



**ARLINGTON COUNTY, VIRGINIA
OFFICE OF THE PURCHASING AGENT
2100 CLARENDON BOULEVARD, SUITE 500
ARLINGTON, VA 22201
(703) 228-3410**

INVITATION TO BID NO. 23-DES-ITBPW-474

ELECTRONIC SEALED BIDS WILL BE RECEIVED BY ARLINGTON COUNTY VIA VENDOR REGISTRY UNTIL 4:00 P.M. ON THE 9TH DAY OF FEBRUARY 2023.

FOR THE PROVISION OF N GLEBE ROAD WATERMAIN REPLACEMENT

The Contractor shall replace the existing 12" water main along N Glebe Road between N Randolph Street and N Pershing Street with a new 12" water main. The main scope of work includes the installation of approximately 2041 linear feet of 12" water main, approximately 87 linear feet of 8" water main and 90 linear feet of 6" watermain with various appurtenances. The work also includes several water main connections to existing services or existing fire hydrants, 26 each of water service re-taps, restoration of disturbed or damaged surfaces during construction and full depth pavement restoration of the excavated areas.

VENDORS ARE REQUIRED TO REGISTER ON [VENDOR REGISTRY](#) IN ORDER TO SUBMIT A RESPONSE TO THIS INVITATION TO BID. NO RESPONSES WILL BE ACCEPTED AFTER THE BID DUE DATE AND TIME.

The County will conduct a virtual bid opening via Microsoft Teams Application (APP). Bidders interested in viewing the public bid opening must download the APP and join the meeting via the Microsoft Teams APP and enable audio, video or both. The link to join the virtual bid opening is provided below:

[Click here to join the meeting](#)
[+1 347-973-6905](tel:+13479736905) United States, New York City (Toll)
Conference ID: 961142789#

Bid Surety in the amount of not less than 5% of the bid must be submitted with the bid. Performance and Payment Bonds in the amount of 100% of the award will be required of the successful bidder.

NOTICE: ANY BIDDER ORGANIZED AS A STOCK OR NONSTOCK CORPORATION, LIMITED LIABILITY COMPANY, BUSINESS TRUST, OR LIMITED PARTNERSHIP OR REGISTERED AS A LIMITED LIABILITY PARTNERSHIP MUST BE AUTHORIZED TO TRANSACT BUSINESS IN THE COMMONWEALTH OF VIRGINIA BEFORE CONTRACT AWARD (REFER TO AUTHORITY TO TRANSACT BUSINESS SECTION IN THE SOLICITATION FOR FURTHER INFORMATION)

Arlington County reserves the right to reject any and all bids, cancel this solicitation, and to waive any informalities or irregularities in procedure. A bidder's submission of a bid indicates acceptance of these terms.

Arlington County, Virginia
Office of the Purchasing Agent

Kaylin Schreiber
Procurement Officer
kschreiber@arlingtonva.us

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I. INFORMATION FOR BIDDERS

1. QUESTIONS AND ADDENDA

BIDDERS MUST BE REGISTERED IN VENDOR REGISTRY TO SUBMIT A QUESTION FOR THIS INVITATION TO BID.

All communications relating to this solicitation must be submitted online using Vendor Registry. For a question to be considered, the question must be entered in the Question Section of the **ITB No. 23-DES-ITBPW-474**. Prior to the award of a contract resulting from this solicitation, bidders are prohibited from contacting any County staff other than those assigned to the Office of the Purchasing Agent.

QUESTIONS REGARDING THE ORIGINAL SOLICITATION MUST BE SUBMITTED BY JANUARY 23, 2023 AT 5:00 PM EASTERN TIME TO BE CONSIDERED FOR AN ADDENDUM. ALL QUESTIONS RECEIVED BY THE QUESTION DEADLINE WILL BE RESPONDED TO WITHIN VENDOR REGISTRY AND POSTED FOR ALL BIDDERS. THE SYSTEM WILL NOT ACCEPT ANY QUESTIONS AFTER THIS DATE AND TIME.

If any questions or responses require revisions to this solicitation, such revisions will be by formal Addendum only. Bidders are cautioned not to rely on any written, electronic, or oral representations made by any County representative or other person, including the County's technical contact, that appear to change any portion of the solicitation unless the change is ratified by a written Addendum to this solicitation issued by the Office of the Purchasing Agent.

2. INTEREST IN MORE THAN ONE BID AND COLLUSION

Reasonable grounds for believing that a Bidder is interested in more than one bid for a solicitation, including both as a Bidder and as a subcontractor for another Bidder, or that collusion exists between two or more Bidders, will result in rejection of all affected bids. However, an individual or entity acting only as a subcontractor may be included as a subcontractor on bids of two or more different Bidders. Bidders rejected under the above provision will also be disqualified if they respond to a re-solicitation for the same work.

3. TRADE SECRETS OR PROPRIETARY INFORMATION

Trade secrets or proprietary information that a bidder or contractor submits in connection with a procurement transaction may be exempted from public disclosure under the Virginia Freedom of Information Act ("VFOIA"). However, the bidder or contractor must invoke VFOIA protection clearly and in writing on the Bid Form for County review. The Bid Form must include at least the following: (1) the data or other materials sought to be protected and (2) specific reasons why the material is confidential or proprietary. It is the bidder's sole responsibility to defend such exemptions if challenged in a court of competent jurisdiction.

4. DEBARMENT STATUS

The Bidder must indicate on the Bid Form whether it or any of its principals is currently debarred, enjoined, or suspended from submitting bids to the County or to any other state or political subdivision and whether the Bidder is an agent of any person or entity that is currently debarred, enjoined or suspended from submitting bids to the County or to any other state or political subdivision. An affirmative response may be considered grounds for rejection of the bid.

5. AUTHORITY TO TRANSACT BUSINESS

Any Bidder organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership must be authorized to transact business in the Commonwealth of Virginia as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the Code of Virginia, or as otherwise required by law. The proper and full legal name of the entity and the identification number issued to the Bidder by the Virginia State Corporation Commission must be included on the Bid Form. Any Bidder that is not required to be authorized to transact business in the Commonwealth must include in its bid a statement describing why the Bidder is not required to be so authorized. The County may require a Bidder to provide documentation that 1) clearly identifies the complete name and legal form of the entity and 2) establishes that the entity is authorized by the State Corporation Commission to transact business in the Commonwealth of Virginia. Failure of a Bidder to provide such documentation will be a ground for rejection of the bid or cancellation of any award. For further information refer to the Commonwealth of Virginia State Corporation Commission website at: www.scc.virginia.gov.

The County reserves the right to waive this requirement at any time, for any reason.

6. ARLINGTON COUNTY BUSINESS LICENSES

The successful Bidder must comply with the provisions of Chapter 11 ("Licenses") of the Arlington County Code, if applicable. For information on the provisions of that Chapter and its applicability to this solicitation, contact the Arlington County Business License Division, Office of the Commissioner of the Revenue, at 2100 Clarendon Blvd., Suite 200, Arlington, Virginia, 22201, tel. (703) 228-3060, or e-mail business@arlingtonva.us.

7. COVID-19 VACCINATION POLICY FOR CONTRACTORS

Due to the ongoing COVID-19 pandemic, the County has taken various steps to protect the welfare, health, safety, and comfort of the workforce and public at large. As part of these steps, the County has implemented various requirements with respect to health and safety including policies with respect to social distancing, the use of face-coverings and vaccine mandates. To protect the County's workforce and the public at large, all employees and subcontractors of the Contractor who are assigned to this Contract, should be fully vaccinated against COVID-19. Any contractor employee or subcontractor who is not fully vaccinated should follow a weekly testing protocol as established by the Contractor, unless exempt pursuant to a valid reasonable accommodation under state or federal law.

8. VIRGINIA CONTRACTOR LICENSE

For all work that is classified as being performed by "Contractors" as defined by the Virginia State Board for Contractors, a Class A, B, or C License is required.

If a contract for performing or managing construction, removal, repair or improvements is for \$120,000 or more, or if the total value of all such construction, removal, repair, or improvements undertaken by the bidder within any twelve-month period is \$750,000 or more, the bidder is required under Title 54.1, Chapter 11, Code of Virginia, as amended, to be licensed as a "CLASS A CONTRACTOR."

If a contract for performing or managing construction, removal, repair or improvements is for \$10,000 or more, but less than \$120,000, or if the total value of all such construction, removal, repair, or improvements undertaken by the bidder within any twelve-month period is \$150,000 or more, but less than \$750,000, the bidder is required under Title 54.1, Chapter 11, Code of Virginia, as amended, to be licensed as a "CLASS B CONTRACTOR."

If a contract for performing construction, removal, repair or improvements is for \$1,000 or more, but no more than \$10,000 or if the total value of all such construction, removal, repair, or improvements undertaken by the bidder within any twelve-month period is less than \$150,000, the bidder is required under Title 54.1, Chapter 11, Code of Virginia, as amended, to be licensed as a "CLASS C CONTRACTOR." Class C contractors shall not include electrical, plumbing, and heating, ventilation and air conditioning contractors.

For further information, contact the State Board for Contractors, 2 South Ninth Street, Richmond, VA 23219, (804) 367-8511.

9. ESTIMATED QUANTITIES/NON-EXCLUSIVITY OF CONTRACTOR

The contract that will result from this solicitation will not obligate the County to purchase a specific quantity of items or services during the Contract Term. Any quantities that are included in the contract documents are the present expectations the County for the period of the contract, and the County is under no obligation to buy that, or any, amount as a result of having provided this estimate or of having had any normal or otherwise measurable requirement in the past. The County may require more goods and/or services than the estimated annual amount, and any such additional quantities will not give rise to any claim for compensation other than at the unit prices and/or rates specified in the contract.

The items or services covered by this contract may be or become available under other County contract(s), and the County may determine that it is in its best interest to procure the items or services through such other contract(s). The County does not guarantee that the selected contractor will be the exclusive provider of the goods or services covered by the resulting contract.

10. PREVAILING WAGE CONTRACT FOR CONSTRUCTION SERVICES

This solicitation and the resulting contract are subject to Prevailing Wage provisions covered under Article 4-104 of the Arlington County Purchasing Resolution. All employees of any contractor or any subcontractor working on the contract shall be paid wages, salaries, benefits, and other remuneration at or above the craft or trade category prevailing wage rate indicated by Virginia Commissioner of Labor and Industry (DOLI) and as listed in the contract. The County will request from DOLI a wage determination at bid posting and a final wage determination at contract award. If the final wage determination changes at contract award, the Bidder shall submit their revised bid pricing to comply with the final wage determination from DOLI. By submitting a response to the solicitation, the Bidder certifies that it will comply with this provision and will ensure that its subcontractors, if any, also comply with the prevailing wage provisions. (Refer to draft Contract Terms and Conditions for further Prevailing Wage details specific to this solicitation/contract.)

11. BID FORM SUBMISSION

The submitted Bid Form must be signed and fully executed. The Bid Form must be submitted electronically via Vendor Registry no later than the date and time specified in this solicitation. The Vendor Registry system will not accept bids after the close date and time. The County will not accept emailed or faxed bid

The Bidder name on the electronic bid submittal shall be the same as the Contractor/Vendor name as the registration in Vendor Registry for the upload to be considered a valid bid. **ONLY ELECTRONIC SUBMISSION IS ALLOWED, NO BID SUBMITTED OTHER THAN A VENDOR REGISTRY ELECTRONIC UPLOAD WILL BE ACCEPTED. Arlington County is not responsible for late submissions, missed Addendums, or questions not submitted before the end date and time.**

Timely submission is solely the responsibility of the Bidder. The Vendor Registry System will not accept applications after the publicly posted date and time. A bid may be rejected if the Bid Form is not signed in the designated space by a person authorized to legally bind the Bidder.

Modification of or additions to the Bid Form may be cause for rejection of the bid; however, Arlington County reserves the right to decide, in its sole discretion, whether to reject such a bid as nonresponsive. As a precondition to bid acceptance, Arlington County may request the bidder to withdraw or modify any such modifications or additions, if it does not affect quality, quantity, price, or delivery.

Bids and all documents uploaded/submitted to Arlington County by an Bidder become the property of the County upon receipt.

12. BIDDER CERTIFICATION

Submission of a signed Bid Form is certification by the respective bidder that it is registered with the Virginia State Corporation Commission (SCC), if applicable, it is the legal entity authorized to enter into an agreement with the County, and that it will accept any award made to it as a result of the submission. Entry of a Bidder's SCC number may be required at Vendor Registration.

13. ERRORS IN EXTENSION

If the unit price and the extension price differ, the unit price will prevail.

14. EXCEPTIONS

Conditional or qualified bids containing exceptions, unless specifically allowed in the solicitation, are subject to rejection in whole or in part as nonresponsive.

15. NONCONFORMING TERMS AND CONDITIONS

If a bid contains alternate terms and conditions that do not conform to the terms and conditions in this solicitation, the bid will be subject to rejection for nonresponsiveness. The County reserves the right to permit a bidder to withdraw nonconforming terms and conditions from its bid prior to the County's determination of nonresponsiveness.

16. BIDDERS' RESPONSIBILITY TO INVESTIGATE

Before submitting a bid, each bidder must make all investigations necessary to ascertain all conditions and requirements affecting the full performance of the contract and to verify any representations made by the County upon which the bidder will rely. No pleas of ignorance of such conditions and requirements will relieve the successful bidder from its obligation to comply in every detail with all provisions and requirements of the contract or will be accepted as a basis for any claim for any monetary consideration on the part of the successful bidder.

17. SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

Each bidder is responsible for ascertaining the nature and locations of the Work of the solicitation, and for investigating the general and local conditions and factors which can affect the work or its cost, including but not limited to:

- a. conditions bearing upon transportation, disposal, handling, and storage of materials;
- b. the availability of labor, water, electric power, and roads;
- c. uncertainties of weather, river stage, tides, or similar physical conditions at the site;
- d. the conformation and conditions of the ground; and
- e. the character of equipment and facilities needed before and during work performance.

Each bidder is responsible for investigating the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work publicly or otherwise available, as well as from the drawings and specifications made a part of this solicitation.

The locations of existing utilities, including underground utilities, which may affect the work are indicated on the drawings or in the specifications insofar as their existence and location were known at the time of preparation of the drawings. However, nothing in these drawings or specifications shall be construed as a guarantee that such utilities are in the location indicated or that they actually exist, or that other utilities are not within the area of operations. The bidder shall make all necessary investigations to determine the existence and locations of such utilities.

The County assumes no responsibility for any conclusions or interpretations made by the bidder based on the information made available by the County. The County assumes no responsibility for any understanding reached or representation made concerning conditions which could affect the work by any of its officers or agents before the execution of the contract, unless that understanding, or representation is expressly stated in the Contract.

18. INCOMPLETE DOCUMENTS

Each bidder is responsible for having determined the accuracy and/or completeness of the solicitation documents upon which it relied in making its bid, and has an affirmative obligation to notify the Arlington County Purchasing Agent immediately upon discovery of an apparent or suspected inaccuracy, error in, or omission of any pages, drawings, sections, or addenda whose omission from the documents was apparent from a reference or page numbering or other indication in the solicitation documents.

If a bidder downloads an electronic version of the solicitation documents, that potential bidder is responsible for determining the accuracy and/or completeness of the electronic documents and ensuring that the electronic documents used in preparing the bid are the most current version of solicitation documents issued by the County.

If the successful bidder proceeds with any activity that may be affected by an inaccuracy, error in, or omission in the solicitation documents of which it is aware but has not notified the Arlington County Purchasing Agent, the bidder hereby agrees to perform any activity described in the missing or incomplete documents at bidder's sole expense and at no additional cost to Arlington County.

19. ERRONEOUS OR INFEASIBLE REQUIREMENTS

Each bidder is responsible for having determined the feasibility of the work required and shall notify the County Purchasing Agent immediately upon discovery of any apparent erroneous, contradictory, incomplete, or infeasible requirements or directions contained in the Solicitation Documents. If a bidder fails to notify the County of such conditions immediately upon discovery, the bidder assumes all responsibility for any and all work required to satisfy the contract requirements at no additional cost to the County and within the Time for Completion.

20. QUALIFICATION OF BIDDERS

In order to be considered responsible and responsive Bidders shall have the experience described below, and provide the supporting documentation as instructed.

COMPANY QUALIFICATIONS:

Bidders shall have three (3) continuous years construction contract experience conducting public works infrastructure and street improvement projects in an urban environment. The experience shall be work of similar size and scope, construction, re-construction, and maintenance. The Bidder's obtained project experience shall consist of the following:

- **State and County streets**
- **Curbs and gutters**
- **Sidewalks and walkways**
- **Driveway aprons**
- **Storm sewer pipes and inlets**
- **Wet Utilities**
- **Pavement markings and signage**
- **Electrical conduits**
- **Traffic signals and Street lighting**
- **Streetscapes and related site work**

Bidders shall provide a list of at least 5 similar projects recently completed within the last 5 years that involve the same material, equal size, and comparable length. For each project, Bidders shall list the following information:

- Project Name
- Project description and Bidder's scope of work within the project
- Project manager's name, telephone number and email address
- Work start date, scheduled completion, and actual completion date
- Initial contract cost and final contract cost

STAFFING QUALIFICATIONS:

Site Supervisor:

The Bidder shall have a qualified and experienced site supervisor who can clearly communicate technical matters on-site at all times when construction activity is occurring or when the site is not in a secure state. The Site Supervisor must have at least (5) years of experience in overseeing projects of similar type and size.

Safety Project Officer:

The Bidder shall have at least one (1) employee certified by VDOT in Basic Work Zone Traffic Control on-site at all times that work is occurring and be responsible for the following:

- Placement, maintenance, and removal of work zone traffic control devices,
- Compliance with permit requirements and conditions, approved plans and specifications, the Virginia Work Area Protection Manual, and the Manual of Uniform Traffic Control Devices.

The flagger shall be certified in accordance with the VDOT Flagger Certification Program, the American Traffic Safety Services Association Flagger Certification Program or any other VDOT approved flagger program. The flagger shall have his/her certification card with them at all times while performing flagging activities.

The Bidder shall have at least one (1) employee certified in OSHA 10 on-site at all times that work is occurring. The employee shall have served as a Project Safety Officer on at least three

(3) prior projects. If the contractor has multiple employees with these requirements, the Contractor shall clearly identify which employee shall serve as the Project Safety Officer.

Environmental Project Officer:

The Bidder shall have at least one (1) employee that has successfully completed the VDOT Erosion & Sediment Control Contractor Certification training. The bidder employee shall be on-site during all land disturbance activities.

Bidder shall submit resume of the proposed Site Supervisor with its bid submission. Bidder must also submit certification of VDOT Flagger Certification Program, the American Traffic Safety Service Association Flagger Certification Program or any other VDOT approved flagger program of the Safety Project Officer(s) with its bid submission. Bidder must also submit certification of VDOT Erosion & Sediment Control Contractor Certification training and the OSHA 10 Certification with its bid submission.

In addition, the Purchasing Agent may require a bidder to demonstrate that it has the necessary facilities, ability, and financial resources to comply with the contract and furnish the service, material or goods specified herein in a satisfactory manner before the award of any contract. A bidder may also be required to provide past history and references. Failure to qualify according to the foregoing requirements will result in bid rejection.

21. ALTERNATE BID

Bidders who have other items they wish to offer in lieu of, or in addition to, what is required by this solicitation shall submit a separate bid clearly marked "ALTERNATE BID". Alternate bids will be automatically deemed nonresponsive.

22. INFORMALITIES

The County reserves the right to waive minor defects or variations from the exact requirements of the solicitation in a bid insofar as those defects or variations do not affect the price, quality, quantity, or delivery schedule of the services being procured. If insufficient information is submitted for Arlington County to properly evaluate a bid or a bidder; the County may request such additional information after bid opening, provided that the information requested does not change the price, quality, quantity, or delivery schedule for the services being procured.

23. USE OF BRAND NAMES/ "OR EQUIVALENT" BIDS

Unless identified as a "No Equivalent" item in the solicitation, the name of a certain brand, make or manufacturer does not restrict bidders to that specific brand, make or manufacturer. The use of the brand, make or manufacturer's identification is intended to convey the general type, style, character, and quality of the article described. When a brand name is specified and followed by the phrase "or approved equal," the brand name product may be substituted if a suitable equivalent considering quality, workmanship, economy of operation, and suitability for the intended use, is accepted by the County Purchasing Agent.

The County may accept any equivalent item(s) that it considers suitable for the intended use.

For those items not identified as "No Equivalent", and followed by the phrase "or approved equal," the County has established the following procedure for determining the equivalency of a particular item:

Bidder Submission of Proposed Equivalent Item(s):

- 1) Bidder shall submit to the County its proposed item(s) for determination of their equivalency to the Brand Name(s) specified.
- 2) Each proposed item must be described on a separate page, indicating the appropriate specification section number, product or fabrication or installation method to be replaced, and specifics of the proposed item. Attach any technical information, photographs, brochures and the relevant data listed below that supports the proposed item and will permit the County to fairly determine acceptability of the item proposed:
 - a. Reasons why the specified product cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the product specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of Architects and owners, if requested.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Statement of impact on the construction schedule. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
 - i. Cost information.
 - j. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
- 3) The County will consider factors provided in the project technical specifications, such as relative costs, equivalency of features, serviceability, and the design of the item proposed.
- 4) All pages of the submission shall be marked with the name, address and contact information of the bidder, and sent via email to the Office of the Purchasing Agent to arrive prior to the question deadline established in Section I., paragraph I. ADDITIONAL INFORMATION. E-mail transmittals will be accepted at kschreiber@arlingtonva.us.

County Review of Proposed Equivalent Item(s):

- 1) Approved item(s) will be added to the solicitation, in the form of an Addendum to the solicitation, and forwarded to all bidders of record.
- 2) Bidders whose item(s) have not been approved will be so advised in writing simultaneously with the issuance of the Addendum.

24. NEW MATERIAL

Unless otherwise provided for in this solicitation, all goods, materials, supplies, or components offered to the County under this bid solicitation must be new, not used or reconditioned, and are not of such age or so deteriorated as to impair their usefulness or safety and that the goods, materials, supplies, or components offered are current production models of the respective manufacturer. If a bidder believes that furnishing used or reconditioned goods, materials, supplies or components will be in the County's interest, the bidder shall notify the County Purchasing Agent in writing no later than fifteen (15) calendar days prior to the date set for opening of bids. The notice shall include the reasons for the request and any benefits which may accrue to the County if the Purchasing Agent authorizes the bidding of used or reconditioned goods, materials, supplies or components.

25. BID WITHDRAWAL PRIOR TO BID OPENING

The Bidder may withdraw a bid from Vendor Registry before the opening date and time. It is the sole responsibility of the Bidder to remove and/or resubmit a bid before the bid deadline.

26. WITHDRAWAL OF BID FROM CONSIDERATION AFTER BID OPENING

After the opening of a bid, a bidder may withdraw its bid from consideration if the price of the bid is substantially lower than other bids due solely to a mistake therein, provided the bid is submitted in good faith, the mistake is a clerical mistake as opposed to a judgment mistake, and is actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of the bid, which unintentional error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. No partial withdrawals of bids will be permitted after the time and date set for the bid opening. The bidder must give an electronic written notice to the Arlington County Purchasing Agent of a claim of right to withdraw a bid and provide all work papers, documents and other materials used in the preparation of the bid sought to be withdrawn, within two (2) business days after the date of bid opening. A bid may also be withdrawn if the County fails to award or issue a notice of intent to award the bid within ninety (90) days after the date fixed for opening bids.

27. METHOD OF AWARD

The County will award to the lowest responsive and responsible bidder. The lowest bidder will be determined by Primary Contract amount.

28. NOTICE OF DECISION TO AWARD

When the County has made a decision to award a contract(s), the County will post a Notice of Award or Intent to Award to [Vendor Registry](#).

29. INSURANCE REQUIREMENTS

Each bidder must be able to demonstrate proof of the specific coverage requirements and limits applicable to this solicitation. If the bidder is not able to do so, it may propose alternate insurance coverage for consideration by the County. Written requests for consideration of alternate coverage must be received by the County Purchasing Agent at least 10 working days prior to bid due date. If the County permits alternate coverage, an amendment to the Insurance Checklist will be issued prior to the time and date set for receipt of bids.

30. SURETY REQUIRED

Companies who wish to implement digital signatures during the COVID-19 public health emergency may do so, along with a SURETY BOND SEAL ADDENDUM which contains an electronic corporate seal and states the following:

“Due to logistical issues associated with the use of traditional seals during this COVID-19 pandemic, [Surety Company] has authorized its Attorney-in-Fact to affix [Surety Company’s] corporate seal to any bond executed on behalf of [Surety Company] by any such Attorney-in-Fact by attaching this Addendum to said bond.

To the extent this Addendum is attached to a bond that is executed on behalf of [Surety Company] by its Attorney-in-Facts, [Surety Company] hereby agrees that the seal below shall be deemed affixed to said bond to the same extent as if its raised corporate seal was physically affixed to the face of the bond.”

A. BID SURETY:

A fully completed and properly executed original Bid Bond, cashier's check, certified check, money order, or cash escrow in the amount of 5% of the amount of the bid made payable to the Treasurer of Arlington County shall accompany each bid. The Bid Surety will be retained until after the award to the successful bidder. The Bid Surety of the successful bidder will be retained until completion of the Contract or the posting of a Performance Bond, whichever occurs sooner. A bid submitted without a proper bid surety will be rejected.

B. FAILURE TO EXECUTE:

The failure of a bidder to accept an award and file acceptable Performance and Payment Bonds within ten (10) days after award notice will cause cancellation of the award and the forfeiture of the Bid Surety to the County.

C. PERFORMANCE SURETY:

A fully completed and properly executed original Performance Bond in the amount of 100% of the amount of the bid will be required of the successful bidder to ensure satisfactory completion of the work. The bond shall be a corporate surety bond issued by a surety company authorized to do business in the Commonwealth of Virginia and acceptable to the County. Where applicable, the Performance Bond shall be renewable annually in the original amount through the completion of the Contract, including all warranty and guarantee periods.

D. PAYMENT BOND:

A fully completed and properly executed original Payment Bond in the amount of 100% of the amount of the bid, will be required of the successful bidder to ensure payment of all persons who have and fulfill contracts for the Contractor for performing labor, providing equipment, or providing material in the performance of the work provided for in the Contract. The Bond shall be a corporate surety bond issued by a surety company authorized to do business in the Commonwealth of Virginia and acceptable to the County. Where applicable, the Payment Bond shall be renewable annually in the original amount for the duration of the Contract.

31. EXECUTION OF CONTRACT

Within three days after the Contract is presented to the successful Bidder for signature, the Contractor must submit to the County Purchasing Agent the original of the executed Agreement. Within ten days the Contractor must submit executed performance and payment bonds and required certificate of insurance. Failure to do so shall constitute a default, and the County may award the Contract to the next lowest responsive and responsible bidder or solicit new bids. The County may then charge against the Contractor

the difference between the amount of the Contract award and the amount for which a Contract is subsequently executed, up to the total amount of the Contractor's bid security.

