



**REQUEST FOR PROPOSALS TITLE PAGE**  
**Include this Page as the First Page in the Proposal Response**

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**City of Lynchburg, Virginia**  
**Procurement Division**

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**Proposal Title: Architectural and Engineering Services for the Lynchburg Wastewater Treatment Plant Operations Building Renovation (City Project 15012-S)**

This is the City of Lynchburg's Request for Proposals (RFP) No. 2016-007, issued June 23, 2015. Direct inquires for information should be directed to Lisa Moss: e-mail: [lisa.moss@lynchburgva.gov](mailto:lisa.moss@lynchburgva.gov); Phone: 434-455-4228; Fax: 434-845-0711. All requests for clarification of or questions regarding this RFP must be made in writing and received by 2:00 p.m., July 21, 2015. All responses to this solicitation shall be in strict accordance with the requirements set forth in this RFP document and the ensuing contract documents.

A non-mandatory Pre-Proposal meeting will be held **on July 9, 2015 at 10:00 A.M. at the City of Lynchburg Waste Water Treatment Plant located at 2301 Concord Turnpike, Lynchburg, VA.**

Sealed proposals will be publicly accepted prior to **4:00 p.m., July 29, 2015**; however, only the names of firms responding will be available for announcement. Proposals received after the stated due date and time shall not be considered. Submit proposals in a sealed, opaque envelope, and put the RFP number, title, due date and time on the lower left front. Offerors are responsible for having their proposal stamped by Procurement Division staff before the deadline indicated above and acknowledge all addenda so issued in the space provided below. Any alteration or changes to this RFP will be made only by written addendum issued by the Procurement Division, and all Offerors are responsible for obtaining issued addenda from the City's Procurement website: <http://www.lynchburgva.gov/current-solicitations>.

Acknowledge receipt of addenda here: No. \_\_\_\_\_ Date: \_\_\_\_\_ No. \_\_\_\_\_ Date: \_\_\_\_\_  
Submit Proposals: **BY MAIL, GROUND DELIVERY, OR HAND DELIVER TO:**

Procurement Division  
Third Floor City Hall  
900 Church Street  
Lynchburg, Virginia 24504

**Information the Offeror deems Proprietary is included in the proposal response in section(s):** \_\_\_\_\_  
See Paragraph B. on page 2 for guidelines on submitting proprietary information.

In compliance with this Request for Proposals and all the conditions imposed therein, the undersigned offers and agrees to furnish the services in accordance with the attached proposal or as mutually agreed by subsequent negotiations. By my signature below, I certify that I am authorized to bind the Offeror in any and all negotiations and/or contractual matters relating to this Request for Proposals. Sign in ink and type or print requested information.

Full Legal Name of Offeror: \_\_\_\_\_

Fed ID OR SOC. SEC. NO.: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_

\_\_\_\_\_ e-mail address: \_\_\_\_\_

Signature: \_\_\_\_\_

\_\_\_\_\_  
Typed or Printed Name, Title

*Stephanie Suter*  
\_\_\_\_\_  
City Procurement Manager's Signature

## I. SUBMISSION OF PROPOSALS

- A. An original (1), so marked, and (3) copies, so marked, for a total of (4) of the proposal document are required. In addition, submit one (1) copy of proposal in an electronic format on CD. The City will not assume responsibility for reproduction where an insufficient number of copies have been supplied. In any such case, the City will notify the Offeror of the deficiency and request that the appropriate number of copies be delivered within 24 hours. Failure to comply with this or other requirements of this Request for Proposal shall be grounds for the City to reject such proposals. Telegraphic or facsimile submission of proposals is not acceptable and any such proposals will not be considered.
- B. **Submission of Proprietary Information**  
Trade secrets or proprietary information submitted by an Offeror in connection with this procurement transaction shall not be subject to public disclosure under the Virginia Freedom of Information Act; however, the Offeror must invoke the protection of this section prior to or upon submission of the data or the materials, and must identify the data or other materials to be protected and state the reason why protection is necessary. (Section 2.2-4342 F. of the Code of Virginia). **Offerors shall submit, in a separate section of the proposal, any information considered proprietary and any copyrighted material and clearly identify the information as proprietary and/or copyrighted information. Offerors may not declare their entire proposal proprietary nor may they declare proposed pricing to be proprietary.** References may be made within the body of the proposal to proprietary information; however all information contained within the body of the proposal not in the separate section labeled proprietary shall be considered Public Information.
- C. Proposals having any erasures or corrections must be initialed by the Offeror in ink.
- D. The City reserves the right to accept or reject any or all proposals, to waive informalities, and to reissue any request for proposals and to award contracts to multiple Offerors. Any contract resulting from this Request for Proposal shall not be exclusive to the Successful firm. The City reserves the right to contract with firms not party to the resultant contract for similar work if it determines this to be in their best interest. If this is a cooperative procurement, each entity referenced will award a contract in accordance with its respective independent procurement policies and procedures and as it deems will best serve its interest.
- E. By submitting a proposal, the Offeror agrees that the proposal will not be withdrawn for a period of 90 days following the due date for proposal responses.
- F. By submitting a proposal, the Offeror certifies that it has not combined, conspired or agreed to intentionally rig, alter or otherwise manipulate, or to cause to be rigged, altered or otherwise manipulated its proposal for the purpose of allocating purchases or sales to or among persons, raising or otherwise fixing the prices of the goods or services, or excluding other persons from dealing with the City.
- G. By submitting a proposal, the Offeror certifies that its proposal is made without collusion or fraud and that it has not offered or received any kickbacks or inducements from any other Offeror, supplier, manufacturer or subcontracting firm in connection with its proposal; and that it has not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised.
- H. Nothing herein is intended to exclude any responsible Offeror or in any way restrain or restrict competition. All responsible Offerors are encouraged to submit proposals.
- I. The City will not be responsible for any expense incurred by any Offeror in preparing and submitting a proposal. All proposals submitted will become the property of the City.

## II. BACKGROUND

- A. The City of Lynchburg operates the Lynchburg Regional Waste Water Treatment Plant (WWTP) at 2301 Concord Turnpike, serving the City of Lynchburg and surrounding counties. The plant currently treats an average daily flow of 12-13 million gallons per day (MGD) and has a permitted capacity of 22 MGD average flow and a peak flow of 44 MGD. The WWTP operations, controls, and laboratory are centered in the Operations Building, a 12,000 square feet (sf), two story structure. This building currently houses administration offices, the plant SCADA and control center, the plant laboratory, a men's and women's locker room, a break room where employees eat meals, a conference room, mechanical rooms, electrical rooms, and storage areas.
- B. In 2011, the City of Lynchburg contracted with Virginia A&E to analyze the space utilization in the WWTP Operations Building. This study was re-looked at in 2013 and a Basis of Design Narrative was published with a revision date of January 29, 2014. The Basis of Design Narrative concluded:
1. Laboratory space was minimal and there is limited ability to accommodate potential future requirements, specifically related to NELAC and VELAP standards.
  2. Office space is limited and inefficiently organized.
  3. Access control throughout the building should be reprogrammed to provide a higher level of security to the operations and limited public access, in particular the laboratory areas.
  4. Existing facilities do not include modern restrooms with lockers and showers.
  5. Additional space is needed for entire staff for safety, training, and operations meetings.
  6. Space used for chemical and part storage has been relocated to the maintenance building and former space in the Operations Building is now vacant.

The Basis of Design shall serve as guidance for this project, but alternative proposals may be suggested.

- C. The intent of this Request for Proposal (RFP) is to solicit Architectural and Engineering Services from highly qualified firms to produce a preliminary engineering report (PER), updating the 2014 revision to the Basis of Design Narrative to meet current staff operational needs as well as laboratory needs. Accommodations for future laboratory standards, as well as providing the ability to maintain current best practices for laboratory work are one of the primary goals of the project. The City has elected to remodel and renovate portions of the existing building, and to expand the building where necessary.

From the PER, the qualified firm would then produce bid-ready drawings and specifications and an estimate of probable construction cost. The qualified firm would assist the City in bidding the project including responding to bidders questions, preparing addenda, and evaluating bid results and the qualifications of the low bidder. The qualified firm would be able to provide construction administration services including at a minimum, responding to contractor's request for information, review of contractor submittals, periodic inspections including substantial and final inspections, and preparation of as-built survey and drawings. The City may elect to utilize the qualified firm to provide day-to-day construction inspection.

- D. **Firms submitting a proposal shall visit the site at least once prior to submitting their proposal. A non-mandatory pre-proposal will be held on July 9, 2015 at 10:00 A.M. at the City of Lynchburg WWTP located at 2301 Concord Turnpike, Lynchburg, VA.** All prospective offerors shall either attend the pre-proposal meeting or shall schedule a site visit with Alvin Rucker or Steve Dunn at the WWTP. To schedule a site visit or to revisit the site, contact Leigh Bruffy at (434) 455-6240 to arrange a time and date.
- E. The Basis of Design Narrative, dated May 31, 2011 and revised January 29, 2014 will be available for download at the City's Procurement Department web page.
- F. The City would like to renovate the existing elevator at the Operation Building. This work is not included in the Basis of Design Narrative. Elevator renovations will be looked at the in study phase, but may not be constructed with the improvements depending on financial considerations.

### **III. SCOPE OF SERVICES**

The City reserves the right to award all or part of the work to one or several Offeror(s).

#### **Task 1 – Preliminary Engineering Report**

The Offeror shall:

1. Review the 2011/2014 Basis of Design study.
2. Be familiar with the current National Environmental Laboratory Accreditation Conference (NELAC) and Virginia Environmental Laboratory Accreditation Program (VELAP) regulations.
3. Be familiar with all applicable federal, state, and local building codes and regulations. The Offeror shall identify any current deficiencies that require upgrade to be fully compliant with such regulations.
4. Coordinate with the Owner on physical and operational changes that have been made at the WWTP Operations Building since 2014. This includes, but is not limited to, changes in the number of staff, changes in sample handling and laboratory operating procedures, changes in the City's pre-treatment program, addition of new HVAC units, addition of a third low voltage transformer and circuit box, and modifications to the floor plan of the Operations Building.
5. Coordinate laboratory improvements to be designed with the intent that the laboratory can be upgraded to a commercial laboratory with minimal structural changes.
6. Coordinate with the Owner on WWTP operational capability requirements while renovations to the Control Building are underway. The City of Lynchburg Regional WWTP operates 24/7/365 and must meet state and federal discharge and monitoring requirements. Disruption of the primary function and operation of the WWTP during construction in the Operations Building will not be permitted. A phased building construction approach may be feasible.
7. Coordinate with the Owner on potential renovations to the elevator. Financial considerations for this renovation may result in the elevator not being included in the final design.
8. Prepare a Preliminary Engineering Report/Basis of Design incorporating the 2014 revision and all additional changes and modifications including a revised estimate of probable construction cost.

