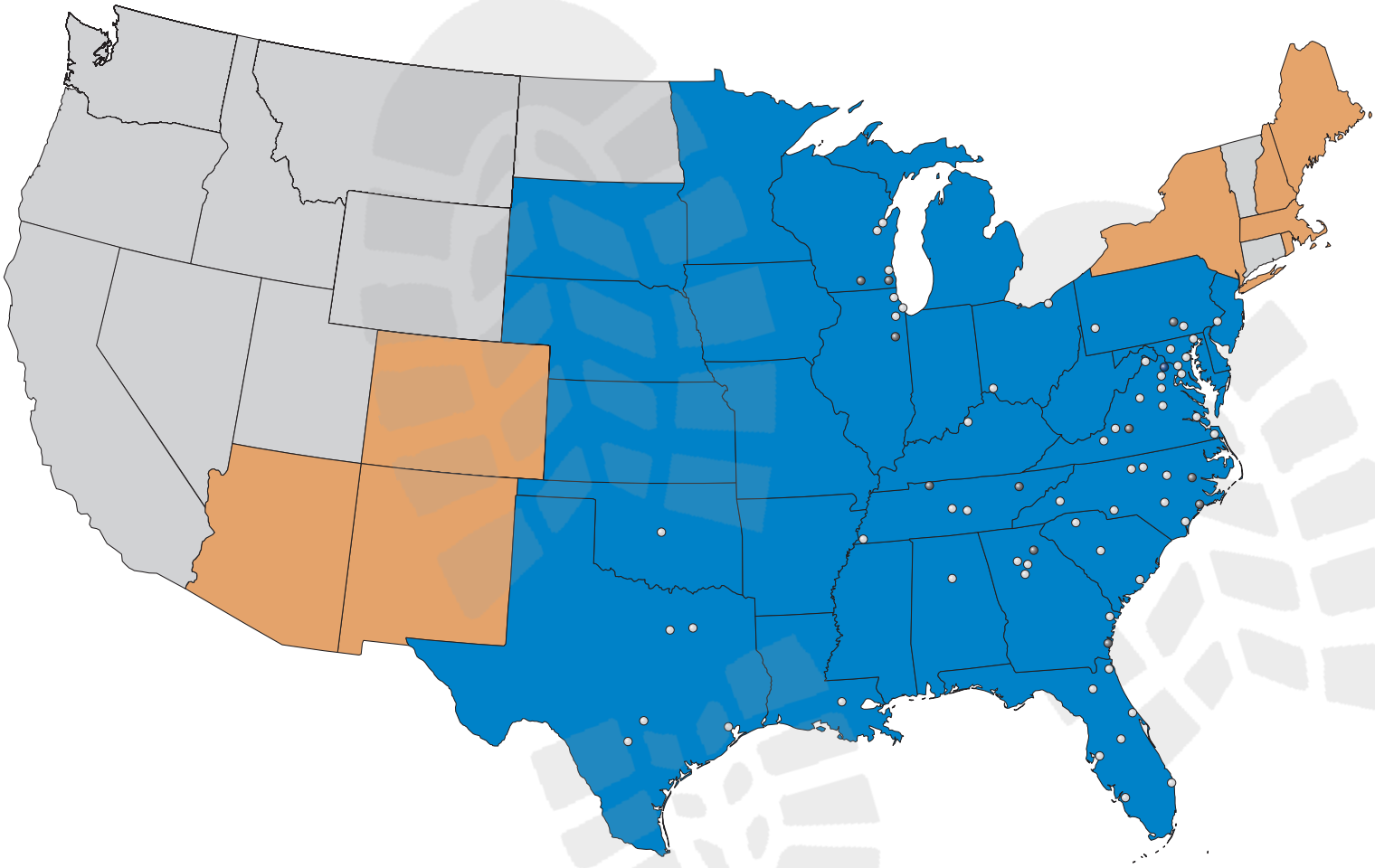
WHY ECS? WE HAVE GRIT.

What does that mean for you? That one descriptive word defines our company culture. It sets just the right tone for what our clients can expect our team to deliver each and every day. At ECS, GRIT is made up of four characteristics: guts, resilience, initiative and tenacity. Our boots are made for working. Click here for an inside look at what we do, who we are and why we have GRIT.

As a culture of doers, we roll up our sleeves and use our skills to help solve problems. We hustle.

WHEREVER YOUR PROJECT TAKES YOU, ECS HAS...

BOOTS ON THE GROUND.



SERVICES KEY

- Environmental & Facilities
- Geotechnical, Environmental, Materials Testing & Facilities
- Geotechnical, Environmental & Facilities

OFFICES KEY

- Full Service Office
- Testing Services Only
- Corporate Headquarters

Materials Testing Service Area is approximately a 75-mile radius around each office.

DUE DILIGENCE

As part of typical commercial, industrial and residential real estate transactions, many services need to be completed prior to closing that should not be overlooked. ECS provides environmental and engineering due diligence services common to real estate transaction-driven work, including:

Environmental Due Diligence Services:

- Phase I Environmental Site Assessments (ESAs)
- Wetland and Stream Determination and Delineation Services
- Phase II Environmental Site Assessments (ESAs)
- Underground Storage Tank (UST) Assessments and Closures
- Environmental Transaction Screens (ETS)
- Regulatory Record Reviews
- HUD Assessments
- Endangered Species Assessments
- Historical and Cultural Surveys/Assessments
- Radon Assessment
- Asbestos Surveys and Abatement Design
- Lead-Based Paint Surveys and Abatement Design
- Microbial and Indoor Air Quality Assessments
- Vapor Intrusion Assessments
- Fannie Mae and Freddie Mac Assessments
- Contaminated soil management plans

Facilities Due Diligence Services:

- Accessibility Consulting
- Bank Draw Review
- Pre and Post Construction Surveys
- Property Condition Assessments (PCAs)
- Forensic Investigations
- GPR Surveys
- EIFS Services

Engineering Due Diligence Services:

- Subsurface Geotechnical Explorations
- Test Pit Evaluations
- Seismic Studies
- Cost estimating for construction
- Geologic Assessments

GARNETT B. WILLIAMS, PG
ECS MID-ATLANTIC, LLC

EDUCATION

Bachelor of Science, 1983
Geology
James Madison University

REGISTRATIONS

- Professional Geologist: VA

CERTIFICATIONS

- National Certification Program for Construction Code Inspectors
- Asbestos Inspector: VA
- Professional Wetland Delineator: VA
- e-Railsafe

MEMBERSHIPS

- Association of Groundwater Scientists and Engineers
- Virginia Association of Wetland Professionals

EXPERIENCE

Mr. Williams serves as senior environmental project manager for the Mid-Atlantic region. Responsibilities include coordinating and preparing Phase I/Phase II Environmental Site Assessments, facility audits, environmental site characterization studies, remediation feasibility studies, coordinating and implementation of corrective action plans and contaminant remediation efforts, and wetlands delineation studies, and associated environmental permitting. Mr. Williams has worked on numerous VDEQ State Lead projects since 2004 involving both petroleum and hazardous substance/waste impacted properties.

PROJECT EXPERIENCE

Blue Ridge Community College, Weyers Cave, VA - This project consisted of an emergency response mold assessment and final clearance sampling and screening following a catastrophic release of water, when a thrust joint failed on a 10-inch diameter gravity water line inside the mechanical room. The amount of water released was unknown but a substantial area of the first floor was flooded by the incident. The bulk of the impact occurred to gypsum drywall and limited areas of the wood sub-floor in the theater. Dispatched a remediation subcontractor to the site to deploy drying fans and large commercial de-humidifiers, used a FLIR Systems ThermaCAM to perform nondestructive scanning, and obtained moisture readings using a Protimeter Moisture Measuring System.

Bohler-Uddeholm, New Boston, VA - This project consists of environmental services for a former hazardous waste management unit operating under a Resource Conservation and Recovery Act Post-Closure Care Permit, and a recently identified former hazardous waste management unit undergoing investigation for potential inclusion in the existing permit at the site. Conducting semi-annual and quarterly groundwater monitoring, providing statistical analysis and reporting, coordinating and submitting reports to the Virginia Department of Environmental Quality office, preparing a permit application for renewal of the existing 30-year Post-Closure Care Permit, conducting soil and groundwater sampling, installing groundwater monitoring wells, conducting an annual review, and preparing a Spill Prevention Control and Countermeasure Plan.

Former Star City Lumber, Roanoke, VA - This project consisted of environmental services for four buildings located in a commercial/industrial area identified as first being developed as part

of the Johnson Carpet Furniture Company in 1947 with buildings being added and subtracted from the property for many years. The site was also identified as part of the Singer Furniture facility from at least 1947 to at least 2000. The Singer facility is listed at a leaking underground storage tank, a registered storage tank, and Voluntary Remediation Program listed facility. Evaluated the probability of impact to the surface water, groundwater and/or soils within the property boundaries, evaluated historical land usage to identify previous conditions, evaluated the potential for on-site and off-site contamination, conducted a Phase I Environmental Site Assessment, and provided engineering controls or appropriate placement and treatment of soils during construction.

Fort Rucker, Small Arms Ranges, Washington, DC - This project consisted of environmental services to support the U.S. Army Environmental Center in a demonstration of small arms range berm improvement technologies, to eliminate or minimize metal contamination of soil and surface water, and enable recovery of lead from spent rounds. Developed a technical sampling plan, performed site characterization studies, collected data to evaluate berm stabilization and metal containment technologies, implemented and studied engineering and environmental design controls, designed and constructed a prototypical range and berm, and installed permanent Isco stormwater samplers in the re-constructed range floor and sedimentation basin outlets.

Handley High School Additions and Renovations, Winchester, VA - This project consisted of additions and renovations to the existing 80-year-old structure to update the existing facilities and to provide additional space for classrooms, offices and activities. Conducted inspections for the presence and abatement oversight of hazardous materials, provided construction material testing and inspection services, performed laboratory tests, analyzed the field and laboratory data to develop engineering recommendations, and provided testing and observation services during construction.

Korean Orthodox Presbyterian Church, Herndon, VA - This project consisted of environmental services for a building constructed in 1965, originally used as a two-story warehouse building designed for research. The Korean Orthodox Presbyterian Church purchased the property to provide church services to the Korean and English speaking community. Conducted an asbestos and lead-based paint survey of the building, and prepared an Operations and Maintenance Plan for the asbestos-containing materials identified at the site.

Oxhampton Estates, Lorton, VA - This project consisted of environmental services on a private shotgun and small arms range previously used for recreational shooting for over 30 years. A single station shotgun trap field and a two-lane rifle/pistol range with an earthen backstop were identified on the property. Collected soil and sediment samples using hand augers and analyzed for total and

leachable concentrations of metals, determined where concentrations of lead exceeding residential screening levels had accumulated based on the distribution of lead shot fall-out from the trap range, determined which areas of the site required mixing and burial or offsite disposal of lead-impacted soils.

Port Republic Road, Harrisonburg, VA - This project consisted of a road widening to four, 12-foot lanes with curbs and gutters, a 16-foot raised median, crossovers and turn lanes at all major intersections. Additional construction includes pedestrian and bicycle accommodations to include a multi-use path for bicycles and pedestrians on the east side of the road and a sidewalk on the west side of the road. Provided a subsurface investigation and conducted laboratory testing services to support engineering and design of pavements and structures.

Rockingham County Small Arms Range, Harrisonburg, VA - This project consisted of environmental services for a small arms municipal firing range adjacent to the Rockingham County Landfill to evaluate the concentration and distribution of lead in the backstop, range floor and runoff pathways. Prepared a site specific Health and Safety Plan, collected and analyzed soil, sediment, and groundwater samples for total and leachable concentrations of metals, estimated quantities of soil requiring excavation and treatment, completed an assessment of remedial technologies, performed oversight of the treatment process and final confirmation sampling, and transported treated soils to the adjacent municipal landfill and used as cap and cover materials.

Rockingham Memorial Hospital, Harrisonburg, VA - This project consisted of the construction of a proposed six-story, 575,000-square-foot hospital building. The new hospital will feature 238 beds, a rehabilitation/fitness center, a cancer center, a nature preserve, and state-of-the art medical technology. Currently, officials are working with a group from James Madison University to create a farm on the hospital's campus that would serve organic foods to the hospital and surrounding community. Performed a comprehensive geotechnical study, conducted a geophysical investigation for sinkhole assessment, conducted a Refraction Microtremor survey for seismic site classification, and performed construction testing and inspection for bulk earthwork operations, roads, utilities, and other infrastructure.

Root Property, Augusta County, VA - This project consisted of approximately 120 acres of undeveloped agricultural land for the construction of a large scale commercial development, associated parking lots, travel ways, emergency access, and utility corridors necessary for project completion. The project involved the disturbance of 0.23 acres of emergent wetlands and approximately 1,900-linear-feet of stream through grading, and building and road construction. Completed the wetland delineation, classification, and stream assessments of over one-mi of perennial and intermittent streams utilizing the Unified Stream Methodology, participated in the

design phase and project planning to minimize impacts to the maximum extent practicable, quantified the current functionality of the aquatic system, determine the impacts of the proposed project, and calculate the required compensatory mitigation requirements, and designed all aspects of stream restoration plan.

Russell Farm, Phase I Cultural Resources Survey, Loudoun County, VA - This project consisted of the development and implementation of a Phase I cultural resources survey of the 150-acre Russell Farm tract. The project involved historic architectural evaluation, the development of a field research model meeting the Virginia Department of Historical Resources guidelines, and completion of background and archival studies. Identified and recommended 11 previously unknown archaeological sites as ineligible for the NRHP, delineated the recorded archaeological sites, and evaluated and recommended the property as not eligible for the NRHP during Phase II.

Shenandoah Gas Line Extension, Middletown, VA - This project consisted of environmental services for an eight-inch, high-pressure, liquid, natural gas pipeline along the existing Washington Gas/Shenandoah Gas easement extending 4.5-miles from Middletown north to Stephens City, Virginia. The new installation impacted areas of federally regulated waters of the U.S. Army Corps of Engineers (USACE) at 17 locations identified as palustrine emergent (PEM) wetland areas, intermittent channels with fringe PEM wetlands, intermittent channels, and two perennial stream crossings. Performed wetland and stream bed delineation, historic and archeological surveys, and a threatened and endangered species assessment, and prepared the final permit application for submission to the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality.

Virginia School for the Deaf and Blind, Environmental, Staunton, VA - This project consisted of new construction and renovations to the Virginia School for the Deaf and Blind, a state agency owned by the Board of Education providing special education services. Performed a comprehensive Asbestos Hazard Emergency Response Act survey, conducted lead-based paint surveys following Housing and Urban Development guidelines, conducted a hazardous materials survey to include polychlorinated biphenyls and radon in light, electrical fixtures, and mercury switches, and prepared an Environmental Impact Report for the Department of General Services and Department of Energy review.

Virginia School for the Deaf and Blind, Environmental Impact Report, Staunton, VA - This project consisted of environmental services for 75 acres of land for the proposed construction and renovations for the Virginia School for the Deaf and Blind, a state agency owned by the Board of Education providing special education and related services to deaf and blind children. The consolidation of the two campuses will

consist of 21 buildings consisting of dorms, classrooms, maintenance and support facilities, and faculty/administrative offices. Completed an Environmental Impact Report following the "Procedures for Environmental Impact Review of Major State Facilities," and Section 708 of the "Construction and Professional Services Manual," and provided alternatives to the proposed construction, as the intended plan adversely affected the wildlife habitat and environment.

Virginia State Lead Program, Valley View Plaza, Penn Laird, VA - This project consisted of environmental services to evaluate alternate water supply scenarios to bring clean potable water to a former abandoned gasoline/service station now operating as an antique store called Valley View Plaza. Prepared an initial Corrective Action Plan, performed engineering studies to analyze a proposed waterline extension, provided recommendations to install a replacement well with sufficient distance from the plume, coordinated bid solicitation for drilling the well and final plumbing of the water line, and monitored installation of the replacement well.

Western State Hospital, Staunton, VA - This project consisted of a proposed 246-bed hospital with a gross floor area of approximately 330,000-square-feet to replace the existing hospital to the south. The building is a multi-story structure with slab-on-grade and includes a two-story central section with a large interior courtyard. Performed a wetland delineation, conducted a Phase IA archeological survey, review of threatened and endangered species, and a final habitat assessment, completed a geotechnical study, drilled and sampled soil test borings, performed rock coring, measured shallow water table elevations, and provided engineering recommendations pertaining to subsurface conditions, foundations, paved areas, construction of stormwater ponds, and general earthwork.

Winebrenner's Crossing Tract, Archaeological Survey, Martinsburg, WV - This project consisted of a Phase I Archaeological survey of 336 acres of land on the Winebrenner's Crossing tract located in the southern portion of Berkeley County. ECS conducted the survey on an expedited project schedule and concluded work within the prescribed budget. Performed shovel testing on land with medium to high probability of producing cultural resources, conducted archival research, which produced a number of maps with previously recorded archaeological sites and architectural resources near the project area, discovered six previously unrecorded archaeological sites and three previously unrecorded archaeological locations.

ALEXANDRA MOON

SENIOR ENVIRONMENTAL PROJECT MANAGER

CERTIFICATIONS

VA: Asbestos Inspector, Asbestos Management Planner, Asbestos Project Designer, Asbestos Project Monitor

NRSB Radon Measurement Specialist

Nuclear Gauge Operation

SKILLS

Hazardous Materials Surveys

Environmental Site Assessments

Noise Monitoring and Assessments

Storage Tank Removal

Site Characterization

EDUCATION

Bachelor of Science, 2005, Geology, Radford University, Radford, VA

YEARS OF EXPERIENCE

ECS: 14 Other: 0

PROFESSIONAL PROFILE

Ms. Moon serves as a Senior Environmental Project Manager in the Roanoke, Virginia office. Her responsibilities include asbestos surveys, lead-based paint screenings, radon sampling, and microbial assessments as well as Phase I Environmental Site Assessments; Soil, Groundwater and Vapor Assessments; and noise assessments. Additional responsibilities include project management, coordinating schedules, developing budgets, authoring proposals and writing remedial strategies and reports.

PROJECT EXPERIENCE

Proposed Florida Avenue Development, Lynchburg, VA – Senior Project Manager. This project consisted of the completion of a Phase I ESA and HUD Part 58 Form on a wooded lot located in Lynchburg, Virginia prior to the acquisition and development of the site for independent living for people with disabilities.

Undisclosed Solar Project Due Diligence (Various Sites), VA – Senior Project Manager: Ms. Moon provided oversight and portfolio management of a 17 site project that included Phase I ESAs, Wetland Delineation, and Threatened and Endangered species reviews. She also assisted with report writing and client management.

City of Danville On Call Services (Various Projects), VA – Senior Project Manager: This on call service consists of completing asbestos surveys on abandoned and derelict houses and small commercial properties located in the City of Danville. If friable asbestos is identified, also providing abatement specifications, monitoring during the asbestos abatement and clearance reporting after the asbestos is removed.

Cooper Crouse and Hinds, Roanoke, VA - Provided industrial hygiene services and testing including area noise assessment and dust exposure monitoring at the Roanoke manufacturing facility.

Roanoke College, Salem, VA - Environmental Project Manager: Provided an asbestos-containing materials survey of the former Bowman Hall at Roanoke College. Ms. Moon also prepared specifications for the removal of asbestos, PCB's, and mercury.

Appendix VII: Acronyms

List of Common Acronyms

AULs	Activity and Use Limitations
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
ACM	Asbestos Containing Materials
BER	Business Environmental Risk
CORRACTS	CERCLA Corrective Action List
NPL	CERCLA National Priorities List
NFRAP	CERCLA No Further Remedial Action Planned
CERCLA	Comprehnsive Environmental Response Cleanup Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CREC	Controlled Recognized Environmental Condition
ERNS	Emergency Response Notification System
EC	Engineering Controls
HIST LF	Historical Landfill
HREC	Historical Recognized Environmental Condition
IC	Institutional Controls
LQG	Large Quantity Generator
LBP	Lead Based Paint
LTANKS	Leaking Tanks
LUST	Leaking Underground Storage Tank
REC	Recognized Environmental Condition
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
SQG	Small Quantity Generator
SWF/LF	Solid Waste Facility/Landfill
SHWS	State Hazardous Waste Sites
UST	Underground Storage Tank
USGS	United States Geological Survey

ECS Mid-Atlantic, LLC

Geotechnical Engineering Report

Bonsack Fire Station

1455 Mexico Way NE
Roanoke, Virginia

ECS Project No. 12:19596

June 9, 2022

ECS MID-ATLANTIC, LLC
"Setting the Standard for Service"
Geotechnical • Construction Materials • Environmental • Facilities

June 9, 2022

Mr. George Assaid
Roanoke County
1206 Kessler Mill Road
Salem, VA 24153

ECS Project No. 12:19596

Reference: Geotechnical Engineering Report
Bonsack Fire Station
Roanoke, Virginia

Dear Mr. Assaid:

ECS Mid-Atlantic, LLC (ECS) has completed the subsurface exploration, laboratory testing, and geotechnical engineering analyses for the above-referenced project. Our services were performed in general accordance with our agreed to scope of work. This report presents our understanding of the geotechnical aspects of the project along with the results of the field exploration and laboratory testing conducted, and our design and construction recommendations.

It has been our pleasure to be of service to Roanoke County during the design phase of this project. We would appreciate the opportunity to remain involved during the continuation of the design phase, and we would like to provide our services during construction phase operations as well to verify subsurface conditions assumed for this report. Should you have any questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,

ECS Mid-Atlantic, LLC

Brandon Quinn

Brian S Wyatt Digitally signed by Brian S Wyatt Date: 2022.06.09 13:39:42 -04'00'

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TABLE OF CONTENTS

EXECUTIVE SUMMARY 1
1.0 INTRODUCTION 2
2.0 PROJECT INFORMATION 3
2.1 Project Location/Current Site Use/Past Site Use 3
2.2 Proposed Construction 4
3.0 FIELD EXPLORATION AND LABORATORY TESTING 4
3.1 Site Geology 5
3.2 Subsurface Characterization 5
3.3 Groundwater Observations 5
3.4 Laboratory Testing 6
4.0 DESIGN RECOMMENDATIONS 6
4.1 Karst Risk Commentary 6
4.2 Foundations 6
4.3 Slabs on Grade 7
4.4 Below Grade WallS 8
4.5 Seismic Design Considerations 9
4.6 Pavements 10
4.7 Site Retaining Walls 11
5.0 SITE CONSTRUCTION RECOMMENDATIONS 13
5.1 Subgrade Preparation 13
5.1.1 Stripping and Grubbing 13
5.1.2 Proofrolling 13
5.2 Earthwork Operations 13
5.2.1 Existing Man-Placed Fill 13
5.2.2 High Plasticity Soils 13
5.2.3 Weathered Rock and Rock 14
5.2.4 Structural Fill 14
5.3 Foundation and Slab Observations 15
5.4 Utility Installations 16
6.0 CLOSING 16

APPENDICES

Appendix A – Drawings & Reports

- Site Location Diagram
- Boring Location Diagram
- Subsurface Cross-Sections

Appendix B – Field Operations

- Reference Notes for Boring Logs
- Subsurface Exploration Procedure: Standard Penetration Testing (SPT)
- B-01 through B-06, P-01 through P-04, S-01, S-02, SWM-01, and SWM-02

Appendix C – Laboratory Testing

- Laboratory Test Results Summary
- Plasticity Chart
- Grain Size Analyses
- Moisture-Density Relationship Curves
- CBR Test Results

EXECUTIVE SUMMARY

This Executive Summary is intended as a very brief overview of the primary geotechnical conditions that are expected to affect design and construction. Information gleaned from the Executive Summary should not be utilized in lieu of reading the entire geotechnical report.

- No grading plans were available at the time of this report but based on the existing grades and a finish floor elevation of 1060 feet, it appears that the maximum cuts and fills will be in the range of about 15 feet and 2 feet, respectively, to reach design grades. It is our understanding that a slope will be cut into the 2.25-acre parcel approximately 20 feet in height at a slope of 2H:1V. Auger refusal on apparent hard rock was encountered within some of our borings, and small rock outcrops were visible in some areas. Given the proposed earth work anticipated to reach site grades, rock excavation at this site will likely be required. Rock cut material used for structural fill will need to be processed and crushed prior to placement.

- The proposed structures can be supported by conventional shallow foundations consisting of column and/or strip footings bearing on the existing soils for maximum column loads of up to 150 kips. Such foundations can be designed for a net allowable bearing pressure of 2,500 psf based on anticipated design loads. The building can be designed based on a seismic site classification of C as currently configured.

- For protection against potential shrink-swell action, footings should bear at least 30 inches below final exterior grades.

- ECS should be provided with the opportunity to review our recommendations and complete additional geotechnical exploration and recommendations based on actual loading conditions and final layout.

Refer to the text of the report for site specific design and construction recommendations.

1.0 INTRODUCTION

The purpose of this study was to provide geotechnical information for the design of the foundations for the proposed construction and related infrastructure. The project will include an 11,600 square foot, three bay fire station, pavements, fuel storage, and stormwater management. The recommendations developed for this report are based on project information supplied by you.

Our services were provided in accordance with our Proposal No. 14969-P, dated February 3, 2022, as authorized by W.L. Heath Honaker on April 20, 2022, which includes our Terms and Conditions of Service.

This report contains the procedures and results of our subsurface exploration and laboratory testing programs, review of existing site conditions, engineering analyses, and recommendations for the design and construction of the project.

The report includes the following items.

a. Observations from our site reconnaissance including current site conditions, surface drainage features, and surface topographic conditions

b. A review of the published geologic conditions and their relevance to your planned development

c. A subsurface characterization and a description of the field exploration and laboratory tests performed. Groundwater concerns relative to the planned construction, if any, will be summarized.

d. Final logs of the soil borings and records of the field exploration prepared in accordance with the standard practice for geotechnical engineering. A boring location plan will be included, and the results of the laboratory tests will be plotted on the final boring logs or included on a separate test report sheet.

e. Recommended allowable soil bearing pressure(s) for conventional shallow foundations (spread footings) and estimates of predicted foundation settlement. If required, we will provide recommendations for suitable intermediate foundations/ground improvement options or deep foundations in the event estimated settlements of shallow foundations are not tolerable.

f. Recommendations for slab-on-grade construction, including recommendations for subgrade improvements, subgrade modulus, and underslab subdrainage recommendations, if necessary

g. Recommendations for site retaining walls including lateral earth pressures, sliding resistance coefficients, and allowable bearing pressures

h. Evaluation of the on-site soil characteristics encountered in the soil borings. Specifically, we will discuss the suitability of the on-site materials for reuse as engineered fill to support grade slabs and pavements. We will also include compaction requirements and suitable material guidelines.

i. Recommendations for seismic site classification in accordance with the International Building Code (IBC 2018)

j. Recommendations for design of flexible pavement (asphalt) and rigid pavement (concrete) based on laboratory CBR values

k. Recommendations for additional testing and/or consultation that might be required to complete the geotechnical assessment and related engineering for this project

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION/CURRENT SITE USE/PAST SITE USE

The site is located at 1455 Mexico Way NE within the corporate city limits of Roanoke, Virginia. At the time of our visit, the ground surface over the site was grass with scattered trees and pavement. The overall site is bounded to the south by Mexico Way, to the east by Parkway Church on the Mountain, to the west by an Airgas store, and to the north by a wooded area.

Figure 2.1.1. Site Location

At the time of our visit the site was generally grass-covered with a wooded area near the northeast corner of the site. Mexico Way runs through the southern and southwestern portions of the site. The property slopes generally from southwest to northeast, with the central section being relatively flat. A few rock outcrops less than a foot wide were visible at the ground surface. With the exception of the wooded area in the northeast, most of the site is generally open. Elevations range from +1055 msl in the southwest corner to +1086 msl in the northeast corner.

Historical images indicate the site was bisected by a dirt path running southwest to northeast from the 1990s until 2005, when some grading took place as part of the construction of the Parkway Church. A drainage ditch with riprap was installed in the northeast portion of the site between September of 2005 and April of 2006 and remains in place. Existing fill could be present on site which was not detected by the borings.

2.2 PROPOSED CONSTRUCTION

The following information explains our understanding of the planned development including proposed fire station and related infrastructure.

SUBJECT	DESIGN INFORMATION / ASSUMPTIONS
Building Footprint	Approximately 11,600 square feet in plan view
# of Stories	One-story 3 bay fire station
Usage	Public Service
Framing	Cast-in-place concrete with minor reinforced masonry
Column Loads*	150 kips
Wall Loads*	5 kips per linear foot (klf) maximum
Lowest Finish Floor Elevation	EL. 1060 ft (up to 15 feet below present site grades)

*Assumed load are based on reasonable material and product loads. If final design loads exceed our assumed loads, this report needs to be revised to update our foundation recommendations, bearing capacity, and settlement calculations.

Two options for stormwater facilities are shown on the concept plan, an above ground facility at the north end of the site or an underground facility on the southern end. Invert elevations for these facilities were not provided at the time of this report.

Pavement types may include both asphalt and concrete.

3.0 FIELD EXPLORATION AND LABORATORY TESTING

Our exploration procedures are explained in greater detail in Appendix B including the insert titled Subsurface Exploration Procedures. Our scope of work included drilling 16 borings. Our borings were located with a handheld GPS unit while referencing Google Earth aerial imaging (showing desired boring locations provided by your office) and estimating angles from existing site features. Their approximate locations are shown on the Boring Location Diagram in Appendix A.

3.1 SITE GEOLOGY

The project site is located within the Valley and Ridge Geologic Province of Virginia. Our review of the Geology of the Roanoke and Stewartsville Quadrangles, Virginia (1981) indicates the site is underlain by the Cambrian-aged Rome Formation, which consists of interbedded phyllitic mudstone, sandstone, siltstone, and conglomerate, with frequent 10 to 50-foot carbonate intervals consisting primarily of thinly laminated dolomite and phyllitic mudstone.

The carbonate rock types encountered in this geology are subject to development of karst features such as sinkholes. Carbonate materials solution in water over long periods of time, resulting in loss of rock material. The solution process typically occurs along planes of more soluble material and causes the formation of interconnected seams and cavities within carbonate formations.

3.2 SUBSURFACE CHARACTERIZATION

The subsurface conditions encountered were generally consistent with published geological mapping. The following sections provide generalized characterizations of the soil strata. Please note that the ground surface elevations were not surveyed by a licensed surveyor; these elevations are approximate based on Google-Earth©; therefore, elevation ranges are approximate +/- several feet. Please refer to the boring logs in Appendix B.

Approximate Depth (ft)	Stratum	Description	Ranges of SPT(1) N-values (bpf)
0-1.2 (Surface cover)	n/a	Topsoil 4-6”, Asphalt 6” and Gravel 8”	N/A
0.3-1.2 to 3-21.5	I	Residuum, Medium Dense to Very Dense SILTY FINE TO MEDIUM SAND (SM), Medium Dense CLAYEY FINE TO MEDIUM SAND (SC), Stiff to Hard SANDY SILT (ML), Firm to Stiff SANDY LEAN CLAY/LEAN CLAY WITH SAND (CL), Firm to Very Stiff SANDY FAT CLAY/FAT CLAY/FAT CLAY WITH SAND (CH), Dry to Wet	7 to 72
3-5.5 to 5.5-7.5	II	Weathered Rock Sampled as SILTY FINE TO MEDIUM SAND (WR), Dry	50+
5.5-21.5+	III	Hard rock, likely pinnacled when encountered at shallow depths	N/A

Notes:
(1) Standard Penetration Testing

A graphical presentation of the subsurface conditions is shown on the Subsurface Cross Section Diagrams included in Appendix A.

3.3 GROUNDWATER OBSERVATIONS

Water levels were measured in our borings in Appendix B. Groundwater was only observed in B-04 at the time of drilling and was observed at a depth of 18 feet below the ground surface, corresponding to EL. +1042 ft msl. Variations in the long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff, construction activities, and other factors.

3.4 LABORATORY TESTING

The laboratory testing consisted of selected tests performed on samples obtained during our field exploration operations. Classification and index property tests were performed on representative soil samples. The laboratory testing program included natural moisture content tests (ASTM D2216), grain size analyses tests (ASTM D6913), and Atterberg Limits tests (ASTM D4318). Standard Proctor tests (ASTM VTM-1) and California Bearing Ratio (CBR) tests (VTM-8) were performed on bulk soil samples. The results of all laboratory testing conducted are included in the Appendix of this report.

Each sample was visually classified on the basis of texture and plasticity in accordance with ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedures) and including USCS classification symbols, and ASTM D2487 Standard Practice for Classification for Engineering Purposes (Unified Soil Classification System (USCS)). After classification, the samples were grouped in the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses along with the soil descriptions. The stratification lines between strata on the logs are approximate; in situ, the transitions may be gradual.

4.0 DESIGN RECOMMENDATIONS

4.1 KARST RISK COMMENTARY

The site is mapped to be underlain by geologic parent rock which is known to be carbonate in nature. There are mapped karst features within one mile of the site. However, based on our exploration the subsurface did not exhibit karst overburden soil characteristics. Additionally, during our site reconnaissance karst surface features were not observed on the property or immediate vicinity. Therefore, we define the risk of future sinkhole development on this site as low.

4.2 FOUNDATIONS

Provided subgrades and Structural Fills are prepared as recommended in this report, the proposed structure can be supported by shallow foundations including column footings and continuous wall footings. We recommend the foundation design use the following parameters:

Design Parameter	Column Footing	Wall Footing
Net Allowable Bearing Pressure(1)	2,500 psf	2,500 psf
Acceptable Bearing Soil Material	Stiff Stratum I or II	Stiff Stratum I or II
Minimum Width	24 inches	16 inches
Minimum Interior Footing Embedment Depth (below slab or finished grade)	24 inches	18 inches
Minimum Exterior Footing Depth (below final exterior grade)(2)	30 inches	30 inches
Estimated Total Settlement (3)	Less than 1- inch	Less than 1- inch
Estimated Differential Settlement (4)	Less than ¾ inches between columns	Less than ¾ inches

Notes:

(1) Net allowable bearing pressure is the applied pressure in excess of the surrounding overburden soils above the base of the foundation.
(2) For bearing considerations and expansive soil concerns.
(3) Based on assumed structural loads. If final loads are different, ECS must be contacted to update foundation recommendations and settlement calculations.
(4) Based on maximum column/wall loads and variability in borings. Differential settlement can be re-evaluated once the foundation plans are more complete.

Potential Undercuts: Most of the soils at the foundation bearing elevation are anticipated to be suitable for support of the proposed structure. If soft or unsuitable soils are observed at the footing bearing elevations, the unsuitable soils should be undercut and removed. Any undercut should be backfilled with lean concrete ($f'_c \geq 200$ psi at 28 days) or compacted VDOT No. 21-A Stone up to the original design bottom of footing elevation; the original footing shall be constructed at the designed footing elevations. Due to karst potential on the site, we do not recommend the use of VDOT No. 57 Stone for undercut backfilling.

If shallow foundation is subject to lateral loading, the following engineering parameters can be utilized:

SOIL PARAMETER	ESTIMATED VALUE
Coefficient of Passive Earth Pressure (K_p)	2.2
Soil Moist Unit Weight (γ)	110 pcf
Cohesion (C)	800 psf
Interface Friction Angle [Concrete on Soil] (ϕ_f)	18°
Sliding Friction Coefficient [Concrete on Soil] (μ)	0.32
Passive equivalent fluid pressure	242H (psf)

4.3 SLABS ON GRADE

Provided subgrades and structural fills are prepared as discussed herein, the proposed floor slabs can be constructed as Ground Supported Slabs (or Slab-On-Grade). Based on a lowest finished floor elevation of

EL. 1060 feet, it appears that the slabs will bear on newly compacted fill or Stratum I. The following graphic depicts our soil-supported slab recommendations:

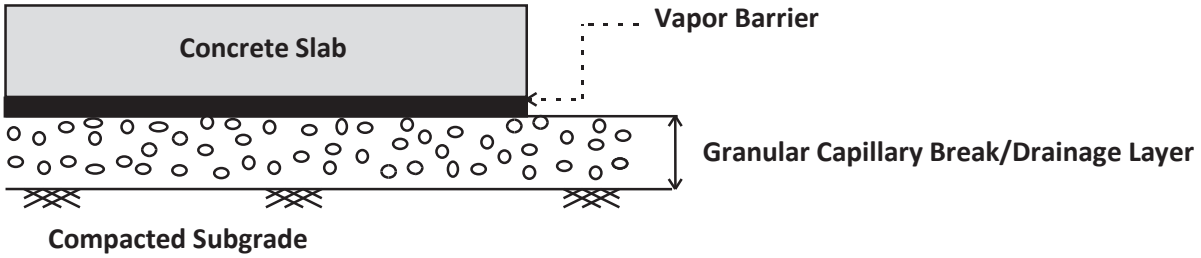


Figure 4.2.1

1. Drainage Layer Thickness: 4 inches
2. Drainage Layer Material: GRAVEL (GP, GW), SAND (SP, SW)

Soft or yielding soils may be encountered in some areas. Those soils should be removed and replaced with compacted Structural Fill in accordance with the recommendations included in this report.

Subgrade Modulus: Provided the Structural Fill and Granular Drainage Layer are constructed in accordance with our recommendations, the slab may be designed assuming a modulus of subgrade reaction, k_1 of 100 pci (lbs./cu. inch). The modulus of subgrade reaction value is based on a 1 foot by 1 foot plate load test basis.

Vapor Barrier: Before the placement of concrete, a vapor barrier may be placed on top of the granular drainage layer to provide additional protection against moisture penetration through the floor slab. When a vapor barrier is used, special attention should be given to surface curing of the slab to reduce the potential for uneven drying, curling and/or cracking of the slab. Depending on proposed flooring material types, the structural engineer and/or the architect may choose to eliminate the vapor barrier.

Slab Isolation: Soil-supported slabs should be isolated from the foundations and foundation-supported elements of the structure so that differential movement between the foundations and slab will not induce excessive shear and bending stresses in the floor slab. Where the structural configuration prevents the use of a free-floating slab such as in a drop down footing/monolithic slab configuration, the slab should be designed with suitable reinforcement and load transfer devices to preclude overstressing of the slab.

4.4 BELOW GRADE WALLS

We recommend that below grade walls be designed to withstand at-rest lateral earth pressures and surcharge loads from adjacent building foundations, and/or streets. These recommendations apply to a “drained” condition which is where there is drainage material behind below grade walls that prevents hydrostatic water pressures on the back of the below grade wall.

To accomplish a drained condition, drainage materials such as a free draining gravel, geocomposite drainage panels, weep holes, and an underslab drainage system should be used.

We recommend that walls that are restrained from movement at the top be designed for a linearly increasing lateral earth pressure. The following figure depicts our recommended at-rest lateral earth pressure condition for a "drained below-grade wall" with restrained wall top:

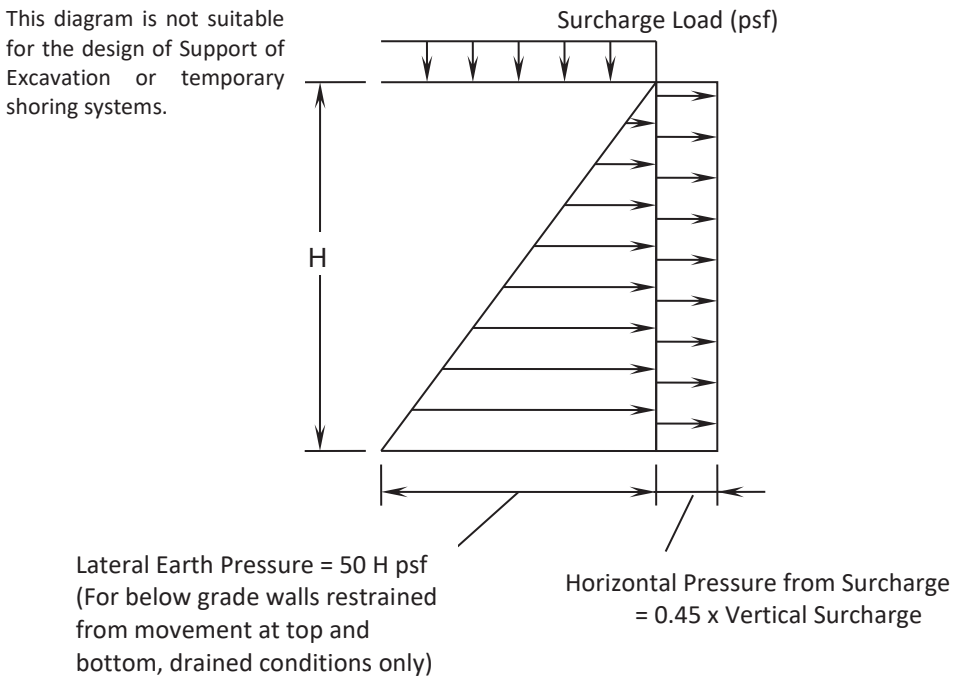


Figure 4.3.1

Surcharge loads imposed within a 45 degree slope from the base of the restrained wall should be considered in the below grade wall design. These surcharge loads should be based on an at-rest pressure coefficient, k_0, of 0.45. Care should be used to avoid the operation of heavy equipment to compact the wall backfill since it may overload and damage the wall; in addition, such loads are not typically considered in the design of below grade walls.

4.5 SEISMIC DESIGN CONSIDERATIONS

Seismic Site Classification: The International Building Code (IBC) 2015 requires site classification for seismic design based on the upper 100 feet of a soil profile. At least two methods are utilized in classifying sites, namely the shear wave velocity (v_s) method and the Standard Penetration Resistance (N-value) method. The second method (N-value) was used in classifying this site.

SEISMIC SITE CLASSIFICATION			
Site Class	**Soil Profile Name**	**Shear Wave Velocity, Vs, (ft./s)**	**N value (bpf)**
A	Hard Rock	Vs > 5,000 fps	N/A
B	Rock	2,500 < Vs ≤ 5,000 fps	N/A
C	Very dense soil and soft rock	1,200 < Vs ≤ 2,500 fps	>50

SEISMIC SITE CLASSIFICATION			
Site Class	**Soil Profile Name**	**Shear Wave Velocity, Vs, (ft./s)**	**N value (bpf)**
D	Stiff Soil Profile	600 ≤ Vs ≤ 1,200 fps	15 to 50
E	Soft Soil Profile	Vs < 600 fps	<15

Based upon our interpretation of the subsurface conditions, the appropriate Seismic Site Classification is "C" as shown in the preceding table.

Ground Motion Parameters: In addition to the seismic site classification, ECS has determined the design spectral response acceleration parameters following the IBC methodology. The Mapped Responses were estimated from the USGS website https://www.usgs.gov/natural-hazards/earthquake-hazards/design-ground-motions. The design responses for the short (0.2 sec, S_{DS}) and 1-second period (S_{D1}) are noted in bold at the far right end of the following table.

GROUND MOTION PARAMETERS [IBC 2018 Method]								
Period (sec)	**Mapped Spectral Response Accelerations (g)**		**Values of Site Coefficient for Site Class**		**Maximum Spectral Response Acceleration Adjusted for Site Class (g)**		**Design Spectral Response Acceleration (g)**	
Reference	Figures 1613.3.1 (1) & (2)		Tables 1613.3.3 (1) & (2)		Eqs. 16-37 & 16-38		Eqs. 16-39 & 16-40	
0.2	S_S	0.184	F_a	1.3	$S_{MS}=F_aS_s$	0.24	$S_{DS}=2/3\ S_{MS}$	0.16
1.0	S_1	0.063	F_v	1.5	$S_{M1}=F_vS_1$	0.094	$S_{D1}=2/3\ S_{M1}$	0.063

The Site Class definition should not be confused with the Seismic Design Category designation which the Structural Engineer typically assesses. If a higher site classification is beneficial to the project, we can provide additional testing methods that may yield more favorable results.

4.6 PAVEMENTS

Subgrade Characteristics: Based on the results of our borings, it appears that the pavement subgrades in cuts will consist mainly of SANDY LEAN CLAY (CL) and SILT (ML) material. We anticipate pavement subgrades in fill areas will consist of similar materials from on-site cuts.

California Bearing Ratio (CBR) testing was performed in our lab. The soils tested demonstrated CBR values of13.4 and 10.3, with an average of 11.9. Maximum swell was 0.57%. For design purposes, we recommend a design CBR value of 7.9, two-thirds of the average laboratory value.

Traffic Loading Information: We were not provided traffic loading information; therefore, we have assumed loadings typical of this type of project. Specifically, for Light-Duty Pavements, we have assumed 250 vehicle passes per day with 5 percent or less of light truck traffic for an EAL_{18} loading of approximately 50,000. For Heavy-Duty Pavements, we have assumed two heavy trucks in and out of each of the three

truck bays each day, for an EAL_{18} loading of approximately 230,000. When traffic loading becomes available, ECS should be contacted to revise our preliminary pavement design.

Pavement Design Recommendations: Our pavement design was performed in general accordance with the *AASHTO Guide for Design of Pavement Structures*, considering the *VDOT Guidelines for 1993 AASHTO Pavement Design.* The preliminary pavement sections below are guidelines that may or may not comply with local jurisdictional minimums.

PROPOSED PAVEMENT SECTIONS				
MATERIAL	FLEXIBLE PAVEMENT		RIGID PAVEMENT	
	Heavy Duty	Light Duty	Heavy Duty	Light Duty
Portland Cement Concrete (f'_c = 4000 psi)	-	-	6 in	4 in
Asphaltic Concrete Surface Course (SM-12.5)	1.5 in	2 in	-	-
Asphaltic Concrete Base Course (IM-19.0)	2 in	-	-	-
Graded Aggregate Base Course (AASHTO #21A/21B)	8 in	8 in	4 in	4 in

In general, heavy duty sections are areas that will be subjected to trucks, buses, or other similar vehicles including main drive lanes of the development. Light duty sections are appropriate for vehicular traffic and parking areas.

Large, front loading trash dumpsters frequently impose concentrated front wheel loads on pavements during loading. This type of loading typically results in rutting of asphalt pavement and ultimately pavement failures. For preliminary design purposes, we recommend that the pavement in trash pickup areas consist of a 6-inch thick, 4,000 psi, reinforced concrete slab over 6-inches of dense graded aggregate.

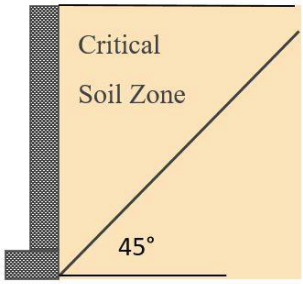
Prior to subbase placement and paving, we recommend that CBR testing of the subgrade soils (both natural and fill soils) be performed to determine the soil engineering properties for final pavement design.

4.7 SITE RETAINING WALLS

Unlike below grade walls, site retaining walls are free to rotate at the top (not restrained). For these walls the "Active" (k_a) soil condition should be used along with a triangular distribution of earth pressures. In addition, site retaining walls should be designed to withstand lateral earth pressures exerted by the backfill and any surcharge loads within the “Critical Soil Zone”. The Critical Zone is defined as the area between the back of the retaining wall footing and an imaginary line projected upward and rearward at a 45-degree angle (see figure below).

The lateral earth pressures developed behind site retaining walls are a function of the backfill soil type, backfill slope angle, and any surcharge loads. For the design of site retaining walls, we recommend the soil parameters provided below.

RETAINING WALL BACKFILL IN THE CRITICAL SOIL ZONE	
Soil Parameter	**Estimated Value**
Soil Classification	Silty SAND (SM) or more granular
Fines Content	Max. 20%>#200 Sieve
Coefficient of Active Earth Pressure (K_a)	0.31
Retained Soil Moist Unit Weight (γ)	125 pcf
Cohesion (C)	0 psf
Angle of Internal Friction (ϕ)	32°
Friction Coefficient [Concrete on Soil] (μ)	0.40
Active Equivalent Fluid Pressure	39H (psf)



FOUNDATION SOILS	
Soil Parameter	**Estimated value**
Allowable Soil Bearing Pressure	2,500 psf
Minimum Wall Embedment Below Grade	30 inches
Coefficient of Passive Earth Pressure (K_p)	2.2
Soil Moist Unit Weight (γ)	110 pcf
Cohesion (C)	800 psf
Interface Friction Angle [Concrete on Soil] (ϕ_f)	18°
Sliding Friction Coefficient [Concrete on Soil] (μ)	0.3
Passive Equivalent Fluid Pressure	240H (psf)

It is critical that the soils used for backfill of the retaining walls meet the soil parameters recommended above. If the soils available do not meet those parameters, then ECS should be contacted to provide revised values, and to confirm that only suitable soils will be used for wall backfill.

Care should be used to avoid the operation of heavy equipment to compact the wall backfill since it may overload and damage the wall. In addition, such loads are not typically considered in the design of site retaining walls, and are not provided for in our recommendations.

Wall Drainage: Retaining walls should be provided with a wall and foundation drainage system to relieve hydrostatic pressures which may develop behind the walls. This system should consist of weepholes through the wall and/or a 4-inch perforated, closed joint drain line located along the backside of the walls above the top of the footing. The drain line should be surrounded by a minimum of 6 inches of AASHTO #57 Stone wrapped with an approved non-woven geotextile, such as Mirafi 140-N or equivalent. Wall drains can consist of a 12-inch wide zone of free draining gravel, such as AASHTO #57 Stone, employed directly behind the wall and separated from the soils beyond with a non-woven geotextile. Alternatively, the wall drain can consist of a suitable geocomposite drainage board material. The wall drain should be hydraulically connected to the foundation drain.

5.0 SITE CONSTRUCTION RECOMMENDATIONS

5.1 SUBGRADE PREPARATION

5.1.1 Stripping and Grubbing

The subgrade preparation should consist of stripping all vegetation, rootmat, topsoil, existing fill, and any soft or unsuitable materials from the 5-foot expanded building and 2-foot expanded pavement limits, and 5 feet beyond the toe of Structural Fills. Borings performed in "undisturbed" areas of the site contained an observed 4 to 6 inches of topsoil. Deeper topsoil or organic laden soils may be present in wet, low-lying, and poorly drained areas. In wooded areas, the root balls may extend as deep as about 2 feet and will require additional localized stripping depth to completely remove the organicsECS should be retained to verify that topsoil and unsuitable surficial materials have been removed prior to the placement of structural fill or construction of structures.

5.1.2 Proofrolling

Prior to fill placement or other construction on subgrades, the subgrades should be evaluated by an ECS field technician. The exposed subgrade should be thoroughly proofrolled with construction equipment having a minimum axle load of 10 tons [e.g. fully loaded tandem-axle dump truck]. Proofrolling should be traversed in two perpendicular directions with overlapping passes of the vehicle under the observation of an ECS technician. This procedure is intended to assist in identifying any localized yielding materials.

Where proofrolling identifies areas that are unstable or "pumping" subgrade those areas should be repaired prior to the placement of any subsequent Structural Fill or other construction materials. Methods of stabilization include undercutting, moisture conditioning, or chemical stabilization. The situation should be discussed with ECS to determine the appropriate procedure. Test pits may be excavated to explore the shallow subsurface materials to help in determining the cause of the observed unstable materials, and to assist in the evaluation of appropriate remedial actions to stabilize the subgrade.

5.2 EARTHWORK OPERATIONS

5.2.1 Existing Man-Placed Fill

Fill Removal in Building Areas: No onsite fill was encountered in our boring but may be encountered in unexplored areas. If encountered, all existing fill should be removed from below the planned pavement and building areas.

5.2.2 High Plasticity Soils

High plasticity soils are prevalent in the site vicinity. Ideally, such soils would be excluded from reuse as fill and be undercut and replaced in cut subgrades for slabs, pavements, and footings to avoid the potential for moisture-related volume change or instability when wet; however, we anticipate this would not be practical for the subject site. Therefore, it should be recognized that high plasticity soils are moisture sensitive and may be problematic during construction activities. Care should be taken to provide adequate drainage and maintenance of exposed subgrades. Due to the risk of shrink-swell, or moisture-related

volume change, we have provided a footing embedment depth recommendation in **Section 4.2 Foundations**.

5.2.3 Weathered Rock and Rock

Based on boring data obtained during the exploration, we anticipate that materials requiring difficult or rock excavation techniques will be encountered during site grading and excavation to planned subgrades. It is our understanding that that a slope will be cut into the 2.25-acre parcel approximately 20 feet in height at a slope of 2H:1V. Auger refusal on apparent hard rock was encountered within some of our borings. Borings S-01 and P-02 in an area of proposed cut refused on hard rock at depths of 5.5 and 7.5 feet, respectively. Given the proposed earth work anticipated to reach site grades, rock excavation at this site will likely be required. Rock cut material used for structural fill will need to be processed and crushed prior to placement.

The excavation of weathered rock and rock can have a substantial impact on the cost and schedule of the proposed construction. This discussion considers two general classes of materials for purposes of describing excavatability. Residuum and weathered rock will be used as the terms for the materials to be excavated.

In mass excavations for general site work, overburden soils with standard penetration test N-values of 40 bpf or less can usually be removed with conventional earth excavation equipment. Residual soils or soft weathered (Saprolitic) rock with N-values of 40 to 50 bpf can generally be removed with conventional earth moving equipment after first being loosened with a large single-tooth ripper attached to a large crawler tractor. Harder, less weathered rock will generally require the use of a large single-tooth ripper, dozers, and/or track-mounted backhoes for excavation. However, materials exhibiting N-values of 50 blows or greater for 6 inch of penetration, typically defined as refusal material, will be more difficult to excavate and generally require blasting and other rock excavation techniques. The actual excavatability of the bedrock material will be greatly controlled by in-situ jointing and bedding and may vary from location to location.

In confined excavations, such as utility trenches, excavation of dense residual soils typically requires the use of large track-mounted backhoes. Excavation of harder phases of weathered rock typically requires the use of large track-mounted backhoes, pneumatic spades, or light blasting. Refusal materials (apparent rock) normally require blasting in trench excavations. Blasting in utility trenches should be done carefully to avoid damage to the surrounding materials. When the material to be excavated requires blasting, the contractor should comply with the jurisdictional requirements.

5.2.4 Structural Fill

Prior to placement of Structural Fill, representative bulk samples (about 50 pounds) of on-site and/or off-site borrow should be submitted to ECS for laboratory testing, which will typically include Atterberg limits, natural moisture content, grain-size distribution, and moisture-density relationships (i.e., Proctors) for compaction. Import materials should be tested prior to being hauled to the site to determine if they meet project specifications. Alternatively, Proctor data from other accredited laboratories can be submitted if the test results are within the last 90 days.

Satisfactory Structural Fill Materials: Materials satisfactory for use as Structural Fill should consist of inorganic soils with the following engineering properties and compaction requirements.

STRUCTURAL FILL INDEX PROPERTIES	
Subject	**Property**
Building and Pavement Areas (Borrow Soils)	LL < 50, PI<25
Building and Pavement Areas (On-site Soils)	LL < 60, PI < 30
Max. Particle Size	4 inches
Max. organic content	3% by dry weight

STRUCTURAL FILL COMPACTION REQUIREMENTS	
Subject	**Requirement**
Compaction Standard	Standard Proctor, ASTM D698
Required Compaction	95% of Max. Dry Density
Moisture Content	+/-3 % points of the soil's optimum value
Loose Thickness	8 inches prior to compaction

Aggregates/Blast Rock: The gradation of the material removed by ripping or blasting is typically quite varied. Excavated rock and weathered rock are generally only suitable for use in the deeper parts of embankment fills, or outside the zone of Structural Fill.

When rock or intact weathered rock fragments are placed in non-structural areas, we recommend that the rock fragments be spread out evenly in layers. Many times the rock needs to be choked off with rock fines, and/or soil, so that voids between the rock fragments are filled. Where the material exhibits large voids between rock fragments, a geotextile may need to be placed over the rock prior to placement of additional materials. In general, the larger rock fragments should be placed at the bottom of the fill, but no fragment should exceed 1.5 feet in its maximum dimension. Between 2 feet and 10 feet below the final subgrade elevation, no rock fragment should exceed 8 inches in its maximum dimension. Within 2 feet of the subgrade elevation, no rock fragment should exceed 4 inches in maximum dimension.

In some situations, it can be cost effective to use an onsite rock crusher to produce material that meets the requirements of Structural Fill materials.

Fill Placement: Fill materials should not be placed on frozen soils, on frost-heaved soils, and/or on excessively wet soils. Borrow fill materials should not contain frozen materials at the time of placement, and all frozen or frost-heaved soils should be removed prior to placement of Structural Fill or other fill soils and aggregates. Excessively wet soils or aggregates should be scarified, aerated, and moisture conditioned.

5.3 FOUNDATION AND SLAB OBSERVATIONS

Protection of Foundation Excavations: Exposure to the environment may weaken the soils at the footing bearing level if the foundation excavations remain open for too long a time. Therefore, foundation

concrete should be placed the same day that excavations are made. If the bearing soils are softened by surface water intrusion or exposure, the softened soils must be removed from the foundation excavation bottom immediately prior to placement of concrete. If the excavation must remain open overnight, or if rainfall becomes imminent while the bearing soils are exposed, a 1 to 3-inch thick "mud mat" of "lean" concrete should be placed on the bearing soils before the placement of reinforcing steel.

Footing Subgrade Observations: Most of the soils at the foundation bearing elevation are anticipated to be suitable for support of the proposed structure. It is important to have ECS observe the foundation subgrade prior to placing foundation concrete, to confirm the bearing soils are what was anticipated.

Slab Subgrade Verification: Prior to placement of a drainage layer, the subgrade should be prepared in accordance with the recommendations found in **Section 5.1.2 Proofrolling**.

5.4 UTILITY INSTALLATIONS

Utility Subgrades: The soils encountered in our exploration are expected to be generally suitable for support of utility pipes. The pipe subgrades should be observed and probed for stability by ECS. Any loose or unsuitable materials encountered should be removed and replaced with suitable compacted Structural Fill, or pipe stone bedding material.

Utility Backfilling: The granular bedding material (AASHTO #57 stone) should be at least 4 inches thick, but not less than that specified by the civil engineer's project drawings and specifications. We recommend that the bedding materials be placed up to the springline of the pipe. Fill placed for support of the utilities, as well as backfill over the utilities, should satisfy the requirements for Structural Fill and Fill Placement.

Excavation Safety: All excavations and slopes should be constructed and maintained in accordance with OSHA excavation safety standards. The contractor is solely responsible for designing, constructing, and maintaining stable temporary excavations and slopes. The contractor's responsible person, as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. ECS is providing this information solely as a service to our client. ECS is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

6.0 CLOSING

ECS has prepared this report to guide the geotechnical-related design and construction aspects of the project. We performed these services in accordance with the standard of care expected of professionals in the industry performing similar services on projects of like size and complexity at this time in the region. No other representation, expressed or implied, and no warranty or guarantee is included or intended in this report.

The description of the proposed project is based on information provided to ECS by our client. If any of this information is inaccurate or changes, either because of our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted so we can review our

recommendations and provide additional or alternate recommendations that reflect the proposed construction.

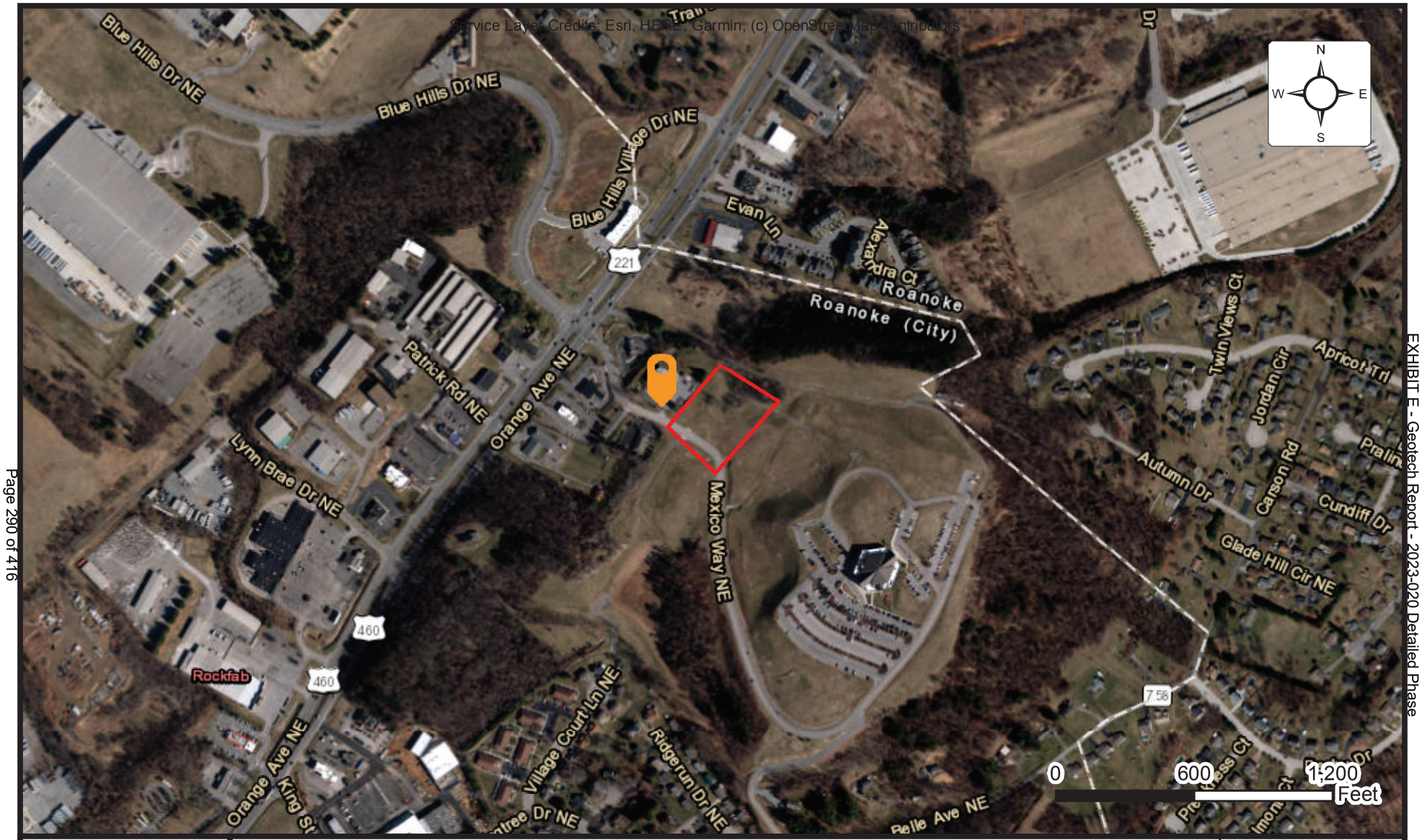
We recommend that ECS review the project plans and specifications so we can confirm that those plans/specifications are in accordance with the recommendations of this geotechnical report.

Field observations, and quality assurance testing during earthwork and foundation installation are an extension of, and integral to, the geotechnical design. We recommend that ECS be retained to apply our expertise throughout the geotechnical phases of construction, and to provide consultation and recommendation should issues arise.

ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.