32. EXPENSES INCURRED IN PREPARING BID

All expenses related to a bid are the sole responsibility of the bidder.

33. OPTIONAL ESCROW AGREEMENT

If the successful bidder so elects, the bidder may utilize an escrow account for utilization of the retainage funds pursuant to § 2.2-4334 of the Code of Virginia. The bidder must indicate on the Bid Form whether or not it elects the escrow account procedure.

34. NEGOTIATIONS WITH LOWEST RESPONSIVE AND RESPONSIBLE BIDDER

If the bid by the lowest responsive and responsible bidder exceeds available funds, the County reserves the right to negotiate with the apparent low bidder to obtain an acceptable price. Negotiations with the apparent low bidder may involve discussions of reduction of quantity, quality, or other cost saving mechanisms. The final negotiated contract shall be subject to final approval of the County, in its sole discretion.

35. ELECTRONIC SIGNATURE

If awarded, the Bidder may be required to accept an agreement and sign electronically through the County's e-signature solution, DocuSign.

FOLLOWING THIS PAGE IS THE AGREEMENT THAT WILL BE ENTERED INTO BETWEEN THE COUNTY AND THE CONTRACTOR. THE AGREEMENT IS PART OF THIS SOLICITATION. THIS AGREEMENT IS SUBJECT TO REVIEW BY THE COUNTY ATTORNEY PRIOR TO BEING SUBMITTED FOR CONTRACTOR'S SIGNATURE.

II. AGREEMENT AND CONTRACT TERMS AND CONDITIONS



**ARLINGTON COUNTY, VIRGINIA
OFFICE OF THE PURCHASING AGENT
SUITE 500, 2100 CLARENDON BOULEVARD
ARLINGTON, VA 22201**

AGREEMENT NO. 23-DES-ITBPW-474

THIS AGREEMENT is made, on _____, between Contractor's name,
Contractor's address ("Contractor") a name of state type of entity
authorized to do business in the Commonwealth of Virginia, and the County Board of Arlington County,
Virginia ("County"). The County and the Contractor, for the consideration hereinafter specified, agree as
follows:

1. CONTRACT DOCUMENTS

The Contract Documents consist of:

- Agreement No. 23-DES-ITBPW-474, and all modifications properly incorporated into the Agreement
- Exhibit A – Arlington County Invitation to Bid No. 23-DES-ITBPW-474, including DES General Conditions, Special Conditions, and Supplementary Specifications
- Exhibit B – Virginia Department Of Labor And Industry Wage Determination Decision
- Exhibit C – Price Bid of Contractor
- Exhibit D – Contractor Performance Evaluation Form
- Exhibit E – Drawings
- Exhibit F – LDA Plan Set
- Exhibit G – Special Conditions
- Exhibit H – Materials Testing Specification
- Exhibit I – Test Holes
- Exhibit J – LUP Permit
- Exhibit K – LDA Green Card
- Exhibit L – VDOT Lane Closure Guidelines
- Exhibit M – List of State and Federal Roads in Arlington County
- Exhibit N – Change Order Forms
- Exhibit O – RFI Form

Where the terms and provisions of this Agreement vary from the terms and provisions of the other Contract Documents, the terms and provisions of this Agreement will prevail over the other Contract Documents, and the remaining Contract Documents will be complementary to each other. If there are any conflicts, the most stringent terms or provisions will prevail.

The Contract Documents set forth the entire agreement between the County and the Contractor. The County and the Contractor agree that no representative or agent of either party has made any representation or promise with respect to the parties' agreement that is not contained in the Contract Documents. The Contract Documents may be referred to below as the "Contract" or the "Agreement".

2. SCOPE OF WORK

The Contractor will furnish all labor, materials, and equipment for the construction of the N Glebe Road watermain replacement (the "Project") and all other work shown, described, and required by the Contract Documents (hereinafter "the Work").

The Work shall be performed according to the standards established by the Contract Documents read together as a single specification. It shall be the Contractor's responsibility, at solely the Contractor's cost, to provide sufficient services to fulfill the purposes of the Work. Nothing in the Contract Documents shall be construed to limit the Contractor's responsibility to manage the details and execution of its Work.

3. PROJECT OFFICER

The performance of the Contractor is subject to the review and approval of the County Project Officer identified in Section 53, Notices, unless the Contractor is otherwise notified in writing.

4. TIME FOR COMPLETION

Work under this Agreement shall achieve Substantial Completion no later than five hundred forty (540) consecutive calendar days after the commencement date given in a Notice to Proceed provided by the County to the Contractor, subject to any modifications made as provided for in the Contract Documents. This five hundred forty (540) day period shall be the Period of Performance for Substantial Completion. No Work shall be deemed Substantially Complete until it meets the requirements of Substantial Completion set forth in the General Conditions. Final Completion of the Work shall be completed no later than thirty (30) calendar days after the date of acceptance of Substantial Completion by the County Project Officer. Work will not reach Final Completion until it meets the requirements set forth in the General Conditions.

Unless otherwise provided, no claims for early completion are allowed.

5. CONTRACT AMOUNT

The County will pay the Contractor in accordance with the terms of the Progress Payments and Retainage and Payment Terms sections below and at the prices shown in Exhibit C, but not more than \$_____ for the Contractor's completion of the Work as required by the Contract Documents provided the Work is performed to the satisfaction of and is accepted by the Project Officer. The Contractor will complete the Work for the total amount specified in this section ("Contract Amount") unless such amount is modified as provided in this Agreement. The Contract Amount includes all of the Contractor's costs and fees (profit) and is inclusive of all anticipated or known site conditions, anticipated or known materials, labor, and equipment costs, or any other costs which should reasonably have been expected by the Contractor Documents.

6. PROGRESS PAYMENTS AND RETAINAGE

The County will make monthly progress payments to the Contractor upon written application by the Contractor, on the basis of a written estimate of the work performed during the preceding calendar month as approved by the Project Officer. However, 5% of each progress payment will be retained by the County until Final Completion and acceptance of all Work covered by the Agreement.

All material and work covered by partial payments will become the property solely of the County at the time the partial payment is made. However, the Contractor will have the sole responsibility, care and custody for all materials and work upon which payments have been made until Substantial Completion. When calculating payment for materials on-site, the County shall not pay for materials which are not scheduled for incorporation into the Work within sixty (60) days from the date of application for payment.

7. PAYMENT TERMS

The Contractor must submit invoices to the County's Project Officer, who will either approve the invoice or require corrections. The County will pay the Contractor 45 days after approval of an invoice for completed work which is reasonable and allocable to the Contract. All payments will be made from the County to the Contractor via ACH. The number of the County Purchase Order pursuant to work has been performed must appear on all invoices.

8. PAYMENT OF SUBCONTRACTORS

The Contractor is wholly responsible for the entire amount owed to any subcontractor with which the Contractor contracts in the performance of this Agreement, regardless of whether the Contractor has received payment from the County. The Contractor is not liable for amounts that are not owed as a result of the subcontractor's breach of its agreement with the Contractor, in which case the Contractor must notify the subcontractor in writing of its intention to withhold payment, in full or in part, and the reason for doing so.

The Contractor is obligated to take one of the two following actions within seven days after receipt of payment by the County for work performed by any subcontractor under this Contract:

- a. Pay the subcontractor for the proportionate share of the total payment received from the County attributable to the work performed by the subcontractor under this Contract; or
- b. Notify the County and the subcontractor, in writing, of the Contractor's intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment.

The Contractor is obligated to pay interest to the subcontractor on all amounts owed by the Contractor to the subcontractor that remain unpaid after seven days following receipt by the Contractor of payment from the County for work performed by the subcontractor under this Contract, except for amounts withheld as allowed in subsection b., above. Unless otherwise provided under the terms of this Contract, interest will accrue at the rate of 1% per month.

The Contractor must include in each of its subcontracts, if any are permitted, a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

The Contractor's obligation to pay an interest charge to a subcontractor pursuant to this section may not be construed to be an obligation of the County. A Contract modification may not be made for the purpose of providing reimbursement for such interest charge. A cost reimbursement claim may not include any amount for reimbursement for such interest charge.

9. PREVAILING WAGE CONTRACT REQUIREMENTS

- A. Section 4-104 of the Arlington County Purchasing Resolution (regarding “Prevailing Wage”) applies to this Contract. All employees of the Contractor and any subcontractors shall be paid wages, salaries, benefits, and other remuneration at or above the craft or trade category prevailing wage rate indicated by Virginia Commissioner of Labor and Industry (DOLI) and as listed in the contract.

The Contractor and its subcontractors shall submit all certified payrolls and statements of compliance weekly through the [eComply website](#). If the Contractor or any subcontractor does not have an eComply profile, a one-time registration process immediately following the Notice of Award or Notice of Intent to Award and training on system functionality are required for each non-registered entity. The Contractor shall also be responsible for reviewing subcontractor payrolls and ensuring that contract requirements are met.

In addition to applying the prevailing wage rates to its own employees, the Contractor shall include the provisions of this Article 4-104 in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor agrees to assume the obligation that the wage requirements will be observed in fulfilling the requirements of the Contract. The appropriate enforcement sanctions will be invoked against the Contractor and any such subcontractor in the event of such subcontractor’s failure to comply with any of the provisions of this Article 4-104.

All wage rates to be used are listed in this Contract in Exhibit B. While DOLI maintains a list of wage determinations online for reference purposes, only the wage determinations made in an official Wage Determination Decision, sent by DOLI to Arlington County, can be used to ascertain the exact rates to be paid for this Contract.

All rates are determined by DOLI and any appeals of specific classification may be made through the Wage Determination Appeal form available at <http://www.doli.virginia.gov/wp-content/uploads/2021/04/Appeal-for-Wage-Determination-Clarification.pdf>.

- B. Upon award of the Contract, the Contractor shall certify, under oath, to the Virginia Commissioner of Labor and Industry and to the County Prevailing Wage Compliance Manager, the pay scale for each craft and trade to be employed for, or to provide labor for, in the Work by the Contractor and any subcontractors. The Contractor’s certification shall include all information required by the Code of Virginia § 2.2-4321.3G.
- C. The Contractor shall ensure that each individual providing labor as a mechanic, laborer, worker or equivalent shall be accurately classified in confirmation with the Wage Determination.
- D. The Contractor shall post the prevailing wage rate for each craft and classification involved as determined by DOLI, including the effective date, in a prominent and easily accessible place at the work site during the time work is being performed. The posting must be in English and any other language that is primarily spoken by the individuals at the work site. Within 10 days of such posting the Contractor shall certify to the County Prevailing Wage Compliance Manager and DOLI its compliance with this subsection at https://www.doli.virginia.gov/wp-content/uploads/2021/04/PW_Posting_Compliance_Form.pdf;

- E. The Contractor must fully cooperate with the County Prevailing Wage Compliance Manager to ensure contract compliance requirements ,including but not limited to site visits, wage rate signage, contractor employee interviews, and the submission of certified payroll records.
- F. The Contractor must submit to the County Prevailing Wage Compliance Manager and DOLI, within five (5) working days of the end of each month, certification for each craft or trade employed on the project, specifying the total hourly amount paid to employees, including wages and applicable fringe benefits using the Pay Scale Certification Form at <https://www.doli.virginia.gov/wp-content/uploads/2021/04/DOLI-Pay-Scale-Certification-for-Public-Works-Projects.pdf>. The certification must itemize the amount paid in wages and each applicable benefit and list the names and addresses of any third party fund, plan or program to which benefit payments will be made on behalf of employees.
- G. The Contractor shall indemnify and hold harmless the County from any fines, demands, claims, suits, and damages, including attorney’s fees, resulting from the Contractor’s or any subcontractor’s failure to pay the Prevailing Wage.
- H. The Contractor and its subcontractors shall keep, maintain, and preserve (i) records relating to the wages paid to and hours worked by each individual performing the work of any mechanic, laborer, or worker; and (ii) a schedule of the occupation or work classification at which each individual performing the work of any mechanic, laborer, or worker on the construction project is employed each work day and week. The Contractor and its subcontractors shall make such records available to the Prevailing Wage Compliance Manager within 10 days of a request or per a regular schedule established in the Contract, and shall certify that records reflect the actual hours worked and the amount paid to its workers for whatever time period is requested. The Contractor and its subcontractors must preserve these records for a period of six (6) years after the expiration or earlier termination of the applicable contract.
- I. Any Contractor or subcontractor who pays any mechanic, laborer, or worker for services under this Contract less than the Prevailing Wage shall be liable to such individuals for the payment of all wages due, plus interest at an annual rate of eight percent (8%) from the dates wages were due; and shall be disqualified from bidding on public contracts with any public body until the Contractor or subcontractor has made full restitution. A willful violation of Article 4-104 is a Class I misdemeanor.
- J. For questions regarding Prevailing Wage, please email prevailingwage@arlingtonva.us.

10. RELEASE AND REQUEST FOR FINAL PAYMENT

In order to receive final payment upon Final Completion of the Project and before Final Acceptance, the Contractor must submit to the Project Officer a signed original notarized copy of the Arlington County Release and Request for Final Payment form per the General Conditions.

11. LIQUIDATED DAMAGES

Time is of the essence under this Contract. The Work must be completed within the Time for Completion. The County and the Contractor agree that damages for failure to achieve Substantial Completion of the Work by the date specified under Time for Completion are not susceptible to exact determination but that \$1758 per calendar day is in proportion to the actual loss that the County would suffer from such delay. Therefore, the Contractor will pay the County as liquidated damages \$1758 per day for each and

every day beyond the time for Substantial Completion that the County determines Substantial Completion has not achieved. The County and the Contractor also agree that damages for failure to achieve Final Completion of the Work by the date specified under Time for Completion are not susceptible to exact determination but that \$1758 per calendar day is in proportion to the actual loss the County would suffer from such delay. Therefore, the Contractor will pay the County as liquidated damages \$1758 per day for each and every day beyond the time for Final Completion until Final Completion is achieved.

AND

The County will be entitled to deduct liquidated damages against any sums owed by the County to the Contractor under this Contract. The Contractor hereby waives any defense as to the validity of any liquidated damages on grounds that such liquidated damages are void as penalties or are not reasonably related to actual damages.

12. BACKGROUND CHECK

All employees or subcontractors whom the Contractor assigns to work on this Contract must pass a County background check. The background check will include fingerprinting by the County Sheriff's Office and a credit check.

13. PERFORMANCE OF WORK BY THE CONTRACTOR

The Contractor shall perform on site, and with its own organization, at least eighty percent (80%) of the total direct labor and at least eighty percent (80%) of the total work in place to be performed under the Contract. Prior to award, the Contractor must demonstrate to the Project Officer's satisfaction that both of these standards will be met during contract performance. Labor and work to be counted when determining whether the Contractor has met the self-performance requirement shall not include any work that the Contractor performs under the supervision of a subcontractor.

The self-performance percentage may be reduced by an Amendment to the Contract, if during performance of the Work, the Contractor requests a reduction and the Project Officer determines that the reduction would be to the advantage of the County.

14. NON-APPROPRIATION

All payments by the County to the Contractor pursuant to this Contract are subject to the availability of an annual appropriation for this purpose by the County Board of Arlington County, Virginia ("Board"). In the event that the Board does not appropriate funds for the goods or services provided under this Contract, the County will terminate the Contract, without termination charge or other liability to the County, on the last day of the fiscal year or when the previous appropriation has been spent, whichever occurs first.

15. ESTIMATED QUANTITIES/NON-EXCLUSIVITY OF CONTRACTOR

This Contract does not obligate the County to purchase a specific quantity of items or services during Contract Term. Any quantities that are included in the Contract Documents are the present expectations of the County for the period of the Contract; and the County is under no obligation to buy that or any amount as a result of having provided this estimate or of having had any normal or otherwise measurable requirement in the past. The County may require more goods and/or services than the estimated annual quantities, and any such additional quantities will not give rise to any claim for compensation other than at the unit prices and/or rates in the Contract.

The County does not guarantee that the Contractor will be the exclusive provider of the goods or services covered by this Contract. The items or services covered by this Contract may be or become available under other County contract(s), and the County may determine that it is in its best interest to procure the items or services through those contract(s).

16. COUNTY PURCHASE ORDER REQUIREMENT

County purchases are authorized only if the County issues a Purchase Order in advance of the transaction, indicating that the ordering County agency has sufficient funds available to pay for the purchase. If the Contractor provides goods or services without a signed County Purchase Order, it does so at its own risk and expense. The County will not be liable for payment for any purchases made by its employees that are not authorized by the County Purchasing Agent.

17. LIEN

It is expressly agreed that after any payment has been made by the County either to the Contractor for work done, or labor or material supplied under the Contract, the County will have a lien upon all material delivered to the site either by the Contractor, or for the Contractor, which is to be used in the performance of the Contract.

18. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED

During the performance of its work pursuant to this Contract:

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, national origin, age, disability or on any other basis prohibited by state law. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation will be deemed sufficient for meeting the requirements of this section.
- C. The Contractor will state in all solicitations or advertisements for employees that it places or causes to be placed that such Contractor is an Equal Opportunity Employer.
- D. The Contractor will comply with the provisions of the Americans with Disabilities Act of 1990 ("ADA"), which prohibits discrimination against individuals with disabilities in employment and mandates that disabled individuals be provided access to publicly and privately provided services and activities.
- E. The Contractor must include the provisions of the foregoing paragraphs in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

19. EMPLOYMENT OF UNAUTHORIZED ALIENS PROHIBITED

In accordance with §2.2-4311.1 of the Code of Virginia, as amended, the Contractor must not during the performance of this Contract knowingly employ an unauthorized alien, as that term is defined in the federal Immigration Reform and Control Act of 1986.

20. DRUG-FREE WORKPLACE TO BE MAINTAINED BY CONTRACTOR

During the performance of this Contract, the Contractor must: (i) provide a drug-free workplace for its

employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violating such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "workplace" means the site(s) for the performance of the work required by this Contract.

21. SEXUAL HARASSMENT POLICY

If the Contractor employs more than five employees, the Contractor shall (i) provide annual training on the Contractor's sexual harassment policy to all supervisors and employees providing services in the Commonwealth, except such supervisors or employees that are required to complete sexual harassment training provided by the Department of Human Resource Management, and (ii) post the Contractor's sexual harassment policy in (a) a conspicuous public place in each building located in the Commonwealth that the Contractor owns or leases for business purposes and (b) the Contractor's employee handbook.

22. COVID-19 VACCINATION POLICY FOR CONTRACTORS

Due to the ongoing COVID-19 pandemic, the County has taken various steps to protect the welfare, health, safety, and comfort of the workforce and public at large. As part of these steps, the County has implemented various requirements with respect to health and safety including policies with respect to social distancing, the use of face-coverings and vaccine mandates. To protect the County's workforce and the public at large, all employees and subcontractors of the Contractor who are assigned to this Contract, should be fully vaccinated against COVID-19. Any contractor employee or subcontractor who is not fully vaccinated should be following a weekly testing protocol as established by the Contractor, unless exempt pursuant to a valid reasonable accommodation under state or federal law.

23. PROJECT STAFF

The County has the right to reasonably reject staff or subcontractors whom the Contractor assigns to the Project. The Contractor must then provide replacement staff or subcontractors satisfactory to the County in a timely manner and at no additional cost to the County. The day-to-day supervision and control of the Contractor's employees and its subcontractors is the sole responsibility of the Contractor.

24. FAILURE TO DELIVER

If the Contractor fails to deliver goods or services in accordance with the Contract terms and conditions, the County, after notice to the Contractor, may procure the goods or services from other sources and hold the Contractor responsible for any resulting additional purchase and administrative costs. The County shall be entitled to offset such costs against any sums owed by the County to the Contractor. However, if public necessity requires the use of nonconforming materials or supplies, they may be accepted at a reduction in price to be determined solely by the County.

25. UNSATISFACTORY WORK

If any of the work done, or material, goods, or equipment provided by the Contractor, is unsatisfactory to the County the Contractor must, upon notice from the County, immediately remove at the Contractor's expense such unsatisfactory work, material, goods, or equipment and replace the same with work,

material, goods, or equipment satisfactory to the County. If the Contractor fails to do so after fifteen (15) days the County shall have the right to remove or replace the rejected work, material, goods, or equipment at the expense of the Contractor and offset the expense and administrative costs against any sums owed to the Contractor. This provision applies during the Contract term and during any warranty or guarantee period. At the Project Officer's discretion, rather than correction or replacement of the work, an appropriate adjustment to the Contract Amount may be made.

26. TERMINATION

The County may terminate this Contract at any time as follows: (1) for cause, if, as determined by the County, the Contractor is in breach or default or has failed to perform the Work satisfactorily; or (2) for the convenience of the County.

Upon receipt of a notice of termination, the Contractor must not place any further orders or subcontracts for materials, services or facilities; must terminate all vendors and subcontracts, except as are necessary for the completion of any portion of the Work that the County did not terminate; and must immediately deliver all documents related to the terminated Work to the County.

Any purchases that the Contractor makes after the notice of termination will be the sole responsibility of the Contractor, unless the County has approved the purchases in writing as necessary for completion of any portion of the Work that the County did not terminate.

If any court of competent jurisdiction finds a termination for cause by the County to be improper, then the termination will be deemed a termination for convenience.

A. TERMINATION FOR CAUSE, INCLUDING BREACH AND DEFAULT; CURE

1. Termination for Unsatisfactory Performance. If the County determines that the Contractor has failed to perform satisfactorily, then the County will give the Contractor written notice of such failure(s) and the opportunity to cure them within 15 days or any other period specified by the County ("Cure Period"). If the Contractor fails to cure within the Cure Period, the County may terminate the Contract for failure to provide satisfactory performance by providing written notice with a termination date. Upon such termination, the Contractor may apply for compensation for Contract services that the County previously accepted ("Termination Costs"), unless payment is otherwise barred by the Contract. The Contractor must submit any request for Termination Costs, with all supporting documentation, to the County Project Officer within 30 days after the expiration of the Cure Period. The County may accept or reject the request for Termination Costs, in whole or in part, and may notify the Contractor of its decision within a reasonable time.

In the event of termination by the County for failure to perform satisfactorily, the Contractor must continue to provide its services as previously scheduled through the termination date, and the County must continue to pay all fees and charges incurred through the termination date.

2. Termination for Breach or Default. If the County terminates the Contract for default or breach of any Contract provision or condition, then the termination will be immediate after notice of termination to the Contractor (unless the County provides for an opportunity to cure), and the Contractor will not be permitted to seek Termination Costs.

Upon any termination pursuant to this section, the Contractor will be liable to the County for costs that the County must expend to complete the Work, including costs resulting from any related delays and from unsatisfactory or non-compliant work performed by the Contractor or its subcontractors. The County will deduct such costs from any amount due to the Contractor; or if the County does not owe the Contractor, the Contractor must promptly pay the costs within 15 days of a demand by the County. This section does not limit the County's recovery of any other damages to which it is entitled by law.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt the notice of the termination.

B. TERMINATION FOR THE CONVENIENCE OF THE COUNTY

The County may terminate this Contract in whole or in part whenever the Purchasing Agent determines that termination is in the County's best interest. The County will give the Contractor at least 15 days' notice in writing. The notice must specify the extent to which the Contract is terminated and the effective termination date. The Contractor will be entitled to Termination Costs, as defined above, plus any other reasonable amounts that the parties might negotiate; but no amount will be allowed for anticipatory profits.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt of the notice of the termination.

27. INDEMNIFICATION

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless and indemnify the County and all of its elected and appointed officials, officers, current and former employees, agents, departments, agencies, boards and commissions (collectively the "County Indemnitees") from and against any and all claims made by third parties for any and all losses, damages, injuries, fines, penalties, costs (including court costs and attorneys' fees), charges, liability, demands or exposure resulting from, arising out of or in any way connected with the Contractor's acts or omissions, including the acts or omissions of its employees, vendors, delivery drivers and/or subcontractors, in performance or nonperformance of the Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys' fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

28. INTELLECTUAL PROPERTY INDEMNIFICATION

The Contractor warrants and guarantees that in providing services under this Contract neither the Contractor nor any subcontractor is infringing on the intellectual property rights (including, but not limited to, copyright, patent, mask and trademark) of third parties.

If the Contractor or any of its employees or subcontractors uses any design, device, work or material that is covered by patent or copyright, it is understood that the Contract Amount includes all royalties, licensing fees, and any other costs arising from such use in connection with the Work under this Contract.

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless, and indemnify the County Indemnitees, as defined above, from and against any and all claims, losses, damages, injuries, fines, penalties, costs (including court costs and attorneys' fees), charges, liability or

exposure for infringement of or on account of any trademark, copyright, patented or unpatented invention, process or article manufactured or used in the performance of this Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys' fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

29. COPYRIGHT

By this Contract, the Contractor irrevocably transfers, assigns, sets over and conveys to the County all rights, title and interest, including the sole exclusive and complete copyright interest, in any and all copyrightable works created pursuant to this Contract. The Contractor will execute any documents that the County requests to formalize such transfer or assignment.

The rights granted to the County by this section are irrevocable and may not be rescinded or modified, including in connection with or as a result of the termination of or a dispute concerning this Contract.

The Contractor may not use subcontractors or third parties to develop or provide input into any copyrightable materials produced pursuant to this Contract without the County's advance written approval and unless the Contractor includes this Copyright provision in any contract or agreement with such subcontractors or third parties related to this Contract.

30. OWNERSHIP AND RETURN OF RECORDS

This Contract does not confer on the Contractor any ownership rights or rights to use or disclose the County's data or inputs.

All drawings, specifications, blueprints, data, information, findings, memoranda, correspondence, documents or records of any type, whether written, oral or electronic, and all documents generated by the Contractor or its subcontractors as a result of this Contract (collectively "Records") are the exclusive property of the County and must be provided or returned to the County upon completion, termination, or cancellation of this Contract. The Contractor will not use or willingly cause or allow such materials to be used for any purpose other than performance of this Contract without the written consent of the County.

The Records are confidential, and the Contractor will neither release the Records nor share their contents. The Contractor will refer all inquiries regarding the status of any Record to the Project Officer or to his or her designee. At the County's request, the Contractor will deliver all Records, including hard copies of electronic records, to the Project Officer and will destroy all electronic Records.

The Contractor agrees to include the provisions of this section as part of any contract or agreement related to this Contract into which it enters with subcontractors or other third parties.

The provisions of this section will survive any termination or cancellation of this Contract.

31. CONFIDENTIAL INFORMATION

The Contractor and its employees, agents and subcontractors will hold as confidential all County information obtained under this Contract. Confidential information includes, but is not limited to, nonpublic personal information; personal health information (PHI); social security numbers; addresses; dates of birth; other contact information or medical information about a person; and information

pertaining to products, operations, systems, customers, prospective customers, techniques, intentions, processes, plans and expertise. The Contractor must take reasonable measures to ensure that all of its employees, agents and subcontractors are informed of and abide by this requirement.