The City of Lynchburg will make available to the Offeror:

1. Digital copies, in pdf format, of all available design drawings for the Operations Building construction and past renovations. All information on the civil/site plan is intended to be as accurate as possible; however, the Offeror is responsible for any survey required to verify locations for design.

#### **Task 2 – Ready to Bid Construction Documents**

Based on the approved PER/Basis of Design, the Offeror shall prepare bid-ready contract documents.

1. The Offeror shall provide survey for any civil/site work related documents. Options for expansion of the Operations Building footprint may be considered. The front face of the building may be expanded to the current sidewalk location. All site process and utility piping has been relocated from the front of the building to the current sidewalk.
2. If building expansion is considered, the Offeror shall provide geotechnical services for building foundation design as needed.
3. The bid documents shall include civil, architectural, structural, mechanical, electrical, and instrumentation/control sheets, each as needed. All drawings shall be sealed by a professional engineer or registered architect, registered in the Commonwealth of Virginia. Detail sheets shall be prepared as needed with civil/site details conforming to the City of Lynchburg Standards and Specifications, most current edition.

Plans and specifications shall meet local, state, and federal building codes and laboratory requirements.

4. Specifications shall be prepared utilizing the City of Lynchburg Standards and Specifications for Division 2, supplemented by the Architect/Engineer developed specifications for all other Divisions. The City of Lynchburg, Procurement Department will attach the City of Lynchburg's standard up-front documents and Division 1 specifications for bidding.
5. An estimate of probable construction cost shall be prepared at the 50% and at the 100% phase of the design.
6. Should work include expanding the current building footprint, or any external building renovations, the project may be required to be submitted to the City's Technical Review Committee (TRC). Comments received from TRC committee shall be incorporated into the final design.
7. The building and laboratory design is not required to be submitted to state or federal regulatory agencies.

### **Task 3 – Bid Phase Services**

The Offeror shall prepare a Bid Package for advertisement on the City's Procurement Department web site and assist the City in the bid phase process. This work shall include:

1. Preparation of the bid documents including plans and specifications. Should any bid alternates be used, the bid documents shall represent the base bid and provide descriptions of each bid alternate to allow the contractors to competitively bid all alternatives. The final approved plans and specifications shall be provided to the City Procurement Department in pdf format.
2. Preparation of a bid tab document defining any unit prices used in bidding. Alternative bid formats may be considered.
3. Attendance and coordination of a pre-bid meeting. The pre-bid meeting will include a summary of bid requirements from the City Procurement Department and summary of technical requirements by the Architect/Engineer. Any questions and responses at the pre-bid meeting will be documented and submitted as an addendum.
4. Assistance to the City in reviewing questions during the bid phase and preparation of addenda.
5. Review of the opened bids, including background check of the low-bidder's qualifications, if required.

### **Task 4 – Construction Phase Services**

If so directed, the Offeror shall provide construction phase services to include:

1. Conducting the pre-construction conference.
2. Reviewing submittals.
3. Coordinating progress meetings.
4. Evaluating and processing change orders.
5. Providing on-call professional services for inspection, approval of major components, and recommendations on resolution of field issues.
6. Evaluating and approving Contractor's pay requests.
7. Preparing as-built drawings representing the original bid documents, any changes during construction, and as-built survey, if needed.

## **IV. PROPOSAL PREPARATION**

Proposals must address the items included in the Scope of Services and the Criteria for Proposal Evaluation. Proposals should be prepared simply, providing straightforward and concise responses to requests for information and descriptions of qualifications and capabilities. Responses shall be limited to no more than 30 pages excluding the cover, including all other materials. Each copy of the proposal must be bound with all documentation in a single volume where practical. Failure to do so will result in a lowered evaluation. Incomplete proposals may be determined nonresponsive. Proposals with extraneous information or staff will receive lower ranking.

Offerors should organize their proposals using the format described below:

### **Title Page**

Furnish the **REQUEST FOR PROPOSALS TITLE PAGE** and include it as the first page of the proposal. The name stated on the Title Sheet must be the full legal name of the Offeror and the address must be that of the office which will have the responsibility for the services provided.

### **Section 1 - Project Understanding & Methodology**

Briefly describe the understanding of the scope of work to be accomplished, and describe the proposed approach to providing the required services. Explain how the project will be organized, and steps anticipated. Indicate a timeline for required and optional tasks.

### **Section 2 - Staff Experience**

Indicate the project manager and each individual with a proposed role in the project. For each individual involved show:

1. The role of the individual on this project,
2. The geographical location of the individual,
3. The corporate affiliation of the individual,
4. The projected availability of the individual over the next 12 months,
5. The proportion of the total project effort to be provided by the individual, and
6. A resume of prior related experience. For each project listed on the individual's resume indicate
  - a. The role of the individual on that project,
  - b. The number of equivalent full-time months worked by the individual on that project, and
  - c. The recentness of that project.

Resumes of individuals who will not be directly involved with the proposed project should not be included. Resumes for staff of sub-consultants should be included in the same format as those for the prime consultant.

### **Section 3 - Project Team**

Show a project team organization chart. For each individual indicate what proportion of total project staff-hours that individual will provide. Sum of all these proportions should be 100%. This may be divided into phases with proportions summing to 100% for each phase, if appropriate. Indicate the extent that individual team members have previously collaborated in terms of full-time months of collaboration.

### **Section 4 – Additional Firm Experience**

Indicate additional projects performed by the firm by staff outside the project team. Indicate the character, project size, and recentness of these additional efforts and how such experience would be beneficial to the project team and the City of Lynchburg.

### **Section 5 - References**

Provide a list of clients for whom similar services have been provided and dates when the service was provided. Include project name, types of services performed, client name, individual contact name, address, telephone number, and e-mail address.

### **Section 6 - Summary**

A brief summary of the reasons that the Offerors believe themselves to be the most qualified for this project.

## **V. PROPOSAL EVALUATION AND AWARD**

The following criteria will be utilized in evaluating proposals:

- A. Demonstrated understanding of the tasks and requirements depicted in the proposal. Firm experience in providing services on projects of similar scope (1/3).
- B. Expertise, experience and qualifications of the assigned staff, in providing services on projects of similar size and scope (1/3).
- C. Ability to manage projects expeditiously; approach to problem/task resolution; methodology/data gathering techniques and procedures; demonstrated cohesiveness of the project team (1/3).

### **Method of Award**

Following evaluation of the written proposals as submitted, presentations shall be held prior to selection. The opportunity to present shall be made to two or more Offerors deemed to be fully qualified and best suited among those submitting proposals, on the basis of the factors involved in the Request for Proposal, and respondents ranked 1, 2, 3 or more. Upon completion of the presentations the selection committee shall select the number 1 ranked firm and the City project manager shall begin negotiations with that firm in an attempt to reach an agreement to provide the services. Price shall be considered, but need not be the sole determining factor. If after negotiations have been conducted with the top ranked firm, an agreement cannot be reached, negotiations will be terminated with that firm, and negotiations began with the firm ranked number 2. This procedure will continue until an agreement is reached or negotiations are terminated and the services re-solicited. At any stage of the selection process should the City determine in writing and in its sole discretion that only one Offeror is fully qualified, or that one Offeror is clearly more highly qualified than the others under consideration, a contract may be negotiated and awarded to that Offeror.

## **VI. GENERAL TERMS AND CONDITIONS**

The Contract for Services (“Contract” or “Agreement”) with the successful Offeror will contain the following Terms and Conditions. Offerors taking exception to these terms and conditions or intending to propose additional or alternative language must (a) identify with specificity the City Terms and Conditions to which they take exception or seek to amend or replace: and (b) include any additional or different language with their proposal. Failure to both identify with specificity those terms and conditions Offeror takes exception to or seeks to amend or replace as well as to provide Offeror’s additional or alternate Contract terms may result in rejection of the proposal.

### **A. Subcontracting and Assignment of Work**

The Consultant shall not subcontract or assign portions of the work, other than those specifically defined in the contract, without the express written consent of the City. A description of any work the Offeror proposes to subcontract shall be submitted to the City for review and approval along with the name and address of the individual, firm, or corporation that is the proposed subcontracting firm. This submittal shall also include a list of the key personnel that the subcontractor will assign to the project. All work performed by any subcontractor shall be coordinated by the Consultant who shall be responsible to the City for all work performed by any subcontractor or special consultant.

### **B. Independent Successful Firm**

The Consultant is an independent firm and nothing contained in a subsequent contract shall constitute or designate such firm

or any of its agents or employees as employees of the City.

**C. Notification**

Any notice required by the contract shall be effective if given by registered mail, return receipt requested, to the Consultant in the name and at the address given in its proposal submission; provided that change of address shall be effective if given in accordance with this paragraph. Unless otherwise specified, any notice to the City shall be given to the City of Lynchburg, Procurement Manager, 900 Church Street, Lynchburg, VA 24504. The Consultant agrees to notify the City immediately of any change of legal status or of address. Any notice provided in accordance with this paragraph shall be deemed to have been completed five calendar days after the date of mailing.

**D. Cooperative Procurement**

As authorized in § 2.2-4304 of the Code of Virginia, this procurement is being conducted on behalf of and may be used by public bodies, agencies, institutions and localities of the several states, territories of the United States, and the District of Columbia with the consent of the Consultant.

**E. Termination**

Subject to the provisions below, the contract may be terminated by the City upon thirty (30) days advance written notice to the Consultant; but if any work or service hereunder is in progress, but not completed as of the date of termination, then the contract may be extended upon written approval of the City until said work or services are completed and accepted. All information and materials gathered and/or prepared by or for it under the terms of the contract shall be delivered to, become and remain the property of the City. The City shall have the right to use and reproduce the data and reports submitted hereunder, without additional compensation to the Consultant.

Termination for Convenience:

The City may terminate this contract for convenience at any time in which the case the parties shall negotiate reasonable termination costs.

