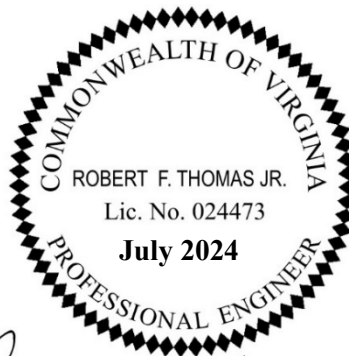

Progressive Engineering Consultants, Inc.

CONTRACT DOCUMENTS FOR THE CONSTRUCTION OF THE CONCRETE FOUNDATIONS AND PIERS FOR THE 115 kV - 13.2/7.62 kV SUBSTATION

CITY OF FRANKLIN
FRANKLIN, VIRGINIA

DOCUMENTS PREPARED BY:



A handwritten signature in black ink, appearing to read "Robert F. Thomas Jr.", positioned below the professional seal.

P.O. Box 690638 Charlotte, North Carolina 28227-7011
Telephone (704) 545 – 7327

progress@pecinc.net

Fax (704) 545 - 2315

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ADVERTISEMENT FOR BIDS

SECTION AB

ADVERTISEMENT FOR BIDS

**City of Franklin
1050 Pretlow Street
Franklin, VA 23851**

Sealed bids for furnishing the labor, material and equipment as specified for the Construction of the Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation shall be received by the **City of Franklin, 1050 Pretlow Street, Franklin, Virginia 23851** at or before **2:00 pm standard time on Thursday, August 15, 2024**, at which time and place the proposals shall be publicly opened and read.

Proposals should be addressed to the City of Franklin, 1050 Pretlow St., Franklin, VA 23851 Attention Zach Wright.

The Contract Documents may be examined at the following locations:

City of Franklin
Progressive Engineering Consultants, Inc.

Franklin, Virginia
Charlotte, North Carolina

Copies of the documents may be obtained by contacting the office of Progressive Engineering Consultants, Inc., P.O. Box 690638, Charlotte, NC, 28227 (physical address 4700-D1 Lebanon Road, Charlotte, NC 28227) or by telephone (704) 545-7327.

A certified check or cashiers' check payable to the City of Franklin, Virginia or a satisfactory Bid Bond executed by a corporate surety licensed under the laws of Virginia to execute such bonds in the amount equal to five (5) percent of the total of the bid shall be submitted with each bid. Bid proposals may not be withdrawn for ninety (90) days after the date of receipt of bids.

The successful bidder shall be required to furnish separately, one hundred percent (100%) Performance and Payment Bonds on the forms included as a part of the Contract Documents.

The bid deposit shall be retained by the City of Franklin, Virginia if the successful bidder fails to execute the contract or fails to provide the required bonds as stated above, within ten (10) days after award of the contract.

The City of Franklin, Virginia reserves the right to reject any or all bid proposals and to accept any proposal which is deemed to be in the best interest of the City. The City of Franklin, Virginia invites and encourages participation in this bidding process by minority business enterprises.

**CITY OF FRANKLIN
FRANKLIN, VIRGINIA**

By _____

Issued: _____

Title

NOTICE AND INSTRUCTIONS TO BIDDERS

SECTION NIB

NOTICE AND INSTRUCTIONS TO BIDDERS

The City of Franklin, Virginia (hereinafter called the "Owner") will receive sealed proposals for furnishing the necessary labor, material, and equipment as specified for the Construction of the Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation. Proposals will be received, opened, and read at the time and location as follows:

Location: City of Franklin
1050 Pretlow Street
Franklin, Virginia 23851
Attn: Zach Wright

Time: 2:00 P.M., local time

Date: Thursday, August 15, 2024

Proposals received after the date and time specified for the opening will be returned unopened.

The scope of work shall include the Construction of the Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation in Franklin, Virginia consisting of foundations for one (1) - 100 kV incoming bypass structure; twelve (12) - 100 kV bus support structures; two (2) - 100 kV motor operated switch structures; two (2) - 100 kV main circuit breaker pads; two (2) - transformer oil containment pits (transformers pads are not included and have already been installed); two (2) - 15 kV bus support structures; two (2) - 15 kV circuit breaker bypass structure; two (2) - 15 kV main bus circuit breaker pads; one (1) - 15 kV class switching station structure; (6) - 15 kV feeder circuit breaker pads; and six (6) - 7.2 kV voltage regulator pads.

Complete Specifications and Construction Drawings may be obtained from the office of the Owner's Engineer, Progressive Engineering Consultants, Inc. 4700-D Lebanon Road, PO Box 690638, Charlotte, North Carolina 28227. Telephone (704) 545-7327 Attention Robert F. Thomas, Jr., P.E. Prospective bidders may examine the Construction Drawings and Specifications at either the office of the Owner or the Engineer.

INSTRUCTIONS

1. Proposals and all supporting documentation shall be submitted in a sealed envelope to:

Mailing Address (USPS)

City of Franklin
207 W. 2nd Avenue
Franklin, VA 23851
Attn: Zach Wright

Physical Address (FedEx, UPS)

City of Franklin
1050 Pretlow Street
Franklin, VA 23851
Attn: Zach Wright

2. The name and address of the Bidder as well as the date and hour of the opening of the Proposals must appear on the envelope in which the Proposal is submitted. Proposals shall also be marked "**Sealed Proposals for Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation in Franklin, Virginia.**"

-
3. The Bidder hereby agrees that the filing of this Proposal shall constitute acceptance of all requirements included in these Notice and Instructions and the Specifications.
 4. Proposals will be required to comply with all applicable statutes, regulations, etc., as set forth by the State of Virginia and those attached to and made a part of these documents.
 5. Each proposal must be accompanied by a certified check on a bank that is a member of the FDIC, payable to the order of the Purchaser, or a Bidder's Bond acceptable to the Purchaser and running in favor of the Purchaser, in an amount equal to (5%) of the maximum bid price. If a proposal is accepted, the Bidder agrees that by filing its' proposal together with such check or Bidder's Bond, in consideration of the Purchaser's receiving and considering such proposal, said proposal shall be firm and binding upon each such Bidder and such check or Bidder's Bond shall be held by the Purchaser for a period not to exceed ninety (90) days from the date set for the opening of the proposals.
 6. The successful Bidder will be required to enter into a contract with the Purchaser and to furnish a one hundred percent (100%) Performance Bond, on the forms included as a part of these documents, in a penal sum equal to the contract price and with Surety satisfactory to the Purchaser's Attorney. Contract and Performance Bonds are not to be completed at the time of this proposal and are included in order to advise the Bidder as to form. The Performance Bond shall be in full force and effect for one (1) year after the date of final acceptance of the equipment by the Purchaser.
 7. Any conditions, requirements, or restrictions included as part of the Proposal as set forth in these Notice and Instructions to Bidders may result in the proposal being deemed non-responsive.
 8. Proposals will be received only from Contractors duly licensed by the State of Virginia to engage in the class of work herein specified. Contractors and subcontractors, in order to perform work in the State of Virginia, are required to hold a State of Virginia Contractor's license of the class required to perform the specified work. The Contractor's license number shall be inserted in the appropriate place on the Proposal form, before Proposal will be considered. Evidence of subcontractor's compliance with the above shall be submitted to the Engineer before starting subcontract work on this Contract.
 9. Prior to receiving the final payment for work completed as a part of the Contract, the successful Bidder shall be required to furnish the Owner with executed copies of the enclosed Waiver and Release of Lien forms. These forms shall be executed by each supplier of labor, material and equipment in conjunction with the completion of the Contract. The successful Bidder shall provide the Owner with the names and addresses of each supplier or subcontractor and a description of the work performed by each as a condition of the Contract.

10. The Owner reserves the right to waive minor irregularities or minor errors in the proposal which appear to have been made through inadvertence, provided such irregularities or errors so waived are corrected on the proposal prior to its acceptance by the Owner. The Owner also reserves the right to reject any and all proposals and to accept any proposal which is determined to be in the best interest of the Owner.
11. Each Bidder's proposal price shall include and shall be deemed to have included the amounts which will be payable by the successful Bidder, or by the Owner on account of taxes imposed by any taxing authority upon the sale, purchase or use of materials, supplies or equipment incorporated therein, except for equipment to be supplied by the Owner. All taxes of the foregoing descriptions shall be payable by the successful Bidder.
12. The Bidder agrees that, if his proposal is accepted, the Bidder will receive from the Owner the List of Owner Furnished Material as shown on the enclosed material list. The successful Bidder shall take possession of and assume full responsibility for the safekeeping and protection of such material.
13. The successful Bidder shall enter all applications for payment in triplicate on the enclosed Application for Payment form. Applications for Payment shall be entered with the Owner's Engineer. The Engineer shall verify, adjust or approve these Applications and certify same for payment by the Owner. No payment will be made to the successful Bidder prior to receiving the Bidder's statement of sales tax paid during the period for which payment is requested.
14. The Successful Bidder shall commence construction of the Project within ten (10) calendar days after the Engineer has given written notice to commence construction and shall prosecute diligently and complete construction to the satisfaction of the Owner and the Engineer. No work shall be performed on days that the City offices are closed for business without prior approval of the Owner and Engineer. The Liquidated Damages Clause of the Construction Contract will be applicable for each calendar day of overrun past the scheduled completion date.
15. The successful Bidder shall reimburse the Owner or provide replacements of like kind for loss or breakage of all equipment, at the Owner's discretion, of equipment which is supplied by the Owner. All excess or scrap materials shall remain the property of the Owner or shall be disposed of as directed by the Owner. It is agreed that the cost of the Owner Furnished Material shall be actual invoice cost to the Owner plus applicable Engineering and Overhead expenses necessary to affect the replacements.
16. Following Contract award, the successful Bidder shall furnish a detailed schedule of values for use in verifying Contract Payments. The schedule shall be itemized by equipment purchase, material purchase and labor costs.

17. The proposal form shall be completed exactly as presented with all prices, terms, and signatures as required. Any proposal which is not properly completed may be deemed non-responsive and may not be considered for contract award.
18. The Bidder's proposal shall include transportation charges for all equipment and materials to the substation site located in Franklin, Virginia.
19. Any controversy or litigation arising out of the Construction Contract shall be resolved and venued in the courts of Franklin County, Virginia.

CITY OF FRANKLIN
FRANKLIN, VIRGINIA
(Purchaser)

PROGRESSIVE ENGINEERING CONSULTANTS, INC.
(Engineer)

Date: July 19, 2024

BIDDERS PROPOSAL

SECTION BP

BID PROPOSAL

1. The Bidder hereby agrees that the filing of this Proposal shall constitute acceptance of all terms and conditions included in the Notice and Instructions to Bidders, Bidder's Proposal, Construction Contract, Performance and Payment Bonds, Construction Specifications and the Construction Drawings, all of which are incorporated herein.
2. The Bidder hereby agrees that he has thoroughly familiarized himself with the site conditions, as well as the scope of the labor described and specified in the documents attached to and made a part of this Proposal.
3. The Contract effected by acceptance of this Proposal shall consist of the Notice and Instructions to Bidders, Bidder's Proposal, Construction Contract, Performance and Payment Bonds, Construction Specifications and the Construction Drawings, all of which are incorporated herein.
4. The Bidder has made a careful examination of the Notice and Instructions to Bidders, Bidder's Proposal, Construction Contract, Performance and Payment Bonds, Construction Specifications and the Construction Drawings and has satisfied himself as to the nature and location of the work, the kind and character of the soil and terrain, the character quality and quantity of the facilities needed preliminary to and during the prosecution of the work, the general and local conditions, and all other matter which can in any way affect the work or the cost thereof under the Contract. The failure or omission of any Bidder to thoroughly examine and familiarize himself with the Contract Documents or to receive or examine any form, instrument or document or to visit the site and acquaint himself with the conditions there existing shall in no way relieve any Bidder from any obligation in respect to his Bid.
5. This Proposal is made pursuant to the provisions of the Notice and Instructions to Bidders, Bidder's Proposal, Construction Contract, Performance and Payment Bonds, Construction Specifications and the Construction Drawings attached hereto, and the Bidder agrees to all terms and conditions thereof.
6. The Bidder hereby warrants that this Proposal is made in good faith and without collusion or connection with any other person or persons bidding for the same work.
7. The Bidder hereby agrees that in the event his Proposal is accepted, he will execute a Contract of the form included herein.
8. The Bidder hereby agrees that in the event his Proposal is accepted, he will furnish Performance and Payment Bonds acceptable to the Owner's Attorney in a penal sum not less than the maximum Contract Price. In the event that the Surety or Sureties on the Performance Bond delivered to the Owner contemporaneously with the execution of the Contract or on any bond or bonds delivered in substitution therefore or in addition thereto shall at any time become unsatisfactory to the Owner, the Bidder agrees to deliver to the Owner additional bond or bonds in such form and with such Surety or Sureties as the Owner may approve.

9. The Bidder hereby agrees to commence construction of the Project within ten (10) calendar days after the Engineer has given the undersigned written notice to commence construction, and further agrees to prosecute diligently and to complete such construction to the satisfaction of the Owner within the time shown in the Bidder's Proposal. Provided, however, that the Bidder will not be required to perform any work on such days when in the judgment of the Engineer weather conditions or the results of same make it impractical to perform any operation of construction. Time lost due to the conditions described herein shall be added to the times for completion set out above. Determination of time to be added will be at the sole discretion of the Owner and the Engineer.
10. The prices shown in the Contractor's Proposal include provisions for the payment of all moneys which will be payable by the Bidder or the Owner in connection with the construction of the Project on account of taxes imposed by any taxing authority upon the sale, purchase or use of materials, supplies or equipment to be incorporated in the Project. The Bidder agrees to pay all such taxes and to furnish to the Owner and all appropriate taxing authorities all required information and reports upon request. Owner furnished material shall not be included as a part of this provision.
11. The Bidder hereby agrees that all temporary work performed for his convenience shall be installed and removed at his own expense. All temporary work shall be installed in a safe and workmanlike manner. Any temporary work which is deemed to be unsafe or unreliable by the Owner or the Engineer shall be repaired, replaced or removed as directed by the Engineer.