32. ETHICS IN PUBLIC CONTRACTING

This Contract incorporates by reference Article 9 of the Arlington County Purchasing Resolution, as well as all state and federal laws related to ethics, conflicts of interest or bribery, including the State and Local Government Conflict of Interests Act (Code of Virginia § 2.2-3100 et seq.), the Virginia Governmental Frauds Act (Code of Virginia § 18.2-498.1 et seq.) and Articles 2 and 3 of Chapter 10 of Title 18.2 of the Code of Virginia, as amended (§ 18.2-438 et seq.). The Contractor certifies that its bid was made without collusion or fraud; that it has not offered or received any kickbacks or inducements from any other offeror, supplier, manufacturer or subcontractor; and that it has not conferred on any public employee having official responsibility for this procurement any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

33. COUNTY EMPLOYEES

No Arlington County employee may share in any part of this Contract or receive any benefit from the Contract that is not available to the general public.

34. FORCE MAJEURE

Neither party will be held responsible for failure to perform the duties and responsibilities imposed by this Contract if such failure is due to a fire, riot, rebellion, natural disaster, war, act of terrorism or act of God that is beyond the control of the party and that makes performance impossible or illegal, unless otherwise specified in the Contract, provided that the affected party gives notice to the other party as soon as practicable after the force majeure event, including reasonable detail and the expected duration of the event's effect on the party.

35. AUTHORITY TO TRANSACT BUSINESS

The Contractor must, pursuant to Code of Virginia § 2.2-4311.2, be and remain authorized to transact business in the Commonwealth of Virginia during the entire term of this Contract. Otherwise, the Contract is voidable at the sole option of and with no expense to the County.

36. RELATION TO THE COUNTY

The Contractor is an independent contractor, and neither the Contractor nor its employees or subcontractors will be considered employees, servants or agents of the County. The County will not be responsible for any negligence or other wrongdoing by the Contractor or its employees, servants or agents. The County will not withhold payments to the Contractor for any federal or state unemployment taxes, federal or state income taxes or Social Security tax or for any other benefits. The County will not provide to the Contractor any insurance coverage or other benefits, including workers' compensation.

37. ANTITRUST

The Contractor conveys, sells, assigns and transfers to the County all rights, title and interest in and to all causes of action under state or federal antitrust laws that the Contractor may have relating to this Contract.

38. REPORT STANDARDS

The Contractor must submit all written reports required by this Contract for advance review in a format approved by the Project Officer. Reports must be accurate and grammatically correct and should not contain spelling errors. The Contractor will bear the cost of correcting grammatical or spelling errors and inaccurate report data and of other revisions that are required to bring the report(s) into compliance with this section.

Whenever possible, proposals must comply with the following guidelines:

- printed double-sided on at least 30% recycled-content and/or tree-free paper
- recyclable and/or easily removable covers or binders made from recycled materials (proposals with glued bindings that meet all other requirements are acceptable)
- avoid use of plastic covers or dividers
- avoid unnecessary attachments or documents or superfluous use of paper (e.g. separate title sheets or chapter dividers)

39. AUDIT

The Contractor must retain all books, records and other documents related to this Contract for at least five (5) years, unless otherwise specified in the Contract, or such period of time required by the County's funding partner(s), if any, whichever is greater, after the final payment and must allow the County or its authorized agents to examine the documents during this period and during the Contract Term. The Contractor must provide any requested documents to the County for examination within 15 days of the request, at the Contractor's expense. Should the County's examination reveal any overcharging by the Contractor, the Contractor must, within 30 days of County's request, reimburse the County for the overcharges and for the reasonable costs of the County's examination, including, but not limited to, the services of external audit firm and attorney's fees; or the County may deduct the overcharges and examination costs from any amount that the County owes to the Contractor. If the Contractor wishes to destroy or dispose of any records related to this Contract (including confidential records to which the County does not have ready access) within five (5) years after the final payment, unless otherwise specified in the Contract, or such period of time required by the County's funding partner(s), if any, whichever is greater, the Contractor must give the County at least 30 days' notice and must not dispose of the documents if the County objects.

The Purchasing Agent may require the Contractor to demonstrate that it has the necessary facilities, ability, and financial resources to comply with the Contract and furnish the service, material or goods specified herein in a satisfactory manner at any time during the term of this Contract.

40. ASSIGNMENT

The Contractor may not assign, transfer, convey or otherwise dispose of any award or any of its rights, obligations or interests under this Contract without the prior written consent of the County.

41. AMENDMENTS

This Contract may not be modified except by written amendment executed by persons duly authorized to bind the Contractor and the County.

42. ARLINGTON COUNTY PURCHASING RESOLUTION AND COUNTY POLICIES

Nothing in this Contract waives any provision of the Arlington County Purchasing Resolution, which is incorporated herein by reference, or any applicable County policy.

43. DISPUTE RESOLUTION

All disputes arising under this Agreement or concerning its interpretation, whether involving law or fact and including but not limited to claims for additional work, compensation or time, and all claims for alleged breach of contract must be submitted in writing to the Project Officer as soon as the basis for the claim arises. In accordance with the Arlington County Purchasing Resolution, claims denied by the Project Officer may be submitted to the County Manager in writing no later than 60 days after the final payment. The time limit for a final written decision by the County Manager is 30 days. Procedures concerning contractual claims, disputes, administrative appeals and protests are contained in the Arlington County Purchasing Resolution. The Contractor must continue to work as scheduled pending a decision of the Project Officer, County Manager, County Board or a court of law.

44. APPLICABLE LAW, FORUM, VENUE, AND JURISDICTION

This Contract is governed in all respects by the laws of the Commonwealth of Virginia; and the jurisdiction, forum and venue for any litigation concerning the Contract or the Work is in the Circuit Court for Arlington County, Virginia, and in no other court.

45. ARBITRATION

No claim arising under or related to this Contract may be subject to arbitration.

46. NONEXCLUSIVITY OF REMEDIES

All remedies available to the County under this Contract are cumulative, and no remedy will be exclusive of any other at law or in equity.

47. NO WAIVER

The failure to exercise a right provided for in this Contract will not be a subsequent waiver of the same right or of any other right.

48. SEVERABILITY

The sections, paragraphs, clauses, sentences, and phrases of this Contract are severable; and if any section, paragraph, clause, sentence or phrase of this Contract is declared invalid by a court of competent jurisdiction, the rest of the Contract will remain in effect.

49. ATTORNEY'S FEES

In the event that the County prevails in any legal action or proceeding brought by the County to enforce any provision of this Contract, the Contractor will pay the County's reasonable attorney's fees and expenses.

50. SURVIVAL OF TERMS

In addition to any statement that a specific term or paragraph survives the expiration or termination of this Contract, the following sections also survive: INDEMNIFICATION; INTELLECTUAL PROPERTY INDEMNIFICATION; RELATION TO COUNTY; OWNERSHIP AND RETURN OF RECORDS; AUDIT; COPYRIGHT; DISPUTE RESOLUTION; APPLICABLE LAW AND JURISDICTION; ATTORNEY'S FEES, AND CONFIDENTIAL INFORMATION.

51. HEADINGS

The section headings in this Contract are inserted only for convenience and do not affect the substance of the Contract or limit the sections' scope.

52. AMBIGUITIES

The parties and their counsel have participated fully in the drafting of this Agreement; and any rule that ambiguities are to be resolved against the drafting party does not apply. The language in this Agreement is to be interpreted as to its plain meaning and not strictly for or against any party.

53. NOTICES

Unless otherwise provided in writing, all legal notices and other formal communications required by this Contract are deemed to have been given when either (a) delivered in person; (b) delivered by an agent, such as a delivery service; or (c) deposited in the United States mail, postage prepaid, certified or registered and addressed as follows:

TO THE CONTRACTOR:

TO THE COUNTY:

_____, Project Officer

AND

Dr. Sharon T. Lewis, LL.M, MPS, VCO, CPPB
Purchasing Agent
Arlington County, Virginia
2100 Clarendon Boulevard, Suite 500
Arlington, Virginia 22201
Phone: (703) 228-3294
Email: slewis1@arlingtonva.us

TO COUNTY MANAGER’S OFFICE (FOR PROJECT CLAIMS):

Mark Schwartz, County Manager
Arlington County, Virginia
2100 Clarendon Boulevard, Suite 318
Arlington, Virginia 22201

54. NON-DISCRIMINATION NOTICE

Arlington County does not discriminate against faith-based organizations.

55. INSURANCE, PAYMENT AND PERFORMANCE BONDS

The Contractor shall maintain the required insurance coverage and payment and performance bonds as set forth in the Invitation to Bid through completion of the Contract, including all warranty and guarantee periods.

56. MATERIAL CHANGES

The Contractor shall notify Purchasing Agent within seven days of any material changes in its operation that relate to any matter attested regarding certifications on its bid form.

57. CONTRACTOR PERFORMANCE EVALUATION

Arlington County will perform written evaluations of the Contractor's performance at various intervals throughout the term of this Contract. The evaluations will address, at a minimum, the Contractor's work/performance, quality, cost controls, schedule, timeliness and sub-contractor management. The Project Officer shall be responsible for completing the evaluations and providing a copy to the Contractor and County Procurement Officer.

58. COUNTERPARTS

This Agreement may be executed in one or more counterparts and all of such counterparts shall together constitute one and the same instrument. Original signatures transmitted and received via facsimile or other electronic transmission (e.g., PDF or similar format) are true and valid signatures for all purposes hereunder and shall be effective as delivery of a manually executed original counterpart.

WITNESS these signatures:

THE COUNTY BOARD OF ARLINGTON
COUNTY, VIRGINIA

CONTRACTOR

AUTHORIZED
SIGNATURE: _____

AUTHORIZED
SIGNATURE: _____

NAME: _____

NAME: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

III. ARLINGTON COUNTY CONSTRUCTION GENERAL CONDITIONS
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A. INTRODUCTION TO TERMS

- 1) The term "Agreement" means the completed and signed Form of Contract Agreement.
- 2) The term "Award Date" means the date of execution of the Agreement by the Purchasing Agent.
- 3) The term "Business Day" shall refer to any day that the County is open for general business.
- 4) The term "Calendar Day" means any day of twenty-four hours measured from midnight to the next midnight. Included are weekends and holidays. When the term "Day" is used it shall be assumed to refer to a Calendar Day unless otherwise specified.
- 5) The term "Change Order" means a written order to the Contractor, signed by the Project Officer and the Contractor, which authorizes a change in the Work, and/or adjustment to the Contract Amount and/or an adjustment to the Time for Completion. A Change Order once signed by all the parties is incorporated into and becomes part of the Contract.
- 6) The term "Commencement Date" means the date on which the Time for Completion will commence for the Contractor to begin to perform his obligations under the Contract Documents as provided in the Notice to Proceed.
- 7) The term "Construction Change Directive" means a written order issued by the County directing a change in the Work prior to agreement on adjustment, if any, in the Contract Amount or Contract Time, or both.
- 8) The term "Contract Documents" means the Agreement and all the documents and Exhibits and/or Attachments identified therein which shall include the Drawings and the Specifications, and all modifications including amendments and subsequent Change Orders thereto properly incorporated in the Contract.
- 9) The terms "County" and "Contractor" shall mean the respective parties to the Contract. They shall be treated throughout the Contract Documents as though each were of the singular number and masculine gender. Only one Contractor is recognized as a party to this Contract.
- 10) The term "Critical Path Method or CPM" means a step-by-step project management technique for process planning that defines critical and non-critical tasks with the goal of preventing time-frame problems and process bottlenecks. An activity on the critical path cannot be started until its predecessor activity has been completed. is delayed then the entire project is delayed.
- 11) The term "Delay" means an event or condition that results in a work activity starting or being completed later than originally planned.

- 12) The term "Drawings" means all drawings pertaining to the Contract, including the Contract Drawings and Construction Notes which show and describe the locations, character, dimensions, and details of the Work to be performed under the contract.
- 13) The term "Field Order" is a written order to the Contractor, authorized by the Project Officer, which acknowledges a change in the Work that does not adjust the Contract Amount and does not adjust the Time for Completion.
- 14) The term "Final Acceptance" shall mean the date on which the County issues the final payment for the Work.
- 15) The term "Final Completion" shall mean the condition when the County agrees that all the Work has been fully completed in accordance with the Contract Documents and is acceptable. The date of the Final Completion of the Work under the Contract is the date on which Final Completion is accomplished.
- 16) The term "Float" shall represent the amount of time that a task in a project network or sequence can be delayed without causing a delay to: subsequent tasks ("free Float") or project completion date ("total Float"). Float shall belong to the County and shall be used for the successful completion of the Project within the Time for Completion.
- 17) The term "Limits of Disturbance (LOD)" shall represent the area within which land disturbing activities take place. Land disturbing activities include all actions that expose bare soil during construction.
- 18) The term "Limits of Work (LOW)" shall represent the area within which construction activities take place, including but not limited to the Limits of Disturbance area.
- 19) The term "Notice to Proceed" shall mean a written notice issued by the County to the Contractor stating the Commencement Date. The Notice to Proceed will specify the Time for Completion of the Contract.
- 20) The term "Project" means the entire proposed construction to be executed as stipulated in the Contract Documents
- 21) The term "Project Officer" means the County Project Officer assigned by the Director of the County Department responsible for the project, or the Director's designee. When a designee to act on behalf of the Project Officer is used by the County, the name of the designee and the duties and authority of such designee will be identified in the Contract Documents or in a written notice to the Contractor from the Project Officer responsible for the project. The designee may be a professional architect or engineer or other person employed by the County to perform construction services administration, design services, or project oversight.

- 22) The term "Punch List" means unfinished items of the construction of the Project, which unfinished items of construction are minor or insubstantial details of construction, mechanical adjustment or decoration remaining to be performed, the non-completion of which would not materially affect use of the Project, and which are capable of being completed within the time specified for Final Completion after Substantial Completion has been achieved.
- 23) The term "Request for Information" (RFI) means a request originated by the Contractor requesting clarification or additional information from the Project Officer and/or Architect/Engineer concerning information in the construction documents where the Contractor believes there is insufficient information or a conflict in the documents. RFI's shall be submitted by the Contractor sufficiently in advance of the Work to provide time for assessment and response without delay of the Work. Responses to RFI's shall not be construed as authorization for a Change Order.
- 24) The term "Schedule of Values" means a listing of the Contractor's total contract value by Construction Specifications Institute (CSI) divisions, including Division 1, Contractor's General Conditions.
- 25) The term "Site" refers to that portion of the property on which the Work is to be performed or which has otherwise been set aside for use by the Contractor.
- 26) The terms "Special Conditions" mean the written statements modifying or supplementing the Technical Specifications or General Conditions for requirements or conditions peculiar to the Contract.
- 27) The term "Specifications" means and shall include the Technical Specifications, the Special Conditions and all written agreements and instructions pertaining to the performance of the Work.
- 28) When used, the term "Stipulated Price Item" means and includes an item of Work, unanticipated or of unknown quantity at the time of issuance of the solicitation for a Bid and determined to be executed, based on the actual field conditions during the progress of Work under the Contract. The Unit Price for the "Stipulated Price Item", as identified in the "Stipulated Price Items" section of the Bid Form, is predetermined by the County as the current reasonably workable rate for the Item inclusive of all necessary labor, equipment, materials, overheads (provision and installation), and the contractor's profit.
- 29) The term "Subcontractor", shall include only those having a direct contract with the Contractor, and it shall include those who furnish material worked to a special design according to the plans and specifications for this Work but shall not include those who merely furnish material not so worked.

- 30) The term "Substantial Completion" shall mean the condition when the County agrees that the Work, or a specific portion thereof, is sufficiently complete, in accordance with the Contract Documents, so that it can be utilized by the County for the purposes for which it was intended. The date of Substantial Completion of the Work under the Contract is the milestone date on which Substantial Completion condition is accomplished.
- 31) The term "Technical Specifications" means that part of the Contract Documents that describe the quality of materials, method of installation, standard of workmanship, and the administrative and procedural requirements for the performance of the Work under the contract.
- 32) The term "Time for Completion" shall mean the time period set forth in the Agreement.
- 33) The term "Work" shall mean the services performed under this Contract including, but not limited to, furnishing labor, and furnishing and installing materials and equipment required to complete the Project specified in the Contract Documents.

B. DRAWINGS, SPECIFICATIONS, RELATED DATA AND RECORDS KEEPING

1. INTENT OF THE DRAWINGS AND SPECIFICATIONS

- a. It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, water haulage, light power, transportation, superintendence, temporary construction of all kinds, and other services and facilities of every nature whatsoever that are necessary to execute and deliver the Work, complete and usable within the scope of the Contract with all parts in working order, and all connections properly made.
- b. The general character and scope of the Work are illustrated by the Drawings and listed in the Specifications. Any additional drawings and or other instructions deemed necessary by the Project Officer or designee will be furnished to the Contractor when required for the Work and shall be incorporated into the Contract Documents.
- c. Where "as shown", "as indicated", "as detailed", or words of similar import are used, it shall be understood that direction, requirements, permission, or review of Project Officer or designee is intended unless stated otherwise. As used herein, "provide" shall be understood to mean "provide complete in place", that is, "furnish and install."
- d. Unless otherwise specifically noted, the word "similar" where it occurs in the Drawings, shall be interpreted in its general sense and not as meaning identical, and all details shall be worked out in relation to their locations and their connection with other parts of the Work.
- e. Materials or work described in words which, so applied, have a well-known technical, construction industry, or trade meaning, shall be held to refer to the recognized technical or trade meaning.
- f. The Contract Documents are complementary, and what is called for by any one document shall be as binding as if called for by all documents. In case of conflicting variance between the Contract Documents, the Order of Precedence stated in the Agreement shall govern. Figured dimensions on the plans shall be used; drawings shall not be scaled.
- g. Unless otherwise specifically noted, construction tolerances shall be to the numerical precision presented in the Contract Drawings.

2. DISCREPANCIES AND ERRORS

If the Contractor discovers any discrepancies between the Drawings and Specifications and the site conditions or any errors or omissions in the Drawings or Specifications, the Contractor shall at once, but in no event later than three calendar days after discovery of

the discrepancy or error, report them in writing to the Project Officer or designee. If the Contractor proceeds with any work that may be affected by such discrepancies, errors, or omissions, after their discovery, but before a clarification is provided, such work shall be at the Contractor's risk and expense. Issues affecting critical path activities shall be made known to the Project Officer or designee within one business day after discovery.

3. DIFFERING SITE CONDITIONS

The Contractor shall immediately, and before the conditions are further disturbed, give notice to the Project Officer of subsurface or latent physical conditions at the site which differ materially from those indicated in this Contract, or previously unknown physical conditions discovered at the site of an unusual nature and which differ materially from those ordinarily expected to be encountered at the site. Such notice shall be followed by a written notice provided within 48 hours of discovery.

The Project Officer will investigate the site conditions promptly after receiving the notice. If the conditions do materially differ to the extent that an increase or decrease would result in the Contractor's cost of the Work, or the time required for performing any part of the Work under the contract, an equitable adjustment may be made under this clause and the Contract modified in writing accordingly.

No request by the Contractor for an adjustment to the Contract under this clause shall be allowed, unless the Contractor has given the written notice required. If the Contractor proceeds with any work that may be affected by such differing site conditions before giving notice to the Project Officer as set forth herein, such work shall be at the Contractor's sole risk and expense.

No request by the Contractor for an adjustment to the contract for differing site conditions shall be allowed if made after Final Payment under the Contract.

4. COPIES FURNISHED

Except as provided for otherwise, copies of the Drawings and Specifications reasonably necessary for the execution of the Work will be furnished to the Contractor. One electronic copy of the Contract Drawings and Specifications will be provided by the Project Officer or designee to the Contractor.

5. USE OF CADD FILES

The Contractor may request Electronic CADD files related to the Work or the Project. The CADD files will be provided by the County only if the Contractor completes the Arlington County Electronic CADD Drawing Release Form, which form is then incorporated by reference into this Contract. Use of CADD files is at the Contractor's own risk and in no way alleviates Contractor's responsibility for the Work to conform to the Plans and Specifications.

6. DOCUMENTS ON THE JOBSITE

The Contractor shall keep on the site of the Project a copy of the Drawings and Specifications updated to include all authorized revisions and RFI responses, and

shall at all times give the County and its authorized representatives access thereto. The Contractor shall mark up the Drawings on a daily basis in red. The As-Built Drawings shall be submitted to the County at Substantial Completion as the Final As-Built Drawings.

7. OWNERSHIP OF DRAWINGS AND SPECIFICATIONS

All Drawings and Specifications and copies thereof furnished by the County are the property of the County and shall not be used on other projects. All copies of the Drawings and Specifications except the signed Contract sets shall be returned to the Project Officer or designee at Final Completion.

8. SUBMITTALS

- a. The term "submittals", as used herein, shall include fabrications, erection and setting drawings, manufacturers' standard drawings, schedules, descriptive literature, catalogs, brochures, performance and test data, wiring and control diagrams, and other descriptive data pertaining to the materials and equipment as required to demonstrate compliance with the Contract requirements.
- b. Unless other specified in the Specifications the Contractor shall submit for the review of the Project Officer or designee a listing of all submittals required by the Specifications or requested by the Project Officer or designee within fifteen (15) calendar days after receipt of the Notice to Proceed. This listing shall include due dates for each required submittal, coordinated with the project schedule such that adequate time is allotted for review and potential resubmittals, fabrication and delivery without causing delay. The Contractor bears all risk for delay associated with submittals not received in a timely manner.
- c. Submittals shall be submitted in such number of copies as established in the Specifications. Each submission shall be accompanied by a letter of transmittal, listing the contents of the submission and identifying each item by reference to specification section or drawing. All submittals shall be clearly labeled with the name of the project and such information as may be necessary to enable their complete review by the Project Officer or designee. Catalog plates and other similar material that cannot be so labeled conveniently shall be bound in suitable covers bearing the identifying data.
- d. Submittals shall be accompanied by all required certifications and other such supporting material, and shall be submitted in sequence or groups that all related items can be checked together. When submittals cannot be checked because a submission is not complete, or because submittals on related items have not been received by the Project Officer or designee, then such submittals will be returned without

action or will be held, not checked, until the missing material is received. Incomplete or defective submittals shall not be considered to have been submitted. Failure to deliver submittals within the specified time will not be grounds for additional time or compensation.

- e. Submittals shall have been reviewed by the Contractor and coordinated with all other related or affected work before they are submitted for review and acceptance and shall bear the Contractor's certification that the Contractor has checked and approved them as complying with all relevant information in the Contract Documents. Submittals submitted without such certification and coordination will be returned to the Contractor without action and will not be considered as a formal submission.
- f. If shop drawings show variations from the Drawings and Specifications because of standard shop practice or other reasons, the Contractor shall make specific mention of such variation in the Contractor's letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment; otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Drawings and Specifications even though shop drawings have been accepted.
- g. The Project Officer or designee shall review the shop drawings with reasonable promptness. Review and/or acceptance of shop drawings will be general for conformance with the design concept of the Project and compliance with the information given in the Contract Documents, and will not include quantities, detailed dimensions, nor adjustments of dimensions to actual field conditions. Acceptance shall not be construed as permitting any departure from Contract requirements, as authorization of any increase in price nor as relieving the Contractor of the responsibility for any error in details, dimensions or otherwise that may exist. Review is not intended to relieve the contractor of full responsibility for the accuracy and completeness of the plans and calculations, or for the complete compliance with the contract documents. Contractor is solely responsible for the means and methods of the construction, including temporary items proposed for use.

9. SAMPLES

The Contractor shall submit to the Project Officer or designee, all samples required by the Specifications or requested by the Project Officer or designee. Samples shall be submitted in single units only, unless the Contractor desires additional units for the Contractor's own use. Each sample shall bear a label indicating what the material represented, the name of the producer and the title of the Project. Acceptance of a sample shall be only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents, and only for the characteristics or use named in such acceptance. Such acceptance shall not be construed to change or modify any Contract requirements or the Contract Price. Materials and equipment

incorporated in the Work shall match the accepted samples. The Contractor shall be responsible for researching the availability of the specified product in the dimensions and colors specified at no additional cost to the County. Failure of the Contractor to identify specified products that are not commercially produced within the time required for submittal transmittal in order to meet the project schedule shall not be entitled to additional time or compensation.

10. TESTS

Any specified tests of materials and finished articles shall be made by bureaus, laboratories or agencies approved by the Project Officer or designee and the certified reports of such tests shall be submitted to the Project Officer or designee. All tests shall be in compliance with the Specifications. All costs in connection with the testing and test failures shall be borne by the Contractor. Failure of any material to pass the specified tests or any test performed by the Project Officer or designee, will be sufficient cause for refusal to consider, under this Contract, any further materials of the same brand or make of that material. Samples of various materials delivered on the site or in place may be taken by the Project Officer or designee for testing. Samples failing to meet the Contract requirements will automatically void previous acceptance of the items tested. The Contractor will not be compensated for additional time and/or cost incurred in finding an acceptable replacement or the removal and replacement of the defective item.

11. MATERIALS AND EQUIPMENT LIST

- a. Unless otherwise specified in the Specifications, within thirty (30) days of the Commencement Date the Contractor shall submit to the Project Officer or designee a complete list of materials and equipment proposed for use in connection with the Project. Partial lists submitted from time to time will not be considered unless specifically approved by the Project Officer or designee.
- b. After any material or piece of equipment has been approved through submittal process, no change in brand or make will be permitted unless satisfactory written evidence is presented to prove that the manufacturer cannot make scheduled delivery of the accepted material, or that material delivered has been rejected and the substitution of a suitable material is an urgent necessity, or that other conditions have become apparent which indicate that acceptance of such other material is in the best interest of the County. The Contractor is solely responsible for the cost and time required to obtain and install a suitable replacement.

12. STANDARDS, SUBSTITUTIONS

- a. Any material specified by reference to the number, symbol or title of a specific standard, such as a Commercial Standard, a Federal

Specification, a Trade Association Standard, or other similar standard, shall comply with the requirements in the latest revision of the standards or specification and any amendment or supplement, except as limited to type, class or grade, or as modified in such reference. The standard referred to, except as modified in the Specifications, shall have full force and effect as though printed in the Specifications.