Termination for Cause:

In the event of Termination for Cause, the thirty (30) days advance notice is waived and the Consultant shall not be entitled to termination costs.

Termination Due to Unavailability of Funds in Succeeding Fiscal Years:

If funds are not appropriated or otherwise made available to support continuation of the performance of this Contract in a subsequent fiscal year, then the Contract shall be canceled and, to the extent permitted by law, the Consultant shall be reimbursed for the reasonable value of any non-recurring costs incurred but not amortized in the price of the supplies or services delivered under the Contract.

**F. Laws and Regulations**

The Successful firm shall abide by all Federal, State and Local laws and regulations governing the provision of the services called for in the contract. The Successful firm shall give notice and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the work.

By entering this Contract, the Consultant 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.

This contract shall be governed and construed in all respects by its terms and by the laws of the Commonwealth of Virginia. Any legal proceedings arising out of or related to this contract shall be filed by the parties in the City of Lynchburg General District Court or the Lynchburg Circuit Court.

**G. Additional Services**

The City may add to the Scope of Services any services of a similar nature to those specified in the Scope of Services of this Request for Proposals as mutually agreed to at a price mutually agreed upon.

**H. Severability**

Each paragraph and provision of the resultant contract will be severable from the entire contract and if any provision is

declared invalid, the remaining provisions shall remain in effect.

**I. Licenses and Permits**

The successful firm shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the work which are legally required prior to and during the work. The City will not charge for any permits required by the City of Lynchburg.

**J. Nondiscrimination**

If the resultant contract exceeds \$10,000, during the performance of the contract, the Consultant agrees as follows:

- a. The Consultant will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Consultant. The Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
- b. The Consultant, in all solicitations or advertisements for employees placed by or on behalf of the Consultant, will state that such Consultant 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.
- d. The Consultant 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 subcontracted firm or vendor.

**K. Payments to Successful firms**

Payments to the Consultant shall be made within 30 days after receipt of an approved invoice for services provided in the previous month. Backup documentation for each invoice shall be provided in detail satisfactory to the City. The Consultant's records and documentation supporting such invoices shall be made available to the City upon reasonable request. The Consultant agrees to retain all records, documents and support materials relevant to the contract for a period of five years following final payment. Invoices must be prepared in formats as required by funding agencies.

In accordance with Virginia Code Section 2.2-4354 the Consultant agrees that:

1. Should any contractor be employed by the Consultant for the provision of any goods or services under this Contract, the Consultant agrees to the following:
  - (a) The Consultant shall, within seven days after receipt of any payments from the City pursuant to this Contract, either:
    - (1) Pay the subcontractor for the proportionate share of the total payment received from the City attributable to the goods or services provided by the subcontractor; or
    - (2) Notify the City, as applicable, and the subcontractor, in writing, of the intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment. Written notice to the City shall be given to: City of Lynchburg Procurement Manager, 900 Church Street, Lynchburg, VA 24504.
  - (b) The Consultant shall pay interest to the subcontractors, at the rate of one percent per month on all amounts owed to the subcontractor that remain unpaid after seven days following receipt of payment from the City for goods or services provided under this Contract, except for amounts withheld under subparagraph (a)(2) above.
  - (c) The Consultant 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 with respect to each lower-tier subcontractors firm.
  - (d) The Consultant's obligation to pay an interest charge to a subcontractor shall not be an obligation of the City.
  - (e) No contract modification shall be allowed for the purpose of providing reimbursement for these interest charges. No cost reimbursement claim shall include any amount for reimbursement of these interest charges.

**L. Contractual Claims**

Any claims by a contractor or anyone claiming on the contractor's behalf against the City arising under or relating to a contract shall only be resolved as specified in the City's Procurement Ordinance, Sec. 18.1-7, ensuring timely notice of the claim.

The contractor shall give the City written notice of any claim within ten (10) days of the beginning of the occurrence of the event leading to the claim being made. The written notice shall be a document from the contractor addressed to the City official or employee designated by the contract to receive such notice, or if no one is so designated, to the City Manager. The written notice shall clearly state the contractor's intention to make a claim, shall describe the occurrence involved, and shall be transmitted in a manner to ensure receipt by the City. The contractor shall submit the claim and any supporting data to the City within thirty (30) days after the occurrence giving rise to the claim ends. The burden shall be on the contractor to substantiate that it has given written notice and submitted its claim in accordance with this provision.

**M. Taxes**

The Consultant shall pay all City, State and Federal taxes required by law enacted at the time proposals are received and resulting from the work or traceable thereto, under whatever name levied. Said taxes shall not be in addition to the contract price as the taxes shall be an obligation of the Consultant and not of the City and the City shall be held harmless for same by the Consultant.

**N. Indemnification**

To the fullest extent permitted by law, the Consultant, for itself, heirs, representatives, successors and assigns agrees to save, defend, keep harmless and indemnify the City and all of its officials, agents and employees (collectively, the "City") from and against any and all claims, loss, damage, injury, costs (including court costs and attorney's fees), charges, liability or exposure, however caused, resulting from, arising out of or in any way connected with the Consultant's performance (or nonperformance) of the contract terms or its obligations under this contract.

**O. Contract Assignment**

The resultant contract may not be assigned, in whole or part, without the written consent of the City. The rights and obligations of the Consultant are personal and may be performed only by the Consultant. Any purported assignment that does not comply with this provision is void. This contract is binding upon and inures to the benefit of the parties and their respective permitted successors and assigns.

**P. Royalty and License Fees and Copyright, Trademark and Patent Protection**

The Successful firm shall pay all royalty and license fees relating to the items covered by the contract. In the event any third party shall claim that the manufacture, use and sales of these goods offered hereby constitutes an infringement of any copyright, trademark, or patent, the Offeror shall indemnify and hold harmless the City from any cost, expense, damage or loss incurred in any manner by the City on account of such alleged infringement.

**Q. Precedence of Documents**

The precedence of documents shall be as follows: the CONTRACT, the Request for Proposals and the Offeror's response to the Request for Proposals.

**R. Insurance**

The Consultant shall be required to maintain in force such insurance, in amounts acceptable to the City, as will protect it and the City from claims which may arise out of or result from the execution of the work, whether such execution be by the firm, its employees, agents, subcontractors or by anyone for whose acts any of them may be liable. This coverage should include, at a minimum, Worker's Compensation and General Liability (including premises/operations, independent successful firms, products and completed operations, contractual liability and personal injury liability). All insurance shall be provided by companies authorized to conduct business in the Commonwealth. The Consultant shall furnish the City with an original Certificate of Insurance upon request. The Certificate should name the City as additional insured under their General Liability coverage. The Consultant shall notify the City at least 30 days prior to policy cancellation, non-renewal or reduction of coverage.

### S. Administrative Appeals Procedure

- (a) The following are the exclusive procedures for a bidder or offeror to protest the city's award or decision to award a contract.
- (1) Any protest to award a contract shall be in writing and shall be delivered so that it is received by the city manager not later than five (5) business days after announcement of the award or decision to award, whichever comes first. Otherwise any such protest shall be deemed to be waived.
  - (2) Except for a protest of an emergency or sole source procurement, a protest of a city award or decision to award a contract may only be made by a person who submitted a bid or proposal for the procurement at issue and who was reasonably likely to have its proposal accepted but for the city's decision. In the case of an emergency or sole source procurement, a protest may only be made by a person who can show that he was reasonably likely to have submitted a successful bid or proposal if the procurement had been other than emergency or sole source.
  - (3) Protests shall only be granted if (1) the protester has complied fully with this Sec. 18.1-6 and there has been a violation of law, the Lynchburg public procurement code, or mandatory terms of the solicitation that clearly prejudiced the protestor in a material way, or (2) a statute requires voiding of the decision.
  - (4) The city manager shall issue a written decision on a protest within ten (10) days of its receipt by the city manager.
  - (5) If the protest is denied, the protestor may only appeal the denial or otherwise contest or challenge procurement by then filing suit in the Lynchburg circuit court, Lynchburg, Virginia, and serving the city with such suit within ten (10) days of such denial. Otherwise, the city manager's decision shall be final and conclusive, and the protestor's right to appeal the denial or to otherwise contest or challenge the procurement shall be deemed to be waived.
  - (6) The city should defer award of a contract where the decision to award has been protested unless there is a written determination by the city manager that proceeding without delay is necessary to protect the public interest or unless the bid or offer of the prospective awardee would expire.
  - (7) The validity of a contract awarded and accepted in good faith shall not be affected by the fact that a protest or appeal is filed.
  - (8) The exclusive relief allowed if a protest is granted is to void the decision being protested. If a contract has already been awarded and performance under the contract has begun, the contract need not be voided if not in the public interest to do so. Under no circumstances will any monetary amount be allowed to the protestor as part of any relief granted.
  - (9) Strictly following these procedures shall be a mandatory prerequisite for protest of the city's award or decision to award a contract. Failure by a bidder to follow these procedures strictly shall preclude that bidder's protest and be deemed to constitute a waiver of any protest.
- (b) A protest may not be based upon the alleged non-responsibility of a person to whom the city awards or makes a decision to award a contract.

### T. Drug Free Workplace

In accordance with Sec 2.2-4312 of the Virginia Code, during the performance of this contract, the Consultant agrees to (i) provide a drug-free workplace for the consultant'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 Consultant'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 consultant that such consultant 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 sub-Consultant or vendor.

Successful firm shall not use, possess, manufacture, or distribute alcohol or illegal drugs during the performance of the contract or while on City premises or distribute it to City employees.

Successful firm understands that a violation of these prohibitions constitutes a breach of the contract and that the City has the right cancel the contract.

For the purpose of this section, "Drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a firm, the employees of which 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.

**U. Certification by Consultant as to Felony Convictions**

No one with a felony conviction may be employed under this Contract and by the signature of its authorized official on the response to this solicitation, the Consultant certifies that neither the contracting official nor any of the Consultant's employees, agents or subcontractors who will work under this contract have been convicted of a felony.

**V. Confidentiality**

**1. Consultant Confidentiality**

The Consultant acknowledges and understands that its employees may have access to proprietary, business information, or other confidential information belonging to the City of Lynchburg. Therefore, except as required by law, the Consultant agrees that its employees will not:

- a) Access or attempt to access data that is unrelated to their job duties or authorizations as related to this Contract.
- b) Access or attempt to access information beyond their stated authorization.
- c) Disclose to any other person or allow any other person access to any information related to the City or any of its facilities or any other user of this Contract that is proprietary or confidential. Disclosure of information includes, but is not limited to, verbal discussions, FAX transmissions, electronic mail messages, voice mail communication, written documentation, "loaning" computer access codes and/or another transmission or sharing of data.