**Concrete Foundations and Piers
for the 115 kV - 13.2/7.62 kV Substation**

The undersigned has carefully examined the attached form of Notice and Instructions to Bidders, Bidder's Proposal, Construction Contract, Performance and Payment Bonds, Construction Specifications and the Construction Drawings and hereby declares that he will furnish the material, equipment and services as specified as follows:

Labor, material and equipment for the construction of Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation as specified

Bid Price \$ _____

Unit price for the addition or deletion of one (1) cubic yard of concrete as specified

Bid Price \$ _____

TOTAL \$ _____

Total cubic yards of concrete _____

Bidder

Signature

Address

Print Name

City State Zip

Title

Telephone

Email

Date

I hereby certify that the Bidder holds the following valid Virginia Contractor's license number, and that license is of the required class to perform the work as described.

DATE: _____

BIDDER

Signature

Print Name

Title

Address

City

State

Zip

Email

Completion Time: _____ Calendar Days

Virginia Contractor License Number _____

State of Incorporation _____

Bidder's Telephone Number _____

Bidder's Contact Person _____

Contact Email _____

*To ensure contracts are executed in a timely manner, please provide the following **complete** information for the person or persons **responsible for the execution of these contract documents.***

Street address is required for UPS and/or Fedex deliveries. No PO Box please.

CONTRACTS ARE TO BE SENT TO:

Company Name

Name

Title

Address

Email Address

City State Zip Code

Telephone

**Contract Administrator
(if applicable)**

Email

Telephone

CONTRACT

SECTION C

CONSTRUCTION CONTRACT

This agreement made the _____ day of _____, **2024**, by and between the **CITY OF FRANKLIN, VIRGINIA** (hereinafter called the "Owner") and _____ (hereinafter called the "Contractor"), a corporation organized and existing under the laws of the State of _____.

WITNESSETH, That the Contractor and the Owner for the consideration hereinafter named, agree as follows:

WHEREAS the Owner **desires to have Constructed the Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation in Franklin, Virginia.** in accordance with the Notice and Instructions to Bidders, Bidder's Proposal, Construction Contract, Performance and Payment Bonds, Construction Specifications and the Construction Drawings attached hereto and as described in detail in this Construction Contract, and

WHEREAS the Contractor is willing to undertake the work as described:

NOW THEREFORE, the parties to this agreement have covenanted and agreed to and with as follows:

DEFINITIONS

The Owner, the Contractor, and the Engineer are those mentioned as such in this agreement and are treated as if each were a singular number and masculine gender.

The term "work" of the Contractor includes labor, material and equipment as specified or facilities necessary for proper completion of the contract.

The term "completion" shall mean full performance by the Contractor of the Contractor's obligations under this contract and all amendments and revisions thereof. A certificate of completion, stating the date of completion, signed by the Engineer and approved in writing by the Owner, shall be the sole and conclusive evidence as to the fact of completion and the date thereof.

THE OWNER AND/OR ENGINEER SHALL FURNISH

Drawings, Specifications, and Instructions

Complete Drawings, Specifications, and Instructions covering all phases of the project design shall be furnished to the Contractor by the Engineer. These Drawings together with the Specifications and Instructions from the Engineer will constitute the Contractor's scope of work.

Owner's Representative

The Engineer shall be the Owner's duly appointed representative on this Contract. The Engineer shall be present as necessary, during the progress of the work, will approve lines and grades and will be available for consultation and for approval of final construction. The Engineer shall have full authority to approve or reject work and shall be consulted by the Contractor in case of any uncertainty or question as to details pertaining to Project design.

THE CONTRACTOR SHALL FURNISH

Contractor's Superintendent

A competent and experienced superintendent, together with necessary assistants, shall be kept on the site at all times by the Contractor. This Superintendent shall represent the Contractor and all directions given to him shall be as binding as if given to the Contractor directly. Important directions shall be confirmed in writing when requested by the Contractor.

Labor

All labor required for the accomplishment of the work shall be employed by the Contractor in his own name and shall be his employee. The several classes of labor required shall be entirely competent and skilled in their lines of work. The Contractor shall at all times keep good order among his employees and, at the request of the Owner, shall remove from the job any employee who, in the judgment of the Owner or Engineer, is not competent or is detrimental to the orderly progress of the work or is interfering with the Owner's operations.

Compliance with Labor Laws

The Contractor agrees, as to all of his representatives and employees to be employed upon or in any way connected with the work, he shall comply fully with and be subject to the terms of the Workmen's Compensation Acts of the State before any work shall be undertaken.

Equipment and Tools

The Contractor shall furnish all necessary tools, vehicles and other equipment that may be necessary for the full and complete prosecution of the Contract. All construction equipment shall be modern and of adequate size and capacity to conduct safely and efficiently the work for which it is used.

Permits

Permits necessary for the prosecution of the work will be secured by the Contractor.

Taxes

The Contractor shall include in his quoted price all Federal, State, or other governmental division taxes and contributions for unemployment compensation, and old age or other benefits, effective during the term of this Contract.

Insurance

The Contractor shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the Contractor's execution of the work, whether such execution be by himself or by any Subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable:

Claims under workmen's compensation disability benefit and other similar employee benefit acts.

Claims for damages because of bodily injury, occupational sickness or disease, or death of any person other than his employees.

Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of any offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person, and

Claims for damages resulting in injury to or destruction of tangible property, including loss of use resulting therefrom.

Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the work. These Certificates shall contain provisions such that coverage afforded under the policies will not be canceled unless at least fifteen (15) days prior written notice has been given to the Owner.

The Contractor shall secure and maintain at his own expense, during the Contract period, liability insurance as hereinafter specified:

Contractor's General Public Liability and Property Damage Insurance including vehicle coverage issued to the Contractor and protecting him from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the Contract Documents, whether such operations be by himself or by any Subcontractor under him, or anyone directly or indirectly employed by the Contractor or by a Subcontractor. Insurance shall be written with a limit of liability of not less than \$1,000,000.00 for all damages arising out of bodily injury, including death, at any time resulting there from, sustained by any one person in any one accident, and a limit of liability of not less than \$1,000,000.00 aggregate for any such damages sustained by two or more persons in any one accident.

Insurance shall be written with a limit of liability of not less than \$500,000.00 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than \$500,000.00 aggregate for any such damage sustained by two or more persons in any one accident.

The Contractor shall secure and maintain, at his own expense, during the Contract period, in accordance with the provisions of the laws of the State of Virginia, Workmen's Compensation Insurance, including occupational disease provisions, for all of his employees at the site of the work and in the case Subcontractors, the Contractor shall require such Subcontractors similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. In the event that any class of employees engaged in hazardous work under this contract

at the site is not protected under Workmen's Compensation, the Contractor shall provide, and shall require each Subcontractor to provide, adequate insurance for the protection of his employees not otherwise protected.

General liability shall include coverage of Comprehensive form, Premises-Operations, Explosion and Collapse Hazard, Underground Hazard, Products/Completed Operations, Contractual, Broad Form Property Damage, Independent Contractors, and Personal Injury. An umbrella liability policy shall cover the General Public Liability and Property Damage Insurance with minimum \$1,000,000 limit per occurrence in addition to the limits above.

Performance and Payment Bond

The Contractor shall furnish bonds acceptable to the Owner's Attorney for the full Contract Price guaranteeing the faithful performance of the Contract and the payment of all obligations arising from same.

Manner of Construction

The Contractor shall do no work without detailed drawings and instructions. The work is to be made complete and to the satisfaction of the Owner notwithstanding any minor omissions in the Specifications or Construction Drawings.

The Owner acting through the Engineer shall have the right to direct the Contractor to construct any part or parts of the Project before any other part or parts thereof. The Contractor shall comply with all other reasonable directions of the Owner and Engineer.

The Engineer shall have the right to require the Contractor to increase the number of his employees and to increase or change the amount or kind of tools and equipment if at any time the progress of the work shall be unsatisfactory to the Engineer. Failure of the Engineer to give any such directions shall not relieve the Contractor of his obligations to complete the work within the time and in the manner specified in this Contract.

The manner of construction of the Project, and all materials and equipment used therein, shall be subject to the inspection, tests, and approval of the Engineer and the Contractor shall furnish all information required by the Engineer concerning the nature or source of any materials incorporated or to be incorporated in this Project. The Contractor shall provide all reasonable facilities necessary for such inspection and test. The Contractor shall have an authorized agent accompany the Engineer or his Agent when inspections are made.

The Engineer shall have the authority to suspend the work wholly or in part for such period or periods as the Engineer may deem necessary due to unsuitable weather or such other conditions as are considered unfavorable for the satisfactory prosecution of the work or because of the failure of the Contractor to comply with any of the provisions of the Contract. The Contractor shall not suspend work pursuant to this provision without written authority from the Engineer to do so. The time of completion, hereinabove set forth, shall be increased by the number of days of any such suspension except when such suspension is due to the failure of the Contractor to comply with any of the provisions of this Contract. In the event that work is suspended by the Contractor with the

consent of the Owner, the Contractor, before resuming work, shall give the Engineer at least forty-eight (48) hours' written notice thereof.

Defective Workmanship and Materials

The acceptance of any workmanship, materials, or equipment by the Engineer shall not preclude the subsequent rejection thereof if such workmanship, materials or equipment shall be found to be defective after delivery or installation, and any such workmanship, materials or equipment found defective before final acceptance of the construction shall be repaired or replaced, as directed by the Engineer, by and at the expense of the Contractor. Any defective material or equipment shall be immediately removed from the site by the Contractor at the Contractor's expense. The Contractor shall not be entitled to any additional compensation hereunder. The Contractor shall not be held responsible for defective material furnished by the Owner, provided however that it is determined that the Contractor was unaware of such defects prior to his installing said material.

Notwithstanding any certificate which may have been given by the Engineer, if any workmanship, material or equipment which does not comply with the requirements of the Contract shall be discovered within one (1) year after completion of the project, the Contractor shall repair any such defective workmanship or replace such defective materials or equipment within thirty (30) days after notice in writing of the existence thereof shall have been given by the Owner. In the event of failure by the Contractor to do so, the Owner may repair such defective workmanship or replace such defective materials or equipment, at the Owner's discretion; the Contractor shall pay to the Owner the cost and expense thereof.

PAYMENT AND RELEASE OF LIENS

Contract Price

All work undertaken by the Contractor under this Contract shall be paid for by the Owner on the basis of the total of all lump sum prices for all of the various items of work to be performed by the Contractor. The Contract Price shall include in each case the furnishing of all necessary construction equipment and tools, specified materials, supervision, field and office overhead and expenses, insurance, taxes, specified materials, labor, Workmen's Compensation Insurance and Social Security Tax and Contractor's profit. The entire compensation of the Contractor shall be the amount herein stated, plus any additional amount for extra work, as authorized by the Owner and the Engineer and for which compensation has been mutually agreed upon in writing.

Payment Terms

On execution of the Contract the Contractor shall submit to the Engineer a schedule of values, with descriptions of each value. The schedule of values shall be suitably itemized in order to allow approval of monthly progress payments. Within the first fifteen (15) days of each Accounting Month, the Owner shall make partial payment to the Contractor for construction accomplished during the preceding Accounting Month. The Contractor shall submit to the Engineer his Application for Payment in triplicate on the enclosed form by the fifth of each month in order to receive payment by the fifteenth of same. Application for Payment shall require the approval of both the Owner and the Engineer solely for the purpose of payment. Such approval by the Owner and the Engineer shall not be deemed approval of the workmanship or materials. Ninety percent (90%) of each such estimate approved during the construction of the project shall be paid by the

Owner to the Contractor prior to completion of the Project. Upon completion by the Contractor of the construction of the Project, the Contractor shall certify to the Engineer that the Contract is completed and the Engineer, after verifying such certification and making any necessary corrections therein, shall certify the same to the Owner together with a certificate of the total cost of the construction performed under this Contract. Upon the approval of said certificates by the Owner, the Owner shall make payment to the Contractor of all amounts to which the Contractor shall be entitled there under which have not previously been paid. No payment shall be due while the Contractor is in default in respect to any of the provisions of this Contract and the Owner may withhold from the Contractor the amount of any claim by a third party against either the Contractor or the Owner based upon alleged failure of the Contractor to perform the work hereunder, in accordance with the provisions of this Contract.

Release of Liens

Upon the completion by the Contractor of the construction of the Project, but prior to the payment to the Contractor of any amount in excess of ninety percent (90%) of the total cost of the completed project as certified by the Engineer, or at any other time specified by the Owner, the Contractor shall deliver to the Engineer, in triplicate, release of all liens and of rights to claim any lien, on the attached forms, from all manufacturers, material suppliers, and Subcontractors furnishing services or materials for the Project and an Affidavit from the Contractor on the attached form certifying that the cost of all labor and material used on or for the Project has been paid and that all such releases have been submitted to the Engineer.

Protection to Persons and Property

The Contractor shall at all times take all reasonable precaution for the safety of all employees on the work and of the public, and shall comply with all applicable provisions of Federal, State, and Municipal safety laws and building and construction codes and shall be solely responsible for implementation of same. All machinery and equipment and other physical hazards shall be guarded in accordance with the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America, unless such instructions are incompatible with Federal, State, or Municipal laws or regulations.

The following provisions shall not limit the generality of the above requirements:

- The Contractor shall so conduct the construction of the Project as to cause the least possible obstruction of public highways.
- The Contractor shall provide security personnel as necessary to properly protect all construction work done and materials furnished under this contract.
- The Contractor shall provide and maintain any and all guard lights and other protection for the public as may be required by applicable statutes, ordinances, and regulations or by particular local conditions.