APPENDIX A – Diagrams & Reports

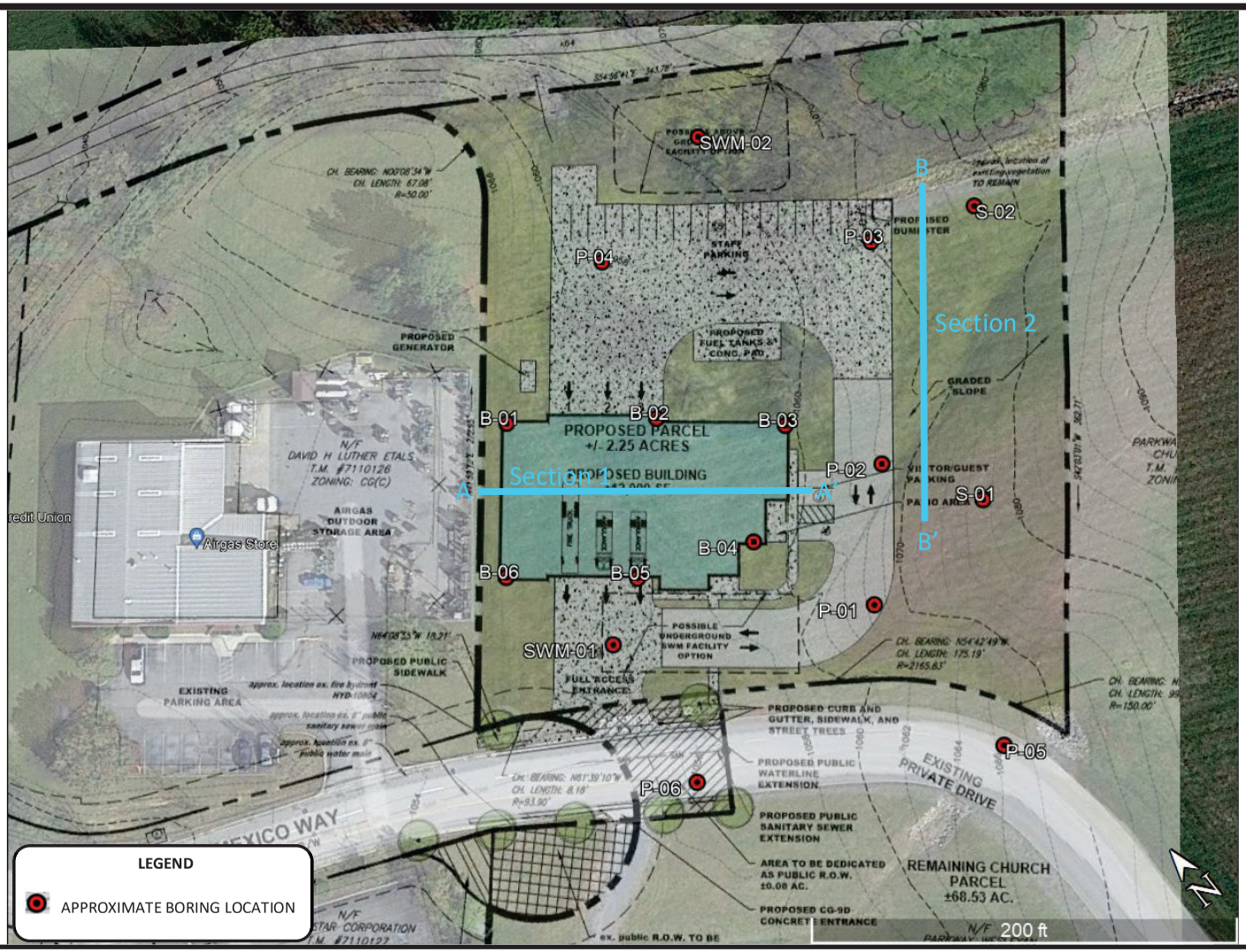
Site Location Diagram
Boring Location Diagram
Subsurface Cross-Sections



SITE LOCATION DIAGRAM
BONSACK FIRE STATION

1455 MEXICO WAY NE, ROANOKE, VIRGINIA
ROANOKE COUNTY - PARKS & RECREATION

ENGINEER	BSW
SCALE	AS NOTED
PROJECT NO.	12:19596
SHEET	1 OF 1
DATE	5/23/2022



BORING LOCATION DIAGRAM
BONSACK FIRE STATION

1455 MEXICO WAY NE, ROANOKE, VA

ROANOKE COUNTY – PARKS AND RECREATION

ENGINEER	BSW
SCALE	AS NOTED
PROJECT NO.	12:19596
SHEET	1 OF 1
DATE	06/07/2022

Legend Key

- Topsoil
- SILTY SAND
- Fat CLAY
- SILT
- Lean CLAY
- CLAYEY SAND

1038.00

Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit Water Content Liquid Limit
[FINES CONTENT %]
BOTTOM OF CASING
LOSS OF CIRCULATION

WL (First Encountered)
WL (Completion)
WL (Seasonal High Water)
WL (Stabilized)

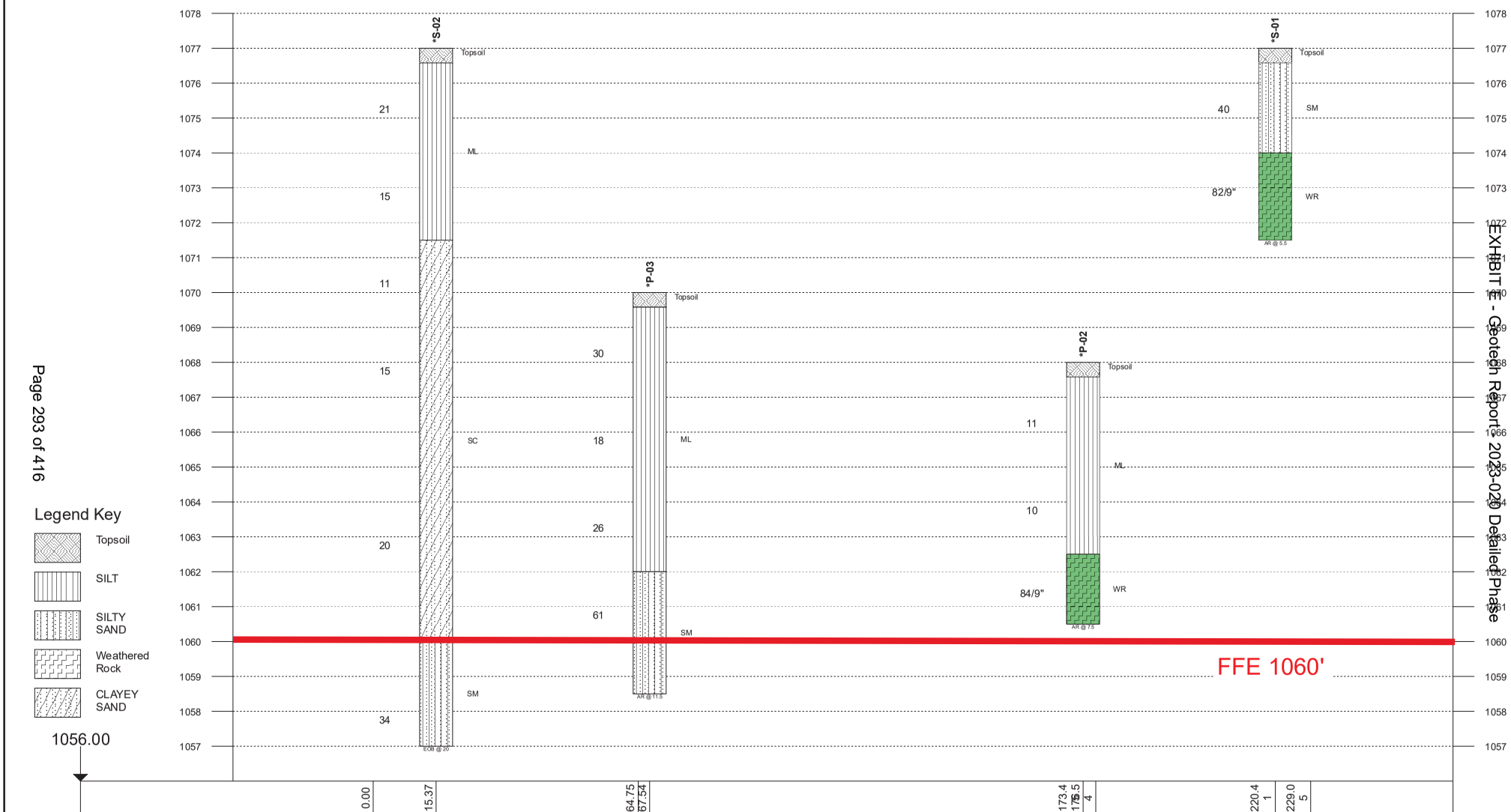
Fill
Possible Fill
Probable Fill
Rock

ECS

GENERALIZED SUBSURFACE SOIL PROFILE Section line 1 A-A'

Bonsack Fire Station
Roanoke County - Parks & Recreation
1455 Mexico Way NE, Roanoke, Virginia 24012

Project No: 12:19596 Date: 06/08/2022



Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit Water Content Liquid Limit X—●—△	WL (First Encountered)	Fill	
[FINES CONTENT %]	WL (Completion)	Possible Fill	
BOTTOM OF CASING	WL (Seasonal High Water)	Probable Fill	
LOSS OF CIRCULATION	WL (Stabilized)	Rock	

ECS

GENERALIZED SUBSURFACE SOIL PROFILE Section line 2 B-B'

Bonsack Fire Station
Roanoke County - Parks & Recreation
1455 Mexico Way NE, Roanoke, Virginia 24012

Project No: 12:19596 Date: 06/08/2022

APPENDIX B – Field Operations

Reference Notes for Boring Logs
Subsurface Exploration Procedure: Standard Penetration Testing (SPT)
Boring Logs B-01 through B-06, P-01 through P-04, S-01, S-02, SWM-01, and SWM-02

REFERENCE NOTES FOR BORING LOGS

MATERIAL[1,2]

	ASPHALT	
	CONCRETE	
	GRAVEL	
	TOPSOIL	
	VOID	
	BRICK	
	AGGREGATE BASE COURSE	
GW	WELL-GRADED GRAVEL	gravel-sand mixtures, little or no fines
GP	POORLY-GRADED GRAVEL	gravel-sand mixtures, little or no fines
GM	SILTY GRAVEL	gravel-sand-silt mixtures
GC	CLAYEY GRAVEL	gravel-sand-clay mixtures
SW	WELL-GRADED SAND	gravelly sand, little or no fines
SP	POORLY-GRADED SAND	gravelly sand, little or no fines
SM	SILTY SAND	sand-silt mixtures
SC	CLAYEY SAND	sand-clay mixtures
ML	SILT	non-plastic to medium plasticity
MH	ELASTIC SILT	high plasticity
CL	LEAN CLAY	low to medium plasticity
CH	FAT CLAY	high plasticity
OL	ORGANIC SILT or CLAY	non-plastic to low plasticity
OH	ORGANIC SILT or CLAY	high plasticity
PT	PEAT	highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS

SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION

DESIGNATION		PARTICLE SIZES
Boulders		12 inches (300 mm) or larger
Cobbles		3 inches to 12 inches (75 mm to 300 mm)
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")		<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS

UNCONFINED COMPRESSIVE STRENGTH, QP[4]	SPT[5] (BPF)	CONSISTENCY[7] (COHESIVE)
<0.25	<2	Very Soft
0.25 - <0.50	2 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

RELATIVE AMOUNT[7]	COARSE GRAINED (%)[8]	FINE GRAINED (%)[8]
Trace	≤5	≤5
With	10 - 20	10 - 25
Adjective *(ex: "Silty")*	25 - 45	30 - 45

GRAVELS, SANDS & NON-COHESIVE SILTS

SPT[5]	DENSITY
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

WATER LEVELS[6]

- WL (First Encountered)
- WL (Completion)
- WL (Seasonal High Water)
- WL (Stabilized)

FILL AND ROCK

FILL | POSSIBLE FILL | PROBABLE FILL | ROCK

[1]Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

[2]To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

[3]Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

[4]Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

[5]Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

[6]The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

[7]Minor deviation from ASTM D 2488-17 Note 14.

[8]Percentages are estimated to the nearest 5% per ASTM D 2488-17.

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SUBSURFACE EXPLORATION PROCEDURE: STANDARD PENETRATION TESTING (SPT) ASTM D 1586 Split-Barrel Sampling

Standard Penetration Testing, or **SPT**, is the most frequently used subsurface exploration test performed worldwide. This test provides samples for identification purposes, as well as a measure of penetration resistance, or N-value. The N-Value, or blow counts, when corrected and correlated, can approximate engineering properties of soils used for geotechnical design and engineering purposes.

SPT Procedure:

- Involves driving a hollow tube (split-spoon) into the ground by dropping a 140-lb hammer a height of 30-inches at desired depth
- Recording the number of hammer blows required to drive split-spoon a distance of 12 inches (in 3 or 4 Increments of 6 inches each)
- Auger is advanced* and an additional SPT is performed
- One SPT test is typically performed for every two to five feet
- Obtain two-inch diameter soil sample

**Drilling Methods May Vary—* The predominant drilling methods used for SPT are open hole fluid rotary drilling and hollow-stem auger drilling.

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-01**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637937.6	**11079438.3**		**1060.50**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[4.00"]			
	S-1	SS	18	14	(SM) Residuum, SILTY FINE TO MEDIUM SAND, contains rock fragments, purple brown, moist, medium dense			6-7-9 (16)
	S-2	SS	18	15	(CH) FAT CLAY WITH SAND, purple brown, moist, stiff		1056	3-6-7 (13)
5								
	S-3	SS	18	18	(ML) SILT, yellow brown, moist to wet, medium dense			4-5-7 (12)
	S-4	SS	18	18			1051	3-5-8 (13)
10								
	S-5	SS	18	18			1046	3-5-8 (13)
15								
	S-6	SS	18	17	(ML) SANDY SILT, contains rock fragments, red brown, moist, hard		1041	7-14-25 (39)
20					**END OF BORING AT 20 FT**			
25							1036	
30							1031	

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

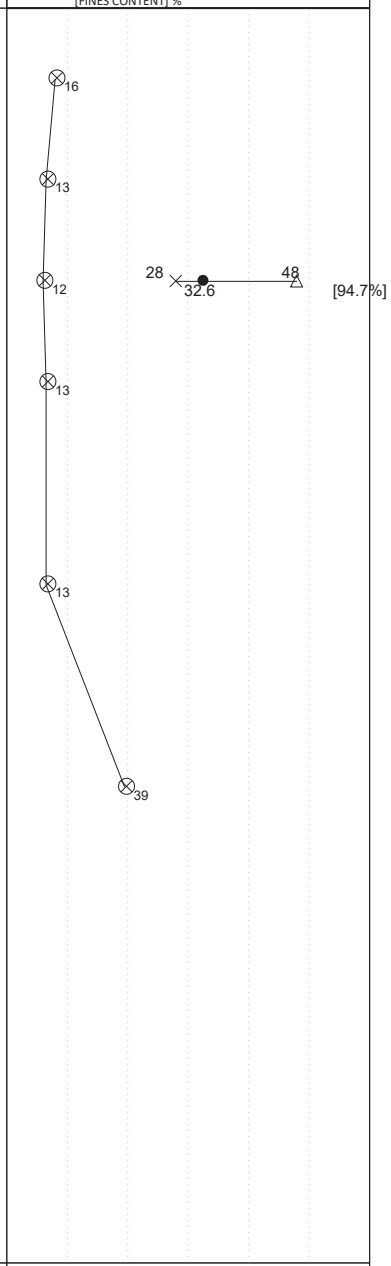
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **11.30**	
▼ WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
▼ WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-02**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637891.6	**11079498.4**		**1060.00**

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

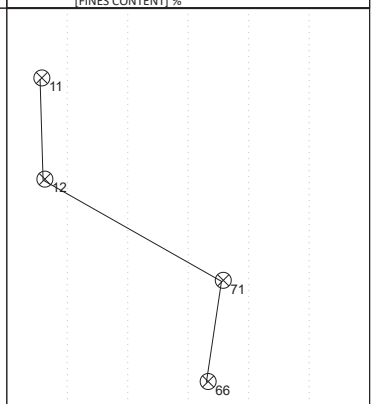
RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	15	(SM) Residuum, SILTY FINE TO MEDIUM SAND, contains rock fragments, purple, moist, medium dense			3-5-6 (11)
	S-2	SS	18	15	(ML) SANDY SILT, contains rock fragments, purple, moist, stiff			4-6-6 (12)
5							1055	
	S-3	SS	18	14	(SM) SILTY MEDIUM SAND, contains rock fragments, purple, dry, very dense			9-44-27 (71)
	S-4	SS	18	13				10-37-29 (66)
10							1050	
					AUGER REFUSAL AT 12 FT			
15							1045	
20							1040	
25							1035	
30							1030	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **4.40**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4"HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-03**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637846.4	**11079546.0**		**1060.00**

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

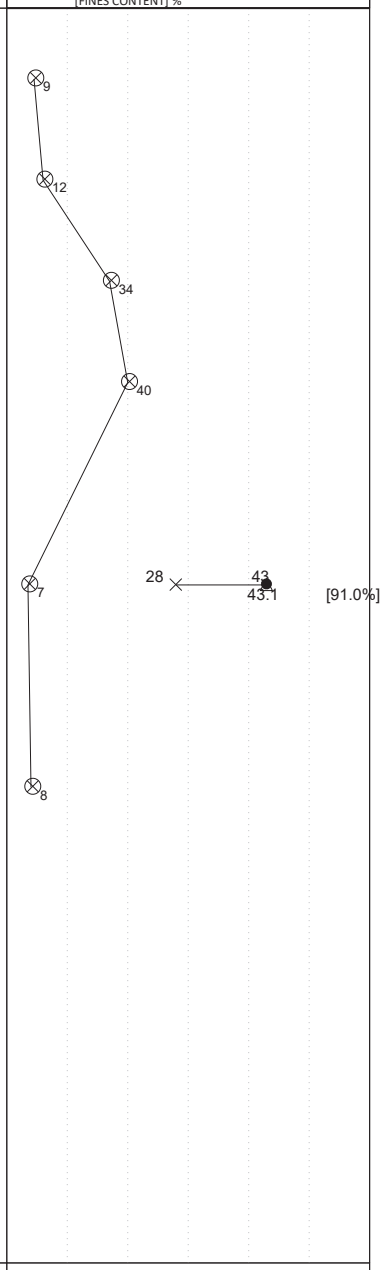
RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[6.00"]			
	S-1	SS	18	16	(ML) Residuum, SANDY SILT, contains mica, medium brown, moist, stiff			3-4-5 (9)
	S-2	SS	18	15				5-6-6 (12)
5							1055	
	S-3	SS	18	17	(SM) SILTY FINE TO MEDIUM SAND, contains rock fragments, orange, moist, dense			8-12-22 (34)
	S-4	SS	18	17				8-16-24 (40)
10							1050	
					(ML) SILT, contains rock fragments, light brown, wet, firm			
	S-5	SS	18	16				2-3-4 (7)
15							1045	
	S-6	SS	18	18				3-4-4 (8)
20					**END OF BORING AT 20 FT**		1040	
25							1035	
30							1030	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **8.90**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4"HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-04**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

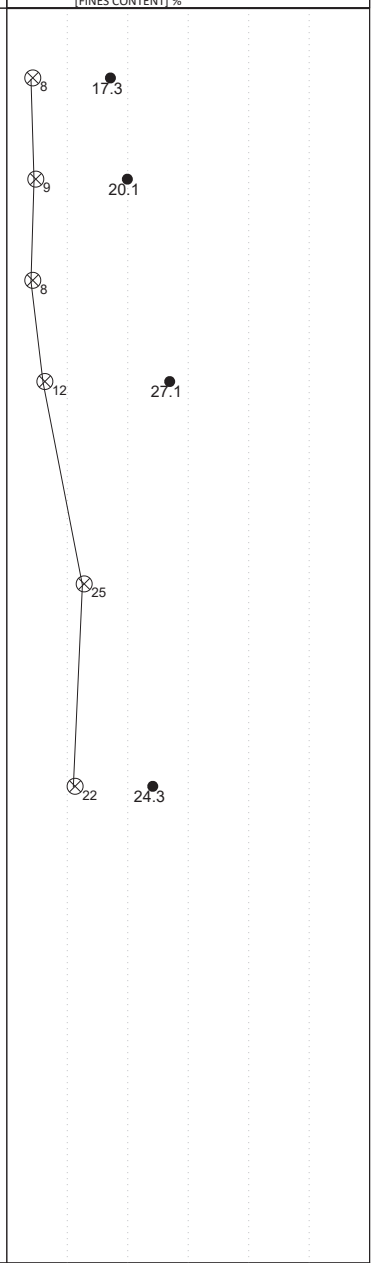
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637813.9	**11079496.3**		**1060.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[6.00"]			
	S-1	SS	18	16	(CL) Residuum, SANDY LEAN CLAY, contains rock fragments, gray brown, moist, firm			5-4-4 (8)
	S-2	SS	18	15	(ML) SANDY SILT, trace clay, contains rock fragments, gray brown, moist, stiff			6-4-5 (9)
5							1055	
	S-3	SS	18	16	(CH) SANDY FAT CLAY, contains rock fragments, orange brown and gray brown, moist, firm to stiff			3-4-4 (8)
	S-4	SS	18	15				4-5-7 (12)
10							1050	
	S-5	SS	18	15	(SC) CLAYEY FINE TO MEDIUM SAND, purple to orange brown, moist to wet, medium dense			8-16-9 (25)
15							1045	
	S-6	SS	18	16				4-6-16 (22)
20							1040	
					AUGER REFUSAL AT 21.5 FT			
25							1035	
30							1030	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**18.00**	BORING STARTED:	**May 12 2022**	CAVE IN DEPTH:	**15.60**
WL (Completion)		BORING COMPLETED:	**May 12 2022**	HAMMER TYPE:	**Manual**
WL (Seasonal High Water)		EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD:	**2 1/4" HSA**
WL (Stabilized)					

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-05**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637836.3	**11079439.8**		**1060.00**

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

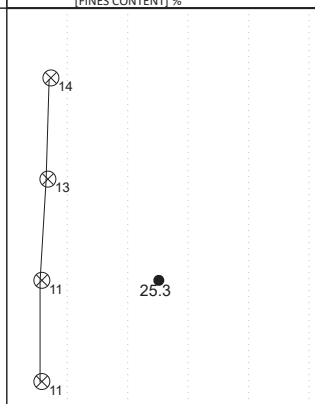
RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[4.00"]			
	S-1	SS	18	17	(ML) Residuum, SANDY SILT, trace clay, contains rock fragments, gray brown, moist, stiff			3-6-8 (14)
	S-2	SS	18	16				4-5-8 (13)
5							1055	
	S-3	SS	18	15	(CH) FAT CLAY, trace sand, red brown, moist, stiff			4-4-7 (11)
	S-4	SS	18	14	(CL) LEAN CLAY WITH SAND, contains rock fragments, purple brown and orange brown, moist, stiff			3-6-5 (11)
10							1050	
					AUGER REFUSAL AT 13 FT			
15							1045	
20							1040	
25							1035	
30							1030	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**	CAVE IN DEPTH: **6.20**	
WL (Completion)	BORING COMPLETED: **May 13 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**B-06**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637876.4	**11079390.5**		**1060.50**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[4.00"]			
	S-1	SS	18	14	(CH) Residuum, FAT CLAY WITH SAND, contains roots, medium brown, moist, stiff			3-6-8 (14)
	S-2	SS	18	16	(SM) SILTY MEDIUM SAND, contains rock fragments, purple brown to orange brown, moist, dense to very dense		1056	7-14-22 (36)
5	S-3	SS	18	15				9-14-24 (38)
	S-4	SS	18	16			1051	10-17-28 (45)
10								
	S-5	SS	18	16			1046	9-26-42 (68)
15					**AUGER REFUSAL AT 17.5 FT**			
20							1041	
25							1036	
30							1031	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

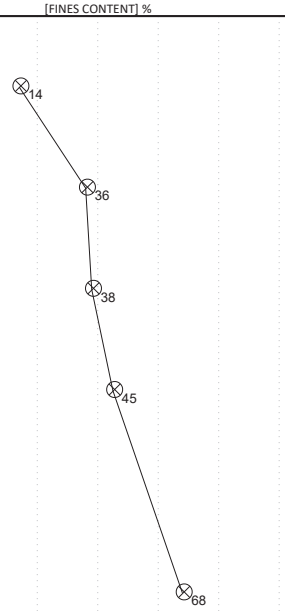
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**Dry**	BORING STARTED:	**May 12 2022**	CAVE IN DEPTH:	**7.90**
WL (Completion)		BORING COMPLETED:	**May 12 2022**	HAMMER TYPE:	**Manual**
WL (Seasonal High Water)		EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD:	**2 1/4" HSA**
WL (Stabilized)					

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-01**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637752.8	**11079522.2**		**1066.50**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	15	(CL) Residuum, SANDY LEAN CLAY, contains rock fragments, medium gray, dry, dense to very dense			3-10-21 (31)
	S-2	SS	18	14			1062	12-24-48 (72)
5	D3S-66	BG1	108					
	S-3	BG1 SS	18	16	(CL) LEAN CLAY WITH SAND, orange brown and purple brown, moist, dense to very dense			8-16-22 (38)
	S-4	SS	18	15			1057	14-21-38 (59)
10					**END OF BORING AT 10 FT**			
15							1052	
20							1047	
25							1042	
30							1037	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

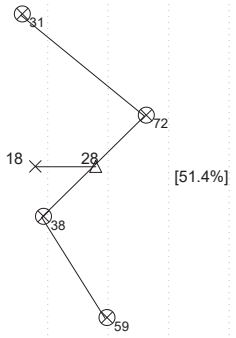
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**	CAVE IN DEPTH: **5.50**	
WL (Completion)	BORING COMPLETED: **May 13 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-02**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637804.8	**11079570.3**		**1068.00**

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

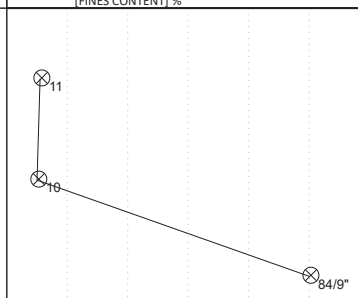
RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	15	(ML) Residuum, SANDY SILT, contains rock fragments, medium brown, moist, stiff			4-5-6 (11)
	S-2	SS	18	14				6-5-5 (10)
5							1063	
	S-3	SS	15	6	(WR) WEATHERED ROCK SAMPLED AS SILTY FINE TO MEDIUM SAND, contains significant rock fragments, medium gray, dry, very dense [Weathered ROCK]			12-34-50/3" (84/9")
					AUGER REFUSAL AT 7.5 FT			
10							1058	
15							1053	
20							1048	
25							1043	
30							1038	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**	CAVE IN DEPTH: **3.40**	
WL (Completion)	BORING COMPLETED: **May 13 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-03**	**1 of 1**

PROJECT NAME:	DRILLER/CONTRACTOR:
Bonsack Fire Station	**Blue Ridge Drilling, Inc.**

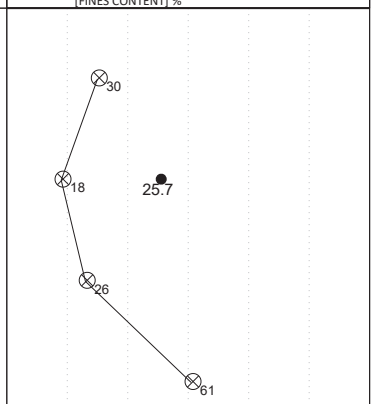
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637886.9	**11079638.4**		**1070.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	16	(ML) Residuum, SANDY SILT, contains rock fragments, purple brown to orange brown, moist, very stiff			6-12-18 (30)
	S-2	SS	18	15				4-8-10 (18)
5							1065	
	S-3	SS	18	15				8-10-16 (26)
	S-4	SS	18	16	(SM) SILTY MEDIUM SAND, contains rock fragments, purple brown, moist, very dense			10-22-39 (61)
10							1060	
					AUGER REFUSAL AT 11.5 FT			
15							1055	
20							1050	
25							1045	
30							1040	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**	CAVE IN DEPTH: **6.10**	
WL (Completion)	BORING COMPLETED: **May 13 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-04**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

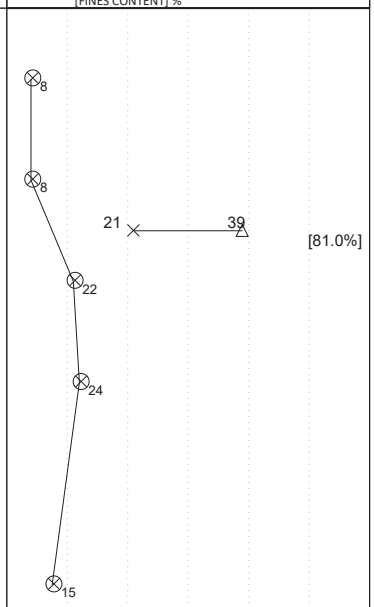
SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637972.0	**11079529.3**		**1060.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[6.00"]			
	S-1	SS	18	10	(SM) Residuum, SILTY FINE TO MEDIUM SAND, contains rock fragments, purple brown, moist, loose			8-4-4 (8)
	S-2	SS	18	15	(CL) LEAN CLAY WITH SAND, purple brown, moist, firm			3-4-4 (8)
5	D3S-67	BG1	108				1055	
	S-3	BG1 SS	18	16	(CL) SANDY LEAN CLAY, red brown, moist, very stiff			6-10-12 (22)
	S-4	SS	18	17				8-11-13 (24)
10							1050	
	S-5	SS	18	16	(CL) LEAN CLAY WITH SAND, contains rock fragments, red brown, moist, stiff			5-7-8 (15)
15					**END OF BORING AT 15 FT**		1045	
20							1040	
25							1035	
30							1030	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **7.40**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-05**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637663.9	**11079526.9**		**1066.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Asphalt Thickness[6.00"]			
					Gravel Thickness[8.00"]			
					(GP) GRAVEL			
					END OF BORING AT 1.2 FT			
5							1061	
10							1056	
15							1051	
20							1046	
25							1041	
30							1036	

Plastic Limit Water Content Liquid Limit
X——●——△

⊗ STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	BORING STARTED: **May 13 2022**		CAVE IN DEPTH:
▼ WL (Completion)	BORING COMPLETED: **May 13 2022**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**P-06**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637738.9	**11079399.9**		**1056.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Asphalt Thickness[6.00"]			
					Gravel Thickness[8.00"]			
					(GP) GRAVEL			
					END OF BORING AT 1.2 FT			
5							1051	
10							1046	
15							1041	
20							1036	
25							1031	
30							1026	

Plastic Limit Water Content Liquid Limit
X——●——△

⊗ STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	BORING STARTED: **May 13 2022**		CAVE IN DEPTH:
▼ WL (Completion)	BORING COMPLETED: **May 13 2022**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**S-01**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637757.5	**11079595.2**		**1077.00**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	12	(SM) Residuum, SILTY FINE TO MEDIUM SAND, contains rock fragments, purple brown, moist, dense			5-17-23 (40)
	S-2	SS	15	10	(WR) WEATHERED ROCK SAMPLED AS SILTY FINE TO MEDIUM SAND, contains rock fragments, purple brown, moist, very dense [Weathered ROCK]		1072	12-32-50/3" (82/9")
5					**AUGER REFUSAL AT 5.5 FT**			
10							1067	
15							1062	
20							1057	
25							1052	
30							1047	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

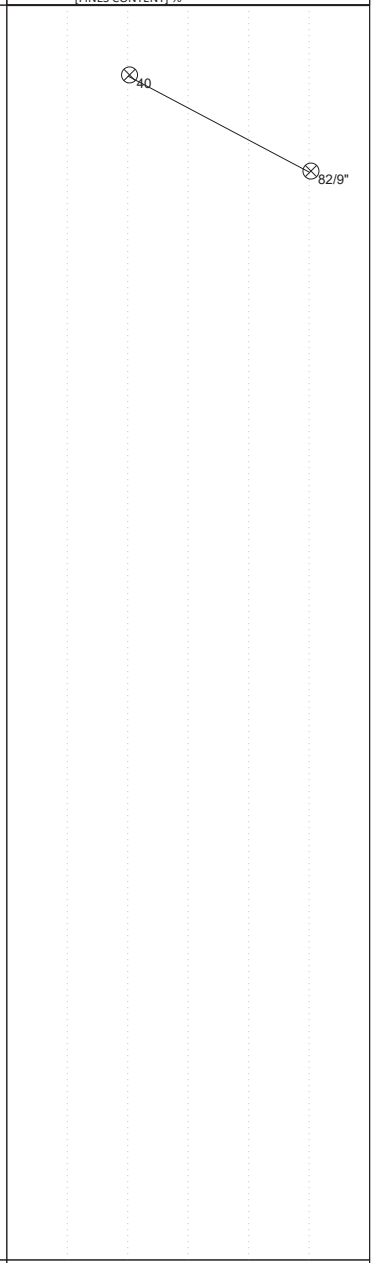
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**		CAVE IN DEPTH:
WL (Completion)	BORING COMPLETED: **May 13 2022**		HAMMER TYPE: **Manual**
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**S-02**	**1 of 1**

PROJECT NAME:	DRILLER/CONTRACTOR:
Bonsack Fire Station	**Blue Ridge Drilling, Inc.**

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637871.8	**11079686.5**		**1077.00**

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

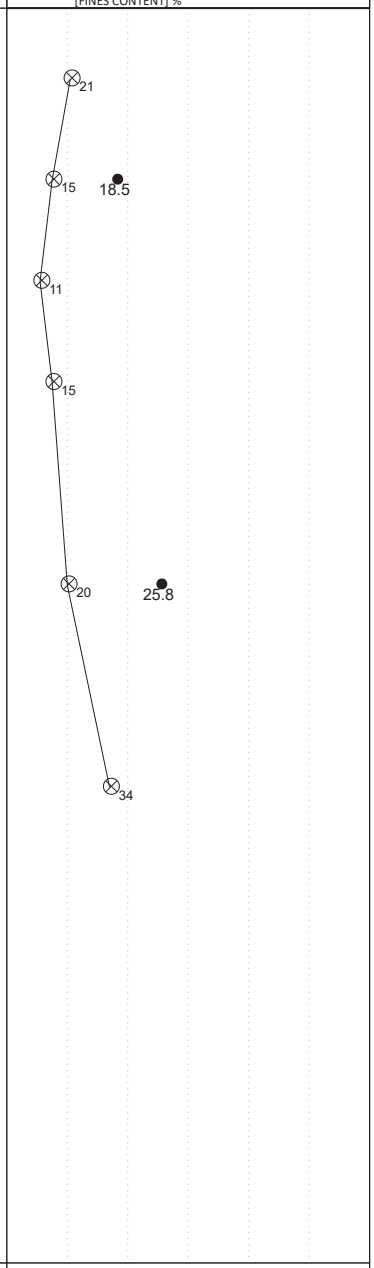
RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[5.00"]			
	S-1	SS	18	16	(ML) Residuum, SANDY SILT, contains rock fragments, medium brown, moist, very stiff to stiff			8-9-12 (21)
	S-2	SS	18	15				6-7-8 (15)
5							1072	
	S-3	SS	18	17	(ML) SILT WITH SAND, contains rock fragments, yellow brown, moist, stiff to very stiff			3-5-6 (11)
	S-4	SS	18	18				4-6-9 (15)
10							1067	
	S-5	SS	18	16				5-6-14 (20)
15							1062	
	S-6	SS	18	18	(SM) SILTY FINE TO MEDIUM SAND, trace clay, purple brown, moist, dense			7-13-21 (34)
20					**END OF BORING AT 20 FT**		1057	
25							1052	
30							1047	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 13 2022**		CAVE IN DEPTH:
WL (Completion)	BORING COMPLETED: **May 13 2022**		HAMMER TYPE: **Manual**
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**SWM-01**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637818.0	**11079409.9**		**1057.00**

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

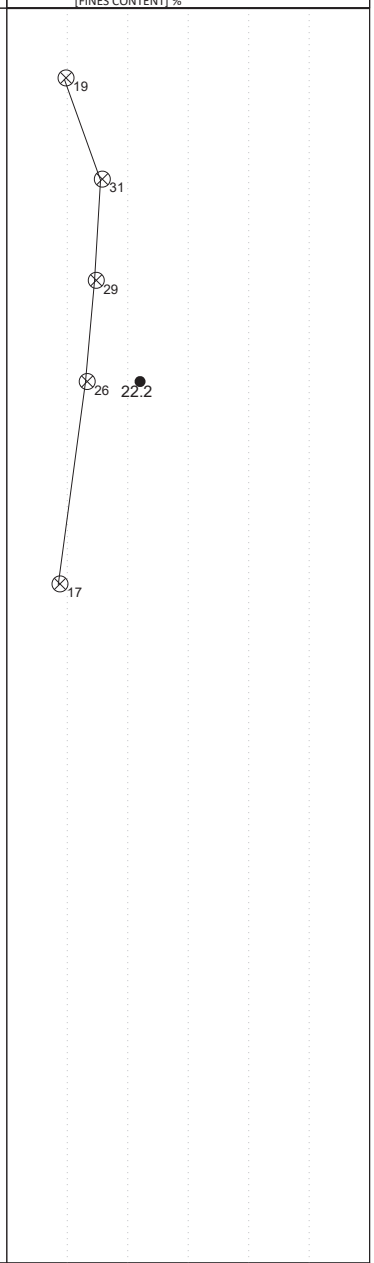
RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[4.00"]			
	S-1	SS	18	16	(ML) Residuum, SILT WITH SAND, contains rock fragments, orange brown and gray brown, moist, medium dense to dense			6-8-11 (19)
	S-2	SS	18	15				7-12-19 (31)
5							1052	
	S-3	SS	18	15	(ML) SANDY SILT, red brown, moist, very stiff			8-13-16 (29)
	S-4	SS	18	16				6-10-16 (26)
10							1047	
	S-5	SS	18	15	(SM) SILTY FINE TO MEDIUM SAND, orange, moist, medium dense			5-7-10 (17)
15					**END OF BORING AT 15 FT**		1042	
20							1037	
25							1032	
30							1027	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**Dry**	BORING STARTED:	**May 12 2022**	CAVE IN DEPTH:	**6.70**
WL (Completion)		BORING COMPLETED:	**May 12 2022**	HAMMER TYPE:	**Manual**
WL (Seasonal High Water)		EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD:	**2 1/4" HSA**
WL (Stabilized)					

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Roanoke County - Parks & Recreation	**12:19596**	**SWM-02**	**1 of 1**
PROJECT NAME: **Bonsack Fire Station**	DRILLER/CONTRACTOR: **Blue Ridge Drilling, Inc.**		

SITE LOCATION: **1455 Mexico Way NE, Roanoke, Virginia 24012**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
3637990.7	**11079606.4**		**1061.00**

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

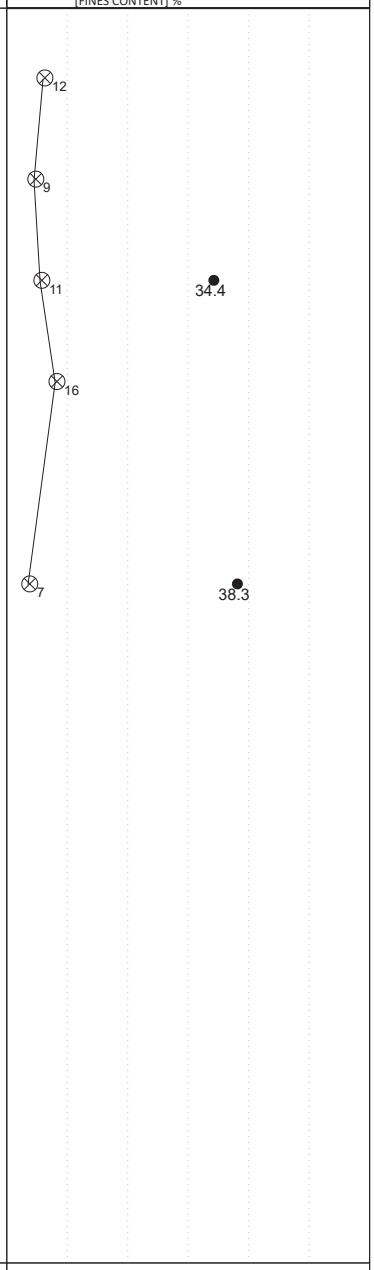
RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					Topsoil Thickness[6.00"]			
	S-1	SS	18	16	(ML) Residuum, SANDY SILT, medium brown, moist, stiff			5-6-6 (12)
	S-2	SS	18	15				6-4-5 (9)
5							1056	
	S-3	SS	18	15	(CL) SANDY LEAN CLAY, red brown and tan brown, moist, stiff			3-5-6 (11)
	S-4	SS	18	16	(CL) LEAN CLAY WITH SAND, red brown, moist, very stiff			4-7-9 (16)
10							1051	
	S-5	SS	18	18	(CL) LEAN CLAY, trace sand, red brown, moist, firm			3-3-4 (7)
15					**END OF BORING AT 15 FT**		1046	
20							1041	
25							1036	
30							1031	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **Dry**	BORING STARTED: **May 12 2022**	CAVE IN DEPTH: **6.30**	
WL (Completion)	BORING COMPLETED: **May 12 2022**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water)	EQUIPMENT: **Truck BK-51**	LOGGED BY: **MCA**	DRILLING METHOD: **2 1/4" HSA**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

APPENDIX C – Laboratory Testing

Laboratory Test Results Summary
Plasticity Chart
Grain Size Analyses
Moisture-Density Relationship Curves
CBR Test Results

Laboratory Testing Summary

Sample Location	Sample Number	Depth (feet)	^MC (%)	Soil Type	Atterberg Limits			**Percent Passing No. 200 Sieve	Moisture - Density		CBR (%)		#Organic Content (%)
					LL	PL	PI		<Maximum Density (pcf)	<Optimum Moisture (%)	0.1 in.	0.2 in.	
B-01	S-3	6-7.5	32.6	ML	48	28	20	94.7					
B-03	S-5	13.5-15	43.1	ML	43	28	15	91.0					
B-04	S-1	1-2.5	17.3										
B-04	S-2	3.5-5	20.1										
B-04	S-4	8.5-10	27.1										
B-04	S-6	18.5-20	24.3										
B-05	S-3	6-7.5	25.3										
P-01	D3S-66	1-10		CL	28	18	10	51.4	114.2	15.5	13.4	16.4	
P-03	S-2	3.5-5	25.7										
P-04	D3S-67	1-10		CL	39	21	18	81.0	105.5	18.7	10.3	9.3	

Notes: See test reports for test method, ^ASTM D2216-19, *ASTM D2488, **ASTM D1140-17, #ASTM D2974-20e1 < See test report for D4718 corrected values

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content

Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation

Project No.: 12:19596
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received
JGeil	JMurphy	JMurphy	5/17/2022

Laboratory Testing Summary

Sample Location	Sample Number	Depth (feet)	^MC (%)	Soil Type	Atterberg Limits			**Percent Passing No. 200 Sieve	Moisture - Density		CBR (%)		#Organic Content (%)
					LL	PL	PI		<Maximum Density (pcf)	<Optimum Moisture (%)	0.1 in.	0.2 in.	
S-02	S-2	3.5-5	18.5										
S-02	S-5	13.5-15	25.8										
SWM-01	S-4	8.5-10	22.2										
SWM-02	S-3	6-7.5	34.4										
SWM-02	S-5	13.5-15	38.3										

Notes: See test reports for test method, ^ASTM D2216-19, *ASTM D2488, **ASTM D1140-17, #ASTM D2974-20e1 < See test report for D4718 corrected values

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content

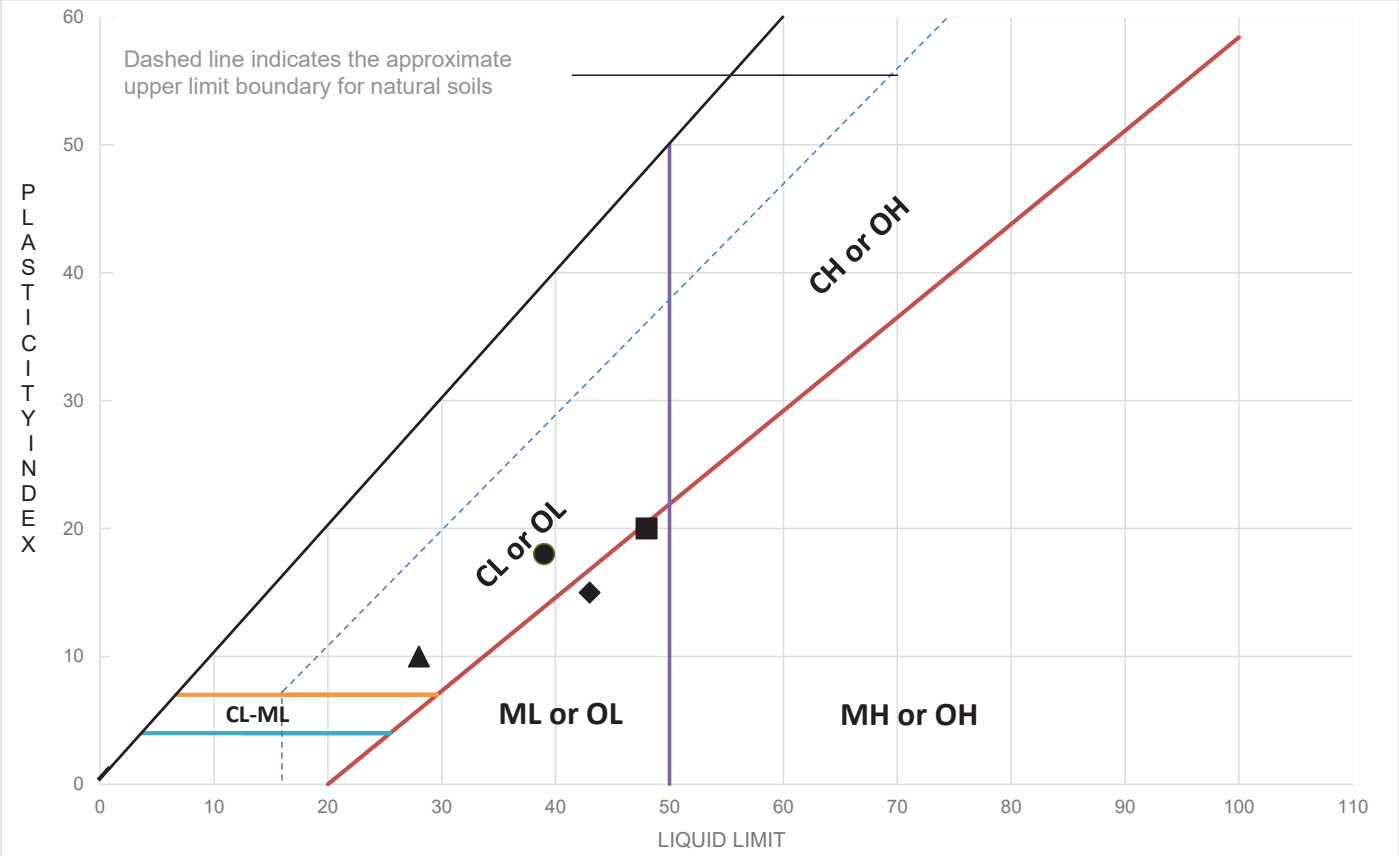
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation

Project No.: 12:19596
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received
JGeil	JMurphy	JMurphy	

LIQUID AND PLASTIC LIMITS TEST REPORT



TEST RESULTS (ASTM D4318-10 (MULTIPOINT TEST))

	Sample Location	Sample Number	Sample Depth (ft)	LL	PL	PI	%<#40	%<#200	AASHTO	USCS	Material Description
■	B-01	S-3	6-7.5	48	28	20	99.8	94.7	A-7-6	ML	Yellow Brown SILT
◆	B-03	S-5	13.5-15	43	28	15	94.6	91.0	A-7-6	ML	Orange Brown SILT
▲	P-01	D3S-66	1-10	28	18	10	63.4	51.4	A-4	CL	Purple Brown SANDY LEAN CLAY with Gravel
●	P-04	D3S-67	1-10	39	21	18	86.5	81.0	A-6	CL	Brown LEAN CLAY with Sand

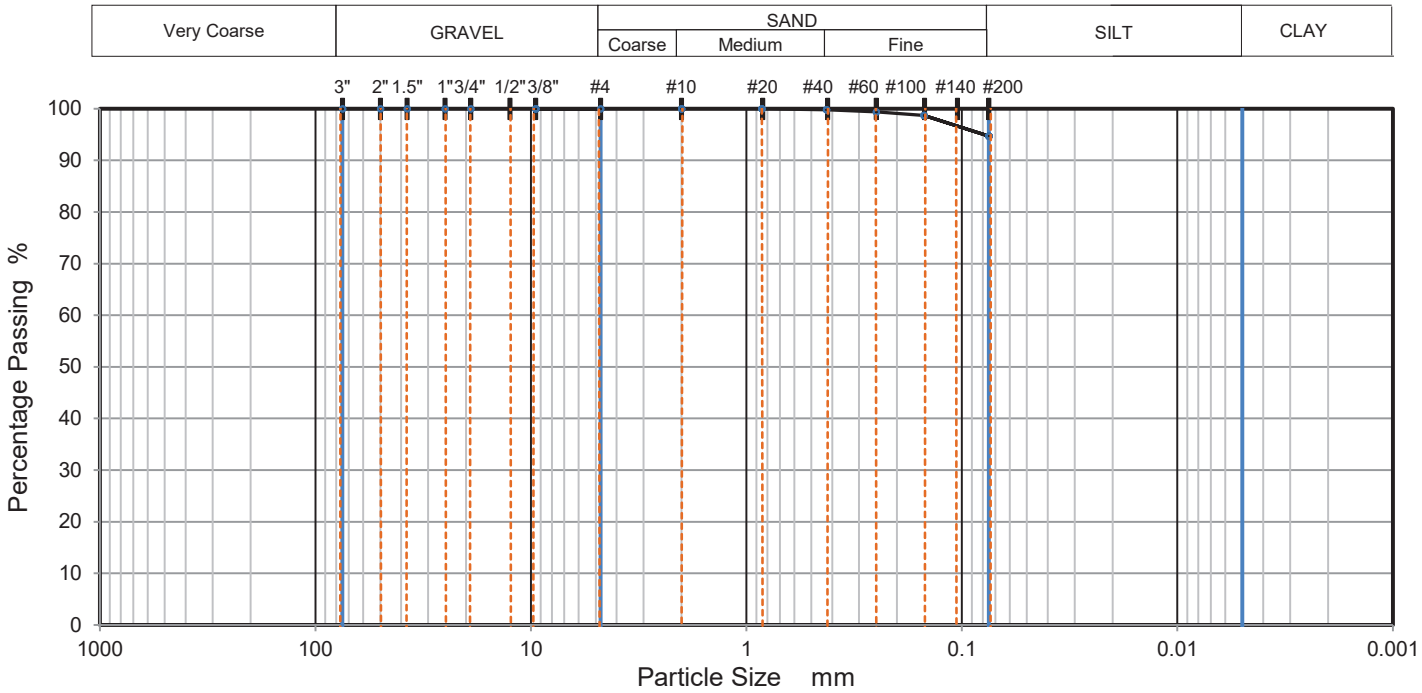
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation

Project No.: 12:19596
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received
JGeil	JMurphy	JMurphy	5/17/2022

PARTICLE SIZE DISTRIBUTION



TEST RESULTS (ASTM D6913M-17-METHOD A)

Sieving		Hydrometer Sedimentation	
Particle Size	% Passing	Particle Size mm	% Passing
3"	100		
2"	100		
1 1/2"	100		
1"	100		
3/4"	100		
3/8"	100		
#4	100		
#10	100		
#20	100		
#40	100		
#60	99		
#100	99		
#200	95		

Dry Mass of sample, g	48.6

Sample Proportions	% dry mass
Very coarse, >3" sieve	0
Gravel, 3" to # 4 sieve	0
Coarse Sand, #4 to #10 sieve	0
Medium Sand, #10 to #40	0
Fine Sand, #40 to #200	5
Fines <#200	95

USCS	ML	Liquid Limit	48	D90		D50		D10	
AASHTO	A-7-6	Plastic Limit	28	D85		D30		Cu	
USCS Group Name	Silt	Plasticity Index	20	D60		D15		Cc	

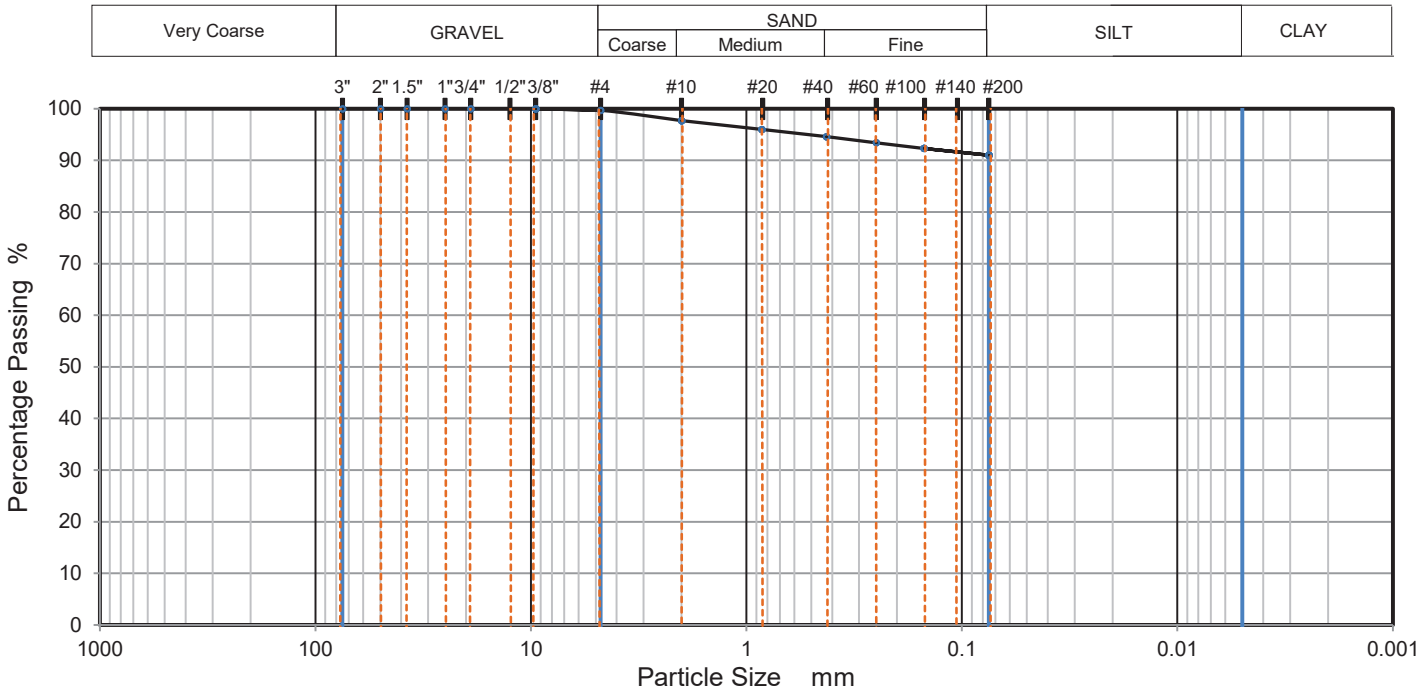
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample Description: Yellow Brown SILT
Sample Source: B-01

Project No.: 12:19596
Depth (ft): 6 - 7.5
Sample No.: S-3
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

PARTICLE SIZE DISTRIBUTION



TEST RESULTS (ASTM D6913M-17-METHOD A)

Sieving		Hydrometer Sedimentation	
Particle Size	% Passing	Particle Size mm	% Passing
3"	100		
2"	100		
1 1/2"	100		
1"	100		
3/4"	100		
3/8"	100		
#4	100		
#10	98		
#20	96		
#40	95		
#60	93		
#100	92		
#200	91		

Dry Mass of sample, g	57.9

Sample Proportions	% dry mass
Very coarse, >3" sieve	0
Gravel, 3" to # 4 sieve	0
Coarse Sand, #4 to #10 sieve	2
Medium Sand, #10 to #40	3
Fine Sand, #40 to #200	4
Fines <#200	91

USCS	ML	Liquid Limit	43	D90		D50		D10	
AASHTO	A-7-6	Plastic Limit	28	D85		D30		Cu	
USCS Group Name	Silt	Plasticity Index	15	D60		D15		Cc	

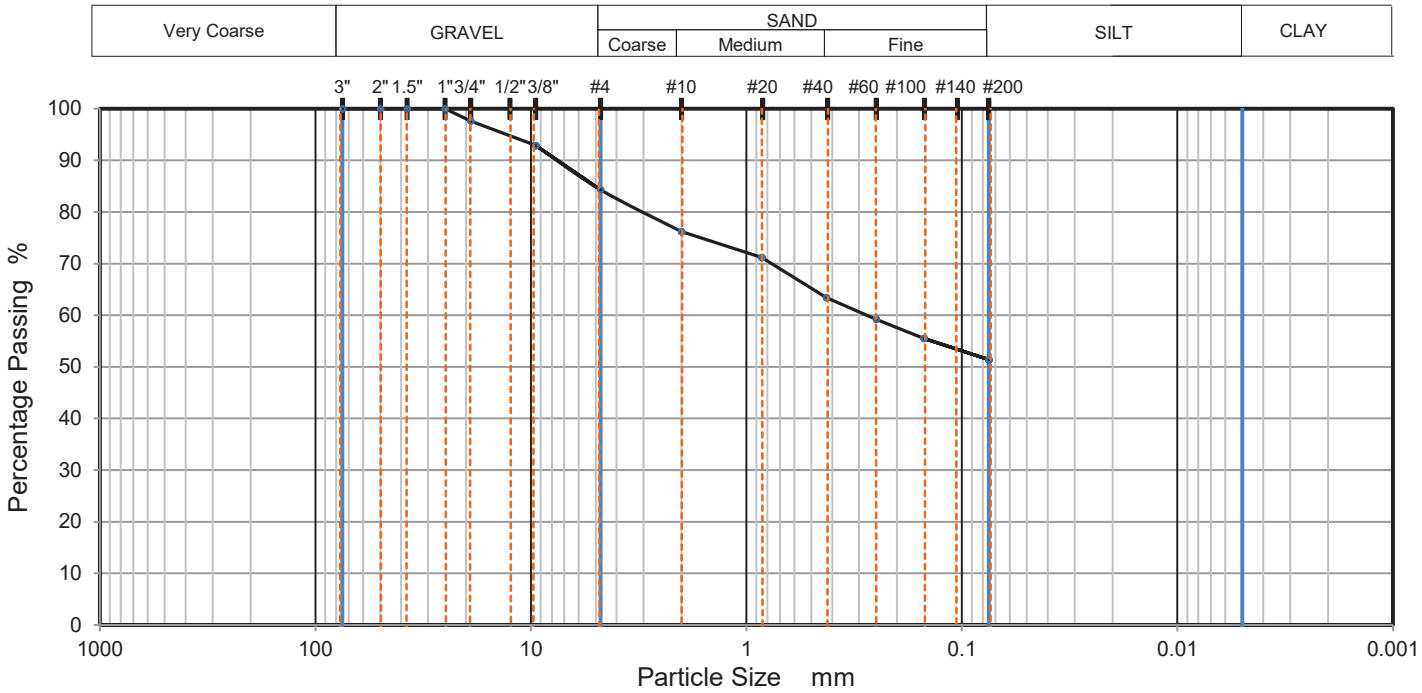
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample Description: Orange Brown SILT
Sample Source: B-03

Project No.: 12:19596
Depth (ft): 13.5 - 15
Sample No.: S-5
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

PARTICLE SIZE DISTRIBUTION



TEST RESULTS (ASTM D6913M-17-METHOD A)

Sieving		Hydrometer Sedimentation	
Particle Size	% Passing	Particle Size mm	% Passing
3"	100		
2"	100		
1 1/2"	100		
1"	100		
3/4"	98		
3/8"	93		
#4	84		
#10	76		
#20	71		
#40	63		
#60	59		
#100	56		
#200	51		

Dry Mass of sample, g	31210.0

Sample Proportions	% dry mass
Very coarse, >3" sieve	0
Gravel, 3" to # 4 sieve	16
Coarse Sand, #4 to #10 sieve	8
Medium Sand, #10 to #40	13
Fine Sand, #40 to #200	12
Fines <#200	51

USCS	CL	Liquid Limit	28	D90	7.520	D50		D10	
AASHTO	A-4	Plastic Limit	18	D85	5.026	D30		Cu	
USCS Group Name	Sandy lean clay with gravel	Plasticity Index	10	D60	0.277	D15		Cc	

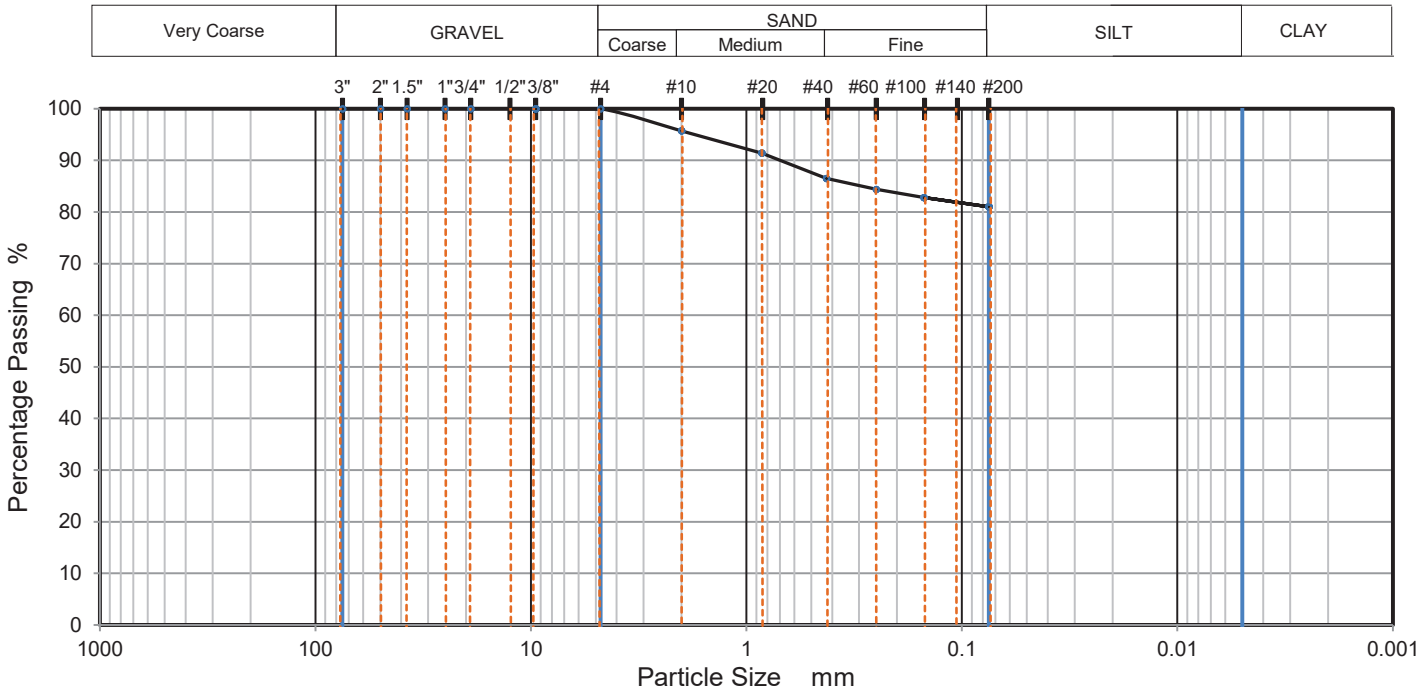
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample Description: Purple Brown SANDY LEAN CLAY with Gravel
Sample Source: P-01

Project No.: 12:19596
Depth (ft): 1 - 10
Sample No.: D3S-66
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

PARTICLE SIZE DISTRIBUTION



TEST RESULTS (ASTM D6913M-17-METHOD A)

Sieving		Hydrometer Sedimentation	
Particle Size	% Passing	Particle Size mm	% Passing
3"	100		
2"	100		
1 1/2"	100		
1"	100		
3/4"	100		
3/8"	100		
#4	100		
#10	96		
#20	91		
#40	87		
#60	84		
#100	83		
#200	81		

Dry Mass of sample, g	100.7

Sample Proportions	% dry mass
Very coarse, >3" sieve	0
Gravel, 3" to # 4 sieve	0
Coarse Sand, #4 to #10 sieve	4
Medium Sand, #10 to #40	9
Fine Sand, #40 to #200	6
Fines <#200	81

USCS	CL	Liquid Limit	39	D90	0.697	D50		D10	
AASHTO	A-6	Plastic Limit	21	D85	0.291	D30		Cu	
USCS Group Name	Lean clay with sand	Plasticity Index	18	D60		D15		Cc	

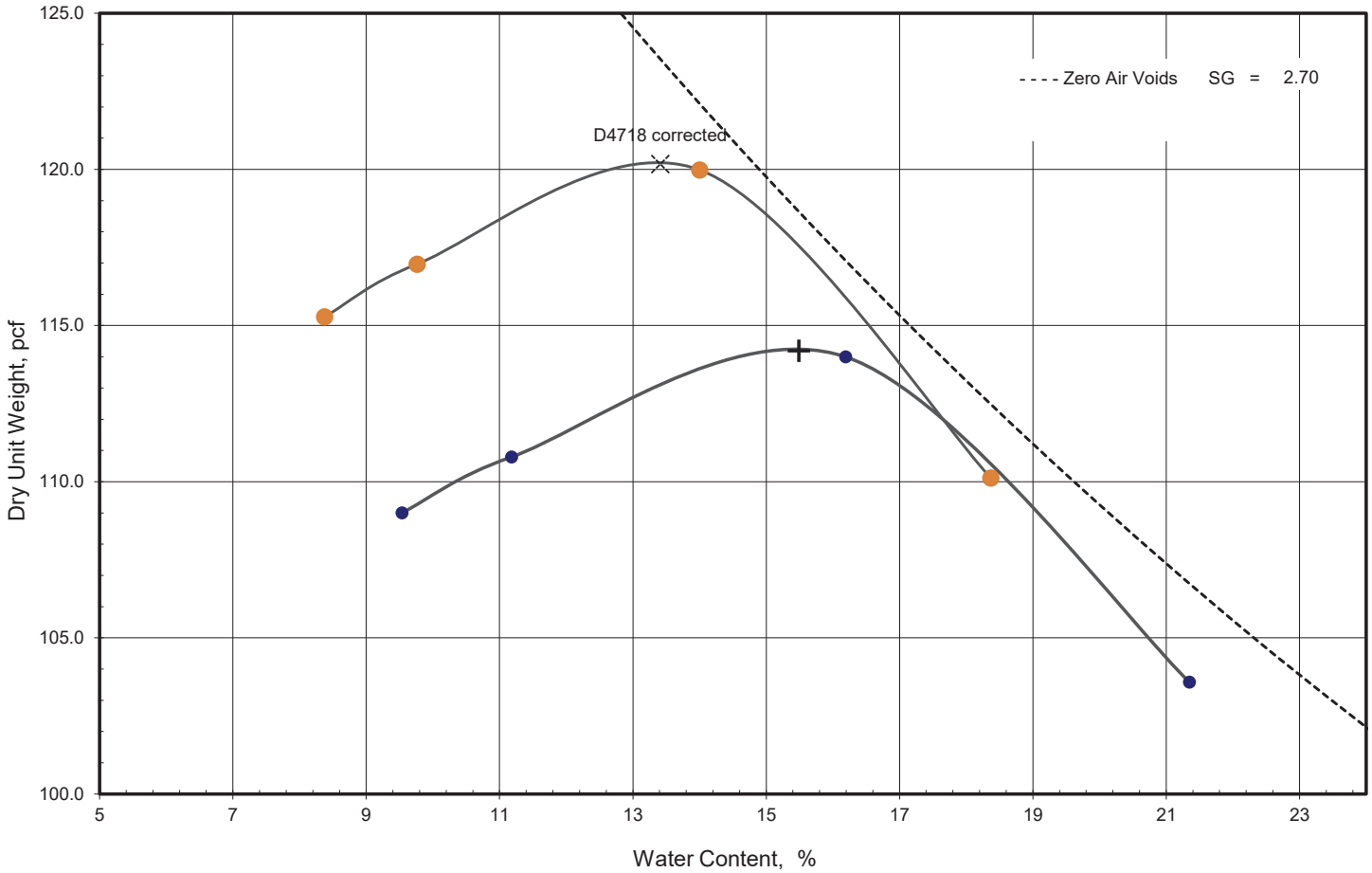
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample Description: Brown LEAN CLAY with Sand
Sample Source: P-04

Project No.: 12:19596
Depth (ft): 1 - 10
Sample No.: D3S-67
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

Laboratory Compaction Characteristics of Soil Using Standard Effort



Optimum Moisture Content		**15.5**	%
Maximum Dry Unit Weight		**114.2**	pcf
Corrected Opt. Moisture Content		13.4	%
Corrected Max. Dry Density		120.2	pcf
Cumulative material retained on:	3/4 in. sieve	2.4	%
	3/8 in. sieve	7.1	%
	#4 sieve	15.7	%

15.67 % retained on #4 sieve.