The Consultant understands that the City, or others may suffer irreparable harm by disclosure of proprietary or confidential information and that the City may seek legal remedies available to it should such disclosure occur. Further, the Consultant understands that violations of this provision may result in Contract termination.

The Consultant further understands that information and data obtained during the performance of this contract shall be considered confidential, during and following the term of this Contract, and will not be divulged without the Purchasing Agent's written consent and then only in strict accordance with prevailing laws. The Consultant shall hold all information provided by the City as proprietary and confidential, and shall make no unauthorized reproduction or distribution of such material.

**2. City Confidentiality**

The City understands that certain information provided by the Consultant during the performance of this Contract may also contain confidential or proprietary information. Consultant acknowledges that this Contract and public records (as defined by §2.2-3701 of the Virginia Freedom of Information Act) provided pursuant to this Contract are subject to the Virginia Freedom of Information Act §§2.2-3700 et seq. and the Virginia Public Procurement Act §2.2-4342 of the Code of Virginia.

**W.** The Consultant shall devote such part of its time as is reasonably necessary to the operations outlined under the resultant contract. The Consultant may engage in business ventures of a nature and description independent of this Contract with the City. The Consultant is required to disclose immediately any outside activities or interests, as they arise, that conflict or suggest a potential conflict with the declared or stated interests of the City. The Consultant is required to disclose all local government clients and must attest that work for those clients will not conflict with the interests of the City. The City reserves the right to object to such attestations. If such objections arise, the parties will agree to the best course of action to resolve the conflict or potential conflict.

**X.** The Consultant shall conduct all transactions under this contract in good faith. The Consultant will employ the highest ethical and professional standards at all times — failure to do so could result in termination of the Contract for cause or convenience.

CITY OF LYNCHBURG, VIRGINIA

Waste Water Treatment Plant Operations Building



# Basis of Design Narrative

May 31, 2011

Revision 1 – January 29, 2014



1115 Vista Park Drive  
Forest, VA 24551  
Phone 434.316.6001 • Fax 434.316.6002

VAE Project No. 07117



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# Executive Summary

## A. General Project Description

Services required to be provided by the existing Waste Water Treatment Plant (WWTP) operations staff exceed the capabilities of the facility. Laboratory space is minimal, and there is limited ability to accommodate potential future requirements for lab standards and codes. Office space is limited and inefficiently organized. Access control and adjacencies throughout the building should be reprogrammed to provide a higher level of security to the operations, particularly in the lab areas which are sensitive and should be limited from public access. The existing facilities do not include integral modern restrooms with lockers and showers. Additional space is required to accommodate the entire staff for safety, training, and operations meetings. Chemical and parts storage have been moved to the Maintenance Building, and areas within the Operations Building that formerly housed those functions are no longer used and are vacant.

The WWTP operations staff requires an expanded building necessary for staff to perform their job efficiently and to provide adequate space for current as well as future laboratory needs. Modifications to control public access to sensitive lab areas must be performed. Accommodations for future lab standards, as well as providing the ability to maintain current best practices for laboratory work are one of the primary goals of this project. The City has elected to remodel and renovate portions of the existing building, and to expand the building where necessary.

A staff restroom is also required in the process area, adjacent to the Odor Control Building.

## B. Applicable Codes & Standards

The following codes and standards were applicable at the time the code analysis was performed.



- 2006 Virginia Uniform Statewide Building Code (VUSBC) with Revisions Effective May 1, 2008
- July 23, 2004 Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)
- NFPA 72 – 2007 National Fire Alarm Code
- NFPA 70 – 2005 National Electrical Code
- 2003 NELAC Standards
- 2006 International Building Code
- 2006 International Mechanical Code
- 2006 International Plumbing Code
- 2006 International Energy Conservation Code
- 2006 International Fuel Gas Code
- Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910
- Virginia Occupational Safety and Health (VOSH) Standards for Lab Safety
- Sewage Collection and Treatment (SCAT) Regulations 9 VAC 25-790-10 et seq.
- Certification for Noncommercial Environmental Labs 1 VAC 30-45-10 et seq.
- Accreditation for Commercial Environmental Labs 1 VAC 30-46-10 et seq.

NOTE: Changes required by implementation of the current Virginia Uniform Statewide Building Code should be considered during detailed design.



## Site Development

### A. Existing Site Conditions

The existing site is located at 2301 Concord Turnpike in the City of Lynchburg, Virginia. The property is developed with parking and utilities. Existing utilities including water, gas, sanitary, telecommunications, and electric utilities are believed to be adequate for anticipated building renovations.

The existing site stormwater management permit will be minimally disturbed by these renovations and additions. Exterior additions are confined to a small area at the north (main) entrance, and at the southwest locker room addition. Based on this design, the stormwater runoff will not be significantly increased between the existing and proposed conditions. In addition, the stormwater around the building is typically collected and diverted through the water treatment plant as part of the facility's spill prevention permit.

Existing utilities will require further evaluation during detailed design to confirm clearance and/or relocation requirements at building additions.

### B. Site Improvements

1. **Sanitary Sewer:** Sanitary sewer will need to be connected for the locker room building addition and front restroom addition. These connections will most likely occur within the uninhabitable space below the building to avoid slab patch and repair work. An exterior manhole, drop inlet, and sewer pipe on the southwest corner of the building may require relocation for the locker room building addition.
2. **SCADA System:** It is anticipated that all SCADA system connections will be addressed interior of the building and site distribution of the SCADA system will not be required.
3. **Site Lighting:** Exterior lighting is currently installed around the building. Additional building-mounted fixtures may be required near the loading dock. Additional required locations will be determined during detailed design.



# Operations Building

## A. Proposed Building Data

- Building Location: 2301 Concord Turnpike; Lynchburg, Virginia
- Building Height: 36'-0" +/- above grade
- Number of Floors: 2, with uninhabitable space below grade
- Building Area per IBC 502:
  - Office Area (B): 5,135 square feet (GSF)
  - Laboratory Area (B): 2,252 square feet (GSF)
  - Mechanical and Storage Areas (B): 4,172 square feet (GSF)
  - Educational / Classroom Area (B): 498 square feet (NSF)
- Total Building Area (proposed): 12,057 square feet (GSF)
- Purpose/Occupancy: Office and laboratory with accessory mechanical and storage areas
- Use Group: (B) Business (per VUSBC Section 311)
- Building Occupant Load per VUSBC Table 1004.1.2:
  - Office and Laboratory: 7,387 GSF @ 100 occupants / SF
  - Mechanical / Storage: 4,172 GSF @ 300 occupants / SF
  - Educational / Classroom: 498 NSF @ 20 occupants / SF
  - Total occupant load = 113 occupants. Refer to table in Chapter 10 – Means of Egress noted below.
- Type of Construction: II-B

## B. Code Analysis

### *Chapter 3 – Use and Occupancy Classification*

- Use Group/Classifications:
  - (B) Business (Section 304)
- Per IBC Section 508.2, where a building or portion thereof contains two or more occupancies or uses, the building or portion thereof shall be considered to contain incidental use areas or be considered mixed occupancies. Incidental uses



are to be separated from the main use as described in Table 508.2. Storage rooms over 100 square feet require 1-hour separation or automatic fire-extinguishing system.

#### ***Chapter 4 – Special Detailed Requirements Based on Use and Occupancy***

- Not Applicable

#### ***Chapter 5 – General Building Height and Area Limitations***

- Table 503 Allowable Height and Building Areas:
  - (B) Business: 4 stories; 23,000 square feet (GSF)
- Use Group Separation: Single occupancy with incidental use areas per Section 508.

#### ***Chapter 6 – Types of Construction***

- Type of Construction: II-B
- Per Section 602.2 Type II-B construction is that type of construction in which the structural elements, exterior walls and interior walls are of non-combustible materials, but have no fire resistance. Existing structural elements are concrete, exterior walls are concrete and masonry, and interior walls are either masonry or metal studs with 5/8” gypsum board.
- Table 601 Fire-Resistance Rating Requirements for Building Elements (Hours), based on construction type II-B, are below:

○ Structural Frame	0 hr(s)	Fire Doors	0 hr(s)
○ Exterior Bearing Walls	0 hr(s)	Fire Doors	0 hr(s)
○ Interior Bearing Walls	0 hr(s)	Fire Doors	0 hr(s)
○ Exterior Nonbearing Walls	0 hr(s)	Fire Doors	0 hr(s)
○ Floor Construction	0 hr(s)	Fire Doors	0 hr(s)
○ Roof Construction	0 hr(s)	Fire Doors	0 hr(s)

#### ***Chapter 7 – Fire-Resistant-Rated Construction***

- Not Applicable



**Chapter 8 – Interior Finishes**

- Final selections to be determined during detailed design to comply with VUSBC. See architectural section for outline of proposed interior finishes.