During the Contract period all risks in connection with the construction of the Project and the materials to be used therein shall be borne by the Contractor. The Contractor shall make good and fully repair all injuries and damages to the Project or any portion thereof under the control of the Contractor where the same shall have occurred by reason of the Contractor's negligence. The

Contractor shall hold the Owner harmless from any and all claims for injuries to persons or for damage to property happening by reason of any negligence or faulty construction on the part of the Contractor or any of the Contractor's agents or employees during the control by the Contractor of the Project or any part thereof.

Any and all excess earth, rock, debris, underbrush and other excess material shall be removed by the Contractor from the site as rapidly as practicable as the work progresses.

Upon notice of violation of this provision being delivered to the Contractor by the Engineer or the Owner, the Contractor shall immediately correct such violation. Upon failure of the Contractor to act to remedy such violation the Owner may correct such violation at the Contractor's expense. The Owner may, if he deems it necessary or advisable in the interest of public safety, correct such violation at the Contractor's expense without such prior notice to the Contractor.

REMEDIES

Completion on Contractor's Default

If default shall be made by the Contractor or any Subcontractor in the performance of any of the terms of this Contract, the Owner, without in any manner limiting its legal and equitable remedies in the circumstances, may serve upon the Contractor and the Surety or Sureties upon the Contractor's Bond or Bonds written notice requiring the Contractor to cause such default to be corrected. Unless within ten (10) days after the service of such notice upon the Contractor such default shall be corrected or arrangements for the correction thereof satisfactory to the Owner shall be made, this Contract shall be terminated. In the event of any such termination the Owner shall serve notice thereof upon said Surety or Sureties, which shall have the right to take over and perform the obligations of the Contractor herein contained. If said Surety or Sureties shall not assume the performance of the Contractor's obligations hereunder within twenty (20) days after the date of such notice, the Owner may assume the construction of the Project and prosecute the same to completion by Contractor or otherwise for the account and at the expense of the Contractor, and the Contractor and its Surety or Sureties shall be liable to the Owner for any cost or expense in excess of the contract price required thereby. In such event the Owner may take possession of and utilize, in completing the construction of the Project, any materials, tools, supplies, equipment, appliances, and plant belonging to the Contractor or any of its Subcontractors, which may be situated at the site. The Owner in such contingency may exercise any right, claims or demand which the Contractor may have against third persons in connection with this Contract and for such purpose, the Contractor does hereby assign, transfer, and set over unto the Owner all such rights, claims and demands.

Liquidated Damages

The time of the completion of the construction of the Project is of the essence of this Contract. Should the Contractor neglect, refuse, or fail to complete the construction within the time herein agreed upon, after giving effect to extensions of time, if any, herein provided, then in that event and in view of the difficulty of estimating with exactness damages caused by such delay, the Owner shall have the right to deduct from and retain out of such moneys which may be then due, or which may become due and payable to the Contractor, the sum of Five Hundred Dollars (\$500.00) per day for each and every calendar day that such construction is delayed in its completion beyond the

specified time, as liquidated damages and not as a penalty; if the amount due and to become due from the Owner to the Contractor is insufficient to pay in full any such liquidated damages, the Contractor shall pay to the Owner the amount necessary to effect such payment in full.

Cumulative Remedies

Every right or remedy herein conferred upon or reserved to the Owner shall be cumulative, shall be in addition to every right and remedy now or hereafter existing at law or in equity or by statute, and the pursuit of any right or remedy shall not be construed as an election: Provided, however, that the provisions set forth above shall be the exclusive measure of damages for failure by the Contractor to complete the construction of the Project within the time herein agreed upon.

Litigation Venue

Any controversy or litigation arising out of this Contract shall be resolved by and venued in the courts of Franklin County, Virginia.

MISCELLANEOUS

Purchase of Material

The Contractor shall purchase all necessary materials and supplies outright and not subject to any conditional sales agreement, bailment, or other agreement reserving to the seller any right, title, or interest therein. All Contractor purchased materials and supplies shall become the property of the Owner when erected in place.

Assignment of Guarantees

All guarantees of materials and workmanship running in favor of the Contractor shall be transferred and assigned to the Owner on completion of construction and at such time as the Contractor receives final payment.

Patent Infringement

The Contractor shall save harmless and indemnify the Owner from any and all claims, suits, and proceedings for the infringement of any patent or patents covering any Contractor furnished materials or equipment used in construction of the project.

Permits for Explosives

All permits necessary for the handling or use of explosives in connection with the construction of the Project shall be obtained by and at the expense of the Contractor.

Compliance with Statutes and Regulations

The Contractor shall comply with all applicable statutes, ordinances, rules, and regulations pertaining to the construction of the Project.

IN WITNESS, WHEREOF, the parties hereto have caused this contract to be signed and sealed, all as of the date and year first written:

Executed in three (3) counterparts.

ATTEST:

Signature

Print Name

Title

(Contractor)

Signature

Print Name

Title

**AFFIX
SEAL**

ATTEST:

Signature

Print Name

Title

**CITY OF FRANKLIN
FRANKLIN, VIRGINIA**

(Owner)

Signature

Print Name

Title

**AFFIX
SEAL**

PERFORMANCE AND PAYMENT BONDS

SECTION B

CONTRACTOR'S PERFORMANCE BOND

KNOW ALL MEN BY THEE PRESENTS, THAT, we _____

_____ Hereinafter called the "Principal" and

_____ a corporation incorporated under the laws of the State of _____
hereinafter called the "Surety", are held and firmly bound unto the **CITY OF FRANKLIN,**
VIRGINIA hereinafter called the "Owner", in the full and just sum of _____

_____ **US DOLLARS (\$ _____)**

lawful money of the United States of America, to be paid to the said Owner, its successors, or its assigns, for which payment well and truly to be made and done we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents. Sealed with our seals and dated this _____ day of _____, 2024.

WHEREAS, the above bonded "Principal" has entered into a Contract with the said Owner, bearing the date _____ day of _____, 2024.

A copy of which Contract is incorporated herein by reference and is made a part hereof as it fully contained herein.

For the full and complete execution of work in connection with furnishing the necessary labor, material and equipment as specified for the Construction of the Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation in Franklin, Virginia.

NOW THEREFORE, the conditions of this obligation are such that if the above bonded "Principal", as Contractor, shall in all respects comply with the terms and conditions of the Contract as herein stated and Contractor's obligation thereunder, including the Specifications and Construction Drawings therein referred to and made a part thereof and such alterations as may be made in said Specifications and Construction Drawings as therein provided for, and shall well and truly and in a manner satisfactory to the Owner complete the work contracted for within the time stipulated in the Contract, and shall save harmless the Owner from any expense incurred through the failure of said Contractor to complete the work as specified, and from any damage growing out

of the carelessness of said Contractor or Contractor's servant, and also shall save and keep harmless the said Owner against and from all losses to it from any cause whatsoever including patent, trademark and copyright infringements in the manner of prosecution of said Contract, then this obligation shall be void; otherwise to be and remain in full force and virtue.

Provided however, that no suit, action or proceeding by reason of any default whatsoever shall be brought on this Bond after twenty-four (24) months from the day on which the final payment under the Contract falls due.

And provided further the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, and or alterations or addition to the terms of contract or to the work to be performed thereunder of the specifications accompanying the same shall in any such way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, and/or alteration or addition to the terms of the Contract or to the work or to the specifications.

The obligation shall remain in full force and effect until the performance of all covenants, terms and conditions herein stipulated, and after such performance it shall become null and void.

IN TESTIMONY WHEREOF witness the hands and seals of the parties hereto on this
_____ day of _____, 2024.

Executed in three (3) counterparts.

ATTEST:

_____	_____
Signature	(Contractor)
_____	_____
Print Name	Signature
_____	_____
Title	Print Name
_____	_____
	Title

**AFFIX
SEAL**

_____	_____
By	(Surety Company)
_____	_____
(Witness as to Surety)	By

Countersigned:

_____	_____
	Print Name
_____	_____
(Licensed Resident Agent)	Title

**AFFIX
SEAL**

INSTRUCTIONS

Bonds must be executed by a Surety Company authorized to conduct business in the State of incorporation of the Owner, acknowledged before a Notary Public, and accompanied by Power of Attorney or other authority satisfactory to the Owner.

CONTRACTOR'S PAYMENT BOND

KNOW ALL MEN BY THEE PRESENTS, THAT, we _____

_____ Hereinafter called the "Principal" and

_____ a corporation incorporated under the laws of the **State of** _____

hereinafter called the "Surety," are held and firmly bound unto the **CITY OF FRANKLIN, VIRGINIA** hereinafter called the "Owner," in the full and just sum of _____

_____ lawful money of the United States of America, to be paid to the said Owner, its successors, or its assigns, for which payment well and truly to be made and done we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents. Sealed with our seals and dated this _____ **day of** _____, **2024.**

WHEREAS, the above bonded "Principal" has entered into a Contract with the said Owner, bearing the date _____ **day of** _____, **2024.**

A copy of which Contract is incorporated herein by reference and is made a part hereof as it fully contained herein:

For the full and complete payment for all labor, material and equipment as specified used in the execution of the work in connection with furnishing the necessary labor, material and equipment for the **Construction of the Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation.**

NOW THEREFORE, if the above bonded "Principal" as Contractor, shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, then this obligation shall be void; otherwise, to remain in full force and virtue.

Provided however, that no suit, action or proceeding by reason of any default whatsoever shall be brought on this Bond after twenty-four (24) months from the day on which the final payment under the Contract falls due.

And provided further the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, and/or alteration or additions to the terms of the Contract or to the work to be performed thereunder or to the specifications accompanying the same shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, and/or alteration or addition to the terms of the Contract or to the work or to the specifications.

This obligation shall remain in full force and effect until the performance of all covenants, terms, and conditions herein stipulated, and after such performance it shall become null and void.

IN TESTIMONY WHEREOF witness the hands and seals of the parties hereto on this _____ day of _____, 2024.

Executed in three counterparts.

ATTEST:

_____	_____
Signature	(Contractor)
_____	_____
Print Name	Signature
_____	_____
Title	Print Name
_____	_____
	Title

**AFFIX
SEAL**

By _____	_____
(Witness as to Surety)	(Surety Company)

	Signature

Countersigned:

_____	_____
(Licensed Resident Agent)	Print Name

	Title

**AFFIX
SEAL**

INSTRUCTIONS

Bonds must be executed by a Surety Company authorized to conduct business in the State of incorporation of the Owner, acknowledged before a Notary Public, and accompanied by Power of Attorney or other authority satisfactory to the Owner.

APPLICATION FOR PAYMENT

SECTION AP

APPLICATION FOR PAYMENT

Project: City of Franklin, Virginia App. No. _____
Concrete Foundations and Piers for Date: _____
115 kV - 13.27/7.62 kV Substation % Complete: _____

Engineer: Progressive Engineering Consultants, Inc., Charlotte, North Carolina

Contractor: _____

Summary	Work Completed Last Application	\$ _____
	Work Completed Since Last Application	\$ _____
	Total Work Completed to Date	\$ _____
	Less Retainage – 10%	\$ _____
	Subtotal	\$ _____
	Less Previous Payments	\$ _____
	Current Payment Due	\$ _____

SIGNATURES

Contractor: _____

By: _____
Name Title Date

Verification:

In accordance with the contract and to the best of our knowledge, information and belief, the contractor has completed the work stated above and is entitled to full payment in the amount shown.

Engineer: Progressive Engineering Consultants, Inc., Charlotte, North Carolina

BY: _____
Name Title Date

APPROVAL: *This application is hereby approved for payment:*

Owner: City of Franklin, Virginia

By: _____
Name Title Date

**AFFIDAVIT OF CONTRACTOR
AND
WAIVER AND RELEASE FORMS

SECTION WR**

AFFIDAVIT OF CONTRACTOR

The undersigned hereby affirms that the following Subcontractors and/or Vendors constitute all suppliers of labor, material and equipment in conjunction with the completion of the Contract for the **Construction of the Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation for the City of Franklin, Virginia;**

<u>NAME</u>	<u>SERVICE PROVIDED</u>	<u>VALUE</u>
_____	_____	\$ _____
_____	_____	\$ _____
_____	_____	\$ _____
_____	_____	\$ _____

And that payment has been made by the Contractor for all labor, material and equipment for which a Lien could be filed;

And that all payrolls, material, equipment bills, and other indebtedness connected with the prosecution of the Contract for which the Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied;

And that the Contractor hereby Waives and Releases any and all rights to claim any Lien against the Owner arising out of the completion of the Contract.

ATTEST:

By

Print Name

Title

(Contractor)

By

Print Name

Title

**AFFIX
SEAL**

WAIVER AND RELEASE FORM

The undersigned hereby declares that _____
has furnished _____

to _____
in conjunction with the prosecution of the Contract for the **Construction of the Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation for the City of Franklin, Virginia;**

And that the total value of the service provided is \$ _____;

And that any and all costs associated with the providing of the service has been paid in full or otherwise satisfied;

And that the Vendor Hereby Waives and Releases any and all rights to claim any Lien against the City of Franklin, Virginia arising out of the furnishing of said services.

Signed this _____ day of _____, 2024.

ATTEST:

By

Print Name

Title

(Vendor)

By

Print Name

Title

**AFFIX
SEAL**

SPECIFICATIONS

SECTION S

**CONSTRUCTION SPECIFICATIONS
OF THE CONCRETE FOUNDATIONS & PIERS
FOR THE
115 kV - 13.2/7.62 kV SUBSTATION**

General

These Specifications cover the Construction of the Concrete Foundations and Piers for the 115 kV - 13.2/7.62 kV Substation for the City of Franklin, Virginia consisting of foundations for one (1) - 100 kV incoming bypass structure; twelve (12) - 100 kV bus support structures; two (2) - 100 kV motor operated switch structures; two (2) - 100 kV main circuit breaker pads; two (2) - transformer oil containment pits (transformers pads are not included); two (2) - 15 kV bus support structures; two (2) - 15 kV circuit breaker bypass structure; two (2) - 15 kV main bus circuit breaker pads; one (1) - 15 kV class switching station structure; (6) - 15 kV feeder circuit breaker pads; and six (6) - 7.2 kV voltage regulator pads.