Preparation	ASTM dry preparation method	
Type of rammer	Manual - 5.5lbf (24.5N)	
Test Specfication / Method	VTM-1	
Specific gravity - D854 water pycnometer	2.70	Historical
Coarse Aggregate Specific Gravity -	2.70	Historical

Soil Description	Nat. Moist. %	Liquid Limit	Plasticity Index	%< #200	USCS	AASHTO
Purple Brown SANDY LEAN CLAY with Gravel		28	10	51.4	CL	A-4

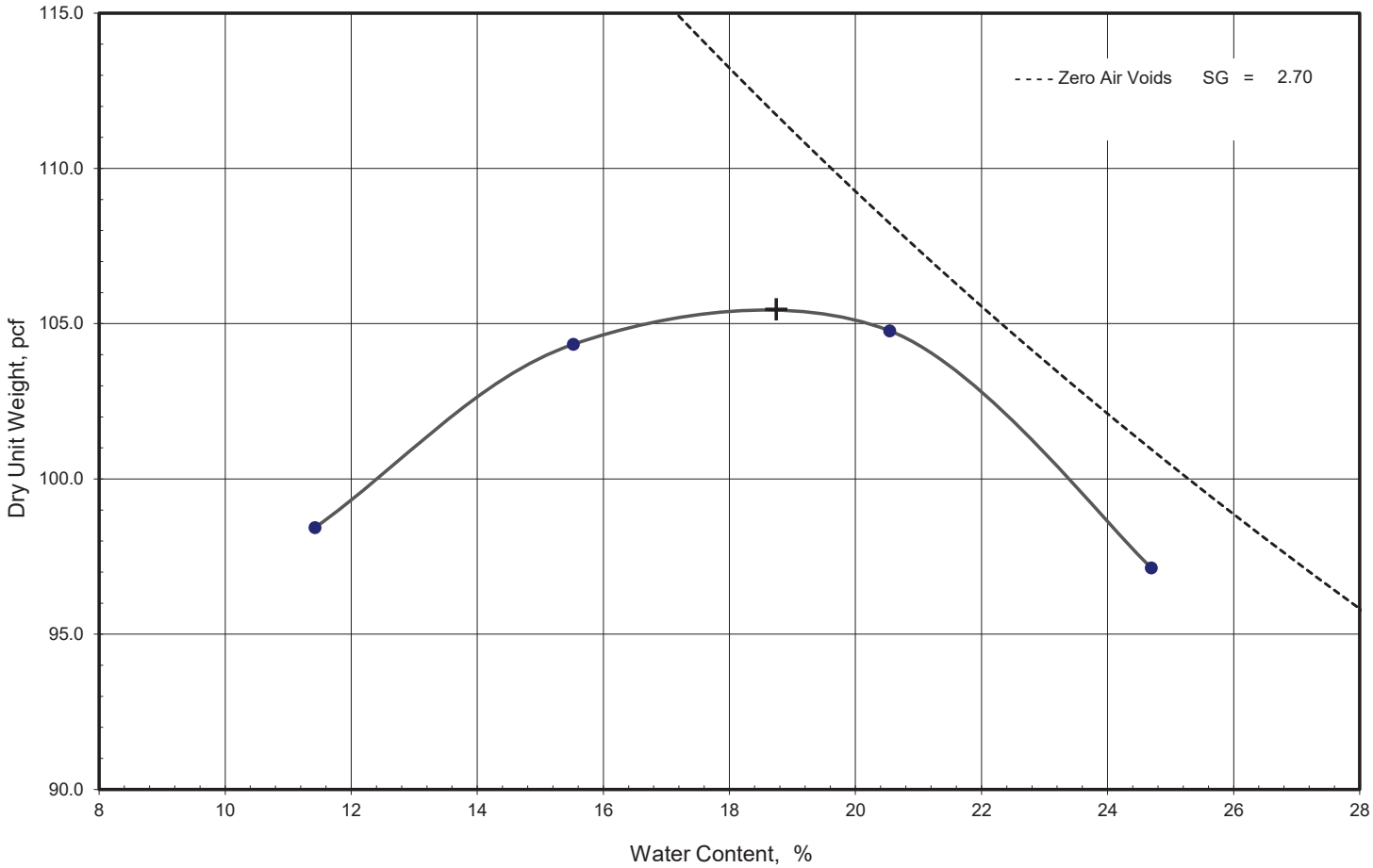
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample / Source P-01
Test Reference/No.:

Project No.: 12:19596
Depth (ft.): 1 - 10
Sample No.: D3S-66
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

Laboratory Compaction Characteristics of Soil Using Standard Effort



Optimum Moisture Content		**18.7**	%
Maximum Dry Unit Weight		**105.5**	pcf
Cumulative material retained on:	3/4 in. sieve	0.0	%
	3/8 in. sieve	0.0	%
	#4 sieve	0.0	%

Preparation	ASTM dry preparation method	
Type of rammer	Manual - 5.5lbf (24.5N)	
Test Specfication / Method	VTM-1	
Specific gravity - D854 water pycnometer	2.70	Historical
Coarse Aggregate Specific Gravity -		

Soil Description	Nat. Moist. %	Liquid Limit	Plasticity Index	%< #200	USCS	AASHTO
Brown LEAN CLAY with Sand		39	18	81.0	CL	A-6

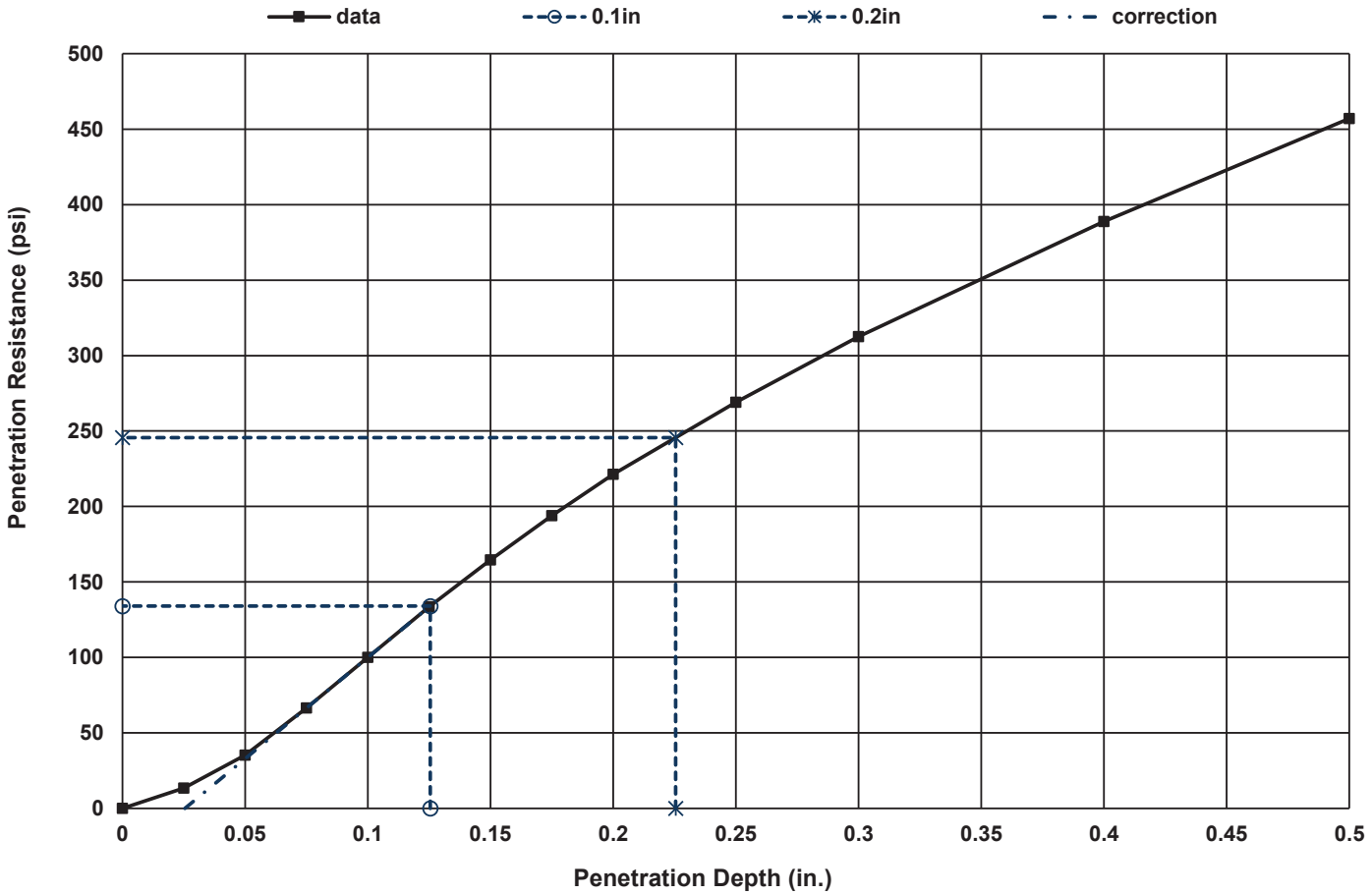
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample / Source P-04
Test Reference/No.:

Project No.: 12:19596
Depth (ft.): 1 - 10
Sample No.: D3S-67
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

California Bearing Ratios (CBR) of Laboratory-Compacted Soils



TEST RESULTS (VTM-8)

Molded			Soaked			CBR (%)		Linearty Correction (in.)	Surcharge (lbs.)	Swell (%)
Density (pcf)	Percent of Max. Dens.	Moisture (%)	Density (pcf)	Percent of Max. Dens.	Moisture (%)	0.1 in.	0.2 in.			
117.4	97.7	14.5	115.9	96.4	15.9	13.4	16.4	0.03	10	0.11

Material Description	AASHTO	USCS	MAX. Dens. (pcf)	Optimum Moisture (%)	LL	PI	% Fines	% Gravel
Purple Brown SANDY LEAN CLAY with Gravel	A-4	CL	120.2	13.4	28	10	51.4	15.7

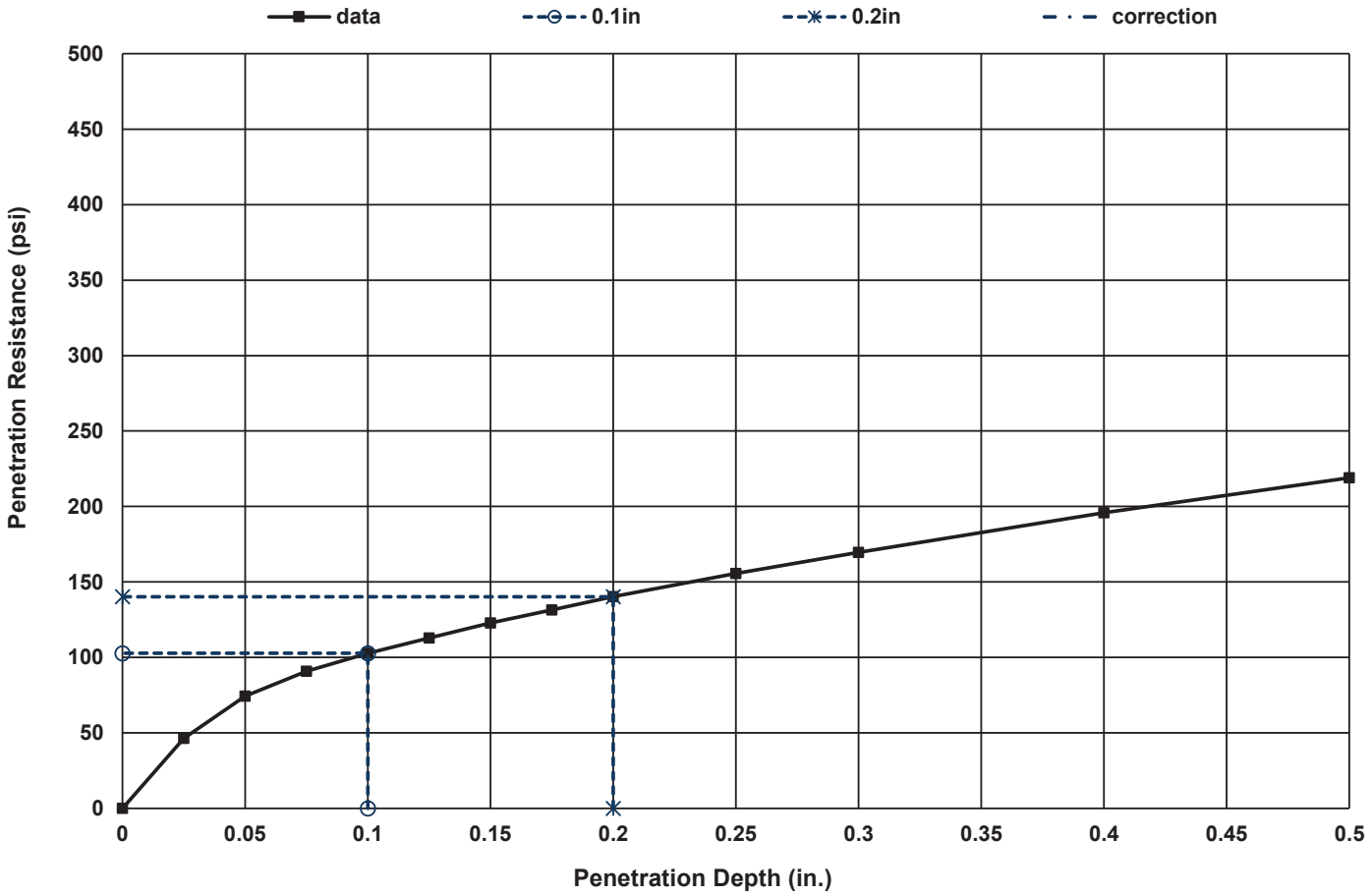
Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample / Source P-01
Test Reference/No.: 1

Project No.: 12:19596
Depth (ft.): 1 - 10
Sample No.: D3S-66
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

California Bearing Ratios (CBR) of Laboratory-Compacted Soils



TEST RESULTS (VTM-8)

Molded			Soaked			CBR (%)		Linearty Correction (in.)	Surcharge (lbs.)	Swell (%)
Density (pcf)	Percent of Max. Dens.	Moisture (%)	Density (pcf)	Percent of Max. Dens.	Moisture (%)	0.1 in.	0.2 in.			
107.5	101.9	17.2	104.3	98.9	20.1	10.3	9.3	0.00	10	0.57

Material Description	AASHTO	USCS	MAX. Dens. (pcf)	Optimum Moisture (%)	LL	PI	% Fines	% Gravel
Brown LEAN CLAY with Sand	A-6	CL	105.5	18.7	39	18	81.0	0.0

Project: Bonsack Fire Station
Client: Roanoke County - Parks & Recreation
Sample / Source P-04
Test Reference/No.: 1

Project No.: 12:19596
Depth (ft.): 1 - 10
Sample No.: D3S-67
Date Reported: 6/8/2022

Office / Lab	Address	Office Number / Fax
ECS Mid-Atlantic LLC - Roanoke	7670 Enon Drive Suite 101 Roanoke, VA 24019	(540)362-2000 (540)362-1202

Tested by	Checked by	Approved by	Date Received	Remarks
JGeil	JMurphy	JMurphy	5/17/2022	

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N67°40'16"W	18.21'

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHD BEARING	CHD LENGTH	DELTA
C1	50.00'	73.53'	N03°39'55"W	67.08'	84°15'28"
C2	150.00'	101.81'	N36°28'27"W	99.87'	38°53'18"
C3	2165.83'	175.24'	N58°14'10"W	175.19'	4°38'09"
C4	93.90'	8.18'	N65°10'31"W	8.18'	4°59'29"

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley
Shenandoah Valley
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

PRELIMINARY

PUBLIC SERVICE CENTER #12

EXISTING CONDITIONS

3645 ORANGE AVE NE
ROANOKE, VA 24012

DRAWN BY	KAM
DESIGNED BY	KAM
CHECKED BY	BTC
DATE	5/24/2022
SCALE	1" = 20'
REVISIONS	

EX-A

PROJECT NO. 04200086.00

J:\2020\04042020086.00 ROANOKE DD COST ESTIMATING - NDA\CIVIL\dwg\04200086.00 Base.dwg PLOTTED: 5/24/2022 3:17:04 PM

BONSACK/460 FIRE STATION
PRELIMINARY PROGRAMMING & DESIGN CONSIDERATIONS

Building Architecture:

Single Story Station

- Station Staffing
  - Six full-time personnel
    - Engine
    - EMS Medic Unit
    - Utility
  - Two part-time personnel
    - EMS Medic Unit
  - Station personnel totals
    - 24 personnel
      - Three different shifts with six personnel on each shift A, B, C and includes two PT personnel for an additional EMS Medical Unit

- Open Floor Plan
  - Ease of transition
  - Efficient travel lines throughout the building
  - Preference is to have egress doors leading into the apparatus bay to be push/pull without a latch if allowed

- Mezzanine
  - Located above Clean Quarters
  - Storage area
  - HVAC equipment
  - Double door access
  - Comm/IT
  - Water heater
  - Similar layout to Co. 1

- NFPA 13 Sprinkler System
  - Provide sprinkler head protection cages where needed

- Dirty Quarters – located on one side of the apparatus bays, away from Clean Quarters
  - Weight room
    - 750 S.F. minimum
    - Flooring
      - Concrete with rubber gym floor covering
    - Exterior entrance door
      - Large double opening door for better insulation
      - Concrete pad at exterior entry
    - Windows on exterior wall
    - Include Locution Alert – visual and audio
    - Pullup bars are permanent outside
    - Ceiling fans

        - Mirrors
        - Wall protection for lower 4 feet
        - Power and cable outlets for elevated hanging TV
        - Large window to the apparatus bay
        - Electrical in the floor and walls for workout equipment
        - Phone Jack
        - Exercise Equipment
            - Treadmill
            - Stair Stepper
            - Rowing Machine
            - Stationary Bike
            - Squat Rack (2)
            - Bench (2)
            - Dumbbells 5lbs to 100lbs plus rack
            - Plate Tree
            - Jump Box 30" x 24"

    - Bay Toilet
        - Watercloset
        - Urinal
        - Lavatory
        - Locate near the Weight Room

    - PPE Gear Storage
        - 24" width Gear grid lockers, a total of 30 (which includes three for travel in personnel from other stations)
        - Extra exhaust/ventilation due to moisture and odor concerns
        - Exhaust fan controlled by a timer with manual override
        - Electrical outlets throughout

    - Air Room
        - Station Compressor
        - Cascade/compressor system SCBA
        - SCBA air compressor in a separate room from the gear extractor and dryer because the heat off of the dryer will make the compressor less efficient

    - Decon Room
        - Location to be close to PPE Storage
        - Full standup shower in proximity to Decon Room and PPE Storage
        - Gear washer and dryer
            - Provide plumbing and electrical connections
        - Slop sink
        - Large floor drain/grate against a wall for washing off equipment and with pegs to hang equipment so it can dry

    - Sprinkler Room
        - Located on the first floor

- Shop
  - Minimum 200 S.F.
  - Workbench
  - Storage and area for flammable liquids
  - Pre-piped air shores

- Electric Room
  - Locate on Mezzanine?

- Apparatus Bays
  - Three Bays – 80' Deep
    - Fast Open Roll Up Fire Station Doors
    - Approximately 14'-8" door height
    - Large floor drains centered per apparatus bay (see Co. 2, Co. 5 & Co.9)
    - Diesel exhaust removal for apparatus
      - Similar to Co.1 and Res 2 but with a quieter fan
    - Spacing between apparatus by doors approximately 6 feet
      - Wider spaces between bay doors (like Co. 1) so you can open truck doors easily and not so close together that to get in one truck, the other truck doors need to be closed
      - USB and USB-C charging ports in some of the electrical outlets
    - Battery charging station
      - Rip-n-run
      - Electrical to handle Zoll/life pak/portables/TIC/SCBA/flashlight/etc.
      - Approximately 25 S.F.
    - Multiple water hookups with hose reels for hoses with one (1) faucet located somewhere in the Bay with a standard garden hose connection
    - Planned electrical drops at each Bay near the engineer side
    - Phones on both sides of the Bay
    - Two BAF ceiling fans
    - Area designed for printer/stereo/multiple batteries charging spaces
    - Minimize overhead obstructions
    - Radiant heating
      - Consider hydronic radiant floor heating
    - 1 ½" water connections for attaching hose line to clean bay floors/equipment
    - Water fountain with bottle filler near Weight Room
    - Wash alcove with floor grates and water supply

  - Hose Tower
    - 35 feet high hose drying rack
    - Dedicated nook for hose rack for storage
    - Prefer to have the hose tower in the middle of the work area, against the wall where it is still under the peak of the roof
    - Consider pricing hose tower as an option
      - If there is no hose tower, a hose dryer is required

  - Dirty Storage/Lawn Mower Storage
    - Exterior entrance

        - Flammable container, ladders, push mowers, riding mowers, weed eaters, fuels
        - Easy access through a double door to the exterior. Same as Co. 1

- Clean Quarters – located on the opposite side of apparatus bays, away from Dirty Quarters
    - Vestibule
        - Toilet Room with water closet and lavatory
        - Doorbell throughout station

    - Kitchen/Dining
        - Open floor plan from Kitchen to Dining and Day Room
        - Large commercial 3-compartment stainless steel sink
        - Commercial grade cabinets
        - Stainless steel Countertops and backsplash (full height)
        - Gas range top and griddle with hood
        - Electric double wall oven
        - Microwave
        - Large dishwasher
        - Garbage disposal
        - Island with bar seats
        - Under and over cabinet lights
        - 3 refrigerators
        - 3 large pantries (three shifts at the station, each shift would have its own food pantry (3' wide x 3' deep in a convenient location, possibly located across the hall into nook IT/Day Room)
        - With 3 large pantries, we do not need a whole lot of cabinets (St. 1 has way too many)
        - Planned coffee area, cabinet with water supply
        - Cast iron skillet hanging area
        - Magnetic knife holder
        - Ice machine
        - Movable stainless steel prep table

    - Captain's Office
        - Captain's desk with computer
        - Window into Apparatus Bay with shade
        - Storage cabinets, bookshelf, small individual mailboxes
        - File cabinets for 24 personnel (we would prefer to find another location for the files)
        - Large dry erase board
        - TV with AV and ethernet connection
        - Additional computers (3 preferred)

    - Bunkrooms (see PDF of preferred layout)
        - 7 Individual dorm rooms
        - Warm Sheet = two beds per dorm room
        - Desk w/ chair between the beds to double as a nightstand

        - Wall outlets with USB beside beds to be raised above desk height for easy access for cell phone charging
        - Ceiling Fan
        - Carpet floors
        - Efficient travel lanes from Bunkrooms to Apparatus Bays
        - If 7 dorm rooms are cost prohibitive, possibly consider a large bunk room with:
            - Individual cubicles
                - Do not extend to ceiling height to allow for airflow and use of one thermostat
            - Provide the same furnishings as in the individual dorm rooms
            - Provide sliding doors so that personnel can have privacy

- Changing Rooms
    - Located across from Bunkrooms and beside the bathroom
    - 7 large wardrobes per changing room
        - Size similar to St. 2
        - Total of 21 wardrobes (7 each per Changing Room)
    - Bench centered in the changing room
    - Smooth tile flooring similar to Co. 2

- Restrooms (see PDF layout)
    - Single sink with water closet and walk-in shower
    - No shower curtain or doors (like St. 1)
    - Small bench
    - Do not attach Toilets to the dorm rooms
    - Recommend a minimum of 3 full bathrooms and two ½ baths (Vestibule and Bay area)
    - Have at least one urinal possibly located in the toilet in the Bay

- Day Room
    - AV hookup
    - Dimmable overhead lights
    - TV electric and cable connection mounted behind wall mounted TV. (no visible wires)
    - Large window looking into apparatus bays
    - Stadium seating with a walkway between (preferred)
        - Space for seven recliners (alternate)
    - Provide solid blocking in the wall for hanging heavy items (TV, etc.)
    - Dry erase board, and a camera for Zoom calls separate from a computer located for ease of training (unless a training room can be included in the space program; preferred)
    - Provide AV connections so a laptop can be connected to the TV
    - Several recessed floor outlets

- Janitor
    - Located centrally between living quarters and kitchen
    - Floor drain
    - Storage for janitorial supplies

        - Slop sink and low tub for bucket filling
        - Exhaust fan

    - Laundry
        - Cabinets with Countertop
        - Slop sink
        - Ample storage for supplies
        - Washer and dryer

    - Patio
        - Covered Patio
        - Gas hookup for grill
        - Patio furniture

    - EMS Storage Room
        - Adjacent to the bays

- Architectural
    - No automatic unlocking doors (like Co. 10 and Station 1)
    - Low maintenance flooring in high traffic areas (Corridors, Kitchen, Day Room)
        - Epoxy resin
        - Polished concrete
        - Stained concrete
    - Windows
        - Aluminum storefront type
        - Provide aluminum storefront type operable windows in Dorm Rooms
    - Wall corners
        - Covered with stainless steel
    - Water fountains to include bottle filler
    - Ceilings
        - Generally, 2 x 2 reveal edge acoustical tile ceilings and/or gypsum board ceilings are anticipated for most non-apparatus bay areas.

- Electrical
    - LED lighting throughout with dimmable controls in certain locations
        - Provide dimmable controls in Day Room, Training Room, Captain's Office, Dorm Rooms
        - Simple operating light switches
        - No motion sensors
    - USB-USB-C Charging ports incorporated with outlets
    - Doorbell to be programmed into Locution
        - Audible in all occupied spaces and have individual tones for different doors

- AV/Technology/Security/Phone
    - Radio/dispatch speakers throughout the building for all occupied rooms
    - Security cameras covering the exterior of the structure, linked to the Office and Captain's Bunkroom
    - Exterior phone linked to dispatch – 911 box

- No automatic unlocking doors like Co. 10 and Co. 1

- Plumbing
  - Simple operating faucets
    - No motion sensors on lavatories, water closets, urinals
  - No waterless urinals
  - Individual shut-offs for bathrooms
    - Manifold system

- HVAC
  - Chiller/Boiler with digital valves
  - Thermostats that personnel can control – BAS system (understood that every room is not realistic)
  - With boiler/chiller, consider ductless units as a backup in the Day Room, Kitchen/Dining areas, Captain's Office, Training Room, Dorm Rooms.
  - Chiller – consider placing it by the bunkrooms or the electrical room and turning it longways from the building. Either location would consider a wall built or some other sound insulation around the unit for noise reduction. Would like outdoor units in an area close to the clean side of the building but far enough away so it will not disturb personnel when operating.
  - Consideration should be given to providing gas radiant tube heaters in the apparatus bays that would not be connected to the boiler.

- Training Props
  - Incorporated into hose tower
  - FDC/Standpipe
  - Ladder crash zones inside and out
  - 2nd story locking window (door) for bailouts to the exterior of the building

- Building Exterior
  - Design Look = Fire Station
  - Focused Front Entrance
  - Large signage with Roanoke County Fire and Rescue Station #___
  - Arched apparatus bay entrances
  - Pitched roof with standing seam metal (preferred) or architectural roof shingles
  - Awning or roofed area over walk areas and entrances
  - Banners outside of bays with apparatus listed (semi-permanent)
  - Dusk to Dawn lighting on building and parking areas

- Site
  - Concrete pad for all truck traffic areas
  - Commercial dumpster area
  - Parking spaces for 20
  - Fuel Island in the direction of travel
    - Driver fill-ups are on the vehicle's driver's side
    - Ability to fuel trucks without backing up
  - Station Generator
    - Locate generator away from sleeping quarters
    - Fueled from a direct line to fuel island tank to confirm fresh diesel

- Bollards located on both the inside and outside of bay doors
- Building-mounted sign
  - Back lite
- Fire Hydrant
  - Non-metered
  - Installed on-site for easy access for fire trucks to fill up

Roanoke County Public Service Center #12

Stormwater Summary

City and State stormwater management regulations will need to be addressed on-site for the proposed development. In the existing condition, a portion of the runoff drains north to an existing drainage low. The remaining runoff drains south towards the public right-of-way of Mexico Way where it is collected existing drainage inlets and conveyed through the storm sewer system.

Since runoff is currently draining in two directions, the detained runoff from the proposed development can be discharge in to either of the existing drainage areas.

Option A is to detain the stormwater runoff in the rear of the site using either an above ground detention pond, or an underground storage facility. The runoff would then be discharged to the north to the existing drainage low. The City of Roanoke would prefer the development to utilize this option as it would not direct any additional flow to the already over-capacity storm sewer system in Mexico Way. Further calculations would be required to determine the exact volume required in the stormwater management facility and if an above ground detention pond is a viable option.

Option B is to detain the stormwater runoff in the front of the site using an underground storage facility. A new storm sewer system would be required to convey the detained runoff from the site to the existing storm sewer system located approximately 200 ft from the site.

In both above options, stormwater quality requirements would need to be addressed as well. If an underground storage facility is utilized, a portion of the water quality requirements can be addressed on-site. The remaining requirements would need to be addressed using other on-site methods, or by purchasing off-site nutrient credits.

Appalachian Power Company
PO Box 2021
Roanoke, VA 24022-2121

Kyle Mitchell
Balzer & Associates
1208 Corporate Circle
Roanoke VA 24018

May 11, 2022

RE: Power Availability for the proposed Public Service Center #12 to be located at the end of Mexico Way NE

Dear Mr. Mitchell,

Appalachian Power Company (APCO) has a 3 phase 34.5 KV underground circuit across the road from the property. This can be intercepted and extended to the new parcel to serve the needs of the customer, subject to company policies and the current Tariff on file with the Virginia State Corporation Commission.

Sincerely,
Keith A. Freeman

Keith A. Freeman
Customer Design Supervisor NE
Roanoke Customer Design
(540) 427-3643 off
(540) 427-3727 fax
kafreeman@aep.com

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AEP: America's Energy Partner ®

Roanoke Gas
519 Kimball Avenue, N.E.
P.O. Box 13007
Roanoke, Virginia 24030
540-777-4427

May 5th, 2022

Subject: Mexico Way NE Gas Availability

Mr. Kyle Mitchell
Engineer
Blazer & Associates

Roanoke Gas Company has a 2" Plastic gas main that is located on the east side of (Along Mexico Way NE) which is located in Roanoke City, Virginia. The gas pressure on this main is approximately 40-45 psi.

To determine whether there will be any cost to the builder to install a gas service to the new building, I will need to compare the cost of installing the service to the expected revenue from the project. A cost estimate will be performed when requested by the customer.

The builder may contact me to start the service installation planning process when the time comes.

If you have any other questions, please let me know.

Sincerely,

CJ Boothe
Director of Operations
540-777-3816
Email address: Christopher_Boothe@roanokegas.com

Kyle Mitchell

From: Draper, Jeffrey B <jeffrey.b.draper@verizon.com>
Sent: Monday, May 16, 2022 12:13 PM
To: Kyle Mitchell
Cc: roscoe.a.asbury.jr@verizon.com
Subject: Re: [E] FW: Public Service Center #12 - Will Serve Letter

Good morning Kyle,
Unfortunately we do not provide will-serve letters anymore, as there are multiple carriers that can provide service in the Roanoke area. Verizon does have fiber and copper on Mexico Way NE, your customer can order any service Verizon offers in the area at that location.

Jeffrey Draper
Supervisor Outside Plant Engineering
O 5402657501
4843 Oakland Blvd
Roanoke, VA 24012

On Mon, May 16, 2022 at 10:20 AM Kyle Mitchell <kmitchell@balzer.cc> wrote:

Jeff,

We are working on a project in the City of Roanoke located at the end of Mexico Way. See attached proposed concept plan and architectural perspective.

Can you please provide us a will serve letter for the new building? Let me know if you need any additional information from me to facilitate this.

Thanks,

Kyle Mitchell

Balzer & Associates

Envisioning tomorrow. Designing today.

Planners / Architects / Engineers / Surveyors

Roanoke / Richmond / New River Valley / Shenandoah Valley

WESTERN VIRGINIA WATER AUTHORITY
540.853.5700 | info@westernvawater.org

Engineering Services
601 South Jefferson St, Suite 300
Roanoke, VA 24011
540-853-5700

Availability Letter #
22-240

Property Information

Availability #	22-240
Address	0 Mexico Way NE/ 3645 Orange Ave NE
Tax Map #	Parent Parcel 7110105
Contact	BALZER & ASSOCIATES, INC.
Phone #	Kyle Mitchell/540-772-9580
LOC / CUST #	

Project Information

Date prepared	5/10/2022
Acct code	Roanoke City
Project type	Commercial
	NC SC
Project Name	Public Service Center #12
Project Status	Conceptual

Prepared by: **Margaret Pearson - Utility Planner 540-283-2996**

This letter has been generated without an approved plan or plat.

Based on the information that has been provided to the Western Virginia Water Authority, public water and sewer can be made available to this proposed parcel under certain conditions as outlined below. The design engineer is responsible to verify the water and sewer requirements for any development. All costs associated with the design and construction of the public water and sewer improvements required to serve this new parcel will be the responsibility of the owner/developer. A more detailed Availability Letter outlining specific fees associated with connecting to the public water and sewer systems will be provided in conjunction with the site plan review process.

WATER:
Water can be provided to the property by connectiin to the existing 8" public water main located in MEXICO WAY NE. The hydraulic grade line of the existing 8" waterline is HGL 1329. It is the owner/developers responsibility to ensure that the existing water system can provide the necessary flow and pressure required for the proposed development on this parcel. Depending on how Property is developed the internal water service could be either private or public, and this would be determined at the time of site plan approval.

SEWER:
Sewer can be provided to the Property by connecting to the existing 8”public sanitary main located in MEXICO WAY NE.
Depending on how Property is developed the sewer service could be either private or public, and this would be determined at the time of site plan approval.

SEE PAGE 2 FOR WVWA DEVELOPMENT POLICIES & PROCEDURES

Additional Information

- Once plans are submitted to the locality for review, all WVWA comments will be included as part of the localities review and approval process.
- Fixture counts will be required to properly size the requested meter and to set the availability fees for this project.
  Fixture Count Worksheet
- Fee amounts are listed in the approved Rate and Fee Schedule, as amended. This fee will be collected following issuance of an Availability Letter.
  WVWA Rates & Fees
- Any wastewater which contains fats, oils & grease (FOG) shall only be discharged into the Authority's sanitary sewer system.
  FOG Application

  Fats, Oils & Grease (FOG) Policy
- Hydrant flow tests will be performed at the cost of the developer for any hydrant flow test data requested.
  Fire flow requirements will be determined by the localities and it is the developer's responsibility to submit any hydraulic modeling for the localities approval
  Hydrant Flow Test Application

  Additional links below:
  WVWA homepage

  General Business Rules & Regulations

  WVWA Regional Design & Construction Standards

  Plan Review Checklist

  WVWA Warranty Agreement

  Inflow & Infiltration inspection

Public-Private Education Facilities and Infrastructure Act of 2002

County of Roanoke

Guidelines

April 2003 (rev. Jan. 2021)

Public-Private Education Facilities and Infrastructure Act of 2002

Roanoke County Procedures
Table of Contents

I. Introduction 3

II. General Provisions 4
- A. Proposal Submission 4
- B. Affected Local Jurisdictions 5
- C. Proposal Review Fee 5
- D. Freedom of Information Act 6
- E. Applicability of Other Laws 8

III. Solicited Proposals 8

IV. Unsolicited Proposals 9
- A. Decision to Accept and Consider Unsolicited Proposal; Notice 9
- B. Initial Review by the County at the Conceptual Stage (Part 1) 10

V. Review of Solicited and Unsolicited Proposals 10

VI. Proposal Preparation and Submission 11
- A. Format for Submissions at Conceptual Stage (Part 1) 11
- B. Format for Submissions at Detailed Stage (Part 2) 16

VII. Proposal Evaluation and Selection Criteria 17
- A. Qualifications and Experience 17
- B. Project Characteristics 18
- C. Project Financing 19
- D. Project Benefit and Compatibility 19
- E. Other Factors 20

VIII. Interim and Comprehensive Agreements 20
- A. Interim Agreement Terms 20
- B. Comprehensive Agreement Terms 21
- C. Public Hearing During Proposal Review Process; Notice and Posting Requirements 23

Terms and Definition 24

I. Introduction

The Public-Private Education Facilities and Infrastructure Act of 2002, as amended, (the "PPEA") allows responsible public entities to create public-private partnerships for development of a wide range of projects for public use if the public entities determine there is a need for the project and that private involvement may provide the project to the public in a timely and cost-effective fashion. For purposes of the PPEA, the County of Roanoke, is a "responsible public entity" that "has the power to develop or operate the applicable qualifying project." Individually negotiated comprehensive agreements between a private entity and the County will define the respective rights and obligations of the parties. This document sets forth the procedures to guide the private partner(s) and the County in the application of PPEA. The approval of the Board of Supervisors of Roanoke County is required for the County to enter into a comprehensive agreement pursuant to the PPEA.

In order for a project to be considered under the PPEA, it must meet the definition of a "qualifying project." The PPEA contains a broad definition of "qualifying project" that includes public buildings and facilities of all types; for example:

(i) An education facility, including, but not limited to, a school building, any functionally-related and subordinate facility and land to a school building (including a stadium or other facility primarily used for school events), any functionally related and subordinate facility and land to a school building and any depreciable property provided for use in a school facility that is operated as part of the public school system or as an institution of higher education;

(ii) Any building or facility that meets a public purpose and is developed or operated by or for any public entity;

(iii) Improvements, together with equipment, necessary to enhance public safety and security of buildings to be principally used by a public entity;

(iv) Utility, telecommunications and other communications infrastructure;

(v) Technology infrastructure, including, but not limited to, telecommunications, automated data processing, word processing and management information systems, and related information, equipment, goods and services;

(vi) Technology, equipment, or infrastructure designed to deploy wireless broadband services to schools, businesses, or residential areas;

(vii) Services designed to increase the productivity or efficiency through the use of technology or other means;

(viii) Any improvements necessary or desirable to any unimproved County owned real estate; or

(ix) A solid waste management facility that produces electric energy from solid waste;

(x) A recreational facility; and

(xi) Certain service contracts.

The PPEA establishes requirements that the County shall adhere to when reviewing and approving proposals received pursuant to the PPEA. The County Administrator may receive and consider proposals in strict accord with the procedures specified in this document. In addition, the PPEA specifies the criteria that must be used to select a proposal and the contents of the interim or comprehensive agreement detailing the relationship between the County and the private entity.

II. General Provisions

A. Proposal Submission

A proposal may be either solicited by the County or delivered by a private entity on an unsolicited basis. Private entity proposers will be required to follow a two-part proposal submission process consisting of an initial conceptual phase (Part 1) and a detailed phase (Part 2). The initial phase of the proposal should contain specified information on proposer qualifications and experience, project characteristics, project financing, anticipated public support or opposition, or both, and project benefit and compatibility. The Part 2 detailed proposal must contain specified deliverables.

The PPEA allows private entities to include innovative financing methods, such as the imposition of user fees or service payments, in a proposal. Such financing arrangements may include the issuance of debt instruments, equity or other securities or obligations, including, if applicable, the portion of the tax-exempt private activity bond limitation amount to be allocated annually to the Commonwealth of Virginia pursuant to the federal Economic Growth and Tax Relief Reconciliation Act of 2001 for the development of education facilities using public-private partnerships, and to provide for carryovers of any unused limitation amount.

Proposals should be prepared simply and economically, providing a concise description of the proposer's capabilities to complete the proposed qualifying project and the benefits to be derived from the project by the public. Project benefits to be considered are those occurring during the construction, renovation, expansion or improvement phase and during the life cycle of the project. Proposals also should include a scope of work and a financial plan for the project, which contain enough detail to allow an analysis by the County of the financial feasibility of the proposed project.

For specific applications, the County may request, in writing, clarification to the submission.

The PPEA is intended to encourage proposals from the private sector that offer the provision of private financing in support of the proposed public project and the assumption of commensurate risk by the private entity, but also benefits to the private entity through innovative approaches to project financing, development and use. However, while substantial private sector involvement is encouraged, qualifying facilities will still be devoted primarily to *public* use and typically involve facilities critical to the public health, safety and welfare. Accordingly, the County shall continue to exercise full and proper due diligence in the evaluation and selection of operators for these projects. In this regard, the qualifications, capabilities, resources and other attributes of a prospective operator and its whole team should be carefully examined for every project. In addition, private entities proposing projects shall be held strictly accountable for representations or other information provided regarding their qualifications, experience or other contents of their proposals, including all specific aspects of proposed plans to be performed by the operator.

B. Affected Local Jurisdictions

Any private entity requesting approval from, or submitting a conceptual or detailed proposal to, the County must provide other affected units of local government with a copy of the private entity's request or proposal by certified mail, express delivery or hand delivery, after the County determines whether to accept such proposal. Affected local jurisdictions shall have 60 days from the receipt of the request or proposal to submit written comments to the County at either or both the conceptual and detailed phases. Comments received within the 60-day period shall be considered in evaluating the request or proposal, however no negative inference shall be drawn from the absence of comment by an affected local jurisdiction.

C. Proposal Review Fee

No fee will be charged by the County to process, review or evaluate any solicited proposal submitted under the PPEA, other than what are considered reasonable and incidental permit, utility, and related fees during the construction stage of the project. The County shall receive an analysis of the proposal from County staff or outside advisors or consultants with relevant experience in determining whether to enter into an agreement with the private entity.

The County shall charge a fee of one-half of one percent (0.5%), not to exceed $50,000, of the estimated present value cost to the County of the proposal, but not less than $5,000, to cover the costs of processing, reviewing, and evaluating any unsolicited, Part 1 proposal or competing unsolicited Part 1 proposal submitted under the PPEA, including a fee to cover the costs of outside attorneys, consultants and financial advisors. This fee shall not be greater than the direct costs associated with evaluating the proposed qualifying project. “Direct costs” include (i) the cost of staff time required to process,

evaluate, review, and respond to the proposal, and (ii) the out-of-pocket costs of attorneys, consultants, and financial advisors. For purposes of initial processing of the proposal, the County shall accept the $5,000 minimum fee with the balance due and payable prior to the proposals proceeding beyond the initial review stage. Such sums shall be paid with certified funds, and shall be deposited with the Treasurer of Roanoke County in a special fund known as the PPEA Fund. The fund shall be established for such purpose, and deposits to the fund shall be apportioned to defray the direct cost of proposal review(s).

- If the cost of reviewing the proposal is less than the established proposal fee, the County may refund to the proposer the excess fee.
- If during the initial review the County decides not to proceed to publication and conceptual-phase review of an unsolicited proposal, the proposal fee, less any direct (itemized) costs of the initial review, shall be refunded to the private entity.
- If the County chooses to proceed with evaluation of proposal(s) under the PPEA, it shall not do so until the entire, non-refundable proposal fee has been paid to the County in full.

D. Freedom of Information Act

1. General applicability of disclosure provisions.

Generally, proposal documents submitted by private entities are subject to the Virginia Freedom of Information Act ("FOIA") except that subdivision 11 of § 2.2-3705.6 exempts certain documents from public disclosure. FOIA exemptions, however, are discretionary, and the County may elect to release some or all of the documents except to the extent the documents are:

a. Trade secrets of the private entity as defined in the Uniform Trade Secrets Act (§59.1-336 et seq.);

b. Financial records of the private entity that are not generally available to the public through regulatory disclosure or otherwise, including but not limited to, balance sheets and financial statements; or

c. Other information submitted by a private entity, where if the record or document were made public prior to the execution of an interim or comprehensive agreement the financial interest or bargaining position of the public or private entity would be adversely affected.

Additionally, to the extent access to proposal documents submitted by private entities are compelled or protected from disclosure by a court order, the County must comply with the provisions of such order.

2. Protection from mandatory disclosure for certain documents submitted by a private entity.

a. Before a document of a private entity may be withheld from disclosure, the private entity must make a written request to the County at the time the documents are submitted, designating with specificity the documents for which the protection is being sought and a clear statement of the reasons for invoking the protection with reference to one or more of three classes of records listed above in Section II(D)(1).

b. Upon receipt of a written request for protection of documents, the County shall determine whether the documents contain (i) trade secrets, (ii) financial records, or (iii) other information that would adversely affect the financial interest or bargaining position of the County or private entity in accordance with Section II(D)(1). The County shall make a written determination of the nature and scope of the protection to be afforded by the County under this subdivision. If the determination regarding protection or the scope thereof differs from the proposer's request, then the County will accord the proposer a reasonable opportunity to clarify and justify its request. Upon a final determination by the County to accord less protection than requested by the proposer, the proposer will be accorded an opportunity to withdraw its proposal. A proposal so withdrawn should be treated in the same manner as a proposal not accepted for publication and conceptual-phase consideration as provided in section IV.A.2 below.

c. Once a written determination has been made by the County, the documents afforded protection under this subdivision shall continue to be protected from disclosure when in the possession of the County or any affected jurisdiction to which such documents are provided.

d. If a private entity fails to designate trade secrets, financial records, or other confidential or proprietary information for protection from disclosure, such information, records, or documentation shall be subject to disclosure under FOIA.

3. Protection from mandatory disclosure for certain documents produced by the County.

a. The County may withhold from disclosure memoranda, staff evaluations, or other records prepared by the County, its staff, outside advisors, or consultants exclusively for the evaluation and negotiation of proposals where (i) if such records were made public prior to or after the execution of an interim or comprehensive agreement, the financial interest or bargaining position of the County would be adversely affected, and (ii) the basis for the determination required in clause (i) is documented in writing by the County.

b. Cost estimates relating to a proposed procurement transaction prepared by or for the County shall not be open to public inspection.

E. Applicability of Other Laws

The applicability of the Virginia Public Procurement Act (the "VPPA") is as set forth in the PPEA. In soliciting or entertaining proposals under the PPEA, the County shall also comply with all applicable federal laws and applicable state and local laws not in conflict with the PPEA. Likewise, in submitting proposals and in developing, executing or operating facilities under the PPEA, private entities shall comply will all applicable federal laws and applicable state and local laws. Such laws may include, but not necessarily be limited to, contractual obligations which require Workers Compensation insurance coverage, performance bonds or payment bonds from approved sureties, compliance with the Virginia Prompt Payment Act, compliance with the Ethics in Public Contracting Act and compliance with environmental laws, workplace safety laws, and state or local laws governing contractor or trade licensing, building codes and building permit requirements.

Expenditure of County funds in support of a comprehensive agreement requires an appropriation in the County budget or other appropriation(s).

The PPEA process should not be used to create County-supported debt. Comprehensive agreements involving any form of County-supported debt, require specific, project-level approval by the Board of Supervisors.

III. Solicited Proposals

With the written authorization of the County Administrator a Request for Proposals (RFPs) or an invitation for competitive sealed bids may be issued, inviting proposals from private entities to develop or operate qualifying projects or to design or equip projects so constructed, improved renovated, expanded, maintained or operated. The County shall use a two-part proposal process consisting of an initial conceptual phase (Part 1) and a detailed phase (Part 2). The RFP shall invite proposers to submit proposals on individual projects identified by the County. In such a case the County shall set forth in the RFP the format and supporting information that is required to be submitted, consistent with the provisions of the PPEA.

The RFP should specify, but not necessarily be limited to, information and documents that must accompany each proposal and the factors that will be used in evaluating the submitted proposals. The RFP shall be posted on the County's electronic procurement website. Notices shall also be published in the Roanoke Times and World News, a newspaper of general circulation. Pre-proposal conferences may be held as deemed appropriate by the County. Any proposal submitted pursuant to the PPEA that is not received in response to a RFP or invitation for sealed bids shall be an Unsolicited Proposal under these procedures, including but not limited to (a) proposals received in response to a notice of the prior receipt of another Unsolicited Proposal, and (b)

proposals received in response to publicity by the County concerning particular needs when the County has not issued RFP or invitation for sealed bids, even if the County has encouraged the submission of proposals.

IV. Unsolicited Proposals

The PPEA permits the County to receive, evaluate and select for negotiations unsolicited proposals from private entities to develop or operate a qualifying project.

From time to time the County may publicize its needs and may encourage interested parties to submit unsolicited proposals subject to the terms and conditions of the PPEA. When such proposals are received without issuance of an RFP, the proposal shall be treated as an unsolicited proposal. Unsolicited proposals should be submitted to the County Administrator by delivering six complete copies, together with the required review fee. A working group may be designated by the County Administrator to review and evaluate all unsolicited proposals.

A. Decision to Accept and Consider Unsolicited Proposal; Notice

1. The County reserves the right to reject any and all proposals at any time. If the County rejects a proposal initiated by a private entity that purports to develop specific cost savings, the County shall specify the basis for the rejection.

2. Upon receipt of any unsolicited proposal, or group of proposals, and payment of the required fee by the proposer or proposers, the County should determine whether to accept the unsolicited proposal for publication and conceptual-phase consideration. If the County determines not to accept the proposal, it shall return the proposal, together with all fees and accompanying documentation, to the proposer.

3. If the County chooses to accept an unsolicited proposal for conceptual-phase consideration, the following shall apply:

    a. Within 10 working days after acceptance of such proposal, the County shall post a notice on the County's electronic procurement website, and in such other public area(s) as may be regularly used for posting of public notices, for a period of not less than 45 days. At least one copy of the proposals shall be made available for public inspection. The County may provide for more than 45 days in situations where the scope or complexity of the original proposal warrants additional time for potential competitors to prepare proposals.

    b. The notice shall state that the County (i) has received and accepted an unsolicited proposal under the PPEA, (ii) intends to evaluate the proposal, (iii) may negotiate an interim or comprehensive agreement

with the proposer based on the proposal, and (iv) will accept for simultaneous consideration any competing proposals that comply with the procedures adopted by the County and the provisions of the PPEA. The notice will summarize the proposed qualifying project or projects, and identify their proposed locations. Copies of unsolicited proposals shall be available upon request, subject to the provisions of FOIA and § 56-575.4 G of the PPEA.

c. To ensure that sufficient information is available upon which to base the development of a serious competing proposal, representatives of the County familiar with the unsolicited proposal and the guidelines established by the County shall be made available to respond to inquiries and meet with private entities that are considering the submission of a competing proposal.

d. Prior to posting of the notices provided for in this subsection the County shall receive from the private partner or partners the balance due, if any, of the required project proposal review fee.

B. Initial Review by the County at the Conceptual Stage (Part 1)

After reviewing the original proposal and any competing proposals submitted during the notice period, the County Administrator may recommend to the Board of Supervisors:

(i) not to proceed further with any proposal,

(ii) to proceed to the detailed (Part 2) phase of review with the original proposal,

(iii) to proceed to the detailed (Part 2) phase with a competing proposal,

(iv) to proceed to the detailed (Part 2) phase with multiple proposals, or

(v) to request modifications or amendments to any proposals.

In the event that more than one proposal will be considered in the detailed (Part 2) phase of review, the County Administrator shall recommend to the Board of Supervisors whether the unsuccessful private entity, or entities, shall be reimbursed, in whole or in part, for costs incurred in the detailed phase of review. In such case, reasonable costs may be assessed to the successful proposer as part of any ensuing comprehensive agreement.

V. Review of Solicited and Unsolicited Proposals

1. Only proposals complying with the requirements of the PPEA that contain sufficient information for a meaningful evaluation and that are provided in an appropriate format will be considered by the County for further review at the conceptual stage. Formatting suggestions for proposals at the conceptual stage are found at Section VI A.

2. The Board of Supervisors will determine at the initial review stage whether it will proceed using:

a. Standard procurement procedures consistent with the VPPA; or

b. Procedures developed that are consistent with procurement of "other than professional services" through "competitive negotiation" as the term is defined in § 2.2-4301 of the Code of Virginia (competitive negotiation). The Board of Supervisors may proceed using such procedures only if it makes a written determination that doing so is likely to be advantageous to the County and the public based upon either (i) the probable scope, complexity or priority of project, or (ii) the risk sharing including guaranteed cost or completion guarantees, added value or debt or equity investments proposed by the private entity; or (iii) increase in funding, dedicated revenue source or other economic benefit from the project that would otherwise not be available.

When the County elects to use competitive negotiations, its written determination should consider factors such as risk sharing, added value and/or economic benefits from the project that would not be available without competitive negotiation. In addition, the written determination should explain how the scope, complexity, and/or priority of the project are such that competitive negotiation is determined necessary.

The Board of Supervisors has determined that the analysis of a request by a private entity for approval of a qualifying project shall be performed by County employees. The Board reserves the right to engage the services of qualified professionals to provide it with an independent analysis of any proposal. The costs of such analysis shall be recovered from the Proposal Review Fee, Section II C.

VI. Proposal Preparation and Submission

A. Format for Submissions at Conceptual Stage (Part 1)

The County requires that proposals at the conceptual stage contain information in the following areas: (i) qualifications and experience, (ii) project characteristics, (iii) project financing, (iv) anticipated public support or opposition, or both, (v) project benefit and compatibility and (vi) such additional information as may seem prudent which is not inconsistent with the requirements of the PPEA. Suggestions for formatting information to be included in proposals at the Conceptual Stage include:

1. Qualification and Experience

   a. Identify the legal structure of the firm or consortium of firms making the proposal. Identify the organizational structure for the project, the management approach and how each partner and major subcontractor ($100,000 or more) in the structure fits into the overall team. All members of the private entity/offeror's team, including major subcontractors known to the proposer must be identified at the time a proposal is submitted for the Conceptual Stage. Identified team members, including major subcontractors (over $500,000), may not be substituted or replaced once a project is approved and comprehensive agreement entered into, without the written approval of the County. Include the status of the Virginia license of each partner, proposer, contractor, and major subcontractor.

   b. Describe the experience of the firm or consortium of firms making the proposal and the key principals involved in the proposed project including experience with projects of comparable size and complexity. Describe the length of time in business, business experience, public sector experience and other engagements of the firm or consortium of firms. Describe the past safety performance record and current safety capabilities of the firm or consortium of firms. Describe the past technical performance history on recent projects of comparable size and complexity, including disclosure of any legal claims and litigation, of the firm or consortium of firms. Include the identity of any firms that will provide design, construction and completion guarantees and warranties and a description of such guarantees and warranties.

   c. For each firm or major subcontractor ($100,000 or more) that will be utilized in the project, provide a statement listing all of the firm's prior projects and clients for the past 3 years and contact information for same (names/addresses /telephone numbers). If a firm has worked on more than ten (10) projects during this period, it may limit its prior project list to ten (10), but shall first include all projects similar in scope and size to the proposed project and, second, it shall include as many of its most recent projects as possible. Each firm or major subcontractor shall be required to submit all performance evaluation reports or other documents which are in its possession evaluating the firm's performance during the preceding three years in terms of cost, quality, schedule maintenance, safety and other matters relevant to the successful project development, operation, and completion.

   d. Provide the names, addresses, and telephone numbers of persons within the firm or consortium of firms who may be contacted for further information.

e. Provide a current or most recently audited financial statement of the firm or firms and each partner with an equity interest of twenty percent or greater.

f. Identify any persons known to the proposer who would be obligated to disqualify themselves from participation in any transaction arising from or in connection to the project pursuant to The Virginia State and Local Government Conflict of Interest Act, Chapter 31 (§ 2.2-3100 et seq.) of Title 2.2.

g. Identify proposed plan for obtaining sufficient numbers of qualified workers in all trades or crafts required for the project.

h. Provide information on any training programs, including but not limited to apprenticeship programs registered with the U.S. Department of Labor or a State Apprenticeship Council, in place for employees of the firm and employees of any member of a consortium of firms.

i. Provide information on the level of commitment by the firm or consortium of firms to use Department of Minority Business Enterprise firms in developing and implementing the project.

j. For each firm or major subcontractor that will perform construction and/or design activities, provide the following information:

(1) A sworn certification by an authorized representative of the firm attesting to the fact that the firm is not currently debarred or suspended by any federal, state or local government entity.

(2) A completed qualification statement that reviews all relevant information regarding technical qualifications and capabilities, firm resources and business integrity of the firm, including but not limited to, bonding capacities, insurance coverage and firm equipment. This statement shall also include a mandatory disclosure by the firm for the past three years any of the following conduct:

(A) bankruptcy filings
(B) liquidated damages
(C) fines, assessments or penalties
(D) judgments or awards in contract disputes
(E) contract defaults, contract terminations
(F) license revocations, suspensions, other disciplinary actions
(G) prior debarments or suspensions by a governmental entity
(H) denials of prequalification, findings of non-responsibility

(I) safety past performance data, including fatality incidents, "Experience Modification Rating," "Total Recordable Injury Rate" and "Total Lost Workday Incidence Rate"
(J) violations of any federal, state or local criminal or civil law
(K) criminal indictments or investigations
(L) legal claims filed by or against the firm

k. Worker Safety Programs: Describe worker safety training programs, job-site safety programs, accident prevention programs, written safety and health plans, including incident investigation and reporting procedures.

2. Project Characteristics

a. Provide a description of the project, including the conceptual design. Describe the proposed project in sufficient detail so that type and intent of the project, the location, and the communities that may be affected are clearly identified.

b. Identify and fully describe any work to be performed by the public entity.

c. Include a list of all federal, state and local permits and approvals required for the project and a schedule for obtaining such permits and approvals.

d. Identify any anticipated adverse social, economic and environmental impacts of the project. Specify the strategies or actions to mitigate known impacts of the project. Indicate if an environmental and archaeological assessment have been completed.

e. Identify the projected positive social, economic and environmental impacts of the project.

f. Identify the proposed schedule for the work on the project, including the estimated time for completion.

g. Identify contingency plans for addressing public needs in the event that all or some of the project is not completed according to projected schedule.

h. Propose allocation of risk and liability for work completed beyond the agreement's completion date, and assurances for timely completion of the project.

i. State assumptions related to ownership, legal liability, law enforcement and operation of the project and the existence of any restrictions on the County's use of the project.

j. Provide information relative to phased or partial openings of the proposed project prior to completion of the entire work.