- b. Reference in the Specifications or on the Drawings to any article, device, product, material, fixture, form or type of construction by name, make or catalog number shall be interpreted as establishing a standard of quality and shall not be construed as eliminating from competition other products of equal or better quality by other approved manufacturers. Otherwise, applications for acceptance of substitutions for the specified items will be considered only upon request of the Contractor, not of individuals, trades or suppliers, and only for a specific purpose; no blanket acceptance will be granted. No acceptance of a substitution shall be valid unless it is in written form and signed by the Project Officer or designee.
- c. If any proposed substitution will affect a correlated function, adjacent construction or the work of other contractors, then the necessary changes and modifications to the affected work shall be considered as an essential part of the proposed substitution, to be accomplished by the Contractor without additional expense to the County or an extension of the contract time, if and when accepted. Detail drawings and other information necessary to show and explain the proposed modifications shall be submitted with the request for acceptance of the substitution.

13. SURVEYS AND CONTROLS

Unless otherwise specified, the Contractor shall establish all baselines for the location of the principal component parts of the Work, establish a suitable number of benchmarks adjacent to the Work, and develop all detail surveys necessary for construction by a professional land surveyor licensed in the Commonwealth of Virginia. The Contractor shall carefully preserve benchmarks, reference points and stakes, and in the case of destruction thereof by the Contractor or due to the Contractor's negligence or the negligence of any subcontractor or supplier, the Contractor shall be responsible for expense and damage resulting therefrom and shall be responsible for any mistakes that may be caused by the loss or disturbance of such benchmarks, reference points and stakes. The Contractor shall within 30 days of NTP perform a full site survey to verify all control points shown on the drawings against existing conditions within the site limits. Any discrepancies found during this effort shall be made known immediately to the Project Officer. Failure to perform this survey and provide proof and acceptance of Project datum, control points, and existing benchmarks will not give rise to any extensions to contract time or amount. The cost of all necessary surveying services shall be considered incidental to the work and, unless otherwise specified, shall be included in the cost of the Work.

14. AS-BUILT DRAWINGS

As-Built Drawings shall be the responsibility of the Contractor. The Contractor shall maintain and mark up one set of prints of the applicable Contract Drawings to portray as-built construction. The prints shall be neatly and clearly marked in red to show all variations between the Work actually provided and that indicated on the Contract Drawings, and all utilities encountered in the Work. All drafting shall conform to good drafting practice and shall include such supplementary notes, legends and details as may be necessary for legibility and clear portrayal of the as-built construction. These drawings shall be marked promptly upon any approved change to the Work or discovery of any undocumented utility or obstruction and shall be submitted to the Project Officer or designee in sufficient time to be approved no later than thirty (30) calendar days after the Substantial Completion Date. The final As-Built Drawings approved by the Project Officer or designee shall be submitted in paper copy and .pdf format electronic files prior to Final Completion. Unless otherwise required under the Contract Documents, incorporation of red-lined changes into CADD format shall be the responsibility of the Architect and/or Engineer of Record, with the exception being any documents prepared by the Contractor in CADD, the record version of which shall also be provided to the County in CADD format by the Contractor. Final payments will be held until the complete set of red-line drawings are submitted to and approved by the Project Officer.

15. WEB BASED RECORDS DOCUMENTATION

Unless instructed otherwise, the Contractor shall use the web based construction management tool, e-Builder for, but not limited to, submittals, record keeping and document storage of all construction files including, invoices, pay applications, RFIs, approved shop drawings, change orders, construction progress meeting minutes, warranties, equipment specifications and brochures, record drawings, automated alerts and reminders for all functions, and Operation and Maintenance (O&M) Manuals.

C. COUNTY, COUNTY PROJECT OFFICER, AND CONTRACTOR RELATIONS

1. STATUS OF COUNTY PROJECT OFFICER OR DESIGNEE

The Project Officer or designee shall be the County's representative during the construction period. All Contractor instructions or requests shall be issued from or submitted through the Project Officer or designee. The Project Officer or designee shall have authority to suspend the Work whenever such suspension may be necessary in the responsible opinion of the Project Officer or designee to ensure the proper execution of the Contract. The Project Officer or designee shall also have authority to reject all work and materials that do not conform to the Contract and to decide questions that arise in the execution of the Work. The County Project Officer or designee will, within a reasonable time, make decisions on all matters relating to the execution and progress of the Work.

2. LIMITATION ON COUNTY'S RESPONSIBILITIES

The County shall not supervise, direct, or have control or authority over, nor be responsible for: The Contractor's means, methods, techniques, sequences or procedures of construction; the safety precautions and programs related to safety, or the Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

3. DISPUTES

- a. All disputes or claims arising under this Contract or its interpretation, whether involving law or fact or both, or extra work, and all claims for alleged breach of Contract shall be submitted in writing to the Project Officer or designee as set forth in these General Conditions. Such claims must set forth in detail the amount of the claim, and shall state the facts surrounding it in sufficient detail to identify it together with its character and scope.
- b. Claims denied by the Project Officer shall be processed in accordance with the procedures outlined in Sections 7-107, Contractual Disputes and 7-108, Legal Actions of the Arlington County Purchasing Resolution and the Dispute Resolution paragraph in the Agreement.
- c. The Contractor shall not cause a delay in the work pending a decision of the Project Officer or designee, County Manager, County Board, or court, except by prior written approval of the Project Officer or designee.

4. INSPECTION OF WORK

The Project Officer or designee and representatives of any public authority having jurisdiction shall, at all times, have access to the Work while in progress. The Contractor shall provide suitable facilities for such access and for proper observation of the Work and shall conduct all special tests required by the Specifications, the Project Officer or designee's instructions, and any laws, ordinances or the regulations of any public

authority applicable to the work. Nothing in this section shall abrogate or otherwise limits or relieves the Contractor's independent duty to inspect the Work.

5. INSPECTION OF MATERIALS

All articles, materials, and supplies purchased by the Contractor for the Work are subject to inspection upon delivery to the site and during manufacturing or fabrication. The County reserves the right to return for full credit, at the risk and expense of the Contractor, all or part of the articles, materials, or supplies furnished contrary to Specifications and instructions. Nothing in this section shall abrogate or otherwise limit or relieve the Contractor's independent duty to inspect materials.

6. EXAMINATION OF COMPLETED WORK

If the Project Officer or designee requests it, the Contractor, at any time before acceptance of the Work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the Specifications. Should the work thus exposed or examined prove acceptable, then the uncovering or removing, and the replacing of the covering or making good of the parts removed shall be paid for as extra work, but should the work so exposed or examined prove unacceptable, then the uncovering, removing and replacing shall be at the Contractor's expense.

7. RIGHT TO SUSPEND WORK

The County shall have the authority to suspend the Work, in whole or in part, for such periods and such reasons as the County may deem necessary or desirable. Any such suspension shall be in writing to the Contractor and the Contractor shall obey such order immediately and not resume the Work until so ordered in writing by the County. No such suspension of the Work shall be the basis for a claim by the Contractor for any increase in the Contract Amount provided that the suspension is for a reasonable time under the circumstances then existing. If the suspension of Work is caused by the County's belief that non-conforming work is being installed, and subsequent investigation proves that the Work was non-conforming, the Contractor shall not be awarded additional time or costs.

8. RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a 10-day period after receipt of written notice from the County or such shorter time as may be reasonable under the circumstances, to commence and continue correction of such default or neglect with diligence and promptness, the County may, without prejudice to other remedies the County may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including the County's expenses, and any additional architect or engineering costs necessary by Contractor's default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the County upon demand.

9. CONTRACTOR MANAGEMENT PERSONNEL

The Contractor shall keep a competent superintendent and any necessary assistants on the Site at all times during progress of the Work and such persons shall be satisfactory to the Project Officer or designee. The superintendent or project manager shall not be changed except with the Project Officer or designee's consent. If the Project Officer determines that the superintendent or project manager is no longer satisfactory, then the superintendent or project manager must be replaced within 15 days of the Project Officer's written notice with a replacement superintendent or project manager with equal or superior qualifications and subject to Project Officer approval.

The superintendent and project manager shall represent the Contractor and all directions given to such persons shall be as binding as if given to the Contractor. The Contractor shall at all times enforce strict discipline and good order among the workers performing under this Contract, and shall not employ on the Work any person not reasonably proficient in the Work assigned. Persons permitted to perform Work under Contractor, or any subcontractor, or sub-subcontractor, shall meet all employment eligibility, safety training, security or drug/alcohol testing requirements required by law or by the County. Any person not complying with all such requirements shall be immediately removed from the Site.

The Contractor shall have a qualified and experienced person who can clearly communicate technical matters regarding the subject project. This person shall be available via phone to respond to emergency situations on the project 24 hours a day.

10. DRUG-FREE POLICY

The Contractor is responsible for ensuring that the Site remains a drug-free site. Contractor will require that employees undergo random drug/alcohol screening on a quarterly interval. Any employee who fails the test must be removed from the Site immediately. Random screening shall be performed by a third party licensed to do so in the Commonwealth of Virginia. The Contractor shall provide its random testing policy and schedule to the Project Officer within 30 days of Notice to Proceed. The Contractor will include this provision in every subcontract relating to this Contract. Any infraction by an employee of the Drug-Free policy shall be reported to the Project Officer within 24 hours.

11. LANDS BY COUNTY

The County shall provide access to the lands shown on the Drawings upon which the Work under the Contract is to be performed and to be used for rights of way and for access. In case all the lands, rights-of-way or easements have not been obtained as herein contemplated before construction begins, then the Contractor shall begin its work on such lands and rights-of-way that the County has acquired access to. No additional time or compensation shall be awarded to the Contractor for modifying work location and sequence provided other locations are available for work.

Contractor shall verify the acquisition of all off-site easements and Rights-of-Way prior to the start of off-site construction. Restore all off-site easements to the conditions existing prior to the start of work.

The Contractor shall confine all activities at the site associated with construction activities, to include storage of equipment and or materials, access to the work, formwork, etc. to within the designated Limits of Disturbance (LOD).

12. LANDS BY CONTRACTOR

If the Contractor requires additional land or lands for temporary construction facilities and for storage of materials and equipment other than the areas available on the site or right-of-way, or as otherwise furnished by the County, then the Contractor shall provide such other lands and access thereto entirely at the Contractor's own expense and without liability to the County. The Contractor shall not enter upon private property for any purpose without prior written permission of all of the persons and entities who own the property. The Contractor shall provide copies of all agreements to the County and shall include language in the agreement indemnifying and holding the County harmless for any damages, repairs, restoration or fees associated with the use of the property. Upon termination of the agreement, the Contractor shall provide to the County a fully executed release from the property owner.

13. PROTECTION OF WORK AND PROPERTY

- a. The Contractor shall continuously maintain and protect all of its Work from damage and shall protect the County's property from damage or loss arising in connection with this Contract until Substantial Completion. After Substantial Completion, the maintenance or protection of any incomplete or remedial Work identified on the punch list that requires maintenance or protection in order to allow for the final completion and acceptance of such Work shall be the responsibility of the Contractor until Final Completion. The Contractor shall make good any such damage or loss, except such as may be caused by agents or employees of the County. Failure to adequately protect the Work shall not be grounds for additional compensation for any maintenance and/or repairs to such Work.
- b. The Contractor shall not place upon the Work, or any part thereof, any loads which are not consistent with the design strength of that portion of the Work.
- c. The Contractor shall be responsible for the preservation of all public and private property, trees, monuments, etc., along and adjacent to the street and/or right-of-way, and shall use every precaution to prevent damage to pipes, conduits and other underground structures, curbs, pavements, etc., except those to be removed or abandoned in place and shall protect carefully from disturbance or damage all monuments and property marks until an authorized agent has witnessed or otherwise

referenced their location and shall not remove them until directed. Any damage which occurs by reason of the operations under this Contract, whether shown or not on the approved construction plans, shall be completely repaired or replaced to the County's satisfaction by the Contractor at the Contractor's expense. The Contractor shall be responsible for all damages caused by their construction activities.

- d. Prior to commencing construction activity at the Site, the Contractor shall videotape the Site and an additional fifty (50) feet outside the perimeter of the Site. Contractor shall submit a copy of high resolution digital recording on a DVD or flash drive to the County. The recording shall be stable, continuous, and contain all items within the limits of Work. Submission of the DVD to the County shall be a condition precedent to any obligation of the County to consider an Application for Payment. The DVD shall be the property of the County, and the County shall be permitted to reproduce such DVD's and use the same for any purpose without limitation or claim of ownership or compensation from any party. Contractor shall incorporate the cost of the preconstruction survey in the bid amount or the unit prices of the bid items, as applicable. No additional payment will be made by the County.
- e. The Contractor shall shore, brace, underpin, secure, and protect, as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site that may be affected in any way by excavations or other operations connected with the work required under this Contract. The Contractor shall be responsible for giving any and all required notices to owners or occupants of any adjoining or adjacent property or other relevant parties before commencement of any work. Contractor shall provide all engineering (signed and sealed) for items listed in this section per the Specifications. The Contractor shall indemnify and hold the County harmless from any damages on account of settlements or loss of all damages for which the County may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.
- f. In an emergency affecting the safety of life or of the Work, or of adjoining property, the Contractor, without special instruction or authorization from the Project Officer or designee, or the County, is hereby permitted to act, at the Contractor's discretion, to prevent such threatened loss or injury, and the Contractor shall so act without appeal, if so instructed or authorized.
- g. The Contractor shall contact "Miss Utility" at 811 for marking the locations of existing underground utilities (i.e. Water, sewer, gas, telephone, electric, and cable tv) at least 72 hours prior to any excavation or construction. The Contractor is required to identify and protect all other utility lines found in the work site area belonging to other owners that are not members of "Miss Utility". Private water

and/or sewer laterals will not be marked by "Miss Utility" or the County. The Contractor shall locate and protect these services during construction.

14. SEPARATE CONTRACTS

- a. The County reserves the right to let other contracts in connection with this Project. The Contractor shall afford other contractors reasonable access to the Project including storage of their materials and the execution of their work, and shall properly connect and coordinate its work with the work of other such contractors.
- b. If any part of the Contractor's work depends, for proper execution or results, upon the work of any other contractor, the Contractor shall inspect and promptly report to the Project Officer or designee any defects in such work that renders it unsuitable for such proper execution and results. The Contractor's failure to so inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of the Contractor's work, except as to defects which may develop in other contractor's work after its execution.
- c. If the Contractor or any of the Contractor's subcontractors or employees cause loss or damage to any separate contractor on the Work, the Contractor agrees to settle or make every effort to settle or compromise with such separate contractor. If such separate contractor sues the County on account of any loss so sustained, the County shall notify the Contractor, who shall indemnify and save the County harmless against any expense, claim or judgment arising therefrom, including reasonable attorney's fees.
- d. In case of a dispute arising between two or more separate contractors engaged on adjacent work as to the respective rights of each under their respective contracts, the Project Officer shall determine the rights of the parties.

15. SUBCONTRACTS

- a. Unless otherwise specified, the Contractor shall, within fifteen (15) calendar days after the execution of the Contract by the County, provide to the Project Officer or designee, in writing, the names of all subcontractors proposed for the principal parts of the Work and for such others as requested by the Project Officer or designee, and shall not employ any subcontractors that the Project Officer or designee may object to as incompetent or unfit after an appropriate determination of the subcontractor's ability. No proposed subcontractor will be disapproved except for cause.

- b. The Contractor shall make no substitutions for any subcontractor previously selected/approved unless first submitted to the County for approval.
- c. The Contractor shall be as fully responsible to the County for the acts and omissions of the Contractor's subcontractors as the Contractor is for the acts and omissions of persons directly employed by the Contractor.
- d. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind subcontractors to the Contractor by the terms of the General Conditions of the Contract, Special Provisions and other Contract Documents comprising the Contract insofar as such documents are applicable to the work of subcontractors.
- e. Nothing contained in the Contract shall be construed to create any contractual relation between any subcontractor and the County, nor shall it establish any obligation on the part of the County to pay to, or see to the payment of any sums to any subcontractor. The County will not discuss, negotiate or otherwise engage in any contractual disputes with any subcontractor.
- f. If requested by the County, the Contractor shall replace any subcontractor at no cost to the County within 30 days of the Project Officers written notice or as otherwise specified. No additional time or compensation will be provided in the event a subcontractor is removed due to non-compliance of the requirements outlined within the Contract.

16. ELIMINATED ITEMS

If any item(s) in the Contract are determined to be unnecessary for the proper completion of the Work contracted, the Project Officer or designee may, upon written notice to the Contractor, eliminate such item(s) from the Contract. Payment will not be made for such item(s) so eliminated; except that the Contractor will be compensated for the actual cost of any work performed and the net cost of materials purchased before the item(s) was eliminated from the Contract, including freight and tax costs, as evidenced by invoice. No additional compensation will be made for overhead or anticipated profit. The County will receive the full unit price credit for work eliminated prior to production or installation.

17. COUNTY ORDINANCES

The Contractor shall comply with all applicable County ordinances, including but not limited to: the *Noise Control*, *Erosion & Sediment Control*, *Storm Water Management*, and *Chesapeake Bay Preservation ordinances (Chapters 15, 57, 60, and 61 of the County Code)*.

D. MATERIALS AND WORKMANSHIP

1. MATERIALS FURNISHED BY THE CONTRACTOR

Unless otherwise specified, all materials and equipment incorporated in the Work under the Contract shall be new. All work shall be accomplished by persons qualified in the respective trades.

2. IBC AND VUSBC REQUIREMENTS

The Contractor certifies that all material supplied or used under this Contract meets all current International Building Code (IBC) requirements and the requirements of the Virginia Uniform Statewide Building Code (VUSBC); and further certifies that, if the material delivered or used in the performance of the work is found to be deficient in any of the applicable state or national code requirements, all costs necessary to bring the material into compliance with the requirements shall be borne by the Contractor. The County shall be entitled to offset such costs against any sums owed by the County to the Contractor under this Contract.

3. ADA COMPLIANCE

The Contractor shall ensure that all Work performed under this Agreement is completed in accordance with the Contract Documents, including Work intended to meet the accessibility requirements of the Americans with Disabilities Act (ADA).

The Contractor is not required to ascertain whether the Contract Documents meet ADA design standards and guidelines. However, should the Contractor discover any non-conformity with such requirements, the Contractor shall immediately inform the County and its design consultant, if applicable, to allow for corrective action.

The Contractor shall defend and hold the County harmless from any expense or liability arising from the Contractor's non-compliance in meeting its obligations herein. The Contractor shall be responsible for all costs related to permitting delays, redesign, corrective Work, and litigation relating to such non-compliance.

4. MANUFACTURER'S DIRECTIONS

Manufactured articles, material, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's directions as accepted by the Project Officer or designee, unless herein specified to the contrary.

5. WARRANTY

All material provided to the County shall be fully guaranteed by the Contractor against manufacturing defects within the period of the manufacturer's standard warranty. Such defects shall be corrected by the Contractor at no expense to the County. The Contractor shall provide all manufacturers' warranties to the Project Officer by the date of Final Completion.

All Work is guaranteed by the Contractor against defects resulting from the use of inferior or faulty materials. The Contractor warrants that the Work will conform to the

requirements of the Contract Documents and will be free from defects or inferior or faulty workmanship, or work not in accordance with the Contract Documents for one (1) year from the date of Substantial Completion or as set forth in the Specifications of the work by the County in addition to and irrespective of any manufacturer's or supplier's warranty.

No date other than Substantial Completion or as set forth in the Specifications shall govern the effective date of the Warranty, unless that date is agreed upon by the County and the Contractor in advance and in a signed writing.

The Contractor shall promptly correct any defective work or materials after receipt of a written notice from the County to do so. If the Contractor fails to proceed promptly or use its best efforts and due diligence to complete such compliance as quickly as possible, the County may have the materials or work corrected and the Contractor and its Sureties shall be liable for all expenses and costs incurred by the County.

Nothing contained in this section shall be construed to establish a period of limitations with respect to other obligations the Contractor may have under this Contract.

6. INSPECTION AND ACCEPTANCE OF MATERIALS

Inspection and acceptance by the County will be at the work site in Arlington County, Virginia and within ten (10) calendar days of delivery unless otherwise provided for in the Contract Documents. The County will not inspect, accept, or pay for any materials stored or delivered off-site by the Contractor, except as provided by the Payment for Stored Materials clause of these General Conditions and other requirements of the Contract Documents. The County's right of inspection shall not be deemed to relieve the Contractor of its obligation to ensure that all articles, materials and supplies are consistent with Specifications and instructions and are fit for their intended use. The County reserves the right to conduct any tests or inspections it may deem appropriate before acceptance. The Contractor shall be responsible for maintaining all materials and supplies in the condition in which they were accepted until they are used in the work.

The Contractor is to coordinate its work and request inspections in such a manner as to minimize the cost to the County without impacting the overall schedule of the Project within reason. All costs associated with re-inspection shall be borne by the Contractor.

7. CONTRACTOR'S TITLE TO MATERIALS

No materials or supplies for the work shall be purchased by the Contractor or any subcontractor subject to any chattel mortgage or under a conditional sale or other agreement by which an interest is retained by the seller. The Contractor warrants that it has good title to, and that it will require all subcontractors to warrant that they have good title to, all materials and supplies for which the Contractor invoices for payment. The County may request proof of title or payment prior to acceptance of the Contractor's invoice.

8. TITLE TO MATERIALS AND WORK COVERED BY PARTIAL PAYMENTS

All material and work covered by partial payments made by the County will become the property solely of the County at the time the partial payment is made. However, risk of

loss or damage to all items shall be the responsibility of the Contractor until Final Acceptance by the County. This provision will not be construed as relieving the Contractor from having sole responsibility for all materials and work upon which payments have been made and for the restoration of any damaged work or replacement or repair at the County's option of any damaged materials. This provision will not be construed as a waiver of the County's right to require fulfillment of all terms of the Agreement, including full rights under the terms of the Warranty provisions of the Agreement, nor shall payment indicate acceptance of the materials or work.

9. CONNECTING WORK

The Contractor shall do all cutting, patching, or digging of the Contractor's work that may be required to make its several parts come together properly and fit it to receive or be received by work of other contractors as shown upon or reasonably implied by the Drawings and Specifications for the completed Project and shall make good after them as the Project Officer or designee may direct. This work will be performed in a workmanlike manner utilizing proper care and equipment to achieve proper line and grade. The Contractor shall not endanger any work by cutting, patching, or digging, or otherwise, and shall not cut or alter the work of any other contract except with the prior written consent of the Project Officer or designee.

10. REJECTED WORK AND MATERIALS

- a. Any of the Work or materials, goods, or equipment which do not conform to the requirements of the Contract Documents, or are not equal to samples accepted by the Project Officer or designee, or are in any way unsatisfactory or unsuited to the purpose for which they are intended, shall be rejected and replaced immediately so as not to cause delay to the Project or work by others. Any defective work, whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause, shall be removed and the work shall be re-executed by the Contractor at the Contractor's expense. The fact that the Project Officer or designee may have previously overlooked such defective work shall not constitute acceptance of any part of it.
- b. If the Contractor fails to proceed at once with the replacement of rejected material and/or the correction of defective workmanship when notified to do so by the Project Officer or designee, the County may, by contract or otherwise, replace such material or correct such workmanship and charge the cost to the Contractor. This clause applies during the Contract and during any warranty or guarantee period.
- c. The Contractor shall be responsible for managing, addressing within a timely manner, and formally closing out all notices of non-compliance issued by the inspector of record, Arlington County Inspection Services, or the Design Team. The Contractor shall be solely liable for any costs or time associated with the corrective action to address any notices of non-compliance. The Contractor must work directly with the entity issuing the notice of non-compliance.

- d. If the Project Officer or designee deems it expedient not to require correction of work which has been damaged or not done in accordance with the Contract, an appropriate adjustment to the Contract Price may be made.

11. PROHIBITION AGAINST ASBESTOS CONTAINING MATERIALS

No goods or equipment provided to the County or construction material installed shall contain asbestos. If a Contractor or supplier provides or installs any goods, equipment, supplies, or materials that contain asbestos in violation of this prohibition, the Contractor shall be responsible for all costs related to the immediate removal and legal disposal of the goods, equipment or materials containing asbestos and replacement with County-approved alternate. The Contractor shall be responsible for all goods, equipment, supplies or materials installed or provided by any of its employees, agents or subcontractors in connection with the work under this contract. The Contractor shall also reimburse to the County all costs of such goods, equipment, supplies or materials installed if not corrected by the Contractor.

E. LEGAL RESPONSIBILITY AND PUBLIC SAFETY

1. SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and locations of the work of the Contract, and that it has investigated and satisfied itself as to the general and local conditions and factors which can affect the Work or its cost, including but not limited to:

- a. conditions bearing upon transportation, disposal, handling, and storage of materials;
- b. the availability of labor, water, electric power, and roads;
- c. uncertainties of weather, river stages, tides, or similar physical conditions at the site;
- d. the information and conditions of the ground; and
- e. the character of equipment and facilities needed before and during work performance.

The Contractor, by executing the Contract, represents that it has reviewed and understands the Contract Documents and has notified the County of and obtained clarification of any discrepancies which have become apparent during the bidding period. During the Contract, the Contractor must promptly notify the County in writing of any apparent errors, inconsistencies, omissions, ambiguities, construction impracticalities or code violations discovered as a result of the Contractor's review of the Contract Documents including any differences between actual and indicated dimensions, locations and descriptions, and must give the County timely notice in writing of same and of any corrections, clarifications, additional Drawings or Specifications, or other information required to define the Work in greater detail or to permit the proper progress of the Work. The Contractor must provide similar notice with respect to any variance between its review of the Site and physical data and Site conditions observed. If the Contractor performs any Work involving an apparent error, inconsistency, ambiguity, construction impracticality, omission or code violation in the

Contract Documents of which the Contractor is aware, or which could reasonably have been discovered, without prompt written notice to the County and request for correction, clarification or additional information, as appropriate, the Contractor does so at its own risk and expense and all related claims are specifically waived.

The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the County, as well as from the Drawings and Specifications made a part of this Contract. Unless otherwise specified, all existing structures, materials and obstructions that interfere with the new construction shall be removed and disposed of as part of this Contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the Work without additional expense to the County.

The locations of existing utilities, including underground utilities, which may affect the Work, are indicated on the Drawings or in the Specifications insofar as their existence and location were known at the time of preparation of the drawings. However, nothing in these Drawings or Specifications shall be construed as a guarantee that such utilities are in the location indicated or that they actually exist, or that other utilities are not within the area of the operations. The Contractor shall make all necessary investigations to determine the existence and locations of such utilities. Should uncharted or incorrectly charted utilities be encountered during performance of the Work, notify the Project Officer or designee immediately for instructions. The Contractor will be held responsible for any damage to and maintenance and protection of existing utilities and structures, of both public and private ownership. However, if it is determined that such existing utility lines or structures require relocation or reconstruction or any other work beyond normal protection, then such additional work will be ordered under the terms of the clause entitled "Changes in Work." At all times, cooperate with the County and utility companies to keep utility services and facilities in operation.

The County assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the County. The County assumes no responsibility for any understanding reached or representation made concerning conditions which can affect the Work by any of its officers or agents before the execution of this Contract, unless that understanding or representation is expressly stated in this Contract.