Layout

The Engineer shall assist the Contractor with the initial layout of the substation, foundations and equipment pads, etc. The Contractor shall provide all necessary instruments and materials.

Structure

All column support piers with anchor bolts shall be installed as shown on the Construction Drawings. Equipment pads shall also be installed as indicated on the Construction Drawings.

Contractor shall be responsible for coordinating with Engineer during the complete construction of the substation foundations. Contractor shall provide suitable means for storing all materials and equipment.

EARTHWORK

General

Earthwork shall include the loosening and removing, transporting, storage, backfilling, and all handling of material of either natural soils, deposited soils, rock or boulder for the construction and completion of all work under this Contract.

Definitions

- "Earth" includes all materials such as sand, gravel, clay, loam, muck, soft or disintegrated rock, not requiring blasting, barring or wedging from their original beds, and specifically excludes all ledge or bed rock, and individual boulders or masonry larger than one half cubic yard in volume.
- "Subgrade" is earth material on which structures or other materials are to be placed.
- "Backfill" includes selected materials for the backfilling or refilling of all excavations and trenches up to the original surface of the ground or to other grades as may be shown or directed.

-
- "Spoil" includes surplus excavated materials not required or suitable for backfills or embankments.
 - "Embankments" include fills constructed of selected materials above the original surface of the ground.
 - "Rock" includes all pieces of ledge or bed rock, boulders, or masonry larger than one half cubic yard in volume requiring blasting, barring, or wedging for removal from their original beds.
 - The term "Excavation" where used, shall be understood to cover the following described work:
 - Grubbing, removing, storing, and re-handling of all materials of every name and nature necessary to be removed for all purpose's incidental to construction and completion of all the work under Contract;
 - All sheeting, sheet piling, bracing and shoring, and the placing, driving, cutting off and removing of the same;
 - The refilling of trenches and pits and the furnishing and placing of material over trenches and pits to the line of filling indicated on the Construction Drawings or directed;
 - The compacting of all materials used in filling or refilling as may be required;
 - The removing and disposing of all surplus materials from the excavations in the manner specified;
 - The maintenance, accommodation and protection of travel;
 - The supporting and protecting of all building, overhead wires, pole, trees, vines, shrubbery, pipes, sewers, conduits, or other structures or property in the vicinity of the work, whether over or underground or which appear within the excavations, and the restoration of the same in case of settlement or other injury;
 - All temporary bridging and fencing and the removing of same, the removing and clearing away of all construction rubbish, refuse, unused materials, plants, and tools from the site of the work;
 - The dressing, sodding or seeding of all unpaved and un-graveled areas may be necessary to leave these surfaces in the same condition as prior to the commencement of the work.

Excavation for Structures

Excavations shall be only of sufficient size to allow suitable room for the proper construction of structures and appurtenances, including allowances for sheeting, dewatering, and other similar work necessary for completion of the Contract.

Excavations for structures shall be made only to the lines and grades shown on the Construction Drawings or as otherwise directed.

Undercutting of excavation faces for extended footings shall not be permitted.

Rock Excavation

Where rock is encountered, the excavation shall be conducted in accordance with the applicable provisions hereof. For concrete structures, rock shall be excavated only to the bottom of the structures.

The Contractor shall be responsible for the removal and disposition of solid rock when encountered in all excavations. Solid rock shall be defined as solid, naturally - occurring mineral formations that cannot be effectively removed by conventional trenchers, backhoes, or pressure augers online trucks. Loose rock or limestone in intermittent layers that result in difficult digging shall not be defined as solid rock excavations. Solid rock shall require the use of air hammers, rock saw, blasting or other specialized equipment. Blasting shall be approved by the Owner in accordance with local ordinances.

Rock excavation shall be a labor cost, including disposition to the designated landfill, on a per-cubic-yard basis. Quantities will be agreed upon jointly by the Contractor and the Engineer as the excavations occur. Over excavation to remove rock will not be counted in the quantity of rock excavations.

Handling of explosives and all blasting work shall be conducted in accordance with the rules and regulations effective in the area and the related advisory provisions published by the Associated General Contractors of America and the Institute of Makers of Explosives.

Charges shall be of such size that the excavation will not be unduly large and shall be so arranged and timed that adjacent rock, upon or against which structures are to be built, will not be shattered. Blasting will not be permitted adjacent to any existing structure.

Injury or damage to the work or to existing structures shall be repaired or rebuilt by the Contractor at his own expense. Should the Engineer determine that further blasting may damage adjacent rock or structures, blasting shall be discontinued, and the rock removed by drilling, barring, wedging, or other methods.

Excavation Below Subgrade

In the event the materials encountered at the limiting sub grades are not suitable for proper support of structures, the Contractor shall excavate from the limiting sub grades shown or specified, to such new lines and grades, as will be ordered by the Engineer. Excavation below subgrade shall be only upon express orders of the Engineer. Unless otherwise defined, the limiting subgrade for structures shall be the underside of structures at the footing lines.

Unauthorized Excavation

No extra compensation will be paid by the Contractor for any materials ordered for refilling the void areas left by a slide, fall, cave-in, or any other unauthorized excavation.

Removal of Water

The Contractor shall at all times during construction, provide and maintain satisfactory means and equipment for the removal of all water entering the excavations, and shall remove all such water as it may collect, in such manner as shall not interfere with the prosecution of the work. The expense of such labor, material and equipment shall be borne by the Contractor. Water shall not be allowed to contact any masonry, concrete or mortar, until at least 24 hours after placement.

Storage of Material

All excavated materials shall be stored in locations such that will not hinder the work, and such that access may be had at all times to all parts of the excavation. All materials shall be stored in such a manner so as to cause no inconvenience to public travel or to adjoining property owners.

Backfilling

Backfilling around structures shall not commence until approved by the Engineer. Backfill around structures may be placed by machine, provided the work shall be accomplished in such a manner as to prevent damage to the structures. Backfill around structures shall be deposited and compacted in horizontal lifts no more than one foot each and shall be compacted to prevent settlement.

All excavations shall be backfilled to the original surface. Backfilling shall be accomplished with suitable excavated materials, approved by the Engineer, which can be satisfactorily compacted during backfilling of the excavation. In the event the excavated materials are not suitable, backfill obtained from approved borrow pits shall be used for backfilling. Each lift of material shall be thoroughly tamped or rolled to the required degree of compaction by sheepfoot or pneumatic rollers, mechanical tampers, or vibrators, unless a satisfactory compaction is obtained by the travel of trucks and earth moving machines. Additional lifts shall not be placed until the current lift has been thoroughly compacted.

The Contractor shall, at his own expense, add water as required during rolling and tamping to assure complete consolidation of the fill material. Should the material contain excess water which will not allow satisfactory compaction, it shall be allowed to dry as necessary before compaction.

Paved Areas

When it is necessary to haul material over pavements, the Contractor shall provide suitably tight material compartments in order to prevent deposits on pavements. In all cases where materials are deposited from the vehicles, the Contractor shall immediately clean up the same as often as directed.

Spoil

In general, all spoil material shall be removed from the site. The Contractor shall bear all removal expense to a location approved by the Owner.

Grading and Graveling

Subgrading has been completed at the installation site. The Contractor shall excavate to the dimensions as shown on the construction drawings for footing and piers, and equipment pads. Upon completion of the construction of all foundations and pads, the site shall be brought back to

its original condition and to the original subgrade to allow for drainage of the entire construction area. Engineer shall inspect grading final payment to the contractor.

CONCRETE

General

American Concrete Institute "Standard Specification for Structural Concrete for Buildings", ACI 301-88, is hereby incorporated as a part of these Specifications to the same extent as if contained herein, except where ACI 301-88 conflicts with the particular requirements of these Specifications.

All concrete shall have a minimum compressive strength at 28 days of 4000 p.s.i. The maximum amount of concrete that may be placed in one day is 50 cubic yards without prior authorization from the Engineer.

Water shall be clear, and free from excessive amounts of oil, acid, alkali, organic matter or other deleterious substances. Approval of the Engineer shall be required for any water source other than a public water supply which is intended for domestic consumption. Slump shall be minimum of 4" and maximum of 6".

Air content, temperature, and overall mixture quality shall be as recommended by the Contractor's testing agency. Tests shall be in accordance with ASTM C-173 by roller meter method.

The Contract price shall include the cost of forming and placing of concrete for the piers and equipment pads as specified. The Bidder shall also include a price per cubic yard for amounts greater than or less than the amount specified to be included. The unit price quoted shall include the cost of concrete, excavation, forming, and pouring. The Contractor shall furnish copies of all concrete delivery tickets to the Engineer.

Supplier

Already mixed concrete shall be supplied from an approved supplier whose plant has been inspected and found to comply with the requirements of the National Ready-Mix Concrete Association.

The Contractor shall submit the name of the concrete supplier, proposed mix specifications, and testing agency to the Engineer for approval prior to the placement of any concrete. All concrete work which does not conform to the requirements of the contract documents, including strength, tolerances and finishing, must be corrected as directed by the Engineer at the Contractor's expense. The Contractor is responsible for the cost of repair of any other work affected by or resulting from corrections to the concrete work.

Forms

Forms shall be properly designed and braced to ensure position and shape prior to, during and after placing. Forms shall conform to the shape, lines and dimensions of the members as called for on the Construction Drawings and shall be substantially free from surface defects. Forms shall extend downward to existing grade to eliminate any concrete from spilling out under the forms. The Contractor will be responsible for cleaning up any excess concrete that spills out from the forms.

Large quantities of excess concrete may result in the Engineer subtracting the excess amount of concrete from the delivery tickets.

Forms for exposed concrete shall provide a smooth surface free from defects and marks.

Vertical and horizontal corners of exposed concrete shall be chamfered a minimum of 3/4".

Inspection

Forms shall be inspected by the Engineer prior to concreting. Notice shall be given forty-eight (48) hours in advance of pouring in order that the inspection may be scheduled. Unless specific permission is given, no concrete may be poured in the absence of the Engineer.

Reinforcing Steel

Reinforcing bars shall meet the requirements of ASTM A615 and shall be grade 60 unless otherwise noted. Reinforcing bars shall be furnished, installed, and placed as shown on the Construction drawings and shall have a minimum yield strength of 60,000 psi.

Protection of Bars

All bars shall be stored such as not to be in contact with the ground and shall, at all times, be protected from moisture and be kept free from dirt, oil, or other damaging coatings. If concreting is delayed after the reinforcing is placed into position, bars shall be protected by covering with canvas or other satisfactory covering, or as otherwise directed by the Engineer. Bars or fabric bearing scaly rust shall be thoroughly cleaned.

Fabrication and Placement

Metal reinforcements shall be properly fabricated, supported, and securely held in place such that its' position will be maintained after the concrete has been placed and compacted. Bars shall be cold bent in accordance with ACI 318 to the shapes shown or required.

Reinforcing steel shall be adequately secured in position by concrete or metal chairs or spacers. Reinforcing steel shall be placed to clear all sides, top, and bottom of concrete by a minimum of six inches unless specified otherwise.

Quality Control Testing of Concrete During Construction

- a. The required testing services shall be performed by a testing agency selected by the Contractor and approved by the Engineer. All services performed by the testing agency shall be paid for by the Contractor at no additional cost to the Owner. It shall be the responsibility of the Contractor to coordinate with the testing agency when ordering concrete. Concrete shall not be allowed to remain in trucks for extended periods of time or as recommended by the testing agency.
- b. Sampling and testing for quality control during placement of concrete shall include the following:
 - Sampling fresh concrete: ASTM C 172, except modified for slump to comply with ASTM C 94.

-
- Slump: ASTM C 143; one test at point of discharge for each day's pour of each type of concrete; additional tests when concrete consistency seems to have changed.
 - Air Content: ASTM C 173, volumetric method for lightweight or normal weight concrete; ASTM C 231 pressure method for normal weight concrete; one for each day's pour of each type of air-entrained concrete.
 - Concrete Temperature: Test each time a set of compression test specimen is made.
 - Compression Test Specimen: ASTM C 31; one set of 4 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory cured test specimens except when field-cure test specimens are required.
 - Compressive Strength Tests: ASTM C 39; one set for each day's pour plus additional sets for each 25-cu. yd. increment over 25 cu. yd. of each concrete class placed in any one day; one specimen tested at 7 days, two specimens tested at 28 days and one specimen retained in reserve for later testing, if required.
- c. Contractor's testing agency shall be responsible for making the necessary field corrections to allow concrete to meet the specified requirements. The Engineer shall have the right to reject any concrete which fails to meet the aggregate mix requirements, slump or any other requirement.
- d. Test results shall be reported in writing to Engineer and Contractor within 24 hours after tests. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials; compressive breaking strength and type of break for both 7-day tests and 28-day tests.
- e. **Additional Tests**
The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics, have not been attained in the structure, as directed by Engineer. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed. Contractor shall pay for such tests when unacceptable concrete is verified.

Equipment Pads

Contractor shall install concrete pads as shown on the Construction Drawings which are included as a part of these Specifications.

APPENDIX

Appendix

1. Site Plan and General Equipment Arrangement
2. Anchor Bolt Plan
3. Anchor Bolt Detail
4. Structural Foundations
5. Equipment Pad Foundations
6. Transformer Spill Containment Foundation

GENERAL NOTES:

1. ALL DOCUMENTS INCLUDING CALCULATIONS, COMPUTER FILES, DRAWINGS AND SKETCHES PREPARED BY PROGRESSIVE ENGINEERING CONSULTANTS, INC PURSUANT TO THIS PROJECT ARE INSTRUMENTS OF PROFESSIONAL SERVICE INTENDED FOR THE ONE-TIME USE IN CONNECTION WITH THIS PROJECT. THEY ARE AND SHALL REMAIN THE PROPERTY OF PROGRESSIVE ENGINEERING CONSULTANTS, INC. ANY REUSE OR ADAPTATION IS PROHIBITED.
2. COORDINATION: STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION AND COORDINATION WITH ALL OTHER CONTRACT DOCUMENTS.
3. EXISTING CONDITIONS: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE JOB SITE. ANY DISCREPANCIES OR VARIATIONS FROM THE CONDITIONS SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING.
4. SHOP DRAWINGS: THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH SHOP DRAWINGS OF THE CONCRETE MIX DESIGN AND THE REINFORCING STEEL FOR REVIEW PRIOR TO FABRICATION. CONTRACTOR TO APPROVE SHOP DRAWINGS PRIOR TO SUBMISSION TO THE ENGINEER.