3. Project Financing

a. Provide a preliminary estimate and estimating methodology of the cost of the work by phase, segment, or both.

b. Submit a plan for the development, financing and operation of the project showing the anticipated schedule on which funds will be required. Describe the anticipated costs of and proposed sources and uses for such funds. Include any supporting due diligence studies, analyses or reports.

c. Include a list and discussion of assumptions underlying all major elements of the plan.

d. Identify the proposed risk factors and methods for dealing with these factors.

e. Identify any local, state or federal resources that the proposer contemplates requesting for the project. Describe the total commitment, if any, expected from governmental sources and the timing of any anticipated commitment.

4. Project Benefit and Compatibility

a. Identify community benefits, including the economic impact the project will have on the County and local community in terms of amount of tax revenue to be generated for the Commonwealth and the County, the number jobs generated for Virginia residents and level of pay and fringe benefits of such jobs, the training opportunities for apprenticeships and other training programs generated by the project and the number and value of subcontracts generated for Virginia subcontractors.

b. Identify any anticipated public support or opposition, as well as any anticipated government support or opposition, for the project;

c. Explain the strategy and plan that will be carried out to involve and inform the general public, business community, local governments, and governmental agencies in areas affected by the project;

d. Describe the compatibility of the project with local, regional, and state economic development efforts.

e. Describe the compatibility with the County's comprehensive plan, zoning ordinances, local infrastructure development plans, capital improvements budget and annual budget.

B. Format for Submissions at Detailed Stage (Part 2)

If the County decides to proceed to the detailed phase of review with one or more proposals, the following information, where applicable, shall be provided by the private entity unless a waiver of the requirement or requirements is agreed to by the County:

1. A topographical map (1:2,000 or other appropriate scale) depicting the location of the proposed qualifying project;

2. Conceptual site plan indicating proposed location and configuration of the project on the proposed site;

3. Conceptual (single line) plans and elevations depicting the general scope, appearance and configuration of the proposed project;

4. Detailed description of the proposed participation, use and financial involvement of the County in the project;

5. A list of public utility facilities, if any, that will be crossed by the qualifying project and a statement of the plans of the proposer to accommodate such crossings;

6. A statement and strategy setting out the plans for securing all necessary property;

7. A detailed listing of all firms that will provide specific design, construction and completion guarantees and warranties, and a brief description of such guarantees and warranties;

8. A total life-cycle cost specifying methodology and assumptions of the project or projects and the proposed project start date. Include anticipated commitment of all parties; equity, debt, and other financing mechanisms; and a schedule of project revenues and project costs. The life-cycle cost analysis should include, but not be limited to, a detailed analysis of the projected return, rate of return, or both, expected useful life of facility and estimated annual operating expenses;

9. A detailed discussion of assumptions about user fees or rates, and usage of the projects;

10. Identification of any known government support or opposition, or general public support or opposition for the project. Government or public support should be demonstrated through resolution of official bodies, minutes of meetings, letters, or other official communications;

11. Demonstration of consistency with the County's comprehensive or infrastructure development plans or indication of the steps required for acceptance into such plans;

12. Explanation of how the proposed project would impact local development plans of each affected local jurisdiction;

13. Description of an ongoing performance evaluation system or database to track key performance criteria, including but not limited to, schedule, cash management, quality, worker safety, change orders, and legal compliance;

14. Identification of any known conflicts of interest or other disabilities that may impact the County's consideration of the proposal, including the identification of any persons known to the proposer who would be obligated to disqualify themselves from participation in any transaction arising from or in connection to the project pursuant to The Virginia State and Local Government Conflict of Interest Act, Chapter 31 (§ 2.2-3100 et seq.) of Title 2.2;

15. Detailed analysis of the financial feasibility of the proposed project, including its impact on similar facilities operated or planned by the County. Include a detailed description of any financing plan for the project, a comparison of that plan with financing alternatives available to the County, and all underlying data supporting any conclusions reached in the analysis of the selection by the private entity of the financing plan proposed for the project;

16. Additional material and information as the County may reasonably request.

VII. Proposal Evaluation and Selection Criteria

Some or all of the following items may be considered in the evaluation and selection of PPEA proposals. In selecting proposals, all relevant information from both the Conceptual Stage and the Detailed Stage should be considered. The County reserves the right at all times to reject any proposal at anytime for any reason.

A. Qualifications and Experience

Factors to be considered in either phase of an agency or institution's review to determine whether the proposer possesses the requisite qualifications and experience may include, but are not necessarily limited to:

1. Experience, training and preparation with similar projects;

2. Demonstration of ability to perform work;

3. Demonstrated record of successful past performance, including timeliness of project delivery, compliance with plans and specifications, quality of workmanship, cost-control, claims and litigation history, and project safety;

4. Demonstrated conformance with applicable laws, codes, standards, regulations, and agreements on past projects;

5. Leadership structure;

6. Project manager's experience;

7. Management approach;

8. Project staffing plans, the skill levels of the proposed workforce, apprenticeship and other training programs offered for the project, and the proposed safety plans for the project;

9. Financial condition; and

10. Project ownership.

B. Project Characteristics

Factors to be considered in determining the project characteristics may include, but are not limited to:

1. Project definition;

2. Proposed project schedule;

3. Operation of the project;

4. Technology, technical feasibility;

5. Conformity to laws, regulations, and standards;

6. Environmental impacts;

7. Condemnation impacts;

8. State and local permits; and

9. Maintenance of the project.

C. Project Financing

Factors to be considered in determining whether the proposed project financing allows adequate access to the necessary capital to finance the project may include, but are not limited to:

1. Cost and cost benefit to the County;

2. Financing and the impact on the debt or debt burden of the County;

3. Financial plan, including overall feasibility and reliability of plan; operator's past performance with similar plans and similar projects; degree to which operator has conducted due diligence investigation and analysis of proposed financial plan and results of any such inquiries or studies;

4. Estimated cost;

5. Life-cycle cost analysis;

6. Identity of any third party that will provide financing for the project and the nature and time of its commitment;

7. Such other items as the County deems appropriate.

D. Project Benefit and Compatibility

Factors to be considered in determining the proposed project's compatibility with the County's comprehensive or development plans and zoning ordinance include:

1. Community benefits, including the economic impact the project will have on the County and local community in terms of amount of tax revenue to be generated for the Commonwealth and the County, the number jobs generated for Virginia residents and level of pay and fringe benefits of such jobs, the training opportunities for apprenticeships and other training programs generated by the project and the number and value of subcontracts generated for Virginia subcontractors.

2. Community support or opposition, or both;

3. Public involvement strategy;

4. Compatibility with existing and planned facilities; and

5. Compatibility with local, regional, and state economic development efforts.

E. Other Factors

1. Proposed cost of the qualifying facility;

2. The general reputation, industry experience, and financial capacity of the private entity;

3. The proposed design of the qualifying project;

4. The eligibility of the facility for accelerated selection, review, and documentation;

5. Local citizen and government comments;

6. Benefits to the public;

7. The private entity's compliance with a minority business enterprise participation plan or good faith effort to comply with the goals of such plan;

8. The private entity's plans to employ local contractors and residents; and

9. Other criteria that the Board of Supervisors deems appropriate.

VIII. Interim and Comprehensive Agreements

Prior to developing or operating the qualifying project, the selected private entity shall enter into a comprehensive agreement with the County. Prior to entering into a comprehensive agreement, an interim agreement may be entered into that permits a private entity to perform compensable activities related to the project.

The Board of Supervisors shall approve any interim or comprehensive agreement entered into pursuant to the PPEA between the County and a private entity. The County shall accept no liability for developing or operating the qualifying project prior to entering into a properly executed agreement. Each agreement shall define the rights and obligations of the responsible public entity and the selected proposer with regard to the project. Once the negotiation of an agreement under these Guidelines is complete, but before an agreement is entered into, the County shall make available the proposed agreement for public inspection at least 7 days before any proposed action by the Board of Supervisors.

A. Interim Agreement Terms

The scope of an interim agreement may include but is not limited to:

1. Project planning and development;

2. Design and engineering;

3. Environmental analysis and mitigation;

4. Survey;

5. Ascertaining the availability of financing for the proposed facility through financial and revenue analysis;

6. Establishing a process and timing of the negotiation of the comprehensive agreement; and

7. Any other provision related to any aspect of the development or operation of a qualifying project that the parties may deem appropriate prior to the execution of a comprehensive agreement.

B. Comprehensive Agreement Terms

The scope of the comprehensive agreement shall include but not be limited to:

1. The delivery of maintenance, performance and payment bonds or letters of credit in connection with any acquisition, design, construction, improvement, renovation, expansion, equipping, maintenance, development or operation of the qualifying project, in the forms and amounts satisfactory to the County;

2. The review and approval of plans and specifications for the qualifying project by the County;

3. The rights of the County to inspect the qualifying project to ensure compliance with the comprehensive agreement;

4. The maintenance of a policy or policies of liability insurance or self-insurance, each in form and amount satisfactory to the County reasonably sufficient to insure coverage of the project and the tort liability to the public and employees and to enable the continued operation of the qualifying project;

5. The monitoring of the practices of the operator by the County to ensure proper maintenance;

6. The terms under which the private entity will reimburse the County for services provided;

7. The policy and procedures that will govern the rights and responsibilities of the County and the operator in the event that the comprehensive agreement is terminated or there is a material default by the private entity including the conditions governing assumption of the duties and responsibilities of the private entity by the County and the transfer or purchase of property or other interests of the private entity by the County;

8. The terms under which the private entity will file appropriate financial statements on a periodic basis;

9. The mechanism by which user fees, lease payments, or service payments, if any, may be established from time to time upon agreement of the parties. Any payments or fees shall be set at a level that is the same for persons using the facility under like conditions and that will not materially discourage use for the qualifying project;

    a. A copy of any service contract shall be filed with the County.

    b. A schedule of the current user fees or lease payments shall be made available by the private entity to any member of the public upon request.

    c. Classifications according to reasonable categories for assessment of user fees may be made.

10. The terms and conditions under which the County may contribute financial resources, if any, for the qualifying project;

11. A periodic reporting procedure that incorporates a description of the impact of the project on the Commonwealth and the County; and

12. Such other terms as the County may find necessary and convenient, that are agreed to by the private partner(s).

Any changes in the terms of the comprehensive agreement as may be agreed upon by the parties from time to time shall be added to the comprehensive agreement only by written amendment.

Parties submitting proposals understand that representations, information and data supplied in support of, or in connection with proposals plays a critical role in the competitive evaluation process and in the ultimate selection of a proposal by the Commonwealth. Accordingly, as part of the Comprehensive Agreement, the private entity and its team members shall certify that all material representations, information and data provided in support of, or in connection with, a proposal is true and correct.

Such certifications shall be made by authorized individuals who have knowledge of the information provided in the proposal. In the event that material changes occur with respect to any representations, information or data provided for a proposal, the prospective operator shall immediately notify the County of same. Any violation of this section of the Comprehensive Agreement shall give the County the right to terminate the Agreement, withhold payment or other consideration due, and seek any other remedy available under the law.

C. Public Hearing During Proposal Review Process; Notice and Posting Requirements.

1. At some point during the proposal review process, but at least 30 days prior to entering into an interim or comprehensive agreement, the County shall hold a public hearing on the proposals that have been received.

2. Once the negotiation phase for the development of an interim or a comprehensive agreement is complete and a decision to award has been made by the County, the County shall post the proposed agreement in the following manner:

    a. On the County's website or by publication, in a newspaper of general circulation in the area in which the contract work is to be performed, of a summary of the proposals and the location where copies of the proposals are available for public inspection.

    b. At least one copy of the proposals shall be made available for public inspection. Trade secrets, financial records, or other records of the private entity excluded from disclosure shall not be required to be posted, except as otherwise agreed to by the County and the private entity.

3. Once an interim or comprehensive agreement has been entered into, the County shall make procurement records available for public inspection, upon request.

    a. Such procurement records shall include documents protected from disclosure during the negotiation phase on the basis that the release of such documents would have adverse effect on the financial interest or bargaining position of the County or private entity.

    b. Such procurement records shall not include (i) trade secrets of the private entity as defined in the Uniform Trade Secrets Act (§ 59.1-336 et seq.) of (ii) financial records, including balance sheets or financial statements of the private entity that are not generally available to the public through regulatory disclosure or otherwise.

The County shall electronically file a copy of any interim and comprehensive agreement and any support documents with the Auditor of Public Accounts within 30 days of its execution.

TERMS AND DEFINITIONS

"Affected jurisdiction" means any county, city, or town in which all or a portion of a qualifying project is located.

"Appropriating body" means the body responsible for appropriating or authorizing funding to pay for a qualifying project.

"Comprehensive agreement" means the comprehensive agreement between the private entity and the responsible public entity that is required prior to the development or operation of a qualifying project.

"Conceptual stage" means the initial phase of project evaluation when the public entity makes a determination whether the proposed project serves a public purpose, meets the criteria for a qualifying project, assesses the qualifications and experience of a private entity proposer, reviews the project for financial feasibility, and warrants further pursuit.

"Cost-benefit analysis" means an analysis that weighs expected costs against expected benefits in order to choose the best option. For example, a city manager may compare the costs and benefits of constructing a new office building to those of renovating and maintaining an existing structure in order to select the most financially advantageous option.

"Detailed stage" means the second phase of project evaluation where the public entity has completed the conceptual stage and accepted the proposal and may request additional information regarding a proposed project prior to entering into competitive negotiations with one or more private entities to develop an interim or comprehensive agreement.

"Develop" or **"development"** means to plan, design, develop, finance, lease, acquire, install, construct, or expand.

"Interim agreement" means an agreement between a private entity and a responsible public entity that provides for phasing of the development or operation, or both, of a qualifying project. Such phases may include, but are not limited to, design, planning, engineering, environmental analysis and mitigation, financial and revenue analysis, or any other phase of the project that constitutes activity on any part of the qualifying project.

"Lease payment" means any form of payment, including a land lease, by a public entity to the private entity for the use of a qualifying project.

"Lifecycle cost analysis" means an analysis that calculates cost of an asset over its entire life span and includes the cost of planning, constructing, operating, maintaining, replacing, and when applicable, salvaging the asset. Although one proposal may have a lower initial construction cost, it may not have the lowest lifecycle cost once maintenance, replacement, and salvage value is considered.

"Material default" means any default by the private entity in the performance of its duties that jeopardizes adequate service to the public from a qualifying project.

"Operate" means to finance, maintain, improve, equip, modify, repair, or operate.

"Opportunity cost" means the cost of passing up another choice when making a decision or the increase in costs due to delays in making a decision.

"Private entity" means any natural person, corporation, general partnership, limited liability company, limited partnership, joint venture, business trust, public benefit corporation, nonprofit entity, or other business entity.

"Public entity" means the Commonwealth and any agency or authority thereof, any county, city or town and any other political subdivision of the Commonwealth, any public body politic and corporate, or any regional entity that serves a public purpose.

"Qualifying project" means (i) any education facility, including, but not limited to a school building, any functionally related and subordinate facility and land of a school building (including any stadium or other facility primarily used for school events), and any depreciable property provided for use in a school facility that is operated as part of the public school system or as an institution of higher education; (ii) any building or facility that meets a public purpose and is developed or operated by or for any public entity; (iii) any improvements, together with equipment, necessary to enhance public safety and security of buildings to be principally used by a public entity; (iv) utility and telecommunications and other communications infrastructure; (v) a recreational facility; (vi) technology infrastructure and services, including, but not limited to, telecommunications, automated data processing, word processing and management information systems, and related information, equipment, goods and services; (vii) any technology, equipment, or infrastructure designed to deploy wireless broadband services to schools, businesses, or residential areas; (viii) any services designed to increase the productivity or efficiency through the use of technology or other means; (ix) any improvements necessary or desirable to any unimproved locally- or state-owned real estate; or (x) any solid waste management facility that produces electric energy derived from solid waste.

"Responsible public entity" means a public entity that has the power to develop or operate the applicable qualifying project.

"Revenues" means all revenues, income, earnings, user fees, lease payments, or other service payments arising out of or in connection with supporting the development or

operation of a qualifying project, including without limitation, money received as grants or otherwise from the United States of America, from any public entity, or from any agency or instrumentality of the foregoing in aid of such facility.

"Service contract" means a contract entered into between a public entity and the private entity pursuant to § 56-575.5.

"Service payments" means payments to the private entity of a qualifying project pursuant to a service contract.

"State" means the Commonwealth of Virginia.

"User fees" mean the rates, fees, or other charges imposed by the private entity of a qualifying project for use of all or a portion of such qualifying project pursuant to the comprehensive agreement pursuant to § 56-575.9.

COUNTY OF ROANOKE, VIRGINIA
INTERIM/COMPREHENSIVE AGREEMENT BETWEEN OWNER AND PPEA CONTRACTOR

THIS INTERIM/COMPREHENSIVE AGREEMENT (the "Contract") is dated and effective as of this _____ day of _____, 2022 (the "Effective Date"), by and between County of Roanoke, Virginia, hereinafter referred to as the "County" or "Owner," and {legal name/address of Private Entity}, hereinafter referred to as the "Private Entity," Choose an item.

RECITALS

A. The legal address for the Owner and for the Contractor and the addresses for delivery of Notices and other project documents are as follows:

Owner: County of Roanoke, Virginia

Attn: Doug Blount, Assistant County Administrator

Address: 5204 Bernard Drive, Roanoke, VA 24018

Telephone: (540) 777-6321

Email: dblount@roanokecountyva.gov

PPEA Contractor (Contractor): _____

Attn: _____

Address: _____

Telephone: (___) ___-____

Email: _____

Contractor's Virginia License#: FEIN_____

B. The Project is identified as and is entitled: Bonsack Fire Station

General Project Description - Design and Construction of an approximately _____sf. fire station building located on property owned by the County of Roanoke containing 2.2459 acres located at 1465 Mexico Way, N.E., Roanoke City, Virginia (Tax Map No. 7110128).

C. The Virginia licensed Architect/Engineer who has been employed by PPEA Contractor to assist in the design of the Project is identified as:

Architect/Engineer: _____

Attn: _____

Architect's Address: _____

Telephone: (___) ___-____

Email: _____

D. The Project Title indicated above is required to be shown for identification purposes on all project-related material and documents including, but not limited to, Notices, Change Orders, Submittals, Requests for Information, Requests for Quotes, Field Orders, minutes of meetings, correspondence, Schedule of Values and Certificate for Payment, test reports, and related material.

E. After competitive negotiation pursuant to the Virginia Public Procurement Act, PPEA Contractor is awarded this Contract to perform the Work described by the Contract Documents for the above-described Project ("the Project").

F. Unless otherwise stated, initially capitalized terms in this Contract shall have the meaning given them in the General Conditions of the Bonsack Fire Station PPEA INTERIM/COMPREHENSIVE Agreement (the "General Conditions").

NOW, THEREFORE, for and in consideration of the premises and mutual covenants hereinafter contained, and subject to the conditions herein set forth, the parties hereby covenant, agree, and bind themselves as follows:

1. STATEMENT OF WORK: The PPEA Contractor shall furnish all labor, equipment, and materials and perform all Work as shown on the Plans and Specifications for the design and the construction of the Project in strict accordance with the Contract Documents. Such Services shall be governed exclusively by this the terms and conditions of this Contract

2. CONTRACT DOCUMENTS: This Contract shall consist of the following attached as Appendix A and are incorporated by reference:

Exhibit 1 RFP 2023-020 Conceptual Phase PPEA, dated August 1, 2022
Exhibit 2 Conceptual Phase Proposal, dated September 15, 2022
Exhibit 3 RFP 2023-020 Detailed Phase PPEA, dated October 12, 2022
Exhibit 4 Detailed Phase Proposal, dated November 28, 2022
Exhibit 5 General Conditions of Bonsack Fire Station PPEA INTERIM/COMPREHENSIVE Agreement
Exhibit 6 Project Plans and Specifications Summary prepared by _____, {Date}
Exhibit 7 GMP Detailed Pricing
Exhibit 8 Project Schedule
Exhibit 9 Roanoke County PPEA Guidelines
Exhibit 10 Project Contingency
Exhibit 11
Exhibit 12
Exhibit 13

THE GENERAL CONDITIONS OF THIS INTERIM/COMPREHENSIVE AGREEMENT SHALL, IN ALL CASES, PREVAIL OVER ANY AND ALL INCONSISTENT TERMS AND CONDITIONS OF VOLUMES 1 and 2 OF PPEA CONTRACTOR'S PROPOSAL DATED SEPTEMBER 15, 2022 AND AS MODIFIED ON NOVEMBER 28, 2022, NOTWITHSTANDING THEIR INCORPORATION BY REFERENCE HEREIN-ABOVE. ANY AMBIGUITIES BETWEEN SUCH INCORPORATED DOCUMENTS AND THIS INTERIM/COMPREHENSIVE AGREEMENT SHALL BE RESOLVED BY

REFERENCE TO AND IN ACCORDANCE WITH THIS INTERIM/COMPREHENSIVE AGREEMENT.

3. TIME FOR COMPLETION: Design work and preconstruction coordination and permitting will be completed in accordance with the Project schedule (Exhibit 8). The Work shall begin on the Date of Commencement and shall be Substantially Completed not later than _____ ( ) Calendar days from the Date of Commencement. The Work shall be finally completed within 30 days after the date of Substantial Completion of the Work, but in no case later than Sixty (60) days following the Date of Substantial Completions.

4. COMPENSATION TO BE PAID TO THE CONTRACTOR: Owner agrees to pay and PPEA Contractor agrees to accept as full just and adequate compensation for the performance of all Work in accordance with the Contract Documents the Guaranteed Maximum Contract Price (GMP) of _____ and 00/100 DOLLARS ($_____.00). Contract price is inclusive of an additional contingency, the Cost Escalation Contingency of _____ and 00/100 DOLLARS ($_____.00) more fully described below.

5. COST ESCALATION CONTINGENCY:

(a) Due to unexpected and unpredictable volatility in the cost of building materials in the months preceding the Proposal, and at the time of the Proposal was originally submitted, and in recognition that economic conditions may continue to drive increases in building materials and labor costs, the parties agree that an additional contingency is prudent to account for potential increases in the cost of materials during the course of the Project. Such contingency is shown in Exhibit 10 as Cost Escalation Contingency. Owner's expectation is that the Contractor shall perform the Work for the GMP, excluding the Owner's Cost Escalation Contingency, and the Contractor shall use its best efforts to avoid utilization of the contingency, including timely subcontracting, purchasing, fabrication, and delivery of materials. This contingency shall be used solely for the purpose of paying increases in the costs of building materials solely due to inflation over the course of the Project that could not have been reasonably projected at the time of the Proposal. This contingency shall not be used in place of the Contractor's Contingency shown in Exhibit 10 as "Design Contingency." Within ten calendar (10) days from contract execution, Contractor shall provide all documentation used to determine material costs to establish the GMP, excluding this contingency, including price estimates obtained on or around _____, 2023, (by way of example, such as subcontractors' estimates and/or bids, with material and labor costs shown separately, or other current material cost information used to determine GMP.) This documentation along with Exhibit 10 shall establish the baseline prices for the purpose of determining and whether an increase of the cost of materials has occurred due to inflation.

(b) Prior to any payments from the Owner's Cost Escalation Contingency, the Contractor shall notify the Owner that it is necessary to utilize the contingency, provide a detailed explanation, and provide documentation of such increased costs of materials on a change order form. The Owner shall have five (5) business days to examine the materials and approve/deny the change and use of the contingency. Once approved, payment of such increased costs from the Owner's Cost Escalation Contingency is hereby authorized. Disputes shall be resolved in accordance with Section 47 of the General Conditions. The Owner will retain unused portions of the Owner's Cost Escalation Contingency.

6. PAYMENTS: The procedures for requesting periodic progress payments for Work in place and for requesting payments for properly stored materials are stated in the General Conditions.

7. CONTRACTUAL CLAIMS: Any contractual claims shall be submitted in accordance with the contractual dispute procedures set forth in Section 47 of the General Conditions.

IN WITNESS WHEREOF, the parties hereto, on the day and year written below, have executed this agreement in three (3) counterparts, each of which shall, without proof or accountancy for the other counterparts, be deemed an original thereof.

PPEA CONTRACTOR:	**OWNER:** COUNTY OF ROANOKE, VIRGINIA
By:	By:
Date:	Date:
Name:	Name:
Title:	Title:
Signature:	Signature:
Phone:	Phone:
Email:	Email:

Approved as to execution:

County Attorney/Assistant County Attorney

COUNTY OF ROANOKE, VIRGINIA

GENERAL CONDITIONS OF THE PPEA CONTRACT

TABLE OF CONTENTS

Section	Title	Page
1.	DEFINITIONS	3
2.	CONTRACT DOCUMENTS	6
3.	LAWS AND REGULATIONS	6
4.	NONDISCRIMINATION	8
5.	PROHIBITION OF ALCOHOL AND OTHER DRUGS	8
6.	TIME FOR COMPLETION	9
7.	CONDITIONS AT SITE	10
8.	CONTRACT SECURITY	10
9.	SUBCONTRACTS	11
10.	SEPARATE CONTRACTS	11
11.	CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE	12
12.	“ALL RISK” BUILDER'S RISK INSURANCE	13
13.	TAXES, FEES AND ASSESSMENTS	13
14.	PATENTS	13
15.	ARCHITECT/ENGINEER'S STATUS	14
16.	INSPECTION	14
17.	SUPERINTENDENCE BY CONTRACTOR	16
18.	CONSTRUCTION SUPERVISION, METHODS AND PROCEDURES	17
19.	SCHEDULE OF THE WORK	17
20.	SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT	20
21.	ACCESS TO WORK	21
22.	SURVEYS AND LAYOUT	21
23.	PLANS AND SPECIFICATIONS	21
24.	SUBMITTALS	22
25.	FEES, SERVICES AND FACILITIES	23
26.	EQUALS	23
27.	AVAILABILITY OF MATERIALS	24
28.	CONTRACTOR'S TITLE TO MATERIALS	24
29.	STANDARDS FOR MATERIALS INSTALLATION & WORKMANSHIP	24
30.	WARRANTY OF MATERIALS AND WORKMANSHIP	25

31. USE OF SITE AND REMOVAL OF DEBRIS 25
32. TEMPORARY ROADS 26
33. SIGNS 26
34. PROTECTION OF PERSONS AND PROPERTY 26
35. CLIMATIC CONDITIONS 27
36. PAYMENTS TO CONTRACTOR 27
37. PAYMENTS BY CONTRACTOR (§2.2-4354, *Code of Virginia*) 30
38. CHANGES IN THE WORK 31
39. EXTRAS 36
40. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT 36
41. OWNER'S RIGHT TO TERMINATE THE CONTRACT FOR CAUSE 36
42. TERMINATION BY OWNER FOR CONVENIENCE 37
43. DAMAGES FOR DELAYS; EXTENSION OF TIME 38
44. INSPECTION FOR SUBSTANTIAL COMPLETION & FINAL COMPLETION 40
45. GUARANTEE OF WORK 41
46. ASSIGNMENTS 43
47. CONTRACTUAL DISPUTES 43
48. TRAINING, OPERATION AND MAINTENANCE OF EQUIPMENT 44
49. PROJECT MEETINGS 44
50. FORUM SELECTION AND CHOICE OF LAW 46

1. DEFINITIONS

Whenever used in these General Conditions of the PPEA Contract ("General Conditions") or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereof:

Architect, Engineer, Architect/Engineer, or A/E: The term used to designate the duly Virginia licensed persons or entities designated by the PPEA Contractor to perform and provide the Architectural and Engineering design and related services in connection with the Work.

Beneficial Occupancy: The condition after Substantial Completion but prior to Final Completion of the Project at which time the Project, or portion thereof, is sufficiently complete and systems operational such that the Owner could, after obtaining necessary approvals and certificates, occupy and utilize the space for its intended use. Guarantees and warranties applicable to that portion of the Work begin on the date the Owner accepts the Project, or a portion thereof, for such Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions or by separate agreement.

Change Order: A document issued on or after the effective date of the Contract Between Owner and PPEA Contractor which is agreed to by the PPEA Contractor and approved by the Owner, and which authorizes an addition, deletion or revision in the Work, including any adjustment in the Contract Price and/or the Contract Completion Date. The term Change Order shall also include written orders to proceed issued pursuant to Section 38 (a)(3). A Change Order, once signed by all parties, is incorporated into and becomes a part of the Contract.

Code of Virginia: 1950 Code *of Virginia* as amended. Sections of the Code referred to herein are noted by § xx-xx.

Construction: The term used to include new construction, reconstruction, renovation, restoration, major repair, demolition and all similar work upon buildings and ancillary facilities, including any draining, dredging, excavation, grading or similar work upon real property.

Contract: The Agreement Between Owner and PPEA Contractor hereinafter referred to as the Contract.

Contract Completion Date: The date by which the Work must be Substantially Complete. The Contract Completion Date is customarily established in the Notice to Proceed, based on the Time for Completion. In some instances, however, the Contract contains a mandatory Contract Completion Date, which shall be stated in the Request for Proposal.

Contract Documents: The Contract Between Owner and PPEA Contractor signed by the Owner and the PPEA Contractor and any documents expressly incorporated therein.

Contract Price: The total compensation payable to the PPEA Contractor for performing the Work, subject to modification by Change Order.

Contractor or PPEA Contractor: The person or entity with whom the Owner has entered into a contract to do the Work.

Date of Commencement: The date as indicated in the written Notice to Proceed, the receipt of the earliest Building Permit, or a date mutually agreed to between the Owner and Contractor in writing, whichever is the latest.

Day(s): Calendar day(s) unless otherwise noted.

Defective: An adjective which, when modifying the word Work, refers to Work that is unsatisfactory, faulty, deficient, does not conform to the Contract Documents **or** does not meet the requirements of inspections, standards, tests or approvals required by the Contract Documents, or Work that has been damaged prior to the final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial

Completion or Beneficial Occupancy).

Drawing: A page or sheet of the Plans which presents a graphic representation, usually drawn to scale, showing the technical information, design, location, and dimensions of various elements of the Work. The graphic representations include, but are not limited to, plan views, elevations, transverse and longitudinal sections, large and small scale sections and details, isometrics, diagrams, schedules, tables and/or pictures.

Emergency: Any unforeseen situation, combination of circumstances, or a resulting state that poses imminent danger to health, life or property.

Field Order: A written order issued by the A/E which clarifies or explains the plans or specifications, or any portion or detail thereof, without changing the design, the Contract Price, the Time for Completion or the Contract Completion Date.

Final Completion Date: The date of the Owner's acceptance of the Work from the Contractor upon confirmation from the Contractor that the Work is totally complete in accordance with Section 44(b).

Final Payment: The final payment that the Contractor receives pursuant to the applicable provisions of Section 36, except in the event no final payment is made due to termination of the Contract under either Sections 41 or 42. In the event of a termination for cause under Section 41, the Final Payment shall be when the termination became effective. In the event of a termination for convenience under Section 42, the Final Payment shall be either the payment of compensation for termination that the Contractor receives according to the provisions of Subsection 42, or the Owner's determination that no compensation for termination is due the Contractor under Subsection 42, as the case may be.

Float: The excess time included in a construction schedule to accommodate such items as inclement weather and associated delays, equipment failures, and other such unscheduled events. It is the contingency time associated with a path or chain of activities and represents the amount of time by which the early finish date of an activity may be delayed without impacting the critical path and delaying the overall completion of the Project. Any difference in time between the Contractor's approved early completion date and the Contract Completion Date shall be considered a part of the Project Float.

Float, Free: The time (in days) by which an activity may be delayed or lengthened without impacting upon the start day of any activity following in the chain.

Float, Total: The difference (in days) between the maximum time available within which to perform an activity and the duration of an activity. It represents the time by which an activity may be delayed or lengthened without impacting the Time for Completion or the Contract Completion Date.

Notice: All written notices, including demands, instructions, claims, approvals and disapprovals, required or authorized under the Contract Documents. Any written notice by either party to the Contract shall be sufficiently given by any one or combination of the following, whichever shall first occur: (1) delivered by hand to the last known business address of the person to whom the notice is due; (2) delivered by hand to the person's authorized agent, representative or officer wherever they may be found; or (3) enclosed in a postage prepaid envelope addressed to such last known business address and delivered to a United States Postal Service official or mailbox. Notice is effective upon such delivery. All notices to the Owner should be directed to the Project Manager.

If the Owner and the Contractor agree in writing that Notices transmitted by Facsimile (Fax) or e-mail are acceptable for the Project, such Notice shall be transmitted to the Fax number or e-mail address listed in the agreement and shall have a designated space for the Fax or e-mail Notice recipient to acknowledge its receipt by authorized signature and date. The Fax or e-mail Notice with authorized signature acknowledging receipt shall be Faxed or e-mailed back to the sender. The Faxed or e-mailed Notice shall be effective on the date it is acknowledged by authorized signature. All Faxed or e-mailed Notices shall also be sent by hard copy, which shall be effective upon delivery, as provided herein. Notice shall be effective upon the date of acknowledgment of the Faxed or e-mailed Notice or the date of delivery, whichever occurs first.

Notice to Proceed: A written notice given by the Owner to the Contractor (with a copy to A/E) directing the PPEA Contractor to commence Work on the Date of the Commencement and specifying the time periods within which the PPEA Contractor is to achieve Substantial and Final Completion.

Owner: The Board of Supervisors of County of Roanoke, Virginia.

Person: This term includes any individual, corporation, partnership, association, company, business, trust, joint venture, or other legal entity.

Plans: The term used to describe the group or set of project-specific drawings prepared by the PPEA Contractor's Architecture/Engineer and acceptable to the Owner which describe the proposed Work in sufficient detail and provide sufficient information for the Building Official to determine code compliance and for the Contractor to perform the Work and which are included in the Contract Documents.

PPEA Proposal: The PPEA Proposal, dated _____, 2022 and revised _____, 2022, submitted by Contractor to Owner, including the Detailed Stage Proposal and the Cost Proposal as well as any modifications submitted by the PPEA Contractor in response to the Owner's RFP setting forth the design concepts, design criteria, pricing requirements, and other conditions of the Work to be performed.

Project: The term used instead of the specific or proper assigned title of the entire undertaking which includes, but is not limited to, the "Work" described by the Contract Documents, including any specific Phases or Subphases of such Work.

Project Inspector: One or more persons employed by the Owner to inspect the Work for the Owner and/or to document and maintain records of activities at the Site to the extent required by the Owner. The Owner shall notify the Contractor in writing of the appointment of such Project Inspector(s).

Project Manager: The Project Manager as used herein shall be the Owner's designated representative onthe Project. The Project Manager shall be the person through whom the Owner generally conveys written decisions and notices. All notices due the Owner and all information required to be conveyed to the Owner shall be conveyed to the Project Manager. The scope of the Project Manager's authority is limited to that authorized by the Owner, who shall provide written information to the Contractor at the Preconstruction meeting defining those limits. Upon receipt of such information, the Contractor shall be on notice that it cannot rely on any decisions of the Project Manager outside the scope of its authority. Nothing herein shall be construed to prevent the Owner from issuing any notice directly to the Contractor. The Owner may change the Project Manager from time to time and may, in the event that the Project Manager is absent, disabled or otherwise temporarily unable to fulfill his duties, appoint an interim Project Manager.

Provide: Shall mean furnish and install ready for its intended use.

Schedule of Values: The schedule prepared by the Contractor and acceptable to the Owner which indicates the value of that portion of the Contract Price to be paid for each trade or major component of the Work.

Site: Shall mean the location at which the Work is performed or is to be performed.

Specifications: That part of the Contract Documents prepared by the Contractor's Architecture/ Engineer and acceptable to the Owner which contain the written design parameters and the technical descriptions of materials, equipment, construction systems, standards, and workmanship which describe the proposed Work in sufficient detail and provide sufficient information for the Building Official to determine code compliance and for the Contractor to perform the Work.

Subcontractor: A person having a direct contract with Contractor or with any other Subcontractor for the performance of the Work. Subcontractor includes any person who provides on-site labor but does not include any person who only furnishes or supplies materials for the Project.

Submittals: All shop, fabrication, setting and installation drawings, diagrams, illustrations, schedules, samples, and other data required by the Contract Documents which are specifically prepared by or for the

Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by the Contractor to illustrate material or equipment conformance of some portion of the Work with the requirements of the Contract Documents.

Substantial Completion or **Substantially Complete**: The condition when the Owner agrees that the Work, or a specific portion thereof, is sufficiently complete, in accordance with the Contract Documents, so that it can be utilized by the Owner for the purposes for which it was intended. The Owner at its sole discretion may, after obtaining the necessary approvals and certificates, take Beneficial Occupancy at this time or choose to wait to occupy until after Final Completion is achieved.

Supplemental General Conditions: That part of the Contract Documents which amends or supplements the General Conditions.

Supplier: A manufacturer, fabricator, distributor, materialman or vendor who provides material for the Project but does not provide on-site labor.

Time for Completion: The number of consecutive calendar days following the Date of Commencement which the Contractor has to substantially complete all Work required by the Contract.

Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which are or have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Work: The services performed under this Contract including, but not limited to, furnishing labor, and furnishing and incorporating materials and equipment into the construction. The Work also includes the entire completed construction, or the various separately identifiable parts thereof, required to be provided under the Contract Documents or which may reasonably be expected to be provided as part of a complete, code compliant, and functioning system for those systems depicted in the plans and specifications.

2. CONTRACT DOCUMENTS

(a) The Contract Between Owner and Contractor, the General Conditions, and all Exhibits referenced in Section 2 of the Agreement.

(b) All time limits stated in the Contract Documents, including but not limited to the Time for Completion of the Work, are of the essence of the Contract.

(c) The Contract Between Owner and Contractor shall be signed by the Owner and the Contractor in as many original counterparts as may be mutually agreed upon, each of which shall be considered an original.

(d) Anything called for by one of the Contract Documents and not called for by the others shall be of like effect as if required or called for by all, except that a provision clearly designed to negate or alter a provision contained in one or more of the other Contract Documents shall have the intended effect. In the event of conflicts among the Contract Documents, the Contract Documents shall take precedence in the following order: the Contract Between Owner and Contractor; the Supplemental General Conditions; the General Conditions; the Special Conditions; the approved specifications with attachments; and the approved plans.

(e) If any provision of the Contract Documents shall be held invalid by any court of competent jurisdiction, such holding shall not invalidate any other provision.

3. LAWS AND REGULATIONS

(a) The Contractor shall comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work and shall give all notices required thereby. The Contractor shall assure that all Subcontractors and tradesmen who perform Work on the Project are properly licensed by the Department of Professional and Occupational Regulation as required by Title 54.1, Chapter 11, Articles 1 and 3 and by applicable regulations.

(b) This Contract and all other contracts and subcontracts are subject to the provisions of Articles 3 and 5, Chapter 4, Title 40.1, *Code of Virginia*, relating to labor unions and the "right to work." The Contractor and its Subcontractors, whether residents or nonresidents of the Commonwealth, who perform any Work related to the Project shall comply with all of the said provisions.

(c) IMMIGRATION REFORM AND CONTROL ACT OF 1986: By signing this Contract, the Contractor certifies that it does not and will not during the performance of this Contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

(d) The provisions of all rules and regulations governing safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia and as issued by the Department of Labor and Industry under Title 40.1 of the *Code of Virginia* shall apply to all Work under this Contract. Inspectors from the Department of Labor and Industry shall be granted access to the Work for inspection without first obtaining a search or administrative warrant.

(e) Building Permit: The Virginia Uniform Statewide Building Code applies to the Work and is administered by the Building Official. The Contractor shall provide to the Building Official the necessary copies of plans, specifications, and other documents required by the Building Official. The Building Permit(s) will be obtained and paid for by the Contractor. All other permits, local license fees, business fees, taxes, or similar assessments imposed by the appropriate political subdivision Quality shall be obtained and paid for by the Contractor. See Section 23(e) for requirements for plans and specification for Building Permits. See Section 25 for utility connection fees and services.

(f) Information or services required of the Owner by the Contract Documents shall be furnished by the Owner with reasonable promptness. Any other information or services relevant to the Contractor's performance of the Work under the Owner's control shall be furnished by the Owner after receipt from the Contractor of a written request for such information of services.

(g) The Contractor shall include in each of its subcontracts a provision requiring each Subcontractor to include or otherwise be subject to the same payment and interest requirements in Subsections (a), (b), and (c) of Section 37 of these General Conditions with respect to each lower-tier Subcontractor and Supplier.

(h) The Contractor, if not licensed as an asbestos abatement contractor, shall have all asbestos-related Work performed by subcontractors who are duly licensed as asbestos contractors appropriate for the Work required.

(i) Lead Based Paint Activities: If the Contract Documents indicate that lead based paint is present on existing materials, components, or surfaces, the Contractor shall conform to the following:

(1) The requirements set forth in 40 CFR 745 in selecting and performing the means, methods and procedures for performing the Work. This includes, but is not limited to, training of personnel, lead abatement, encapsulation of lead containing materials, removal and handling of lead containing materials, and methods of disposal.

(2) The **r**equirements for employee protection contained in 29 CFR Part 1926, Subpart D, and the requirements for record-keeping contained 29 CFR Part 1910.

(3) The Virginia Department of Labor and Industry's (DOLI) Emergency Regulation published in the May 27, 1996 Virginia Register, requiring, among other things, that a permit be issued

to the lead abatement contractor, or any subsequent regulation issued by DOLI.

(j) If the Contractor violates laws or regulations that govern the Project, the Contractor shall indemnify and hold the Owner harmless against any fines and/or penalties that result from such violation. To the extent that such violation is the result of negligence or other actionable conduct of the Contractor, the Contractor shall indemnify and hold the Owner harmless against any third-party claims, suits, awards, actions, causes of action or judgments, including but not limited to attorney's fees and costs incurred thereunder, that arise or result from such violation.

(k) If the Work includes any land disturbing activities, the Contractor shall have on-site an individual certified by the Department of Environmental Quality as a Responsible Land Disturber in accordance with §10.1-563, *Code of Virginia.*

4. NONDISCRIMINATION

(a) All applicable non-discrimination provisions of the *Code of Virginia* and Federal law shall be applicable.

1. During the performance of this Contract, the Contractor agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

(b) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such Contractor is an equal opportunity employer.

(c) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this Section.

2. The Contractor will include the provisions of the foregoing paragraphs (a), (b) and (c) in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

(b) Where applicable, the Virginians with Disabilities Act and the Federal Americans with Disabilities Act shall apply to the Contractor and all Subcontractors.

5. PROHIBITION OF ALCOHOL AND OTHER DRUGS

(a) All applicable state and Federal laws prohibiting use of alcohol and drugs in the workplace shall apply.

"During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over $10,000, so that the

provisions will be binding upon each subcontractor or vendor. For the purposes of this Section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract."

(b) The Contractor shall also establish, maintain and enforce policies which prohibit the following acts by all Contractor, Subcontractor and Supplier personnel at the Site:

(1) the manufacture, distribution, dispensation, possession, or use of alcohol, marijuana or other drugs, except possession and medically prescribed use of prescription drugs; and

(2) the impairment of judgment or physical abilities due to the use of alcohol, marijuana or other drugs, including impairment from prescription drugs.

6. TIME FOR COMPLETION

(a) The Time for Completion for the Project including any dates for completion of any designated Phase or Sub-phase shall be as stated in the Contract as **agreed upon by the Owner and Contractor, subject to Change Orders or written mutual agreement of Owner and Contractor**. The Work must be substantially completed by the Time for Completion or the Contract Completion Date. Unless otherwise specified, the Contractor shall achieve Final Completion within thirty (30) days after the date of Substantial Completion.

(b) The Time for Completion shall be stated in the Contract between Owner and Contractor and shall become a binding part of the Contract upon which the Owner may rely in planning the use of the facilities to be constructed and for all other purposes. If the Contractor fails to substantially complete the Work within the Time for Completion or Contract Completion Date, as set forth in the Contract, it shall be subject to payment of actual damages incurred by the Owner or liquidated damages, if provided for in the Contract.

(c) The Contractor, in submitting its proposal, acknowledges that it has taken into consideration normal weather conditions. Normal weather does not mean statistically average weather but rather means a range of weather patterns which might be anticipated based on weather data for the past ten (10) years, (i.e., conditions which are not extremely unusual). Normal weather conditions shall be determined from the public historical records available, including the U.S. Department of Commerce, Local Climatological Data Sheets, National Oceanic and Atmospheric Administration/ Environmental Data and Information Service, National Climatic Center and National Weather Service. The data sheets to be used shall be those for the locality or localities closest to the site of the work. No additional compensation will be paid to the Contractor because of adverse weather conditions; however, an extension of time for abnormal weather will be considered by the Owner under the following conditions, all of which must be strictly complied with by the Contractor:

(1) The request for additional time shall be further substantiated by weather data collected during the period of delay at the Site. Said data must demonstrate that an actual departure from normal weather occurred at the Site during the dates in question.

(2) The extension requested must be supported by a delay in completion of the entire Project shown on the critical path of the accepted CPM Schedule or the approved bar graph schedule required for the Project. Extensions will be granted only for delays in completion of the Project, not for that portion of any delay which consumes only "float" time.

(3) A request for extension of time based on abnormal weather must be made in writing within fourteen (14) calendar days of the completion of the calendar month during which abnormal weather is claimed at the Site.

(4) All of the evidence and data supporting the request (including both historical data and the

recordings at the Site during the time of delay) must be furnished to the Owner before any consideration will be given to the request. That supporting data shall be submitted by the end of the calendar month following the month for which the request is made.

(d) The failure by the Contractor to comply with any and all of the conditions in (c) above shall constitute a waiver of claims for the extension of time for abnormal weather.

(e) The Contractor represents and agrees that it has taken into account in its bid the requirements of the bid documents, the Contract Documents, local conditions, availability of materials, equipment, and labor, and any other factors which may affect the performance of the Work. The Contractor agrees and warrants that it will achieve Substantial Completion of the Work to allow the Owner to have Beneficial Occupancy not later than the Time for Completion or Contract Completion Date. The Contractor agrees and warrants that it will achieve Final Completion of the Work (the entire completion of all Work, including "punch list" items), not later than thirty (30) days after achieving Substantial Completion.

7. CONDITIONS AT SITE

(a) The Contractor shall have visited the Site prior to submitting its proposal and is totally responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the Site, and the character and extent of existing conditions, improvements, and work within or adjacent to the Site. Claims which result from the Contractor's failure to do so will be deemed waived.

(b) If, in the performance of the Contract, hidden physical conditions of a building being modified are exposed revealing unusual or materially different conditions from those ordinarily encountered or inherent in work of this nature, or if subsurface or latent conditions at the Site are found which are materially different from those frequently present in the locality or from those indicated in the Contract Documents, the Contractor must report such conditions to the Owner and to the Architect/Engineer before the conditions are disturbed. Upon such notice, or upon his own observation of such conditions, the Architect/Engineer shall promptly propose such changes in the Contract Documents as he finds necessary to conform to the different conditions. Any change in the cost of the Work or additional time needed for completion must be requested pursuant to Sections 38, 39 and/or 43 of these General Conditions.

(c) If the Contractor, during the course of the Work, observes the existence of any material which it knows, should know, or has reason to believe is hazardous to human health, the Contractor shall promptly notify the Owner. The Owner will provide the Contractor with instructions regarding the disposition of the material. The Contractor shall not perform any Work involving the material or any Work causing the material to be less accessible prior to receipt of special instructions from the Owner.

8. CONTRACT SECURITY

(a) The Contractor shall deliver to the Owner or its designated representative, Standard Performance Bond, and a Standard Labor and Material Payment Bond, each fully executed by the Contractor one or more surety companies legally licensed to do business in Virginia and each in an amount equal to one hundred percent (100%) of the accepted bid. If more than one Surety executes a bond, each shall be jointly and severally liable to the Owner for the entire amount of the bond. Sureties shall be selected by the Contractor, subject to the Owner's approval. No payment on the Contract shall be due and payable to the Contractor until the bonds have been approved by the Owner and the Roanoke County Attorney. In order to facilitate review of the bonds by the Roanoke County Attorney, the power of attorney from the surety company to its agent who executes the bond shall be attached to the bond or, if not so attached, prior to the execution of the bonds by the surety, recorded in the Office of the Clerk for the County of Roanoke. Upon receipt of such Forms, which cover both this Agreement and any prior Interim Agreement to the extent the Interim Agreement remains in force, the Owner will promptly return to Contractor the Performance Bond and Standard Labor and Material Payment Bond delivered to the Owner pursuant to the Interim Agreement.

(b) For the purposes of all Standard Labor and Material Payment Bonds entered into, the term "subcontractors" means any contractors who participated in the prosecution of the Work undertaken by the Contractor whether such Subcontractor had a direct contract with the Contractor or whether there were one or more other intervening Subcontractors contractually positioned between it and the Contractor. The payment bond shall be for the protection of claimants who have and fulfill contracts to supply labor or materials to the Contractor or to any Subcontractors in furtherance of the Work provided for in this Contract, and shall be conditioned upon the prompt payment for all materials furnished or labor supplied or performed in the furtherance of the Work. "Labor and Materials" includes public utility services and reasonable rentals of equipment, but only for periods when the equipment rented is actually used at the Site.

(c) See §2.2-4338 of the *Code of Virginia* for alternative forms of security for payment and/or performance bonds.

9. SUBCONTRACTS

(a) The Contractor shall, as soon as practicable after the signing of the Contract, notify the Owner in writing of the names of all Subcontractors proposed for the principal parts of the Work and of such others as the Owner may direct. Where the specifications establish qualifications or criteria for Subcontractors, manufacturers, or individuals performing Work on the Project, the Contractor shall be responsible for ascertaining that those proposed meet the criteria or qualifications. The Contractor shall not employ any Subcontractor that the Owner may, within a reasonable time, object by written notice to Contractor to as unsuitable. The Owner shall not direct the Contractor to contract with any particular Subcontractor unless provided in the specifications or Request for Proposals.

(b) The Owner shall, on request, furnish to any Subcontractor the amounts of payments made to the Contractor, the Schedule of Values and Requests for Payment submitted by the Contractor and any other documentation submitted by the Contractor which would tend to show what amounts are due and payable by the Contractor to the Subcontractor.

(c) The Contractor shall be fully responsible to the Owner for all acts and omissions of its agents and employees and all succeeding tiers of Subcontractors and Suppliers performing or furnishing any of the Work. Nothing in the Contract Documents shall create any contractual relationship between Owner and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner to pay for or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization, except as may otherwise be required by law.

(d) The Contractor shall be fully responsible for its invitees at the Site and for those of its Subcontractors, Suppliers, and their employees, including any acts or omissions of such invitees.

(e) The Contractor agrees that it alone is responsible for all dealings with its Subcontractors and Suppliers, and their subcontractors, employees and invitees, including, but not limited to, the Subcontractors' or Suppliers' claims, demands, actions, disputes and similar matters unless specifically provided otherwise by the Contract or by statute.

10. SEPARATE CONTRACTS

(a) The Owner reserves the right to let other contracts in connection with the Project, the Work under which may proceed simultaneously with the execution of this Contract. The Contractor shall afford other separate contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work. The Contractor shall cooperate with them and shall take all reasonable action to coordinate its Work with theirs. If the Owner has listed other separate contracts in the Requests for Proposals or Invitation for Bids which it expects to proceed simultaneously with the Work of the Contractor, and has included the estimated timing of such other Contracts in the Requests for Proposals or Invitation for Bids, the Contractor shall integrate the schedule of those separate contracts into its scheduling. The Contractor shall make every reasonable effort to assist the Owner in maintaining the schedule for all separate contracts. If the work performed by the separate

contractor is defective or performed so as to prevent or threaten to prevent the Contractor from carrying out its Work according to the Contract, the Contractor shall immediately notify the Owner upon discovering such conditions.

(b) If a dispute arises between the Contractor and any separate contractor(s) as to their responsibility for cleaning up as required by Sections 31(c) and 31(d) of these General Conditions, the Owner may clean up and charge the cost thereof to the respective contractors in proportion to their responsibility. If a Contractor disputes the Owner's apportionment of clean-up costs, it shall be that contractor's burden to demonstrate and prove the correct apportionment.

11. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE

(a) The Contractor shall not commence Work under this Contract until it has obtained all the insurance required hereunder from an insurer authorized to do business in Virginia and such insurance has been approved by the Owner; nor shall the Contractor allow any Subcontractor to commence Work on its subcontract until the same types of insurance in an appropriate amount have been obtained by the Subcontractor and approved by the Contractor. Approval of insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder.

(b) The Contractor shall take out and shall maintain in force, at all times during the performance of the Work, Workers' Compensation and Employers' Liability Insurance for all of its employees engaged in the Work in an amount not less than the minimum required by § 2.2-4332 and § 65.2-100 et seq. of the *Code of Virginia*, and, in case any of the Work is sublet, the Contractor shall require each Subcontractor similarly to provide Workers' Compensation and Employers' Liability Insurance for all of the latter's employees to be engaged in the Work. Prior to award of the Contract, the Contractor shall submit, on the form provided by the Owner, a Certificate of Coverage verifying Workers' Compensation coverage. The Contractor shall likewise obtain a Certificate of Coverage for Workers' Compensation coverage from each subcontractor prior to awarding the subcontract and shall provide a copy to the Owner.

(c) During the performance of the Work under this Contract, the Contractor shall maintain commercial general liability insurance to include Premises/Operations Liability, Products and Completed Operations Coverage, Independent Contractor's Liability, Owner's and Contractor's Protective Liability, and Personal Injury Liability, which shall insure him against claims of personal injury, including death, as well as against claims for property damage, which may arise from operations under this Contract, whether such operations be by himself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amounts of general liability insurance shall be not less than **$2,000,000** per occurrence and **$5,000,000** aggregate combined limit. The County of Roanoke, its officers, employees and agents, shall be named as an additional insured with respect to the Work being procured. The Supplemental General Conditions may require the Contractor to provide an Umbrella insurance policy in a specified amount for the Project.

(d) During the performance of the Work under this Contract, the Contractor shall maintain automobile liability insurance which shall insure it against claims of personal injury, including death, as well as against claims for property damage, which may arise from operations under this Contract, whether such operations be by itself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amounts of automobile insurance shall be not less than **$2,000,000** combined limit for bodily injury and property damage per occurrence.

(e) The Contractor's Architect/Engineer responsible for the design portion of the Work shall obtain and maintain in force during the contract period and for a period of five (5) years after the final completion of the Work professional liability and errors and omission insurance in the amount of **$2,000,000** per claim occurrence and **$2,000,000** aggregate combined claims limit.

(f) Except for the insurance provided in Section (e) above, the Owner, its officers, employees and its agents, shall be named as an additional insured in any policy of insurance issued by endorsement. Written evidence of the insurance shall be filed with the Owner no later than thirty (30) days

following the award of the Contract. All insurance policies providing the coverages required under paragraphs 11 b, c, d, and e, and Paragraph 12, shall require thirty (30) days' advance written notice of cancellation [ten (10) days in case of failure to pay premiums] to the Owner. Notice of pending insurance cancellation may cause Owner to issue a "Stop Work" order, the financial penalty of which shall be borne solely by Contractor. The following properly completed endorsements will be acceptable:

Workers' Compensation:

1. Certificate of Coverage
2. Alternate Employer Form WC 00 03 01 A
3. Material Coverage Change or Cancellation Form WC 99 00 10 01 l0 A
   Additional Insured: Form No. CG 20 10 11 85
   Completed Operations: Form No. CG 20 37 07 04
   Material Change or Policy Cancellation Notice: IL 60 05 VA 01 10 and Form No. CA 02 03 12 05

12. "ALL RISK" BUILDER'S RISK INSURANCE

(a) The Contractor, at its cost, shall obtain and maintain in the names of the Owner and the Contractor "all-risk" builder's risk insurance (or fire, extended coverage, vandalism and malicious mischief insurance), if approved by the Owner upon the entire structure or structures on which the Work of this Contract is to be done and upon all material in or adjacent thereto which is intended for use thereon, to one hundred percent (100%) of the insurable value thereof. Such insurance may include a deductible provision if the Owner so provides in the Supplemental General Conditions, in which case the Contractor will be liable for such deductions, whenever a claim arises. The loss, if any, is to be made adjustable with and payable to the Owner, in accordance with its interests, as they may appear. The Owner, its officers, employees and its agents, shall be named as an additional insured in any policy of insurance issued. Written evidence of the insurance shall be filed with the Owner no later than thirty (30) days following the award of the Contract. In the event of cancellation of this insurance, not less than thirty (30) days prior written notice must be sent to the Owner. A copy of the policy of insurance shall be given to the Owner upon demand.

(b) The value of the builder's risk insurance shall exclude the costs of demolitions, excavations, backfills, foundations, underground utilities and Sitework.

(c) Any insurance provided through the Department of Treasury, Division of Risk Management, on buildings, construction, additions or renovations will not extend to Contractor's nor Subcontractors' buildings, equipment, materials, tools or supplies unless these items are to become property of the Owner upon completion of the Project and the Owner has assumed responsibility for such items at the time of the loss.

13. TAXES, FEES AND ASSESSMENTS

Except as provided in Paragraph 3(e), the Contractor shall, without additional expense to the Owner, pay all applicable federal, state, and local taxes, fees, and assessments except the taxes, fees and assessments on the real property comprising the Site of the Project. Owner's tax exempt status shall not inure to the benefit of Contractor.

14. PATENTS

The Contractor shall be responsible to the Owner for obtaining, or assuring its Subcontractors have obtained, all licenses necessary to use any invention, article, appliance, process, or technique of whatever kind and shall pay all royalties and license fees for such invention, article, appliance, process, or technique that is utilized for the Work. The Contractor shall hold the Owner, its officers, agents and employees, harmless against any loss or liability for or on account of the infringement of any patent rights in connection with any invention, process, technique, article or appliance manufactured or used by or on behalf of the Contractor or its subcontractors in

the performance of the Contract, including its use by the Owner, unless such invention, process, technique, article or appliance is specifically named in the specifications or plans as acceptable for use in carrying out the Work. If, before using any invention, process, technique, article or appliance specifically named in the specifications or plans as acceptable for use in carrying out the Work, the Contractor has or acquires information that the same is covered by letters of patent making it necessary to secure the permission of the patentee, or other, for the use of the same, it shall promptly advise the Owner. The Owner may direct that some other invention, process, technique, article, or appliance be used. Should the Contractor have reason to believe that the invention, process, technique, article, or appliance so specified is an infringement of a patent, and fail to inform the Owner, it shall be responsible for any loss or liability due to the infringement.

15. ARCHITECT/ENGINEER'S STATUS

(a) The Contractor's Architect/Engineer shall be duly and properly licensed by the Virginia Department of Professional and Occupational Regulation to provide these services in Virginia. The Architect/Engineer shall provide the professional services to design the Work in conformance with the applicable standards indicated below.

(b) The Architect/Engineer shall have authority to endeavor to secure the faithful performance by Owner and Contractor of the Work under the Contract. He shall review the Contractor's Submittals for conformance to the requirements of the Contract Documents and return copies to the Contractor with appropriate notations. He shall interpret the requirements of the plans and specifications and issue clarifications to the Contractor as may be required. He shall recommend to the Owner suspension of the Work (in whole or in part) whenever such suspension may be necessary to ensure the proper execution of the Contract. He shall have authority to reject, in writing, Work, including material, installation or workmanship, which does not conform to the requirements of the plans and specifications. He shall determine the progress and quality of the Work subject to the Owner's right to make an overriding decision to the contrary. Upon request by the Contractor, the Architect/Engineer shall confirm in writing within fourteen (14) days, any oral order or determination made by him.

(c) The Virginia Department of Transportation "Road & Bridge Specifications," 2002 edition or later, and Virginia Department of Transportation "Road Design Standards," 2001 edition or later, are included by reference and shall be used by the Contractor's Architect/Engineer as the referenced standards for design of the roads, parking areas, sidewalks, curbs, and other sitework.

(d) The building design shall conform to the requirements of the Virginia Uniform Statewide Building Code. The current edition of the Virginia Uniform Statewide Building Code which is in effect at the time the construction documents are submitted to the Building Official for Building Permit shall be the applicable Building Code for that phase of the Project.

(e) The Architect/Engineer shall have no authority to approve or order changes in the Work which alter the approved plans and specifications which were the basis of the Building Permit without obtaining approval of the Building Official.

(f) The provisions of this Section are included as information only to describe the relationship between the Owner, Architect/Engineer, and Contractor. No failure of the Architect/Engineer to act in accordance with this Section shall relieve the Contractor from its obligations under the Contract or create any rights in favor of the Contractor.

16. INSPECTION

(a) All material and workmanship shall be subject to inspection, examination and testing by the Owner, its Project Inspector, authorized inspectors and authorized independent testing entities at any and all times during manufacture and/or construction. The Owner shall have authority to reject defective material and workmanship and require its correction. Rejected workmanship shall be satisfactorily corrected and rejected material shall be satisfactorily replaced with proper material without charge therefore, and the Contractor shall promptly segregate and remove the rejected material from the Site.

If the Contractor fails to proceed at once with replacement of rejected material and/or the correction of defective workmanship, the Owner may, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to the Contractor, or may terminate the right of the Contractor to proceed as provided in Section 41 of these General Conditions, the Contractor and surety being liable for any damage to the same extent as provided in Section 41 for termination thereunder.

(b) Site inspections, tests conducted on Site or tests of materials gathered on Site, which the Contract requires to be performed by independent testing entities, shall be contracted and paid for by the Owner. Examples of such tests are the testing of cast-in-place concrete, foundation materials, soil compaction, pile installations, caisson bearings and steel framing connections. The Contractor shall promptly furnish, without additional charge, all reasonable facilities, labor and materials necessary and convenient for making such tests. Except as provided in (d) below, whenever such examination and testing finds defective materials, equipment or workmanship, the Contractor shall reimburse the Owner for the cost of reexamination and retesting. Although conducted by independent testing entities, the Owner will not contract and pay for tests or certifications of materials, manufactured products or assemblies which the Contract, codes, standards, etc., require to be tested and/or certified for compliance with industry standards such as Underwriters Laboratories, Factory Mutual or ASTM. If fees are charged for such tests and certifications, they shall be paid by the Contractor. The Contractor shall also pay for all inspections, tests, and certifications which the Contract specifically requires him to perform or to pay, together with any inspections and tests which it chooses to perform for its own purposes, but are not required by the Contract.

(c) Where Work is related to or dependent on the Defective Work, the Contractor shall stop such related or dependent Work until the Defective Work or deficiency is corrected or an alternative solution is presented that is satisfactory to the Owner. Where Work is rejected because of defective material or workmanship, the Contractor shall stop like Work in other areas or locations on the Project until the matter is resolved and the Owner has approved corrective measures.

(d) Should it be considered necessary or advisable by Owner at any time before final acceptance of the entire Work to make an examination of any part of the Work already completed, by removing or tearing out portions of the Work, the Contractor shall on request promptly furnish all necessary facilities, labor and material to expose the Work to be tested to the extent required. If such Work is found to be defective in any respect, due to the fault of the Contractor or its Subcontractors, the Contractor shall bear all the expenses of uncovering the Work, of examination and testing, and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, the actual cost of the Contractor's labor and material necessarily involved in uncovering the Work, the cost of examination and testing, and Contractor's cost of material and labor necessary for replacement including a markup of ten (10%) percent for overhead and profit shall be paid to the Contractor and it shall, in addition, if completion of the Work has been delayed thereby, be granted suitable extension of time. Notwithstanding the foregoing, the Contractor shall be responsible for all costs and expenses in removing and replacing the Work if the Contractor had covered the Work prior to any inspection or test contrary to the instructions of the A/E, Owner or Project Inspector.