2. PUBLIC CONVENIENCE

The Contractor shall at all times so conduct its Work as to ensure the least possible obstruction to traffic (vehicular, bicycle and pedestrian) and inconvenience to the general public, County employees, and the residents in the vicinity of the Work. Traffic shall be maintained in accordance with the approved Maintenance of Traffic (MOT) plan. No road, street or sidewalk shall be closed to the public except with the permission of the Project Officer or designee and or proper governmental authority. Fire hydrants on or adjacent to the Work shall be kept accessible to firefighting equipment at all times. Temporary provisions shall be made by the Contractor and included in the cost of

the Work to ensure the use of sidewalks, trails, and transit facilities compliant with all applicable ADA and other regulations, as well as the proper functioning of all gutters, drainage inlets, drainage ditches, and irrigation ditches, which shall not be obstructed except as approved by the Project Officer or designee.

The Contractor is responsible for securing its work area for safety and security. The Contractor shall confine its construction and presence to the Limits of Work, unless otherwise approved by the County Project Officer.

3. SAFETY AND ACCIDENT PREVENTION

The Contractor shall comply with, and ensure that the Contractor's employees and subcontractors comply with, all current applicable local, state and federal policies, regulations and standards relating to safety and health, including, by way of illustration and not limitation, the U.S. Department of Labor's Occupational Safety and Hazard Administration (OSHA) Construction Industry Regulations, the standards of the Virginia Occupational Safety and Health program of the Department of Labor and Industry for General Industry and for the Construction Industry, the Federal Environmental Protection Agency Standards and the applicable standards of the Virginia Department of Environmental Quality.

The Contractor shall provide, or cause to be provided, all technical expertise, qualified personnel, equipment, tools and material to safely accomplish the Work specified to be performed by the Contractor and subcontractor(s).

The Contractor shall identify to the County Project Officer at least one on-site person who is the Contractor's competent, qualified, and authorized safety officer on the worksite and who is, by training or experience, familiar with and trained in policies, regulations and standards applicable to the work being performed. The competent, qualified and authorized person must be capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, shall be capable of ensuring that applicable safety regulations are complied with, and shall have the authority and responsibility to take prompt corrective measures, which may include removal of the Contractor's personnel from the work site.

The Contractor shall provide to the County, within 7 days of issuance of the Notice to Proceed, a copy of the Contractor's written safety policies and safety procedures applicable to the scope of work. Failure to provide this information within may result in cancellation of the Contract.

The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all injury to persons and damage to property either on or off the site, which occur as a result of the Contractor's prosecution of the Work.

The Contractor shall take or cause to be taken such additional safety and health measures as the County may determine to be reasonably necessary. Machinery, equipment, and all hazards shall be guarded in accordance with the safety provisions of

the current version of "Manual of Accident Prevention" published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws. The Contractor is directed to the "Rules and Regulations Governing Construction, Demolition and All Excavation" and adopted by the Safety Codes Commission of Virginia, 1966, or latest edition, covering requirements for shoring, bracing, and sheet piling of trench excavations.

4. HAZARDOUS MATERIALS

Arlington County is subject to the Hazard Communication Standard, 29 CFR §1910.1200 (Standard). The Contractor agrees that it will provide or cause to be provided Safety Data Sheets (SDS) required under the Standard for all hazardous materials supplied to the County or used in the performance of the work. Such SDS shall be delivered to the County no later than the time of actual delivery of any hazardous materials to the County or use of such material in the performance of work under the Contract by the Contractor or its subcontractors, whichever occurs first. Container labeling meeting the requirements of the Standard shall be appropriately affixed to the shipping or internal containers. The County reserves the right to refuse shipments of hazardous materials not appropriately labeled, or when SDS have not been received prior to or at the time of receipt of the shipment for use by the County or for use by the Contractor in the performance of the Contract, or whenever the material is delivered in a manner inconsistent with any applicable law or regulation. Any expenses incurred due to the refusal or rejection of SDS are the responsibility of the Contractor. The Contractor shall comply with all federal, state, and local laws governing the storage, transportation, and use of toxic and hazardous materials. The Contractor shall maintain onsite an up to date SDS binder for all material used and delivered to the Project. The County Project Officer or his designee shall be allowed access to the SDS book at all times.

5. HAZARDOUS WASTE

Hazardous Waste Generator/Hazardous Waste Disposal: The County Board of Arlington County, Virginia and the Contractor shall be listed as Co-generators. The Contractor shall assume all the duties pertaining to the Waste Generator, including signing the Waste Shipment Record ("WSR") and manifest. The Contractor shall supply the County Project Officer with the executed original Owner's Copy of the WSR, as required by applicable regulatory agencies within 35 days from the time the waste was accepted by the initial waste transporter, and prior to request for final payment. A separate WSR shall be submitted for each shipment to the disposal site.

Delayed Waste Shipment Records: The Contractor shall report in writing to the EPA Region III office within 45 days if an executed copy of the WSR is not received from the operator of the disposal site. The report to the EPA regional office shall include a copy of the original WSR and a cover letter signed by the Contractor stating the efforts taken to locate the hazardous waste shipment and the results of those efforts.

Temporary Hazardous Waste Storage Prohibited: The Contractor shall not temporarily store hazardous waste unless pre-approved by the County in writing. If so approved, hazardous waste stored off-site in a temporary facility shall be monitored and records shall be kept on the number of containers, size, and weight. The Contractor shall inform the County when the hazardous waste is to be transported to the final disposal site. The

County has the right to inspect the temporary site at any time. The Contractor shall submit copies of all relevant manifests, Waste Shipment Record(s), and landfill receipts to the County Project Officer prior to the request for final payment. All paperwork shall be signed by the Contractor and disposal site operator as required.

6. ASBESTOS

Whenever and wherever during the course of performing any work under this Contract the Contractor discovers the presence of asbestos or suspects that asbestos is present, the Contractor shall stop work immediately, secure the area, notify the County Project Officer immediately and await positive identification of the suspect material. During the downtime in such a case, the Contractor shall not disturb any surrounding surfaces but shall protect the area with suitable dust covers. Work shall not proceed without an Asbestos-Related Work Authorization executed by the County Asbestos Program Manager.

7. CROSSING UTILITIES

When construction crosses highways, railroads, streets, waterways, or utilities under the jurisdiction of State, County, City, or other public agency, public utility, or private entity, the Contractor shall secure written permission where necessary from the proper authority before executing such new construction. A copy of such written permission must be filed with the County before any work is started. The Contractor shall be required to furnish a release from the proper authority before Final Acceptance of the Work.

8. OVERHEAD HIGH VOLTAGE LINES SAFETY ACT

If any work required herein will be performed within ten feet of an overhead high voltage line, the provisions of Virginia Statute 59.1-406, et. seq., "Overhead High Voltage Line Safety Act" (Act) shall apply. The "person or contractor responsible for the work to be done", as that term is used in the Act, will be interpreted to mean the Contractor. The Contractor shall notify the owner or operator of the high voltage line in the manner prescribed in Section 59.1-411 of the Act in sufficient time prior to the time work is to be commenced to avoid any delays in the work. The County will not pay for lost time, profits, or permit any extension of the work for any delays caused by the failure of the Contractor to make such arrangements in a timely manner. All costs for the work shall be paid by the Contractor. The County shall reimburse the Contractor for the actual reasonable cost paid to the owner or operator of the high voltage line by the Contractor on presentation to the County by the Contractor of original invoices from the owner or operator of the high voltage line in the same manner as for other Contractor invoices submitted for work performed. Retention, if applicable to the Contract, shall not be withheld from the payment to the Contractor by the County for this work. No processing, administrative, or other charges above the actual amount charged by the owner or operator of the high voltage line shall be paid to the Contractor by the County.

9. SANITARY PROVISIONS

The Contractor shall provide and maintain such sanitary accommodations for the use of the Contractor's employees and those of its subcontractors as may be necessary to

comply with the requirements and regulations of OSHA and of the local and State departments of health.

10. SITE CLEAN-UP AND WASTE DISPOSAL

The Contractor shall frequently remove and properly dispose of all refuse, rubbish, scrap materials, and debris from the site resulting from the Contractor's operations during the performance of this contract. The Contractor shall ensure the work site presents a neat and orderly appearance at all times. The Contractor shall isolate any and all dumpsters, trash cans and recycling bins provided for the Project from public use until Final Acceptance.

Unless otherwise stated, the Contract Amount and any unit prices shall include all costs and fees for removal and disposal of all waste and debris, whether disposed of at a County site or at any other location.

The Contractor shall remove all surplus material, false work, temporary structures including foundations thereof, and debris resulting from the Contractor's operations at work completion and before Final Acceptance. The County shall reserve the right to remove the surplus material, false work, temporary structures including foundations and debris. The County will restore the site to a neat, orderly condition if the Contractor fails to do so. The County shall be entitled to offset such cost against any sums owed by the County to the Contractor under this Contract.

11. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

When the Project includes an approved SWPPP, the Contractor shall strictly abide by this plan which includes: a Pollution Prevention (P2) Plan, an Erosion and Sediment Control (E&S) Plan, and a Stormwater Management Plan. If the Contractor proposes to deviate from this approved plan, it shall be the Contractor's responsibility to coordinate and obtain approval from the County Project Officer prior to implementing any changes.

No separate payment shall be made by the County for SWPPP implementation, with the exception of E&S items as specified on the E&S plans or listed as pay items. The Contractor shall not be entitled to any additional payment for changes to the SWPPP which are the result of the Contractor's work schedule or resource allocation, weather delays, or other factors not controlled by the County.

F. PROGRESS AND COMPLETION OF THE WORK

1. NOTICE TO PROCEED

The Contractor shall be given written Notice to Proceed with the Work. Such Notice to Proceed shall state the date on which the Work is to be commenced, and every calendar day thereafter shall be counted in computing the actual Time for Completion.

2. TIME FOR COMPLETION

It is hereby understood and mutually agreed by and between the Contractor and the County that the Commencement Date, the rate of progress, and the Time for

Completion of the Work to be done hereunder are essential conditions of the Contract. The Contractor agrees that the Work shall be started promptly upon receipt of a written Notice to Proceed in accordance with the accepted schedule. The Work shall be prosecuted regularly, diligently, and uninterruptedly at a rate of progress that will ensure full completion of the Project within the Time for Completion specified in the Contract Documents.

3. SCHEDULE OF COMPLETION

Unless otherwise specified, the Contractor shall within 10 business days after the Award Date, or prior to the pre-construction meeting, whichever occurs first, submit schedules which show the order in which the Contractor proposes to carry on the Work, with dates for starting and completing the various activities of the Work. The Contractor shall submit an updated schedule monthly with the request for partial payment. Review and acceptance by the County of the Contractor's schedule of completion shall in no way relieve the Contractor of its responsibility to complete the Work within the contract time. If the Work falls behind the schedule, the County may require the Contractor to prepare and submit, at no extra cost to the County, a recovery schedule indicating by what means the Contractor intends to regain compliance with the schedule. The recovery schedule must be submitted to the County for review by the date indicated in the County's written demand.

4. CONDITIONS FOR COMPLETION

- a. **SUBSTANTIAL COMPLETION:** The Work will be considered Substantially Complete when all of the following conditions have been met and accepted by the Project Officer, and a Certificate of Substantial Completion has been issued:
1. The Contractor has provided formal notice that the Work is substantially complete, and the Project Officer has agreed that the condition of the Work warrants a Substantial Completion inspection;
 2. The Contractor has provided a Punch List and that list has been reviewed and approved by the Project Officer. Failure to include an item on the Punch List does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents;
 3. Final test reports as required by the Contract and certificates of inspection and approval required for use and occupancy;
 4. Fire Marshal's report, if applicable;
 5. Approval forms and transfer documents for all utilities;
 6. All life safety systems, including fire alarms, visual and audios alarms, fire detectors and fire alarm annunciator system, sprinkler systems, and all mechanical and electrical systems are complete and working in an automatic mode, and the County has been adequately trained in the operation of the systems;

7. The HVAC system Testing and Balancing Report and build air quality test results as required for LEED certification have been accepted by the Project Officer;
 8. Operation and Maintenance Manuals have been submitted for review;
 9. All documents and verification of training required in accordance with any Commissioning Plan;
 10. Mark-ups of construction drawings showing the As-Built or "Record" condition have been submitted for review and approval by the Project Officer;
 12. Entrances and egress pathways have been constructed and can remain clear of construction activities;
 13. A Certificate of Occupancy has been issued for the space by the County's Inspection Services Division;
 14. All Commissioning has performed and completed to the satisfaction of the Project Officer; and
 15. Schedule to complete the Punch List and value of Work not yet complete.
- b. Upon the Contractor providing notice that the Work is substantially complete, the Project Officer or designee will invite all relevant parties to perform an inspection of the Work, and any noted deficiencies or incomplete items not indicated on the Contractor's punch list will be added. All punch list items, whether generated by the Contractor or any other party on behalf of the County, shall be completed within thirty (30) days of the date of Substantial Completion, unless otherwise agreed to by the County due to seasonal or other extenuating circumstances.
- c. FINAL COMPLETION: The Work will be considered Finally Complete when all of the following conditions have been met and accepted and a Final Completion Notice has been issued by the Project Officer:
1. The Contractor has provided formal notice that the Work is complete, and the Project Officer has agreed that the condition of the Work warrants a Final Completion inspection;
 2. All construction deficiencies and punch list items have been closed and all construction deficiencies corrected and accepted by the Project Officer;

3. All spare parts and attic stock have been delivered, stored in an orderly manner in a space designated by the Project Officer and a complete inventory list has been verified and accepted by the Project Officer;
4. All warranties and manufacturer certificates and contact information for parties providing warranties have been delivered and accepted by the Project Officer;
5. All final Operating and Maintenance manuals have been delivered and approved and accepted by the Project Officer;
6. All final As-Built Drawings in .pdf format on a CD delivered and accepted by the Project Officer;
7. All commissioning has been completed and any open construction items in the commissioning agent's report have been closed and accepted by the Project Officer; and
8. All LEED documents and submittals, if applicable, to be provided by the Contractor or sub-contractors have been submitted and accepted by the Project Officer.

5. USE OF COMPLETED PORTIONS

The County shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding that the time for completing the entire Work or such portions may not have expired; but taking such possession and use shall not be deemed an acceptance of any work not done in accordance with the Contract Documents. If the Contractor claims that such prior use increases the cost or delays, the completion of remaining work, or causes refinishing of completed work, the Contractor may submit a claim for compensation or extension of time, or both.

G. MEASUREMENT AND PAYMENT

1. PAYMENTS TO CONTRACTOR

The County will make partial payments, less retainage, to the Contractor monthly on the basis of the Contractor's written estimate of the work performed during the preceding calendar month as approved by the Project Officer or designee.

The Contractor's application for payment shall indicate the amount of work completed to date in a format consistent with the accepted bid and as indicated below:

- a. Lump Sum: For lump sum contracts, the Contractor shall provide to the Project Officer a Schedule of Values, and the application for payment will reflect the Schedule of Values and the amount of work completed in those units.

For contracts that include multiple lump sum line items, the application for payment shall reflect the percentage of work completed for each lump sum item. If requested by the Project Officer, the Contractor shall provide a Schedule of Values for each lump sum line item in the contract.

- b. Unit Price: The schedule of unit prices in the accepted bid shall be used as the basis for preparing the estimates, and each partial payment shall represent the total value of all units of work completed, computed at the unit prices stated in the Contract, less the aggregate of previous payments.

At the discretion of the Project Officer, payments may alternatively be based on actual quantities and site measurements taken in the field by County staff using the Contract Unit Prices.

If Stipulated Price Items are included in the contract, Work on such Stipulated Price Items shall be carried out only upon written order by the Project Officer. The payment for a Stipulated Price Item shall be made by the County to the Contractor at the related unit price specified in the 'Stipulated Price Items' section of the Bid Form on the same basis as the payment for any other regular Bid Item.

In addition to the amount of work completed to date, the application for payment shall indicate the aggregate of all previous payments for each line item, the retainage previously withheld, and the total payment requested this period.

The Contractor's application for payment will not be reviewed or processed unless an updated schedule is attached. The pay application shall also contain a certification by the Contractor that due and payable amounts have been paid by the Contractor, including payments to subcontractors, for work which previous payment was received by the Contractor from the County.

5. PAYMENT FOR STORED MATERIALS

When requested in writing by the Contractor, payment allowances may be made for material secured for use on the Project and secured at the project site. Such payments will only be made for materials scheduled for incorporation into the work within sixty (60) days.

Payment for materials stored offsite may be considered at the discretion of the Project Officer. Any such request shall be made in writing, and the Contractor shall provide photographs of materials stored offsite, bills of sale, and proof of insurance on the premises at which off-site materials are stored with the application for payment. Payment for stored materials may also be subject to additional requirements contained elsewhere in the Contract Documents.

3. PAYMENTS WITHHELD

The Project Officer or designee may withhold or, on account of subsequently discovered evidence, nullify the whole or a part of any certificate for payment to the extent necessary to protect the County from loss on account of defective work not remedied or withhold payment for violation of any contract term or condition not remedied after sufficient notice given to the Contractor.

Any such withholding shall not result in any liability to the Contractor for damages.

4. COUNTY ORDERED CHANGES IN WORK

The County, without invalidating the Contract, may order extra Work or make changes by addition, deletion or revision in the Work, with the total Contract Amount being adjusted accordingly if applicable. All such work shall be executed under the conditions of the original Contract, except that modification of the Time for Completion caused thereby shall be made at the time of approving such change.

- a. Changes in the Work which do not involve extra cost and are not inconsistent with the purpose of the Project can be directed by means of a Field Order. Otherwise, except in an emergency endangering life or property, no extra Work or change shall be made unless in pursuance of a written Construction Change Directive or Change Order and no claim for an addition to the Contract Amount or Contract Time shall be valid unless so ordered.
- b. The Contractor shall review any County requested or directed change and shall respond in writing within 14 days after receipt of the proposed change stating the effect of the proposed change upon Contractor's work, including any increase or decrease in Contract time and price. The Contractor shall furnish the County an itemized breakdown of the quantities and prices used in computing the proposed change. The Contractor shall also furnish any sketches, drawings, and or pictures to properly explain the change or impact to the Project Officer. It is the sole responsibility of the Contractor to provide adequate change order backup to satisfy the Project Officer.

- c. The value of any such extra work or change shall be proposed by the Contractor in one or more of the following ways: (a) by estimate in a lump sum; (b) by cost and fixed fee; (c) by unit price additions or deletions of quantities stated in the unit price contract; or (d) by any other method permitted under the Arlington County Purchasing Resolution. The Project Officer will determine the method appropriate based on the nature of the changes.
- d. If none of the aforementioned methods is agreed upon the Contractor shall proceed with the work without delay under force account, provided the Contractor receives a Construction Change Directive. In such case, the Contractor shall keep and present in such form as the Project Officer or designee may direct, a correct account of the cost, together with vouchers. The Project Officer or designee shall be permitted to verify such records on a daily basis and may require such additional records as are necessary to determine the cost of the change to the Work. The Project Officer or designee shall certify to the amount due to the Contractor, including a reasonable lump sum allowance for overhead and profit. A complete accounting of the extra cost shall be made within 14 days after completion of the work involved in the claim. Refer to Paragraph G.5, *Force Account Work*, below for a description of allowable costs when work is performed under force account.
- e. A cost proposal for a change in the Work shall provide a complete breakdown itemizing the estimated quantities and costs of labor, materials, and equipment (base cost) required in addition to any markup used. The allowable percentage markups for overhead and profit for a non-force account change to the Work performed by the Contractor's own forces or performed by the Subcontractor shall be negotiated based on the nature, size, and complexity of the Work involved but shall not exceed the percentages for each category listed below.
 - 1) Subcontractor's markup for overhead and profit for the work it performs in a change to the Work shall be a maximum of fifteen (15%).
 - 2) Contractor's markup for overhead and profit on the Subcontractor's base cost in a change to the Work shall be a maximum of ten percent (10%).
 - 3) Contractor's markup for overhead and profit (including bonds and insurance) for work it performs in a change to the Work shall be a maximum of fifteen percent 15%.
 - 4) The markup for overhead and profit of a sub-subcontractor at any tier on a change to the Work it performs shall be a maximum of fifteen percent (15%). The Contractor and all intervening tiers of subcontractors' markup on such sub-subcontractor's base cost in the change to the Work shall not exceed a total of ten percent (10%).
- f. Base Cost is defined as the total of labor, material, and equipment costs, it does not include markup for overhead and profit. The labor costs include only the

costs of employees directly constructing or installing the change in the Work and exclude the costs of employees coordinating or managing the work.

- g. The allowable percentage markups for overhead and profit stated above shall compensate the Contractor, subcontractor, and sub-subcontractor for all other costs associated with or relating to the change to the Work including by way of illustration and not limitation, general conditions, supervision, field engineering, coordination, insurance, bond(s), use of small tools, incidental job costs, and all other general and administrative home and field office expenses.
- h. Allowable costs for changes in the Work shall not include home office expenses including payroll costs for the Contractor's officers, executives, administrators, project managers, estimators, clerks timekeepers, and other administrative personnel employed by the Contractor, whether at the Site or in the Contractor's principal or branch office for general administration of the Work. These costs are deemed overhead included in the percentage markups in Subsection (e) above.
- i. If the change to the Work also changes the Time for Completion by adding days to perform the Work, an itemized accounting of the following Site direct overhead expenses for the change to the time may be considered as allowable costs for compensation in addition to the base cost indicated above:
 - 1) site superintendent's pro-rata salary
 - 2) temporary site office trailer expense
 - 3) temporary site utilities including basic telephone service, electricity, heat, water, and sanitary/toilet facilities.

All other direct and indirect overhead expenses are considered covered by and included in Subsection (e) markups above. In no case shall subcontractor extended overhead be submitted or considered. The County does not have a direct contractual relationship with any subcontractor or supplier and therefore will not direct, discuss or negotiate with subcontractors employed by the Contractor.

- j. If Contractor requests an extension to the Time for Completion due to changes in the Work it must provide to the Project Officer adequate documentation substantiating its entitlement for the time extension. The documentation must demonstrate an anticipated actual increase in the time required to complete the Work beyond that allowed by the Contract as adjusted by prior changes to the Work, not just an increase or decrease in the time needed to complete a portion of the total Work. In the event a Critical Path Method (CPM) schedule is required by the Contract, no extension to the Time for Completion shall be granted unless the additional or change to the Work increases the length of the critical path beyond the Time for Completion as demonstrated on the approved CPM schedule or bar chart schedule. Any Float belongs to Arlington County. A written statement in addition to a CPM analysis shall be prepared explaining how no other sequence of work activities could have been performed to

decrease the impact or eliminate the impact altogether. If requested by the Project Officer the Contractor must provide alternate documentation detailing the claim to the County's satisfaction.

- k. Any change that will increase the Contract Amount more than 10% will require notice to sureties and require that Performance and Payment Bonds be increased by the Contractor. The increased Performance and Payment Bonds must be sent to the County's Office of the Purchasing Agent within 15 calendar days of the County's approval of such change.

5. FORCE ACCOUNT WORK

A Force Account may be used at the County's discretion and only when either 1) agreement on the valuation of a change cannot be made using the methods described in the preceding paragraph, *County Ordered Changes in the Work*, or 2) the County cannot firmly establish an applicable and acceptable estimate for the cost of the work because the level of effort necessary to perform and complete the work cannot be reasonably estimated or anticipated but can only be determined by performing the work. Because of the significant burden on the County to monitor and control the work, Force Account work is not a preferred method, and it shall be the responsibility of the Contractor to provide all necessary documentation and justification of costs. The rates for labor, equipment and materials to be used in cases of work performed on a force account basis will be compensated as documented below. No costs other than those explicitly listed below shall be allowed:

- a. Labor: Before any Force Account work begins, the Contractor shall submit for approval to the Project Officer the proposed hourly rates and associated labor costs (benefits and payroll burden) for all laborers and forepersons to be engaged in the work. The number of laborers and forepersons engaged in the work will be subject to regulation by the Project Officer and shall not exceed the number that the Project officer deems most practical and economical for the work. For all labor and forepersons in direct charge of the force account work, excluding general superintendence, compensation will be as follows:
 - 1) Certified Pay Rate: The Contractor will receive the actual rate of wage or scale as set forth in his most recent payroll for each classification of laborers, and forepersons who are in direct charge of the specific operation. The time allowed for payment will be the number of hours such workers are actually engaged in the work. If overtime work is authorized by the County, payment will be at the normal overtime rate set forth in the Contractor's most recent payroll.
 - 2) Benefits: The Contractor will be entitled to receive the actual cost for any fringe benefits that are regularly provided to the classes of laborers and forepersons engaged in the work and that are not included in the certified pay rate.

- 3) Payroll Burden: The Contractor will be entitled to receive the actual cost for all costs associated with required payroll taxes and payroll benefits not covered in 2) above, including:
 - Social Security Tax
 - Medicare Tax
 - Unemployment Tax
 - Worker's Compensation Insurance
 - Contractor's Public Liability Insurance
 - Contractor's Property Damage Liability Insurance
 - 4) If the Contractor is unable to provide the necessary documentation for Benefits and Payroll Burden as identified above, the Contractor will be entitled to an additive of 20% of the Certified Hourly Pay Rate as full and final compensation for Benefits and Payroll Burdens
 - 5) Overhead and Profit: The Contractor will be entitled to an additive of 10% on all properly documented and approved costs established in paragraphs 1), 2), 3), and 4) above for all administrative, overhead, and profit associated with labor costs.
 - 6) Subsistence and lodging allowances may be allowed by the Project Officer at the actual and documented costs for lodging and meals if the following conditions are met and the applicable rates and authorization for such costs are established prior to beginning the work. No additives for overhead, administrative, profit, or any other costs will be permitted for subsistence and lodging.
 - i. The specific Force Account work is outside the scope of the original contract, requires mobilization of a separate crew not intended to be used on the original contract, and the Contractor's base location is more than 50 miles from the work site, or
 - ii. Forces which have been working on the Contract will be used for the Force Account work and have been routinely staying overnight during the life of the Project, and the Force Account Work will warrant an extension of the contract time, and the distance from the Contractor's base location to the work site is more than 50 miles
- b. Materials: The Contractor will receive the actual cost of materials accepted by the Project Officer that are delivered and used for the work including taxes, transportation, and handling charges paid by the Contractor, not including labor and equipment rentals as herein set forth, to which 15 percent (15%) of the cost will be added for administration and profit. The Contractor shall make every reasonable effort to take advantage of trade discounts offered by material suppliers. Any discount received shall pass through to the County. Salvageable temporary construction materials will be retained by the County, or their appropriate salvage value shall be credited to the County, at the County's

discretion.