FOUNDATIONS:

1. FOUNDATION DESIGN IS BASED ON AN ALLOWABLE NET BEARING PRESSURE OF 2500 PSF AS RECOMMENDED IN THE ENGINEERING REPORT"
2. ALL FOUNDATIONS PITS SHALL BE OVEREXCAVATED BY 2' AND FILLED WITH #57 WASHED STONE

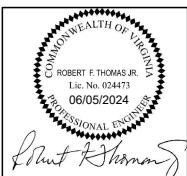
CONCRETE:

1. CONCRETE PLACEMENT AND QUALITY: PER RECOMMENDATIONS IN ACI SP-15.
2. DEBRIS. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONCRETE.
3. INSERTS: SECURELY POSITION ALL ITEMS TO BE CAST IN CONCRETE.
4. PIPES: DO NOT EMBED PIPES IN CONCRETE.
5. REBAR GRADES: REINFORCING STEEL TO BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60.

CONCRETE USE	STRENGTH @ 28 DAYS	SLUMP	AIR	AGGREGATE SIZE	AGGREGATE TYPE
FOUNDATIONS	4000	3"-4"	4% - 6%		NORMAL WT.

DO NOT ADD WATER TO CONCRETE MIX AT SITE UNLESS APPROVED BY

7. CONCRETE: NORMAL WEIGHT CONCRETE WITH TYPE 1 CEMENT
8. AGGREGATE: NORMAL WEIGHT AGGREGATE CONFORMING TO ASTM C33
9. CONCRETE AGE: NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT
10. THOROUGHLY VIBRATED CONCRETE TO ASSURE VOIDS ARE FILLED AND CONCRETE IS CONSOLIDATED.



DRAWING NO.
140-08-001

SHEET NO.
1 OF 2

SCALE: N.T.S.
DATE ISSUED: 06/05/24
DESIGNED BY: RFT
DRAWN BY: RFT
CHECKED BY: RFT
APPROVED BY: RFT



OFFICE
(704) 545-7327

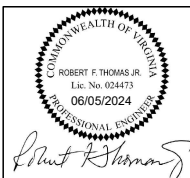
PROGRESSIVE ENGINEERING
CONSULTANTS, INC.
Complete Power Engineering Services
P.O. BOX 690638
CHARLOTTE, N.C. 28227


FAX
(704) 545-2315

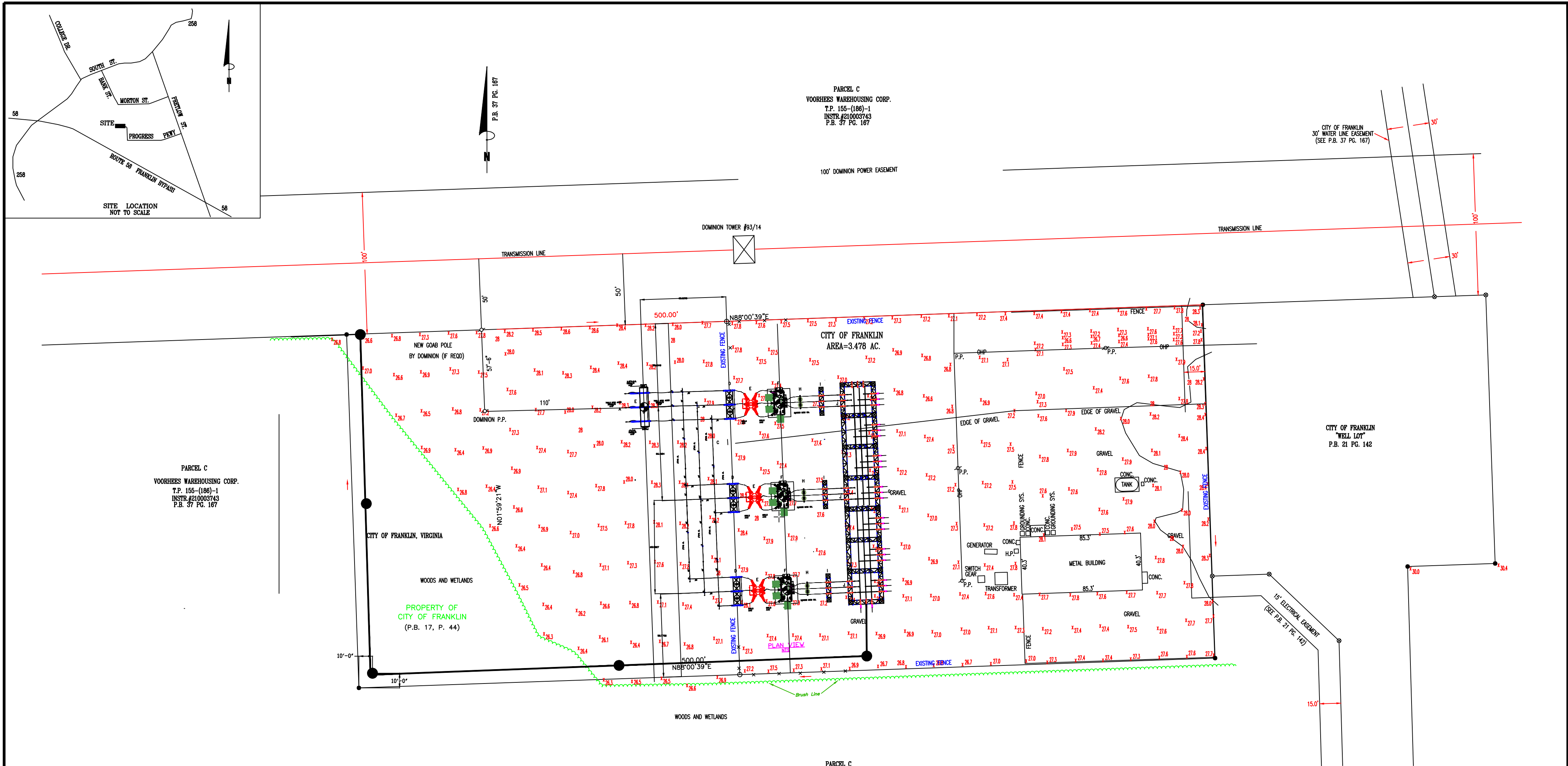
CITY OF FRANKLIN
FRANKLIN, VIRGINIA

SUBSTATION PIER DETAIL
NOTES AND INSTRUCTIONS

11. THE CONTRACTOR SHALL AT ALL TIMES FULLY COMPLY WITH ALL OSHA STANDARDS AS WELL AS THE OWNER'S SAFETY STANDARDS, AS A MINIMUM, ESPECIALLY WITH REGARD TO SHORING OF ALL EXCAVATIONS. THE ENGINEER OR OWNER WILL IMMEDIATELY HALT CONSTRUCTION ACTIVITIES IF THE CONTRACTOR DOES NOT COMPLY WITH THESE STANDARDS. FAILURE TO IMMEDIATELY COMPLY AT ALL TIMES WITH THESE STANDARDS WILL RESULT IN DISMISSAL FROM THE PROJECT.
12. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPIES OF OSHA STANDARDS AS WELL AS THE OWNER'S SAFETY STANDARDS. COPIES SHALL BE AVAILABLE ON SITE AT ALL TIMES DURING CONSTRUCTION.
13. THE OIL CONTAINMENT SYSTEM HAS BEEN DESIGNED TO CONTAIN THE ENTIRE VOLUME OF OIL IN THE SINGLE LARGEST CONTAINER, PLUS RAINFALL BASED ON LOCAL WEATHER RECORDS. HOWEVER, 100% OIL CONTAINMENT IS NOT GUARANTEED IN THE EVENT OF AN EXPLOSIVE TYPE FAILURE WHERE OIL IS SPRAYED BEYOND THE PERIMETER OF THE CONTAINMENT BASIN.
14. ALL STRUCTURAL CONCRETE SHALL BE SUPPORTED ON FIRM UNDISTURBED EARTH OR COMPACTED FILL.
15. REINFORCING STEEL SHALL BE GRADE 60 ASTM A-615 OR A-617.
16. TIE RODS SHALL BE LAPPED A MINIMUM OF 12" OR AS SHOWN ON THE DRAWINGS.
16. CONCRETE SLUMP SHALL BE BETWEEN THREE AND FOUR INCHES (3"-4"). THE CONTRACTOR SHALL MAKE OR HAVE MADE A MINIMUM OF ONE (1) SLUMP TEST IN ACCORDANCE WITH ASTM C 143 FOR EACH TRUCKLOAD OF CONCRETE DELIVERED.
17. CONCRETE COVER OVER REINFORCING STEEL SHALL BE THREE INCHES (3") MINIMUM.
18. ALL CONCRETE TO BE THOROUGHLY VIBRATED DURING PLACEMENT INTO FORMS TO ENSURE ALL VOIDS ARE FILLED.
20. ALL WALLS SHALL BE CHAMFERED ONE INCH (1"), 45 DEGREES, ALL AROUND TOP EDGE OR AS SHOWN.
21. AFTER INSTALLATION, THE OIL CONTAINMENT SYSTEM SHOULD BE CHECKED REGULARLY BY THE OWNER TO ENSURE ALL EQUIPMENT IS IN PROPER WORKING ORDER.
22. ALL LINES SHALL HAVE MINIMUM SLOPES AS INDICATED BY INVERT ELEVATIONS SHOWN ON DRAWING
23. OIL CONTAINMENT SYSTEM DESIGN SHOWN IS IN ACCORDANCE WITH RECOMMENDATIONS OF EPA 40 CFR 112.
24. SLOPE PITS AWAY FROM TRANSFORMER FOUNDATIONS. ESTABLISH POSITIVE DRAIN TO OUTLETS. NOTE ELEVATIONS SHOWN IN PITS. SEE.
25. ALL CONTROL/ELECTRICAL CONDUITS ARE TO BE SCHEDULE 40 PVC. SIZE AS SHOWN ON DRAWING.
26. THE CONTRACTOR SHALL PREPARE, OR HAVE PREPARED, IN ACCORDANCE WITH ASTM C-31, FOUR (4) TEST CYLINDERS FROM EACH TRUCKLOAD OF CONCRETE DELIVERED TO THE SITE. WITHIN 20-24 HOURS AFTER BEING PREPARED, THE CYLINDERS SHALL BE DELIVERED TO A QUALIFIED TESTING LABORATORY AND TESTED IN ACCORDANCE WITH THE CONCRETE SPECIFICATIONS AND ASTM C-39. TEST RESULTS ARE TO BE PROVIDED TO THE ENGINEER FOR EVALUATION AND DIRECTION OF CORRECTIVE ACTION IF NEEDED.



DRAWING NO. 140-08-001	SCALE: N.T.S.	 <div>PROGRESSIVE ENGINEERING CONSULTANTS, INC. Complete Power Engineering Services P.O. BOX 690638 CHARLOTTE, N.C. 28227</div> <div>OFFICE (704) 545-7327</div> <div>FAX (704) 545-2315</div>	CITY OF FRANKLIN FRANKLIN, VIRGINIA
	DATE ISSUED: 06/05/24		
	DESIGNED BY: RFT		
DRAWN BY: RFT			
CHECKED BY: RFT			
SHEET NO. 2 OF 2	APPROVED BY: RFT		SUBSTATION PIER DETAIL NOTES AND INSTRUCTIONS



THIS SURVEY IS SUBJECT TO ANY EASEMENT OF RECORD AND OTHER PERTINENT FACTS WHICH A TITLE SEARCH MIGHT DISCLOSE.

I HEREBY CERTIFY THAT THE PROPERTY SHOWN ON THIS PLAT IS LOCATED IN ZONE "X" AS SHOWN ON THE FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 510060 0004 D, DATED SEPT. 4, 2002.