(e) The Project Inspector has the authority to recommend to the Owner that the Work be suspended when in its judgment the Contract Documents are not being followed. Any such suspension shall be continued only until the matter in question is resolved to the satisfaction of the Owner. The cost of any such Work stoppage shall be borne by the Contractor unless it is later determined that the Work stoppage was not reasonably justified by the Contractor's failure to follow the Contract Documents.

(f) The Project Inspector has the right and the authority to:

(1) Inspect all construction materials, equipment, and supplies for quality and for compliance with the Contract Documents and/or approved shop drawings and Submittals.

(2) Inspect workmanship for compliance with the standards described in the Contract

Documents.

(3) Observe and report on all tests and inspections performed by the Contractor.

(4) Recommend rejection of Work which does not conform to requirements of the Contract Documents.

(5) Keep a record of construction activities, tests, inspections, and reports.

(6) Attend all joint Site construction meetings and inspections held by the Owner and/or the Architect/Engineer with the Contractor.

(7) Check materials and equipment, together with documentation related thereto, delivered for conformance with approved Submittals and the Contract.

(8) Check installations for proper workmanship and conformance with shop drawing and installation instructions.

(9) Assist in the review and verification of the Schedule of Values & Certificate for Payment, submitted by the Contractor each month.

(10) Do all things for or on behalf of the Owner as the Owner may subsequently direct in writing.

(g) The Project Inspector has no authority to:

(1) Authorize deviations from the Contract Documents;

(2) Enter into the area of responsibility of the Contractor's superintendent;

(3) Issue directions relative to any aspect of construction means, methods, techniques, sequences or procedures, or in regard to safety precautions and programs in connection with the Work;

(4) Authorize or suggest that the Owner occupy the Project, in whole or in part; or

(5) Issue a certificate for payment.

(h) The duties of the Project Inspector are for the benefit of the Owner only and not for the Contractor. The Contractor may not rely upon any act, statement, or failure to act on the part of the Project Inspector, nor shall the failure of the Project Inspector to properly perform his duties in any way excuse Defective Work or otherwise improper performance of the Contract by the Contractor.

17. SUPERINTENDENCE BY CONTRACTOR

(a) The Contractor shall have a competent foreman or superintendent, satisfactory to the Owner, on the Site at all times during the progress of the Work. The superintendent or foreman shall be familiar with and be able to read and understand the plans and specifications, and be capable of communicating orally and in writing with the Owner's inspectors and the Contractor's workers. The Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures, for coordinating all portions of the Work under the Contract except where otherwise specified in the Contract Documents, and for all safety and worker health programs and practices. The Contractor shall notify the Owner, in writing, of any proposed change in superintendent, including the reason therefore, prior to making such change.

(b) The Contractor shall, at all times, enforce strict discipline and good order among the workers on the Project, and shall not employ on the Work, or contract with, any unfit person, anyone not skilled in the Work assigned to him, or anyone who will not work in harmony with those employed by the

Contractor, the Subcontractors, the Owner or the Owner's separate contractors and their subcontractors.

(c) The Owner may, in writing, require the Contractor to remove from the Site any employee or Subcontractor's employee the Owner deems to be incompetent, careless, not working in harmony with others on the Site, or otherwise objectionable, but the Owner shall have no obligation to do so.

18. CONSTRUCTION SUPERVISION, METHODS AND PROCEDURES

(a) The Contractor shall be solely responsible for supervising and directing the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction and for coordinating all portions of the Work under the Contract, except where otherwise specified in the Contract Documents. The Contractor, in performing as the Contractor, shall also be responsible to the Owner for the design or selection of any specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. The Contractor is solely responsible to the Owner that the finished Work complies with the Contract Documents.

The Contractor shall be solely responsible for health and safety precautions and programs for workers and others in connection with the Work. No inspection by, knowledge on the part of, or acquiescence by the Architect or Engineer, the Project Inspector, the Owner, the Owner's employees and agents, or any other entity whatever shall relieve the Contractor from its sole responsibility for compliance with the requirements of the Contract or its sole responsibility for health and safety programs and precautions.

(b) The Contractor shall be fully responsible to the Owner for all acts and omissions of all succeeding tiers of Architect/Engineer, Subcontractors, and Suppliers performing or furnishing any of the Work just as the Contractor is responsible for the Contractor's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between the Owner and any Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of the Owner to pay for or see to payment of any moneys due any such Subcontractor, Supplier, or other person or organization except as may otherwise be required by law.

19. SCHEDULE OF THE WORK

(a) **General:** The Contractor is responsible for the scheduling and sequencing of ordering materials for the Work, scheduling and sequencing of the Work, for coordinating the Work, for monitoring the progress of the Work, and for taking appropriate action to keep the Work on schedule. The Contractor may attempt to achieve Substantial Completion on or before the Time for Completion or the Contract Completion Date established by the Contract and receive payment in accordance with Section 36 for the Work completed each period. However, the date established by the Contract Documents as the deadline for achieving Substantial Completion must be used in all schedules as the date on which Substantial Completion will be achieved. The time (in days) between the Contractor's planned early completion and the contracted Time for Completion is part of the Project "Total Float" time and will be used as such. Extensions of time pursuant to Sections 38, 39, and 43, damages for delay, and all other matters between the Owner and the Contractor will be determined using the contractually required Substantial Completion date, not an early Substantial Completion date planned by the Contractor.

Within two (2) weeks after the Contractor signs the Contract Between Owner and Contractor, unless otherwise extended by the Owner at the time of the signing, the Contractor shall prepare and submit to the Owner a preliminary bar graph schedule for accomplishing the Work based upon the Time for Completion stated in the Contract. The preliminary schedule shall be in sufficient detail to show the sequencing of the various trades for each floor level, wing or work area. The Owner will notify the Contractor of its acceptance of or objections to the preliminary schedule within fifteen (15) days of receipt by the Owner. A fully complete Project schedule for accomplishing the Work must be

submitted in like manner no later than sixty (60) days after the Contract is signed by the Owner.

The Owner's failure to reject or its acceptance of any schedule, graph, chart, recovery schedule, updated schedule, plan of action, etc. shall not constitute a representation or warranty by the Owner, including but not limited to a representation or warranty that the schedule is feasible or practical nor shall any such acceptance or failure to reject relieve the Contractor from sole responsibility for completing the Work within the time allowed.

No progress payments will be payable to the Contractor until after it has submitted a preliminary schedule which is acceptable to the Owner. Neither the second progress payment nor any subsequent payment shall be payable to the Contractor until it has submitted a fully complete Project schedule accepted by the Owner. Nor shall subsequent progress payments be payable to the Contractor unless and until it submits the monthly bar graphs or status reports required by Section 19(d) herein or unless and until it provides any recovery schedule pursuant to Section 19(e) herein.

Failure to provide a satisfactory preliminary or fully complete Project schedule within the time limits stated above shall be a breach of contract for which the Owner may terminate the Contract in the manner provided in Section 41 of these General Conditions.

The fully complete Project schedule for accomplishing the Work shall be of the type set forth in subparagraph (1) or (2) below, as appropriate:

(1) For Contracts with a price of $1,500,000 or less, a bar graph schedule will satisfy the above requirement. The schedule shall indicate the estimated starting and completion dates for each major element of the work. See (b) below.

(2) For Contracts with a price over $1,500,000, a Critical Path Method (CPM) schedule shall be utilized to control the planning and scheduling of the Work. The CPM schedule shall be the responsibility of the Contractor and shall be paid for by the Contractor. See (c) below.

(b) **Bar Graph Schedule:** Where a bar graph schedule is required, it shall be time-scaled in weekly increments, shall indicate the estimated starting and completion dates for each major element of the Work by trade and by area, level, or zone, and shall schedule dates for all salient features, including but not limited to the placing of orders for materials, submission of shop drawings and other Submittals for approval, approval of shop drawings by Architect/Engineer, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor.

The Contractor shall allow sufficient time in its schedule for its Architect/Engineer to conduct whatever associated reviews or inspections as may be required under the Architect/Engineer's contract with the Contractor. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

(c) **Critical Path Method (CPM) Schedule:** Where a CPM schedule is required, it shall be in the time-scaled precedence format using the Contractor's logic and time estimates. The CPM schedule shall be drawn or plotted with activities grouped or zoned by Work area or subcontract as opposed to a random (or scattered) format.

The CPM schedule shall be time-scaled on a weekly basis and shall be drawn or plotted at a level of detail and logic which will schedule all salient features of the Work, including not only the actual construction Work for each trade, but also the submission of shop drawings and other Submittals for approval, approval of shop drawings by the Contractor's Architect/Engineer, placing of orders for materials, the manufacture and delivery of materials, the testing and installation of materials and

equipment, and all Work activities to be performed by the Contractor. Failure to include any element of Work required for the performance of this Contract shall not excuse the Contractor from completing all Work required within the Time for Completion, Contract Completion Date and any interim deadlines established by the Contract.

The Contractor shall allow sufficient time in its schedule for its Architect/Engineer to conduct whatever associated reviews or inspections as may be required. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

When completed, the CPM schedule shall be submitted to the Owner for review. The CPM schedule will identify and describe each activity, state the duration of each activity, the calendar dates for the early and late start and the early and late finish of each activity, and clearly highlight all activities on the critical path. “Total Float” and “Free Float” shall be indicated for all activities. Float time, whether “Free Float” or “Total Float” as defined in Section 1, shall not be considered for the exclusive use or benefit of either the Owner or the Contractor, but must be allocated in the best interest of completing the Work within the Time for Completion or the Contract Completion Date. Extensions to the Time for Completion or the Contract Completion Date, when granted by Change Order, will be granted only when equitable time adjustment exceeds the Total Float in the activity or path of activities affected by the change. On contracts with a price over $5,000,000, the CPM schedule shall also show what part of the Contract Price (expressed in U.S. dollars) is attributable to each activity on the schedule, the sum of which for all activities shall equal the total Contract Price. On contracts with a price over $10,000,000, the CPM schedule shall also show the planned workforce (crew size and number of crews) and the major pieces of equipment required for each activity on the schedule. When acceptable to the Owner and Architect/Engineer as to compliance with the requirements of this Section, but not as to logic, the schedule shall become the CPM schedule for the Project. Acceptance of the schedule by the Owner does not indicate agreement with, nor responsibility for the proposed or actual duration of any activity shown on the accepted schedule.

(d) **Monthly Project Reports:** The Contractor shall review progress not less than each month, but as often as necessary to properly manage the Project and stay on schedule. The Contractor shall collect and preserve information on Change Orders, including extensions of time. The Contractor shall evaluate this information and update the latest accepted schedule as often as necessary to finish within the Contract Time for Completion or before the Contract Completion Date. The Contractor shall submit to the Owner along with its monthly request for payment a copy of the bar graph schedule annotated to show the current progress. For projects requiring a CPM schedule, the Contractor shall submit a monthly report of the status of all activities. The bar graph schedule or monthly status report submitted with each periodic request for payment shall show the Work completed to date in comparison with the Work scheduled for completion, including but not limited to the dates for the beginning and completion of the placing of orders; the manufacture, testing and installation of materials, supplies and equipment. The form shall be approved by the Owner; however, a bar graph or a CPM schedule marked, colored or annotated to reflect the above will usually satisfy this requirement. If any elements of the Work are behind schedule, regardless of whether they may prevent the Work from being completed on time, the Contractor must indicate in writing in the report what measures it is taking and plans to take to bring each such element back on schedule and to ensure that the Time for Completion or Contract Completion Date is not exceeded.

(e) **Progress Delay:** Should any of the following conditions exist, the Owner may require the Contractor to prepare, at no extra cost to the Owner, a plan of action and a recovery schedule for completing the Work by the Contract Time for Completion or the Contract Completion Date:

(1) The Contractor's monthly project report indicates delays that are, in the opinion of the Owner, of sufficient magnitude that the Contractor's ability to complete the Work by the scheduled Time for Completion or the Contract Completion Date is brought into question;

(2) The CPM schedule sorted by early finish shows the Contractor to be thirty (30) or more days behind the critical path schedule at any time during construction up to thirty (30) days prior to scheduled Substantial Completion date;

(3) The Contractor desires to make changes in the logic (sequencing of Work) or the planned duration of future activities of the CPM schedule which, in the opinion of the Architect/Engineer or the Owner, are of a major nature.

The plan of action and recovery schedule, when required, shall explain and display how the Contractor intends to regain compliance with the current accepted, fully completed, Project CPM schedule, as updated by approved change orders.

The plan of action, when required, shall be submitted to the Owner for review within two (2) business days of the Contractor receiving the Owner's written demand. The recovery schedule, when required, shall be submitted to the Owner within five (5) calendar days of the Contractor's receiving the Owner's written demand.

(f) **Early Completion of Project:** The Contractor may attempt to achieve Substantial Completion on or before the Time for Completion or the Contract Completion Date. However, such planned early completion shall be for the Contractor's convenience only and shall not create any additional rights of the Contractor or obligations of the Owner under this Contract, nor shall it change the Time for Completion or the Contract Completion Date. The Contractor shall not be required to pay damages to the Owner because of its failure to achieve Substantial Completion by its planned earlier date. Likewise, the Owner shall not pay the Contractor any additional compensation for achieving Substantial Completion early nor will the Owner owe the Contractor any compensation should the Owner, its officers, employees, or agents cause the Contractor not to achieve Substantial Completion earlier than the date required by the Contract Documents.

If the Contractor seeks to change the Time for Completion or the Contract Completion Date to reflect an earlier completion date, it may request or propose such a change. The Owner may, but is not required to, accept such proposal. However, a change in the Time for Completion or the Contract Completion Date shall be accomplished only by Change Order. If the Contractor's proposal to change the Time for Completion or the Contract Completion Date is accepted, a Change Order will be issued stating that all references in the Contract, including these General Conditions, to the Time for Completion or the Contract Completion Date shall thereafter refer to the date as modified, and all rights and obligations, including the Contractor's liability for actual damages, delay damages and/or liquidated damages, shall be determined in relation to the date, as modified.

20. SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT

(a) Before submittal of the first partial payment request under the Contract, the Contractor shall prepare for review and approval of the Owner a schedule of the estimated values listed by trades or by specification sections of the Work, totaling the Contract Price. Where the total Project has multiple parts or phases, the Contractor shall prepare appropriate schedules of values to facilitate reviews and justifications for payments.

All requests for payment shall be made on a computerized spreadsheet. Where a computerized spreadsheet is used, one copy of the entire Schedule of Values shall be provided to the Owner an agreed spreadsheet format (e.g., Excel) with the initial request for payment.

(b) If the Contractor requests, or intends to request, payment for materials stored in an approved and secure manner, the Schedule of Values must indicate the amount for labor and the amount for materials, and in a supplement thereto must include an itemized list of materials for that trade or Work section. The material breakdown shall be in sufficient detail to allow verification of the quantities required for the Project, the quantities delivered, the Work completed, and the quantities

stored on or off Site.

(c) The "Value of Work Completed" shall be completed, the Contractor's certification completed and signed, and the appropriate substantiating material attached to each Certificate for Payment. Such substantiating material includes, but is not limited to, invoices for materials, delivery tickets, time sheets, payroll records, daily job logs/records, and similar materials which, in the opinion of the Owner, are necessary or sufficient to justify payment of the amount requested.

(d) The labor progress for any task or activity shall be calculated based upon the percentage of Work complete up to fifty percent (50%) of the completion of the task or activity. Thereafter, the evaluation of labor progress will be based upon the effort required to complete that task or activity. The material progress shall be calculated as the invoiced dollar cost of materials used in relationship to the amount estimated as necessary to complete a particular element of Work. When calculating material progress, credit shall be given for installed material as well as that stored on the Site and any material stored off Site which has been certified in accordance with Section 36 of these General Conditions.

(e) Should Work included in previous Schedule of Values submittals, and for which payment has been made, subsequently be identified, by tests, inspection, or other means, as not acceptable or not conforming to Contract requirements, the "Value of Work Completed" portion of the first Schedule of Values submitted after such identification shall be modified to reduce the "completed" value of that Work by deleting the value of that which has been identified as not acceptable or nonconforming.

21. ACCESS TO WORK

The Owner, the Project Manager, the Owner's inspectors and other testing personnel, inspectors from the Department of Labor and Industry, and others authorized by the Owner, shall have access to the Work at all times. The Contractor shall provide proper facilities for access and inspection.

22. SURVEYS AND LAYOUT

(a) The Owner shall furnish the Contractor all necessary documents showing property lines and the location of existing buildings and improvements. The Contractor shall provide competent surveying and engineering services to execute the Work in accordance with the Contract and shall be responsible for the accuracy of these surveying and engineering services.

(b) Such general reference points and benchmarks on the Site as will enable the Contractor to proceed with the Work will be established in the plans and specifications. If the Contractor finds that any previously established reference points have been lost or destroyed, it shall promptly notify the Owner.

(c) The Contractor shall protect and preserve the established benchmarks and monuments and shall make no changes in locations without the written approval from the Owner. Any of these which may be lost or destroyed or which require shifting because of necessary changes in grades or locations shall, subject to prior written approval of the Owner, be replaced and accurately located by the Contractor.

23. PLANS AND SPECIFICATIONS

(a) The general character and scope of the Work are illustrated by the plans and the specifications prepared by the Contractor's Architect/Engineer. The level of detail shown on the plans and stipulated in the specifications shall be sufficient to clearly demonstrate to the Building Official that the design conforms to the requirements of the VUSBC. The Contractor shall carry out the Work in accordance with the plans and specification and any additional detail drawings and instructions provided by the Architect/Engineer.

(b) Measurements or dimensions shown on the drawings for Site features, utilities and structures shall be verified at the Site by the Contractor before commencing the Work. The Contractor shall not scale measurements or dimensions from the drawings. If there are discrepancies, the Architect/Engineer shall be consulted. If new Work is to connect to, match with or be provided in existing Work, the

Contractor shall verify the actual existing conditions and necessary dimensions prior to ordering or fabrication.

(c) As-Built Drawings: The Contractor shall maintain at the Site for the Owner one copy of all drawings, specifications, addenda, approved shop or setting drawings, Change Orders and other modifications (collectively referred to herein as "As-Built Drawings") in good order and marked to record all changes as they occur during construction. These shall be available to the Owner, the Project Inspector, the Owner's other inspectors and to the Owner's testing personnel. The drawings shall be neatly and clearly marked in color during construction to record all variations made during construction. The representation of such variations shall include such supplementary notes, symbols, legends, and details as may be necessary to clearly show the as-built construction.

(d) Record Drawings: Upon completion of the Work and prior to the final inspection, the Contractor shall deliver to the Owner one complete set of "As-Built Drawings" in reproducible form.

(e) Ownership of all materials and documentation including the original drawings, the Plans (including electronic files) and Specifications, and copies of any calculations and analyses prepared pursuant to the Contract between the Owner and the Contractor, shall belong exclusively to the Owner. These materials and documentation, whether completed or not, shall be the property of the County of Roanoke, whether the Work for which they are made is executed or not. The Contractor shall not use these materials on any other work or release any information about these materials without the express written consent of the Owner.

Such material may be subject to public inspection in accordance with the Virginia Freedom of Information Act. Security-related documents and information are excluded from the Act unless a specific need to know can be shown. Trade secrets or proprietary information submitted by a bidder, offeror, or contractor in connection with a procurement transaction shall not be subject to disclosure under the Virginia Freedom of Information Act, provided the bidder, offeror, or contractor invokes the applicable provisions of the *Code of Virginia*, prior to or upon submission of the data or other materials, identifies the data or materials to be protected and states the reason why the protection is necessary.

The Contractor shall provide the following documents to the Owner at the completion of the Work:

- original sealed and signed drawings
- BIM Models.
- original copy of the specifications
- copy of analyses made for the Project
- indexed copy of the calculations made by each discipline for the Project
- the Owner copy of all shop drawings, submittals, cut sheets, operation and maintenance instructions, parts lists, and other material related to the Project.

The County, as owner of the documents prepared for its projects, has the right to use the Project documents as a prototype to demonstrate scope, size, functional relationships, etc., to an Architect/Engineer designing a similar project. Neither the Contractor nor its Architect/Engineer for the original Project design shall be responsible or liable to the Owner for any such use of the documents.

The Architect/Engineer for the similar project shall be responsible for providing a complete set of project and location-specific "Final Documents" with its seals and signatures which meet all applicable codes and standards in effect at the time those "Final Documents" are submitted.

24. SUBMITTALS

(a) Shop drawings, setting drawings, product data, and samples generated by the Contractor shall be known as submittals. Three (3) copies of all submittals shall be provided to the Owner when generated.

(b) Submittals shall be approved by the Contractor and its licensed professional designer for

conformance with the required codes, standards, and provisions of the Contract. Three (3) copies of all approved submittals shall be provided to the Owner. One copy of the "Approved" shop drawings/submittals shall be on file in the construction trailer for use by Inspectors.

(c) Any submittal material, assembly, or product which deviates from the approved Building Permit Documents shall be submitted to the Building Official for VUSBC approval prior to installation.

(d) The Work shall be in accordance with approved Building Permit Documents as detailed by the approved submittals.

25. FEES, SERVICES AND FACILITIES

(a) The Contractor shall obtain all permits, including the Building Permit(s), and pay for all fees and charges necessary for temporary access and public right-of-way blockage or use, for temporary connections to utilities and for the use of property (other than the Site) for storage of materials and other purposes unless otherwise specifically stated in the Contract Documents.

(b) Certain projects such as renovations and interior modifications of existing buildings will usually have water and electric service to the building. In those instances, water and electric power, if required for the Work under the Contract, will be furnished by the Owner subject to reasonable use by the Contractor, only to the extent and capacity of present services. The Contractor shall be responsible for providing required connections, temporary wiring, piping, etc. to these services in a safe manner and in accordance with applicable codes. All temporary wire, pipe, etc. shall be removed before the Substantial Completion inspection. Acceptance by the Contractor of the use of Owner's water and electricity constitutes a release to the Owner of all claims and of all liability to the Contractor for whatever damages which may result from power and water outages or voltage variations.

(c) The Owner shall pay any connection charges for permanent utility connections directly to the utility Supplier. The Contractor shall coordinate such connections with the utility Supplier.

(d) Unless otherwise specifically stated in the Contract Documents, the Contractor, either directly or through its Subcontractors, shall provide and pay for all material, labor, tools, equipment, water, light, power, telephone and other services or facilities of every nature whatsoever necessary to execute completely and deliver the Work within the Contract Time for Completion or before the Contract Completion Date.

(e) The Contractor shall provide temporary facilities including Contractor's office space, Owner's Project Inspector office space (if required by the specifications), toilet facilities, and storage space, as required for the operations and the protection of the material and work. Number, sizes and locations shall be subject to approval of the Owner. Sanitary facilities shall be plumbed into an approved waste treatment system or shall be an approved type of chemical toilet and shall be regularly serviced.

26. EQUALS

(a) **Brand names:** Unless otherwise stated in the Request for Proposals or Invitation for Bids, the name of a certain brand, make or manufacturer denotes the characteristics, quality, workmanship, economy of operation and suitability for the intended purpose of the article desired, but does not restrict the Contractor to the specific brand, make, or manufacturer; it is set forth to convey to the Contractor the general style, type, character and quality of the article specified.

(b) **Equal materials, equipment or assemblies:** Whenever in these Contract Documents, a particular brand, make of material, device or equipment is shown or specified, such brand, make of material, device or equipment shall be regarded merely as a standard. Any other brand, make or manufacturer of a product, assembly or equipment which in the opinion of the Owner is the equal of that specified, considering quality, capabilities, workmanship, configuration, economy of operation, useful life, compatibility with design of the Work, and suitability for the intended purpose**,** will be accepted unless rejected by the Owner as not being equal.

(c) **Substitute materials, equipment or assemblies:** The Contractor may propose to substitute a material, product, equipment, or assembly which deviates from the requirements of the approved plans and specifications but which the Contractor deems will perform the same function and have equal capabilities, service life, economy of operations, and suitability for the intended purpose. The proposal must include any cost differentials proposed. If the proposed substitute is acceptable to the Owner, a Change Order will be proposed to the Contractor to accept the substitute and to deduct the proposed cost savings from the Contract Price. The Owner shall have the right to limit or reject substitutions at its sole discretion.

(d) The Contractor shall be responsible for making all changes in the Work necessary to adapt and accommodate any equal or substitute product which it uses. The necessary changes shall be made at the Contractor's expense.

27. AVAILABILITY OF MATERIALS

If a brand name, product, or model number included in the Contract Documents is not available on the present market, alternate equal products or model numbers may be proposed by the Contractor for approval by the Owner. Also submit data to the Building Official for approval of products, materials, and assemblies regulated by the VUSBC.

28. CONTRACTOR'S TITLE TO MATERIALS

No materials or supplies for the Work shall be purchased by the Contractor, or by any Subcontractor or Supplier, subject to any security interest, installment or sales contract or any other agreement or lien by which an interest is retained by the seller or is given to a secured party. The Contractor warrants that it has clear and good title to all materials and supplies which it uses in the Work or for which it accepts payment in whole or in part.

29. STANDARDS FOR MATERIALS INSTALLATION & WORKMANSHIP

(a) Unless otherwise specifically provided in the Contract, all equipment, material, and accessories incorporated in the Work are to be new and in first class condition.

(b) Unless specifically approved by the Owner or required by the Contract, the Contractor shall not incorporate into the Work any materials containing asbestos or any material known by the industry to be hazardous to the health of building construction workers, maintenance workers, or occupants. If the Contractor becomes aware that a material required by the Contract contains asbestos or other hazardous materials, it shall notify the Owner immediately and shall take no further steps to acquire or install any such material without first obtaining Owner approval.

(c) All workmanship shall be of the highest quality found in the building industry in every respect. All items of Work shall be done by craftsmen or tradesmen skilled in the particular task or activity to which they are assigned. In the acceptance or rejection of Work, no allowance will be made for lack of skill on the part of workmen. Poor or inferior workmanship (as determined by the Architect/Engineer, the Owner or other inspecting authorities) shall be removed and replaced at Contractor's expense such that the Work conforms to the highest quality standards of the trades concerned, or otherwise corrected to the satisfaction of the Owner, or other inspecting authority, as applicable.

(d) Where specified items are supplied with the manufacturer's printed instructions, recommendations, or directions for installation, or where such instructions, recommendations, or directions are available, installation of the specified items shall be in strict accordance with the manufacturer's printed instructions.

(e) Where reference is made to specific codes or standards governing the installation of specified items, installation shall in all cases be in strict accordance with the referenced codes and standards. Where

no reference is made to specific codes or standards, installation shall conform to the applicable industry standards for installation of the specific item to be installed. The Contractor and each Subcontractor are expected to be proficient and skilled in their respective trade and knowledgeable of the Codes and Standards of the National Fire Protection Association (NFiPA), National Electric Code (NEC), Occupational Safety and Health Act (OSHA) and other codes and standards applicable to installations and associated work by its trade.

(f) Where the manufacturer's printed instructions are not available for installation of specific items, where specific codes or standards are not referenced to govern the installation or specific items, or where there is uncertainty on the part of the Contractor concerning the installation procedures to be followed or the quality of workmanship to be maintained in the installation of specific items, the Contractor shall consult the Architect/Engineer for approval of the installation procedures or the specific standards governing the quality of workmanship the Contractor proposes to follow or maintain during the installation of the items in question.

(g) During and/or at the completion of installation of any items, the tests designated in the plans or specifications necessary to assure proper and satisfactory functioning for its intended purpose shall be performed by the Contractor or by its Subcontractor responsible for the completed installation. All costs for such testing are to be included in the Contract Price. If required by the Contract Documents, the Contractor shall furnish prior to final inspection the manufacturers' certificates evidencing that products meet or exceed applicable performance, warranty and other requirements, and certificates that products have been properly installed and tested.

30. WARRANTY OF MATERIALS AND WORKMANSHIP

(a) The Contractor warrants that, unless otherwise specified, all materials and equipment incorporated in the Work under the Contract shall be new, in first-class condition, and in accordance with the Contract Documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with the Contract Documents and shall be performed by persons qualified at their respective trades.

(b) Work not conforming to these warranties shall be considered defective.

(c) This warranty of materials and workmanship is separate and independent from and in addition to any of the Contractor's other guarantees or obligations in the Contract or under Virginia law.

31. USE OF SITE AND REMOVAL OF DEBRIS

(a) The Contractor shall:

(1) Perform the Work in such a manner as not to interrupt or interfere with the operation of any existing activity on, or in proximity to, the Site or with the Work of any other separate contractor;

(2) Store its apparatus, materials, supplies and equipment in such orderly fashion at the Site of the Work as will not unduly interfere with the progress of its Work or the work of any other separate contractor; and

(3) Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work.

(b) The Contractor expressly undertakes, either directly or through its Subcontractor(s), to effect all cutting, filling or patching of the Work required to make the same conform to the plans and specifications, and, except with the consent of the Owner, not to cut or otherwise alter the Work of any other separate contractor. The Contractor shall not damage or endanger any portion of the Work or Site, including existing improvements, unless called for by the Contract.

(c) The Contractor expressly undertakes, either directly or through its Subcontractor(s), to clean up frequently all refuse, rubbish, scrap materials and debris caused by its operations, to the end that at all times the Site shall present a neat, orderly and workmanlike appearance. No such refuse, rubbish, scrap material and debris shall be left within the completed Work nor buried on the building Site, but shall be removed from the Site and properly disposed of in a licensed landfill or otherwise as required by law.

(d) The Contractor expressly undertakes, either directly or through its Subcontractor(s), before final payment or such prior time as the Owner may require, to remove all surplus material, false Work, temporary structures, including foundations thereof, plants of any description and debris of every nature resulting from its operations and to put the Site in a neat, orderly condition; to thoroughly clean and leave reasonably dust free all finished surfaces including all equipment, piping, etc., on the interior of all buildings included in the Contract; and to clean thoroughly all glass installed under the Contract, including the removal of all paint and mortar splatters and other defacements. If the Contractor fails to clean up at the time required herein, the Owner may do so and charge the costs incurred thereby to the Contractor in accordance with Section 10(b) of these General Conditions.

(e) The Contractor shall have, On-Site, an employee certified by the Department of Environmental Quality as a Responsible Land Disturber who shall be responsible for the installation, inspection and maintenance of erosion control and stormwater management measures and devices. The Contractor shall prevent Site soil erosion, the runoff of silt and/or debris carrying water from the Site, and the blowing of debris off the Site in accordance with the applicable requirements and standards of the Contract and the Virginia Department of Environmental Quality's Erosion and Sediment Control Regulations and the Virginia Stormwater Management Regulations.

32. TEMPORARY ROADS

Temporary roads, if required, shall be established and maintained until permanent roads are accepted, then removed and the area restored to the conditions required by the Contract Documents. Crushed rock, paving and other road materials from temporary roads shall not be left on the Site unless permission is received from the Owner to bury the same at a location and depth approved by the Owner.

33. SIGNS

The Contractor may, at its option and without cost to the Owner, erect signs acceptable to the Owner on the Site for the purpose of identifying and giving directions to the job. No signs shall be erected without prior approval of the Owner as to design and location.

34. PROTECTION OF PERSONS AND PROPERTY

(a) The Contractor expressly undertakes, both directly and through its Subcontractor**s**, to take every reasonable precaution at all times for the protection of all persons and property which may come on the Site or be affected by the Contractor's Work.

(b) The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Any violation of these requirements or duties or any potential safety hazard that is brought to the attention of the Contractor by the Architect/Engineer, the Owner, or any other persons shall be immediately abated.

(c) The provisions of all rules and regulations governing health and safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia, issued by the Department of Labor and Industry under Title 40.1 of the *Code of Virginia*, shall apply to all Work under this Contract.

(d) The Contractor shall continuously maintain adequate protection of all its Work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except as may be directly and solely due to errors in the Contract Documents or caused by agents or employees of the Owner. The Contractor shall

adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by its owners. The Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for protection as required by public authority, local conditions, or the Contract.

(e) In an emergency affecting the health, safety or life of persons or of the Work, or of the adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act, at its discretion, to prevent such threatened loss or injury. Also, should he, to prevent threatened loss or injury, be instructed or authorized to act by the Owner, it shall so act immediately, without appeal. Any additional compensation or extension of time claimed by the Contractor on account of any emergency work shall be determined as provided by Section 38 of these General Conditions.

(f) When necessary for the proper protection of the Work, temporary heating of a type compatible with the Work must be provided by the Contractor at the Contractor's expense, unless otherwise specified.

35. CLIMATIC CONDITIONS

The Contractor shall suspend activity on and protect any portion of the Work that may be subject to damage by climatic conditions.

36. PAYMENTS TO CONTRACTOR

(a) Unless otherwise provided in the Contract, the Owner will make partial payments to the Contractor on the basis of a duly certified and approved Schedule of Values and Certificate for Payment (Exhibit ____), showing the estimate of the Work performed during the preceding calendar month or work period. When evaluating the Contractor's Schedule of Values and Certificate for Payment, the Owner will consider the value of the Work in place, the value of approved and properly stored materials, the status of the Work on the critical path with regard to the Time for Completion, and the estimated value of the Work necessary to achieve Final Completion. The Owner will schedule a monthly pay meeting to occur no earlier than the 25th day of the month represented by the payment request or not later than the 5th day of the following month. The Contractor will submit its monthly estimate of Work in accordance with the Contract between the Owner and Contractor so that it is received by the Owner's Project Manager at least one workday prior to the date scheduled for the monthly pay meeting. The Owner will review the estimate with the Contractor at the monthly pay meeting, which shall be considered the receipt date, and may approve some or all of the estimate of Work for payment. In preparing estimates, the material delivered to the Site and preparatory Work done shall be taken into consideration, if properly documented as required by Section 20 of these General Conditions, or as may be required by the Owner so that quantities may be verified. In addition to material delivered to the Site, material such as large pieces of equipment and items purchased specifically for the Project, but stored off the Site within the Commonwealth of Virginia, may be considered for payment, provided all of the following are accomplished prior to the submission of the monthly payment request in which payment for such' materials is requested:

(1) The Contractor must notify the Owner in writing, at least ten (10) days prior to the submission of the payment request that specific items will be stored off Site in a designated, secured place within the Commonwealth of Virginia. The Schedule of Values must be detailed to indicate separately both the value of the material and the labor/installation for trades requesting payment for stored materials. By giving such notification and by requesting payment for material stored off Site, the Contractor warrants that the storage location is safe and suitable for the type of material stored and that the materials are identified as being the property of the Contractor, and agrees that loss of materials stored off the Site shall not relieve the Contractor of the obligation to timely furnish these types and quantities of materials for the Project and meet the Time for Completion or Contract Completion Date, subject to Section 43(b) of these General Conditions. If the storage location is more than 20 miles from the Site, the Contractor may be required to reimburse the Owner for the cost incurred for travel to the, storage location to verify the Contractor's request for payment for materials stored off Site.

(2) Such notification, as well as the payment request, shall:

(a) itemize the quantity of such materials and document with invoices showing the cost of said materials;

(b) indicate the identification markings used on the materials, which shall clearly reference the materials to the particular project;

(c) identify the specific location of the materials, which must be within reasonable proximity to the Site and within the Commonwealth of Virginia;

(d) include a letter from the Contractor's Surety which confirms that the Surety on the Performance Bond and the Labor and Material Payment Bond has been notified of the request for payment of materials stored off the Site and agrees that the materials are covered by the bond; and

(e) include a certificate of all-risk builder's risk insurance in an amount not less than the fair market value of the materials, which shall name the Owner and the Contractor as co-insureds.

(3) The Contractor's Architect/Engineer shall indicate, in writing, to the Owner that Submittals for such materials have been reviewed and meet the requirements of the Contract Documents, that the stored materials meet the requirement of the plans and specifications, and that such materials conform to the approved Submittals. Should the Architect/Engineer deem it necessary to visit the storage site to make such review, the Contractor shall bear the costs incurred therewith.

(4) The Owner shall notify the Contractor in writing of its agreement to prepayment for materials.

(5) The Contractor shall notify the Owner in writing when the materials are to be transferred to the Site and when the materials are received at the Site.

(b) Payment will not be made for materials or equipment stored on or off the Site which are not scheduled for incorporation into the Work within the six months next following submission of the request for payment, unless the Contractor has the prior consent of the Owner, which consent may be granted or withheld by the Owner in its discretion if, in the opinion of the Owner, it is not necessary to procure the materials more than six months in advance of use to assure their availability when needed.

(c) No payment shall be made to the Contractor until:

(1) The Contractor furnishes to the Owner its Social Security Number (SSN) if an individual, or its Federal Employer Identification Number (FEIN) if a proprietorship, partnership, corporation or other legal entity.

(2) Certificates of Insurance or other satisfactory evidence of compliance by the Contractor with all the requirements of Section 11 (and Section 12 if applicable) of these General Conditions have been delivered to the Owner.

(3) Copies of any certificates of insurance required of a Subcontractor under Section 11 have been delivered to the Owner for payments based on Work performed by a Subcontractor

(4) The Contractor has (i) submitted a preliminary schedule which is acceptable to the Owner in accordance with Section 19(a), (ii) submitted a fully complete Project schedule accepted by the Owner in accordance with Section 19(a), (iii) maintained the monthly bar graphs or status reports required by Section 19(b), or (iv) provided a recovery schedule pursuant to Section 19(e), as each of them may be required.

(d) In making such partial payments, five percent (5%) of each payment to the Contractor shall be retained until Final Completion and acceptance of all Work covered by the Contract, unless otherwise provided by any law, regulation or program of the federal government. Such retainage shall be held to assure faithful performance of the Contract and may also be used as a fund to deduct amounts due to or claimed by the Owner, including, but not limited to, payment to the Owner of all moneys due for deductive change orders, credits, uncorrected Defective Work, interest, damages, and the like. (§2.2-4333 of the *Code of Virginia*) The Owner may, at its sole discretion, agree on an item by item basis to release the retainage on items which are fully 100% complete, and which have accepted by the Owner as being tested and complete, and on which no further action or work will be required. Retainage which is released by the Owner shall be distributed by the Contractor to the applicable party(ies) in conformance with Section 37 of these General Conditions.

(e) All material and Work for which partial payments are made shall thereupon become the sole property of the Owner, but this provision shall not relieve the Contractor from the sole responsibility for all materials and Work, including those for which payment has been made, or for the restoration of any damaged materials or Work**.** Nor shall this provision serve as a waiver of the right of the Owner to require the fulfillment of all of the terms and conditions of the Contract.

(f) The final payment, which shall include the retainage, less any amounts due to or claimed by the Owner, shall not become due until the Owner agrees that Final Completion has been achieved and until the Contractor shall deliver to the Owner a Certificate of Completion by the Contractor and an Affidavit of Payment of Claims, stating that all Subcontractors and Suppliers of either labor or materials have been paid all sums claimed by them for Work performed or materials furnished in connection with this Project. Amounts due the Owner which may be withheld from the final payment may include, but are not limited to, amounts due pursuant to Section 3(g), Section 16(a-d), Section 31(d), costs incurred to repair or replace Defective Work, costs incurred as a result of the Contractor's negligent acts or omissions or omissions of those for whom the Contractor is responsible, delay damages under Section 43(h), and any liquidated or actual damages. If all Subcontractors and Suppliers of labor and materials have not been paid the full amount claimed by them, the Contractor shall list each to which an agreed amount of money is due or which has a claim in dispute. With respect to all such Subcontractors and Suppliers, the Contractor shall provide to the Owner, along with the Affidavit of Payment of Claims, an affidavit from each such Subcontractor and Supplier stating the amount of their subcontract or supply contract, the percentage of completion, the amounts paid to them by the Contractor and the dates of payment, the amount of money still due if any, any interest due the Subcontractor or Supplier pursuant to Section 37(b) below, and whether satisfactory arrangements have been made for the payment of said amounts. If no agreement can be reached between the Contractor and one or more Subcontractors or Suppliers as to the amounts owed to the Subcontractors or Suppliers, the Owner may, in its discretion, pay such portion of the moneys due to the Contractor which is claimed by the Subcontractor or Supplier into a Virginia Court or Federal Court sitting in Virginia, in the manner provided by Virginia law. Said payment into court shall be deemed a payment to the Contractor. Nothing in this Section shall be construed as creating any obligation or contractual relationship between the Owner and any Subcontractor or Supplier, and the Owner shall not be liable to any Subcontractor or Supplier on account of any failure or delay of the Owner in complying with the terms hereof.

(g) Upon successful completion of the final inspection and all Work required by the Contract, including but not limited to the delivery of As-Built Reproducible Record Drawings, equipment manuals, written warranties, acceptance of the Work by the Owner and the delivery of the affidavits required in Section 36(f) of these General Conditions, the Contractor shall deliver the written Certificate of Completion by the Contractor (Exhibit ____) to the Owner stating the entire amount of Work performed and compensation earned by the Contractor, including extra work and compensation therefor. The Owner may accept the Work for occupancy or use while asserting claims against the Contractor; disputing the amount of compensation due to the Contractor; disputing the quality of the Work, its completion, or its compliance with the Contract Documents; or any other reason.

(h) Unless there is a dispute about the compensation due to the Contractor, Defective Work, quality of the Work, compliance with the Contract Documents, completion itself, claims by the Owner, other matters in contention between the parties, within thirty (30) days after receipt and acceptance of the Schedule of Values and Certificate for Payment in proper form by the Architect/Engineer at the monthly pay meeting, which shall be considered the receipt date, the Owner shall pay to the Contractor the amount approved less all prior payments and advances whatsoever to or for the account of the Contractor. In the case of final payment, the completed Affidavit of Payment of Claims, and the Certificate of Completion by the Contractor shall accompany the final Schedule of Values and Certificate for Payment, which is forwarded to the Owner for payment. The date on which payment is due shall be referred to as the Payment Date. All prior estimates and payments including those relating to extra Work may be corrected and adjusted in any payment and shall be corrected and adjusted in the final payment. In the event that any request for payment by the Contractor contains a defect or impropriety, the Owner shall notify the Contractor of any defect or impropriety that would prevent payment by the Payment Date, within five (5) days after receipt of the Schedule of Values and Certificate for Payment by the Owner.

(i) Interest shall accrue on all amounts owed by the Owner to the Contractor that remain unpaid thirty (30) days following the Payment Date. Said interest shall accrue at the rate of six percent (6%) per annum. No interest shall accrue on retainage or when payment is delayed because of disagreement between the Owner and the Contractor regarding the quantity, quality, or timeliness of the Work, including, but not limited to, compliance with Contract Documents or the accuracy of any Request for Payment received. This exception to the accrual of interest stated in the preceding sentence shall apply only to that portion of a delayed payment that is actually the subject of such a disagreement and shall apply only for the duration of such disagreement. Nothing contained herein shall be interpreted, however, to prevent the withholding of retainage to assure faithful performance of the Contract. These same provisions relating to payment of interest to the Contractor shall apply also to the computation and accrual of interest on any amounts due from the Contractor to the Owner for deductive change orders and to amounts due on any claims by the Owner. The date of mailing of any payment by the U.S. Mail is deemed to be the date of payment to the addressee.

(j) The acceptance by the Contractor of the Final Payment shall be and operate as a release to the Owner of all claims by the Contractor, its Subcontractors and Suppliers, and of all liability to the Contractor whatever, including liability for all things done or furnished in connection with this Work, except for things done or furnished which are the subject of unresolved claims for which the Contractor has filed a timely written notice of intent, provided a claim is submitted no later than sixty (60) days after Final Payment. Acceptance of any interest payment by the Contractor shall be a release of the Owner from claims by the Contractor for late payment.

(k) No certificate for payment issued, and no payment, final or otherwise, no certificate of completion, nor partial or entire use or occupancy of the Work by the Owner, shall be an acceptance of any Work or materials not in accordance with the Contract, nor shall the same relieve the Contractor of responsibility for faulty materials or Defective Work or operate to release the Contractor or its Surety from any obligation under the Contract, the Standard Performance Bond and the Standard Labor and Material Payment Bond.

37. PAYMENTS BY CONTRACTOR (§2.2-4354, *Code of Virginia*)

Under §2.2-4354, *Code of Virginia*, the Contractor is obligated to:

(a) Within seven (7) days after receipt of amounts paid to the Contractor by the Owner for Work performed by the Subcontractor or Supplier under this Contract,

(1) Pay the Subcontractor or Supplier for the proportionate share of the total payment received from the Owner attributable to the Work performed by the Subcontractor or the materials furnished by the Supplier under this Contract; or

(2) Notify the Subcontractor or Supplier, in writing, of its intention to withhold all or a part of the

Subcontractor or Supplier's payment with the reason for nonpayment;

(b) Pay interest to the Subcontractor or Supplier on all amounts owed by the Contractor that remain unpaid after seven (7) days following receipt by the Contractor of payment from the Owner for Work performed by the Subcontractor or materials furnished by the Supplier under this contract, except for amounts withheld as allowed under Subsection (a)(2) of this Section.

(c) Include in each of its subcontracts a provision requiring each Subcontractor to include in each ofits subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower tier subcontractor. Each Subcontractor shall include with its invoice to, or request for payment from, the Contractor, a certification that that Subcontractor has paid each of its suppliers and lower tier subcontractors their proportionate share of previous payments received from the Contractor attributable to the Work performed or the materials furnished by it under this Contract.

The Contractor's obligation to pay interest to the Subcontractor or Supplier pursuant to Subsection (b) of this Section is not an obligation of the Owner. A modification to this Contract shall not be made for the purpose of providing reimbursement for such interest charge. A Contractor's cost reimbursement claim shall not include any amount for reimbursement of such interest charge.

38. CHANGES IN THE WORK

(a) The Owner may at any time, and without notice to the sureties, make changes in the Work which are within the general scope of the Contract, except that no change will be made which will increase the total Contract Price to an amount more than twenty percent (20%) in excess of the original Contract Price without notice to sureties and approval of its governing bodies. At the time of the Pre-construction Meeting described in Section 49(b), the Contractor and the Owner shall advise each other in writing of their designees authorized to accept and/or approve changes to the Contract Price and of any limits to each designee's authority. Should any designee or limits of authority change during the time this Contract is in effect, the Contractor or Owner shall give written notice to the other within seven (7) calendar days, utilizing the procedures set forth in these General Conditions. The Contractor agrees and understands that the authority of the Owner's designee is limited by Virginia Code §2.2-4309 and any other applicable statute.

In making any change, the charge or credit for the change shall be determined by one of the following methods as selected by the Owner:

(1) **Fixed Price:** By a mutually agreed fixed amount change to the Contract Price and/or time allowed for completion of the Work. The Change Order shall be substantiated by documentation itemizing the estimated quantities and costs of all labor, materials, and equipment required as well as any mark-up used. The price change shall include the Contractor's overhead and profit. See Subsections (d), (e), and (f) below.

(2) **Unit Price:** By using unit prices and calculating the number of net units of Work in each part of the Work which is changed, either as the Work progresses or before Work on the change commences, and by then multiplying the calculated number of units by the applicable unit price set forth in the Contract or multiplying by a mutually agreed unit price if none was provided in the Contract. No additional percentage markup for overhead or profit shall be added to the unit prices.

(3) **Cost Reimbursement:** By ordering the Contractor to perform the changed Work on a cost reimbursement basis by issuing two Change Orders citing this Subsection, an initiating Change Order, authorizing the changed Work, and a confirming Change Order approving the additional cost and time for the changed Work. The initiating Change Order shall:

(i) Describe the scope or parameters of the change in the Work;

(ii) Describe the cost items to be itemized and verified for payment and the method of

measuring the quantity of work performed;

(iii) Address the impact on the schedule for Substantial Completion;

(iv) Order the Contractor to proceed with the change to the Work;

(v) Order the Contractor to keep in a form acceptable to the Owner, an accurate, itemized account of the actual cost of the change in the Work, including, but not limited to, the actual costs of labor, materials, equipment, and supplies;

(vi) Order the Contractor-to annotate a copy of the Project schedule to accurately show the status of the Work at the time this first Change Order is issued, to show the start and finish dates of the changed Work, and the status of the Work when the changed Work is completed; and

(vii) State that a confirming Change Order will be issued to incorporate the cost of the ordered changed in the Work into the Contract Price and any change in the Contract Time for Completion or Contract Completion Date.

The Contractor shall sign the initiating Change Order acknowledging it has been ordered to proceed with the change in the Work. The Contractor's signature on each initiating Change Order citing this Subsection 38(a)(3) as the method for determining the cost of the Work shall not constitute the Contractor's agreement on the cost or time impact of the ordered Work.

Except as otherwise may be agreed to in writing by the Owner, such costs shall not exceed those prevailing for the trades or crafts (based upon rates established by the U.S. Department of Labor, Bureau of Statistics, or other generally recognized cost data publication), materials, and equipment in the locality of the Project, may include only those items listed as allowable in Subsection 38(e), and shall not include any of the costs listed as not allowable in Subsection 38(f). The Owner shall be permitted, on a daily basis, to verify such records and may require such additional records as are necessary to determine the cost of the change to the Work.

Within fourteen (14) days of the conclusion of such ordered Work, the Contractor and the Owner shall reach agreement on the cost for the ordered Work, based on the records kept and the Contractor's allowance for overhead and profit determined in accordance with the provisions as set forth in Subsections (d) and (f), below; and the change in the Contract Time for Completion or Contract Completion Date, if necessary as a result of the ordered Work. Such costs and time shall be incorporated into a confirming Change Order which references the initiating Change Order. If agreement on the cost and time of the changed Work cannot be reached within the fourteen (14) days allotted, the Contractor may file a claim for the disputed amount as provided for in Section 47.

(4) By issuing a unilateral change order in the amount deemed appropriate by the Owner for the Work. If the Contractor objects to the amount or scope of the change order then the Contractor may within the fourteen (14) days of the date of the change order file a claim for the disputed amount as provided for in Section 47.

(b) The Contractor shall review any change requested or directed by the Owner and shall respond in writing within fourteen (14) calendar days after receipt of the proposed change (or such other reasonable time as the Owner may direct), stating the effect of the proposed change upon its Work, including any increase or decrease in the time and price. The Contractor shall furnish to the Owner an itemized breakdown of the quantities and prices used in computing the proposed change in Contract Price.

The Owner shall review the Contractor's proposal and respond to the Contractor within thirty (30) days of receipt. If a change to the Contract Price and Time for Completion or Contract Completion Date are agreed upon, both parties shall sign the Change Order. If the Contract Price and Time for Completion or Contract Completion Date are not agreed upon, the Owner may direct the Contractor to proceed under Subsection 38(a)(3) above. Change Orders shall be effective when signed by both parties.

(c) In figuring changes, any instructions for measurement of quantities set forth in the Contract shall be followed.

(d) The percentage to be used in calculating both additive and deductive changes in the Work (other than changes covered by unit prices) shall be calculated paid by applying the following specified percentage markups only on the net cost of the changed Work (i.e., difference in cost between original and changed Work). Said percentages shall reasonably approximate the Contractor's overhead and profit but shall not exceed the percentages for each category listed below:

(1) If a Subcontractor does all or part of the changed Work, the Subcontractor's mark-up for overhead and profit on the Work it performs shall be a maximum of ten percent (10%). The Contractor's mark-up for the Subcontractor's price shall be a maximum of ten percent (10%).

(2) If the Contractor does all or part of the changed Work, its markup for overhead and profit on the changed Work it performs shall be a maximum of ten percent (10%).

(3) If a Sub-subcontractor at any tier does all or part of the changed Work, the Sub-subcontractor's markup on that Work shall be a maximum of ten percent (10%). The markup of a sub-subcontractor's Work by the Contractor and all intervening tiers of Subcontractors shall not exceed a total of ten percent (10%).

(4) Where Work is deleted from the Contract prior to commencement of that Work without substitution of other similar Work, one hundred percent (100%) of the Contract Price attributable to that Work shall be deducted from the Contract Price. However, in the event that material Submittals have been approved and orders placed for said materials, Contractor shall use reasonable diligence to minimize the cost to the Owner of cancelling any such order, in which event an amount equal to Contractor’s net reduction in the cost of the Work, if any, attributable to cancelation of the order shall be deducted from the Contract Price.

(e) Allowable changes in the Work may include the following:

(1) Labor costs for employees directly employed in the change in the Work, including salaries and wages plus the cost of payroll charges and fringe benefits and overtime premiums, if such premiums are explicitly authorized by the Owner.

(2) Materials incorporated into the change to the Work, including costs of transportation and storage, if applicable. If applicable, all cash discounts shall accrue to the Contractor, unless the Owner deposits funds with the Contractor to make such payments, and all trade discounts, rebates, refunds, and returns from the sale of surplus materials shall accrue to the Owner.

(3) Equipment incorporated in the changed Work or equipment used directly in accomplishing the Work. If rented expressly for accomplishing the change in the Work, the cost shall be the rental rate according to the terms of the rental agreement, which the Owner shall have the right to approve. If owned by the Contractor, the costs shall be a reasonable price based upon the life expectancy of the equipment and the purchase price of the equipment. If applicable, transportation costs may be included.

(4) Costs of increases in premiums for the Standard Labor and Material Payment Bond and the

Standard Performance Bond, provided coverage for the cost of the change in the Work results in such increased costs. At the Owner's request, the Contractor shall provide proof of its notification to the Surety of the change in the Work and of the Surety's agreement to include such change in its coverage. The cost of the increase in premium shall be an allowable cost but shall not be marked up.

(5) Contractor and Subcontractor overhead costs as set forth in Subsection (d) markups above.

(6) If the change in the Work also changes the Time for Completion or the Contract Completion Date by adding days to complete the Work, an itemized accounting of the following direct Site overhead expenses set forth in subparagraph (i) below may be considered as allowable costs for compensation in addition to those shown above:

(i) Direct Site Overhead Expenses:

The Contractor's per diem expenses, as shown by the itemized accounting for the following allowable direct Site overhead expenses: The Site superintendent's pro-rata salary, temporary Site office trailer, and temporary Site utilities including basic telephone service, electricity, heat, water and sanitary/toilet facilities for each day added by the change in the Work. All other direct expenses are covered by and included in the Subsection 38(d) markups above.

(7) Any other costs directly attributable to the change in the Work with the exception of those set forth in Subsection 38(f) below.

(f) Allowable costs for changes in the Work shall not include the following:

(1) Costs due to the negligence of the Contractor, any Subcontractor, Supplier, their employees or other persons for whom the Contractor is responsible**,** including, but not limited to, costs for the correction of Defective Work, for improper disposal of material, for equipment wrongly supplied, for delay in performing the Work, or for delay in obtaining materials or equipment.

(2) Home office expenses including payroll costs for the Contractor's officers, executives, administrators, accountants, counsel, timekeepers, clerks, and other similar administrative personnel employed by the Contractor, whether at the Site or in the Contractor's principal or branch office for general administration of the Work. These costs are deemed overhead included in the percentage markups allowable in Subsections 38(d) above.

(3) Home office, and field office expenses not itemized in Subsection 38(e)(6) above. Such items include, but are not limited to, expenses of Contractor's home and branch offices, Contractor's capital expenses, interest on Contractor's capital used for the Work, charges for delinquent payments, small tools, incidental job costs, rent, utilities, telephone and office equipment, and other general overhead expenses.

(g) All Change Orders, except the “initial” Change Orders authorizing work citing Subsection 38(a)(3) procedures, must state that the Contract Time for Completion or Contract Completion Date is not changed or is either increased or decreased by a specific number of days. The old Time for Completion and, if changed, the new Time for Completion must be stated.

If the Contractor requests an extension to the Time for Completion or a later Contract Completion Date, it must provide written justification for the extension to the Architect/Engineer and to the Owner. The written justification must demonstrate an anticipated actual increase in the time required to complete the Work beyond that allowed by the Contract as adjusted by prior change orders or amendments to the Contract, not just an increase or decrease in the time needed to complete some portion of the total Work. When a CPM schedule is required by the Contract, no extension to the Time for Completion or Contract Completion Date shall be allowed unless, and then only to the

extent that, the additional or changed Work increases the length of the critical path beyond the Time for Completion or Contract Completion Date. If approved, the increase in time required to complete the Work shall be added to the Time for Completion or Contract Completion Date.

The Owner may decrease, by Change Order, the Time for Completion or Contract Completion Date when an Owner-requested deletion from the Work results in a decrease in the actual time required to complete the Work as demonstrable on the Bar Graph Schedule or on the CPM Schedule, whichever is appropriate. The Contractor may submit a request to decrease, by Change Order, the Time for Completion or Contract Completion Date under the procedures and subject to the considerations set forth in Section 19(f). No request for such decrease shall be considered for approval unless the proposed shorter schedule is otherwise acceptable under Sections 19(b) or (c), whichever is applicable. The Change Order decreasing the Time for Completion or changing the Contract Completion Date must be signed by both the Owner and the Contractor.

With the exception of Change Orders under Subsection 38(a)(3), which shall arrive at a change to the Contract Price and any change to time using the procedures set forth therein, each Change Order shall include all time and monetary impacts of the change, whether the Change Order is considered alone or with all other changes during the course of the Project. Failure to include a change to time and Contract Price attributable to such change in time under Section 38(a)(1) or (2) shall waive any change to the time and Contract Price unless the parties mutually agree in writing to postpone a determination of the change to time related impacts of the change. Such a determination may be postponed not more than forty-five (45) days to give the Contractor an opportunity to demonstrate a change in the time and price needed to complete the Work. During any such postponement, the Work shall proceed, unless the Owner agrees otherwise.

If at any time there is a delay in the critical path of the Work due to postponement, due to the Contractor's efforts to justify an extension of the time or an increase in the Contract Price, or due to the Contractor's refusal to proceed with any of the Work pending agreement on a change in time or price, such delay and any Contractor costs resulting from it shall not serve as the basis for the extension of the Time for Completion or Contract Completion Date or for an increase in the Contract Price.

(h) The acceptance by the Contractor of any payment made by the Owner under a Change Order shall be and operate as a release to the Owner of all claims by the Contractor and of all liability owing to the Contractor for all things done or furnished in connection with the Work described in the Change Order. The execution of any Change Order by the Owner shall not be an acceptance of any Work or materials not in accordance with the Contract Documents, nor shall it relieve the Contractor of responsibility for faulty materials or workmanship or operate to release the Contractor or its surety from any obligation arising under the Contract or the Standard Performance Bond or Standard Labor and Material Payment Bond.

(i) Payments will not be made for any Work, labor or materials on a unit price or Subsection 38(a)(3) basis until the Contractor has furnished the Owner documents, certified as true and correct by an authorized officer or agent of the Contractor, evidencing the cost of such Work, labor and materials. The Owner may require any or all of the following documentation to be provided by the Contractor.

For Work performed on a Unit Price basis:

(1) certified measurements of authorized and approved excavations, over-excavations, fills and/or backfills, and similar work; and/or

(2) certified measurements of piling installed, caissons installed, and similar work; and/or

(3) daily records of waste materials removed from the Site and/or fill materials imported to the Site.

For Work performed on a Subsection 38(a)(3) basis:

(1) certified payroll records showing the name, classification, date, daily hours, total hours, rate, and extension for each laborer, foreman, supervisor or other worker;

(2) equipment type & model, dates, daily hours, total hours, rental rate or other specified rate, and extension for each unit of equipment;

(3) invoices for materials showing quantities, prices, and extensions;

(4) daily records of waste materials removed from the Site and/or fill materials imported to the Site;

(5) certified measurements of over-excavations, piling installed and similar work; and/or

(6) transportation records for materials, including prices, loads, and extensions.

Requests for payment shall be accompanied and supported by invoices for all materials used and for all transportation charges claimed. If materials come from the Contractor's own stock, then an affidavit may be furnished, in lieu of invoices, certifying quantities, prices, etc. to support the actual cost.

39. EXTRAS

If the Contractor claims that any instructions given to him by the Owner, by drawings or otherwise, involve extra Work which increases the scope of the Contract, then, except in emergencies endangering life or property, it shall give the Owner written notice thereof before proceeding to execute the Work. Said notice shall be given promptly enough to avoid delaying the Work and in no instance later than fourteen (14) days after the receipt of such instructions. Should it not be immediately clear to the Contractor that the change involves extra Work outside the scope of the Contract, written notice shall be sufficient if given as soon as possible after such realization, but in no event later than fourteen (14) days after the start of such Work. If the Owner agrees, a Change Order shall be issued as provided in Section 38 of these General Conditions, and any additional compensation shall be determined by one of the three (3) methods provided in Subsection 38(a), as selected by the Owner. If the Owner does not agree, then any claims for compensation for the extra Work shall be filed in accordance with Section 47.

40. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

If the Work should be stopped under an order of any court or other public authority for a period of ninety (90) days through no fault of the Contractor or anyone employed by him, or if the Owner should fail to pay to the Contractor within thirty (30) days any sum certified by the Owner when no dispute exists as to the sum due or any provision of the Contract, then the Contractor may, upon ten (10) calendar days written notice to the Owner, stop Work or terminate the Contract and recover from the Owner payment for the cost of the Work actually performed, together with overhead and profit thereon, but profit on the Work performed shall be recovered only to the extent that the Contractor can demonstrate that it would have had profit on the entire Contract if it had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed. The Contractor may recover the reasonable cost of physically closing down the Site, but no other costs of termination. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. In no event shall termination of the Contract by the Contractor terminate the obligations of the Contractor's surety on its payment and performance bonds.

41. OWNER'S RIGHT TO TERMINATE THE CONTRACT FOR CAUSE

(a) If the Contractor should be adjudged as bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, the Owner may terminate the Contract. If the Contractor should refuse or should repeatedly fail, except in cases for which extension of time is provided, to supply enough properly skilled workers or proper

materials and equipment, or if it should fail to perform the Work in a diligent, efficient, workmanlike, skillful, and careful manner, or if it should fail or refuse to perform the Work in accordance with the Contract Documents, or if it should fail to make prompt payment to Subcontractors or Suppliers of material or labor, or if it should disregard laws, ordinances or the written instructions of the Architect/Engineer or the Owner, or otherwise be in substantial violation of any provision of the Contract, then the Owner may terminate the Contract.

(b) Prior to termination of the Contract, the Owner shall give the Contractor and its surety ten (10) calendar days written notice pursuant to Section 1 ("Definitions") of these General Conditions, during which the Contractor and/or its surety may rectify the basis for the notice. If rectified to the satisfaction of the Owner within said ten (10) days, the Owner may rescind its notice of termination. If not, the termination for cause shall become effective at the end of the ten (10) day notice period without further notice to the Contractor. In the alterative, the Owner may, in writing, postpone the effective date of the termination for cause, at its sole discretion, if it should receive reassurances from the Contractor and/or its surety that the basis for the termination will be remedied in a time and manner that the Owner finds acceptable. If at any time after such postponement, the Owner determines that Contractor and/or its surety has not or is not likely to rectify the causes of termination in an acceptable manner or within the time allowed, then the Owner may immediately terminate the Contract for cause, without the necessity of further ten (10) day notice, by notifying the Contractor and its surety in writing of the termination. In no event shall termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.

(c) Upon termination of the Contract becoming effective, the Owner shall take possession of the Site and of all materials, tools and equipment thereon and shall proceed as follows:

(1) If no security has been provided pursuant to Section 8 herein, the Owner shall finish the Work by whatever method it may deem expedient. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract Price, the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others.

(2) If security has been provided pursuant to Section 8 herein, the Owner shall provide Notice to the Surety that termination of the Contract became effective and proceed as set forth in the Standard Performance Bond, and the Terms and Conditions therein. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract Price and the penal amount of the Standard Performance Bond, the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others.

(d) If it should be judicially determined that the Owner improperly terminated this Contract for cause, then the termination shall be deemed to be a termination for the convenience of the Owner, and the Contractor's rights and remedies shall be solely limited to those provided by Section 42 of these General Conditions.