**Chapter 9 – Fire Protection Systems**

- An automatic sprinkler system is not required for Group B.
- A standpipe system is not required per Section 905.
- Section 906 requires installation of portable fire extinguishers in accordance with the International Fire Code. The Owner will provide CO2 fire extinguishers at locations determined during detailed design.
- Section 907 Manual Fire Alarm and Detection Systems
  - Not required in Group B per Section 907.2.2

**Chapter 10 – Means of Egress**

- Section 1004.1 and Table 1004.1.1 outlines requirements to determine design occupant load as follows:
  - Business Areas (Offices) – 100 gross square feet per occupant
  - Educational / Classroom Areas (Training Room) – 20 NSF per occupant
  - Mechanical / Storage Areas (throughout building) – 300 GSF per occupant
- Building Occupant Load is as follows:

<b>Area (Second Floor)</b>	<b>Floor Area (GSF)</b>	<b># of Occupants</b>
Training Room (20 nsf/person)	498	25
Mechanical / Storage (300 gsf/person)	2,389	8
Business (100 gsf/person)	775	8
<b>Total Second Floor</b>	<b>3,662</b>	<b>41</b>
<b>Area (First Floor)</b>	<b>Floor Area (GSF)</b>	<b># of Occupants</b>
Mechanical / Storage (300 gsf/person)	1,783	6
Business (100 gsf/person)	6,612	66
<b>Total First Floor</b>	<b>8,395</b>	<b>72</b>
<b>Total</b>	<b>12,057</b>	<b>113</b>



- Section 1005 outlines minimum required egress width per Table 1005.1 – Egress Width as follows:
  - Stairways: 0.3 inches per occupant
  - Other egress components: 0.2 inches per occupant
- Section 1006 requires the means of egress illumination, including the exit discharge, to be not less than 1 foot-candle at the floor level minimum with emergency power per Section 1006.3.
- Section 1007 requires that each accessible space shall have an accessible means of egress. Where a space is required to have two (2) means of egress by Section 1014.1 and 1018.1 both shall be accessible. All areas on the first floor will be accessible. Areas provided on the second floor are not primary functions to the building, and are not required to be accessible.
- Section 1009.1 requires that stair width shall not be less than 44”, with an exception allowing a width of not less than 36” where the stair serves an occupant load of less than 50. The second floor has a total occupant load of 35; therefore a 36” width is acceptable. The existing stair width is 41”. Section 1009.3 requires that stair riser height shall be 7 inches maximum and 4 inches minimum. Stair tread depths shall be 11 inches minimum. Existing stair riser heights are approximately 6.7 inches. Existing stair tread depths are approximately 11 inches.
- Section 1014 outlines requirements for Exit Access as follows:
  - Section 1014.2 – Egress through Intervening Spaces: Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas are accessory to the area served; are not high-hazard occupancy and provide a discernible path of egress travel to an exit. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes. An exit shall not pass through a room that can be locked to prevent egress. Occupants in the supervisor’s office and the office near the break room must pass through intervening spaces, but those comply with the exceptions noted above.
  - Section 1014.4 – Aisles: Outlines requirements for aisles serving as portion of an exit access. Section 1014.4.1 requires aisles in Group B to be determined in accordance with Section 1005.1 for the occupant load served,



but no less than 36 inches; except non public aisles serving less than 50 people, and not required to be accessible by Chapter 11 need not exceed 28 inches in width. Any aisles created by the location of tables and chairs in the Break Room shall comply with this section.

- Section 1015 outlines requirements for Exit and Exit Access Doorways as follows below.
  - Section 1015.1 – Two exit or exit access doorways are required from any space that have the following occupancy:
    - 50 or more for (B) Business
    - 30 or more for (S) Storage
- Section 1016 outlines requirements for Exit Access Travel Distance as follows:
  - Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path, shall not exceed distance in Table 1016.1 as follows:
    - (B) Business – 200 feet (without sprinkler system)
    - (S-1) Moderate-Hazard Storage – 200 feet (without sprinkler system)
- Section 1017 outlines requirements for Corridors as follows:
  - Section 1017.1 and Table 1017.1 requires a minimum 1-hour fire resistance rating for corridors with and occupant loads exceeding 30, unless the building is equipped with a fire sprinkler system. Corridors will require fire rating unless a sprinkler system is added.
  - Section 1017.2 requires a minimum corridor width of 44 inches. A width of 36 inches is allowed where the occupant capacity is less than 50.
  - Section 1017.3 requires that dead end corridors be a maximum of 20 feet long. There are no dead end corridors in the building.
- Section 1019 outlines requirements for Number of Exits and Continuity as follows below. Two exits are required from the second floor per code requirements indicated below. The second floor does not currently meet egress requirements.
  - Section 1019.1 – Minimum number of exits per story shall be two (2) for an occupant load of 1-500 per Table 1019.1.



- Table 1019.2 – A two story Group B building with one exit is limited to a maximum of 30 occupants per floor and 75 feet travel distance.
- IEBC Section 305.3 states that when a building is altered, existing stairs may remain as is. However, the means of egress capacity must comply with current codes. IEBC Section 705.3.1.1.1 states that a single exit is permitted in Group B occupancy where the occupant load does not exceed 50 and the exit access travel distance does not exceed 75'. Exit access travel distance exceeds 100'; therefore a second exit is required.
- Section 1021 outlines requirements for exit passageways.
  - Section 1021.3 requires that exit passageway enclosures have not less than 1-hour fire resistance rating.

### ***Chapter 11 – Accessibility***

- Areas within the first floor shall be made accessible to the greatest extent possible, even though job classifications may not permit employment of disabled personnel. Site improvements will be evaluated with available funding during detailed design.
- Section 1104 outlines requirements for Accessible Route as follows:
  - Section 1104.1 Site Arrival Points: Accessible routes within the site shall be provided from accessible parking and public streets or sidewalks to the accessible building entrance served.
  - Section 1104.3 Connected Spaces: When a building or portion of a building is required to be accessible, an accessible route shall be provided to each portion of the building, to accessible building entrances connecting accessible pedestrian walkways and the public way.
  - Section 1104.3.1 Employee Work Areas: Common use circulation paths within employee work areas shall be accessible routes.
  - Section 1104.5 Location: Accessible routes shall coincide with or be located in the same area as a general circulation path. Where the circulation is interior, the accessible route shall also be interior. Where only one accessible route is provided, the accessible route shall not pass through kitchens, storage rooms, restrooms, closets, or similar spaces.



- Section 1105 outlines requirements for Accessible Entrances as follows:
  - Section 1105.1 Public Entrances: In addition to accessible entrances required by Sections 1105.1.1 through 1105.1.6, at least 60 percent of all public entrances shall be accessible.
  - Section 1105.1.3 Restricted Entrances: Where restricted entrances are provided to a building or facility, at least one restricted entrance to the building or facility shall be accessible.
- Section 1106 outlines requirements for Parking and Passenger Loading Facilities as follows:
  - Section 1106.1 Required: Where parking is provided, accessible parking spaces shall be provided in compliance with Table 1106.1.
    - Exception: This section does not apply to parking spaces used exclusively for buses, trucks, other delivery vehicles...where lots accessed by the public are provided with an accessible passenger loading zone.

***Table 1106.1 – Accessible Parking Spaces***

<b>Total Parking Spaces Provided</b>	<b>Required Min. Number of Accessible Spaces</b>
1 to 25	1
25 to 50	2

- Section 1106.6 Location. Accessible parking spaces shall be located on the shortest accessible route of travel from adjacent parking to an accessible building entrance.
- Section 1106.8 Identification of Accessible Parking Spaces: In addition to complying with applicable provisions of this chapter, all accessible parking spaces shall be identified by above grade signs. All above grade parking space signs shall have the bottom edge of the sign no lower than 4 feet (1219 mm) and no higher than 7 feet (2133 mm) above the parking surface. All disabled parking signs shall include the following language: PENALTY, \$100-500 Fine, TOW-AWAY ZONE.
- Section 1109 outlines requirements for Other Features and Facilities as follows:



- Section 1109.2 Toilet and Bathing Facilities: Toilet rooms and bathing facilities shall be accessible. At least one of each type of fixture, element, control, or dispenser in each accessible toilet room and bathing facility shall be accessible.
  - Section 1109.2.2 Water Closet Compartment: Where water closet compartments are provided in a toilet room or bathing facility, at least one wheelchair-accessible compartment shall be provided.
- Section 1109.3 Sinks: Where sinks are provided, at least 5 percent but not less than one provided in accessible spaces shall comply with ICC A117.1. Lavatories shall be installed in countertops which shall comply with ADA requirements where applicable.
- Section 1109.4 Kitchens and Kitchenettes: Where kitchens and kitchenettes are provided in accessible spaces or rooms, they shall be accessible in accordance with ICC A117.1.
- Section 1109.5 outlines requirements for Drinking Fountains as follows:
  - Section 1109.5.1 Minimum Number: No fewer than two drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheelchair and one drinking fountain shall comply with the requirements for standing persons.
    - Exception: A single drinking fountain that complies with the requirements for people who use a wheelchair and standing persons shall be permitted to be substituted for two separate drinking fountains.
  - Section 1109.5.2 More than the Minimum Number. Where more than the minimum number of drinking fountains specified in Section 1109.5.1 is provided, 50 percent of the total number of drinking fountains shall comply with the requirements for persons who use a wheelchair and 50 percent of the total number of drinking fountains shall comply with the requirements for standing persons.
- Section 1109.8 outlines requirements for Storage as follows:



- Section 1109.8.1 Lockers: Where lockers are provided in accessible spaces, at least five percent, but not less than one, of each type shall be accessible.
- Section 1109.8.3 Coat Hooks and Shelves: Where coat hooks and shelves are provided in toilet rooms or toilet compartments or in dressing, fitting, or locker rooms, at least one of each type shall be accessible and shall be provided in accessible toilet rooms, compartments, and accessible dressing and locker rooms.
- Section 1109.11 Seating at Tables, Counters and Work Surfaces: Where seating or standing space at work surfaces is provided in accessible spaces, at least 5 percent of the seating and standing spaces, but not less than one, cubicle or counter shall be accessible.
- Section 1109.13 Controls, Operating Mechanisms and Hardware: Controls, operating mechanisms and hardware intended for operation by the occupant, including switches that control lighting and ventilation and electrical convenience outlets, in accessible spaces, along accessible routes or as parts of accessible elements shall be accessible. This section does not apply to spaces not required to be accessible due to the nature of the work performed within. The job classification and type of work required in the laboratory and control room provides an exception from those work areas being accessible.
- Section 1110 outlines requirements for Signage as follows:
  - Section 1110.1 Signs: The following areas shall be identified by the International Sign for Accessibility:
    - Accessible Parking Spaces required by Section 1106.1.
    - Accessible rooms where multiple single-user toilet or bathing rooms are clustered at a single location.
    - Accessible entrances where not all entrances are accessible.