_____. L.S.

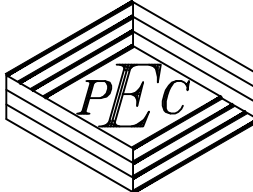
TOPOGRAPHICAL MAP FOR
CITY OF FRANKLIN
LOCATED ON PROGRESS PARKWAY
CITY OF FRANKLIN, VIRGINIA
SCALE 1"=30' APRIL 24, 2022

REFERENCE - INSTR.#210003743
P.B. 37 PG. 167

LEGEND:
● - DENOTES IRON PIN
⊙ - DENOTES COMPUTED POINT
X 27.7 - DENOTES EXISTING ELEVATIONS
P.P. - DENOTES POWER POLE
H.P. - DENOTES HEAT PUMP

REVISIONS			REVISIONS		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

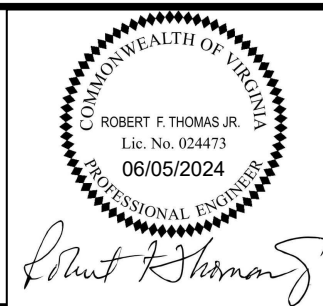
SCALE: 1"=50"
DATE ISSUED:
DESIGNED BY: RFT
DRAWN BY: RFT
CHECKED BY: RFT
APPROVED BY: RFT



**PROGRESSIVE ENGINEERING
CONSULTANTS, INC.**
Complete Power Engineering Services
P.O. BOX 690638
CHARLOTTE, N.C. 28227

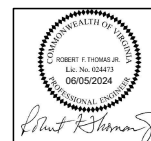
OFFICE
(704) 545-7327

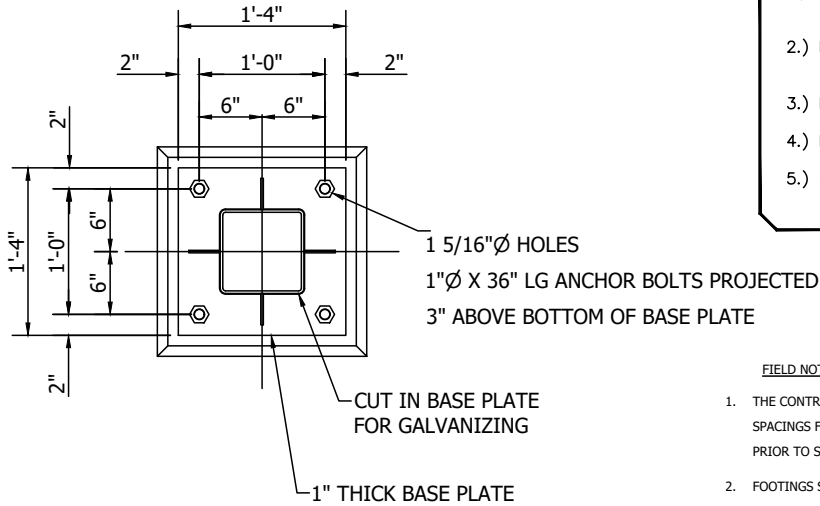
FAX
(704) 545-2315



CITY OF FRANKLIN FRANKLIN, VIRGINIA		DRAWING NO. 140-08-001
115kV-13.2 7.62kV Substation		SHEET NO. 1 OF 1

SHEET NO.
1 OF 1





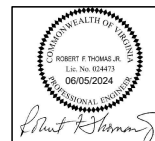
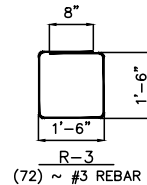
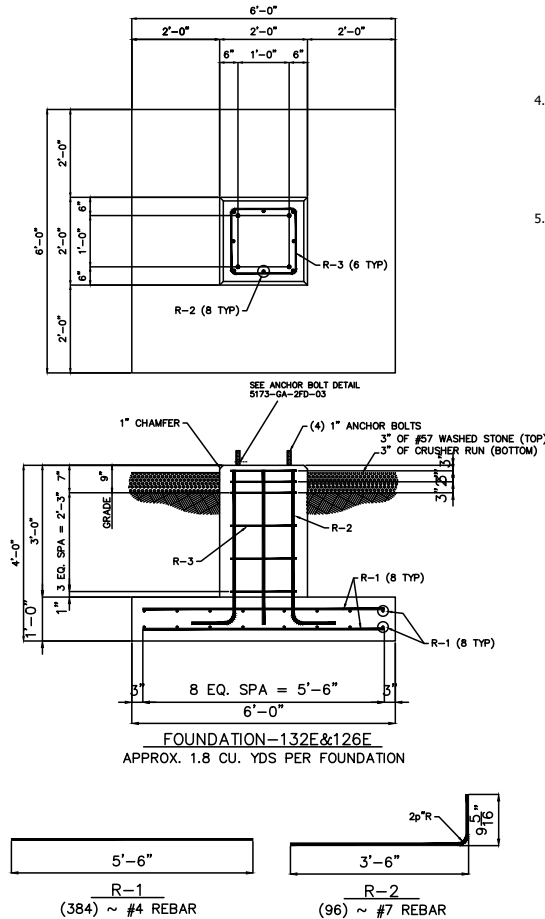
ANCHOR BOLT DETAIL (132E, 126E)

NOTES:

- 1.) DESIGN BEARING PRESSURE OF 2000 PSF.
- 2.) MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 4000 PSI REQUIRED.
- 3.) REBAR PER ASTM A615, GRD.60
- 4.) FOUNDATION DESIGN PER ACI 318.
- 5.) 3" COVER TYPICAL UNLESS NOTED OTHERWISE.

FIELD NOTES

1. THE CONTRACTOR SHALL VERIFY ALL ANCHOR BOLT SPACINGS FOR EQUIPMENT FURNISHED BY OWNER PRIOR TO SETTING BOLTS AND POURING CONCRETE.
2. FOOTINGS SHALL REST ON UNDISTURBED SOIL CAPABLE OF SUPPORTING 2,500 PSF MINIMUM. IF SOIL IS DISPLACED, IT SHALL BE RECOMPACTED AND TESTED TO ENSURE MINIMUM BEARING CAPACITY.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AFTER 28 DAYS. MINIMUM CEMENT CONTENT SHALL BE 470 LBS PER CUBIC YARD. AT PLACING, SLUMP SHALL BE 3-4 INCHES.
4. CONCRETE REINFORCING SHALL CONFORM TO EITHER ASTM A-615, A-616 OR A-617 WITH A MINIMUM YIELD STRENGTH OF 60 KSI. PLACEMENT OF BARS SHALL CONFORM TO ACI 318-83 OR LATEST VERSION.
5. TEST REPORTS FROM EACH POUR SHALL BE SUBMITTED TO THE CONTRACT ENGINEER DIRECTLY FROM THE TEST LAB.



SCALE: NTS
DATE ISSUED: 06/05/24
DESIGNED BY: RFT
DRAWN BY: RFT
CHECKED BY: RFT
APPROVED BY: RFT



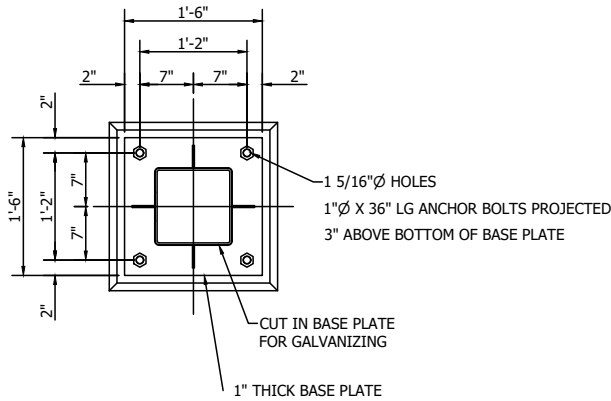
PROGRESSIVE ENGINEERING
CONSULTANTS, INC.
Complete Power Engineering Services
P.O. BOX 690638
CHARLOTTE, N.C. 28227
OFFICE (704) 545-7327
FAX (704) 545-2815

CITY OF FRANKLIN
FRANKLIN, VIRGINIA

115 kV BUS PIER DETAIL, FOUNDATION "126E"
(AB BASE-132E&126E) (18 REQUIRED)

DRAWING NO.
140-08-006

SHEET NO.
1 OF 1



ANCHOR BOLT DETAIL

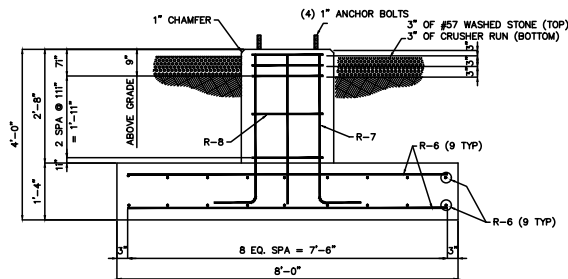
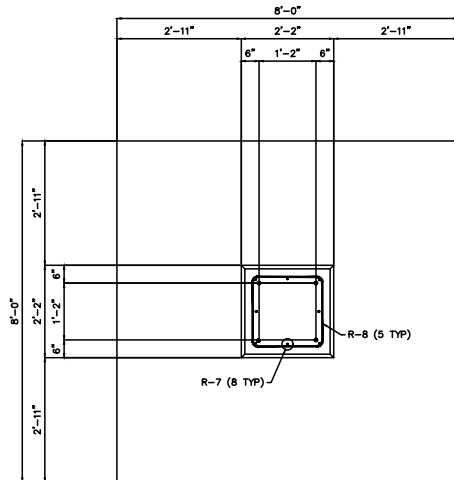
127G

NOTES:

- 1.) DESIGN BEARING PRESSURE OF 2500 PSF.
- 2.) MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 4000 PSI REQUIRED.
- 3.) REBAR PER ASTM A615, GRD.60
- 4.) FOUNDATION DESIGN PER ACI 318.
- 5.) 3" COVER TYPICAL UNLESS NOTED OTHERWISE.

FIELD NOTE

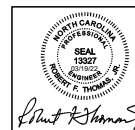
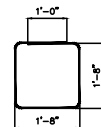
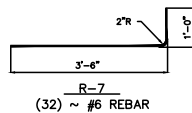
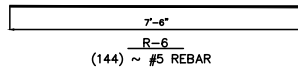
1. THE CONTRACTOR SHALL VERIFY ALL ANCHOR BOLT SPACINGS FOR EQUIPMENT FURNISHED BY OWNER PRIOR TO SETTING BOLTS AND POURING CONCRETE.
2. FOOTINGS SHALL REST ON UNDISTURBED SOIL CAPABLE OF SUPPORTING 2,500 PSF MINIMUM. IF SOIL IS DIS-PLACED, IT SHALL BE RECOMPACTED AND TESTED TO ENSURE MINIMUM BEARING CAPACITY.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AFTER 28 DAYS. MINIMUM CEMENT CONTENT SHALL BE 470 LBS PER CUBIC YARD. AT PLACING, SLUMP SHALL BE 3-4 INCHES.
4. CONCRETE REINFORCING SHALL CONFORM TO EITHER ASTM A-615, A-616 OR A-617 WITH A MINIMUM YIELD STRENGTH OF 60 KSI. PLACEMENT OF BARS SHALL CONFORM TO ACI 318-83 OR LATEST VERSION.
5. TEST REPORTS FROM EACH POUR SHALL BE SUBMITTED TO THE CONTRACT ENGINEER DIRECTLY FROM THE TEST LAB.



FOUNDATION-127G

NTS

APPROX. 3.62 CU. YDS PER FOUNDATION



SCALE: NTS
DATE ISSUED: 06/05/24
DESIGNED BY: RPT
DRAWN BY: RPT
CHECKED BY: RPT
APPROVED BY: RPT



PROGRESSIVE ENGINEERING
CONSULTANTS, INC.
Complete Power Engineering Services
P.O. BOX 690638
CHARLOTTE, N.C. 28227
FAX (704) 545-2815


CITY OF FRANKLIN
FRANKLIN, VIRGINIA

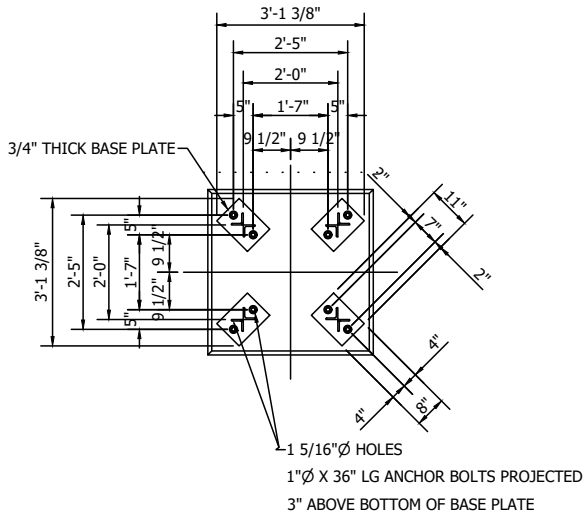
115 kV MOTOR OPERATOR PIER DETAIL,
FOUNDATION "127G" (AB BASE-127G) (6 REQUIRED)

DRAWING NO.
140-08-007

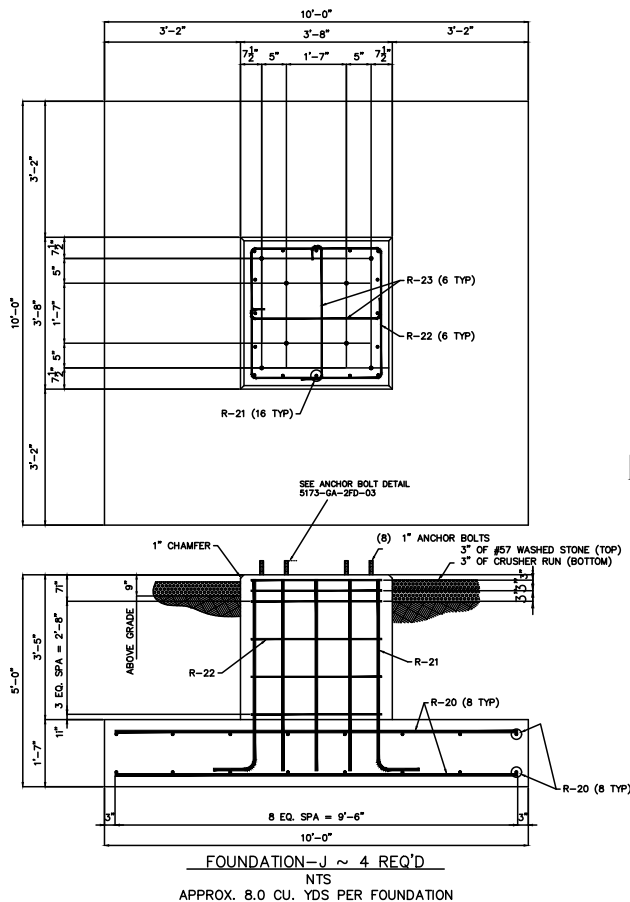
SHEET NO.
1 OF 1



SCALE: NTS	<div><p>PROGRESSIVE ENGINEERING CONSULTANTS, INC. Complete Power Engineering Services P.O. BOX 690638 CHARLOTTE, N.C. 28227</p><p>OFFICE (704) 545-7327</p><p>FAX (704) 545-2315</p></div>	CITY OF FRANKLIN FRANKLIN, VIRGINIA	DRAWING NO. 140-08-008
DATE ISSUED: 06/05/24			115kV-13.2/7.62kV BUS PIER DETAIL, FOUNDATION "128H" (AB BASE-128H) (3 REQUIRED)
DESIGNED BY: RFT			
DRAWN BY: RFT			
CHECKED BY: RFT			
APPROVED BY: RFT			



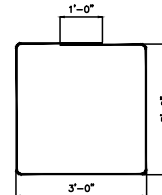
ANCHOR BOLT DETAIL J



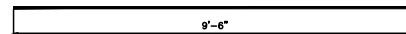
- NOTES:
- 1.) DESIGN BEARING PRESSURE OF 2000 PSF.
 - 2.) MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 4000 PSI REQUIRED.
 - 3.) REBAR PER ASTM A615, GRD.60
 - 4.) FOUNDATION DESIGN PER ACI 318.
 - 5.) 3" COVER TYPICAL UNLESS NOTED OTHERWISE.