(e) Termination of the Contract under this Section is in addition to and without prejudice to any other right or remedy of the Owner. Any actions by the Owner permitted herein shall not be deemed a waiver of any other right or remedy of the Owner under the Contract or under the law. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. The provisions of this Section shall survive termination of the Contract.

42. TERMINATION BY OWNER FOR CONVENIENCE

(a) Owner may terminate this Contract, in whole or in part, at any time without cause upon giving the Contractor written notice of such termination pursuant to Section 1 ("Definitions") of these General Conditions. Upon such termination, the Contractor shall immediately cease Work and remove from the Site all of its labor forces and such of its materials as Owner elects not to purchase or to assume

in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as Owner may require to assign to the Owner the Contractor's interest in all Subcontracts and purchase orders designated by Owner. After all such steps have been taken to Owner's satisfaction, the Contractor shall receive as full compensation for termination and assignment the following:

(1) Amounts due for Work performed in accordance with the Contract subsequentto the latest approved Schedule of Values and Certificate for Payment through the date of termination;

(2) All amounts then otherwise due under the terms of this Contract associated with the Work performed prior to the date of termination; and

(3) Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination.

The Contractor shall not be entitled to any compensation or damages for lost profits or for any other type of contractual compensation or damages other than those provided in Subsection 42(a). The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. Upon payment of the foregoing, Owner shall have no further obligations to Contractor of any nature. The Contractor agrees to waive all claims against the Owner for any consequential damages that may arise from or relate to the Owner’s termination of the Contract including, but not limited to, damages for loss of revenue, income, profit, business, reputation, or bonding capacity.

(b) In no event shall termination for the convenience of the Owner terminate the obligations of the Contractor's surety on its payment and performance bonds.

(c) Any actions by the Owner permitted herein shall not be deemed a waiver of any other right or remedy of the Owner under the Contract or under the law. The provisions of this Section shall survive termination of the Contract.

43. DAMAGES FOR DELAYS; EXTENSION OF TIME

(a) **Excusable Non-Compensable Delays:** If and to the extent that the Contractor is delayed at any time in the progress of the Work by strikes, fires, unusual delays in transportation or unavoidable casualties, or other unforeseeable causes outside the Owner's or Contractor's control, with the exception of delays caused by weather provided for in Section 6 for which the Contractor intends to request an extension of either the Time for Completion or the Contract Completion Date, as the case may be, then the Contractor shall give the Owner and Architect/Engineer written notice of the delay within fourteen (14) days of the inception of the delay. The Contractor shall also give written notice to the Owner and Architect/Engineer of the termination of the delay not more than fourteen (14) days after such termination. If the Owner agrees with the existence and impact of the delay, the Owner shall extend the ,time for Completion, the Contract Completion Date or Final Completion, as the case may be, for the length of time that the date for Substantial Completion or Final Completion was actually delayed thereby, and the Contractor shall not be charged with liquidated or actual damages for delay during the period of such extension nor shall the Contractor be due compensation or damages of any kind, under any theory of law, as a result of such delay, the impact of such delay, or acceleration of Work as a result of such delay, the impact of such delay, or acceleration of Work as a result of such delay. In the event a CPM schedule is required by the Contract, no extension of the Time for Completion or Contract Completion Date shall be granted unless the Contractor demonstrates a delay in the critical path of the approved CPM schedule or approved bar graph schedule.

(b) **Excusable Compensable Delays:** If and to the extent that the Contractor is unreasonably delayed at any time in the progress of the Work by any act or omission of the Owner, its agents or employees, and due to causes within the Owner's control, and the Contractor intends to request an extension of either the Time for Completion or the Contract Completion Date, as the case may be, and/or additional compensation for damages, if any, caused by the delay, the Contractor shall notify the

Owner and the Architect/Engineer immediately at the time of the occurrence giving rise to the delay by the fastest means available and shall give written notice no later than fourteen (14) working days after inception of the delay. The Contractor's written notice shall specify the nature of the delay claimed by the Contractor, the cause of the delay and the impact of the delay on the Contractor's Work schedule. The Owner shall then have three (3) working days to respond to the Contractor's notice with a resolution, remedy, or direction to alleviate the delay or rejection of the Contractor's notice of delay. The Owner's failure to respond within the time required shall be deemed to be a rejection of the Contractor's notice. The Contractor shall also give written notice to the Owner and Architect/Engineer of the termination of the delay not more than fourteen (14) days after such termination. If and to the extent that a delay is caused by or due to the Owner or Architect/Engineer taking any actions permitted or required by the Contract, the Contractor shall be entitled to an extension of time or additional compensation only for the portion of the delay that is unreasonable, if any.

(c) **Non-Excusable Non-Compensable Delays:** The Contractor shall not be entitled to an extension of the Time for Completion or Contract Completion Date or to any additional compensation for delays if and to the extent they are (1) caused by acts, omissions, fault, or negligence of the Contractor or its Subcontractors, agents or employees, or due to foreseeable causes within their control, including, but not limited to delays resulting from Defective Work, including workmanship and/or materials; from rejected Work which must be corrected before dependent work can proceed; from Defective Work or rejected Work for which corrective action must be determined before like work can proceed; from incomplete, incorrect, or unacceptable Submittals or samples, or from the failure to furnish enough properly skilled workers, proper materials or necessary equipment to diligently perform the Work in a timely manner in accordance with the Project schedule; or (2) due to causes that would entitle the Owner to recover delay costs or damages.

(d) No extension of time or additional compensation, if applicable, will be granted for any delay unless the claimed delay directly affects the critical path of the approved CPM schedule or the schedule shown on the approved bar graph schedule, whichever is applicable, and any float has been consumed. No extension of time or additional compensation shall be given for a delay if the Contractor failed to give notice in the manner and within the time prescribed in Subsections 43(a) or (b) above, whichever applies. Furthermore, no extension of time or additional compensation shall be given for any delay unless a written request therefor is made in writing to the Owner within twenty (20) days of the end of the delay. The request shall state the cause of the delay, the number of days of extension requested and any additional compensation requested by the Contractor. Failure to give written notice of either the inception or the termination of the cause of delay or failure to present a claim for extension of time and/or monetary compensation within the times prescribed shall constitute a waiver of any claim for extension or additional compensation based upon that cause.

(e) Requests for extensions of time and/or compensation for delays pursuant to Subsection 43(b) above must be substantiated by itemized data and records clearly showing that the Work delayed was on the critical path of the approved CPM schedule or on the sequence of Work on the approved bar graph schedule, as modified, whichever applies, and that the additional time and/or costs incurred by the Contractor are directly attributable to the delay in the Work claimed. Furthermore, compensation for delay shall be calculated from the contractual Time for Completion or Contract Completion Date, as adjusted by Change Order, and shall not be calculated based on any early completion planned or scheduled by the Contractor, unless a Change Order has been executed pursuant to Section 19(f) changing the Time for Completion or the Contract Completion Date to reflect such early completion. See Section 19 for procedures for the Contractor to follow if it plans early completion of the Work and wishes to request a Change Order reflecting the early completion date.

Agreed Compensation for Owner Delay:

If, and to the extent that the Contractor is entitled to an extension in the Time for Completion or the Contract Completion Date and additional compensation purely as a result of delay under Subsection 43(b), and not as a result of a change in the Work under Section 38, the agreed compensation due the Contractor for days added to the Time for Completion or the Contract Completion Date for each day

of such delay shall be the per diem expenses as determined from an itemized accounting of the direct Site overhead expenses only as specified in Subsections 38(e)(6)(i). These Expenses shall exclude any and all expenses specified in Subsection 38(f).

(f) If the Contractor submits a claim for delay damages pursuant to Subsection 43(b) above, the Contractor shall be liable to the Owner for a percentage of all costs incurred by the Owner in investigating, analyzing, negotiating and litigating the claim, which percentage shall be equal to the percentage of the Contractor's total delay claim which is determined through litigation to be false or to have no basis in law or in fact. (Section 2.2-4335, *Code of Virginia*)

(g) Any change in the Contract Time for Completion or Contract Completion Date shall be accomplished only by issuance of a Change Order.

(h) **Agreed Compensation for Contractor Delay:** If the Contractor fails to complete the Work within the Time for Completion or the Contract Completion Date, the Contractor shall be liable to the Owner in the amounts set forth in the Supplemental General Conditions, if any, not as a penalty, but as fixed, agreed and liquidated damages for delay until the Work is substantially or finally completed as the case may be. If liquidated damages are not so fixed in the Supplemental General Conditions, the Contractor shall be liable for any and all actual damages sustained as a result of delay. In addition to damages for delay, whether liquidated or actual, the Contractor shall also be liable for any and all actual damages sustained by the Owner as a result of any other breach of the Contract, including, but not limited to, Defective Work and abandonment of the Contract.

(i) If liquidated damages are provided by the Supplemental General Conditions, the following provisions apply:

(1) If the Work is not substantially complete by the Time for Completion or Contract Completion Date, the Contractor shall owe to the Owner, not as a penalty but as Step One liquidated damages, the sum stated in the Supplemental General Conditions for Step One liquidated damages for each and every partial or total calendar day of delay in Substantial Completion.

(2) Once the Work is substantially complete, the accrual of Step One liquidated damages shall cease and the Contractor shall have thirty (30) calendar days in which to achieve Final Completion of the Work.

(3) If Final Completion of the Work is not achieved on or before the thirtieth (30th) calendar day after Substantial Completion, and if the Owner has not granted any extension of time, the Contractor shall owe to the Owner, not as a penalty but as Step Two liquidated damages, the sum stated in the Supplemental General Conditions as Step Two liquidated damages for each and every partial or total calendar day of delay in Final Completion.

(j) The Contractor waives any and all defenses as to the validity of any liquidated damage provisions in the General Conditions or other Contract Documents, or of any liquidated damages assessed against the Contractor, on the grounds that such damages are void as penalties or are not reasonably related to actual damages.

44. INSPECTION FOR SUBSTANTIAL COMPLETION & FINAL COMPLETION

(a) The Contractor shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Contractor, of the date when the Work or designated portion thereof, will be, in its opinion, substantially complete and ready for inspection and testing to determine if it has reached Substantial Completion. The notice shall be given at least ten (10) days in advance of said date. Inspection and testing shall take place at a time(s) mutually agreeable to the Contractor and the Owner.

The inspection shall include a demonstration by the Contractor that all equipment, systems, and

operable components of the Project function properly and in accordance with the Contract Documents. The Contractor shall furnish access for the inspection and testing as provided in Section 21 of these General Conditions. The inspection and testing shall determine whether Substantial Completion has been accomplished and shall result in a written list of unfinished Work and Defective Work, commonly referred to as a "punch list," which must be finished and corrected to obtain Final Completion.

After successful completion of the testing and the Architect/Engineer determines that, in its opinion, the Work either in whole or in part, is Substantially Complete, the Architect/Engineer shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Architect/Engineer), that the Work, or a specified portion thereof, is recommended to be declared Substantially Complete. The Owner shall notify the Contractor, in writing, of the date the Owner accepts the Work, or the specified portion thereof, as Substantially Complete or the Owner shall notify the Contractor of the deficiencies to be corrected or completed before such Work will be accepted as substantially complete.

(b) The Contractor shall notify the Owner, in writing on the Certificate of Completion by the Contractor of the date when the Work has reached or will reach Final Completion and will be ready for final inspection and testing. The notice shall be given at least five (5) days in advance of said date. That inspection and any necessary testing shall be conducted in the same manner as the inspection for Substantial Completion. When the Work is finally and totally complete, including the elimination of all defects, the Work shall be finally accepted by the Owner and final payment shall be made in accordance with Section 36 of these General Conditions.

(c) Representatives of the Building Official may participate in the Substantial Completion Inspection. The Owner may elect to have other persons of its choosing also participate in the inspections. If one or more Substantial or Final Completion re-inspections are required, the Contractor shall reimburse the Owner for all costs of re-inspection or, at the Owner**'s** option, the costs may be deducted from payments due to the Contractor.

(d) Approval of Work at or as a result of any inspection required herein shall not release the Contractor or its surety from responsibility for complying with the Contract.

45. GUARANTEE OF WORK

(a) Except as otherwise specified, all Work shall be, and is hereby, guaranteed by the Contractor against defects resulting from the use of materials, equipment or workmanship, which are defective, inferior, or not in accordance with the terms of the Contract, for one (1) year from the date of Final Completion of the entire Project by the Owner. Equipment and facilities which have seasonal limitations on their operation (e.g., heating or air conditioning units) shall be guaranteed for one (1) full year from the date of seasonally appropriate tests and acceptance, in writing, by the Owner. Where the Owner agrees to take Beneficial Occupancy of a portion or phase of the Work which has been determined to be substantially complete before the entire Work is finally completed, the guarantees for the materials, equipment and workmanship in that portion or phase shall begin on the date that the Owner takes Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions, Special Conditions, or by separate agreement.

(b) If, within any guarantee period, Work which is not in accordance with the Contract, Defective Work, or inferior material, equipment or workmanship is noted by the Owner which requires or renders necessary repairs or changes in connection with the guaranteed Work, the Contractor shall, promptly upon receipt of notice from the Owner, such notice being given not later than two weeks after the guarantee period expires, and without expense to the Owner:

(1) Place in satisfactory condition in every particular all of such guaranteed Work and correct all defects, inferior materials, equipment or workmanship therein;

(2) Make good all damage to the structure or Site or equipment or contents thereof, which, in

the opinion of the Owner, is the result of the use of materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the Contract; and

(3) Make good any Work or materials or the equipment and contents of structures and/or Site disturbance that results from fulfilling the provisions of this Section.

(c) In any case, when in fulfilling the requirements of the Contract and this guarantee or any other guaranty or warranty, the Contractor disturbs any work performed by a separate contractor, it shall restore such work to a condition satisfactory to the Owner and guarantee such restored work to the same extent as if it was guaranteed under this Contract.

(d) If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee as set forth in this Section, the Owner may have the defects or inferior materials, equipment or workmanship corrected and the Contractor and its surety shall be liable for all expense incurred.

(e) All special warranties and guarantees applicable to definite parts of the Work that may be stipulated in or required by the Contract Documents shall be subject to the terms of this Section during the first year of the life of such special warranty or guarantee.

(f) The guarantee of this Section shall be in addition to and not in lieu of all other warranties, express or implied, applicable to or arising from this Contract or by law.

(g) Nothing contained in this Section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including liability for Defective Work under Section 30. This Section relates only to the specific obligation of the Contractor as set forth in this Section to correct the Work and does not limit the time within which his obligation to comply with the Contract Documents may be sought to be enforced, nor the time within which proceedings may be commenced to establish the Contractor's liability with respect to its other obligations under the Contract Documents.

(h) In the event the Work of the Contractor is to be modified by another contractor, either before or after the Final Inspection provided by Section 44 of the General Conditions, the first Contractor shall remain responsible in all respects under this Section's Guarantee of Work and under any other warranties or guarantees, express or implied, applicable to or arising from this Contract or by law. However, the Contractor shall not be responsible for any defects in material or workmanship introduced by the contractor modifying its Work. The first Contractor and the contractor making the modifications shall each be solely responsible for its respective work. The contractor modifying the earlier Work shall be responsible for any damage to or defect introduced into the Work by its modification. If the first contractor claims that a subsequent contractor has introduced defects of materials and/or workmanship into its Work, it shall be the burden of the contractor making the claim to demonstrate clearly the nature and extent of such introduced defects and the other contractor's responsibility for those defects. Any contractor modifying the work of another shall have the same burden if it asserts that defects in its work were caused by the contractor whose work it is modifying.

(i) The Contractor shall indemnify and hold harmless the Owner and the Owner's consultants, representatives, agents and employees from and against any and all claims, causes of action, losses, costs, expenses or damages, including but not limited to attorney's fees, of any kind or nature whatsoever, arising from or relating to any bodily injury, including sickness, disease or death, or any property damage, that results from or arises out of the work performed by the Contractor, or by or in consequence of any neglect in safeguarding the Work, through the use unacceptable materials in the Work, or resulting from any act, omission, negligence or misconduct of the Contractor, any of its Subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable. The Owner may retain as much of the moneys due the Contractor under the Contract as are reasonably necessary to ensure that a fund will be available to pay a settlement or judgement of such suits, actions or claims.

46. ASSIGNMENTS

Neither party to the Contract shall assign the Contract in whole or any part without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the prior written consent of the Owner. Consent to assignment shall not be unreasonably withheld. No assignment shall relieve any party from its obligations under the Contract.

47. CONTRACTUAL DISPUTES

(a) Contractual claims, whether for money or for other relief, shall be submitted, in writing, no later than sixty (60) days after Final Payment; however, written notice of the Contractor's intention to file such claim must be given within fourteen (14) days of the time of the occurrence or beginning of the Work upon which the claim is based. Such notice shall state that it is a "notice of intent to file a claim" and include a written statement describing the act or omission of the Owner or its agents that allegedly caused or may cause damage to the Contractor and the nature of the claimed damage. The submission of a timely notice is a prerequisite to recovery under this Section. Failure to submit such notice of intent within the time and in the manner required shall be a conclusive waiver of the claim by the Contractor. Oral notice, the Owner's actual knowledge, or a written notice given after the expiration of fourteen (14) days of time of the occurrence or beginning of the Work upon which the claim is based, shall not be sufficient to satisfy the requirements of this Section. Although the Contractor may be required to submit certain classes of claims prior to Final Payment, and the Contractor is not prevented from submitting claims during the pendency of the Work, the Owner shall not be obligated to render a final written decision on any claim until after Final Payment. All claims shall state that they are "claims" pursuant to this Section, be submitted along with all practically available supporting evidence and documentation and the certification required by Subsection 47(f), and request a final decision. Certificates for payment, applications for payment, vouchers, invoices and similar requests for payment submitted for work done by the Contractor in accordance with the expected contract performance are routine submissions and shall not be considered claims under this Section. Proposed or requested change orders, demands for money compensation or other relief, and correspondence and e-mails to the Owner or its representatives, which do not strictly comply with the requirements of this Section, shall not be considered claims under this Section.

(b) No written decision denying a claim or addressing issues related to the claim shall be considered a denial pursuant to this Section unless the written decision makes express reference to this Section and is signed by the County Administrator or his designee. The Contractor may not institute legal action prior to receipt of the Owner's final written decision on the claim unless the Owner fails to render such a decision within ninety (90) days of submission of the claim, at which time the claim shall be deemed denied.

(c) The decision of the County Administrator or other signatory on the Contract shall be final and conclusive unless the Contractor within six (6) months of the date of the final decision on a claim, initiates legal action as provided in § 2.2-4364 of the *Code of Virginia*. Failure of the Owner to render a decision within 90 days shall not result in the Contractor being awarded the relief claimed nor shall it result in any other relief or penalty. The sole result of the Owner's failure to render a decision within 90 days shall be the Contractor's right to immediately institute legal action. No administrative appeals procedure pursuant to § 2.2-4365 of the *Code of Virginia* has been established for contractual claims under this Contract.

(d) Pursuant to **§** 2.2-4366, Alternative Dispute Resolution, of the *Code of Virginia*, the Owner may enter into an agreement with the Contractor to submit disputes arising from the performance of this Contract to arbitration and utilize mediation and other alternative dispute resolution procedures. However, such procedures entered into by the Owner, or any department, institution, division, commission, board or bureau thereof, shall be non-binding and subject to § 2.2- 514, as applicable.

(e) In the event that a dispute, claim or controversy between the Owner and the Contractor arises regarding the requirements of the Contract, the performance of the Work, payment due the Contractor, the terms

of any Change Order, or otherwise, the Contractor shall not stop, suspend or delay the Work or any part of the Work to be performed under the Contract, or under any Change Order, or as directed by the Owner. The Contractor shall continue to diligently prosecute the Work to completion, including work required in any Change Order or as directed by the Owner.

(f) Along with a claim submitted under this Section, the Contractor shall submit a Claim Certification Form (DGS-30-234) certifying that the claim is a true and accurate representation of the claim. Claims submitted without the Claim Certification Form shall not constitute a proper claim and, if not submitted with the certification within the time required, shall be deemed to be waived.

(g) The remedies provided in these General Conditions, including costs, expenses, damages or extensions of time, shall be the Contractor's sole remedies for the acts, omissions or breaches of the Owner, which shall survive termination or breach of the Contract.

48. TRAINING, OPERATION AND MAINTENANCE OF EQUIPMENT

(a) As a part of the Work, the Contractor in conjunction with its Subcontractors and Suppliers shall provide the Owner's operations and maintenance personnel with adequate instruction and training in the proper operation and maintenance of any equipment, systems, and related controls provided or altered in the Work. The training requirements may be further defined in the specifications.

(b) The Contractor shall provide the Owner with a minimum of two (2) copies of operating, maintenance and parts manuals for all equipment and systems provided in the Work. Further specific requirements may be indicated in the specifications.

49. PROJECT MEETINGS

(a) The intention of this Section is that the Contractor and the Owner have timely exchange of information and cooperate to accomplish the Work as required by the Contract Documents. The Contractor is responsible for managing the Work, obtaining approvals and requesting clarifications on a timely, reasonable basis. The Owner is responsible for making a reasonable effort to provide timely responses to the Contractor.

(b) **Preconstruction Meeting:**
Prior to the start of construction and no later than fifteen (15) calendar days after the Notice to Proceed, a "Preconstruction" meeting shall be held with attendees to include the Owner's Project Manager and Project Inspector, the Architect/Engineer's project manager and representatives of each design discipline involved in the Project, the Contractor's project manager and superintendent (and scheduler, if Contractor desires), and representatives of the Contractor's major Subcontractors. The purpose of the meeting is to clarify and discuss the specifics related to, but not limited to, the following:

(1) Persons involved from each entity and their chain of authority including the names of persons authorized to sign Change Orders and any limits to their authority. Name of Contractor's on-site certified Responsible Land Disturber.

(2) Names, addresses, telephone numbers and FAX numbers to be used for Requests for Information (RFI), Requests for Clarification (RFC), Requests for Proposals (RFP), shop drawings, Submittals, and notices.

(3) Contractor's proposed construction schedule, including order schedules for building materials and Owner's sequencing requirements, if any.

(4) Schedule of Values and Certificate for Payment requirements and procedures.

(5) Procedures for shop drawings, product data and Submittals.

(6) Procedures for handling Field Orders and Change Orders.

(7) Procedures for Contractor's request for time extension, if any.

(8) Construction Site requirements, procedures and clarifications to include:
- Manner of conducting the Work
- Site specialties such as dust and erosion control, stormwater management, project signs, clean up and housekeeping, temporary facilities, utilities, security, and traffic
- Safety
- Layout of the Work
- Quality control, testing, inspections and notices required
- Site visits by the A/E and others
- Owner's Project Inspector duties
- Running Punch List
- As-Built Drawings
- Staging and storage of building materials

(9) Procedures and documentation of differing or unforeseen Site conditions

(10) Monthly Pay Meeting

(11) Assignment of responsibility for generation of meeting minutes of all project meetings.

(12) Project Close-Out requirements and procedures

(13) Project records

(c) **Monthly Pay Meeting:**
Section 36 establishes the requirement for a monthly pay meeting which will usually be held at or near the Site. In addition to Owner and Contractor representatives, the following representatives, at a minimum, should be available to attend portions of the meeting, as applicable or necessary:
- Owner's Project Inspector
- Contractor's project superintendent
- Architect/Engineer representative
- A representative of each subcontractor who performed work included in the current pay request.
- A representative of each subcontractor who is projected to perform work in the coming month.

The following topics should be included, as a minimum, in the monthly pay meeting:

(1) Observations of status, quality and workmanship of Work in progress

(2) Validation of the Schedule of Values and Certificate for payment

(3) Conformance with proposed construction schedule

(4) Outstanding Requests for Information, Requests for Clarification and Requests for Proposal

(5) Submittals with action pending

(6) Status of pending Change Orders

(7) Status of Running Punch List items

(8) Work proposed for coming pay period

(9) Discussions of any problems or potential problems which need attention

(d) **Other Meetings:**
Requirements for other meetings, such as progress meetings, coordination meetings, pre-installation meetings and/or partnering meetings, may be included in the Contract Documents.

50. FORUM SELECTION AND CHOICE OF LAW

(a) This Contract shall be governed by, and construed in accordance with, the laws of the Commonwealth of Virginia, without application of Virginia's conflict of law provisions. Venue for any litigation, suits, and claims arising from or connected with this Contract shall only be proper in the Roanoke County Circuit Court, or in the Roanoke County General District Court if the amount in controversy is within the jurisdictional limit of such court, and all parties to this Contract voluntarily submit themselves to the jurisdiction and venue of such courts, regardless of the actual location of such parties. The provisions of this Contract shall not be construed in favor of or against either party, but shall be construed according to their fair and customary meaning as if both parties jointly prepared this Contract.

1
2
3
4
5
6
148' - 0"
24' - 8"
57' - 4"
40' - 8"
14' - 0"
11' - 4"
A
B
C
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G
44' - 8"
90' - 0"
21' - 4"
17' - 4"
4' - 8"
2' - 0"
FITNESS
622 SF
WORKSHOP
129 SF
WH
WASH ALCOVE
21 SF
BUNKER GEAR
327 SF
HELMET & EQUIP. WASH
EXTRACTOR
DECON
284 SF
GEAR DRYER
HOSE STOR.
32 SF
HALLWAY
64 SF
HOUSE AIR
AIR ROOM
196 SF
CASCADE SYSTEM
RESTROOM
55 SF
APPARATUS BAY
4692 SF
COMMUNICATIONS
26 SF
CAPTAIN SLEEP
121 SF
SLEEP
112 SF
SLEEP
112 SF
SLEEP
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SLEEP
112 SF
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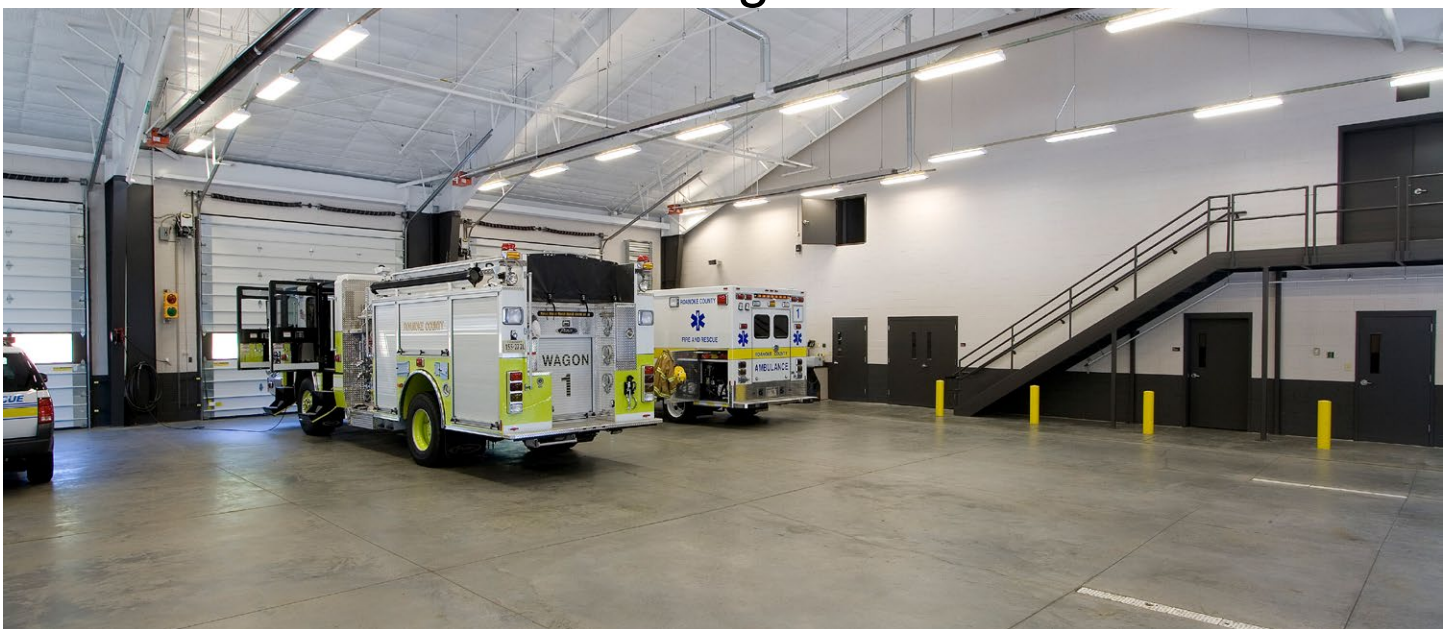
RESTROOM
78 SF
RESTROOM ADA
98 SF
RESTROOM ADA
98 SF
HALLWAY
402 SF
JANITOR
100 SF
W/D
LAUNDRY
146 SF
ELECTRICAL
107 SF
STORAGE
114 SF
IT
104 SF
HALLWAY
205 SF
FIRE RISER
106 SF
DAYROOM
429 SF
KITCHEN
384 SF
DW
DW
DINING
205 SF
PATIO
225 SF
HALLWAY
202 SF
RESTROOM
53 SF
CAPTAIN OFFICE
119 SF
FFWA
315 SF
VESTIBULE
159 SF

Exhibit 4 to Interim Agreement 2023-020



BONSACK FIRE STATION

Solicited PPEA Proposal for Construction - *Detailed Phase*

RFP# 2023-020

COPY - REDACTED

November 28, 2022 | 2:00 PM

G&H Contracting INCORPORATED Salem, Virginia

Lexington Fire Station

Following a strict review process and designed after Lexington's historic local architecture, the 18,000 SF Lexington Fire Station includes 5 apparatus bays, arches, a bell tower, and a two color scheme brick façade.

TABLE OF CONTENTS

3.2. Introduction 1
- 3.2.1. Cover Letter 1
- 3.2.2. Executive Summary 2
- 3.2.3. Proposal Signature Sheet 3
- 3.2.4. Proprietary/Confidential Information 4
- 3.2.5. Changes to Conceptual Stage Proposal 4

3.3. Conceptual Project Plans 6
- 3.3.1. Site Plan 6
- 3.3.2. Building Concepts 7
- 3.3.3. System Narratives 11
  - Site Narrative 10
    - Site Pavements 10
    - Retaining Wall 10
  - Structural Narrative 10
  - Architectural Narrative 11
    - Apparatus Bays 12
    - Red/Yellow Zone 13
    - Green Zone 14
    - FF&E 16
  - M/E/P Narrative 16
    - HVAC 16
    - Electrical 17
    - Plumbing Pipes 20
    - Plumbing Fixtures 21

3.4. Additive Facility Enhancements 23
- 3.4.1. Enhancements Above Facility Requirements 23

3.5. Guarantees & Warranties 25
3.5.1. Design and Construction Team 25

3.6. Proposed County Responsibilities 27
3.6.1. Work Required by Roanoke County 27

3.7. Performance Management 29
3.7.1. Project Evaluation System 29

3.8. Project Cost & Schedule 31
3.8.1. Life Cycle Costs, Methodology, and Assumptions 31
3.8.2. Schedule of Values 32
3.8.3. Schedule 33
3.8.4. VE/VA Options for Consideration 34

3.9. Conflict of Interest 36
3.9.1. Executive Management 36

3.10. Conformance with Ethics in Public Contracting 37

3.11. Additional Information 39

3.2

INTRODUCTION

November 28, 2022

ATTN: Heath Honaker, County Purchasing Director
Purchasing Division
Roanoke County Administration Building
5204 Bernard Drive, Suite 300 F
Roanoke, VA 24018

Re: Solicited PPEA Proposals for Construction of Bonsack Fire Station
RFP# 2023-020

Dear Heath,

Thank you for inviting G&H Contracting to submit a Detailed Proposal for the new Bonsack Fire Station. We would like nothing more than to join your team and continue working on this project, as we have diligently considered all aspects, reviewed the input provided, and are ready to aid in providing solutions.

We know we are the right fit for this facility in this procurement format. Our team's experience and expertise on fire stations displayed in the conceptual phase, paired with our ability to gain this experience via the customary bid process, exemplifies why the PPEA process exists.

No company has done more because no other company could beat our price. Now that our project team has efficiently worked together through pre-construction, we are ready to continue these relationships in an official team atmosphere.

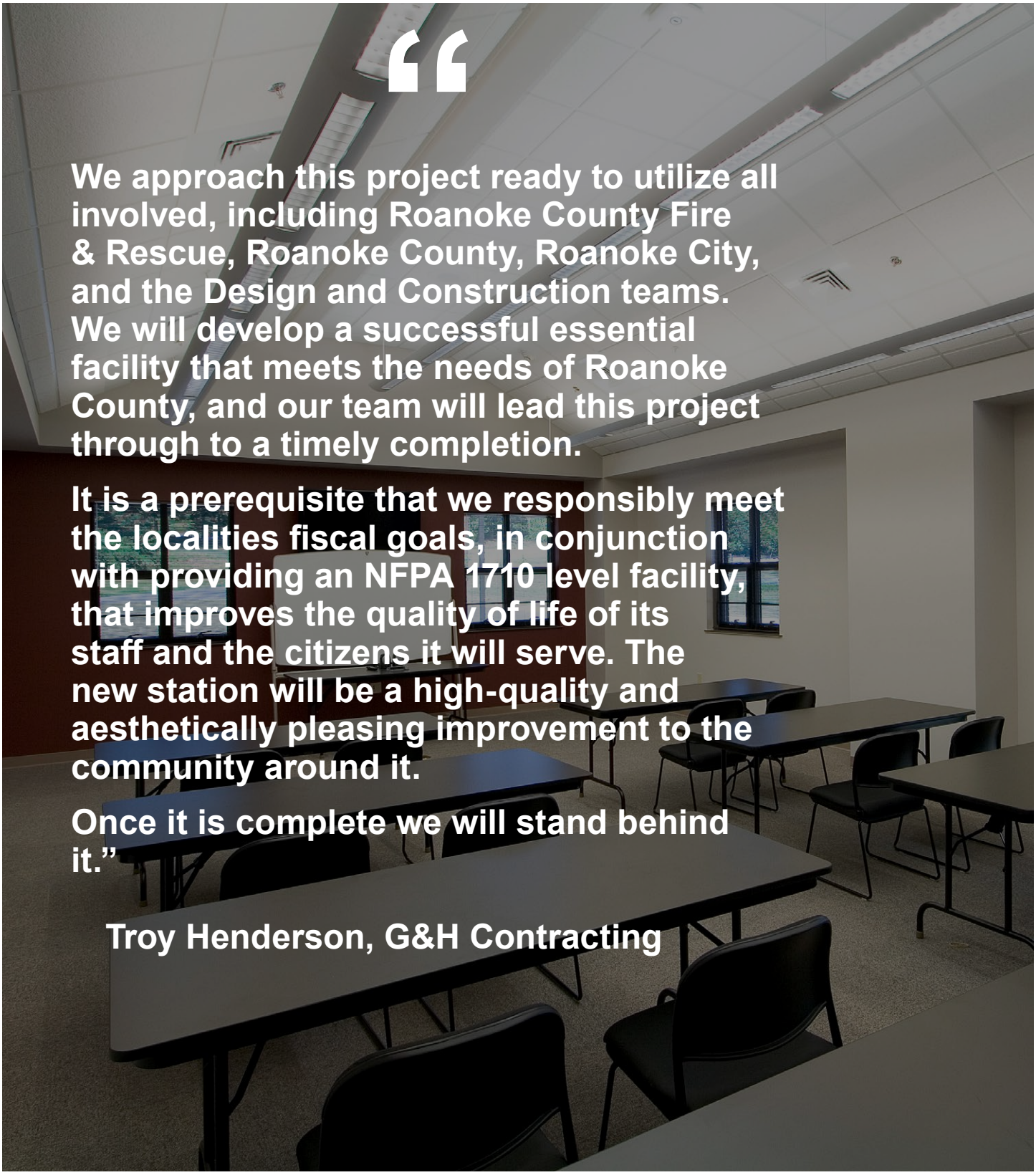
Our design team and subcontractor pool represents a group that has had the most collaborative communication and levels of experience on our fire stations. The admiration we have for Roanoke County's Fire & Rescue staff, and our ability to navigate Roanoke City, results in our team being the optimal choice from all angles.

Sincerely,

Troy Henderson, Vice President G&H Contracting
THenderson@ghcontracting.com

3.2. Introduction

3.2.2. Executive Summary



"

We approach this project ready to utilize all involved, including Roanoke County Fire & Rescue, Roanoke County, Roanoke City, and the Design and Construction teams. We will develop a successful essential facility that meets the needs of Roanoke County, and our team will lead this project through to a timely completion.

It is a prerequisite that we responsibly meet the localities fiscal goals, in conjunction with providing an NFPA 1710 level facility, that improves the quality of life of its staff and the citizens it will serve. The new station will be a high-quality and aesthetically pleasing improvement to the community around it.

Once it is complete we will stand behind it."

Troy Henderson, G&H Contracting

PPEA (RFP) DETAILED PHASE BONSACK FIRESTATION

RFP No. 2023-020
Issue Date: October 12, 2022
Title: PPEA - RFP - 2023-020 - Detailed Phase Bonsack Firestation

Issued By: **County of Roanoke**
Roanoke County Administration Building
Purchasing Division
5204 Bernard Drive, SW, Suite 300-F
Roanoke, VA 24018-0798
Phone (540) 772-2020

Email: hhonaker@roanokecountyva.gov

Sealed proposals will be received on or before **2:00 P.M., November 28, 2022** for furnishing the services and/or items described herein. The time of receipt shall be determined by the time clock stamp in the Purchasing office.

All questions must be submitted before **5:00 P.M**. on **November 17, 2022**. If necessary, an addendum will be issued and posted to the County website on the Current Bids/RFP Requests tab at https://www.roanokecountyva.gov/bids.aspx?bidID=1160.

If proposals are hand delivered or mailed, send directly to the Purchasing Division at the address listed above. If the Roanoke County Administration Building is closed for business at the time scheduled for the proposal opening, the sealed proposal will be accepted and opened on the next business day of the County, at the originally scheduled hour.

THIS PUBLIC BODY DOES NOT DISCRIMINATE AGAINST FAITH-BASED ORGANIZATIONS.

The County reserves the right to cancel this RFP and/or reject any or all proposals and to waive any informalities in any proposal.

This section is to be completed by the Offeror and this page must be returned with the proposal. In compliance with this request for proposal and subject to all terms and conditions imposed herein, which are hereby incorporated herein by reference, the undersigned offers and agrees to furnish the services and/or items requested in this solicitation if the undersigned is selected as the successful Offeror. Unless the proposal is withdrawn, the Offeror agrees that any prices or terms for such proposal shall remain valid for sixty (60) days after opening. Notices of proposal withdrawal must be submitted in writing to the Purchasing Division.

Legal Name and Address of Firm:

G & H Contracting, Inc. Date: 11/28/2022

1383 Southside Drive By: _____ (Signature in Ink)

Name: Troy Henderson (Please Print)

Salem, VA Zip: 24153 Title: Vice President

Phone: (540) 387-5059 FAX: (540) 387-3394

Email: THenderson@ghcontracting.com Business License# 901293, City of Salem

Virginia State Corporation Commission Identification Number: 03416328

3.2. Introduction

3.2.4. Proprietary/Confidential Information

The sections in this proposal we consider proprietary are:

3.3 Conceptual Project Plans
- 3.3.2. Building Concepts
- 3.3.3. System Narratives

3.4. Additive Facility Enhancements
- 3.4.1. Enhancements Above Facility Requirements

3.8. Project Cost & Schedule
- 3.8.2. Schedule of Values
- 3.8.3. Schedule
- 3.8.4. VE/VA Options for Consideration

3.9. Conflicts of Interest
- 3.9.1. Conflict of Interest Statement

3.2.5. Changes to Conceptual Stage Proposal

We have no changes to our Conceptual Stage Proposal.

3.3

CONCEPTUAL PROJECT PLANS

3.3.1. Site Plan

SITE & ZONING SUMMARY:

SITE ADDRESS:	3645 ORANGE AVE NE ROANOKE, VA 24012
OWNER:	PARKWAY WESLEYAN CHURCH INC
OWNER ADDRESS:	3645 ORANGE AVE NE ROANOKE, VA 24012
APPLICANT:	ROANOKE COUNTY BOARD OF SUPERVISORS
TAX MAP NUMBER:	7110105
EXISTING LOT SIZE:	± 70.7850 AC.
PROPOSED LOT SIZE:	± 2.25 AC.
EXISTING ZONING DISTRICT:	INPUD
PROPOSED ZONING DISTRICT:	INPUD

ZONING AMENDMENT REQUEST SUMMARY:

1. AMENDMENT TO THE EXISTING INPUD ZONING STANDARDS FOR 2.25 ACRES OF OVERALL ± 70.78 AC TRACT

2. AMENDMENT TO REPEAL THE SIGN OVERLAY DISTRICT FOR 2.25 ACRES OF THE OVERALL ± 70.78 AC TRACT

ZONING REQUIREMENTS:

MINIMUM SIZE OF DISTRICT:	NONE
MINIMUM LOT AREA PER DWELLING UNIT (SQUARE FEET)	NONE
LOT FRONTAGE MINIMUM (FEET)	25'
SETBACKS:	
FRONT YARD MINIMUM:	0'
SIDE YARD MINIMUM:	0'
REAR YARD MINIMUM:	0'
HEIGHT MAXIMUM:	45'
USEABLE OPEN SPACE (PERCENTAGE OF LOT)	5%
ACCESSORY STRUCTURE MINIMUM SETBACK FROM REAR AND SIDE LOT LINES (FEET)	0'
MINIMUM PARKING REQUIREMENT	NONE
IMPERVIOUS SURFACE RATIO MAXIMUM (PERCENTAGE OF LOT AREA)	80%
MINIMUM TREE CANOPY (PERCENTAGE OF LOT AREA)	15%
ALLOWABLE USES:	FIRE, POLICE, OR EMERGENCY SERVICES

SIGNAGE:

ANY NEW SIGNAGE ON THE INPUD ZONED PROPERTY WILL CONFORM TO THE REQUIREMENTS OF THE CITY OF ROANOKE ZONING ORDINANCE, TABLE 668-1, FOR THE IN, INSTITUTIONAL DISTRICT.

BUILDING SUMMARY:

THE PROPOSED BUILDING SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE PROVIDED RENDERING INDICATED AS PUBLIC SERVICE CENTER #12 – EXHIBIT B ARCHITECTURAL PERSPECTIVE PREPARED BY BALZER & ASSOCAITES, INC. UNDER THE DATE OF 2/28/2022.

PREEMPTION DETECTION DEVICE:

A PREEMPTION DETECTION DEVICE SHALL BE DESIGNED AND INSTALLED BY THE DEVELOPER AT THE TIME OF COMPREHENSIVE SITE PLAN. PREEMPTION DETECTION DEVICE SHALL BE LOCATED WITHIN THE CITY OF ROANOKE RIGHT-OF-WAY AND POSITIONED ALONG MEXICO WAY BASED ON CONSIDERATION OF THE REQUIRED CLEARANCE TIMES FOR THE TRAFFIC SIGNAL LOCATED AT THE INTERSECTION OF MEXICO WAY AND ORANGE AVENUE. FUTURE SIGNAL PHASES PER THE VDOT FUNDED STARS INTERSECTION IMPROVEMENT PROJECT FOR THIS INTERSECTION, INCLUDING THE PEDESTRIAN CROSSING, SHALL BE CONSIDERED.

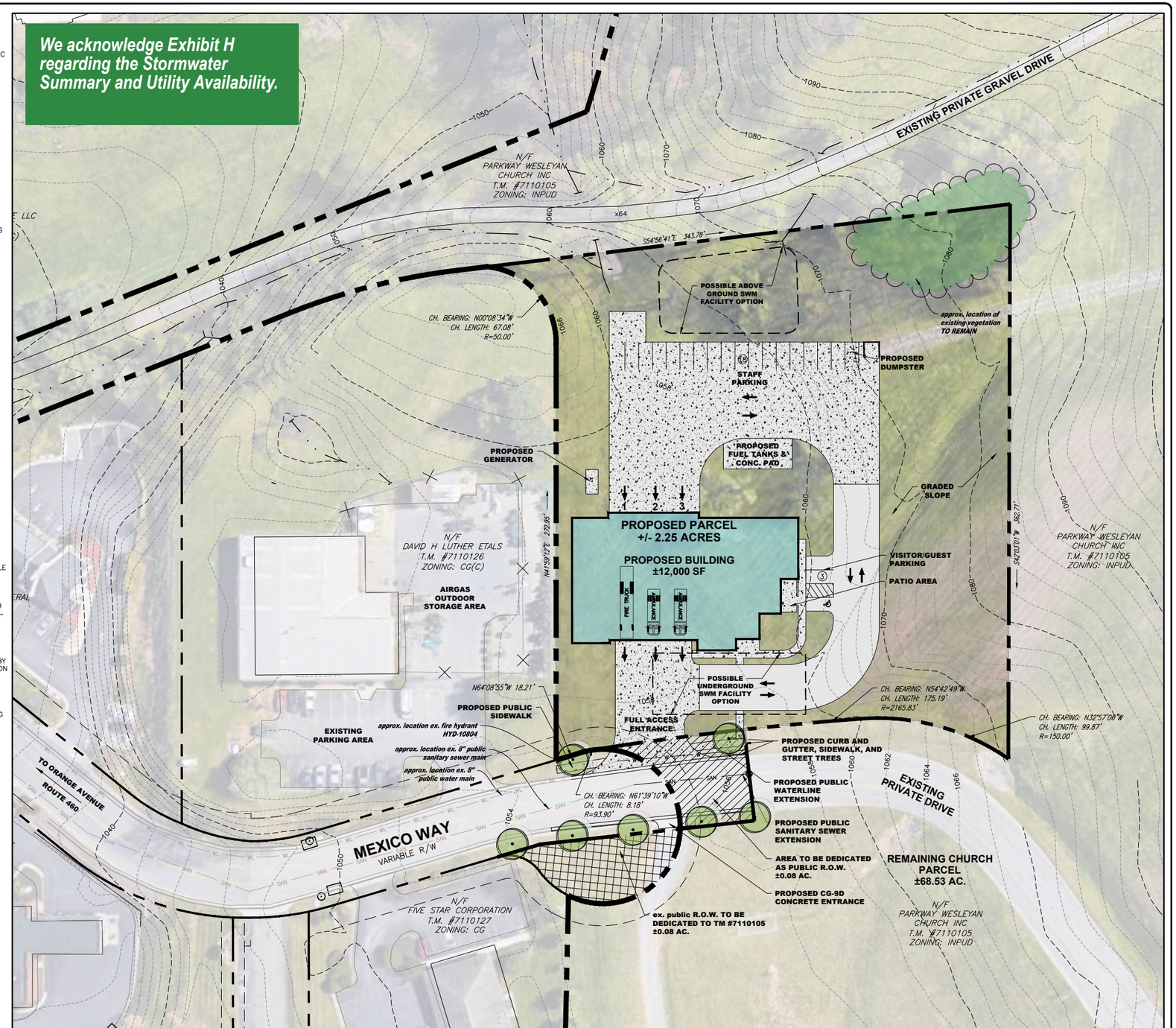
CONCEPT PLAN NOTE:

1. THIS PLAN IS FOR CONCEPTUAL PLANNING PURPOSES AND HAS BEEN PREPARED USING COMPILED INFORMATION. A CURRENT FIELD SURVEY HAS NOT BEEN PERFORMED TO VERIFY ALL EXISTING CONDITIONS ON-SITE.

2. AERIAL IMAGERY SOURCED FROM GOOGLE EARTH IMAGE, DATED NOVEMBER 2019

30 0 30 60 90

1" = 30'



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg
www.balzer.cc

1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

PRELIMINARY

COUNTY OF ROANOKE VIRGINIA 1838

PUBLIC SERVICE CENTER #12 - FIRE STATION

INPUD DEVELOPMENT PLAN

3645 ORANGE AVE NE
ROANOKE, VA 24012

DRAWN BY	KAM
DESIGNED BY	BTC
CHECKED BY	BTC
DATE	3/18/2022
SCALE	1" = 30'
REVISIONS	

EX-A

PROJECT NO. 04200086.01

J:\2020\04200086.01 ROANOKE COUNTY FIRE STATION #12\BCRNACK\CIVIL\dwg\04200086 - ZONING.DWG - File Blocks=2022-3-17 Bwp PLOTTED: 3/17/2022 10:02:34 AM

3.3.2. Building Concepts

This section is proprietary information and may not be shared per the protection of section 2.2-4342(f) of the Code of Virginia.

3.3. Conceptual Project Plans

3.3.3. System Narratives

This section is proprietary information and may not be shared per the protection of section 2.2-4342(f) of the Code of Virginia.

3.4

ADDITIVE FACILITY ENHANCEMENTS

3.4. Additive Facility Enhancements

3.4.1. Enhancements Above Facility Requirements

This section is proprietary information and may not be shared per the protection of section 2.2-4342(f) of the Code of Virginia.

3.5

GUARANTEES & WARRANTIES

3.5. Guarantees & Warranties

3.5.1. Outline of Design and Construction Teams

G&H Contracting will handle all construction related services for this project. Our design team leader, **Hughes Associates A&E**, will manage the design team.

Together, we have assembled a design team consisting of **Day & Kinder Consulting Engineers, PLLC** (structural engineering), **Stewart Cooper Newell Architects** (fire station design consultant), and **Ascent Engineering Group** (mechanical/electrical/plumbing/fire protection engineering).

Guarantees and Warranties

G&H standardizes warranties and guarantees per typical project specifications for one year, but seeks to accommodate an advanced level of service. It is extremely common for G&H to respond and remain involved after the one year warranty period for many items, as our Clients are typically people we come to know, or already know, on an extensive basis. We are, and have always been, a responsible service provider.

CONSTRUCTION TEAM

G&H Contracting INCORPORATED Salem, Virginia

DESIGN TEAM

HUGHES ASSOCIATES ARCHITECTS & ENGINEERS

Stewart · Cooper · Newell Architects

Day & Kinder Consulting Engineers, PLLC

ASCENT ENGINEERING GROUP

3.6

PROPOSED COUNTY RESPONSIBILITIES

3.6. Proposed County Responsibilities

3.6.1. Work Required by Roanoke County

Before entering into an agreement, we request that Roanoke County:

- Select Points of Contact for all aspects of contracts, financing, management, design, and construction.
- Select a committee to work with our team to program, provide feedback on conceptual plans, budgeting, community needs, and regulatory agency requirements.
- Provide reasonable access to the proposed site

The following work will be required of Roanoke County:

- Review PPEA proposals
- Serve as an Admin to the PPEA process
- Negotiate the Interim or Comprehensive Agreement
- Perform standard permitting and review (Roanoke City)
- Fund the construction of the fire station
- Provide any items required by the Interim Comprehensive Agreement such as connection fees and special inspections defined by the agreement.

3.7

PERFORMANCE MANAGEMENT

3.7. Performance Management

3.7.1. Project Evaluation System

Maintaining the Schedule

Maintaining the schedule is a continuous process. Upon the creation of a project schedule, we will communicate all tasks and milestones with the project team. We will update the schedule regularly and notify Roanoke County of our progress. We use integrated software internally that can be linked externally via vehicles like Procore.

Cash Management

G&H Contracting uses integrated software (Sage Timberline) that tracks all projects costs and individual man hours throughout the project. We track these costs in conjunction with the schedule to ensure our project completes on time and within budget.

Quality Assurance/Quality Control

Preliminary Concepts and Exhibits were developed for the project. Per requirements, we will substantially conform to these exhibits and the design team will enhance the project with required standards and review quality control.

Our team will use municipal and special inspection services, regular designer/contractor/ Owner meetings, progress reviews, and internal reviews. At 75% completion of construction documents, the documents reviewed for quality assurance by another design professional in the firm who is not associated with the project.

Worker Safety

Our company requires workers to participate in safety education programs such as OSHA 10-hour, OSHA 30-hour, Focus Four via Builders Mutual, and in-house Tool Talks compiled by our Safety Committee, which is attended by field staff, supervision, project management, and executive staff. We are also a long-time participant in OSHA's Complimentary Compliance program.

We have a comprehensive safety program managed and overseen by our Safety Manager, Danny Guard and implemented by our OSHA certified project superintendents. We want to be constantly aware of any potential safety concerns, such as means of entrance, egress, and job site circulation.

Minimizing Change Orders

The key to minimal change orders starts with a comprehensive set of drawings and clear communication with the contractor. In order to minimize change orders, the design team and contractor must work well together and have extensive experience with the task at hand and provide a detailed established scope of work that is communicated to the owner and confirmed acceptance of such. From there change orders are only derived in two instances. Environmental pre-existing unknown conditions that can be accounted for in the contract in advance, or Owner requested modifications that can be protected and allocated for as a contingency in the project.

Legal Compliance

In working with many municipalities, we've developed best practices and a strong awareness for how localities operate. We build relationships with local building officials and are familiar with City of County's building department. This helps to clarify/interpret any grey areas in the building code. Preliminary code reviews are often presented to the local building officials and fire marshal to expedite the approval process.

3.8

PROJECT COST & SCHEDULE

3.8. Project Cost & Management

3.8.1. Life Cycle Costs, Methodology, and Assumptions

Our assumptions relied on for a successful project are:

- Adequate funding will be available in a timely manner
- We assume there will not be another global pandemic outbreak
- Inflation will be present, but not as volatile as earlier in the year
- Government approvals will occur in a reasonable amount of time
- Due to the site being clear with access to utilities, we do not assume any unmitigable conditions are present

3.8.2. Schedule of Values

This page is proprietary information and may not be shared per the protection of section 2.2-4342(f) of the Code of Virginia.

3.8.3. Schedule

This page is proprietary information and may not be shared per the protection of section 2.2-4342(f) of the Code of Virginia.

3.8.4. VE/VA Options for Consideration

This page is proprietary information and may not be shared per the protection of section 2.2-4342(f) of the Code of Virginia.

3.9

CONFLICT OF INTEREST

3.9. Conflict of Interest

3.9.1. Executive Management

This page is proprietary information and may not be shared per the protection of section 2.2-4342(f) of the Code of Virginia.

3.10

CONFORMANCE WITH ETHICS IN PUBLIC CONTRACTING

Acknowledgment of Conformance

G&H Contracting acknowledges conformance with Article 6, Ethics in Public Contracting, to include provisions § 2.2-4367 - 2.2-4377.

3.11

ADDITIONAL INFORMATION

3.11. Additional Information

Additional Information

G&H Contracting has reviewed the below Comprehensive Agreement and General Conditions and finds it acceptable.

COUNTY OF ROANOKE, VIRGINIA
INTERIM/COMPREHENSIVE AGREEMENT BETWEEN OWNER AND PPEA CONTRACTOR

THIS INTERIM/COMPREHENSIVE AGREEMENT (the "Contract") is dated and effective as of this _____ day of _____, 2022 (the "Effective Date"), by and between County of Roanoke, Virginia, hereinafter referred to as the "County" or "Owner," and {legal name/address of Private Entity}, hereinafter referred to as the "Private Entity," Choose an item.

RECITALS

A. The legal address for the Owner and for the Contractor and the addresses for delivery of Notices and other project documents are as follows:

Owner: County of Roanoke, Virginia
Attn: Doug Blount, Assistant County Administrator
Address: 5204 Bernard Drive, Roanoke, VA 24018
Telephone: (540) 777-6321
Email: dblount@roanokecountyva.gov

PPEA Contractor (Contractor): _____
Attn: _____
Address: _____
Telephone: (___) ___-____
Email: _____
Contractor's Virginia License#: FEIN_____

B. The Project is identified as and is entitled: Bonsack Fire Station

General Project Description - Design and Construction of an approximately _____sf. fire station building located on property owned by the County of Roanoke containing 2.2459 acres located at 1465 Mexico Way, N.E., Roanoke City, Virginia (Tax Map No. 7110128).

C. The Virginia licensed Architect/Engineer who has been employed by PPEA Contractor to assist in the design of the Project is identified as:

Architect/Engineer: _____
Attn: _____
Architect's Address: _____
Telephone: (___) ___-____
Email: _____

Page 1 of 4

THANK YOU

On behalf of G&H Contracting and the rest of our team, thank you again for your time in reviewing our information. A large part of the G&H's success story can be attributed to repeat business from strong relationships. I look forward to hearing from you and hope we can continue to provide Roanoke County with the services they deserve.

Sincerely,
Troy

G&H Contracting, Inc.
1383 Southside Drive
Salem, VA 24153
Phone: (540) 387-5059

For more information, visit:
www.GHContracting.com

Exhibit 5 to Interim Agreement 2023-020

COUNTY OF ROANOKE, VIRGINIA

GENERAL CONDITIONS OF THE PPEA CONTRACT

TABLE OF CONTENTS

Section	Title	Page
1.	DEFINITIONS	3
2.	CONTRACT DOCUMENTS	6
3.	LAWS AND REGULATIONS	6
4.	NONDISCRIMINATION	8
5.	PROHIBITION OF ALCOHOL AND OTHER DRUGS	8
6.	TIME FOR COMPLETION	9
7.	CONDITIONS AT SITE	10
8.	CONTRACT SECURITY	10
9.	SUBCONTRACTS	11
10.	SEPARATE CONTRACTS	11
11.	CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE	12
12.	“ALL RISK” BUILDER'S RISK INSURANCE	13
13.	TAXES, FEES AND ASSESSMENTS	13
14.	PATENTS	13
15.	ARCHITECT/ENGINEER'S STATUS	14
16.	INSPECTION	14
17.	SUPERINTENDENCE BY CONTRACTOR	16
18.	CONSTRUCTION SUPERVISION, METHODS AND PROCEDURES	17
19.	SCHEDULE OF THE WORK	17
20.	SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT	20
21.	ACCESS TO WORK	21
22.	SURVEYS AND LAYOUT	21
23.	PLANS AND SPECIFICATIONS	21
24.	SUBMITTALS	22
25.	FEES, SERVICES AND FACILITIES	23
26.	EQUALS	23
27.	AVAILABILITY OF MATERIALS	24
28.	CONTRACTOR'S TITLE TO MATERIALS	24
29.	STANDARDS FOR MATERIALS INSTALLATION & WORKMANSHIP	24
30.	WARRANTY OF MATERIALS AND WORKMANSHIP	25

31. USE OF SITE AND REMOVAL OF DEBRIS 25
32. TEMPORARY ROADS 26
33. SIGNS 26
34. PROTECTION OF PERSONS AND PROPERTY 26
35. CLIMATIC CONDITIONS 27
36. PAYMENTS TO CONTRACTOR 27
37. PAYMENTS BY CONTRACTOR (§2.2-4354, *Code of Virginia*) 30
38. CHANGES IN THE WORK 31
39. EXTRAS 36
40. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT 36
41. OWNER'S RIGHT TO TERMINATE THE CONTRACT FOR CAUSE 36
42. TERMINATION BY OWNER FOR CONVENIENCE 37
43. DAMAGES FOR DELAYS; EXTENSION OF TIME 38
44. INSPECTION FOR SUBSTANTIAL COMPLETION & FINAL COMPLETION 40
45. GUARANTEE OF WORK 41
46. ASSIGNMENTS 43
47. CONTRACTUAL DISPUTES 43
48. TRAINING, OPERATION AND MAINTENANCE OF EQUIPMENT 44
49. PROJECT MEETINGS 44
50. FORUM SELECTION AND CHOICE OF LAW 46

1. DEFINITIONS

Whenever used in these General Conditions of the PPEA Contract ("General Conditions") or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereof:

Architect, Engineer, Architect/Engineer, or A/E: The term used to designate the duly Virginia licensed persons or entities designated by the PPEA Contractor to perform and provide the Architectural and Engineering design and related services in connection with the Work.

Beneficial Occupancy: The condition after Substantial Completion but prior to Final Completion of the Project at which time the Project, or portion thereof, is sufficiently complete and systems operational such that the Owner could, after obtaining necessary approvals and certificates, occupy and utilize the space for its intended use. Guarantees and warranties applicable to that portion of the Work begin on the date the Owner accepts the Project, or a portion thereof, for such Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions or by separate agreement.

Change Order: A document issued on or after the effective date of the Contract Between Owner and PPEA Contractor which is agreed to by the PPEA Contractor and approved by the Owner, and which authorizes an addition, deletion or revision in the Work, including any adjustment in the Contract Price and/or the Contract Completion Date. The term Change Order shall also include written orders to proceed issued pursuant to Section 38 (a)(3). A Change Order, once signed by all parties, is incorporated into and becomes a part of the Contract.

Code of Virginia: 1950 Code *of Virginia* as amended. Sections of the Code referred to herein are noted by § xx-xx.

Construction: The term used to include new construction, reconstruction, renovation, restoration, major repair, demolition and all similar work upon buildings and ancillary facilities, including any draining, dredging, excavation, grading or similar work upon real property.

Contract: The Agreement Between Owner and PPEA Contractor hereinafter referred to as the Contract.

Contract Completion Date: The date by which the Work must be Substantially Complete. The Contract Completion Date is customarily established in the Notice to Proceed, based on the Time for Completion. In some instances, however, the Contract contains a mandatory Contract Completion Date, which shall be stated in the Request for Proposal.

Contract Documents: The Contract Between Owner and PPEA Contractor signed by the Owner and the PPEA Contractor and any documents expressly incorporated therein.

Contract Price: The total compensation payable to the PPEA Contractor for performing the Work, subject to modification by Change Order.

Contractor or PPEA Contractor: The person or entity with whom the Owner has entered into a contract to do the Work.

Date of Commencement: The date as indicated in the written Notice to Proceed, the receipt of the earliest Building Permit for vertical construction (not to be confused with land disturbing permit), or a date mutually agreed to between the Owner and Contractor in writing, whichever is the latest.

Day(s): Calendar day(s) unless otherwise noted.

Defective: An adjective which, when modifying the word Work, refers to Work that is unsatisfactory, faulty, deficient, does not conform to the Contract Documents **or** does not meet the requirements of inspections, standards, tests or approvals required by the Contract Documents, or Work that has been damaged prior to the final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial

Completion or Beneficial Occupancy).

Drawing: A page or sheet of the Plans which presents a graphic representation, usually drawn to scale, showing the technical information, design, location, and dimensions of various elements of the Work. The graphic representations include, but are not limited to, plan views, elevations, transverse and longitudinal sections, large and small scale sections and details, isometrics, diagrams, schedules, tables and/or pictures.

Emergency: Any unforeseen situation, combination of circumstances, or a resulting state that poses imminent danger to health, life or property.

Field Order: A written order issued by the A/E which clarifies or explains the plans or specifications, or any portion or detail thereof, without changing the design, the Contract Price, the Time for Completion or the Contract Completion Date.

Final Completion Date: The date of the Owner's acceptance of the Work from the Contractor upon confirmation from the Contractor that the Work is totally complete in accordance with Section 44(b).

Final Payment: The final payment that the Contractor receives pursuant to the applicable provisions of Section 36, except in the event no final payment is made due to termination of the Contract under either Sections 41 or 42. In the event of a termination for cause under Section 41, the Final Payment shall be when the termination became effective. In the event of a termination for convenience under Section 42, the Final Payment shall be either the payment of compensation for termination that the Contractor receives according to the provisions of Subsection 42, or the Owner's determination that no compensation for termination is due the Contractor under Subsection 42, as the case may be.

Float: The excess time included in a construction schedule to accommodate such items as inclement weather and associated delays, equipment failures, and other such unscheduled events. It is the contingency time associated with a path or chain of activities and represents the amount of time by which the early finish date of an activity may be delayed without impacting the critical path and delaying the overall completion of the Project. Any difference in time between the Contractor's approved early completion date and the Contract Completion Date shall be considered a part of the Project Float.