- c. Equipment: For all equipment other than small tools, the Contractor will be entitled to rental rates as established herein, and agreed to in writing before the work is begun. Transportation costs directly attributable to Force Account work will be as stated below. Small tools will be considered any equipment which has a new cost of \$1000 or less, and will not be eligible for any compensation. The Contractor shall provide the Project Officer a list of all equipment to be used in the work. For each piece of equipment, the list shall include the serial number; date of manufacture; location from which equipment will be transported; and, for rental equipment, the rental rate and name of the company from which it is rented. The number and types of equipment engaged in the work will be subject to regulation by the Project Officer as deemed to be the most practical and economical for the work. No compensation will be allowed for equipment which is inoperable due to mechanical failure. Compensation for equipment shall be as follows:

- 1) Hourly Base Equipment Rental Rates (Owned Equipment) – For equipment authorized for use in the Force Account work that is owned by the Contractor, the Contractor shall be entitled to an Hourly Base Rental Rate as detailed in the following paragraphs. The Hourly Base Rental Rate for Contractor owned equipment will not exceed 1/176 of the monthly rates of the schedule shown in the *Rental Rate Blue Book* modified in accordance with the *Rental Rate Blue Book* rate adjustment tables that are current at the time the force account is authorized. The rates for equipment not listed in the *Rental Rate Blue Book* schedule shall not exceed the hourly rate being paid for such equipment by the Contractor at the time of the force account authorization. In the absence of such rates, prevailing rates being paid in the area where the authorized work is to be performed shall be used.
- 2) Hourly Base Equipment Rental Rates (Rented Equipment) – If the Contractor does not possess or have readily available equipment necessary for performing the force account work and such equipment is rented from a source other than a company that is an affiliate of the Contractor, payment will be based on actual invoice rates when the rates are reasonably in line with established rental rates for the equipment in question and are approved by the Project Officer.
- 3) Hourly Operating Rates – Hourly Operating Rates shall be as established in the Blue Book estimated operating cost per hour. This operating cost will be full compensation for fuel, lubricants, repairs, servicing (greasing, fueling, and oiling), small tools, and any and all incidentals. If rental rates for the equipment being used in the work are not listed in the Blue Book or otherwise readily available, the Hourly Operating Cost will be 15% of the established Hourly Base Rental Rate. If invoices for Rental Equipment include the furnishing of fuel, lubricants, repair, and

servicing, then the Contractor will not be entitled to any Hourly Operating costs for that equipment.

- 4) Equipment Usage - Equipment usage will be measured by time in hours of actual time engaged in the performance of the work. The Contractor shall be entitled to the applicable Hourly Base Equipment Rental Rate and Hourly Operating Rate for all approved Equipment Usage.
 - 5) Equipment Standby – Standby time is defined as the period of time equipment authorized for Force Account work by the Project Officer is available on-site for the work but is idle for reasons not the fault of the Contractor or normally associated with the efficient and necessary use of that equipment in the overall operation of the work at hand. Hourly rates for Contractor owned equipment on standby, will be at 50 percent (50%) of the rate paid for equipment performing work. Operating costs will not be allowed for equipment on Standby. When equipment is performing work less than 40 hours for any given week and is on standby, payment for standby time will be allowed for up to 40 hours, minus hours performing work. Payment for Standby will be allowed only for working days. Payment for Standby will not be made for the time that equipment is on the Project in excess of 24 hours prior to its actual performance in the force account work.
 - 6) Transporting Costs – When it is necessary to obtain equipment exclusively for Force Account work from sources beyond the Project limits and the Project Officer authorizes the transporting of such equipment to the Project site, the cost of transporting the equipment will be allowed as an expense. Where the transport requires the use for a hauling unit, the allowable expense will consist only of the actual cost incurred for the use of the hauling equipment, or the applicable Blue Book cost, whichever is less. When equipment is transferred under its own power, the allowable Transporting cost shall be 50% of the Hourly Base Equipment Rental Rate.
 - 7) Overhead and Profit – The Contractor shall be entitled to an additive of 10% on all appropriate and approved Equipment Rental, Operating, and Transporting costs as defined above.
- d. Subcontracting: The Contractor shall receive the cost of work performed by a subcontractor as determined in (a), (b), and (c) above. In addition, the Contractor will be allowed an allowance per the schedule below for administrative costs and profit.

Total Cost of Subcontract Work: Rate Schedule

\$0 - \$10,000	10%
> \$10,000	\$1,000 + 5 % above \$10,000

- e. Other Costs: The Contractor shall not be entitled to any costs associated with Force Account Work other than those specifically identified in this section.
- f. Statements: Payments will not be made for work performed on a force account basis until the Contractor has furnished the Project Officer duplicate itemized statements of all costs of such work detailed as follows:
 - 1. Payroll indicating name, classification, date, daily hours, total hours, rate, and extension of each laborer, foreperson
 - 2. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of equipment
 - 3. Quantities of materials, prices, and extensions
 - 4. Transportation of materials
 - 5. Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the Force Account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his stock; that the quantity claimed was actually used; and that the price, transportation, and handling claimed represented his actual cost.

6. CLAIMS FOR EXTRA COST

If the Contractor claims that any event will give rise to a claim for an increase in the Contract Amount or that any instructions from the Project Officer, by drawings or otherwise, will incur him extra cost under the Contract, then, except in emergencies endangering life or property, it shall give the Project Officer written notice thereof no later than three (3) days of the event or instruction. The Contractor thereafter must provide to the Project Officer a full cost proposal within 14 days detailing the amount of additional compensation claimed, together with the basis therefore and documentation supporting the claimed amount. No such claims shall be valid unless so made. If the Project Officer agrees that such event or instructions involve extra cost to the Contractor, any additional compensation will be determined by one of the methods provided in the Changes in Work paragraph of these General Conditions as selected by the Project Officer. All pricing and supporting documentation requirements of the Changes in the Work clause shall apply to claims for extra cost deemed valid under this paragraph.

7. DAMAGES FOR DELAY; EXTENSION OF TIME OTHER THAN FOR WEATHER

a. Excusable Non-Compensable Delays: If and to the extent that the Contractor is delayed at any time in the progress of the Work by a Force Majeure event or other causes outside of the County's control or the Contractor's control and which the Contractor could not have reasonably foreseen, the Contractor may request an extension of the Time for Completion. To be considered for an extension of the Time for Completion, the Contractor shall give the Project Officer timely written notice at the inception of the delay. The Contractor thereafter must provide to the Project Officer a full claim within 14 calendar days of the cessation of the delay and demonstrate that the delay affected the critical path of the accepted schedule and any Float has been consumed. If the Project Officer

agrees with the existence and impact of the delays, the Project Officer shall extend the Time for Completion for the length of time that the Time for Completion was actually delayed thereby. The Contractor shall not be due compensation or damages of any kind as a result of such delay. Delays caused by weather are addressed in Section G.8.

b. Excusable Compensable Delays: If and to the extent that the Contractor is unreasonably delayed at any time in the progress of the Work by any act or omission of the County, its agents or employees, due to causes within the County's control, the Contractor may request an extension of the Time for Completion and/or additional compensation. The Contractor shall give notice to the Project Officer immediately at the time of the occurrence giving rise to the delay and shall give written notice no later than five (5) calendar days after the inception of the delay. The Contractor's written notice shall specify the nature of the delay claimed, the cause of the delay, and the impact of the delay on the Contractor's schedule. Thereafter the Contractor shall provide to the Project Officer a full claim within 14 calendar days of the cessation of the delay. The claim must detail the amount of additional contract time or compensation claimed, together with the basis therefor along with itemized documentation supporting the claim. The itemized documentation must demonstrate that the claimed delay directly affected the critical path of the accepted schedule and any Float has been consumed and the time and/or costs incurred by the Contractor are directly attributable to the delay in the work claimed. The Contractor shall be entitled to additional compensation only if the delay was caused solely by acts or omission of the County, its agents or employees, or due to causes within their control.

If the Contractor is entitled to compensation, an itemized accounting of the following direct site overhead expenses will be considered as allowable costs to be used in determining the compensation due the Contractor: the site superintendent(s) (as identified at the inception of the work) pro rata salary, temporary site facilities, temporary site office expense, and temporary site utilities including basic telephone service, electricity, heat, water, and sanitary/toilets. A fifteen percent (15%) markup of these expenses will be allowed to compensate the Contractor for home office and other direct or indirect overhead.

Furthermore, compensation for the delay shall be calculated from the contractual Time for Completion, as adjusted by Change Order, and shall not be calculated based on any early completion planned or scheduled by the Contractor

c. Non-Excusable Non-Compensable Delays: The Contractor shall not be entitled to an extension of the Time for Completion or to any additional compensation for delays if and to the extent they are caused by acts, omissions, fault, or negligence of the Contractor or its subcontractors, agents, or employees or due to foreseeable causes within their control, including, but not limited to, delays resulting from defective work, including workmanship and/or materials, from rejected work which must be corrected before dependent work can proceed, from defective work or rejected work for which corrective action must be determined before like work can proceed, from incomplete,

incorrect, or unacceptable Submittals or samples, or from the failure to furnish enough properly skilled workers, proper materials or necessary equipment to diligently perform the work in a timely manner in accordance with the Project schedule.

d. No extension of time or additional compensation shall be given for a delay if the Contractor failed to give notice in the manner and within the time prescribed herein. Furthermore, no extension of time or additional compensation shall be given for any delay unless a full claim is made to the Project Offer within 14 days of the end of the delay. Failure to give written notice or failure to present a timely claim shall constitute a waiver of any claim for extension or additional compensation based upon that cause.

e. If the Contractor submits a claim for damages pursuant to this Section, the Contractor shall be liable to the County for a percentage of all costs incurred by the County in investigating, analyzing, negotiating and litigating the claim, which percentage shall be equal to the percentage of the Contractor's total delay claim that is determined through litigation to be false or to have no basis in law or fact (Virginia Code §2.2-4335).

f. Any change in the Time for Completion or additional compensation shall be accomplished only by the issuance of a Change Order.

8. TIME EXTENSIONS FOR WEATHER

The Contractor's sole relief on any claims for delay which is caused by abnormal weather shall be an extension of the Time for Completion provided the Contractor gave the Project Officer written notice no later than five (5) calendar days after the onset of such delay and provided the weather affected the Critical Path. A fully-documented claim for a time extension under this Section must be submitted no later than thirty (30) calendar days after the cessation of the delay. It shall be the Contractor's responsibility to provide the necessary documentation to satisfy the Project Officer that the weather conditions claimed were encountered, which may include daily reports by the Contractor, copies of notification of weather days to the Project Officer, NOAA backup, and pictures from each day claimed.

The Time for Completion will not be extended due to inclement weather conditions which are normal, as defined below, for Arlington County. The Time for Completion includes an allowance for workdays (based on five (5) day workweek) which according to historical data may not be suitable for construction work. The Contractor may request extension to the Time for Completion if it can demonstrate unusual and disruptive weather conditions per the requirements below:

- a. That one or more of the Weather Conditions listed below was encountered; and,
- b. The occurrence of the Weather Condition(s) resulted in an inability to prosecute work which would have otherwise been performed on the day(s) the Weather Condition(s) occurred; and,
- c. The work which was not able to be completed was on the Critical Path and could not be completed **only** due to the Weather Condition(s) claimed.

The Project Officer will determine the Contractor’s entitlement to an extension of the Time for Completion. A time extension of no more than one (1) day will be granted for one (1) day of lost work which satisfies the requirements above, regardless of the number of Weather Conditions encountered. The Contractor’s sole relief shall be an extension of the Time for Completion and no claim for an increase in Contract Amount will be allowed.

The Weather Conditions listed below will be the only basis for consideration by the County, based upon the requirements listed above, as an extension of the Time for Completion due to inclement weather or weather-related site conditions.

Weather Condition #1: Unusually Heavy Precipitation - Figure 1 illustrates the anticipated monthly inclement weather due to precipitation (Rain Days). If the number of days with precipitation in excess of 0.10”, as recorded at Washington Reagan National Airport, exceeds the anticipated Rain Days, the Contractor will be entitled to an extension of one (1) day on the Time for Completion for every day in excess of the Rain Days illustrated in Figure 1. The anticipated value of Rain Days for partial months at the beginning and end of the Contract shall be evaluated on a pro-rated basis.

FIGURE 1
Average days with precipitation of 0.1” or more

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
7	6	7	6	8	6	7	6	6	5	6	6

Weather days are not exclusive to the individual months that they represent in Figure 1. If weather days are not used in a previous month(s) they can be used to offset weather delays in subsequent months. This will be reviewed on a case by case basis and is subject to reconciliation at the end of the Project.

Condition #2: Temperature – The Contractor may be entitled to an additional day for every day that the recorded high temperature at Washington Reagan National Airport is 32 degrees Fahrenheit or less, that has not already been incurred under Weather Condition #1 above. This condition does not apply to vertical construction as defined by the Arlington County Vertical Construction Standards.

9. RELEASE OF LIENS

The County, before making final payment, shall require the Contractor to furnish a complete release of all liens arising out of this Contract. The Contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the County, to indemnify him against any lien. If any lien remains unsatisfied after all payments have been made, the Contractor shall refund to the County all money that the latter may be compelled to pay in discharging such lien. However, the County may make payments in part or in full to the Contractor without requiring the releases or receipts, and the payments so made shall not impair the obligations of any Surety or Sureties on any bond or bonds furnished under this Contract.

10. FINAL PAYMENT

After the Contractor has completed all work and corrections to the satisfaction of the Project Officer or designee and delivered all maintenance and operating instructions, schedules, quantities, bonds, certificates of inspection, maintenance records, As-Built Drawings, and other items required as final payment submittal documents, the Contractor may make application for final payment following the procedure for progress payments. The Final Application for Payment shall be accompanied by all documents required in the Contract, including a complete and signed and notarized copy of the Final Payment Release Form as follows:

RELEASE AND REQUEST FOR FINAL PAYMENT

CONTRACT NUMBER: _____ CONTRACTOR NAME: _____

FINAL PAYMENT AMOUNT: _____

The Contractor hereby requests final payment in the amount indicated on the above referenced Contract. The Contractor agrees that its acceptance of final payment releases and forever discharges Arlington County and its officers, employees, servants and agents from any and all actions, claims, demands and liability of whatever nature now existing or which may hereafter arise as a result of or in connection with the above referenced Contract.

The Contractor certifies that all of the debts for labor, materials, and equipment incurred in connection with the above referenced Contract have been fully paid.

AUTHORIZED SIGNATURE DATE: _____

The date of Final Acceptance is the date on which the County issues the final payment for the work performed.

COMMONWEALTH OF VIRGINIA

COUNTY OF ARLINGTON

On this the ____ day of _____, 20__, before me, personally appeared _____, who acknowledged himself/herself to be _____ in the above instrument, and that he/she, as such _____, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing his/her name by himself/herself as _____.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public

My Commission Expires: _____

VI. INSURANCE REQUIREMENTS

Review this section carefully with your insurance agent or broker prior to submitting a bid or proposal. See the Insurance Checklist (part of the Bid or Proposal Forms) for specific coverages applicable to this Contract. The term "Contract," as used in this section, shall mean the fully executed Agreement covering the work entered into between the County and the Contractor.

1. General

- 1.1 The Contractor shall provide insurance as specified in the Insurance Checklist found on the last page of the bid or proposal form.
- 1.2 The Contract with the Contractor will not be executed by the County until the Contractor has obtained, at its own expense, all of the insurance called for hereunder and such insurance has been approved by the County; additionally, the Contractor shall not allow any subcontractor to start work on any subcontract until all insurance required of the subcontractor has been so obtained and approved by the Contractor. The Contractor shall submit to the County Purchasing Agent copies of all required endorsements and documentation of coverage consistent with the requirements herein or, alternately, at the County's request, certified copies of the required insurance policies in compliance with the insurance requirements. All endorsements and documentation shall state this Contract's number and title.
- 1.3 The Contractor shall require all subcontractors to maintain during the term of this Agreement, Commercial General Liability insurance, Business Automobile Liability insurance, and Workers' Compensation, Employers' Liability insurance, or any other insurance required by the Contract in the same manner and form as specified for the Contractor. The Contractor shall furnish subcontractors' evidence of insurance and copies of endorsements to the County Purchasing Agent immediately upon request by the County and/or prior to the subcontractor's performance of work related to this Contract.
- 1.4 If there is a material change or reduction in coverage, nonrenewal of any insurance coverage or cancellation of any insurance coverage required by this contract, the Contractor shall notify the Purchasing Agent immediately. It is the Contractor's responsibility to notify the County upon receipt of a notice indicating that the policy will not be renewed or will be materially changed. Any policy on which the Contractor has received notification from an insurer that the policy has or will be cancelled or materially changed or reduced must be immediately replaced with another policy consistent with the terms of this Contract and in such a manner that there is no lapse in coverage, and the County immediately notified of the replacement. Not having the required insurance throughout the Contract is considered a material breach of this Contract and grounds for termination. The Contractor shall also obtain an endorsement providing to the County thirty (30) days advance notice of cancellation or nonrenewal (ten days for nonpayment of premium. A copy of that endorsement shall be provided to the County Purchasing Agent prior to the execution of this Contract or any Contract extension thereafter.
- 1.5 No acceptance and/or approval of any insurance by the County shall be construed as relieving or excusing the Contractor, any surety, or any bond, from any liability or obligation imposed under this Agreement.
- 1.6 Arlington County, and its officers, elected and appointed officials, employees, and agents are to be listed as additional insureds under all coverages except Workers' Compensation, Professional

Liability, and Automobile Liability, and the endorsement must clearly identify the County as an additional insured permitted to enjoy all the benefits under the applicable policy of insurance. The certified policy, if requested, must so state coverage afforded under this paragraph shall be primary as respects the County, its officers, elected and appointed officials, agents and employees. The following definition of the term "County" applies to all policies issued under the Contract and to all applicable endorsements:

"The County Board of Arlington County and any affiliated or subsidiary Board, Authority, Committee, or Independent Agency (including those newly constituted), provided that such affiliated or subsidiary Board, Authority, Committee, or Independent Agency is either a Body Politic created by the County Board of Arlington County, Virginia, or one in which controlling interest is vested in Arlington County; and Arlington County Constitutional Officers."

- 1.7 The Contractor shall be responsible for the work performed under the Contract Documents and every part thereof, and for all materials, tools, equipment, appliances, and property of any description used in connection with the work. The Contractor assumes all risks for direct and indirect damage or injury to the property or persons used or employed on or in connection with the Work contracted for, and of all damage or injury to any person or property wherever located, resulting from any action, omission, commission or operation under the Contract, or in connection in any way whatsoever with the contracted work.
- 1.8 The insurance coverage required shall remain in force throughout the Contract or as otherwise stated in the Contract Documents or these Insurance Requirements. If the Contractor fails to provide acceptable evidence of current insurance within seven (7) days of written notice at any time during the Contract, the County shall have the absolute right to terminate the Contract without any further obligation to the Contractor.
- 1.9 Contractual and other liability insurance provided under this Contract shall not contain a supervision, inspection or engineering services exclusion that would preclude the County from supervising or inspecting the work as to the end result. The Contractor shall assume all on-the-job responsibilities as to the control of persons directly employed by it and of the subcontractors and any persons employed by the subcontractor and/or carriers delivering and receiving materials from the Project.
- 1.10 If any policy contains a warranty stating that coverage is null and void (or words to that effect) if the Contractor does not comply with the most stringent regulations governing the work, such policy shall be modified so that coverage shall be afforded in all cases except for the Contractor's willful or intentional noncompliance with applicable government regulations.
- 1.11 All policies shall include the following language: "The insolvency or bankruptcy of the insured or of the insured's estate will not relieve the insurance company of its obligations under this policy."
- 1.12 All policy forms must "Pay on behalf of" rather than "Indemnify" the insured.
- 1.13 Nothing contained in these Insurance Requirements or the Contract Documents shall be construed as creating any contractual relationship between any subcontractor and the County. The Contractor shall be as fully responsible to the County for the acts and omissions of its subcontractors and of persons employed by them as it is for acts and omissions of persons directly employed by it.

- 1.14 Precaution shall be exercised by the Contractor at all times for the protection of persons, (including employees) and property. All existing structures, utilities, roads, services, trees and shrubbery shall be protected against damage or interruption of service at all times by the Contractor and its subcontractors during the term of the Contract, and the Contractor shall be held responsible for any damage to property occurring by reason of its work under the Contract whether identified on the Contract Documents or not.
 - 1.15 For any claims related to this work, The Contractor's insurance shall be deemed primary and non-contributory to all other applicable coverage and in particular with respect to Arlington County, its representatives, officials, employees, and agents. Any insurance or self-insurance maintained by Arlington County shall be excess and noncontributory of the Contractor's insurance. The Contractor shall waive its right of subrogation for all insurance claims.
 - 1.16 If the Contractor does not meet the insurance requirements set forth by the Contract Documents, alternate insurance coverage or self-insurance, satisfactory to the Purchasing Agent, may be considered. Written requests for consideration of alternate coverages including the Contractor's most recent actuarial report and a copy of its self-insurance resolution to determine the adequacy of the insurance funding must be received by the County Purchasing Agent at least ten (10) working days prior to the date set for receipt of bids or proposals. If the County denies the request for alternate coverages, the specified coverages will be required to be submitted. If the County permits alternate coverage, an Addendum to the Insurance Requirements will be prepared and distributed prior to the time and date set for receipt of bids or proposals.
 - 1.17 All required insurance coverages must be acquired from insurers authorized to do business in the Commonwealth of Virginia and acceptable to the County. The insurers must also have a policyholders' with a rating of "A-VII" in the latest edition of the A.M. Best Co.'s Insurance Reports, unless the County grants specific approval for an exception, in the same manner as described in 1.16 above.
 - 1.18 The Contractor shall be responsible for payment of any deductibles applicable to the coverages.
 - 1.19 The Contractor must disclose the amount of any deductible or self-insurance component applicable to the General Liability, Automobile Liability, Professional Liability, Intellectual Property or any other policies, if any. The County reserves the right to request additional information to determine if the Contractor has the financial capacity to meet its obligations under a deductible. Thereafter, at its option, the County may require a lower deductible, funds equal to the deductible be placed in escrow, a certificate of self-insurance, collateral, or other mechanism in the amount of the deductible to ensure additional protection for the County.
2. Contractor's Insurance:
 - 2.1 The Contractor shall purchase the following insurance coverages, including the terms, provisions and limits shown in the Insurance Checklist.
 - 2.1.1 Commercial General Liability - Such Commercial General Liability policy shall include any or all of the following as indicated on the Checklist:

- i. General aggregate limit is to apply per project;
- ii Premises/Operations;
- iii. Actions of Independent Contractors;
- iv. Products/Completed Operations to be maintained for five (5) years after completion of the Work;
- v. Contractual Liability, including protection for the Contractor from claims arising out of liability assumed under this Contract;
- vi. Personal Injury Liability including, including but not limited to, coverage for offenses related to employment and copyright infringement;
- vii. Explosion, Collapse, or Underground (XCU) hazards.

2.1.2 Business Automobile Liability, including coverage for any owned, hired, or non-owned motor vehicles, Uninsured Motorists coverage, and automobile contractual liability.

2.1.3 Workers' Compensation - statutory benefits as required by Virginia law or the U.S. Longshoremen's and Harbor Workers' Compensation Act, or other laws as required by labor union agreements, including standard Other States coverage; Employers' Liability coverage. The policy shall not contain any provision or definition which would serve to eliminate third party action over claims, including exclusion for bodily injury to an employee of the insured, employees of the premises owner, or employees of the general contractor to which the insured is subcontracted; or employees of the insured's subcontractor.

2.1.4 General Environmental Remediation Projects

In addition to the Insurance Requirements specified in the general provision or elsewhere in the Contract Documents, the Contractor shall not commence work under this Contract until all insurance as required hereafter has been obtained, and certified copies, naming the County as an additional insured, of such insurance have been submitted and accepted by the Purchasing Agent.

- i. An environmental remediation contractor or subcontractor shall be responsible for purchasing and maintaining Business Automobile Liability insurance and Workers' Compensation insurance as described in 2.1.2 and 2.1.3.
- ii. Acceptance by Arlington County of insurance submitted by the Contractor does not relieve or decrease in any manner the liability of the Contractor for performance of environmental remediation Work under the Contract.
- iii. The Contractor is responsible for any losses, claims, and costs of any kind, which exceed the Contractor's limits of liability, or which may be outside the coverage scope of the policies. The limits and coverage requirements may be revised at the option of the Arlington County Risk Manager. The requirements outlined shall in

no way be construed to limit or eliminate the liability of the Contractor, which arises from performance of work under the Contract.

2.1.5 Contractors Pollution Liability (CPL) Policy

- i. Minimum liability limits required shall be \$1,000,000 Per Loss and \$2,000,000 Total All Losses, including, but not limited to, property damage, bodily injury, loss of use, and clean-up costs.
- ii. Limits must be dedicated to work performed under this Contract only, unless prior approval by the Arlington County Risk Manager has been obtained. The policy of insurance shall contain or be endorsed to include the following:
 - a. Pollution coverage as respects asbestos, lead, VOC and PCB's.
 - b. "Covered Operations" designated by the CPL policy must specifically include all work performed under this contract. (This would include and not be limited to excavation, off-site incineration of soils, demolition, asbestos abatement, drum removal and disposal, in-situ vapor extraction, etc.) and exclusions or limitations affecting work performed under this contract must be deleted. (i.e., lead, asbestos, pollution, testing, underground storage tanks, radioactive matter, etc.)
 - c. Contractor must comply with all applicable DOT and EPA requirements.
 - d. Premises/Operations.
 - e. Broad form property damage.
 - f. Products/Completed Operations coverage for a minimum of five (5) years after Final Payment.
 - g. Contractual liability coverage in accordance with ISO policy form CG 00 01 11 85. Modifications to the standard provision will not be acceptable if they serve to reduce coverage.
 - h. Cross liability/severability of interest.
 - i. The scope of work and all related activities under this Contract shall be scheduled as "Covered Operations" under this policy.
 - j. Coverage is included on behalf of the insured for covered claims arising out of the actions of independent contractors. If insured is utilizing subcontractors, the CPL policy must use "By or On behalf of" language with regards to coverage.
 - k. Loading and unloading exclusions must be amended so as to include coverage for mobile equipment and automobiles.