FIELD NOTE

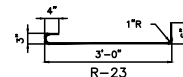
1. THE CONTRACTOR SHALL VERIFY ALL ANCHOR BOLT SPACINGS FOR EQUIPMENT FURNISHED BY OWNER PRIOR TO SETTING BOLTS AND POURING CONCRETE.
2. FOOTINGS SHALL REST ON UNDISTURBED SOIL CAPABLE OF SUPPORTING 2,000 PSF MINIMUM. IF SOIL IS DIS- PLACED, IT SHALL BE RECOMPACTED AND TESTED TO ENSURE MINIMUM BEARING CAPACITY.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AFTER 28 DAYS. MINIMUM CEMENT CONTENT SHALL BE 470 LBS PER CUBIC YARD. AT PLACING, SLUMP SHALL BE 3-4 INCHES.
4. CONCRETE REINFORCING SHALL CONFORM TO EITHER ASTM A-615, A-616 OR A-617 WITH A MINIMUM YIELD STRENGTH OF 60 KSI. PLACEMENT OF BARS SHALL CONFORM TO ACI 318-83 OR LATEST VERSION.
5. TEST REPORTS FROM EACH POUR SHALL BE SUBMITTED TO THE CONTRACT ENGINEER DIRECTLY FROM THE TEST LAB.



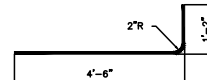
R-22
(6) ~ #3 REBAR PER FOUNDATION



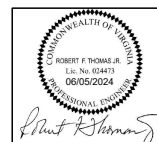
R-20
(32) ~ #7 REBAR PER FOUNDATION



R-23
(12) ~ #3 REBAR PER FOUNDATION



R-21
(16) ~ #7 REBAR PER FOUNDATION



SCALE: NTS
DATE ISSUED: 06/05/24
DESIGNED BY: RPT
DRAWN BY: RPT
CHECKED BY: RPT
APPROVED BY: RPT



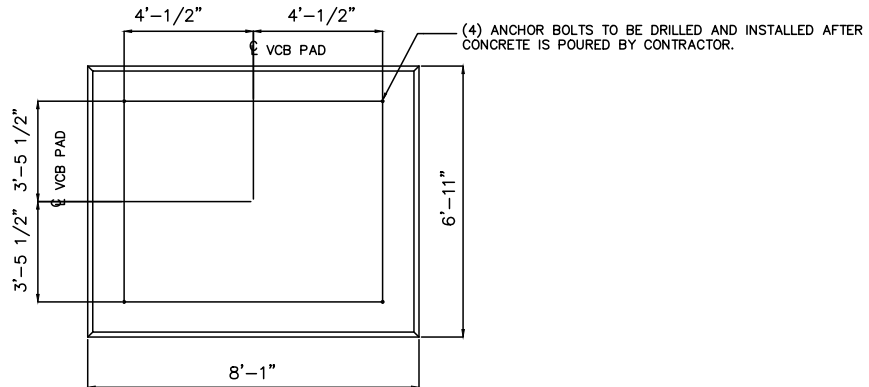
PROGRESSIVE ENGINEERING
CONSULTANTS, INC.
Complete Power Engineering Services
P.O. BOX 690638
CHARLOTTE, N.C. 28227
OFFICE (704) 546-7327 FAX (704) 546-2815

CITY OF FRANKLIN
FRANKLIN, VIRGINIA

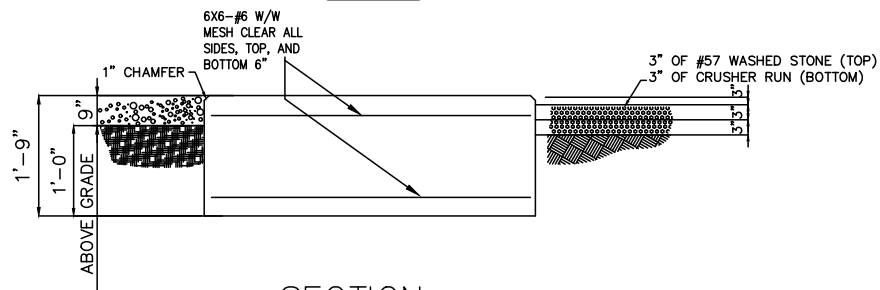
115kV-13.2/7.62 kV SUBSTATION PIER DETAIL
FOUNDATION "J" (AB BASE J)(4 REQ'D)

DRAWING NO.
140-08-009

SHEET NO.
1 OF 2

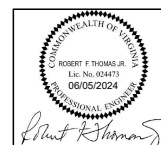



PLAN



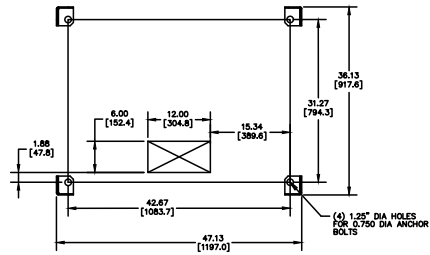
SECTION

115 KV VACUUM CIRCUIT BREAKER FOUNDATION APPROX. 3.1 CU YDS

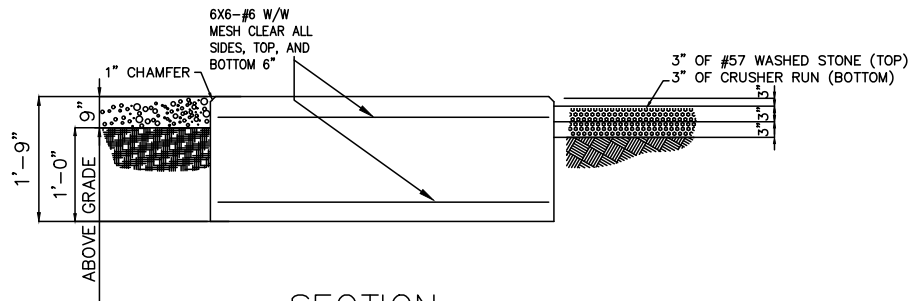
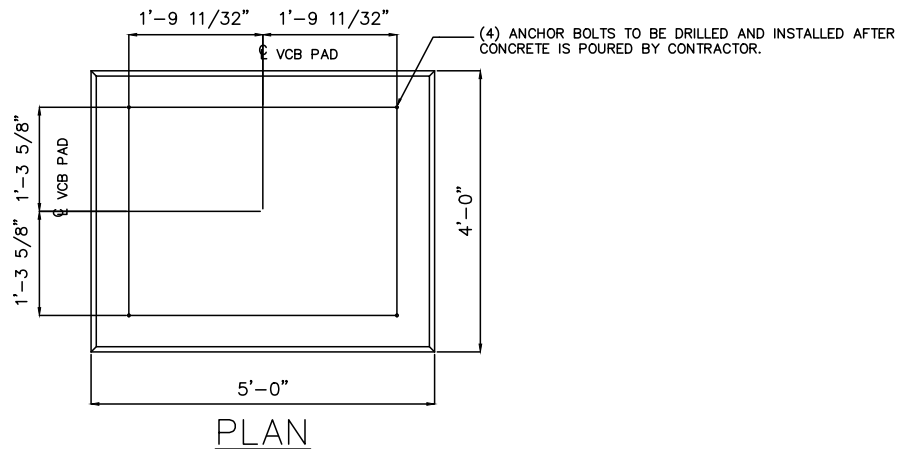


SCALE: NTS	 <p>PROGRESSIVE ENGINEERING CONSULTANTS, INC. Complete Power Engineering Services P.O. BOX 690638 CHARLOTTE, N.C. 28227</p> <p>OFFICE (704) 546-7327 FAX (704) 546-2315</p>	CITY OF FRANKLIN FRANKLIN, VIRGINIA	DRAWING NO. 140-08-010
DATE ISSUED: 06/05/24		115kV CIRCUIT BREAKER PAD (4 REQ'D)	SHEET NO. 1 OF 1
DESIGNED BY: RFT			
DRAWN BY: RFT			
CHECKED BY: RFT			
APPROVED BY: RFT			

REAR (TOWARDS CONTROL BUILDING)

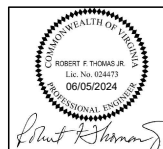


FRONT(TOWARDS REGULATORS)
ANCHOR BOLT DETAIL

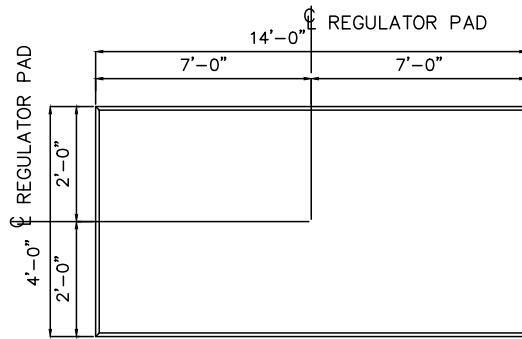


SECTION

VACUUM CIRCUIT BREAKER FOUNDATION
APPROX. 1.83 CU YDS

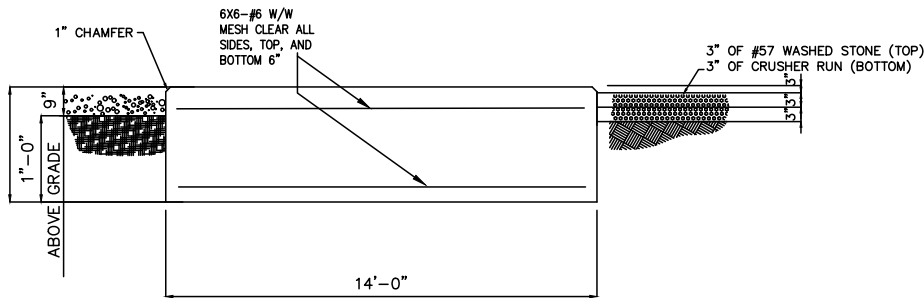


SCALE: NTS	<p>PROGRESSIVE ENGINEERING CONSULTANTS, INC. Complete Power Engineering Services P.O. BOX 690638 CHARLOTTE, N.C. 28227</p> <p>OFFICE (704) 546-7327 FAX (704) 546-2316</p>	CITY OF FRANKLIN FRANKLIN, VIRGINIA	DRAWING NO. 140-08-011
DATE ISSUED: 06/05/24			
DESIGNED BY: RPT		13.2/7.62kV VACUUM BREAKER PAD VACUUM CIRCUIT BREAKER PAD (12 REQ'D)	SHEET NO. 1 OF 1
DRAWN BY: RPT			
CHECKED BY: RPT			
APPROVED BY: RPT			



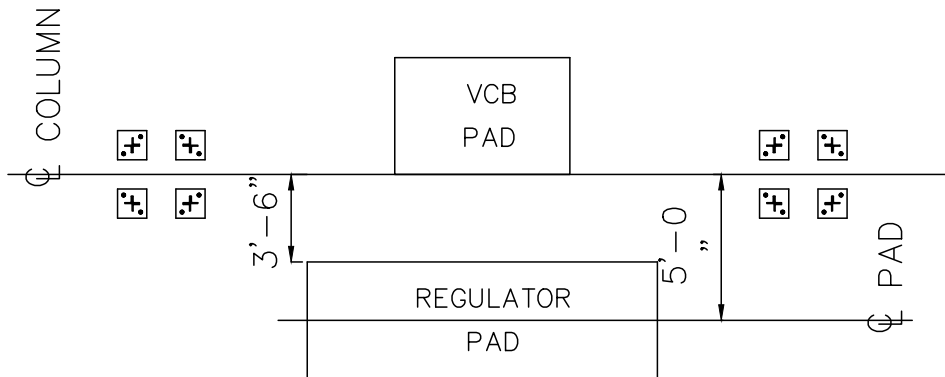
(12) ANCHOR BOLTS TO BE DRILLED AND INSTALLED AFTER CONCRETE IS POURED BY CONTRACTOR.