Float, Free: The time (in days) by which an activity may be delayed or lengthened without impacting upon the start day of any activity following in the chain.

Float, Total: The difference (in days) between the maximum time available within which to perform an activity and the duration of an activity. It represents the time by which an activity may be delayed or lengthened without impacting the Time for Completion or the Contract Completion Date.

Notice: All written notices, including demands, instructions, claims, approvals and disapprovals, required or authorized under the Contract Documents. Any written notice by either party to the Contract shall be sufficiently given by any one or combination of the following, whichever shall first occur: (1) delivered by hand to the last known business address of the person to whom the notice is due; (2) delivered by hand to the person's authorized agent, representative or officer wherever they may be found; or (3) enclosed in a postage prepaid envelope addressed to such last known business address and delivered to a United States Postal Service official or mailbox. Notice is effective upon such delivery. All notices to the Owner should be directed to the Project Manager.

If the Owner and the Contractor agree in writing that Notices transmitted by Facsimile (Fax) or e-mail are acceptable for the Project, such Notice shall be transmitted to the Fax number or e-mail address listed in the agreement and shall have a designated space for the Fax or e-mail Notice recipient to acknowledge its receipt by authorized signature and date. The Fax or e-mail Notice with authorized signature acknowledging receipt shall be Faxed or e-mailed back to the sender. The Faxed or e-mailed Notice shall be effective on the date it is acknowledged by authorized signature. All Faxed or e-mailed Notices shall also be sent by hard copy, which shall be effective upon delivery, as provided herein. Notice shall be effective upon the date of acknowledgment of the Faxed or e-mailed Notice or the date of delivery, whichever occurs first.

Notice to Proceed: A written notice given by the Owner to the Contractor (with a copy to A/E) directing the PPEA Contractor to commence Work on the Date of the Commencement and specifying the time periods within which the PPEA Contractor is to achieve Substantial and Final Completion.

Owner: The Board of Supervisors of County of Roanoke, Virginia.

Person: This term includes any individual, corporation, partnership, association, company, business, trust, joint venture, or other legal entity.

Plans: The term used to describe the group or set of project-specific drawings prepared by the PPEA Contractor's Architecture/Engineer and acceptable to the Owner which describe the proposed Work in sufficient detail and provide sufficient information for the Building Official to determine code compliance and for the Contractor to perform the Work and which are included in the Contract Documents.

PPEA Proposal: The PPEA Proposal, dated _____, 2022 and revised _____, 2022, submitted by Contractor to Owner, including the Detailed Stage Proposal and the Cost Proposal as well as any modifications submitted by the PPEA Contractor in response to the Owner's RFP setting forth the design concepts, design criteria, pricing requirements, and other conditions of the Work to be performed.

Project: The term used instead of the specific or proper assigned title of the entire undertaking which includes, but is not limited to, the "Work" described by the Contract Documents, including any specific Phases or Subphases of such Work.

Project Inspector: One or more persons employed by the Owner to inspect the Work for the Owner and/or to document and maintain records of activities at the Site to the extent required by the Owner. The Owner shall notify the Contractor in writing of the appointment of such Project Inspector(s).

Project Manager: The Project Manager as used herein shall be the Owner's designated representative on the Project. The Project Manager shall be the person through whom the Owner generally conveys written decisions and notices. All notices due the Owner and all information required to be conveyed to the Owner shall be conveyed to the Project Manager. The scope of the Project Manager's authority is limited to that authorized by the Owner, who shall provide written information to the Contractor at the Preconstruction meeting defining those limits. Upon receipt of such information, the Contractor shall be on notice that it cannot rely on any decisions of the Project Manager outside the scope of its authority. Nothing herein shall be construed to prevent the Owner from issuing any notice directly to the Contractor. The Owner may change the Project Manager from time to time and may, in the event that the Project Manager is absent, disabled or otherwise temporarily unable to fulfill his duties, appoint an interim Project Manager.

Provide: Shall mean furnish and install ready for its intended use.

Schedule of Values: The schedule prepared by the Contractor and acceptable to the Owner which indicates the value of that portion of the Contract Price to be paid for each trade or major component of the Work.

Site: Shall mean the location at which the Work is performed or is to be performed.

Specifications: That part of the Contract Documents prepared by the Contractor's Architecture/ Engineer and acceptable to the Owner which contain the written design parameters and the technical descriptions of materials, equipment, construction systems, standards, and workmanship which describe the proposed Work in sufficient detail and provide sufficient information for the Building Official to determine code compliance and for the Contractor to perform the Work.

Subcontractor: A person having a direct contract with Contractor or with any other Subcontractor for the performance of the Work. Subcontractor includes any person who provides on-site labor but does not include any person who only furnishes or supplies materials for the Project.

Submittals: All shop, fabrication, setting and installation drawings, diagrams, illustrations, schedules, samples, and other data required by the Contract Documents which are specifically prepared by or for the

Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by the Contractor to illustrate material or equipment conformance of some portion of the Work with the requirements of the Contract Documents.

Substantial Completion or **Substantially Complete**: The condition when the Owner agrees that the Work, or a specific portion thereof, is sufficiently complete, in accordance with the Contract Documents, so that it can be utilized by the Owner for the purposes for which it was intended. The Owner at its sole discretion may, after obtaining the necessary approvals and certificates, take Beneficial Occupancy at this time or choose to wait to occupy until after Final Completion is achieved.

Supplemental General Conditions: That part of the Contract Documents which amends or supplements the General Conditions.

Supplier: A manufacturer, fabricator, distributor, materialman or vendor who provides material for the Project but does not provide on-site labor.

Time for Completion: The number of consecutive calendar days following the Date of Commencement which the Contractor has to substantially complete all Work required by the Contract.

Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which are or have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Work: The services performed under this Contract including, but not limited to, furnishing labor, and furnishing and incorporating materials and equipment into the construction. The Work also includes the entire completed construction, or the various separately identifiable parts thereof, required to be provided under the Contract Documents or which may reasonably be expected to be provided as part of a complete, code compliant, and functioning system for those systems depicted in the plans and specifications.

2. CONTRACT DOCUMENTS

(a) The Contract Between Owner and Contractor, the General Conditions, and all Exhibits referenced in Section 2 of the Agreement.

(b) All time limits stated in the Contract Documents, including but not limited to the Time for Completion of the Work, are of the essence of the Contract.

(c) The Contract Between Owner and Contractor shall be signed by the Owner and the Contractor in as many original counterparts as may be mutually agreed upon, each of which shall be considered an original.

(d) Anything called for by one of the Contract Documents and not called for by the others shall be of like effect as if required or called for by all, except that a provision clearly designed to negate or alter a provision contained in one or more of the other Contract Documents shall have the intended effect. In the event of conflicts among the Contract Documents, the Contract Documents shall take precedence in the following order: the Contract Between Owner and Contractor; the Supplemental General Conditions; the General Conditions; the Special Conditions; the approved specifications with attachments; and the approved plans.

(e) If any provision of the Contract Documents shall be held invalid by any court of competent jurisdiction, such holding shall not invalidate any other provision.

3. LAWS AND REGULATIONS

(a) The Contractor shall comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work and shall give all notices required thereby. The Contractor shall assure that all Subcontractors and tradesmen who perform Work on the Project are properly licensed by the Department of Professional and Occupational Regulation as required by Title 54.1, Chapter 11, Articles 1 and 3 and by applicable regulations.

(b) This Contract and all other contracts and subcontracts are subject to the provisions of Articles 3 and 5, Chapter 4, Title 40.1, *Code of Virginia*, relating to labor unions and the "right to work." The Contractor and its Subcontractors, whether residents or nonresidents of the Commonwealth, who perform any Work related to the Project shall comply with all of the said provisions.

(c) IMMIGRATION REFORM AND CONTROL ACT OF 1986: By signing this Contract, the Contractor certifies that it does not and will not during the performance of this Contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

(d) The provisions of all rules and regulations governing safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia and as issued by the Department of Labor and Industry under Title 40.1 of the *Code of Virginia* shall apply to all Work under this Contract. Inspectors from the Department of Labor and Industry shall be granted access to the Work for inspection without first obtaining a search or administrative warrant.

(e) Building Permit: The Virginia Uniform Statewide Building Code applies to the Work and is administered by the Building Official. The Contractor shall provide to the Building Official the necessary copies of plans, specifications, and other documents required by the Building Official. The Building Permit(s) will be obtained and paid for by the Contractor. All other permits, local license fees, business fees, taxes, or similar assessments imposed by the appropriate political subdivision Quality shall be obtained and paid for by the Contractor. See Section 23(e) for requirements for plans and specification for Building Permits. See Section 25 for utility connection fees and services.

(f) Information or services required of the Owner by the Contract Documents shall be furnished by the Owner with reasonable promptness. Any other information or services relevant to the Contractor's performance of the Work under the Owner's control shall be furnished by the Owner after receipt from the Contractor of a written request for such information of services.

(g) The Contractor shall include in each of its subcontracts a provision requiring each Subcontractor to include or otherwise be subject to the same payment and interest requirements in Subsections (a), (b), and (c) of Section 37 of these General Conditions with respect to each lower-tier Subcontractor and Supplier.

(h) The Contractor, if not licensed as an asbestos abatement contractor, shall have all asbestos-related Work performed by subcontractors who are duly licensed as asbestos contractors appropriate for the Work required.

(i) Lead Based Paint Activities: If the Contract Documents indicate that lead based paint is present on existing materials, components, or surfaces, the Contractor shall conform to the following:

(1) The requirements set forth in 40 CFR 745 in selecting and performing the means, methods and procedures for performing the Work. This includes, but is not limited to, training of personnel, lead abatement, encapsulation of lead containing materials, removal and handling of lead containing materials, and methods of disposal.

(2) The **r**equirements for employee protection contained in 29 CFR Part 1926, Subpart D, and the requirements for record-keeping contained 29 CFR Part 1910.

(3) The Virginia Department of Labor and Industry's (DOLI) Emergency Regulation published in the May 27, 1996 Virginia Register, requiring, among other things, that a permit be issued

to the lead abatement contractor, or any subsequent regulation issued by DOLI.

(j) If the Contractor violates laws or regulations that govern the Project, the Contractor shall indemnify and hold the Owner harmless against any fines and/or penalties that result from such violation. To the extent that such violation is the result of negligence or other actionable conduct of the Contractor, the Contractor shall indemnify and hold the Owner harmless against any third-party claims, suits, awards, actions, causes of action or judgments, including but not limited to attorney's fees and costs incurred thereunder, that arise or result from such violation.

(k) If the Work includes any land disturbing activities, the Contractor shall have on-site an individual certified by the Department of Environmental Quality as a Responsible Land Disturber in accordance with §10.1-563, *Code of Virginia.*

4. NONDISCRIMINATION

(a) All applicable non-discrimination provisions of the *Code of Virginia* and Federal law shall be applicable.

1. During the performance of this Contract, the Contractor agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

(b) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such Contractor is an equal opportunity employer.

(c) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this Section.

2. The Contractor will include the provisions of the foregoing paragraphs (a), (b) and (c) in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

(b) Where applicable, the Virginians with Disabilities Act and the Federal Americans with Disabilities Act shall apply to the Contractor and all Subcontractors.

5. PROHIBITION OF ALCOHOL AND OTHER DRUGS

(a) All applicable state and Federal laws prohibiting use of alcohol and drugs in the workplace shall apply.

"During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over $10,000, so that the

provisions will be binding upon each subcontractor or vendor. For the purposes of this Section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract."

(b) The Contractor shall also establish, maintain and enforce policies which prohibit the following acts by all Contractor, Subcontractor and Supplier personnel at the Site:

(1) the manufacture, distribution, dispensation, possession, or use of alcohol, marijuana or other drugs, except possession and medically prescribed use of prescription drugs; and

(2) the impairment of judgment or physical abilities due to the use of alcohol, marijuana or other drugs, including impairment from prescription drugs.

6. TIME FOR COMPLETION

(a) The Time for Completion for the Project including any dates for completion of any designated Phase or Sub-phase shall be as stated in the Contract as **agreed upon by the Owner and Contractor, subject to Change Orders or written mutual agreement of Owner and Contractor**. The Work must be substantially completed by the Time for Completion or the Contract Completion Date. Unless otherwise specified, the Contractor shall achieve Final Completion within thirty (30) days after the date of Substantial Completion.

(b) The Time for Completion shall be stated in the Contract between Owner and Contractor and shall become a binding part of the Contract upon which the Owner may rely in planning the use of the facilities to be constructed and for all other purposes. If the Contractor fail**s** to substantially complete the Work within the Time for Completion or Contract Completion Date, as set forth in the Contract, it shall be subject to payment of actual damages incurred by the Owner or liquidated damages, if provided for in the Contract.

(c) The Contractor, in submitting its proposal, acknowledges that it has taken into consideration normal weather conditions. Normal weather does not mean statistically average weather but rather means a range of weather patterns which might be anticipated based on weather data for the past ten (10) years, (i.e., conditions which are not extremely unusual). Normal weather conditions shall be determined from the public historical records available, including the U.S. Department of Commerce, Local Climatological Data Sheets, National Oceanic and Atmospheric Administration/ Environmental Data and Information Service, National Climatic Center and National Weather Service. The data sheets to be used shall be those for the locality or localities closest to the site of the work. No additional compensation will be paid to the Contractor because of adverse weather conditions; however, an extension of time for abnormal weather will be considered by the Owner under the following conditions, all of which must be strictly complied with by the Contractor:

(1) The request for additional time shall be further substantiated by weather data collected during the period of delay at the Site. Said data must demonstrate that an actual departure from normal weather occurred at the Site during the dates in question.

(2) The extension requested must be supported by a delay in completion of the entire Project shown on the critical path of the accepted CPM Schedule or the approved bar graph schedule required for the Project. Extensions will be granted only for delays in completion of the Project, not for that portion of any delay which consumes only "float" time.

(3) A request for extension of time based on abnormal weather must be made in writing within fourteen (14) calendar days of the completion of the calendar month during which abnormal weather is claimed at the Site.

(4) All of the evidence and data supporting the request (including both historical data and the

recordings at the Site during the time of delay) must be furnished to the Owner before any consideration will be given to the request. That supporting data shall be submitted by the end of the calendar month following the month for which the request is made.

(d) The failure by the Contractor to comply with any and all of the conditions in (c) above shall constitute a waiver of claims for the extension of time for abnormal weather.

(e) The Contractor represents and agrees that it has taken into account in its bid the requirements of the bid documents, the Contract Documents, local conditions, the general availability of materials, equipment, and labor which may affect the performance of the Work. The Contractor agrees that it will achieve Substantial Completion of the Work to allow the Owner to have Beneficial Occupancy not later than the Time for Completion or Contract Completion Date. The Contractor agrees that it will achieve Final Completion of the Work (the entire completion of all Work, including "punch list" items), not later than thirty (30) days after achieving Substantial Completion.

7. CONDITIONS AT SITE

(a) The Contractor shall have visited the Site prior to submitting its proposal and is responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the Site, and the character and extent of existing conditions, improvements, and work within or adjacent to the Site. Claims which result from the Contractor's failure to do so will be deemed waived.

(b) If, in the performance of the Contract, hidden physical conditions of a building being modified are exposed revealing unusual or materially different conditions from those ordinarily encountered or inherent in work of this nature, or if subsurface or latent conditions at the Site are found which are materially different from those frequently present in the locality or from those indicated in the Contract Documents, the Contractor must report such conditions to the Owner and to the Architect/Engineer before the conditions are disturbed. Upon such notice, or upon his own observation of such conditions, the Architect/Engineer shall promptly propose such changes in the Contract Documents as he finds necessary to conform to the different conditions. Any change in the cost of the Work or additional time needed for completion must be requested pursuant to Sections 38, 39 and/or 43 of these General Conditions.

(c) If the Contractor, during the course of the Work, observes the existence of any material which it knows, should know, or has reason to believe is hazardous to human health, the Contractor shall promptly notify the Owner. The Owner will provide the Contractor with instructions regarding the disposition of the material. The Contractor shall not perform any Work involving the material or any Work causing the material to be less accessible prior to receipt of special instructions from the Owner.

8. CONTRACT SECURITY

(a) The Contractor shall deliver to the Owner or its designated representative, Standard Performance Bond, and a Standard Labor and Material Payment Bond, each fully executed by the Contractor one or more surety companies legally licensed to do business in Virginia and each in an amount equal to one hundred percent (100%) of the accepted bid. If more than one Surety executes a bond, each shall be jointly and severally liable to the Owner for the entire amount of the bond. Sureties shall be selected by the Contractor, subject to the Owner's approval. No payment on the Contract shall be due and payable to the Contractor until the bonds have been approved by the Owner and the Roanoke County Attorney. In order to facilitate review of the bonds by the Roanoke County Attorney, the power of attorney from the surety company to its agent who executes the bond shall be attached to the bond or, if not so attached, prior to the execution of the bonds by the surety, recorded in the Office of the Clerk for the County of Roanoke. Upon receipt of such Forms, which cover both this Agreement and any prior Interim Agreement to the extent the Interim Agreement remains in force, the Owner will promptly return to Contractor the Performance Bond and Standard Labor and Material Payment Bond delivered to the Owner pursuant to the Interim Agreement.

(b) For the purposes of all Standard Labor and Material Payment Bonds entered into, the term

"subcontractors" means any contractors who participated in the prosecution of the Work undertaken by the Contractor whether such Subcontractor had a direct contract with the Contractor or whether there were one or more other intervening Subcontractors contractually positioned between it and the Contractor. The payment bond shall be for the protection of claimants who have and fulfill contracts to supply labor or materials to the Contractor or to any Subcontractors in furtherance of the Work provided for in this Contract, and shall be conditioned upon the prompt payment for all materials furnished or labor supplied or performed in the furtherance of the Work. "Labor and Materials" includes public utility services and reasonable rentals of equipment, but only for periods when the equipment rented is actually used at the Site.

(c) See §2.2-4338 of the *Code of Virginia* for alternative forms of security for payment and/or performance bonds.

9. SUBCONTRACTS

(a) The Contractor shall, as soon as practicable after the signing of the Contract, notify the Owner in writing of the names of all Subcontractors proposed for the principal parts of the Work and of such others as the Owner may direct. Where the specifications establish qualifications or criteria for Subcontractors, manufacturers, or individuals performing Work on the Project, the Contractor shall be responsible for ascertaining that those proposed meet the criteria or qualifications. The Contractor shall not employ any Subcontractor that the Owner may, within a reasonable time, object by written notice to Contractor to as unsuitable. The Owner shall not direct the Contractor to contract with any particular Subcontractor unless provided in the specifications or Request for Proposals.

(b) The Owner shall, on request, furnish to any Subcontractor the amounts of payments made to the Contractor, the Schedule of Values and Requests for Payment submitted by the Contractor and any other documentation submitted by the Contractor which would tend to show what amounts are due and payable by the Contractor to the Subcontractor.

(c) The Contractor shall be fully responsible to the Owner for all acts and omissions of its agents and employees and all succeeding tiers of Subcontractors and Suppliers performing or furnishing any of the Work. Nothing in the Contract Documents shall create any contractual relationship between Owner and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner to pay for or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization, except as may otherwise be required by law.

(d) The Contractor shall be fully responsible for its invitees at the Site and for those of its Subcontractors, Suppliers, and their employees, including any acts or omissions of such invitees.

(e) The Contractor agrees that it alone is responsible for all dealings with its Subcontractors and Suppliers, and their subcontractors, employees and invitees, including, but not limited to, the Subcontractors' or Suppliers' claims, demands, actions, disputes and similar matters unless specifically provided otherwise by the Contract or by statute.

10. SEPARATE CONTRACTS

(a) The Owner reserves the right to let other contracts in connection with the Project, the Work under which may proceed simultaneously with the execution of this Contract. The Contractor shall afford other separate contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work. The Contractor shall cooperate with them and shall take all reasonable action to coordinate its Work with theirs. If the Owner has listed other separate contracts in the Requests for Proposals or Invitation for Bids which it expects to proceed simultaneously with the Work of the Contractor, and has included the estimated timing of such other Contracts in the Requests for Proposals or Invitation for Bids, the Contractor shall integrate the schedule of those separate contracts into its scheduling. The Contractor shall make every reasonable effort to assist the Owner in maintaining the schedule for all separate contracts. If the work performed by the separate contractor is defective or performed so as to prevent or threaten to prevent the Contractor from

carrying out its Work according to the Contract, the Contractor shall immediately notify the Owner upon discovering such conditions.

(b) If a dispute arises between the Contractor and any separate contractor(s) as to their responsibility for cleaning up as required by Sections 31(c) and 31(d) of these General Conditions, the Owner may clean up and charge the cost thereof to the respective contractors in proportion to their responsibility. If a Contractor disputes the Owner's apportionment of clean-up costs, it shall be that contractor's burden to demonstrate and prove the correct apportionment.

11. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE

(a) The Contractor shall not commence Work under this Contract until it has obtained all the insurance required hereunder from an insurer authorized to do business in Virginia and such insurance has been approved by the Owner; nor shall the Contractor allow any Subcontractor to commence Work on its subcontract until the same types of insurance in an appropriate amount have been obtained by the Subcontractor and approved by the Contractor. Approval of insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder.

(b) The Contractor shall take out and shall maintain in force, at all times during the performance of the Work, Workers' Compensation and Employers' Liability Insurance for all of its employees engaged in the Work in an amount not less than the minimum required by § 2.2-4332 and § 65.2-100 et seq. of the *Code of Virginia*, and, in case any of the Work is sublet, the Contractor shall require each Subcontractor similarly to provide Workers' Compensation and Employers' Liability Insurance for all of the latter's employees to be engaged in the Work. Prior to award of the Contract, the Contractor shall submit, on the form provided by the Owner, a Certificate of Coverage verifying Workers' Compensation coverage. The Contractor shall likewise obtain a Certificate of Coverage for Workers' Compensation coverage from each subcontractor prior to awarding the subcontract and shall provide a copy to the Owner.

(c) During the performance of the Work under this Contract, the Contractor shall maintain commercial general liability insurance to include Premises/Operations Liability, Products and Completed Operations Coverage, Independent Contractor's Liability, Owner's and Contractor's Protective Liability, and Personal Injury Liability, which shall insure him against claims of personal injury, including death, as well as against claims for property damage, which may arise from operations under this Contract, whether such operations be by himself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amounts of general liability insurance shall be not less than **$2,000,000** per occurrence and **$5,000,000** aggregate combined limit. The County of Roanoke, its officers, employees and agents, shall be named as an additional insured with respect to the Work being procured. The Supplemental General Conditions may require the Contractor to provide an Umbrella insurance policy in a specified amount for the Project.

(d) During the performance of the Work under this Contract, the Contractor shall maintain automobile liability insurance which shall insure it against claims of personal injury, including death, as well as against claims for property damage, which may arise from operations under this Contract, whether such operations be by itself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amounts of automobile insurance shall be not less than **$2,000,000** combined limit for bodily injury and property damage per occurrence.

(e) The Contractor’s Architect/Engineer responsible for the design portion of the Work shall obtain and maintain in force during the contract period and for a period of five (5) years after the final completion of the Work professional liability and errors and omission insurance in the amount of **$2,000,000** per claim occurrence and **$2,000,000** aggregate combined claims limit.

(f) Except for the insurance provided in Section (e) above, the Owner, its officers, employees and its agents, shall be named as an additional insured in any policy of insurance issued by endorsement. Written evidence of the insurance shall be filed with the Owner no later than thirty (30) days following the award of the Contract. All insurance policies providing the coverages required under

paragraphs 11 b, c, d, and e, and Paragraph 12, shall require thirty (30) days' advance written notice of cancellation [ten (10) days in case of failure to pay premiums] to the Owner. Notice of pending insurance cancellation may cause Owner to issue a "Stop Work" order, the financial penalty of which shall be borne solely by Contractor. The following properly completed endorsements will be acceptable:

Workers' Compensation:

1. Certificate of Coverage
2. Alternate Employer Form WC 00 03 01 A
3. Material Coverage Change or Cancellation Form WC 99 00 10 01 l0 A
   Additional Insured: Form No. CG 20 10 11 85
   Completed Operations: Form No. CG 20 37 07 04
   Material Change or Policy Cancellation Notice: IL 60 05 VA 01 10 and Form No. CA 02 03 12 05

12. "ALL RISK" BUILDER'S RISK INSURANCE

(a) The Contractor, at its cost, shall obtain and maintain in the names of the Owner and the Contractor "all-risk" builder's risk insurance (or fire, extended coverage, vandalism and malicious mischief insurance), if approved by the Owner upon the entire structure or structures on which the Work of this Contract is to be done and upon all material in or adjacent thereto which is intended for use thereon, to one hundred percent (100%) of the insurable value thereof. Such insurance may include a deductible provision if the Owner so provides in the Supplemental General Conditions, in which case the Contractor will be liable for such deductions, whenever a claim arises. The loss, if any, is to be made adjustable with and payable to the Owner, in accordance with its interests, as they may appear. The Owner, its officers, employees and its agents, shall be named as an additional insured in any policy of insurance issued. Written evidence of the insurance shall be filed with the Owner no later than thirty (30) days following the award of the Contract. In the event of cancellation of this insurance, not less than thirty (30) days prior written notice must be sent to the Owner. A copy of the policy of insurance shall be given to the Owner upon demand.

(b) The value of the builder's risk insurance shall exclude the costs of demolitions, excavations, backfills, foundations, underground utilities and Sitework.

(c) Any insurance provided through the Department of Treasury, Division of Risk Management, on buildings, construction, additions or renovations will not extend to Contractor's nor Subcontractors' buildings, equipment, materials, tools or supplies unless these items are to become property of the Owner upon completion of the Project and the Owner has assumed responsibility for such items at the time of the loss.

13. TAXES, FEES AND ASSESSMENTS

Except as provided in Paragraph 3(e), the Contractor shall, without additional expense to the Owner, pay all applicable federal, state, and local taxes, fees, and assessments except the taxes, fees and assessments on the real property comprising the Site of the Project. Owner's tax exempt status shall not inure to the benefit of Contractor.

14. PATENTS

The Contractor shall be responsible to the Owner for obtaining, or assuring its Subcontractors have obtained, all licenses necessary to use any invention, article, appliance, process, or technique of whatever kind and shall pay all royalties and license fees for such invention, article, appliance, process, or technique that is utilized for the Work. The Contractor shall hold the Owner, its officers, agents and employees, harmless against any loss or liability for or on account of the infringement of any patent rights in connection with any invention, process, technique, article or appliance manufactured or used by or on behalf of the Contractor or its subcontractors in the performance of the Contract, including its use by the Owner, unless such invention, process, technique,

article or appliance is specifically named in the specifications or plans as acceptable for use in carrying out the Work. If, before using any invention, process, technique, article or appliance specifically named in the specifications or plans as acceptable for use in carrying out the Work, the Contractor has or acquires information that the same is covered by letters of patent making it necessary to secure the permission of the patentee, or other, for the use of the same, it shall promptly advise the Owner. The Owner may direct that some other invention, process, technique, article, or appliance be used. Should the Contractor have reason to believe that the invention, process, technique, article, or appliance so specified is an infringement of a patent, and fail to inform the Owner, it shall be responsible for any loss or liability due to the infringement.

15. ARCHITECT/ENGINEER'S STATUS

(a) The Contractor's Architect/Engineer shall be duly and properly licensed by the Virginia Department of Professional and Occupational Regulation to provide these services in Virginia. The Architect/Engineer shall provide the professional services to design the Work in conformance with the applicable standards indicated below.

(b) The Architect/Engineer shall have authority to endeavor to secure the faithful performance by Owner and Contractor of the Work under the Contract. He shall review the Contractor's Submittals for conformance to the requirements of the Contract Documents and return copies to the Contractor with appropriate notations. He shall interpret the requirements of the plans and specifications and issue clarifications to the Contractor as may be required. He shall recommend to the Owner suspension of the Work (in whole or in part) whenever such suspension may be necessary to ensure the proper execution of the Contract. He shall have authority to reject, in writing, Work, including material, installation or workmanship, which does not conform to the requirements of the plans and specifications. He shall determine the progress and quality of the Work subject to the Owner's right to make an overriding decision to the contrary. Upon request by the Contractor, the Architect/Engineer shall confirm in writing within fourteen (14) days, any oral order or determination made by him.

(c) The Virginia Department of Transportation "Road & Bridge Specifications," 2002 edition or later, and Virginia Department of Transportation "Road Design Standards," 2001 edition or later, are included by reference and shall be used by the Contractor's Architect/Engineer as the referenced standards for design of the roads, parking areas, sidewalks, curbs, and other sitework.

(d) The building design shall conform to the requirements of the Virginia Uniform Statewide Building Code. The current edition of the Virginia Uniform Statewide Building Code which is in effect at the time the construction documents are submitted to the Building Official for Building Permit shall be the applicable Building Code for that phase of the Project.

(e) The Architect/Engineer shall have no authority to approve or order changes in the Work which alter the approved plans and specifications which were the basis of the Building Permit without obtaining approval of the Building Official.

(f) The provisions of this Section are included as information only to describe the relationship between the Owner, Architect/Engineer, and Contractor. No failure of the Architect/Engineer to act in accordance with this Section shall relieve the Contractor from its obligations under the Contract or create any rights in favor of the Contractor.

16. INSPECTION

(a) All material and workmanship shall be subject to inspection, examination and testing by the Owner, its Project Inspector, authorized inspectors and authorized independent testing entities at any and all times during manufacture and/or construction. The Owner shall have authority to reject defective material and workmanship and require its correction. Rejected workmanship shall be satisfactorily corrected and rejected material shall be satisfactorily replaced with proper material without charge therefore, and the Contractor shall promptly segregate and remove the rejected material from the Site. If the Contractor fails to proceed at once with replacement of rejected material and/or the correction

of defective workmanship, the Owner may, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to the Contractor, or may terminate the right of the Contractor to proceed as provided in Section 41 of these General Conditions, the Contractor and surety being liable for any damage to the same extent as provided in Section 41 for termination thereunder.

(b) Site inspections, tests conducted on Site or tests of materials gathered on Site, which the Contract requires to be performed by independent testing entities, shall be contracted and paid for by the Owner. Examples of such tests are the testing of cast-in-place concrete, foundation materials, soil compaction, pile installations, caisson bearings and steel framing connections. The Contractor shall promptly furnish, without additional charge, all reasonable facilities, labor and materials necessary and convenient for making such tests. Except as provided in (d) below, whenever such examination and testing finds defective materials, equipment or workmanship, the Contractor shall reimburse the Owner for the cost of reexamination and retesting. Although conducted by independent testing entities, the Owner will not contract and pay for tests or certifications of materials, manufactured products or assemblies which the Contract, codes, standards, etc., require to be tested and/or certified for compliance with industry standards such as Underwriters Laboratories, Factory Mutual or ASTM. If fees are charged for such tests and certifications, they shall be paid by the Contractor. The Contractor shall also pay for all inspections, tests, and certifications which the Contract specifically requires him to perform or to pay, together with any inspections and tests which it chooses to perform for its own purposes, but are not required by the Contract.

(c) Where Work is related to or dependent on the Defective Work, the Contractor shall stop such related or dependent Work until the Defective Work or deficiency is corrected or an alternative solution is presented that is satisfactory to the Owner. Where Work is rejected because of defective material or workmanship, the Contractor shall stop like Work in other areas or locations on the Project until the matter is resolved and the Owner has approved corrective measures.

(d) Should it be considered necessary or advisable by Owner at any time before final acceptance of the entire Work to make an examination of any part of the Work already completed, by removing or tearing out portions of the Work, the Contractor shall on request promptly furnish all necessary facilities, labor and material to expose the Work to be tested to the extent required. If such Work is found to be defective in any respect, due to the fault of the Contractor or its Subcontractors, the Contractor shall bear all the expenses of uncovering the Work, of examination and testing, and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, the actual cost of the Contractor's labor and material necessarily involved in uncovering the Work, the cost of examination and testing, and Contractor's cost of material and labor necessary for replacement including a markup of ten (10%) percent for overhead and profit shall be paid to the Contractor and it shall, in addition, if completion of the Work has been delayed thereby, be granted suitable extension of time. Notwithstanding the foregoing, the Contractor shall be responsible for all costs and expenses in removing and replacing the Work if the Contractor had covered the Work prior to any inspection or test contrary to the instructions of the A/E, Owner or Project Inspector.

(e) The Project Inspector has the authority to recommend to the Owner that the Work be suspended when in its judgment the Contract Documents are not being followed. Any such suspension shall be continued only until the matter in question is resolved to the satisfaction of the Owner. The cost of any such Work stoppage shall be borne by the Contractor unless it is later determined that the Work stoppage was not reasonably justified by the Contractor's failure to follow the Contract Documents.

(f) The Project Inspector has the right and the authority to:

(1) Inspect all construction materials, equipment, and supplies for quality and for compliance with the Contract Documents and/or approved shop drawings and Submittals.

(2) Inspect workmanship for compliance with the standards described in the Contract Documents.

(3) Observe and report on all tests and inspections performed by the Contractor.

(4) Recommend rejection of Work which does not conform to requirements of the Contract Documents.

(5) Keep a record of construction activities, tests, inspections, and reports.

(6) Attend all joint Site construction meetings and inspections held by the Owner and/or the Architect/Engineer with the Contractor.

(7) Check materials and equipment, together with documentation related thereto, delivered for conformance with approved Submittals and the Contract.

(8) Check installations for proper workmanship and conformance with shop drawing and installation instructions.

(9) Assist in the review and verification of the Schedule of Values & Certificate for Payment, submitted by the Contractor each month.

(10) Do all things for or on behalf of the Owner as the Owner may subsequently direct in writing.

(g) The Project Inspector has no authority to:

(1) Authorize deviations from the Contract Documents;

(2) Enter into the area of responsibility of the Contractor's superintendent;

(3) Issue directions relative to any aspect of construction means, methods, techniques, sequences or procedures, or in regard to safety precautions and programs in connection with the Work;

(4) Authorize or suggest that the Owner occupy the Project, in whole or in part; or

(5) Issue a certificate for payment.

(h) The duties of the Project Inspector are for the benefit of the Owner only and not for the Contractor. The Contractor may not rely upon any act, statement, or failure to act on the part of the Project Inspector, nor shall the failure of the Project Inspector to properly perform his duties in any way excuse Defective Work or otherwise improper performance of the Contract by the Contractor.

17. SUPERINTENDENCE BY CONTRACTOR

(a) The Contractor shall have a competent foreman or superintendent, satisfactory to the Owner, on the Site at all times during the progress of the Work. The superintendent or foreman shall be familiar with and be able to read and understand the plans and specifications, and be capable of communicating orally and in writing with the Owner's inspectors and the Contractor's workers. The Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures, for coordinating all portions of the Work under the Contract except where otherwise specified in the Contract Documents, and for all safety and worker health programs and practices. The Contractor shall notify the Owner, in writing, of any proposed change in superintendent, including the reason therefore, prior to making such change.

(b) The Contractor shall, at all times, enforce strict discipline and good order among the workers on the Project, and shall not employ on the Work, or contract with, any unfit person, anyone not skilled in the Work assigned to him, or anyone who will not work in harmony with those employed by the Contractor, the Subcontractors, the Owner or the Owner's separate contractors and their

subcontractors.

(c) The Owner may, in writing, require the Contractor to remove from the Site any employee or Subcontractor's employee the Owner deems to be incompetent, careless, not working in harmony with others on the Site, or otherwise objectionable, but the Owner shall have no obligation to do so.

18. CONSTRUCTION SUPERVISION, METHODS AND PROCEDURES

(a) The Contractor shall be solely responsible for supervising and directing the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction and for coordinating all portions of the Work under the Contract, except where otherwise specified in the Contract Documents. The Contractor, in performing as the Contractor, shall also be responsible to the Owner for the design or selection of any specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. The Contractor is solely responsible to the Owner that the finished Work complies with the Contract Documents.

The Contractor shall be solely responsible for health and safety precautions and programs for workers and others in connection with the Work. No inspection by, knowledge on the part of, or acquiescence by the Architect or Engineer, the Project Inspector, the Owner, the Owner's employees and agents, or any other entity whatever shall relieve the Contractor from its sole responsibility for compliance with the requirements of the Contract or its sole responsibility for health and safety programs and precautions.

(b) The Contractor shall be fully responsible to the Owner for all acts and omissions of all succeeding tiers of Architect/Engineer, Subcontractors, and Suppliers performing or furnishing any of the Work just as the Contractor is responsible for the Contractor's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between the Owner and any Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of the Owner to pay for or see to payment of any moneys due any such Subcontractor, Supplier, or other person or organization except as may otherwise be required by law.

19. SCHEDULE OF THE WORK

(a) **General:** The Contractor is responsible for the scheduling and sequencing of ordering materials for the Work, scheduling and sequencing of the Work, for coordinating the Work, for monitoring the progress of the Work, and for taking appropriate action to keep the Work on schedule. The Contractor may attempt to achieve Substantial Completion on or before the Time for Completion or the Contract Completion Date established by the Contract and receive payment in accordance with Section 36 for the Work completed each period. However, the date established by the Contract Documents as the deadline for achieving Substantial Completion must be used in all schedules as the date on which Substantial Completion will be achieved. The time (in days) between the Contractor's planned early completion and the contracted Time for Completion is part of the Project "Total Float" time and will be used as such. Extensions of time pursuant to Sections 38, 39, and 43, damages for delay, and all other matters between the Owner and the Contractor will be determined using the contractually required Substantial Completion date, not an early Substantial Completion date planned by the Contractor.

Within two (2) weeks after the Contractor signs the Contract Between Owner and Contractor, unless otherwise extended by the Owner at the time of the signing, the Contractor shall prepare and submit to the Owner a preliminary bar graph schedule for accomplishing the Work based upon the Time for Completion stated in the Contract. The preliminary schedule shall be in sufficient detail to show the sequencing of the various trades for each floor level, wing or work area. The Owner will notify the Contractor of its acceptance of or objections to the preliminary schedule within fifteen (15) days of receipt by the Owner. A fully complete Project schedule for accomplishing the Work must be submitted in like manner no later than sixty (60) days after the Contract is signed by the Owner.

The Owner's failure to reject or its acceptance of any schedule, graph, chart, recovery schedule, updated schedule, plan of action, etc. shall not constitute a representation or warranty by the Owner, including but not limited to a representation or warranty that the schedule is feasible or practical nor shall any such acceptance or failure to reject relieve the Contractor from sole responsibility for completing the Work within the time allowed.

No progress payments will be payable to the Contractor until after it has submitted a preliminary schedule which is acceptable to the Owner. Neither the second progress payment nor any subsequent payment shall be payable to the Contractor until it has submitted a fully complete Project schedule accepted by the Owner. Nor shall subsequent progress payments be payable to the Contractor unless and until it submits the monthly bar graphs or status reports required by Section 19(d) herein or unless and until it provides any recovery schedule pursuant to Section 19(e) herein.

Failure to provide a satisfactory preliminary or fully complete Project schedule within the time limits stated above shall be a breach of contract for which the Owner may terminate the Contract in the manner provided in Section 41 of these General Conditions.

The fully complete Project schedule for accomplishing the Work shall be of the type set forth in subparagraph (1) or (2) below, as appropriate:

(1) For Contracts with a price of $1,500,000 or less, a bar graph schedule will satisfy the above requirement. The schedule shall indicate the estimated starting and completion dates for each major element of the work. See (b) below.

(2) For Contracts with a price over $1,500,000, a Critical Path Method (CPM) schedule may be required upon request to control the planning and scheduling of the Work. The CPM schedule shall be the responsibility of the Contractor and shall be paid for by the Contractor. See (c) below.

(b) **Bar Graph Schedule:** Where a bar graph schedule is required, it shall be time-scaled in weekly increments, shall indicate the estimated starting and completion dates for each major element of the Work by trade and by area, level, or zone, and shall schedule dates for all salient features, including but not limited to the placing of orders for materials, submission of shop drawings and other Submittals for approval, approval of shop drawings by Architect/Engineer, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor.

The Contractor shall allow sufficient time in its schedule for its Architect/Engineer to conduct whatever associated reviews or inspections as may be required under the Architect/Engineer's contract with the Contractor. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

(c) **Critical Path Method (CPM) Schedule:** Where a CPM schedule is required, it shall be in the time-scaled precedence format using the Contractor's logic and time estimates. The CPM schedule shall be drawn or plotted with activities grouped or zoned by Work area or subcontract as opposed to a random (or scattered) format.

The CPM schedule shall be time-scaled on a weekly basis and shall be drawn or plotted at a level of detail and logic which will schedule all salient features of the Work, including not only the actual construction Work for each trade, but also the submission of shop drawings and other Submittals for approval, approval of shop drawings by the Contractor's Architect/Engineer, placing of orders for materials, the manufacture and delivery of materials, the testing and installation of materials and

equipment, and all Work activities to be performed by the Contractor. Failure to include any element of Work required for the performance of this Contract shall not excuse the Contractor from completing all Work required within the Time for Completion, Contract Completion Date and any interim deadlines established by the Contract.

The Contractor shall allow sufficient time in its schedule for its Architect/Engineer to conduct whatever associated reviews or inspections as may be required. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

When completed, the CPM schedule shall be submitted to the Owner for review. The CPM schedule will identify and describe each activity, state the duration of each activity, the calendar dates for the early and late start and the early and late finish of each activity, and clearly highlight all activities on the critical path. "Total Float" and "Free Float" shall be indicated for all activities. Float time, whether "Free Float" or "Total Float" as defined in Section 1, shall not be considered for the exclusive use or benefit of either the Owner or the Contractor, but must be allocated in the best interest of completing the Work within the Time for Completion or the Contract Completion Date. Extensions to the Time for Completion or the Contract Completion Date, when granted by Change Order, will be granted only when equitable time adjustment exceeds the Total Float in the activity or path of activities affected by the change. On contracts with a price over $5,000,000, the CPM schedule shall also show what part of the Contract Price (expressed in U.S. dollars) is attributable to each activity on the schedule, the sum of which for all activities shall equal the total Contract Price. On contracts with a price over $10,000,000, the CPM schedule shall also show the planned workforce (crew size and number of crews) and the major pieces of equipment required for each activity on the schedule. When acceptable to the Owner and Architect/Engineer as to compliance with the requirements of this Section, but not as to logic, the schedule shall become the CPM schedule for the Project. Acceptance of the schedule by the Owner does not indicate agreement with, nor responsibility for the proposed or actual duration of any activity shown on the accepted schedule.

(d) **Monthly Project Reports:** The Contractor shall review progress not less than each month, but as often as necessary to properly manage the Project and stay on schedule. The Contractor shall collect and preserve information on Change Orders, including extensions of time. The Contractor shall evaluate this information and update the latest accepted schedule as often as necessary to finish within the Contract Time for Completion or before the Contract Completion Date. The Contractor shall submit to the Owner along with its monthly request for payment a copy of the bar graph schedule annotated to show the current progress. For projects requiring a CPM schedule, the Contractor shall submit a monthly report of the status of all activities. The bar graph schedule or monthly status report submitted with each periodic request for payment shall show the Work completed to date in comparison with the Work scheduled for completion, including but not limited to the dates for the beginning and completion of the placing of orders; the manufacture, testing and installation of materials, supplies and equipment. The form shall be approved by the Owner; however, a bar graph or a CPM schedule marked, colored or annotated to reflect the above will usually satisfy this requirement. If any elements of the Work are behind schedule, regardless of whether they may prevent the Work from being completed on time, the Contractor must indicate in writing in the report what measures it is taking and plans to take to bring each such element back on schedule and to ensure that the Time for Completion or Contract Completion Date is not exceeded.

(e) **Progress Delay:** Should any of the following conditions exist, the Owner may require the Contractor to prepare, at no extra cost to the Owner, a plan of action and a recovery schedule for completing the Work by the Contract Time for Completion or the Contract Completion Date:

(1) The Contractor's monthly project report indicates delays that are, in the opinion of the Owner, of sufficient magnitude that the Contractor's ability to complete the Work by the scheduled Time for Completion or the Contract Completion Date is brought into question;

(2) The CPM schedule sorted by early finish shows the Contractor to be thirty (30) or more days behind the critical path schedule at any time during construction up to thirty (30) days prior to scheduled Substantial Completion date;

(3) The Contractor desires to make changes in the logic (sequencing of Work) or the planned duration of future activities of the CPM schedule which, in the opinion of the Architect/Engineer or the Owner, are of a major nature.

The plan of action and recovery schedule, when required, shall explain and display how the Contractor intends to regain compliance with the current accepted, fully completed, Project CPM schedule, as updated by approved change orders.

The plan of action, when required, shall be submitted to the Owner for review within two (2) business days of the Contractor receiving the Owner's written demand. The recovery schedule, when required, shall be submitted to the Owner within five (5) calendar days of the Contractor's receiving the Owner's written demand.

(f) **Early Completion of Project:** The Contractor may attempt to achieve Substantial Completion on or before the Time for Completion or the Contract Completion Date. However, such planned early completion shall be for the Contractor's convenience only and shall not create any additional rights of the Contractor or obligations of the Owner under this Contract, nor shall it change the Time for Completion or the Contract Completion Date. The Contractor shall not be required to pay damages to the Owner because of its failure to achieve Substantial Completion by its planned earlier date. Likewise, the Owner shall not pay the Contractor any additional compensation for achieving Substantial Completion early nor will the Owner owe the Contractor any compensation should the Owner, its officers, employees, or agents cause the Contractor not to achieve Substantial Completion earlier than the date required by the Contract Documents.

If the Contractor seeks to change the Time for Completion or the Contract Completion Date to reflect an earlier completion date, it may request or propose such a change. The Owner may, but is not required to, accept such proposal. However, a change in the Time for Completion or the Contract Completion Date shall be accomplished only by Change Order. If the Contractor's proposal to change the Time for Completion or the Contract Completion Date is accepted, a Change Order will be issued stating that all references in the Contract, including these General Conditions, to the Time for Completion or the Contract Completion Date shall thereafter refer to the date as modified, and all rights and obligations, including the Contractor's liability for actual damages, delay damages and/or liquidated damages, shall be determined in relation to the date, as modified.

20. SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT

(a) Before submittal of the first partial payment request under the Contract, the Contractor shall prepare for review and approval of the Owner a schedule of the estimated values listed by trades or by specification sections of the Work, totaling the Contract Price. Where the total Project has multiple parts or phases, the Contractor shall prepare appropriate schedules of values to facilitate reviews and justifications for payments.

All requests for payment shall be made on a computerized spreadsheet. Where a computerized spreadsheet is used, one copy of the entire Schedule of Values shall be provided to the Owner an agreed spreadsheet format (e.g., Excel) with the initial request for payment.

(b) If the Contractor requests, or intends to request, payment for materials stored in an approved and secure manner, the Schedule of Values must indicate the amount for labor and the amount for materials, and in a supplement thereto must include an itemized list of materials for that trade or Work section. The material breakdown shall be in sufficient detail to allow verification of the quantities required for the Project, the quantities delivered, the Work completed, and the quantities

stored on or off Site.

(c) The "Value of Work Completed" shall be completed, the Contractor's certification completed and signed, and the appropriate substantiating material attached to each Certificate for Payment. Such substantiating material includes, but is not limited to, invoices for materials, delivery tickets, time sheets, payroll records, daily job logs/records, and similar materials which, in the opinion of the Owner, are necessary or sufficient to justify payment of the amount requested.

(d) The labor progress for any task or activity shall be calculated based upon the percentage of Work complete up to fifty percent (50%) of the completion of the task or activity. Thereafter, the evaluation of labor progress will be based upon the effort required to complete that task or activity. The material progress shall be calculated as the invoiced dollar cost of materials used in relationship to the amount estimated as necessary to complete a particular element of Work. When calculating material progress, credit shall be given for installed material as well as that stored on the Site and any material stored off Site which has been certified in accordance with Section 36 of these General Conditions.

(e) Should Work included in previous Schedule of Values submittals, and for which payment has been made, subsequently be identified, by tests, inspection, or other means, as not acceptable or not conforming to Contract requirements, the "Value of Work Completed" portion of the first Schedule of Values submitted after such identification shall be modified to reduce the "completed" value of that Work by deleting the value of that which has been identified as not acceptable or nonconforming.

21. ACCESS TO WORK

The Owner, the Project Manager, the Owner's inspectors and other testing personnel, inspectors from the Department of Labor and Industry, and others authorized by the Owner, shall have access to the Work at all times. The Contractor shall provide proper facilities for access and inspection.

22. SURVEYS AND LAYOUT

(a) The Owner shall furnish the Contractor all necessary documents showing property lines and the location of existing buildings and improvements. The Contractor shall provide competent surveying and engineering services to execute the Work in accordance with the Contract and shall be responsible for the accuracy of these surveying and engineering services.

(b) Such general reference points and benchmarks on the Site as will enable the Contractor to proceed with the Work will be established in the plans and specifications. If the Contractor finds that any previously established reference points have been lost or destroyed, it shall promptly notify the Owner.

(c) The Contractor shall protect and preserve the established benchmarks and monuments and shall make no changes in locations without the written approval from the Owner. Any of these which may be lost or destroyed or which require shifting because of necessary changes in grades or locations shall, subject to prior written approval of the Owner, be replaced and accurately located by the Contractor.

23. PLANS AND SPECIFICATIONS

(a) The general character and scope of the Work are illustrated by the plans and the specifications prepared by the Contractor's Architect/Engineer. The level of detail shown on the plans and stipulated in the specifications shall be sufficient to clearly demonstrate to the Building Official that the design conforms to the requirements of the VUSBC. The Contractor shall carry out the Work in accordance with the plans and specification and any additional detail drawings and instructions provided by the Architect/Engineer.

(b) Measurements or dimensions shown on the drawings for Site features, utilities and structures shall be verified at the Site by the Contractor before commencing the Work. The Contractor shall not scale measurements or dimensions from the drawings. If there are discrepancies, the Architect/Engineer shall be consulted. If new Work is to connect to, match with or be provided in existing Work, the

Contractor shall verify the actual existing conditions and necessary dimensions prior to ordering or fabrication.

(c) As-Built Drawings: The Contractor shall maintain at the Site for the Owner one copy of all drawings, specifications, addenda, approved shop or setting drawings, Change Orders and other modifications (collectively referred to herein as "As-Built Drawings") in good order and marked to record all changes as they occur during construction. These shall be available to the Owner, the Project Inspector, the Owner's other inspectors and to the Owner's testing personnel. The drawings shall be neatly and clearly marked in color during construction to record all variations made during construction. The representation of such variations shall include such supplementary notes, symbols, legends, and details as may be necessary to clearly show the as-built construction.

(d) Record Drawings: Upon completion of the Work and prior to the final inspection, the Contractor shall deliver to the Owner one complete set of "As-Built Drawings" in reproducible form.

(e) Ownership of all materials and documentation including the original drawings, the Plans (including electronic files) and Specifications, and copies of any calculations and analyses prepared pursuant to the Contract between the Owner and the Contractor, shall belong exclusively to the Owner. These materials and documentation, whether completed or not, shall be the property of the County of Roanoke, whether the Work for which they are made is executed or not. The Contractor shall not use these materials on any other work or release any information about these materials without the express written consent of the Owner.

Such material may be subject to public inspection in accordance with the Virginia Freedom of Information Act. Security-related documents and information are excluded from the Act unless a specific need to know can be shown. Trade secrets or proprietary information submitted by a bidder, offeror, or contractor in connection with a procurement transaction shall not be subject to disclosure under the Virginia Freedom of Information Act, provided the bidder, offeror, or contractor invokes the applicable provisions of the *Code of Virginia*, prior to or upon submission of the data or other materials, identifies the data or materials to be protected and states the reason why the protection is necessary.

The Contractor shall provide the following documents to the Owner at the completion of the Work:

- original sealed and signed drawings
- BIM Models.
- original copy of the specifications
- copy of analyses made for the Project
- indexed copy of the calculations made by each discipline for the Project
- the Owner copy of all shop drawings, submittals, cut sheets, operation and maintenance instructions, parts lists, and other material related to the Project.

The County, as owner of the documents prepared for its projects, has the right to use the Project documents as a prototype to demonstrate scope, size, functional relationships, etc., to an Architect/Engineer designing a similar project. Neither the Contractor nor its Architect/Engineer for the original Project design shall be responsible or liable to the Owner for any such use of the documents.

The Architect/Engineer for the similar project shall be responsible for providing a complete set of project and location-specific "Final Documents" with its seals and signatures which meet all applicable codes and standards in effect at the time those "Final Documents" are submitted.

24. SUBMITTALS

(a) Shop drawings, setting drawings, product data, and samples generated by the Contractor shall be known as submittals. Three (3) copies of all submittals shall be provided to the Owner when generated.

(b) Submittals shall be approved by the Contractor and its licensed professional designer for

conformance with the required codes, standards, and provisions of the Contract. Three (3) copies of all approved submittals shall be provided to the Owner. One copy of the "Approved" shop drawings/submittals shall be on file in the construction trailer for use by Inspectors.

(c) Any submittal material, assembly, or product which deviates from the approved Building Permit Documents shall be submitted to the Building Official for VUSBC approval prior to installation.

(d) The Work shall be in accordance with approved Building Permit Documents as detailed by the approved submittals.

25. FEES, SERVICES AND FACILITIES

(a) The Contractor shall obtain all permits, including the Building Permit(s), and pay for all fees and charges necessary for temporary access and public right-of-way blockage or use, for temporary connections to utilities and for the use of property (other than the Site) for storage of materials and other purposes unless otherwise specifically stated in the Contract Documents.

(b) Certain projects such as renovations and interior modifications of existing buildings will usually have water and electric service to the building. In those instances, water and electric power, if required for the Work under the Contract, will be furnished by the Owner subject to reasonable use by the Contractor, only to the extent and capacity of present services. The Contractor shall be responsible for providing required connections, temporary wiring, piping, etc. to these services in a safe manner and in accordance with applicable codes. All temporary wire, pipe, etc. shall be removed before the Substantial Completion inspection. Acceptance by the Contractor of the use of Owner's water and electricity constitutes a release to the Owner of all claims and of all liability to the Contractor for whatever damages which may result from power and water outages or voltage variations.

(c) The Owner shall pay any connection charges for permanent utility connections directly to the utility Supplier. The Contractor shall coordinate such connections with the utility Supplier.

(d) Unless otherwise specifically stated in the Contract Documents, the Contractor, either directly or through its Subcontractors, shall provide and pay for all material, labor, tools, equipment, water, light, power, telephone and other services or facilities of every nature whatsoever necessary to execute completely and deliver the Work within the Contract Time for Completion or before the Contract Completion Date.

(e) The Contractor shall provide temporary facilities including Contractor's office space, Owner's Project Inspector office space (if required by the specifications), toilet facilities, and storage space, as required for the operations and the protection of the material and work. Number, sizes and locations shall be subject to approval of the Owner. Sanitary facilities shall be plumbed into an approved waste treatment system or shall be an approved type of chemical toilet and shall be regularly serviced.

26. EQUALS

(a) **Brand names:** Unless otherwise stated in the Request for Proposals or Invitation for Bids, the name of a certain brand, make or manufacturer denotes the characteristics, quality, workmanship, economy of operation and suitability for the intended purpose of the article desired, but does not restrict the Contractor to the specific brand, make, or manufacturer; it is set forth to convey to the Contractor the general style, type, character and quality of the article specified.

(b) **Equal materials, equipment or assemblies:** Whenever in these Contract Documents, a particular brand, make of material, device or equipment is shown or specified, such brand, make of material, device or equipment shall be regarded merely as a standard. Any other brand, make or manufacturer of a product, assembly or equipment which in the opinion of the Owner is the equal of that specified, considering quality, capabilities, workmanship, configuration, economy of operation, useful life, compatibility with design of the Work, and suitability for the intended purpose**,** will be accepted unless rejected by the Owner as not being equal.

(c) **Substitute materials, equipment or assemblies:** The Contractor may propose to substitute a material, product, equipment, or assembly which deviates from the requirements of the approved plans and specifications but which the Contractor deems will perform the same function and have equal capabilities, service life, economy of operations, and suitability for the intended purpose. The proposal must include any cost differentials proposed. If the proposed substitute is acceptable to the Owner, a Change Order will be proposed to the Contractor to accept the substitute and to deduct the proposed cost savings from the Contract Price. The Owner shall have the right to limit or reject substitutions at its sole discretion.

(d) The Contractor shall be responsible for making all changes in the Work necessary to adapt and accommodate any equal or substitute product which it uses. The necessary changes shall be made at the Contractor's expense.

27. AVAILABILITY OF MATERIALS

If a brand name, product, or model number included in the Contract Documents is not available on the present market, alternate equal products or model numbers may be proposed by the Contractor for approval by the Owner. Also submit data to the Building Official for approval of products, materials, and assemblies regulated by the VUSBC.

28. CONTRACTOR'S TITLE TO MATERIALS

No materials or supplies for the Work shall be purchased by the Contractor, or by any Subcontractor or Supplier, subject to any security interest, installment or sales contract or any other agreement or lien by which an interest is retained by the seller or is given to a secured party. The Contractor warrants that it has clear and good title to all materials and supplies which it uses in the Work or for which it accepts payment in whole or in part.

29. STANDARDS FOR MATERIALS INSTALLATION & WORKMANSHIP

(a) Unless otherwise specifically provided in the Contract, all equipment, material, and accessories incorporated in the Work are to be new and in first class condition.

(b) Unless specifically approved by the Owner or required by the Contract, the Contractor shall not incorporate into the Work any materials containing asbestos or any material known by the industry to be hazardous to the health of building construction workers, maintenance workers, or occupants. If the Contractor becomes aware that a material required by the Contract contains asbestos or other hazardous materials, it shall notify the Owner immediately and shall take no further steps to acquire or install any such material without first obtaining Owner approval.

(c) All workmanship shall be of the highest quality found in the building industry in every respect. All items of Work shall be done by craftsmen or tradesmen skilled in the particular task or activity to which they are assigned. In the acceptance or rejection of Work, no allowance will be made for lack of skill on the part of workmen. Poor or inferior workmanship (as determined by the Architect/Engineer, the Owner or other inspecting authorities) shall be removed and replaced at Contractor's expense such that the Work conforms to the highest quality standards of the trades concerned, or otherwise corrected to the satisfaction of the Owner, or other inspecting authority, as applicable.

(d) Where specified items are supplied with the manufacturer's printed instructions, recommendations, or directions for installation, or where such instructions, recommendations, or directions are available, installation of the specified items shall be in strict accordance with the manufacturer's printed instructions.

(e) Where reference is made to specific codes or standards governing the installation of specified items, installation shall in all cases be in strict accordance with the referenced codes and standards. Where

no reference is made to specific codes or standards, installation shall conform to the applicable industry standards for installation of the specific item to be installed. The Contractor and each Subcontractor are expected to be proficient and skilled in their respective trade and knowledgeable of the Codes and Standards of the National Fire Protection Association (NFiPA), National Electric Code (NEC), Occupational Safety and Health Act (OSHA) and other codes and standards applicable to installations and associated work by its trade.

(f) Where the manufacturer's printed instructions are not available for installation of specific items, where specific codes or standards are not referenced to govern the installation or specific items, or where there is uncertainty on the part of the Contractor concerning the installation procedures to be followed or the quality of workmanship to be maintained in the installation of specific items, the Contractor shall consult the Architect/Engineer for approval of the installation procedures or the specific standards governing the quality of workmanship the Contractor proposes to follow or maintain during the installation of the items in question.

(g) During and/or at the completion of installation of any items, the tests designated in the plans or specifications necessary to assure proper and satisfactory functioning for its intended purpose shall be performed by the Contractor or by its Subcontractor responsible for the completed installation. All costs for such testing are to be included in the Contract Price. If required by the Contract Documents, the Contractor shall furnish prior to final inspection the manufacturers' certificates evidencing that products meet or exceed applicable performance, warranty and other requirements, and certificates that products have been properly installed and tested.

30. WARRANTY OF MATERIALS AND WORKMANSHIP

(a) The Contractor warrants that, unless otherwise specified, all materials and equipment incorporated in the Work under the Contract shall be new, in first-class condition, and in accordance with the Contract Documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with the Contract Documents and shall be performed by persons qualified at their respective trades.

(b) Work not conforming to these warranties shall be considered defective.

(c) This warranty of materials and workmanship is separate and independent from and in addition to any of the Contractor's other guarantees or obligations in the Contract or under Virginia law.

31. USE OF SITE AND REMOVAL OF DEBRIS

(a) The Contractor shall:

(1) Perform the Work in such a manner as not to interrupt or interfere with the operation of any existing activity on, or in proximity to, the Site or with the Work of any other separate contractor;

(2) Store its apparatus, materials, supplies and equipment in such orderly fashion at the Site of the Work as will not unduly interfere with the progress of its Work or the work of any other separate contractor; and

(3) Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work.

(b) The Contractor expressly undertakes, either directly or through its Subcontractor(s), to effect all cutting, filling or patching of the Work required to make the same conform to the plans and specifications, and, except with the consent of the Owner, not to cut or otherwise alter the Work of any other separate contractor. The Contractor shall not damage or endanger any portion of the Work or Site, including existing improvements, unless called for by the Contract.

(c) The Contractor expressly undertakes, either directly or through its Subcontractor(s), to clean up frequently all refuse, rubbish, scrap materials and debris caused by its operations, to the end that at all times the Site shall present a neat, orderly and workmanlike appearance. No such refuse, rubbish, scrap material and debris shall be left within the completed Work nor buried on the building Site, but shall be removed from the Site and properly disposed of in a licensed landfill or otherwise as required by law.

(d) The Contractor expressly undertakes, either directly or through its Subcontractor(s), before final payment or such prior time as the Owner may require, to remove all surplus material, false Work, temporary structures, including foundations thereof, plants of any description and debris of every nature resulting from its operations and to put the Site in a neat, orderly condition; to thoroughly clean and leave reasonably dust free all finished surfaces including all equipment, piping, etc., on the interior of all buildings included in the Contract; and to clean thoroughly all glass installed under the Contract, including the removal of all paint and mortar splatters and other defacements. If the Contractor fails to clean up at the time required herein, the Owner may do so and charge the costs incurred thereby to the Contractor in accordance with Section 10(b) of these General Conditions.

(e) The Contractor shall have, On-Site, an employee certified by the Department of Environmental Quality as a Responsible Land Disturber who shall be responsible for the installation, inspection and maintenance of erosion control and stormwater management measures and devices. The Contractor shall prevent Site soil erosion, the runoff of silt and/or debris carrying water from the Site, and the blowing of debris off the Site in accordance with the applicable requirements and standards of the Contract and the Virginia Department of Environmental Quality's Erosion and Sediment Control Regulations and the Virginia Stormwater Management Regulations.

32. TEMPORARY ROADS

Temporary roads, if required, shall be established and maintained until permanent roads are accepted, then removed and the area restored to the conditions required by the Contract Documents. Crushed rock, paving and other road materials from temporary roads shall not be left on the Site unless permission is received from the Owner to bury the same at a location and depth approved by the Owner.

33. SIGNS

The Contractor may, at its option and without cost to the Owner, erect signs acceptable to the Owner on the Site for the purpose of identifying and giving directions to the job. No signs shall be erected without prior approval of the Owner as to design and location.

34. PROTECTION OF PERSONS AND PROPERTY

(a) The Contractor expressly undertakes, both directly and through its Subcontractors, to take every reasonable precaution at all times for the protection of all persons and property which may come on the Site or be affected by the Contractor's Work.