2.1.6 Asbestos and Lead Based Paint Abatement Projects

- i. Minimum Liability Limits shall be \$1,000,000 Per Occurrence and \$2,000,000 Aggregate. Limits must be dedicated to work performed under this Contract only, unless otherwise approved by the Arlington County Risk Manager. The policy shall be written with a minimum annual aggregate combined single limit for Bodily Injury and Property Damage as shown on the Insurance Checklist. This limit can be inclusive of defense costs.
- ii. The policy of insurance shall contain or be endorsed to include the following:
 - a. Coverage for Asbestos/Lead-Based Paint Abatement operations as described in the contract. Specific lead endorsement evidencing this project must be provided, if applicable.
 - b. Pollution coverage as respects Asbestos/Lead-Based Paint for all phases of the abatement process.
 - c. Transportation coverage for the hauling of ACM/Lead-Based Paint from the project site to the final disposal location, as evidenced by the contractor or applicable waste hauler. Contractor must comply with all applicable D.O.T. regulations.
 - d. Premises/Operations.
 - e. Broad Form Property Damage.
 - f. Products/Completed Operations coverage for a minimum of five (5) years after project completion.
 - g. Contractual Liability coverage in accordance with ISO policy form CG 00 01 11 85. Modifications to the standard provision will not be acceptable if they serve to reduce coverage.
 - h. Cross Liability. Any "Insured vs. Insured" – type language must be deleted or amended to "Named Insured vs. Named Insured."
 - i. The policy shall not exclude Asbestos/Lead Based Paint bodily injury to employees of Arlington County so long as their designated job duties do not require them to be in the regulated asbestos/lead based paint abatement area.
 - j. If the policy or any endorsement contains a provision which limits or eliminates bodily injury or property damage coverage based on final air fiber clearance levels, the policy shall be modified so that it is consistent with the clearing level (FCC) and the appropriate analytical testing protocol contained in the project specifications.
 - k. Personal Injury.

- l. Independent Contractors.
- m. Hostile fire coverage is to be provided.

2.1.7 Environmental Impairment Liability, including coverage of insureds' on-site clean up, with the following minimum limits of liability:

Bodily Injury and Property	3,000,000 each occurrence
Damage Liability	6,000,000 annual aggregate

The County Board of Arlington County, Virginia, is to be named in Additional Name Insured or a Broad Form Contractual Endorsement may be added to the policy as respects any liability that may arise out of or result from the handling of Work on this Project including specifically but without limitation thereto, the indemnity provisions in the Agreement. Such policies will be endorsed to provide that they are primary to an insurance carried by the County Board of Arlington County, Virginia.

2.1.8 Should any of the Work hereunder involve the cleanup, remediation and/or removal of bio-solids, bio-hazards waste, or any hazardous or toxic materials, trash, debris, refuse, or waste, the Contractor shall provide, or shall require its subcontractor performing the work to provide, the following coverage in addition to the above requirements:

- a) Environmental Liability and Cleanup Coverage – with limits of not less than \$2,000,000 per occurrence.
- b) Business Automobile Liability – for transportation or regulated and/or hazardous waste, products, or materials with limits of not less than \$1,000,000, per occurrence. Said coverage shall include County as an additional insured and shall include both the MCS-90 and CA 9948 (or equivalent) endorsements, which shall be specifically referenced on the certificate of insurance.

2.2 The Contractor shall take reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to, its employees on the job, and others. The Contractor shall comply with all applicable provisions of federal, state and municipal safety laws, insurance requirement's, standard industry practices, the requirements of the operations and this contract, the Contractor, directly through its subcontractors, shall effect and properly maintain at all times, as required by the conditions and progress of the work, necessary safeguards for safety and protection of the public, including securing areas, posting danger signs, placarding, labeling or posting other forms of warning against hazards.

3. Commercial General or other Liability Insurance - Claims-made Basis:

3.1 If Commercial General or other liability insurance purchased by the Contractor has been issued on a claims-made basis, the Contractor must comply with the following additional conditions. The limits of liability and the extensions to be included as described in the Insurance Checklist remain the same. The Contractor must either:

- i. Agree to provide insurance, copies of the endorsement and certified documentation evidencing the above coverages and naming the County as an additional insured for a period of five (5) years after final payment under the Contract. Such documentation shall evidence a retroactive date, no later than the beginning of the Contractors or subcontractors' work under this Contract, or

- ii. Purchase an extended (minimum five [5] years) reporting period endorsement for the policy or policies in force during the term of this Contract and evidence the purchase of this extended reporting period endorsement by means of a copy of the endorsement itself. The extended reporting period will begin upon final payment under the Contract.

4. Builder's Risk Insurance

- 4.1 The Contractor shall purchase and maintain builders risk insurance with a limit equal to the initial Contract Amount and any amendments to the Contract which affect the project cost on a replacement cost basis. Builder's risk insurance shall be maintained until Final Payment under the Contract has been made or until no person or entity other than the County has an insurable interest in the covered property, whichever is earlier. The builders risk insurance shall include the County as defined in Section 1.6, Contractor, subcontractors and sub-subcontractors as named insureds.
- 4.2 Insurance shall be on an all-risks policy form including the perils of fire, theft, vandalism, malicious mischief, lightning, wind, force majeure, collapse, and earthquake. Coverage is to apply for demolition occasioned by enforcement of any applicable legal requirements, and Architect's fees. Coverage for the peril of flood shall not be required unless otherwise required in the Contract Documents.
- 4.3 Unless otherwise provided in the Contract Documents, the builders risk insurance shall also cover materials to be incorporated into the project which are stored off the site.
- 4.4 The Contractor shall purchase and maintain Boiler and Machinery insurance, if required by the contract documents or by law, with a limit satisfactory to the County. The Boiler and Machinery insurance shall cover objects during installation and until Final Acceptance by the County. The County shall be included as a named insured.
- 4.5 Any loss under builder's risk insurance shall be payable to the County as fiduciary for the insureds, as their interests may appear, subject to any mortgagee clause. The Contractor shall pay subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require subcontractors to make payments to their sub-subcontractors in similar manner. The County, as fiduciary, shall have the right to adjust and settle a loss with insurers.
- 4.6 The insurance company providing the builders risk coverage shall grant permission for the County to partially occupy or use the premises under construction prior to final acceptance without removing or affecting the coverage.

VII. ATTACHMENTS AND FORMS

ARLINGTON COUNTY, VIRGINIA
OFFICE OF THE PURCHASING AGENT

INVITATION TO BID NO. 23-DES-ITBPW-474

B I D F O R M

ELECTRONIC BIDS WILL BE RECEIVED BY THE COUNTY VIA VENDOR REGISTRY NOT LATER THAN 4:00 P.M., FEBRUARY 9, 2023

FOR PROVIDING N GLEBE ROAD WATERMAIN REPLACEMENT CONSTRUCTION IDENTIFIED HEREIN IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, TERMS AND CONDITIONS OF THIS SOLICITATION

THE FULL LEGAL NAME OF THE ENTITY SUBMITTING THIS BID MUST BE WRITTEN IN THE SPACE BELOW. THIS BID FORM AND ALL OTHER DOCUMENTS THAT REQUIRE A SIGNATURE MUST BE FULLY AND ACCURATELY COMPLETED AND SIGNED BY A PERSON WHO IS AUTHORIZED TO BIND THE BIDDER, OR THE BID MAY BE REJECTED.

SUBMITTED BY:

(legal name of entity)

AUTHORIZED SIGNATURE:

PRINT NAME AND TITLE:

ADDRESS:

CITY/STATE/ZIP:

TELEPHONE NO.:

E-MAIL ADDRESS:

THIS ENTITY IS INCORPORATED

IN:

THIS ENTITY IS A:

CORPORATION

LIMITED PARTNERSHIP

(check the applicable option)

GENERAL PARTNERSHIP

UNINCORPORATED ASSOCIATION

LIMITED LIABILITY COMPANY

SOLE PROPRIETORSHIP

IS BIDDER AUTHORIZED TO TRANSACT BUSINESS IN THE COMMONWEALTH OF VIRGINIA?

YES NO

IDENTIFICATION NO. ISSUED TO THE ENTITY BY THE

SCC:

Any Bidder exempt from Virginia State Corporation Commission (SCC) authorization requirement must include a statement with its bid explaining why it is not required to be so authorized.

VIRGINIA CONTRACTOR'S LICENSE NUMBER: _____

ENTITY'S DUN & BRADSTREET D-U-N-S NUMBER: (if available): _____

HAS YOUR FIRM OR ANY OF ITS PRINCIPALS BEEN DEBARRED, ENJOINED, OR SUSPENDED FROM SUBMITTING BIDS TO ARLINGTON COUNTY, VIRGINIA, OR ANY OTHER STATE OR POLITICAL SUBDIVISION WITHIN THE PAST THREE YEARS? YES NO

HAS YOUR FIRM DEFAULTED ON ANY PROJECT IN THE LAST THREE YEARS? YES NO

HAS YOUR FIRM HAD ANY TYPE OF BUSINESS, CONTRACTING OR TRADE LICENSE, REGISTRATION OR CERTIFICATION REVOKED OR SUSPENDED IN THE PAST THREE YEARS? YES NO

HAS YOUR FIRM AND ITS PRINCIPALS/OWNERS BEEN CONVICTED OF ANY CRIME RELATING TO ITS CONTRACTING BUSINESS IN THE PAST TEN YEARS? YES NO

HAS YOUR FIRM BEEN FOUND IN VIOLATION OF ANY LAW APPLICABLE TO ITS CONTRACTING BUSINESS (LICENSING LAWS, TAX LAWS, WAGE AND HOUR LAWS, PREVAILING WAGE LAWS, ENVIRONMENTAL) WHERE THE RESULT OF SUCH VIOLATION WAS THE PAYMENT OF A FINE, BACK PAY DAMAGES, OR ANY OTHER PENALTY IN THE AMOUNT OF \$5000 OR MORE? YES NO

IS YOUR FIRM PREQUALIFIED BY THE VIRGINIA DEPT. OF TRANSPORTATION? YES NO

BIDDER STATUS: MINORITY OWNED: WOMAN NEITHER:

The undersigned certifies that (Bidder Name) _____ is currently registered with the Virginia State Board of Contractors as required by the Code of Virginia. Certificate Number _____ for a Class _____ License was issued on the _____ day of _____, 20____. The undersigned further certifies that the registration fee and all renewal fees required under law have been paid.

TIME LIMIT FOR PROJECT: SUBSTANTIAL COMPLETION – 540 CALENDAR DAYS
FINAL COMPLETION – 30 CALENDAR DAYS FROM
SUBSTANTIAL COMPLETION

LIQUIDATED DAMAGES: SUBSTANTIAL COMPLETION - \$1758.00 PER DAY
FINAL COMPLETION - \$1758.00 PER DAY

MINIMUM BIDDER QUALIFICATIONS AND SUBMISSION REQUIREMENTS:

- Bidders shall have three (3) continuous years construction contract experience conducting public works infrastructure and street improvement projects in an urban environment. The experience shall be work of similar size and scope, construction, re-construction, and maintenance. The Bidder's obtained project experience shall consist of the following:
 - **State and County streets**
 - **Curbs and gutters**
 - **Sidewalks and walkways**
 - **Driveway aprons**
 - **Storm sewer pipes and inlets**
 - **Wet Utilities**
 - **Pavement markings and signage**
 - **Electrical conduits**
 - **Traffic signals and Street lighting**
 - **Streetscapes and related site work**

STAFFING QUALIFICATIONS:

- Site Supervisor:
The Bidder shall have a qualified and experienced site supervisor who can clearly communicate technical matters on-site at all times when construction activity is occurring or when the site is not in a secure state. The Site Supervisor must have at least (5) years of experience in overseeing projects of similar type and size.

- Safety Project Officer:
The Bidder shall have at least one (1) employee certified by VDOT in Basic Work Zone Traffic Control on-site at all times that work is occurring and be responsible for the following:
 - Placement, maintenance, and removal of work zone traffic control devices,
 - Compliance with permit requirements and conditions, approved plans and specifications, the Virginia Work Area Protection Manual, and the Manual of Uniform Traffic Control Devices.

The flagger shall be certified in accordance with the VDOT Flagger Certification Program, the American Traffic Safety Services Association Flagger Certification Program or any other VDOT approved flagger program. The flagger shall have his/her certification card with them at all times while performing flagging activities.

The Bidder shall have at least one (1) employee certified in OSHA 10 on-site at all times that work is occurring. The employee shall have served as a Project Safety Officer on at least three (3) prior projects. If the contractor has multiple employees with these requirements, the Contractor shall clearly identify which employee shall serve as the Project Safety Officer.

- Environmental Project Officer:
The Bidder shall have at least one (1) employee that has successfully completed the VDOT Erosion & Sediment Control Contractor Certification training. The bidder employee shall be on-site during all land disturbance activities.

In a separate attachment, Bidders shall provide the following documentation:

- A list of at least 5 similar projects recently completed within the last 5 years that involve the same material, equal size, and comparable length. For each project, Bidders shall list the following information:
 - Project Name
 - Project description and Bidder's scope of work within the project
 - Project manager's name, telephone number and email address
 - Work start date, scheduled completion, and actual completion date
 - Initial contract cost and final contract cost
- Resume of the proposed Site Supervisor
- Certification of VDOT Flagger Certification Program, the American Traffic Safety Service Association Flagger Certification Program or any other VDOT approved flagger program of the Safety Project Officer(s)
- Certification of VDOT Erosion & Sediment Control Contractor Certification training
- OSHA 10 Certification
- Bid Surety in the amount of not less than 5% of the bid

COMPLETE THE PRICING SHEET PROVIDED WITH THE BID DOCUMENTS AS ATTACHMENT A TO ITB NO. 23-DES-ITBPW-474 AND SUBMIT IT WITH YOUR BID.

FAILURE TO SUBMIT THE PRICING SHEET WITH THE BID WILL DEEM THE BIDDER NONRESPONSIVE.

STIPULATED PRICE ITEM			
The Contractor agrees to perform related work for the following items at the stipulated prices shown:			
#	ITEM DESCRIPTION	UNIT	PRICE
1	CONCRETE PIER, CRADLE, OR ENCASEMENT	CY	\$200.00
2	ROCK EXCAVATION	CY	\$150.00
3	CRUSHER RUN VDOT #25 OR APPROVED EQUAL	CY	\$100.00
4	OVER EXCAVATION	CY	\$65.00
5	TEST PITS	EA	\$550.00
6	SELECT BORROW	CY	\$70.00
7	DETECTABLE WARINING SURFACE	SY	\$240.00
8	TRAFFIC SIGN WITH NEW POST	EACH	\$ 480.00
9	CONCRETE MEDIAN CURB (MC-1)	LF	\$85.00

THE UNDERSIGNED UNDERSTANDS AND ACKNOWLEDGES THE FOLLOWING:

THE OFFICIAL COPY OF THE SOLICITATION DOCUMENTS, WHICH INCLUDES ANY ADDENDA, IS THE ELECTRONIC COPY THAT IS AVAILABLE FROM THE VENDOR REGISTRY WEBSITE AT:

[HTTPS://VRAPP.VENDORREGISTRY.COM/BIDS/VIEW/BIDSLIST?BUYERID=A596C7C4-0123-4202-BF15-3583300EE088](https://vrapp.vendorregistry.com/bids/view/bidslst?buyerid=A596C7C4-0123-4202-BF15-3583300EE088).

VENDORS ARE REQUIRED TO REGISTER ON [VENDOR REGISTRY](#) IN ORDER TO SUBMIT A RESPONSE TO THIS INVITATION TO BID. **NO RESPONSES WILL BE ACCEPTED AFTER THE BID DUE DATE AND TIME.**

POTENTIAL BIDDERS ARE RESPONSIBLE FOR DETERMINING THE ACCURACY AND COMPLETENESS OF ALL SOLICITATION DOCUMENTS THEY RECEIVE FROM ANY SOURCE, INCLUDING THE COUNTY.

The undersigned acknowledges receipt of the following Addenda:

ADDENDUM NO. 1 DATE: _____ INITIAL: _____

ADDENDUM NO. 2 DATE: _____ INITIAL: _____

ADDENDUM NO. 3 DATE: _____ INITIAL: _____

TRADE SECRETS OR PROPRIETARY INFORMATION:

Trade secrets or proprietary information submitted by an Offeror in connection with a procurement transaction will not be subject to public disclosure under the Virginia Freedom of Information Act. Pursuant to Section 4-112 of the Arlington County Purchasing Resolution, however, an Offeror seeking to protect submitted data or materials from disclosure must, before or upon submission of the data or materials, identify the specific data or materials to be protected and state the reasons why protection is necessary. Please note that designation of an entire bid, proposal, or prequalification application or of line-item prices or the total bid amount is prohibited.

Please mark one:

No, the bid that I have submitted does not contain any trade secrets and/or proprietary information.

Yes, the bid that I have submitted does contain trade secrets and/or proprietary information.

If Yes, you must clearly identify below the exact data or materials to be protected and list all applicable page numbers, sections, and paragraphs of the bid that contain such data or materials:

State the specific reason(s) why protection is necessary and why the identified information constitutes a trade secret or is proprietary:

If you fail above to identify the data or materials to be protected or to state the reason(s) why protection is necessary, you will not have invoked the protection of Section 4-111 of the Purchasing Resolution. Accordingly, upon the award of a contract, the bid will be open for public inspection consistent with applicable law.

CERTIFICATION OF NON-COLLUSION: The undersigned certifies that this bid is not the result of or affected by (1) any act of collusion with another person engaged in the same line of business or commerce (as defined in Virginia Code §§ 59.1-68.6 *et seq.*) or (2) any act of fraud punishable under the Virginia Governmental Frauds Act (Virginia Code §§ 18.2-498.1 *et seq.*).

CONTACT PERSON AND MAILING ADDRESS FOR DELIVERY OF NOTICES

Provide the name and address of the person who is designated to receive notices and other communications regarding this solicitation. Refer to the "Notices" section in the draft Contract Terms and Conditions for information regarding delivery of notices.

NAME: _____

ADDRESS: _____

E-MAIL: _____

INSURANCE CHECKLIST

CERTIFICATE OF INSURANCE MUST SHOW ALL COVERAGE AND ENDORSEMENTS MARKED "X".

**COVERAGES REQUIRED
MINIMUMS**

LIMITS (FIGURES DENOTE

- 1. **Workers' Compensation**.....Statutory limits of Virginia
- 2. **Employer's Liability**.....\$500,000/accident, \$500,000/disease, \$500,000/disease policy limit
- 3. **Commercial General Liability**..... \$1,000,000 CSL BI/PD each occurrence, \$2 Million annual aggregate
 - 4. Premises/Operations.....\$1, Million CSL BI/PD each occurrence, \$ 2 Million annual aggregate
 - 7. Independent Contractors.....\$1 million CSL BI/PD each occurrence, \$2 Million annual aggregate
 - 8. Products Liability..... \$1 million CSL BI/PD each occurrence, \$2 Million annual aggregate
 - 9. Completed Operations..... \$1 million CSL BI/PD each occurrence, \$2 Million annual aggregate
 - 10. Contractual Liability (Must be shown on Certificate.... \$1 million CSL BI/PD each occurrence, \$2 Million annual aggregate
 - 11. Personal and Advertising Injury Liability.....\$1 million each offense, \$2 Million annual aggregate
 - 21. Moving and Rigging Floater.....Endorsement to CGL
 - 24. XCU Coverage.....Endorsement to CGL
- 5. **Automobile Liability**.....\$1 million CSL BI/PD each accident, Uninsured Motorist
 - 6. Owned/Hired/Non-Owned Vehicle.....\$1 million BI/PD each accident, Uninsured Motorist
 - 16. Motor Carrier Act (MCS-90) and CA9948 (or equivalent) Endorsements\$ 2 million BI/PD each accident, Uninsured Motorist
- 12. **Umbrella/Excess Liability**.....\$1 million Bodily Injury, Property Damage and Personal Injury
- 13. Per Project Aggregate for General Liability or Umbrella/Excess Liability (check coverage)
- 14. **Professional Liability/ Errors and Omission (E&O)**
 - a. Architects and Engineers.....\$1 million per occurrence/claim
 - b. Asbestos Removal Liability\$3 million per occurrence/claim
 - c. Medical Malpractice.....\$2.55 million per occurrence/claim or the statutory VA annual claim cap whichever is greater
 - 15. Miscellaneous E&O.....\$1 million per occurrence/claim
- 17. **Motor Cargo Insurance**.....\$ _____ (to the total value of the goods being transported)
- 18. **Garage Liability**.....\$1 million Bodily Injury, Property Damage per occurrence
- 19. **Garage Keepers Liability**.....\$1Million Comprehensive, \$1 Million Collision
- 20. **Inland Marine-Bailee's Insurance**..... \$ _____ (maximum value of goods under Contractor's care)
- 22. **Crime Liability/ Employee Dishonesty insurance or Dishonesty Bond**.....\$ _____
(Maximum value of revenue or goods that can be taken at one time)
- 23. **Builder's Risk**.....\$ _____ (Provide Coverage in the full amount of contract)
- 25. **USL&H**.....Federal Statutory Limits
- 26. **Carrier Rating shall be Best's Rating of A-VII or better or its equivalent**
- 27. **Notice of Cancellation, nonrenewal or material change in coverage shall be provided to County at least thirty (30) days prior to action.**
- 28. **The County shall be named Additional Insured on all policies except Workers Compensation, Errors, and Omissions/Professional Liability and auto.**
- 29. **Certificate of Insurance shall show Bid Number and Bid Title.**
- 30. **Environmental Impairment Liability, including coverage of on-site clean up.....BI/PD \$3 Million per occurrence or \$6 Million Aggregate**
 - a. If work requires clean up, remediation, and/or removal of bio -solids, bio-hazards waste, and any hazardous or toxic material via transportation request Business Auto Liability add #16 from this checklist.

31. Cyber insurance with Technology E&O..... \$2 Million per occurrence

 X32. OTHER INSURANCE REQUIRED: Contractors Pollution Liability (CPL) Policy.....\$1,000,000 Per Loss and \$2,000,000 Total All Losses
Asbestos and Lead Based Paint Abatement Projects 1,000,000 Per Occurrence and \$2,000,000
Aggregate

BIDDER'S STATEMENT:

If awarded the contract, I will comply with contract insurance requirements.

BIDDERNAME: _____

AUTH. SIGNATURE: _____

ESCROW AGREEMENT

The following pages contain the escrow agreement authorized by 2.2-4334 of the Code of Virginia. Its use is at the Contractor's option. If the Contractor elects to use the escrow procedures, indicate by completing the applicable section of the Bid Form. If the Contractor indicates that it elects to use the escrow procedures, the Contractor must submit the completed escrow agreement to the County, signed by all parties except the County, no later than fifteen (15) days after the date of the notice of award or intent to award issued by the County Purchasing Agent. Escrow agreements received after that time will not be considered.

ESCROW AGREEMENT

THIS AGREEMENT, made and entered into on the date of execution of this agreement by the County by, between and among the County Board of Arlington, Virginia (County), _____ (Contractor), _____ and _____ (Name of Bank), _____ (Address of Bank), a trust company, bank, or savings and loan institution with its principal office located in the Commonwealth of Virginia (hereinafter referred to collectively as Bank) and (Surety) provides:

- I. The County and the Contractor have entered into a Contract with respect to _____ (Contract). This Agreement is pursuant to, but in no way amends or modifies, the Contract. Payments made hereunder or the release of funds from escrow shall not be deemed approval or acceptance of performance by the Contractor.
- II. In order to assure full and satisfactory performance by the Contractor of its obligations under the Contract, the County is required thereby to retain certain amounts otherwise due the Contractor. The Contractor has, with the approval of the County, elected to have these retained amounts held in escrow by the Bank. This agreement sets forth the terms of the escrow. The Bank shall not be deemed a party to, bound by, or required to inquire into the terms of, the Contract or any other instrument or agreement between the County and the Contractor.
- III. The County shall from time to time pursuant to its Contract pay to the Bank amounts retained by it under the Contract. Except as to amounts actually withdrawn from escrow by the County, the Contractor shall look solely to the Bank for the payment of funds retained under the Contract and paid by the County to the Bank.

The risk of loss by diminution of the principal of any funds invested under the terms of this Contract shall be solely upon the Contractor.

Funds and securities held by the Bank pursuant to this Escrow Agreement shall not be subject to levy, garnishment, attachment, lien, or other process whatsoever. Contractor agrees not to assign, pledge, discount, sell or otherwise transfer or dispose of his interest in the escrow account or any part thereof, except to the Surety.

- IV. Upon receipt of checks or warrants drawn by the County and made payable to it as escrow agent, the Bank shall promptly notify the Contractor, negotiate the same and deposit or invest and reinvest the proceeds in approved securities in accordance with the written instructions of the Contractor. In no event shall the Bank invest the escrowed funds in any security not approved.
- V. The following securities, and none other, are approved securities for all purposes of this Agreement:
 - (1) United States Treasury Bonds, United States Treasury Notes, United States Treasury Certificates of Indebtedness or United States Treasury Bills,
 - (2) Bonds, notes and other evidences of indebtedness unconditionally guaranteed as to the payment of principal and interest by the United States,

- (3) Bonds or notes of the Commonwealth of Virginia,
- (4) Bonds of any political subdivision of the Commonwealth of Virginia, if such bonds carried, at the time of purchase by the Bank or deposit by the Contractor, a Standard and Poor's or Moody's Investors Service rating of at least "A", and
- (5) Certificates of deposit issued by commercial Banks located within the Commonwealth, including, but not limited to, those insured by the Bank and its affiliates.
- (6) Any bonds, notes, or other evidences of indebtedness listed in Sections (1) through (3) may be purchased pursuant to a repurchase agreement with a bank, within or without the Commonwealth of Virginia having a combined capital, surplus and undivided profit of not less than \$25,000,000, provided the obligation of the Bank to repurchase is within the time limitations established for investments as set forth herein. The repurchase agreement shall be considered a purchase of such securities even if title, and/or possession of such securities is not transferred to the Escrow Agent, so long as the repurchase obligation of the Bank is collateralized by the securities themselves, and the securities have on the date of the repurchase agreement a fair market value equal to at least 100% of the amount of the repurchase obligation of the Bank, and the securities are held by a third party, and segregated from other securities owned by the Bank.

No security is approved hereunder which matures more than five years after the date of its purchase by the Bank or deposit by the Contractor.

- VI. The Contractor may from time to time withdraw the whole or any portion of the escrowed funds by depositing with the Bank approved securities in an amount equal to, or in excess of, the amount so withdrawn. Any securities so deposited or withdrawn shall be valued at such time of deposit or withdrawal at the lower of par or market value, the latter as determined by the Bank. Any securities so deposited shall thereupon become a part of the escrowed fund.

Upon receipt of a direction signed by the County Comptroller, the Bank shall pay the principal of the fund, or any specified amount thereof, to the Treasurer of Arlington County, Virginia for the account of the County. Such payment shall be made in cash as soon as is practicable after receipt of the direction.

Upon receipt of a direction signed by the County Comptroller, the Bank shall pay and deliver the principal of the fund, or any specified amount thereof, to the Contractor, in cash or in kind, as may be specified by the Contractor. Such payment and delivery shall be made as soon as is practicable after receipt of the direction.

- VII. For its services hereunder, the Bank shall be entitled to a reasonable fee in accordance with its published schedule of fees or as may be agreed upon by the Bank and the Contractor. Such fee and any other costs of administration of this Agreement shall be paid from the income earned upon the escrowed fund and, if such income is not sufficient to pay the same, by the Contractor.