### ***Chapter 29 – Plumbing Systems***

- International Plumbing Code Table 403.1 – Minimum Number of Required Plumbing Fixtures



- Classification – Business (B)
  - Water Closets: 1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50
  - Lavatories: Male & Female: 1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80
  - Bathtubs/Showers: None Required
  - Drinking Fountains: 1 per 100
  - Service Sinks: 1
- Classification – Training Room (E)
  - Water Closets: 1 per 50
  - Lavatories: Male & Female: 1 per 50
  - Bathtubs/Showers: None Required
  - Drinking Fountains: 1 per 100
  - Service Sinks: 1
- Classification – Mechanical / Storage (S)
  - Water Closets: 1 per 100
  - Lavatories: Male & Female: 1 per 100
  - Bathtubs/Showers: None Required
  - Drinking Fountains: 1 per 1,000
  - Service Sinks: 1
- Plumbing Fixture Occupant Load:

<i>Area</i>	<i>Floor Area (GSF)</i>	<i>Total</i>
Business (B)	7,387	74
Training Room (E)	498	25
Mechanical / Storage (S)	4,172	14
<b><i>Total Occupants (Male and Female)</i></b>	<b><i>12,057</i></b>	<b><i>113</i></b>

- Required Plumbing Fixture Summary (by Use Group for Total Occupant Load):



<i>Fixture</i>	<i>Business (B)</i>		<i>Educational (E)</i>		<i>Storage (S)</i>	
	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>
Water Closets	2	2	1	1	1	1
Lavatories	2	2	1	1	1	1
Bathtubs/Showers	-0-					
Drinking Fountains	1					
Service Sinks	1					

*Notes: 1) Per IPC 403.3 the required water closets, lavatories, and showers or bathtubs shall be distributed equally between the sexes based on the percentage of each sex anticipated in the occupant load. The occupant load shall be composed of 50 percent of each sex, unless statistical data approved by the code official indicate a different distribution of the sexes.*

*2) Per IPC 419.2 in each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets.*

- Number of fixtures proposed exceeds the number of fixtures required.
- Number of laboratory sinks and sink types to be used in laboratory should be confirmed early in the detailed design phase.

### C. Proposed Building Program

The Operations Building will be reconfigured to provide space for additional offices, increased laboratory space, additional space for restroom and locker space, and storage.

Chlorine storage has been completely removed from the Control Building. The former Chlorine Feed Room is now a sodium hypochlorite manifold room. In other words, sodium hypochlorite will be in process and not stored in the space. This space is only accessible from an exterior door (i.e., there is no access to this space from the interior of the building). The building will **not** be classified as



Hazardous Occupancy as WWTP has determined that all chemicals are below the levels required by the VUSBC for the building to be considered a Hazardous Occupancy Classification.

Building program requirements discussed since project inception are noted below:

- Relocate the men's locker room to the former chlorine storage room as chlorine tanks have been removed entirely from the building;
- Modify the existing 3-office administration suite to a 2-office administration suite with provisions for a adjoining secure copy/mail room;
- Provide storage area for uniforms in the vicinity of the existing first floor break area and new locker rooms;
- Evaluate and improve emergency egress components on both the first and second floors. Second floor egress will require improvements based upon code analysis;
- Modify the existing lab by providing table height counter area in southwest corner, replacing the ceiling tiles and flooring, and repainting walls;
- Expand and relocate the Chemist's Office adjacent to the lab;
- Expand the lab into the existing Loading Bay, Chemist's Office, or other locations. Expansion into Loading Bay requires cutting an opening in existing dividing wall and possibly a separate roof enclosure over the lab extension due to potential leaks that occur during wash down of the floor slab above;
- Provide an additional AA unit for lab gases and fluids;
- Relocate air compressor to the Loading Bay adjacent to the Lab Expansion;
- Add two (2) single-use restrooms on the second floor possibly in the existing Parts Storage Area to serve the training room;
- Expand the Training Room with space for 35 people at chairs and 15 to 18 people at tables. The existing HVAC equipment located in the existing Parts Storage area must remain. Expansion of the training room and associated restrooms did not disturb the mechanical equipment;



- Provide a storage area off the Training Room for tables and chairs, and electronic equipment (to be evaluated as part of detailed design);
- Provide a Break Room on the first floor in the vicinity of the current vending area including counter space, refrigerator, microwave, toaster, coffee maker, and other miscellaneous appliances. Second Floor Break room will remain in use at this time;
- Repaint and provide minor finishes only at the Second Floor Break Room. The Library will not be expanded into the Second Floor Break Room at this time. The space will continue to be used as a break room and will also accommodate occasional small meetings;
- Provide a sink and refrigerator for convenience as part of a small kitchenette area in the expanded Training Room;
- Relocate the freezer for ice storage from the existing second floor stair landing to the first floor to improve access for delivery personnel and the lab. Possible locations are within the mechanical room or within the Loading Bay adjacent to the Lab Expansion steps. Also, the City may investigate the size of the freezer versus the economics of delivery and lab needs;
- Expand the Boiler Room onto the Loading Dock by eliminating the exterior sliding doors. Expand the Loading Dock to the corner of the Men's Locker Room addition, and access the Boiler Room from the Loading Dock through an overhead acting door;
- Provide distinct division and protection of different types of lab testing to assure a clear, monitored chain of custody for tested materials; and
- Follow DCLS and NELAC Standards for all work.

A summary of the primary required spaces and associated square footage is outlined in the following table:



<b>Building Program Summary</b>	
<b>Space</b>	<b>Actual Area (sq ft)</b>
Daily Operations Lab	369
Control Room	297
Office – Admin / Receptionist	265
Office - Superintendant	237
Office – Admin Area	162
Office – Shift supervisor	138
Office – Pretreatment	154
Office – Staff	133
Office – Chemist	170
Laboratory	1,582
Men’s Restroom/Shower/Locker	529
Women’s Restroom/Shower/Locker	216
Break Room	502
Files / Copy Room	107
Entry / Restrooms	180
Training Room	502
Break Room / Library	291
<b>Net Square Footage (does not include restrooms, mechanical rooms, storage rooms, or corridors)</b>	<b>5,834</b>
<b>Gross Square Footage</b>	
First Floor	8,395
Second Floor	3,662
<b>Total Gross Square Footage</b>	<b>12,057</b>

**D. Architectural**

- Style and Character:** The Operations Building has undergone several additions since its original construction. All previous additions were clad in brick veneer to match the original construction. Repair work to existing brick veneer will be performed where necessary. New exterior walls, where required at the locker rooms, vending area, and north entrance / restrooms will be clad in a material suitable for the environment around the treatment plant, and may be similar brick



vener, split face CMU to complement recent construction, or other compatible material. All new construction areas will be finished with a low slope roof system. Perimeter fascia and parapet walls will be capped with painted or anodized aluminum coping to match existing.

## 2. Basic Construction Materials:

- **Exterior Wall Construction:** Exterior walls will be constructed of load bearing masonry construction. 8" CMU (cores filled with foam-in-place insulation) with rigid insulation within the wall cavity and exterior brick veneer will be used on the exterior walls of the locker room and vending.
- **Roof Construction:** The roofs over the locker room, vending area, and north entrance / restrooms will be constructed of open web joists with steel roof deck and SBS-modified bitumen roofing (similar to existing) on rigid insulation. Roofs will be low-slope toward scuppers on the building perimeter via sloping roof structure.

The roofs will have parapet walls around the perimeter. All parapet walls and roof edge terminations will be constructed of aluminum sheet metal due to the corrosive environment of the WWTP.

- **Exterior Windows:** Non-operable commercial grade aluminum windows with insulated low-e (tinted) glazing and anodized bronze finish frames will be provided in the Vending area. Frosted glazing in existing Men's and Women's restrooms will be replaced with clear glazing to match other windows.
- **Exterior Doors:** Personnel doors will be storefront aluminum with half height glass panels. Provide access control on all existing and new exterior doors.
- **Door Hardware:** All door hardware shall be Corbin-Ruskin keyed to master keying system utilized at the time of construction. All door hardware will be coordinated with existing access control system. Electric strikes will be required on exterior doors, some offices, storage rooms, labs, and other spaces as determined during detailed design. All doors shall have kick plates on each side. Door hardware finish shall be determined during detailed design phase.



- **Interior Finishes:**
  - **Walls:** Interior walls of the office will be finished with painted gypsum board (5/8" thick) walls with vinyl cove base. Restroom walls will be 4x4 ceramic wall tile over cement backer board.
  - **Floors:** The office area, break room, and corridors will typically have Vinyl Composition Tile (VCT). All flooring will be replaced in lab areas. The restrooms, locker rooms, laboratories, and control room will be ceramic tile. Floor tile sizes in the restrooms and locker rooms will be 2x2, and 12x12 acid and chemical resistant tile will be used in the laboratories and control room. Other low impact flooring systems will be evaluated during detailed design for use in the offices, labs, and control room for enhanced worker comfort.
  - **Ceilings:** Ceiling shall be 2'x2' acoustical suspended ceiling panel system throughout. Finished ceiling height will be at approximately 9' above finished floor. All ceiling tiles will be replaced in the laboratory with appropriate materials as determined during detailed design.
  - **Insulation:** Roof insulation shall be rigid polyisocyanurate insulation approximately 3" thick to achieve code required R-value. CMU wall cores will be filled with foam-in-place insulation and rigid insulation will be used in the wall cavity between CMU and brick veneer.
  - **Interior Doors:** Interior doors shall be hollow metal doors and frames typically with half height glazing except at restrooms and closets.
  - **Toilet Partitions:** Toilet Partitions shall be high density polymer in color as selected by the City during submittal review.
  - **Toilet Accessories:** Toilet Accessories shall include stainless steel double roll toilet paper holders and tri-fold paper towel holders. Provide cut sheets for Owner review during detailed design. Owner shall provide soap dispensers and free-standing 13-gallon waste receptacles in new restrooms and locker rooms.
  - **Fixtures, Furnishings and Equipment:** Lockers and lab cabinetry, including desk height cabinet along southwest wall of laboratory, will be contractor furnished. Owner shall provide all other fixtures, furnishings



and equipment for the office area, lab areas, control room, break room, and locker rooms including, but not limited to uniform storage, uniform collection, desk, tables, chairs, audio visual equipment, telephones, computers, bookshelves, appliances, storage racks, storage bins, and shop equipment.

All cabling and connections for A/V equipment, telephones, and computers will be installed by City of Lynchburg IT Department during construction, and should be coordinated with City of Lynchburg IT Department during detailed design.

A detailed summary of lab equipment should be developed in the early part of detailed design, so equipment can be properly located and associated utility connections properly coordinated.