(b) The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Any violation of these requirements or duties or any potential safety hazard that is brought to the attention of the Contractor by the Architect/Engineer, the Owner, or any other persons shall be immediately abated.

(c) The provisions of all rules and regulations governing health and safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia, issued by the Department of Labor and Industry under Title 40.1 of the *Code of Virginia*, shall apply to all Work under this Contract.

(d) The Contractor shall continuously maintain adequate protection of all its Work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except as may be directly and solely due to errors in the Contract Documents or caused by agents or employees of the Owner. The Contractor shall

adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by its owners. The Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for protection as required by public authority, local conditions, or the Contract.

(e) In an emergency affecting the health, safety or life of persons or of the Work, or of the adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act, at its discretion, to prevent such threatened loss or injury. Also, should he, to prevent threatened loss or injury, be instructed or authorized to act by the Owner, it shall so act immediately, without appeal. Any additional compensation or extension of time claimed by the Contractor on account of any emergency work shall be determined as provided by Section 38 of these General Conditions.

(f) When necessary for the proper protection of the Work, temporary heating of a type compatible with the Work must be provided by the Contractor at the Contractor's expense, unless otherwise specified.

35. CLIMATIC CONDITIONS

The Contractor shall suspend activity on and protect any portion of the Work that may be subject to damage by climatic conditions.

36. PAYMENTS TO CONTRACTOR

(a) Unless otherwise provided in the Contract, the Owner will make partial payments to the Contractor on the basis of a duly certified and approved Schedule of Values and Certificate for Payment that will become Exhibit to the contract, showing the estimate of the Work performed during the preceding calendar month or work period. When evaluating the Contractor's Schedule of Values and Certificate for Payment, the Owner will consider the value of the Work in place, the value of approved and properly stored materials, the status of the Work on the critical path with regard to the Time for Completion, and the estimated value of the Work necessary to achieve Final Completion. The Owner will schedule a monthly pay meeting to occur no earlier than the 25th day of the month represented by the payment request or not later than the 5th day of the following month. The Contractor will submit its monthly estimate of Work in accordance with the Contract between the Owner and Contractor so that it is received by the Owner's Project Manager at least one workday prior to the date scheduled for the monthly pay meeting. The Owner will review the estimate with the Contractor at the monthly pay meeting, which shall be considered the receipt date, and may approve some or all of the estimate of Work for payment. In preparing estimates, the material delivered to the Site and preparatory Work done shall be taken into consideration, if properly documented as required by Section 20 of these General Conditions, or as may be required by the Owner so that quantities may be verified. In addition to material delivered to the Site, material such as large pieces of equipment and items purchased specifically for the Project, but stored off the Site within the Commonwealth of Virginia, may be considered for payment, provided all of the following are accomplished prior to the submission of the monthly payment request in which payment for such' materials is requested:

(1) The Contractor must notify the Owner in writing, at least ten (10) days prior to the submission of the payment request that specific items will be stored off Site in a designated, secured place within the Commonwealth of Virginia. The Schedule of Values must be detailed to indicate separately both the value of the material and the labor/installation for trades requesting payment for stored materials. By giving such notification and by requesting payment for material stored off Site, the Contractor warrants that the storage location is safe and suitable for the type of material stored and that the materials are identified as being the property of the Contractor, and agrees that loss of materials stored off the Site shall not relieve the Contractor of the obligation to timely furnish these types and quantities of materials for the Project and meet the Time for Completion or Contract Completion Date, subject to Section 43(b) of these General Conditions. If the storage location is more than 20 miles from the Site, the Contractor may be required to reimburse the Owner for the cost incurred for travel to the, storage location to verify the Contractor's request for payment for materials stored off Site.

(2) Such notification, as well as the payment request, shall:

(a) itemize the quantity of such materials and document with invoices showing the cost of said materials;

(b) indicate the identification markings used on the materials, which shall clearly reference the materials to the particular project;

(c) identify the specific location of the materials, which must be within reasonable proximity to the Site and within the Commonwealth of Virginia;

(d) include a letter from the Contractor's Surety which confirms that the Surety on the Performance Bond and the Labor and Material Payment Bond has been notified of the request for payment of materials stored off the Site and agrees that the materials are covered by the bond; and

(e) include a certificate of all-risk builder's risk insurance in an amount not less than the fair market value of the materials, which shall name the Owner and the Contractor as co-insureds.

(3) The Contractor's Architect/Engineer shall indicate, in writing, to the Owner that Submittals for such materials have been reviewed and meet the requirements of the Contract Documents, that the stored materials meet the requirement of the plans and specifications, and that such materials conform to the approved Submittals. Should the Architect/Engineer deem it necessary to visit the storage site to make such review, the Contractor shall bear the costs incurred therewith.

(4) The Owner shall notify the Contractor in writing of its agreement to prepayment for materials.

(5) The Contractor shall notify the Owner in writing when the materials are to be transferred to the Site and when the materials are received at the Site.

(b) Payment will not be made for materials or equipment stored on or off the Site which are not scheduled for incorporation into the Work within the six months next following submission of the request for payment, unless the Contractor has the prior consent of the Owner, which consent may be granted or withheld by the Owner in its discretion if, in the opinion of the Owner, it is not necessary to procure the materials more than six months in advance of use to assure their availability when needed.

(c) No payment shall be made to the Contractor until:

(1) The Contractor furnishes to the Owner its Social Security Number (SSN) if an individual, or its Federal Employer Identification Number (FEIN) if a proprietorship, partnership, corporation or other legal entity.

(2) Certificates of Insurance or other satisfactory evidence of compliance by the Contractor with all the requirements of Section 11 (and Section 12 if applicable) of these General Conditions have been delivered to the Owner.

(3) Copies of any certificates of insurance required of a Subcontractor under Section 11 have been delivered to the Owner for payments based on Work performed by a Subcontractor

(4) The Contractor has (i) submitted a preliminary schedule which is acceptable to the Owner in accordance with Section 19(a), (ii) submitted a fully complete Project schedule accepted by the Owner in accordance with Section 19(a), (iii) maintained the monthly bar graphs or status reports required by Section 19(b), or (iv) provided a recovery schedule pursuant to Section 19(e), as each of them may be required.

(d) In making such partial payments, five percent (5%) of each payment to the Contractor shall be retained until Final Completion and acceptance of all Work covered by the Contract, unless otherwise provided by any law, regulation or program of the federal government. Such retainage shall beheld to assure faithful performance of the Contract and may also be used as a fund to deduct amounts due to or claimed by the Owner, including, but not limited to, payment to the Owner of all moneys due for deductive change orders, credits, uncorrected Defective Work, interest, damages, and the like. (§2.2-4333 of the *Code of Virginia*) The Owner may, at its sole discretion, agree on an item by item basis to release the retainage on items which are fully 100% complete, and which have accepted by the Owner as being tested and complete, and on which no further action or work will be required. Retainage which is released by the Owner shall be distributed by the Contractor to the applicable party(ies) in conformance with Section 37 of these General Conditions.

(e) All material and Work for which partial payments are made shall thereupon become the sole property of the Owner, but this provision shall not relieve the Contractor from the sole responsibility for all materials and Work, including those for which payment has been made, or for the restoration of any damaged materials or Work**.** Nor shall this provision serve as a waiver of the right of the Owner to require the fulfillment of all of the terms and conditions of the Contract.

(f) The final payment, which shall include the retainage, less any amounts due to or claimed by the Owner, shall not become due until the Owner agrees that Final Completion has been achieved and until the Contractor shall deliver to the Owner a Certificate of Completion by the Contractor and an Affidavit of Payment of Claims, stating that all Subcontractors and Suppliers of either labor or materials have been paid all sums claimed by them for Work performed or materials furnished in connection with this Project. Amounts due the Owner which may be withheld from the final payment may include, but are not limited to, amounts due pursuant to Section 3(g), Section 16(a-d), Section 31(d), costs incurred to repair or replace Defective Work, costs incurred as a result of the Contractor's negligent acts or omissions or omissions of those for whom the Contractor is responsible, delay damages under Section 43(h), and any liquidated or actual damages. If all Subcontractors and Suppliers of labor and materials have not been paid the full amount claimed by them, the Contractor shall list each to which an agreed amount of money is due or which has a claim in dispute. With respect to all such Subcontractors and Suppliers, the Contractor shall provide to the Owner, along with the Affidavit of Payment of Claims, an affidavit from each such Subcontractor and Supplier stating the amount of their subcontract or supply contract, the percentage of completion, the amounts paid to them by the Contractor and the dates of payment, the amount of money still due if any, any interest due the Subcontractor or Supplier pursuant to Section 37(b) below, and whether satisfactory arrangements have been made for the payment of said amounts. If no agreement can be reached between the Contractor and one or more Subcontractors or Suppliers as to the amounts owed to the Subcontractors or Suppliers, the Owner may, in its discretion, pay such portion of the moneys due to the Contractor which is claimed by the Subcontractor or Supplier into a Virginia Court or Federal Court sitting in Virginia, in the manner provided by Virginia law. Said payment into court shall be deemed a payment to the Contractor. Nothing in this Section shall be construed as creating any obligation or contractual relationship between the Owner and any Subcontractor or Supplier, and the Owner shall not be liable to any Subcontractor or Supplier on account of any failure or delay of the Owner in complying with the terms hereof.

(g) Upon successful completion of the final inspection and all Work required by the Contract, including but not limited to the delivery of As-Built Reproducible Record Drawings, equipment manuals, written warranties, acceptance of the Work by the Owner and the delivery of the affidavits required in Section 36(f) of these General Conditions, the Contractor shall deliver the written Certificate of Completion by the Contractor (Exhibit ____) to the Owner stating the entire amount of Work performed and compensation earned by the Contractor, including extra work and compensation therefor. The Owner may accept the Work for occupancy or use while asserting claims against the Contractor; disputing the amount of compensation due to the Contractor; disputing the quality of the Work, its completion, or its compliance with the Contract Documents; or any other reason.

(h) Unless there is a dispute about the compensation due to the Contractor, Defective Work, quality of the Work, compliance with the Contract Documents, completion itself, claims by the Owner, other matters in contention between the parties, within thirty (30) days after receipt and acceptance of the Schedule of Values and Certificate for Payment in proper form by the Architect/Engineer at the monthly pay meeting, which shall be considered the receipt date, the Owner shall pay to the Contractor the amount approved less all prior payments and advances whatsoever to or for the account of the Contractor. In the case of final payment, the completed Affidavit of Payment of Claims, and the Certificate of Completion by the Contractor shall accompany the final Schedule of Values and Certificate for Payment, which is forwarded to the Owner for payment. The date on which payment is due shall be referred to as the Payment Date. All prior estimates and payments including those relating to extra Work may be corrected and adjusted in any payment and shall be corrected and adjusted in the final payment. In the event that any request for payment by the Contractor contains a defect or impropriety, the Owner shall notify the Contractor of any defect or impropriety that would prevent payment by the Payment Date, within five (5) days after receipt of the Schedule of Values and Certificate for Payment by the Owner.

(i) Interest shall accrue on all amounts owed by the Owner to the Contractor that remain unpaid thirty (30) days following the Payment Date. Said interest shall accrue at the rate of six percent (6%) per annum. No interest shall accrue on retainage or when payment is delayed because of disagreement between the Owner and the Contractor regarding the quantity, quality, or timeliness of the Work, including, but not limited to, compliance with Contract Documents or the accuracy of any Request for Payment received. This exception to the accrual of interest stated in the preceding sentence shall apply only to that portion of a delayed payment that is actually the subject of such a disagreement and shall apply only for the duration of such disagreement. Nothing contained herein shall be interpreted, however, to prevent the withholding of retainage to assure faithful performance of the Contract. These same provisions relating to payment of interest to the Contractor shall apply also to the computation and accrual of interest on any amounts due from the Contractor to the Owner for deductive change orders and to amounts due on any claims by the Owner. The date of mailing of any payment by the U.S. Mail is deemed to be the date of payment to the addressee.

(j) The acceptance by the Contractor of the Final Payment shall be and operate as a release to the Owner of all claims by the Contractor, its Subcontractors and Suppliers, and of all liability to the Contractor whatever, including liability for all things done or furnished in connection with this Work, except for things done or furnished which are the subject of unresolved claims for which the Contractor has filed a timely written notice of intent, provided a claim is submitted no later than sixty (60) days after Final Payment. Acceptance of any interest payment by the Contractor shall be a release of the Owner from claims by the Contractor for late payment.

(k) No certificate for payment issued, and no payment, final or otherwise, no certificate of completion, nor partial or entire use or occupancy of the Work by the Owner, shall be an acceptance of any Work or materials not in accordance with the Contract, nor shall the same relieve the Contractor of responsibility for faulty materials or Defective Work or operate to release the Contractor or its Surety from any obligation under the Contract, the Standard Performance Bond and the Standard Labor and Material Payment Bond.

37. PAYMENTS BY CONTRACTOR (§2.2-4354, *Code of Virginia*)

Under §2.2-4354, *Code of Virginia*, the Contractor is obligated to:

(a) Within seven (7) days after receipt of amounts paid to the Contractor by the Owner for Work performed by the Subcontractor or Supplier under this Contract,

(1) Pay the Subcontractor or Supplier for the proportionate share of the total payment received from the Owner attributable to the Work performed by the Subcontractor or the materials furnished by the Supplier under this Contract; or

(2) Notify the Subcontractor or Supplier, in writing, of its intention to withhold all or a part of the

Subcontractor or Supplier's payment with the reason for nonpayment;

(b) Pay interest to the Subcontractor or Supplier on all amounts owed by the Contractor that remain unpaid after seven (7) days following receipt by the Contractor of payment from the Owner for Work performed by the Subcontractor or materials furnished by the Supplier under this contract, except for amounts withheld as allowed under Subsection (a)(2) of this Section.

(c) Include in each of its subcontracts a provision requiring each Subcontractor to include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower tier subcontractor. Each Subcontractor shall include with its invoice to, or request for payment from, the Contractor, a certification that that Subcontractor has paid each of its suppliers and lower tier subcontractors their proportionate share of previous payments received from the Contractor attributable to the Work performed or the materials furnished by it under this Contract.

The Contractor's obligation to pay interest to the Subcontractor or Supplier pursuant to Subsection (b) of this Section is not an obligation of the Owner. A modification to this Contract shall not be made for the purpose of providing reimbursement for such interest charge. A Contractor's cost reimbursement claim shall not include any amount for reimbursement of such interest charge.

38. CHANGES IN THE WORK

(a) The Owner may at any time, and without notice to the sureties, make changes in the Work which are within the general scope of the Contract, except that no change will be made which will increase the total Contract Price to an amount more than twenty percent (20%) in excess of the original Contract Price without notice to sureties and approval of its governing bodies. At the time of the Pre-construction Meeting described in Section 49(b), the Contractor and the Owner shall advise each other in writing of their designees authorized to accept and/or approve changes to the Contract Price and of any limits to each designee's authority. Should any designee or limits of authority change during the time this Contract is in effect, the Contractor or Owner shall give written notice to the other within seven (7) calendar days, utilizing the procedures set forth in these General Conditions. The Contractor agrees and understands that the authority of the Owner's designee is limited by Virginia Code §2.2-4309 and any other applicable statute.

In making any change, the charge or credit for the change shall be determined by one of the following methods as selected by the Owner:

(1) **Fixed Price:** By a mutually agreed fixed amount change to the Contract Price and/or time allowed for completion of the Work. The Change Order shall be substantiated by documentation itemizing the estimated quantities and costs of all labor, materials, and equipment required as well as any mark-up used. The price change shall include the Contractor's overhead and profit. See Subsections (d), (e), and (f) below.

(2) **Unit Price:** By using unit prices and calculating the number of net units of Work in each part of the Work which is changed, either as the Work progresses or before Work on the change commences, and by then multiplying the calculated number of units by the applicable unit price set forth in the Contract or multiplying by a mutually agreed unit price if none was provided in the Contract. No additional percentage markup for overhead or profit shall be added to the unit prices.

(3) **Cost Reimbursement:** By ordering the Contractor to perform the changed Work on a cost reimbursement basis by issuing two Change Orders citing this Subsection, an initiating Change Order, authorizing the changed Work, and a confirming Change Order approving the additional cost and time for the changed Work. The initiating Change Order shall:

(i) Describe the scope or parameters of the change in the Work;

(ii) Describe the cost items to be itemized and verified for payment and the method of

measuring the quantity of work performed;

(iii) Address the impact on the schedule for Substantial Completion;

(iv) Order the Contractor to proceed with the change to the Work;

(v) Order the Contractor to keep in a form acceptable to the Owner, an accurate, itemized account of the actual cost of the change in the Work, including, but not limited to, the actual costs of labor, materials, equipment, and supplies;

(vi) Order the Contractor-to annotate a copy of the Project schedule to accurately show the status of the Work at the time this first Change Order is issued, to show the start and finish dates of the changed Work, and the status of the Work when the changed Work is completed; and

(vii) State that a confirming Change Order will be issued to incorporate the cost of the ordered changed in the Work into the Contract Price and any change in the Contract Time for Completion or Contract Completion Date.

The Contractor shall sign the initiating Change Order acknowledging it has been ordered to proceed with the change in the Work. The Contractor's signature on each initiating Change Order citing this Subsection 38(a)(3) as the method for determining the cost of the Work shall not constitute the Contractor's agreement on the cost or time impact of the ordered Work.

Except as otherwise may be agreed to in writing by the Owner, such costs shall not exceed those prevailing for the trades or crafts (based upon rates established by the U.S. Department of Labor, Bureau of Statistics, or other generally recognized cost data publication), materials, and equipment in the locality of the Project, may include only those items listed as allowable in Subsection 38(e), and shall not include any of the costs listed as not allowable in Subsection 38(f). The Owner shall be permitted, on a daily basis, to verify such records and may require such additional records as are necessary to determine the cost of the change to the Work.

Within fourteen (14) days of the conclusion of such ordered Work, the Contractor and the Owner shall reach agreement on the cost for the ordered Work, based on the records kept and the Contractor's allowance for overhead and profit determined in accordance with the provisions as set forth in Subsections (d) and (f), below; and the change in the Contract Time for Completion or Contract Completion Date, if necessary as a result of the ordered Work. Such costs and time shall be incorporated into a confirming Change Order which references the initiating Change Order. If agreement on the cost and time of the changed Work cannot be reached within the fourteen (14) days allotted, the Contractor may file a claim for the disputed amount as provided for in Section 47.

(4) By issuing a unilateral change order in the amount deemed appropriate by the Owner for the Work. If the Contractor objects to the amount or scope of the change order then the Contractor may within the fourteen (14) days of the date of the change order file a claim for the disputed amount as provided for in Section 47.

(b) The Contractor shall review any change requested or directed by the Owner and shall respond in writing within fourteen (14) calendar days after receipt of the proposed change (or such other reasonable time as the Owner may direct), stating the effect of the proposed change upon its Work, including any increase or decrease in the time and price. The Contractor shall furnish to the Owner an itemized breakdown of the quantities and prices used in computing the proposed change in Contract Price.

The Owner shall review the Contractor's proposal and respond to the Contractor within thirty (30) days of receipt. If a change to the Contract Price and Time for Completion or Contract Completion Date are agreed upon, both parties shall sign the Change Order. If the Contract Price and Time for Completion or Contract Completion Date are not agreed upon, the Owner may direct the Contractor to proceed under Subsection 38(a)(3) above. Change Orders shall be effective when signed by both parties.

(c) In figuring changes, any instructions for measurement of quantities set forth in the Contract shall be followed.

(d) The percentage to be used in calculating both additive and deductive changes in the Work (other than changes covered by unit prices) shall be calculated paid by applying the following specified percentage markups only on the net cost of the changed Work (i.e., difference in cost between original and changed Work). Said percentages shall reasonably approximate the Contractor's overhead and profit but shall not exceed the percentages for each category listed below:

(1) If a Subcontractor does all or part of the changed Work, the Subcontractor's mark-up for overhead and profit on the Work it performs shall be a maximum of ten percent (10%). The Contractor's mark-up for the Subcontractor's price shall be a maximum of ten percent (10%).

(2) If the Contractor does all or part of the changed Work, its markup for overhead and profit on the changed Work it performs shall be a maximum of ten percent (10%).

(3) If a Sub-subcontractor at any tier does all or part of the changed Work, the Sub-subcontractor's markup on that Work shall be a maximum of ten percent (10%). The markup of a sub-subcontractor's Work by the Contractor and all intervening tiers of Subcontractors shall not exceed a total of ten percent (10%).

(4) Where Work is deleted from the Contract prior to commencement of that Work without substitution of other similar Work, one hundred percent (100%) of the Contract Price attributable to that Work shall be deducted from the Contract Price. However, in the event that material Submittals have been approved and orders placed for said materials, Contractor shall use reasonable diligence to minimize the cost to the Owner of cancelling any such order, in which event an amount equal to Contractor's net reduction in the cost of the Work, if any, attributable to cancelation of the order shall be deducted from the Contract Price.

(e) Allowable changes in the Work may include the following:

(1) Labor costs for employees directly employed in the change in the Work, including salaries and wages plus the cost of payroll charges and fringe benefits and overtime premiums, if such premiums are explicitly authorized by the Owner.

(2) Materials incorporated into the change to the Work, including costs of transportation and storage, if applicable. If applicable, all cash discounts shall accrue to the Contractor, unless the Owner deposits funds with the Contractor to make such payments, and all trade discounts, rebates, refunds, and returns from the sale of surplus materials shall accrue to the Owner.

(3) Equipment incorporated in the changed Work or equipment used directly in accomplishing the Work. If rented expressly for accomplishing the change in the Work, the cost shall be the rental rate according to the terms of the rental agreement, which the Owner shall have the right to approve. If owned by the Contractor, the costs shall be a reasonable price based upon the life expectancy of the equipment and the purchase price of the equipment. If applicable, transportation costs may be included.

(4) Costs of increases in premiums for the Standard Labor and Material Payment Bond and the

Standard Performance Bond, provided coverage for the cost of the change in the Work results in such increased costs. At the Owner's request, the Contractor shall provide proof of its notification to the Surety of the change in the Work and of the Surety's agreement to include such change in its coverage. The cost of the increase in premium shall be an allowable cost but shall not be marked up.

(5) Contractor and Subcontractor overhead costs as set forth in Subsection (d) markups above.

(6) If the change in the Work also changes the Time for Completion or the Contract Completion Date by adding days to complete the Work, an itemized accounting of the following direct Site overhead expenses set forth in subparagraph (i) below may be considered as allowable costs for compensation in addition to those shown above:

(i) Direct Site Overhead Expenses:

The Contractor's per diem expenses, as shown by the itemized accounting for the following allowable direct Site overhead expenses: The Site superintendent's pro-rata salary, temporary Site office trailer, and temporary Site utilities including basic telephone service, electricity, heat, water and sanitary/toilet facilities for each day added by the change in the Work. All other direct expenses are covered by and included in the Subsection 38(d) markups above.

(7) Any other costs directly attributable to the change in the Work with the exception of those set forth in Subsection 38(f) below.

(f) Allowable costs for changes in the Work shall not include the following:

(1) Costs due to the negligence of the Contractor, any Subcontractor, Supplier, their employees or other persons for whom the Contractor is responsible**,** including, but not limited to, costs for the correction of Defective Work, for improper disposal of material, for equipment wrongly supplied, for delay in performing the Work, or for delay in obtaining materials or equipment.

(2) Home office expenses including payroll costs for the Contractor's officers, executives, administrators, accountants, counsel, timekeepers, clerks, and other similar administrative personnel employed by the Contractor, whether at the Site or in the Contractor's principal or branch office for general administration of the Work. These costs are deemed overhead included in the percentage markups allowable in Subsections 38(d) above.

(3) Home office, and field office expenses not itemized in Subsection 38(e)(6) above. Such items include, but are not limited to, expenses of Contractor's home and branch offices, Contractor's capital expenses, interest on Contractor's capital used for the Work, charges for delinquent payments, small tools, incidental job costs, rent, utilities, telephone and office equipment, and other general overhead expenses.

(g) All Change Orders, except the "initial" Change Orders authorizing work citing Subsection 38(a)(3) procedures, must state that the Contract Time for Completion or Contract Completion Date is not changed or is either increased or decreased by a specific number of days. The old Time for Completion and, if changed, the new Time for Completion must be stated.

If the Contractor requests an extension to the Time for Completion or a later Contract Completion Date, it must provide written justification for the extension to the Architect/Engineer and to the Owner. The written justification must demonstrate an anticipated actual increase in the time required to complete the Work beyond that allowed by the Contract as adjusted by prior change orders or amendments to the Contract, not just an increase or decrease in the time needed to complete some portion of the total Work. When a CPM schedule is required by the Contract, no extension to the Time for Completion or Contract Completion Date shall be allowed unless, and then only to the

extent that, the additional or changed Work increases the length of the critical path beyond the Time for Completion or Contract Completion Date. If approved, the increase in time required to complete the Work shall be added to the Time for Completion or Contract Completion Date.

The Owner may decrease, by Change Order, the Time for Completion or Contract Completion Date when an Owner-requested deletion from the Work results in a decrease in the actual time required to complete the Work as demonstrable on the Bar Graph Schedule or on the CPM Schedule, whichever is appropriate. The Contractor may submit a request to decrease, by Change Order, the Time for Completion or Contract Completion Date under the procedures and subject to the considerations set forth in Section 19(f). No request for such decrease shall be considered for approval unless the proposed shorter schedule is otherwise acceptable under Sections 19(b) or (c), whichever is applicable. The Change Order decreasing the Time for Completion or changing the Contract Completion Date must be signed by both the Owner and the Contractor.

With the exception of Change Orders under Subsection 38(a)(3), which shall arrive at a change to the Contract Price and any change to time using the procedures set forth therein, each Change Order shall include all time and monetary impacts of the change, whether the Change Order is considered alone or with all other changes during the course of the Project. Failure to include a change to time and Contract Price attributable to such change in time under Section 38(a)(1) or (2) shall waive any change to the time and Contract Price unless the parties mutually agree in writing to postpone a determination of the change to time related impacts of the change. Such a determination may be postponed not more than forty-five (45) days to give the Contractor an opportunity to demonstrate a change in the time and price needed to complete the Work. During any such postponement, the Work shall proceed, unless the Owner agrees otherwise.

If at any time there is a delay in the critical path of the Work due to postponement, due to the Contractor's efforts to justify an extension of the time or an increase in the Contract Price, or due to the Contractor's refusal to proceed with any of the Work pending agreement on a change in time or price, such delay and any Contractor costs resulting from it shall not serve as the basis for the extension of the Time for Completion or Contract Completion Date or for an increase in the Contract Price.

(h) The acceptance by the Contractor of any payment made by the Owner under a Change Order shall be and operate as a release to the Owner of all claims by the Contractor and of all liability owing to the Contractor for all things done or furnished in connection with the Work described in the Change Order. The execution of any Change Order by the Owner shall not be an acceptance of any Work or materials not in accordance with the Contract Documents, nor shall it relieve the Contractor of responsibility for faulty materials or workmanship or operate to release the Contractor or its surety from any obligation arising under the Contract or the Standard Performance Bond or Standard Labor and Material Payment Bond.

(i) Payments will not be made for any Work, labor or materials on a unit price or Subsection 38(a)(3) basis until the Contractor has furnished the Owner documents, certified as true and correct by an authorized officer or agent of the Contractor, evidencing the cost of such Work, labor and materials. The Owner may require any or all of the following documentation to be provided by the Contractor.

For Work performed on a Unit Price basis:

(1) certified measurements of authorized and approved excavations, over-excavations, fills and/or backfills, and similar work; and/or

(2) certified measurements of piling installed, caissons installed, and similar work; and/or

(3) daily records of waste materials removed from the Site and/or fill materials imported to the Site.

For Work performed on a Subsection 38(a)(3) basis:

(1) certified payroll records showing the name, classification, date, daily hours, total hours, rate, and extension for each laborer, foreman, supervisor or other worker;

(2) equipment type & model, dates, daily hours, total hours, rental rate or other specified rate, and extension for each unit of equipment;

(3) invoices for materials showing quantities, prices, and extensions;

(4) daily records of waste materials removed from the Site and/or fill materials imported to the Site;

(5) certified measurements of over-excavations, piling installed and similar work; and/or

(6) transportation records for materials, including prices, loads, and extensions.

Requests for payment shall be accompanied and supported by invoices for all materials used and for all transportation charges claimed. If materials come from the Contractor's own stock, then an affidavit may be furnished, in lieu of invoices, certifying quantities, prices, etc. to support the actual cost.

39. EXTRAS

If the Contractor claims that any instructions given to him by the Owner, by drawings or otherwise, involve extra Work which increases the scope of the Contract, then, except in emergencies endangering life or property, it shall give the Owner written notice thereof before proceeding to execute the Work. Said notice shall be given promptly enough to avoid delaying the Work and in no instance later than fourteen (14) days after the receipt of such instructions. Should it not be immediately clear to the Contractor that the change involves extra Work outside the scope of the Contract, written notice shall be sufficient if given as soon as possible after such realization, but in no event later than fourteen (14) days after the start of such Work. If the Owner agrees, a Change Order shall be issued as provided in Section 38 of these General Conditions, and any additional compensation shall be determined by one of the three (3) methods provided in Subsection 38(a), as selected by the Owner. If the Owner does not agree, then any claims for compensation for the extra Work shall be filed in accordance with Section 47.

40. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

If the Work should be stopped under an order of any court or other public authority for a period of ninety (90) days through no fault of the Contractor or anyone employed by him, or if the Owner should fail to pay to the Contractor within thirty (30) days any sum certified by the Owner when no dispute exists as to the sum due or any provision of the Contract, then the Contractor may, upon ten (10) calendar days written notice to the Owner, stop Work or terminate the Contract and recover from the Owner payment for the cost of the Work actually performed, together with overhead and profit thereon, but profit on the Work performed shall be recovered only to the extent that the Contractor can demonstrate that it would have had profit on the entire Contract if it had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed. The Contractor may recover the reasonable cost of physically closing down the Site, but no other costs of termination. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. In no event shall termination of the Contract by the Contractor terminate the obligations of the Contractor's surety on its payment and performance bonds.

41. OWNER'S RIGHT TO TERMINATE THE CONTRACT FOR CAUSE

(a) If the Contractor should be adjudged as bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, the Owner may terminate the Contract. If the Contractor should refuse or should repeatedly fail, except in cases for which extension of time is provided, to supply enough properly skilled workers or proper

materials and equipment, or if it should fail to perform the Work in a diligent, efficient, workmanlike, skillful, and careful manner, or if it should fail or refuse to perform the Work in accordance with the Contract Documents, or if it should fail to make prompt payment to Subcontractors or Suppliers of material or labor, or if it should disregard laws, ordinances or the written instructions of the Architect/Engineer or the Owner, or otherwise be in substantial violation of any provision of the Contract, then the Owner may terminate the Contract.

(b) Prior to termination of the Contract, the Owner shall give the Contractor and its surety ten (10) calendar days written notice pursuant to Section 1 ("Definitions") of these General Conditions, during which the Contractor and/or its surety may rectify the basis for the notice. If rectified to the satisfaction of the Owner within said ten (10) days, the Owner may rescind its notice of termination. If not, the termination for cause shall become effective at the end of the ten (10) day notice period without further notice to the Contractor. In the alterative, the Owner may, in writing, postpone the effective date of the termination for cause, at its sole discretion, if it should receive reassurances from the Contractor and/or its surety that the basis for the termination will be remedied in a time and manner that the Owner finds acceptable. If at any time after such postponement, the Owner determines that Contractor and/or its surety has not or is not likely to rectify the causes of termination in an acceptable manner or within the time allowed, then the Owner may immediately terminate the Contract for cause, without the necessity of further ten (10) day notice, by notifying the Contractor and its surety in writing of the termination. In no event shall termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.

(c) Upon termination of the Contract becoming effective, the Owner shall take possession of the Site and of all materials, tools and equipment thereon and shall proceed as follows:

(1) If no security has been provided pursuant to Section 8 herein, the Owner shall finish the Work by whatever method it may deem expedient. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract Price, the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others.

(2) If security has been provided pursuant to Section 8 herein, the Owner shall provide Notice to the Surety that termination of the Contract became effective and proceed as set forth in the Standard Performance Bond, and the Terms and Conditions therein. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract Price and the penal amount of the Standard Performance Bond, the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others.

(d) If it should be judicially determined that the Owner improperly terminated this Contract for cause, then the termination shall be deemed to be a termination for the convenience of the Owner, and the Contractor's rights and remedies shall be solely limited to those provided by Section 42 of these General Conditions.

(e) Termination of the Contract under this Section is in addition to and without prejudice to any other right or remedy of the Owner. Any actions by the Owner permitted herein shall not be deemed a waiver of any other right or remedy of the Owner under the Contract or under the law. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. The provisions of this Section shall survive termination of the Contract.

42. TERMINATION BY OWNER FOR CONVENIENCE

(a) Owner may terminate this Contract, in whole or in part, at any time without cause upon giving the Contractor written notice of such termination pursuant to Section 1 ("Definitions") of these General Conditions. Upon such termination, the Contractor shall immediately cease Work and remove from the Site all of its labor forces and such of its materials as Owner elects not to purchase or to assume

in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as Owner may require to assign to the Owner the Contractor's interest in all Subcontracts and purchase orders designated by Owner. After all such steps have been taken to Owner's satisfaction, the Contractor shall receive as full compensation for termination and assignment the following:

(1) Amounts due for Work performed in accordance with the Contract subsequentto the latest approved Schedule of Values and Certificate for Payment through the date of termination;

(2) All amounts then otherwise due under the terms of this Contract associated with the Work performed prior to the date of termination; and

(3) Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination.

The Contractor shall not be entitled to any compensation or damages for lost profits or for any other type of contractual compensation or damages other than those provided in Subsection 42(a). The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. Upon payment of the foregoing, Owner shall have no further obligations to Contractor of any nature. The Contractor agrees to waive all claims against the Owner for any consequential damages that may arise from or relate to the Owner's termination of the Contract including, but not limited to, damages for loss of revenue, income, profit, business, reputation, or bonding capacity.

(b) In no event shall termination for the convenience of the Owner terminate the obligations of the Contractor's surety on its payment and performance bonds.

(c) Any actions by the Owner permitted herein shall not be deemed a waiver of any other right or remedy of the Owner under the Contract or under the law. The provisions of this Section shall survive termination of the Contract.

43. DAMAGES FOR DELAYS; EXTENSION OF TIME

(a) **Excusable Non-Compensable Delays:** If and to the extent that the Contractor is delayed at any time in the progress of the Work by strikes, fires, unusual delays in transportation or unavoidable casualties, or other unforeseeable causes outside the Owner's or Contractor's control, with the exception of delays caused by weather provided for in Section 6 for which the Contractor intends to request an extension of either the Time for Completion or the Contract Completion Date, as the case may be, then the Contractor shall give the Owner and Architect/Engineer written notice of the delay within fourteen (14) days of the inception of the delay. The Contractor shall also give written notice to the Owner and Architect/Engineer of the termination of the delay not more than fourteen (14) days after such termination. If the Owner agrees with the existence and impact of the delay, the Owner shall extend the ,time for Completion, the Contract Completion Date or Final Completion, as the case may be, for the length of time that the date for Substantial Completion or Final Completion was actually delayed thereby, and the Contractor shall not be charged with liquidated or actual damages for delay during the period of such extension nor shall the Contractor be due compensation or damages of any kind, under any theory of law, as a result of such delay, the impact of such delay, or acceleration of Work as a result of such delay, the impact of such delay, or acceleration of Work as a result of such delay. In the event a CPM schedule is required by the Contract, no extension of the Time for Completion or Contract Completion Date shall be granted unless the Contractor demonstrates a delay in the critical path of the approved CPM schedule or approved bar graph schedule.

(b) **Excusable Compensable Delays:** If and to the extent that the Contractor is unreasonably delayed at any time in the progress of the Work by any act or omission of the Owner, its agents or employees, and due to causes within the Owner's control, and the Contractor intends to request an extension of either the Time for Completion or the Contract Completion Date, as the case may be, and/or additional compensation for damages, if any, caused by the delay, the Contractor shall notify the

Owner and the Architect/Engineer immediately at the time of the occurrence giving rise to the delay by the fastest means available and shall give written notice no later than fourteen (14) working days after inception of the delay. The Contractor's written notice shall specify the nature of the delay claimed by the Contractor, the cause of the delay and the impact of the delay on the Contractor's Work schedule. The Owner shall then have three (3) working days to respond to the Contractor's notice with a resolution, remedy, or direction to alleviate the delay or rejection of the Contractor's notice of delay. The Owner's failure to respond within the time required shall be deemed to be a rejection of the Contractor's notice. The Contractor shall also give written notice to the Owner and Architect/Engineer of the termination of the delay not more than fourteen (14) days after such termination. If and to the extent that a delay is caused by or due to the Owner or Architect/Engineer taking any actions permitted or required by the Contract, the Contractor shall be entitled to an extension of time or additional compensation only for the portion of the delay that is unreasonable, if any.

(c) **Non-Excusable Non-Compensable Delays:** The Contractor shall not be entitled to an extension of the Time for Completion or Contract Completion Date or to any additional compensation for delays if and to the extent they are (1) caused by acts, omissions, fault, or negligence of the Contractor or its Subcontractors, agents or employees, or due to foreseeable causes within their control, including, but not limited to delays resulting from Defective Work, including workmanship and/or materials; from rejected Work which must be corrected before dependent work can proceed; from Defective Work or rejected Work for which corrective action must be determined before like work can proceed; from incomplete, incorrect, or unacceptable Submittals or samples, or from the failure to furnish enough properly skilled workers, proper materials or necessary equipment to diligently perform the Work in a timely manner in accordance with the Project schedule; or (2) due to causes that would entitle the Owner to recover delay costs or damages.

(d) No extension of time or additional compensation, if applicable, will be granted for any delay unless the claimed delay directly affects the critical path of the approved CPM schedule or the schedule shown on the approved bar graph schedule, whichever is applicable, and any float has been consumed. No extension of time or additional compensation shall be given for a delay if the Contractor failed to give notice in the manner and within the time prescribed in Subsections 43(a) or (b) above, whichever applies. Furthermore, no extension of time or additional compensation shall be given for any delay unless a written request therefor is made in writing to the Owner within twenty (20) days of the end of the delay. The request shall state the cause of the delay, the number of days of extension requested and any additional compensation requested by the Contractor. Failure to give written notice of either the inception or the termination of the cause of delay or failure to present a claim for extension of time and/or monetary compensation within the times prescribed shall constitute a waiver of any claim for extension or additional compensation based upon that cause.

(e) Requests for extensions of time and/or compensation for delays pursuant to Subsection 43(b) above must be substantiated by itemized data and records clearly showing that the Work delayed was on the critical path of the approved CPM schedule or on the sequence of Work on the approved bar graph schedule, as modified, whichever applies, and that the additional time and/or costs incurred by the Contractor are directly attributable to the delay in the Work claimed. Furthermore, compensation for delay shall be calculated from the contractual Time for Completion or Contract Completion Date, as adjusted by Change Order, and shall not be calculated based on any early completion planned or scheduled by the Contractor, unless a Change Order has been executed pursuant to Section 19(f) changing the Time for Completion or the Contract Completion Date to reflect such early completion. See Section 19 for procedures for the Contractor to follow if it plans early completion of the Work and wishes to request a Change Order reflecting the early completion date.

Agreed Compensation for Owner Delay:

If, and to the extent that the Contractor is entitled to an extension in the Time for Completion or the Contract Completion Date and additional compensation purely as a result of delay under Subsection 43(b), and not as a result of a change in the Work under Section 38, the agreed compensation due the Contractor for days added to the Time for Completion or the Contract Completion Date for each day

of such delay shall be the per diem expenses as determined from an itemized accounting of the direct Site overhead expenses only as specified in Subsections 38(e)(6)(i). These Expenses shall exclude any and all expenses specified in Subsection 38(f).

(f) If the Contractor submits a claim for delay damages pursuant to Subsection 43(b) above, the Contractor shall be liable to the Owner for a percentage of all costs incurred by the Owner in investigating, analyzing, negotiating and litigating the claim, which percentage shall be equal to the percentage of the Contractor's total delay claim which is determined through litigation to be false or to have no basis in law or in fact. (Section 2.2-4335, *Code of Virginia*)

(g) Any change in the Contract Time for Completion or Contract Completion Date shall be accomplished only by issuance of a Change Order.

(h) **Agreed Compensation for Contractor Delay:** If the Contractor fails to complete the Work within the Time for Completion or the Contract Completion Date, the Contractor shall be liable to the Owner in the amounts set forth in the Supplemental General Conditions, if any, not as a penalty, but as fixed, agreed and liquidated damages for delay until the Work is substantially or finally completed as the case may be. If liquidated damages are not so fixed in the Supplemental General Conditions, the Contractor shall be liable for any and all actual damages sustained as a result of delay. In addition to damages for delay, whether liquidated or actual, the Contractor shall also be liable for any and all actual damages sustained by the Owner as a result of any other breach of the Contract, including, but not limited to, Defective Work and abandonment of the Contract.

(i) If liquidated damages are provided by the Supplemental General Conditions, the following provisions apply:

(1) If the Work is not substantially complete by the Time for Completion or Contract Completion Date, the Contractor shall owe to the Owner, not as a penalty but as Step One liquidated damages, the sum stated in the Supplemental General Conditions for Step One liquidated damages for each and every partial or total calendar day of delay in Substantial Completion.

(2) Once the Work is substantially complete, the accrual of Step One liquidated damages shall cease and the Contractor shall have thirty (30) calendar days in which to achieve Final Completion of the Work.

(3) If Final Completion of the Work is not achieved on or before the thirtieth (30th) calendar day after Substantial Completion, and if the Owner has not granted any extension of time, the Contractor shall owe to the Owner, not as a penalty but as Step Two liquidated damages, the sum stated in the Supplemental General Conditions as Step Two liquidated damages for each and every partial or total calendar day of delay in Final Completion.

(j) The Contractor waives any and all defenses as to the validity of any liquidated damage provisions in the General Conditions or other Contract Documents, or of any liquidated damages assessed against the Contractor, on the grounds that such damages are void as penalties or are not reasonably related to actual damages.

44. INSPECTION FOR SUBSTANTIAL COMPLETION & FINAL COMPLETION

(a) The Contractor shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Contractor, of the date when the Work or designated portion thereof, will be, in its opinion, substantially complete and ready for inspection and testing to determine if it has reached Substantial Completion. The notice shall be given at least ten (10) days in advance of said date. Inspection and testing shall take place at a time(s) mutually agreeable to the Contractor and the Owner.

The inspection shall include a demonstration by the Contractor that all equipment, systems, and

operable components of the Project function properly and in accordance with the Contract Documents. The Contractor shall furnish access for the inspection and testing as provided in Section 21 of these General Conditions. The inspection and testing shall determine whether Substantial Completion has been accomplished and shall result in a written list of unfinished Work and Defective Work, commonly referred to as a "punch list," which must be finished and corrected to obtain Final Completion.

After successful completion of the testing and the Architect/Engineer determines that, in its opinion, the Work either in whole or in part, is Substantially Complete, the Architect/Engineer shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Architect/Engineer), that the Work, or a specified portion thereof, is recommended to be declared Substantially Complete. The Owner shall notify the Contractor, in writing, of the date the Owner accepts the Work, or the specified portion thereof, as Substantially Complete or the Owner shall notify the Contractor of the deficiencies to be corrected or completed before such Work will be accepted as substantially complete.

(b) The Contractor shall notify the Owner, in writing on the Certificate of Completion by the Contractor of the date when the Work has reached or will reach Final Completion and will be ready for final inspection and testing. The notice shall be given at least five (5) days in advance of said date. That inspection and any necessary testing shall be conducted in the same manner as the inspection for Substantial Completion. When the Work is finally and totally complete, including the elimination of all defects, the Work shall be finally accepted by the Owner and final payment shall be made in accordance with Section 36 of these General Conditions.

(c) Representatives of the Building Official may participate in the Substantial Completion Inspection. The Owner may elect to have other persons of its choosing also participate in the inspections. If one or more Substantial or Final Completion re-inspections are required, the Contractor shall reimburse the Owner for all costs of re-inspection or, at the Owner**'s** option, the costs may be deducted from payments due to the Contractor.

(d) Approval of Work at or as a result of any inspection required herein shall not release the Contractor or its surety from responsibility for complying with the Contract.

45. GUARANTEE OF WORK

(a) Except as otherwise specified, all Work shall be, and is hereby, guaranteed by the Contractor against defects resulting from the use of materials, equipment or workmanship, which are defective, inferior, or not in accordance with the terms of the Contract, for one (1) year from the date of Final Completion of the entire Project by the Owner. Equipment and facilities which have seasonal limitations on their operation (e.g., heating or air conditioning units) shall be guaranteed for one (1) full year from the date of seasonally appropriate tests and acceptance, in writing, by the Owner. Where the Owner agrees to take Beneficial Occupancy of a portion or phase of the Work which has been determined to be substantially complete before the entire Work is finally completed, the guarantees for the materials, equipment and workmanship in that portion or phase shall begin on the date that the Owner takes Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions, Special Conditions, or by separate agreement.

(b) If, within any guarantee period, Work which is not in accordance with the Contract, Defective Work, or inferior material, equipment or workmanship is noted by the Owner which requires or renders necessary repairs or changes in connection with the guaranteed Work, the Contractor shall, promptly upon receipt of notice from the Owner, such notice being given not later than two weeks after the guarantee period expires, and without expense to the Owner:

(1) Place in satisfactory condition in every particular all of such guaranteed Work and correct all defects, inferior materials, equipment or workmanship therein;

(2) Make good all damage to the structure or Site or equipment or contents thereof, which, in

the opinion of the Owner, is the result of the use of materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the Contract; and

(3) Make good any Work or materials or the equipment and contents of structures and/or Site disturbance that results from fulfilling the provisions of this Section.

(c) In any case, when in fulfilling the requirements of the Contract and this guarantee or any other guaranty or warranty, the Contractor disturbs any work performed by a separate contractor, it shall restore such work to a condition satisfactory to the Owner and guarantee such restored work to the same extent as if it was guaranteed under this Contract.

(d) If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee as set forth in this Section, the Owner may have the defects or inferior materials, equipment or workmanship corrected and the Contractor and its surety shall be liable for all expense incurred.

(e) All special warranties and guarantees applicable to definite parts of the Work that may be stipulated in or required by the Contract Documents shall be subject to the terms of this Section during the first year of the life of such special warranty or guarantee.

(f) The guarantee of this Section shall be in addition to and not in lieu of all other warranties, express or implied, applicable to or arising from this Contract or by law.

(g) Nothing contained in this Section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including liability for Defective Work under Section 30. This Section relates only to the specific obligation of the Contractor as set forth in this Section to correct the Work and does not limit the time within which his obligation to comply with the Contract Documents may be sought to be enforced, nor the time within which proceedings may be commenced to establish the Contractor's liability with respect to its other obligations under the Contract Documents.

(h) In the event the Work of the Contractor is to be modified by another contractor, either before or after the Final Inspection provided by Section 44 of the General Conditions, the first Contractor shall remain responsible in all respects under this Section's Guarantee of Work and under any other warranties or guarantees, express or implied, applicable to or arising from this Contract or by law. However, the Contractor shall not be responsible for any defects in material or workmanship introduced by the contractor modifying its Work. The first Contractor and the contractor making the modifications shall each be solely responsible for its respective work. The contractor modifying the earlier Work shall be responsible for any damage to or defect introduced into the Work by its modification. If the first contractor claims that a subsequent contractor has introduced defects of materials and/or workmanship into its Work, it shall be the burden of the contractor making the claim to demonstrate clearly the nature and extent of such introduced defects and the other contractor's responsibility for those defects. Any contractor modifying the work of another shall have the same burden if it asserts that defects in its work were caused by the contractor whose work it is modifying.

(i) The Contractor shall indemnify and hold harmless the Owner and the Owner's consultants, representatives, agents and employees from and against any and all claims, causes of action, losses, costs, expenses or damages, including but not limited to attorney's fees, of any kind or nature whatsoever, arising from or relating to any bodily injury, including sickness, disease or death, or any property damage, that results from or arises out of the work performed by the Contractor, or by or in consequence of any neglect in safeguarding the Work, through the use unacceptable materials in the Work, or resulting from any act, omission, negligence or misconduct of the Contractor, any of its Subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable. The Owner may retain as much of the moneys due the Contractor under the Contract as are reasonably necessary to ensure that a fund will be available to pay a settlement or judgement of such suits, actions or claims.

46. ASSIGNMENTS

Neither party to the Contract shall assign the Contract in whole or any part without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the prior written consent of the Owner. Consent to assignment shall not be unreasonably withheld. No assignment shall relieve any party from its obligations under the Contract.

47. CONTRACTUAL DISPUTES

(a) Contractual claims, whether for money or for other relief, shall be submitted, in writing, no later than sixty (60) days after Final Payment; however, written notice of the Contractor's intention to file such claim must be given within fourteen (14) days of the time of the occurrence or beginning of the Work upon which the claim is based. Such notice shall state that it is a "notice of intent to file a claim" and include a written statement describing the act or omission of the Owner or its agents that allegedly caused or may cause damage to the Contractor and the nature of the claimed damage. The submission of a timely notice is a prerequisite to recovery under this Section. Failure to submit such notice of intent within the time and in the manner required shall be a conclusive waiver of the claim by the Contractor. Oral notice, the Owner's actual knowledge, or a written notice given after theexpiration of fourteen (14) days of time of the occurrence or beginning of the Work upon which the claim is based, shall not be sufficient to satisfy the requirements of this Section. Although the Contractor may be required to submit certain classes of claims prior to Final Payment, and the Contractor is not prevented from submitting claims during the pendency of the Work, the Owner shall not be obligated to render a final written decision on any claim until after Final Payment. All claims shall state that they are "claims" pursuant to this Section, be submitted along with all practically available supporting evidence and documentation and the certification required by Subsection 47(f), and request a final decision. Certificates for payment, applications for payment, vouchers, invoices and similar requests for payment submitted for work done by the Contractor in accordance with the expected contract performance are routine submissions and shall not be considered claims under this Section. Proposed or requested change orders, demands for money compensation or other relief, and correspondence and e-mails to the Owner or its representatives, which do not strictly comply with the requirements of this Section, shall not be considered claims under this Section.

(b) No written decision denying a claim or addressing issues related to the claim shall be considered a denial pursuant to this Section unless the written decision makes express reference to this Section and is signed by the County Administrator or his designee. The Contractor may not institute legal action prior to receipt of the Owner's final written decision on the claim unless the Owner fails to render such a decision within ninety (90) days of submission of the claim, at which time the claim shall be deemed denied.

(c) The decision of the County Administrator or other signatory on the Contract shall be final and conclusive unless the Contractor within six (6) months of the date of the final decision on a claim, initiates legal action as provided in § 2.2-4364 of the *Code of Virginia*. Failure of the Owner to render a decision within 90 days shall not result in the Contractor being awarded the relief claimed nor shall it result in any other relief or penalty. The sole result of the Owner's failure to render a decision within 90 days shall be the Contractor's right to immediately institute legal action. No administrative appeals procedure pursuant to § 2.2-4365 of the *Code of Virginia* has been established for contractual claims under this Contract.

(d) Pursuant to **§** 2.2-4366, Alternative Dispute Resolution, of the *Code of Virginia*, the Owner may enter into an agreement with the Contractor to submit disputes arising from the performance of this Contract to arbitration and utilize mediation and other alternative dispute resolution procedures. However, such procedures entered into by the Owner, or any department, institution, division, commission, board or bureau thereof, shall be non-binding and subject to § 2.2- 514, as applicable.

(e) In the event that a dispute, claim or controversy between the Owner and the Contractor arises regarding the requirements of the Contract, the performance of the Work, payment due the Contractor, the terms

of any Change Order, or otherwise, the Contractor shall not stop, suspend or delay the Work or any part of the Work to be performed under the Contract, or under any Change Order, or as directed by the Owner. The Contractor shall continue to diligently prosecute the Work to completion, including work required in any Change Order or as directed by the Owner.

(f) Along with a claim submitted under this Section, the Contractor shall submit a Claim Certification Form (DGS-30-234) certifying that the claim is a true and accurate representation of the claim. Claims submitted without the Claim Certification Form shall not constitute a proper claim and, if not submitted with the certification within the time required, shall be deemed to be waived.

(g) The remedies provided in these General Conditions, including costs, expenses, damages or extensions of time, shall be the Contractor's sole remedies for the acts, omissions or breaches of the Owner, which shall survive termination or breach of the Contract.

48. TRAINING, OPERATION AND MAINTENANCE OF EQUIPMENT

(a) As a part of the Work, the Contractor in conjunction with its Subcontractors and Suppliers shall provide the Owner's operations and maintenance personnel with adequate instruction and training in the proper operation and maintenance of any equipment, systems, and related controls provided or altered in the Work. The training requirements may be further defined in the specifications.

(b) The Contractor shall provide the Owner with a minimum of two (2) copies of operating, maintenance and parts manuals for all equipment and systems provided in the Work. Further specific requirements may be indicated in the specifications.

49. PROJECT MEETINGS

(a) The intention of this Section is that the Contractor and the Owner have timely exchange of information and cooperate to accomplish the Work as required by the Contract Documents. The Contractor is responsible for managing the Work, obtaining approvals and requesting clarifications on a timely, reasonable basis. The Owner is responsible for making a reasonable effort to provide timely responses to the Contractor.

(b) **Preconstruction Meeting:**
Prior to the start of construction and no later than fifteen (15) calendar days after the Notice to Proceed, a "Preconstruction" meeting shall be held with attendees to include the Owner's Project Manager and Project Inspector, the Architect/Engineer's project manager and representatives of each design discipline involved in the Project, the Contractor's project manager and superintendent (and scheduler, if Contractor desires), and representatives of the Contractor's major Subcontractors. The purpose of the meeting is to clarify and discuss the specifics related to, but not limited to, the following:

(1) Persons involved from each entity and their chain of authority including the names of persons authorized to sign Change Orders and any limits to their authority. Name of Contractor's on-site certified Responsible Land Disturber.

(2) Names, addresses, telephone numbers and FAX numbers to be used for Requests for Information (RFI), Requests for Clarification (RFC), Requests for Proposals (RFP), shop drawings, Submittals, and notices.

(3) Contractor's proposed construction schedule, including order schedules for building materials and Owner's sequencing requirements, if any.

(4) Schedule of Values and Certificate for Payment requirements and procedures.

(5) Procedures for shop drawings, product data and Submittals.

(6) Procedures for handling Field Orders and Change Orders.

(7) Procedures for Contractor's request for time extension, if any.

(8) Construction Site requirements, procedures and clarifications to include:
- Manner of conducting the Work
- Site specialties such as dust and erosion control, stormwater management, project signs, clean up and housekeeping, temporary facilities, utilities, security, and traffic
- Safety
- Layout of the Work
- Quality control, testing, inspections and notices required
- Site visits by the A/E and others
- Owner's Project Inspector duties
- Running Punch List
- As-Built Drawings
- Staging and storage of building materials

(9) Procedures and documentation of differing or unforeseen Site conditions

(10) Monthly Pay Meeting

(11) Assignment of responsibility for generation of meeting minutes of all project meetings.

(12) Project Close-Out requirements and procedures

(13) Project records

(c) **Monthly Pay Meeting:**
Section 36 establishes the requirement for a monthly pay meeting which will usually be held at or near the Site. In addition to Owner and Contractor representatives, the following representatives, at a minimum, should be available to attend portions of the meeting, as applicable or necessary:
- Owner's Project Inspector
- Contractor's project superintendent
- Architect/Engineer representative
- A representative of each subcontractor who performed work included in the current pay request.
- A representative of each subcontractor who is projected to perform work in the coming month.

The following topics should be included, as a minimum, in the monthly pay meeting:

(1) Observations of status, quality and workmanship of Work in progress

(2) Validation of the Schedule of Values and Certificate for payment

(3) Conformance with proposed construction schedule

(4) Outstanding Requests for Information, Requests for Clarification and Requests for Proposal

(5) Submittals with action pending

(6) Status of pending Change Orders

(7) Status of Running Punch List items

(8) Work proposed for coming pay period

(9) Discussions of any problems or potential problems which need attention

(d) **Other Meetings:**
Requirements for other meetings, such as progress meetings, coordination meetings, pre-installation meetings and/or partnering meetings, may be included in the Contract Documents.

50. FORUM SELECTION AND CHOICE OF LAW

(a) This Contract shall be governed by, and construed in accordance with, the laws of the Commonwealth of Virginia, without application of Virginia's conflict of law provisions. Venue for any litigation, suits, and claims arising from or connected with this Contract shall only be proper in the Roanoke County Circuit Court, or in the Roanoke County General District Court if the amount in controversy is within the jurisdictional limit of such court, and all parties to this Contract voluntarily submit themselves to the jurisdiction and venue of such courts, regardless of the actual location of such parties. The provisions of this Contract shall not be construed in favor of or against either party, but shall be construed according to their fair and customary meaning as if both parties jointly prepared this Contract.

Exhibit 6 to Interim Agreement 2023-020

JOB:	**Bonsack Fire Station 12**		
BY:	**G&H Contracting**		
RE:	**BUDGET ESTIMATE PPEA DETAIL PHASE**		
DATE:	**2/14/2023**		
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SEC	**ITEM DESCRIPTION**	**12100 sf build**	**NOTES**
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1	General Conditions, Permits, Insurance, Bond & License	**$392,664**	
2	Design Fees (6.25 % of construction budget)	**$400,000**	
3	Contractor Construction Contingency 3%	**$210,000**	
4	Site Demolition, E&S, Grading, Utilities	**$296,467**	
5	Soil Poisoning	**$1,545**	
6	Paving, Curb Gutter & Striping	**$73,844**	
7	Site Concrete Paving, Pads, Bases & Sidewalks	**$403,445**	
8	Fencing on Ret Wall (if needed)	**$31,923**	
9	Retaining Walls (if needed)	**$110,960**	
10	Pipe Bollards	**$3,610**	
11	Landscaping & SOD	**$38,617**	
12	Rebar	**$53,039**	
13	Building Concrete	**$152,599**	
14	Pre-Cast Concrete	**$28,916**	
15	Masonry Subcontractor	**$471,986**	
16	Structural Steel & Misc Metals	**$624,357**	
17	Blocking & Rough Carpentry	**$62,846**	
18	Casework	**$58,355**	
19	Waterproofing/Damproofing	**$4,462**	
20	Air Barriers	**$36,043**	
21	Caulking & Sealants	**$10,298**	
22	Fire Caulking	**$6,436**	
23	Insulation	**$47,992**	
24	EIFS	**$16,477**	
25	Corrugated Metal Panels	**$14,417**	
26	CMP Panel	**$5,149**	
27	Membrane Roofing	**$13,044**	
28	Metal Roofing Over Conv Build	**$98,688**	
29	Doors Frames & Hardware	**$70,389**	
30	Overhead Doors (Sectional Add $200K for 4 fold)	**$141,596**	
31	Aluminum Storefront	**$108,128**	
32	Drywall & Metal Studs & ACT	**$229,557**	
33	Floor Covering and Polished Concrete	**$45,826**	
34	Epoxy Flooring in Apparatus Bay	**$53,635**	
35	Painting	**$30,636**	
36	Visual Display Boards	**$5,119**	
37	Knox Box, Flag Poles, Signage, Toilet Accs, Fire Exting.	**$29,833**	
38	Lockers	**$6,436**	
39	Lockers Turnout	**$41,191**	
40	Appliances	**$11,536**	
41	Window Treatments	**$3,004**	
42	Systems/Equipment/Training (locution,exhaust, etc.)	**$250,000**	
43	Fueling Station	**$150,177**	
44	Metal Building (Apparatus Bay)	**$167,340**	
45	Sprinkler	**$80,238**	
46	MECHANICAL	**$952,553**	
47	Electrical Complete	**$647,908**	
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	Subtotal	**$6,693,281**	
	Contractors Overhead and Profit	**$321,528**	
	Total Construction Budget Estimate	**$7,014,809**	
	SF COST 12100sf	**$579.74**	
	Design / Cost Escalation Contingency 7%	**$450,000**	
	Owner Budget Items		
	Connection Fees	**$50,000**	
	Special Inspections	**$25,000**	
	Nutrient Credits	**$40,000**	
	Furnishings/Fixtures/Equipment (bunk, day, fitness, etc,)	**$100,000**	
	IT Technology (CCTV,Access,WIFI etc.)	**$50,000**	
	Traffic Signal Pre-emption	**TBD**	
	Comprehensive Budget with escalation provided if needed	**$7,729,809**	
	TOTAL SF COST	**$638.83**	
	Page 1 of 1		

COUNTY OF ROANOKE, VIRGINIA

INTERIM AGREEMENT BETWEEN OWNER AND CONTRACTOR REGARDING PRE-CONSTRUCTION SERVICES FOR THE BONSACK FIRE STATION

EXHIBIT 7

Bonsack Fire Station
Scope of Pre-Construction Services and Corresponding Schedule of Values

The Contractor agrees to furnish the pre-construction services set forth and required for the completion of the Project for a subsequently agreed-upon Guaranteed Maximum Price (which will be set forth in a future agreement); the scope of such pre-construction services is further set forth in this exhibit. The pre-construction services provided by the Contractor include, but are not limited to, cost estimating, value engineering, scheduling, construction phasing, constructability review, confirming the Owner's program, schematic design, design development, development of construction documents, holding design review meetings with the Owner, receiving input from subcontractors as to building systems, means and methods of construction, site plan review and approval, and project review meetings with the Owner and regulatory review agencies.

The above pre-construction services for the Bonsack Fire Station may be generally categorized into three phases: 1) schematic design, 2) design development, and 3) construction documents. Upon completion of each phase, Contractor will submit the Plans developed for the phase to the Owner, for review and approval. Once Owner provides Contractor with written approval, Contractor will commence the next phase of services. Contractor will not be entitled to full compensation for each phase until such time as Owner provides such written approval.

Schedule of values for this pre-construction work is as follows:

1) **Schematic Design** (SD): The total value of this phase shall be **$73,590**.

The Contractor will:

a) Confirm the program and building plan provided in the RFP for both the building and the site.
b) Provide conceptual drawings, schematic design studies, and any modifications to the site. Architectural conceptual designs shall comply with NFPA-13, 101, 1500, 1710, 1720, and 1851.
c) Oversee and coordinate design as well as investigate up-to-date unit pricing and constructability.

2) **Design Development** (DD): The total value of this phase shall be **$98,120**.

Contractor will prepare Sixty-percent (60%) design drawings and will draft construction Specifications for the Bonsack Fire Station. This design effort will further develop the Plans produced during the schematic design phase and will provide sufficient detail for further analysis and review. Cost and budgets will be compared, and adjustments made to ensure compliance with

budget goals and programming needs. Contractor will begin to incorporate subcontractor input for any budget constraints before commencing the preparation of contract documents. Designs will include:

a) Location and general layout of the Site
b) Layout of Underground Facilities
c) Strategy for the preemption detection device
d) Stormwater management strategies
e) Preliminary exterior elevations (presented in 3-dimensional format)
f) Preliminary interior and exterior finishes
g) Preliminary structural and mechanical, electrical, and plumbing (MEP) engineering

3) **Construction Documents** (CD): The total value of this phase shall be **$196,240**.

Completion of engineering, materials and systems selections, refinement of all architectural and engineering design and other details required to complete the drawings and specifications. Furnish and review with County staff the final construction documents for construction purposes. Contractor will identify and communicate with the team budgets and options for all scopes to final the GMP.

Total value for pre-construction services shall be $367,950.