PLAN

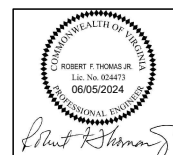


SECTION

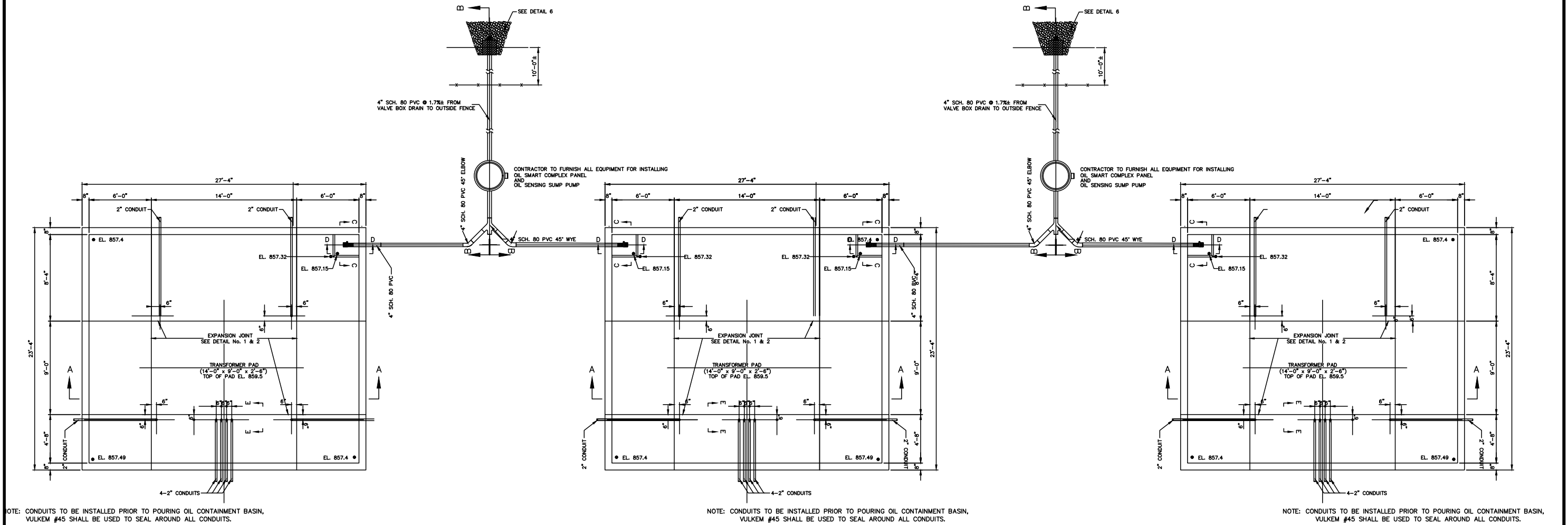
VOLTAGE REGULATOR FOUNDATION
APPROX. 3.6 CU YDS



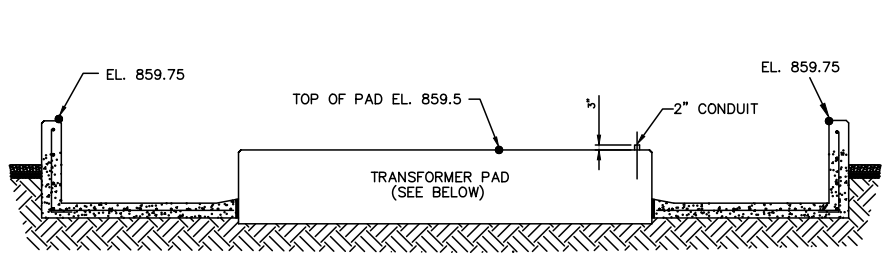
TYPICAL CIRCUIT BREAKER &
REGULATOR PAD FOUNDATION LAYOUT



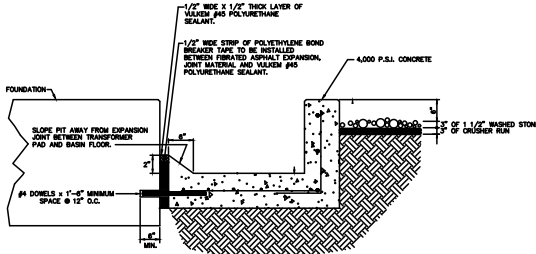
SCALE: NTS	<p>PROGRESSIVE ENGINEERING CONSULTANTS, INC. Complete Power Engineering Services P.O. BOX 690638 CHARLOTTE, N.C. 28227</p> <p>OFFICE (704) 545-7327 FAX (704) 545-2315</p>	CITY OF FRANKLIN FRANKLIN, VIRGINIA	DRAWING NO. 140-08-012
DATE ISSUED: 06/05/24		13.2/7.62kV REGULATOR PAD DETAIL REGULATOR PAD (9 REQ'D)	SHEET NO. 1 OF 1
DESIGNED BY: RFT			
DRAWN BY: RFT			
CHECKED BY: RFT			
APPROVED BY: RFT			



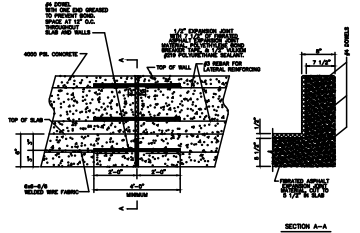
TRANSFORMER OIL CONTAINMENT PAD
PLAN VIEW
(NOT TO SCALE)



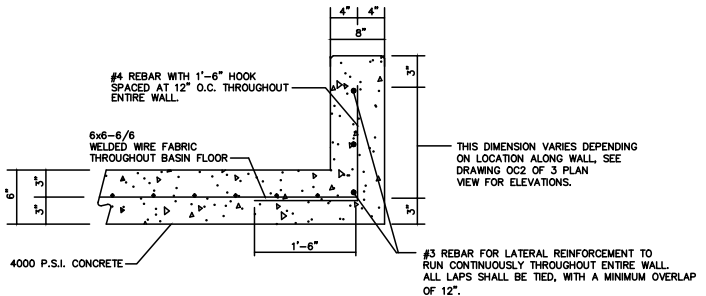
SECTION A-A
(NOT TO SCALE)



DETAIL No.1
FOUNDATION TO SLAB
(NOT TO SCALE)

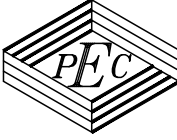


DETAIL No.2
EXPANSION JOINT
(NOT TO SCALE)



DETAIL No.3
CONTAINMENT PIT REINFORCEMENT
(NOT TO SCALE)

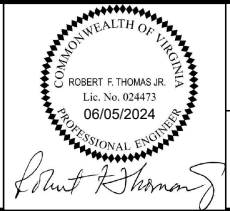
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NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION		
						DATE ISSUED:	06/05/24
						DESIGNED BY:	RFT
						DRAWN BY:	RFT
						CHECKED BY:	RFT
						APPROVED BY:	RFT



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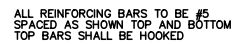


CITY OF FRANKLIN
FRANKLIN, VIRGINIA

115kV-13.2/7.62kV SUBSTATION
TRANSFORMER
SPILL CONTAINMENT

DRAWING NO.
140-08-013

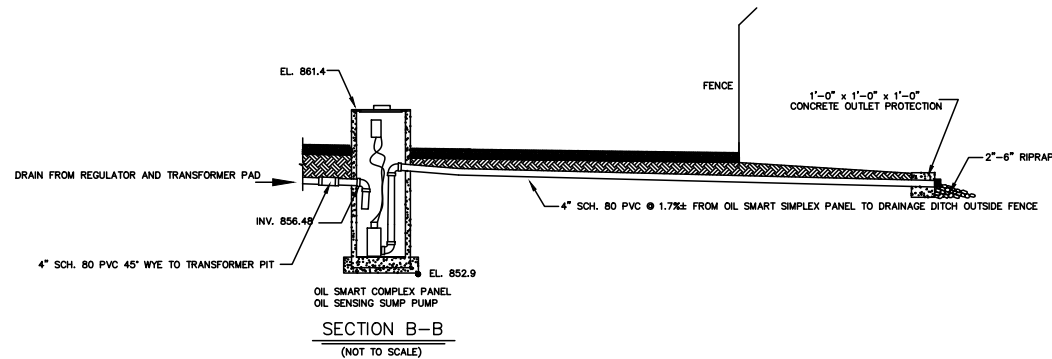
SHEET NO.
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PLAN VIEW



TRANSFORMER FOUNDATION



GENERAL NOTES:

1. ALL DOCUMENTS INCLUDING CALCULATIONS, COMPUTER FILES, DRAWINGS AND SKETCHES PREPARED BY CARRARA ENGINEERS PURSUANT TO THIS PROJECT SHALL BE THE PROPERTY OF CARRARA ENGINEERS. NO REUSE OR ADAPTATION IS PERMITTED IN CONNECTION WITH THIS PROJECT. THEY ARE AND SHALL REMAIN THE PROPERTY OF CARRARA ENGINEERS. ANY REUSE OR ADAPTATION IS PROHIBITED.
2. COORDINATION: ALL STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION AND IN ACCORDANCE WITH ALL OTHER PROJECT DOCUMENTS.
3. EXISTING CONDITIONS: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE JOB SITE. ANY DISCREPANCIES OR OMISSIONS FROM THE CONDITIONS SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING.

FOUNDATIONS:

1. FOUNDATION DESIGN IS BASED ON AN ALLOWABLE NET BEARING PRESSURE OF 2500 PSF.

CONCRETE:

1. CONCRETE PLACEMENT AND QUALITY: PER RECOMMENDATIONS IN ACI SP-15.
2. DEBRIS. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONCRETE.
3. INSERTS: SECURELY POSITION ALL ITEMS TO BE CAST IN CONCRETE.
4. PIPES: DO NOT EMBED PIPES IN CONCRETE.
5. REBAR GRADES: REINFORCING STEEL TO BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60.

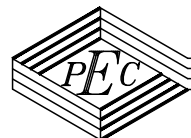
6. CONCRETE USE	STRENGTH @ 28 DAYS	SLUMP	AIR	AGGREGATE SIZE	AGGREGATE TYPE
FOUNDATIONS	4000	3"-4"	4% - 6%		NORMAL WT.

DO NOT ADD WATER TO CONCRETE MIX AT SITE UNLESS APPROVED

9. CONCRETE: NORMAL WEIGHT CONCRETE WITH TYPE 1 CEMENT
8. AGGREGATE: NORMAL WEIGHT AGGREGATE CONFORMING TO ASTM C33
9. CONCRETE AGE: NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT
10. THOROUGHLY VIBRATED CONCRETE TO ASSURE VOIDS ARE FILLED AND CONCRETE IS CONSOLIDATED.
11. THE CONTRACTOR SHALL AT ALL TIMES FULLY COMPLY WITH ALL OSHA STANDARDS AS WELL AS THE OWNER'S SAFETY STANDARDS, AS A MINIMUM, ESPECIALLY WITH REGARD TO SHORING OF ALL EXCAVATIONS. THE ENGINEER OR OWNER WILL IMMEDIATELY HALT CONSTRUCTION ACTIVITIES IF THE CONTRACTOR DOES NOT COMPLY WITH THESE STANDARDS. TO IMMEDIATELY COMPLY AT ALL TIMES WITH THESE STANDARDS WILL RESULT IN DISMISSAL FROM THE PROJECT.
12. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPIES OF OSHA STANDARDS AS WELL AS THE OWNER'S SAFETY STANDARDS. COPIES SHALL BE AVAILABLE ON SITE AT ALL TIMES DURING CONSTRUCTION.
13. THE OIL CONTAINMENT SYSTEM HAS BEEN DESIGNED TO CONTAIN THE ENTIRE VOLUME OF OIL IN THE SINGLE LARGEST CONTAINER, PLUS RAINFALL BASED ON LOCAL WEATHER RECORDS. HOWEVER, 100% OIL CONTAINMENT IS NOT GUARANTEED IN THE EVENT OF AN EXPLOSIVE TYPE FAILURE WHERE OIL IS SPRAYED BEYOND THE PERIMETER OF THE CONTAINMENT BASIN.
14. ALL STRUCTURAL CONCRETE SHALL BE SUPPORTED ON FIRM UNDISTURBED EARTH OR COMPACTED FILL.
15. REINFORCING STEEL SHALL BE GRADE 60 ASTM A-615 OR A-617.
16. THE RODS SHALL BE LAPPED A MINIMUM OF 12".
16. CONCRETE SLUMP SHALL BE BETWEEN THREE AND FOUR INCHES (3"-4"). THE CONTRACTOR SHALL MAKE OR HAVE MADE A MINIMUM OF ONE (1) SLUMP TEST IN ACCORDANCE WITH ASTM C 143 FOR EACH TRUCKLOAD OF CONCRETE DELIVERED.
17. CONCRETE COVER OVER REINFORCING STEEL SHALL BE THREE INCHES (3") MINIMUM.

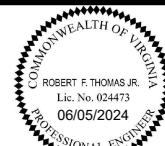
18. ALL CONCRETE TO BE THOROUGHLY VIBRATED DURING PLACEMENT INTO FORMS TO ENSURE ALL VOIDS ARE FILLED.
20. ALL WALLS SHALL BE CHAMFERED ONE INCH (1") ALL AROUND TOP EDGES.
21. AFTER INSTALLATION, THE OIL CONTAINMENT SYSTEM SHOULD BE CHECKED REGULARLY BY THE OWNER TO ENSURE ALL EQUIPMENT IS IN PROPER WORKING ORDER.
22. ALL LINES SHALL HAVE MINIMUM SLOPES AS INDICATED BY INVERT ELEVATIONS SHOWN ON DRAWING
23. OIL CONTAINMENT SYSTEM DESIGN SHOWN IS IN ACCORDANCE WITH RECOMMENDATIONS OF EPA 40 CFR 112.
24. SLOPE PITS AWAY FROM TRANSFORMER FOUNDATIONS. ESTABLISH POSITIVE DRAIN TO OUTLETS. NOTE ELEVATIONS SHOWN IN PITS. SEE.
25. ALL CONTROL/ELECTRICAL CONDUITS ARE TO BE SCHEDULE 40 PVC. SIZE AS SHOWN ON DRAWING.
26. THE CONTRACTOR SHALL PREPARE, OR HAVE PREPARED, IN ACCORDANCE WITH ASTM C-31, FOUR (4) TEST CYLINDERS FROM EACH TRUCKLOAD OF CONCRETE DELIVERED TO THE SITE. WITHIN 20-24 HOURS AFTER BEING PREPARED, THE CYLINDERS SHALL BE DELIVERED TO A QUALIFIED TESTING LABORATORY AND TESTED IN ACCORDANCE WITH THE CONCRETE SPECIFICATIONS AND ASTM C-39. TEST RESULTS ARE TO BE PROVIDED TO THE ENGINEER FOR EVALUATION AND DIRECTION OF CORRECTIVE ACTION IF NEEDED.
27. THOSE ITEMS SHOWN IN GRAY ARE NOT TO BE CONSTRUCTED AT THIS TIME.

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Robert K. Thomas

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SHEET NO.
2 OF 2