## E. Structural

1. **Foundation System:** The exterior building additions (lockers, vending area, and north entrance / restrooms) will be constructed on poured concrete footings for load bearing masonry walls, with 4" reinforced concrete slab-on-grade.
2. **Framing System:** The exterior building additions will be constructed with exterior load bearing masonry walls and steel framing. Steel framing will be a combination of bar joist and steel beams with final selection and location dependent upon location of concentrated loads for any required roof top equipment. The exterior walls will be 8" CMU with 4" brick veneer or compatible exterior finish material. Roof deck will be framed with 1 1/2" metal roof deck, Type F (22 gage). The lateral resistance system will be provided via the diaphragm of the roof deck and masonry shear walls. Structural lintels will be required at load bearing walls to be demolished for building expansion and/or space reconfiguration.
3. **Preliminary Load Criteria for building additions (to be verified during detailed design):**



- Uniform Floor Live Loads:
  - All slab-on-grade floors in building additions: 200 PSF minimum
- Roof Live Load (Non-Reducible): 20 PSF
- Wind Load Criteria:
  - Basic Wind Speed: 90 MPH
  - Wind Importance Factor ( $I_w$ ): 1.0
  - Wind Exposure Condition: B
  - Internal Pressure Coefficient ( $GC_{pi}$ ): TBD
  - Components and Cladding Wind Pressure: TBD
  - Building Category: TBD
- Snow Load Criteria:
  - Ground Snow Load ( $p_g$ ): 30 PSF
  - Flat Roof Snow Load ( $P_f$ ): TBD
  - Snow Exposure Factor ( $C_e$ ): TBD
  - Snow Importance Factor ( $I_s$ ): TBD
  - Snow Thermal Factor ( $C_t$ ): TBD
- Seismic Load Criteria:
  - Seismic Importance Factor ( $I_e$ ): TBD
  - Seismic Use Group: TBD
  - Mapped Spectral Response Coefficient, ( $S_s$ ): TBD
  - Mapped Spectral Response Coefficient, ( $S_i$ ): TBD
  - Site Class (assumed/per geotechnical report): Assumed as Site Class 'D'.
  - Spectral Response Coefficient, ( $S_{DS}$ ): TBD
  - Spectral Response Coefficient, ( $S_{D1}$ ): TBD
  - Seismic Design Category: TBD
  - Design Base Shear: TBD
  - Seismic Response Coefficient, ( $C_s$ ): TBD
  - Response Modification Factor ( $r$ ): TBD
  - Analysis Procedure Used: TBD



## F. Mechanical (HVAC and Plumbing)

### 1. HVAC System Considerations:

- The overall building HVAC has been previously replaced and the overall heating and cooling loads have been reduced over time due to removal of process equipment. The original chiller was 14 tons and the existing chiller is 17 – 19 tons. Large equipment was replaced, but the VAVs and ductwork are circa 1993. New system information is available from Varney. HVAC systems will be evaluated during detailed design.
- The existing HVAC system serving the lab should be evaluated for the current square footage.
- The Locker Room (to be located in the existing Chlorine Storage Room) and Break Room will likely require additional HVAC. A non-water cooled air handling unit may be placed on the Loading Dock expansion if it is determined such is required during detailed design.
- The restroom/shower/locker rooms will operate at a negative pressure relative to the surrounding areas. Fresh air supplied to the office areas will be used as makeup air for restroom/shower/locker room exhaust.
- Return air will be ducted.
- **Energy Efficiency:** Energy efficiency will be achieved through accurate load calculations using software modeling, selection of properly sized and efficient equipment, and properly sized and insulated ductwork. Building controls (time clock) are not required as building is continuous operation.
- **Heating and Cooling Loads:** Outdoor design conditions are 92°F DB / 74°F WB for cooling and 12°F for heating. Indoor design conditions in the office shall be 70°F / 50% RH for cooling and 70°F for heating. Systems shall be designed to meet lab tolerances of +/- 1°F at 70°F.

### 2. Plumbing:

- See Code Analysis summary section for determination of required fixture count. Actual fixture count is summarized below:
  - Water Closets: 1 Male WC; 1 Male Urinal; 1 Female WC; 5 Unisex WC
  - Lavatories: 2 Male Lavatories; 2 Female Lavatories; 5 Unisex Lavatories



- Showers: 2 Male Showers; 1 Female Shower
- Drinking Fountains: 1 Hi-Lo Water Cooler in Break Room
- Kitchen Sink: 1 double bowl Kitchen Sink in Break Area Kitchenette
- Convenience Sink: 1 double bowl Sink in Training Room
- Service Sink: 1 floor Service Sink in Janitor Closet
- Other Items: 1 Emergency Eye Wash/Shower unit is in the Lab. An additional eye wash / drench shower unit will be provided in the laboratory expansion and an eye wash (hose type, similar to Hypochlorite Building) will be provided in the Daily Operations Lab.
- The quantity of sinks in the Lab and the Daily Operations Lab will be determined during detailed design.
- Water Demand will be determined during detailed design.
- Water Pressure will be determined during detailed design.
- Hot Water: Additional hot water is required for locker rooms and additional restrooms; however, existing circulating hot water system and associated water heater are believed acceptable for additional demand. This will be verified during detailed design.
- Piping Systems:
  - Sanitary and Vent Piping: PVC, Schedule 40.
  - Domestic Water Piping: CPVC, Schedule 40.

## G. Electrical

- The existing electrical service is adequate due to removal of process equipment; however, transformers may be required during future detailed design phases to step down the existing power which is typically 480V.
- Electrical Load Calculation will be determined during detailed design.
- Electrical Design Standards: Service conductors will be designed for a maximum calculated voltage drop of 2%. Feeder conductors will be designed for a maximum calculated voltage drop of 1%. Branch circuit conductors will be selected to provide a maximum calculated voltage drop of 2%. The overall voltage drop will be less than 5%.



- Proposed wiring methods are listed in the following table.

PROPOSED WIRING METHODS			
Area	Circuit Type	Concealed /Exposed	Wiring Method
Aboveground	Small Branch	Concealed	Type MC Cable
Aboveground	Small Branch	Exposed	Not Used
Aboveground	Feeder or Large Branch	Concealed	Single Conductors in EMT Conduit
Aboveground	Feeder or Large Branch	Exposed	Not Used
Under Slab	All	Concealed	Single Conductors in Schedule 40 PVC Conduit
Exterior Underground	Branch or Feeder	Concealed	Single Conductors in Schedule 40 PVC Conduit
Exterior Underground	Service	Concealed	Single Conductors in Concrete Encased Schedule 40 PVC Conduit
Exterior Aboveground	All	Exposed	Single Conductors in RSC Conduit

1. **Building Grounding:**

- Existing grounding system is assumed adequate, but should be evaluated during detailed design.

2. **Building Interior Lighting:**

- All fixtures provided in the Operations Building will be fluorescent. 2'x4' lay-in fixtures in the acoustical ceiling tiled areas throughout. 1'x4' surface-mounted fixtures will be used in the Mechanical Room/Parts Storage Area.

3. **Building Telecommunications:**

- The telecommunications backboards, punchdown blocks, and equipment will be relocated from the closet in the existing Control Room to the Electrical Closet. The responsibility for relocation of telecommunications equipment (by the City of Lynchburg IT Department or by the General Contractor) will be determined during detailed design, dependent upon timing for conversion of system from analog to IP.



- SCADA system wiring will be relocated from the small closet and control panel (blue box) in the existing Control Room to the Wiring Closet located in the Laboratory.
  - Conduit rough-ins consisting of a 4x4 wall outlet box And a 3/4" EMT conduit stub from the box to an accessible space above the ceiling will typically be used for telecommunication connections. Each outlet box will include four (4) jack locations. Each jack may be configured blank or wired for data or voice communications. All wired jacks will be terminated and tested to Cat 5e standards by the City of Lynchburg IT Department.
  - Existing public address system shall be modified for new space configuration.
4. **Fire Alarm Systems:**
- VUSBC does not require a manual or automatic fire alarm system for the building; however the existing fire alarm system will be modified for the new space configuration. Conduit rough-in for the fire alarm system will be by the contractor. Design and installation of the fire alarm system will be performed under a separate contract between the Owner and Simplex Grinnell.
5. **Security System:**
- An updated security system is scheduled to be in operation prior to the start of this scope of work. The security system will include both security and process cameras. Conduit rough-ins will be provided for future access control components at new entrance lobby. This will include an exterior rough-in for the card reader and interior rough-ins for “request to exit” device, electronic strike, and door ajar detector. Rough-in for additional cameras will be evaluated during detailed design.



## Odor Control Restroom

The Wastewater Treatment Building (WWTP) currently has a restroom located on an upper floor of a nearby process building in the vicinity of the Odor Control Building; however, they desire to construct a single unisex restroom readily available to the exterior process area. The restroom's interior will be handicapped accessible; however, this is not required as those performing work in this area of the WWTP have specific job requirements which limit work by handicapped persons. Site accessibility is not required, but may be incorporated if easily achieved by placement of the restroom structure within existing site features (sidewalks, curb & gutter, etc.).

The new structure is proposed to be located adjacent to or constructed as an addition to the Odor Control Building. The restroom construction will be similar to surrounding buildings including CMU exterior walls and metal panel parapets. Water and electrical service are available at the Odor Control Building. Sanitary service is available beneath nearby pavement and sidewalks which will be cut and patched as required. Ventilation and heat is required for the structure, but air conditioning is not required. Water service to the structure can be routed exterior and heat-traced if required.



# Construction Phasing

## A. Phasing Considerations

Owner intends to occupy the building during construction and phasing of the construction is required. Preliminary recommendations for phases are outlined below:

### 1. Phase 1:

- a. Locker Room Addition
- b. 1<sup>st</sup> Floor Break Room Renovations including Staff Office and File/Copy Room
- c. Lab Expansion
- d. Odor Control Restroom

### 2. Phase 2:

- a. Administrative Area Renovations (administrative staff to be located in Staff Office and File/Copy Room constructed during Phase 1)
- b. Pretreatment Office Renovations
- c. Entrance Lobby and Restroom Addition
- d. Daily Operations Lab and Shift Supervisor Office
- e. Training Room Renovations including Restrooms

### 3. Phase 3:

- a. Chemist Office
- b. Lab Renovations
- c. Control Room

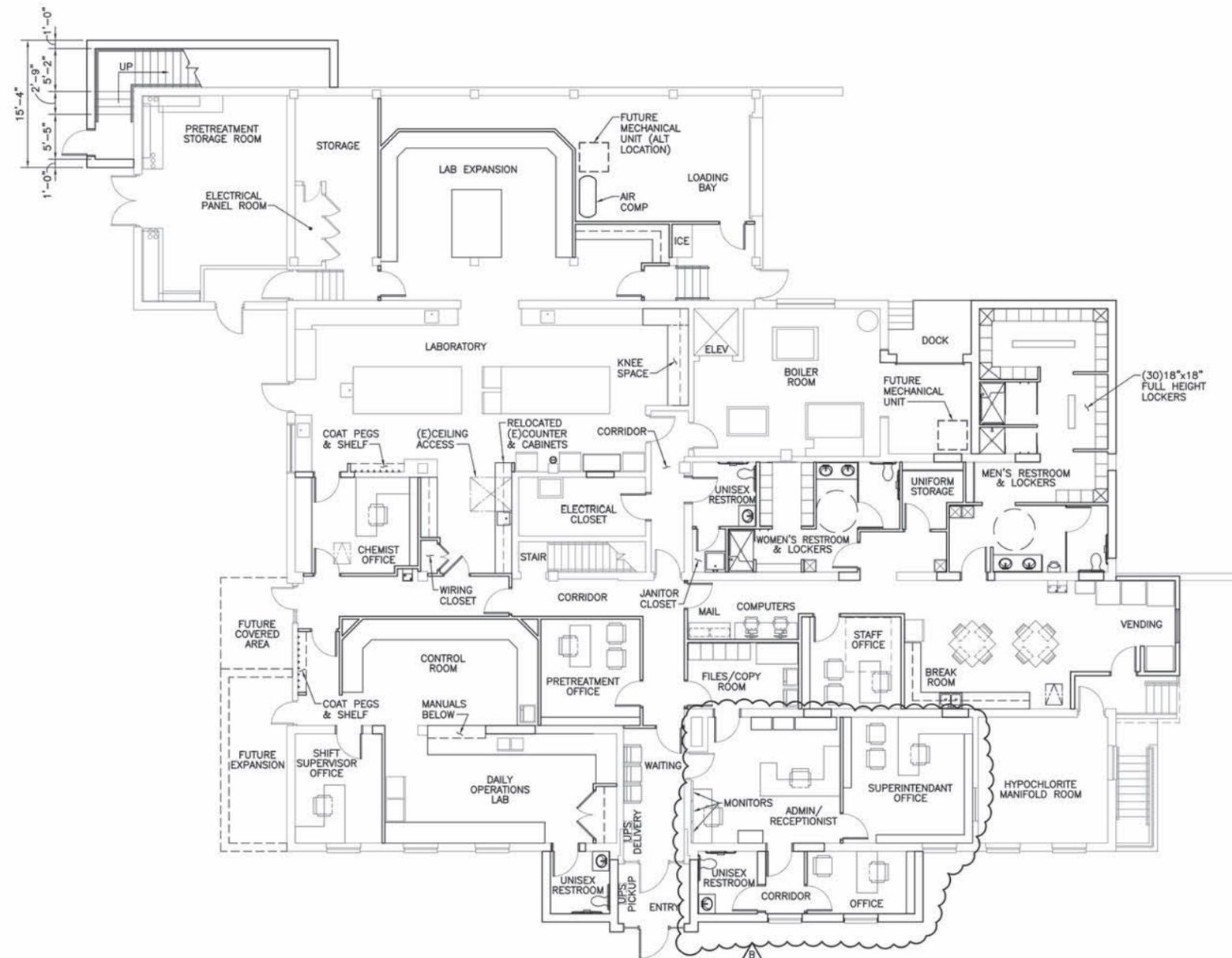
### Notes:

- 1) Control Room is remaining in the same location for the most part and temporary provisions for control of the SCADA system outside of the construction work area may be required.
- 2) Owner will be cleaning up the SCADA system wiring between now and the start of renovations.
- 3) Design is anticipated to start after July 2015 with construction funding planned for July 2016.

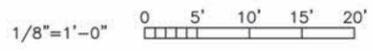


# Appendix A

## Space Layout Drawings



NORTH  
**FIRST FLOOR PLAN**  
 SCALE: 1/8"=1'-0"



NO.	BY	REVISIONS	DATE
B	WLA	OFFICE REVISION	29 JAN 14
A	SDH	BASIS OF DESIGN	31 MAY 11

VIRGINIA A&E, PLLC  
 1115 VISTA PARK DRIVE  
 FOREST, VIRGINIA 24551  
 PHONE: (434) 316-6001

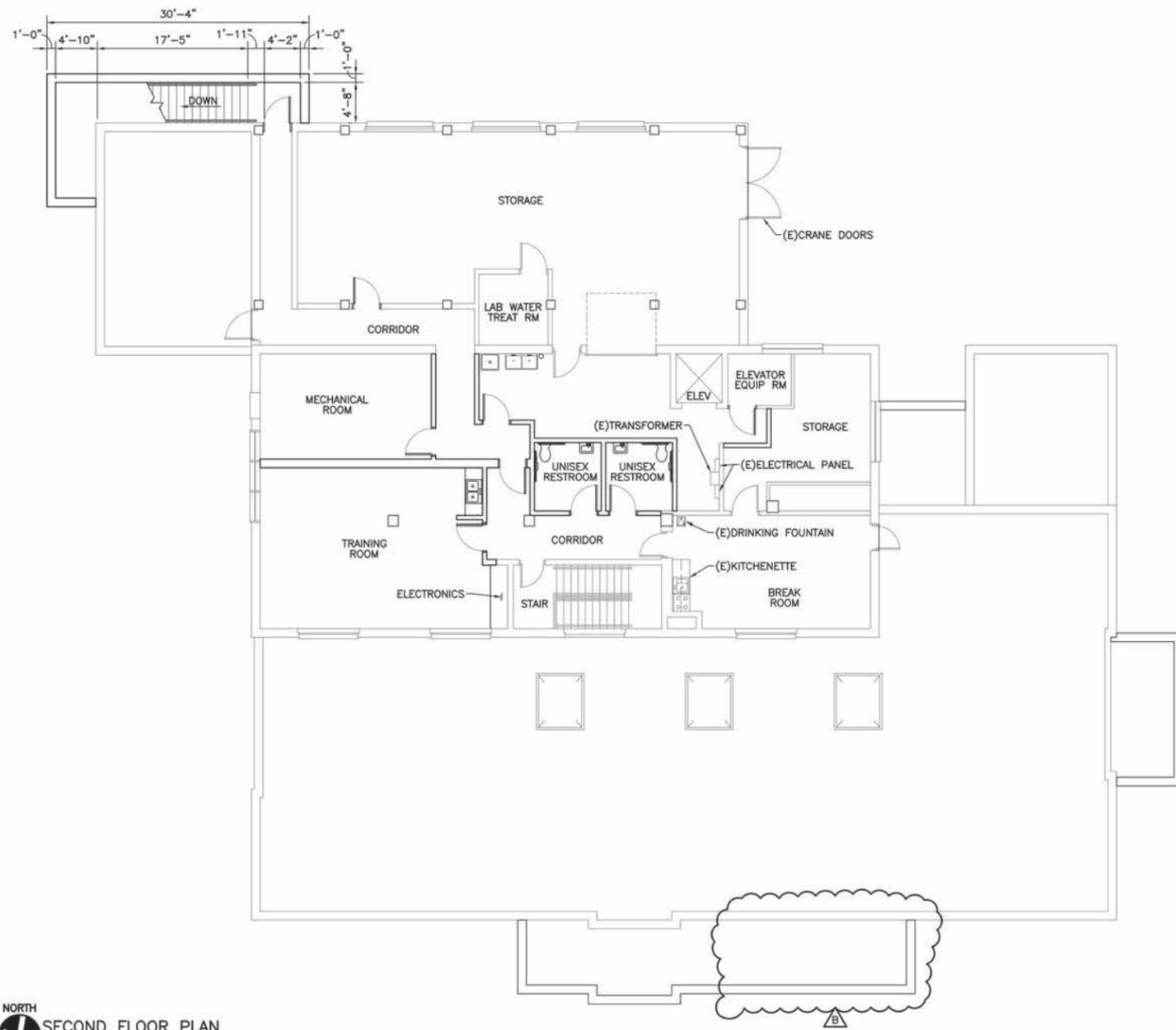
CITY OF LYNCHBURG  
 WASTE WATER TREATMENT PLANT – SPACE STUDY

LYNCHBURG, VIRGINIA

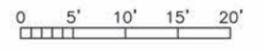
FIRST FLOOR PLAN

PROJECT NO: 07117  
 DATE:

Full Scale Verification  
 0" = 1"  
 Drawing No.: **A1**



NORTH  
 SECOND FLOOR PLAN  
 SCALE: 1/8"=1'-0"

1/8"=1'-0" 

NO.	BY	REVISIONS	DATE
B	WLA	OFFICE REVISION	29 JAN 14
A	SDH	BASIS OF DESIGN	31 MAY 11

VIRGINIA A&E, PLLC  
 1115 VISTA PARK DRIVE  
 FOREST, VIRGINIA 24551  
 PHONE: (434) 316-6001



CITY OF LYNCHBURG  
 WASTE WATER TREATMENT PLANT – SPACE STUDY

LYNCHBURG, VIRGINIA

SECOND FLOOR PLAN

PROJECT NO: 07117  
 DATE:

Full Scale Verification  
  
 Drawing No.:  
**A2**



# Appendix B

## Opinion of Probable Construction Cost



**A. Opinion of Probable Construction Cost**

	<i>Sq. Ft.</i>	<i>Cost per SF</i>	<i>Sub-Total</i>
Locker Room, Lab, Entrance Lobby, Office, and Restroom Additions	1,382	\$300	\$ 414,600
Office, Conference, Break, and Lab Renovation Areas	6,450	\$160	\$ 1,032,000
Exterior Dock Area	150	\$ 50	\$ 7,500
Egress Stair	N/A	N/A	\$ 85,000
Odor Control Restroom	N/A	N/A	\$ 40,000
<b>TOTAL BUDGETARY CONSTRUCTION COST</b>			<b>\$ 1,502,600</b>

**B. Additional Costs**

	<i>Sub-Total</i>
Fixtures, Furnishings, and Equipment Allowance	\$ 100,000
Phasing for Occupied Building (5% of Construction Cost)	\$ 75,130
A/E Fees (10% of Construction Cost for a Phased Renovation Project)	\$ 150,260
Contingency (5% to Above Cost)	\$ 91,400
<b>TOTAL BUDGET</b>	<b>\$ 1,919,390</b>

**Note:** Inflation should be considered in future cost analysis dependent upon any changes in construction start date.