- VIII. The net income earned and received upon the principal of the escrowed fund shall be paid over to the Contractor in quarterly or more frequent installments. Until so paid or applied to pay the

Bank's fee or any other costs of administration, such income shall be deemed a part of the principal of the fund.

IX. The Surety undertakes no obligation hereby but joins in this Agreement for the sole purpose of acknowledging that its obligations as surety for the Contractor's performance of the contract are not affected hereby.

WITNESS the following:

_____, CONTRACTOR

By: _____ (Officer/Partner/Owner)

Date: _____

Bank Attest: _____ (Bank Officer)

Bank: _____

By: _____ (Vice President)

Date: _____

Surety Attest: _____ (Surety Company)

By: _____ (Resident Virginia Agent)

(Address)

Date: _____

By: _____ (Attorney in fact)

Date: _____

THE COUNTY BOARD OF ARLINGTON COUNTY, VIRGINIA

By: _____ (Purchasing Agent)

Date: _____

EXHIBIT B



COMMONWEALTH of VIRGINIA **DEPARTMENT OF LABOR AND INDUSTRY**

Gary G. Pan
COMMISSIONER

Main Street Centre
600 East Main Street, Suite 207
Richmond, Virginia 23219
PHONE (804) 371-2327
FAX (804) 371-6524

Virginia Department of Labor and Industry Wage Determination Decision

Project Name	N. Glebe Watermain Replacement
County Project Code	23-DES-ITBPW
DOLI Project Number	ARLC-23-0002
County or Independent City	Arlington County
Publication Date	01/09/2023
Construction Type	Highway

Wage Determinations	Wage	Fringe
Carpenter, Includes Form Work	\$20.97	
Cement Mason/Concrete Finisher	\$20.70	\$8.03
Electrician, Includes Traffic Signalization	\$30.55	\$11.51
Fence Erector	\$15.28	
Ironworker, Reinforcing	\$34.18	
Ironworker, Structural	\$34.18	
Laborer: Asphalt, Includes Raker, Shoveler, Spreader and Distributor	\$19.06	\$1.75
Laborer: Common or General	\$21.41	\$8.11
Laborer: Grade Checker	\$14.88	
Laborer: Pipelayer	\$20.48	
Laborer: Power Tool Operator	\$15.69	
Operator: Asphalt Spreader and Distributor	\$20.58	\$2.31
Operator: Backhoe/Excavator/Trackhoe	\$23.93	

Wage Determinations	Wage	Fringe
Operator: Bobcat/Skid Steer/Skid Loader	\$19.00	\$3.49
Operator: Broom/Sweeper	\$17.40	\$2.01
Operator: Bulldozer, Including Utility	\$20.64	
Operator: Crane	\$29.46	
Operator: Drill	\$24.89	
Operator: Gradall	\$19.26	
Operator: Grader/Blade	\$23.21	
Operator: Hydroseeder	\$16.64	
Operator: Loader	\$18.92	
Operator: Mechanic	\$22.84	
Operator: Milling Machine	\$23.19	\$2.94
Operator: Pavement Planer	\$21.14	
Operator: Pavement Planer Groundsmen	\$19.75	
Operator: Paver (Asphalt, Aggregate, and Concrete)	\$20.33	\$2.81
Operator: Piledriver	\$21.83	\$4.08
Operator: Roller	\$18.92	
Operator: Roller (Finishing)	\$18.73	\$3.23
Operator: Screed	\$22.13	\$4.89
Pavement Marking Operator	\$22.16	
Pavement Marking Truck Driver	\$18.78	
Traffic Control: Flagger	\$13.64	
Truck Driver: 1/Single Axle Truck	\$19.35	
Truck Driver: Fuel and Lubricant Service	\$18.25	
Truck Driver: Heavy 7CY & Under	\$15.53	
Truck Driver: Heavy Over 7CY	\$18.05	
Truck Driver: Multi Axle	\$20.34	\$2.89

Additional Notes

All wage rates to be used on a contract will be set at the time the contract is awarded. While DOLI maintains a list of wage determinations online for reference purposes, only the wage determinations made in an official Wage Determination Decision, sent by DOLI to the contracting agency, can be used to ascertain the exact rates to be paid for a specific contract.

All rates are determined by DOLI and any appeals of specific classifications may be made through the Wage Determination Appeal form available at <http://www.doli.virginia.gov/wp-content/uploads/2021/04/Appeal-for-Wage-Determination-Clarification.pdf>

Any additional classifications may be requested through the Additional Wage Classification form available at <http://www.doli.virginia.gov/wp-content/uploads/2021/04/Request-for-Additional-Wage-Classification.pdf>

Understand your duties as a contractor under Virginia law by referencing our Contractor Responsibilities information sheet available at <http://www.doli.virginia.gov/wp-content/uploads/2021/04/PREVAILING-WAGE-CONTRACTOR-RESPONSIBILITIES.pdf>

Your employees have specific rights, which can be found on our List of Employee Rights information sheet available at <http://www.doli.virginia.gov/wp-content/uploads/2021/04/PREVAILING-WAGE-EMPLOYEE-RIGHTS.pdf>

Any further questions should be directed to PrevailingWage@doli.virginia.gov

EXHIBIT D

CONTRACTOR PERFORMANCE EVALUATION FORM

ARLINGTON COUNTY GOVERNMENT

Contractor Performance Evaluation Form

Contractor Name: _____ Contract No.: _____

Date: _____ Project/Contract Name: _____

Interim Evaluation _____ Final Evaluation _____

Scope of Work/Services Provided:

Contract Start Date: ___/___/___ Contract End Date: ___/___/___ Actual Completion Date: ___/___/___

Please rate the effectiveness of the Contractor's performance on the Contract/Project across the following dimensions:

Evaluation Criteria: Unacceptable Poor Satisfactory Excellent

Written comments to explain assigned ratings are required for any performance ratings below "satisfactory" or an "excellent" in any category.

Evaluation Questions

1. Quality of Workmanship

Rate the quality of the Contractor's workmanship. Were there quality-related or workmanship problems on the Contract? Was the Contractor responsive to remedial work required?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

2. Problem Solving and Decision Making

Rate the Contractor's ability to provide effective and creative problem solving, coordination and fair decision making on Contract/Project.

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

3. Project Schedule

Rate the Contractor's performance with regard to adhering to contract schedules. Did the Contractor meet the contract schedule, or the schedule as revised by approved change orders? If not was the delay attributable to the Contractor?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

4. Subcontractor Management

Rate the Contractor's ability, effort and success in managing and coordinating subcontractors (if no subcontractors rate the Contractor's overall project management). Was the Contractor able to effectively resolve problems?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

5. Safety

Rate the Contractor's safety procedures on this Contract/Project? Were there any OSHA violations or serious safety accidents?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

6. Environmental Compliance

Did the Contractor comply with local, state, and federal environmental standards in the performance of the Contract? Did the Contractor comply in good faith with local erosion and sedimentation control requirements and/or any Stormwater Pollution Prevention Plan?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

7. Change Orders

Did the Contractor unreasonably claim change orders or extras? Were the Contractor's prices on change orders and extra work reasonable?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

8. Paperwork Processing

Rate this Contractor's performance in completing and submitting required project paperwork (i.e. change orders, submittal, drawings, invoices, workforce reports, etc.) Did the Contractor submit the required paperwork promptly and in proper form?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

9. Supervisory Personnel

Rate the general performance of this Contractor's supervisory personnel. Did they have the knowledge, management skills and experience to run a project of this size and scope?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

10. Expertise, Knowledge and Experience

Rate this Contractor's personnel. Were they dedicated, experienced and qualified for the duration of project.

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

11. Project/Contract Closeout

Rate the Contractor's performance on timeliness and quality of closeout deliverables such as As-Built Drawings, Operation and Maintenance Manuals, and training. Did the Contractor complete the tasks or Project on schedule; was the punch list completed within the allotted time?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

12. Level of Overall Performance

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

Based on these comments, would you recommend this Contractor for comparable work in the future?

Yes No

Please provide any comments regarding the Contractor's performance or the quality of its work. The Contractor can also provide any comments or clarification on the evaluation in the box below.

(Project Officer or Contractor, use additional sheets, if Necessary):

Signatures and Certifications:

1. The information contained in this evaluation form represents, to the best of my knowledge, a true and accurate analysis of the Contractor’s performance record on this Contract; and,
2. The contents on the evaluation form and the ratings were not negotiated with the Contractor or its representative for any reason.

Evaluator’s Signature: _____ Date: _____

Evaluator’s (PjO) Printed Name _____ Evaluator’s Title: _____

Contractor’s signature below acknowledges receipt and the opportunity to respond:

Contractor Signature: _____ Date: _____

Contractor Printed Name: _____ Title: _____

EVALUATION RATINGS DEFINITIONS

Rating	Definition	Notes
Excellent	Performance meets contractual requirements and exceeds many to the County’s benefit. The contractual performance of the element or sub-element being evaluated was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.	To justify an Exceptional rating, identify multiple significant events and state how they were of benefit to the County. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
Satisfactory	Performance meets contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	To justify a Satisfactory rating, there should have been only minor problems, or major problems the contractor recovered from without impact to the contract/order. There should have been NO significant weaknesses identified. A fundamental principle of assigning ratings is that contractors will not be evaluated with a rating lower than Satisfactory solely for not performing beyond the requirements of the contract/order.
Poor	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being evaluated reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor’s proposed actions appear only marginally effective or were not fully implemented.	To justify poor performance, identify a significant event in each category that the contractor had trouble overcoming and state how it impacted the County. A poor rating should be supported by referencing the management tool that notified the contractor of the contractual deficiency (e.g., management, quality, safety, or environmental deficiency report or letter).

Unacceptable	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains a serious problem(s) for which the contractor's corrective actions appear or were ineffective.	To justify an Unsatisfactory rating, identify multiple significant events in each category that the contractor had trouble overcoming and state how it impacted the County. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating. An Unsatisfactory rating should be supported by referencing the management tools used to notify the contractor of the contractual deficiencies (e.g., management, quality, safety, or environmental deficiency reports, or letters).
Not Applicable (N/A)	N/A (not applicable) should be used if the ratings are not going to be applied to a particular area for evaluation.	

END

EXHIBIT E



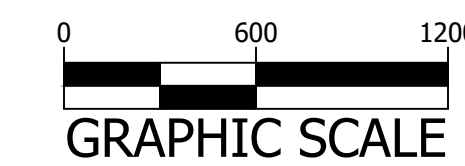
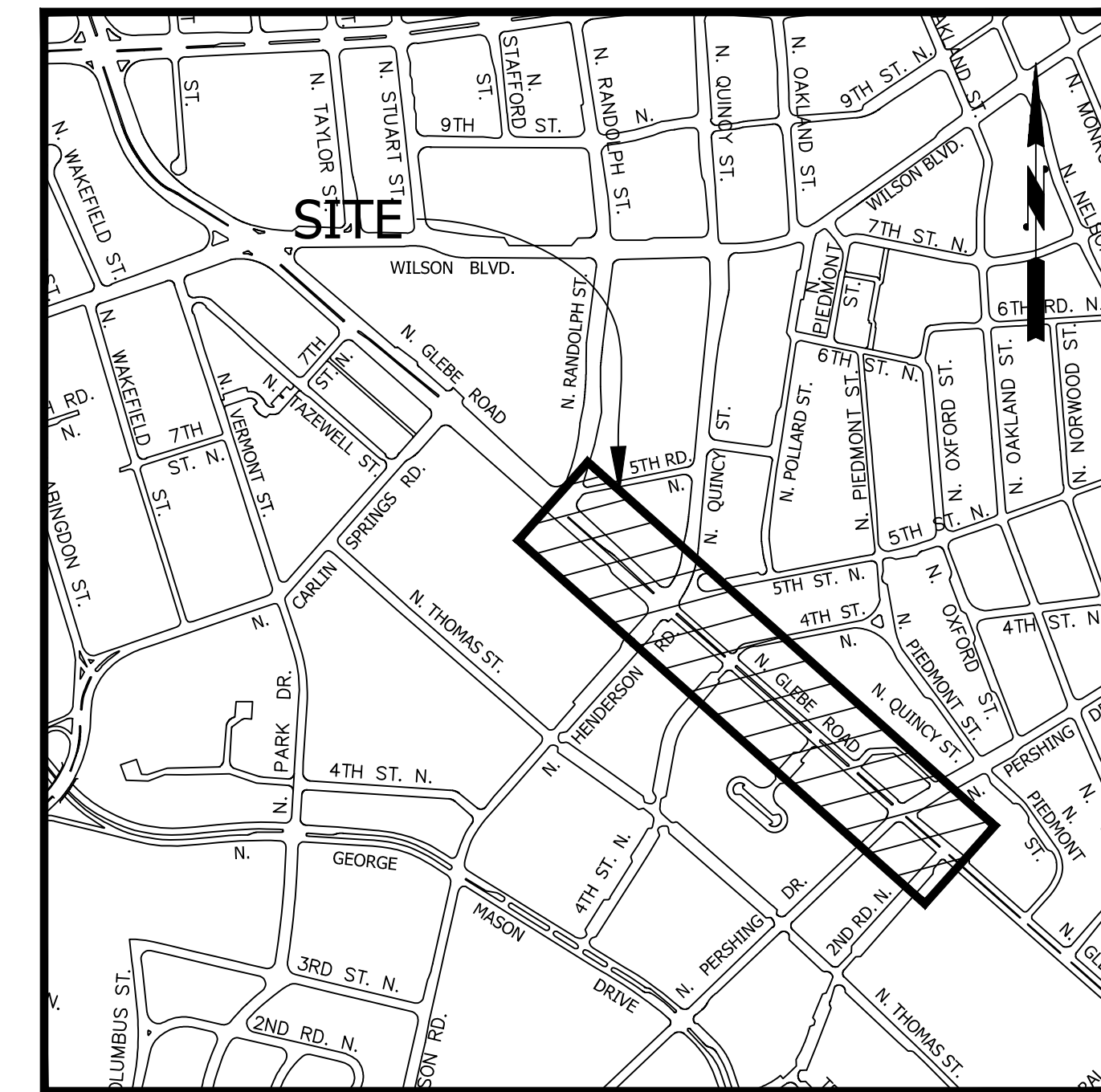
ENGINEER
 DEPARTMENT OF
 ENVIRONMENTAL SERVICES

FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
 2100 CLARENDON BOULEVARD, SUITE 813
 ARLINGTON, VA 22201
 PHONE: 703.228.3629 FAX: 703.228.3606
 WWW.ARLINGTONVA.US

OWNER
 DES/OD/WSS

CONTRACTOR
 TO BE DETERMINED

LOCATION MAP



CONSTRUCTION DRAWINGS FOR:

N. GLEBE ROAD WATERMAIN REPLACEMENT FROM N. RANDOLPH STREET TO N. PERSHING DRIVE

PROJECT NUMBER: R014

GENERAL NOTES:

GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS. THE LATEST EDITIONS OF EACH RELEVANT MANUAL SHALL BE USED.
- ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 FOR MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES (i.e. WATER, SEWER, GAS, TELEPHONE, ELECTRIC, AND CABLE TV) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO IDENTIFY AND PROTECT ALL OTHER UTILITY LINES FOUND IN THE WORK SITE AREA BELONGING TO OTHER OWNERS THAT ARE NOT MEMBERS OF "MISS UTILITY". PRIVATE WATER, SEWER AND GAS LATERALS WILL NOT BE MARKED BY MISS UTILITY OR THE COUNTY. THE CONTRACTOR SHALL LOCATE AND PROTECT THESE SERVICES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT THE WORK AND SHALL RETAIN A PROFESSIONAL LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA TO PROVIDE ALL NECESSARY CONSTRUCTION LAYOUTS AND ESTABLISH ALL CONTROL LINES, GRADES, AND ELEVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A COPY OF ALL CUT SHEETS FOR REVIEW, PER THE SPECIFICATIONS. THE COST OF ALL NECESSARY SURVEYING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND, UNLESS OTHERWISE SPECIFIED, THE COST SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
- THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED TO BE APPROXIMATE. WHEN CONSTRUCTION ACTIVITY REACHES IN PROXIMITY TO EXISTING UTILITIES, THE TRENCH(ES) SHALL BE OPENED A SUFFICIENT DISTANCE AHEAD OF THE WORK OR TEST PITS SHALL BE MADE TO VERIFY THE EXACT LOCATION AND INVERTS OF THE UTILITY TO ALLOW FOR POSSIBLE CHANGES IN THE LINE OR GRADE AS DIRECTED BY OFFICER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES AND THE RELATED STRUCTURES. ALL EXISTING UTILITY SYSTEMS SHALL BE PROTECTED TO PREVENT DAMAGE DURING THE CONTRACTOR'S OPERATIONS. ANY SYSTEM DAMAGED SHALL BE PROMPTLY REPAIRED AT NO COST TO THE OWNER.
- EXISTING MANHOLE FRAMES, COVERS, VALVE BOXES, AND OTHER APPURTENANCES SHALL BE ADJUSTED TO THE FINAL GRADE OR REPLACED, AS NECESSARY. UNLESS OTHERWISE SPECIFIED, THE COST FOR THIS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
- THE CONTRACTOR SHALL PROVIDE ADA COMPLIANT ACCESS THROUGH OR AROUND THE SITE AT ALL TIMES AND SHALL ENSURE THE SAFETY OF ALL THOSE PASSING THROUGH OR ADJACENT TO THE SITE.
- ALL SIDEWALK AND CURB AND GUTTER DEMOLITION SHALL BEGIN AND END AT THE CONSTRUCTION JOINT NEAREST TO THE DEPICTED DEMOLITION EXTENTS WITH A NEAT SAWCUT LINE TO FULL DEPTH OF PAVEMENT SECTION.

STORMWATER AND ENVIRONMENTAL PROTECTION

- THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, TO INCLUDE STORAGE OF EQUIPMENT AND OR MATERIALS, ACCESS TO THE WORK, FORMWORK, ETC. TO WITHIN THE DESIGNATED LIMITS OF DISTURBANCE (LOD).

TREE PROTECTION

- TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF ARLINGTON PARKS & RECREATION STANDARD.

TRAFFIC CONTROL

- CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PREMARKING MAY CONSIST OF TYPE D TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW 3 WORKING DAYS FOR THE INSPECTION AND APPROVAL OF THE PREMARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.
- THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS. PRIOR TO A REQUEST FOR THE REMOVAL OF ACCESS TO ANY ADA PARKING SPACE THE CONTRACTOR MUST HAVE MADE PROVISION FOR ALTERNATIVE ADA PARKING AS INDICATED ON THE APPROVED PLAN OR AS DIRECTED BY THE PROJECT OFFICER.
- WHEN THE APPROVED PLAN CALLS FOR THE REMOVAL OF ANY PARKING METER THE CONTRACTOR MUST MAKE A REQUEST TO THE PROJECT OFFICER AT LEAST ONE WEEK IN ADVANCE OF THE DESIRED REMOVAL. THE PROJECT OFFICER WILL THEN COORDINATE THE PARKING METER REMOVAL WITH TRAFFIC ENGINEERING AND OPERATIONS.
- THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESSIBILITY THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS. THE CONTRACTOR SHALL NOT CLOSE, RELOCATE, OR OTHERWISE MODIFY A BUS STOP WITHOUT PRIOR REQUEST OF THE PROJECT OFFICER. ANY RELOCATION OR CLOSURE OF A BUS STOP SHALL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR - 703-228-3049.
- WHEN CONDITIONS WARRANT DUE TO TRAFFIC VOLUMES, PATTERNS, OR SPECIAL EVENTS, THE COUNTY MAY SUSPEND OR OTHERWISE DIRECT THE CONTRACTOR'S ACTIVITIES TO PROTECT THE PUBLIC AND OR THE COUNTY'S TRANSPORTATION NETWORK.

WATER DISTRIBUTION, STORM AND SANITARY SEWER SYSTEMS

- UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED OPERATION.
- IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-6555 AND THE PROJECT OFFICER.
- THE CONTRACTOR SHALL COORDINATE ALL UTILITY SHUTOFFS, DISCONNECTS, AND/OR ABANDONMENT WITH UTILITY OWNER AND PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED INTERRUPTION.

FIRE DEPARTMENT NOTES:

- ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBTURSED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.

Sheet List

Sheet Number	Sheet Title
C000.1	COVER
C006.1	LEGEND
C011.1	EXISTING CONDITIONS PLAN - 1
C011.2	EXISTING CONDITIONS PLAN - 2
C011.3	EXISTING CONDITIONS PLAN - 3
C011.4	EXISTING CONDITIONS PLAN - 4
C031.1	EROSION & SEDIMENT CONTROL PLAN - 1
C031.2	EROSION & SEDIMENT CONTROL PLAN - 2
C032.1	EROSION & SEDIMENT CONTROL NOTES
C032.2	EROSION & SEDIMENT CONTROL NOTES AND DETAILS - 1
C032.3	EROSION & SEDIMENT CONTROL NOTES AND DETAILS - 2
C045.1	GEOMETRIC CONTROL PLAN - 1
C045.2	GEOMETRIC CONTROL PLAN - 2
C045.3	GEOMETRIC CONTROL PLAN - 3
C045.4	GEOMETRIC CONTROL PLAN - 4
C051.1	WATERMAIN PLAN AND PROFILE - 1
C051.2	WATERMAIN PLAN AND PROFILE - 2
C051.3	WATERMAIN PLAN AND PROFILE - 3
C051.4	WATERMAIN PLAN AND PROFILE - 4
C051.5	WATERMAIN PLAN AND PROFILE - 5
C051.6	WATERMAIN PLAN AND PROFILE - 6
C051.7	WATERMAIN PLAN AND PROFILE - 7
C052.1	WATERMAIN NOTES & DETAILS - 1
C052.2	WATERMAIN NOTES & DETAILS - 2
C052.3	WATERMAIN NOTES & DETAILS - 3
C055.1	PAVING AND PAVEMENT MARKING PLAN - 1
C055.2	PAVING AND PAVEMENT MARKING PLAN - 2
C121.1	MAINTENANCE OF TRAFFIC PLAN - 1
C121.2	MAINTENANCE OF TRAFFIC PLAN - 2
C121.3	MAINTENANCE OF TRAFFIC PLAN - 2A
C121.4	MAINTENANCE OF TRAFFIC PLAN - 3
C121.5	MAINTENANCE OF TRAFFIC PLAN - 4
C121.6	MAINTENANCE OF TRAFFIC PLAN - 5
C121.7	MAINTENANCE OF TRAFFIC PLAN - 6
C122.1	MOT NOTES & DETAILS - 1
C122.2	MOT NOTES & DETAILS - 2
C122.3	MOT NOTES & DETAILS - 3

LDA 20163
 SWM# 20-0176

ADT

26,000 - N. GLEBE ROAD (FROM FAIRFAX DR. TO ARLINGTON BLVD.) - 2019 - VDOT _ DAILY TRAFFIC VOLUME ESTIMATES
 6,800 - N. RANDOLPH STREET (WILSON BLVD TO GLEBE RD) - 2019 - VDOT ANNUAL AVERAGE DAILY TRAFFIC
 1,100 - N. QUINCY STREET (GLEBE RD TO WILSON BLVD) - 2019 - VDOT ANNUAL AVERAGE DAILY TRAFFIC
 10,000 - N. HENDERSON ROAD (GLEBE RD TO THOMAS ST) - 2019 - VDOT ANNUAL AVERAGE DAILY TRAFFIC
 4TH STREET N. - NO TRAFFIC INFORMATION
 3RD STREET N. - NO TRAFFIC INFORMATION
 N. QUEBEC STREET - NO TRAFFIC INFORMATION
 7,900 - N. PERSHING DRIVE (GLEBE RD TO WASHINGTON BLVD) - 2019 - VDOT ANNUAL AVERAGE DAILY TRAFFIC
 6,300 - N. PERSHING DRIVE (G. MASON DR TO GLEBE RD) - 2019 - VDOT ANNUAL AVERAGE DAILY TRAFFIC

STREET CLASSIFICATION

N. GLEBE ROAD - PRINCIPAL ARTERIAL
 N. RANDOLPH RD - MINOR ARTERIAL
 N. QUINCY STREET - MINOR ARTERIAL
 N. HENDERSON ROAD - MINOR ARTERIAL
 N. PERSHING DRIVE - MINOR ARTERIAL

POSTED SPEED

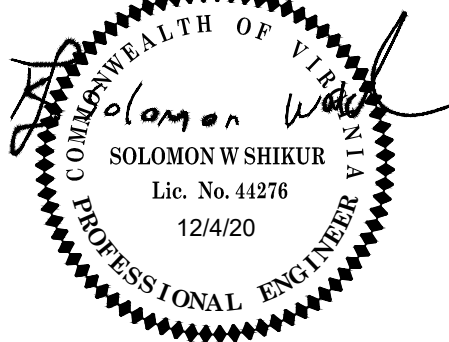
N. GLEBE ROAD - 30 MPH
 N. RANDOLPH ROAD - 25 MPH
 N. QUINCY STREET - 25 MPH
 N. HENDERSON ROAD - 25 MPH
 4TH STREET N. / 3RD STREET N. / N. QUEBEC STREET - 25 MPH
 N. PERSHING DRIVE - 25 MPH



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 FAX: 703.228.3606

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SEAL



APPROVALS DATE

Amy Pflaum 2/11/2021
 QUALITY CONTROL ENGINEER

R.W. Taktak 2.3.21
 CONSTRUCTION MANAGEMENT SUPERVISOR

Quinn 02.09.2021
 WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 02/09/21
 TRANSPORTATION DIRECTOR

Dabney R. Cawen 01/27/2021
 PROJECT MANAGER

REVISIONS DATE

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 COVER

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021

SCALE:

(AS SHOWN)

C000.1

LINETYPE LEGEND

FEATURE	EXISTING	PROPOSED
BUILDING	— — — — —	— — — — —
CENTERLINE / BASELINE	— — — — —	— — — — —
COMMUNICATIONS CABLE	— COM — COM —	— COM — COM —
CONTOURS MAJOR; MINOR	--- 250 --- 250 ---	— — — — —
CRITICAL ROOT ZONE	— CRZ — CRZ —	— CRZ — CRZ —
EASEMENT	— — — — —	— — — — —
ELECTRIC (UNDERGROUND)	— UGE — UGE —	— UGE — UGE —
FENCE (MATERIAL NOTED)	-X-X-X-X-X-	-X-X-X-X-X-
FIBER OPTIC	— FO — FO —	— FO — FO —
GAS LINE	— GAS — GAS —	— GAS — GAS —
X" GAS LINE (SIZE INCLUDED IF AVAILABLE)	— — — — —	— — — — —
GUARDRAIL	o o o o o o o o	o o o o o o o o
HARDSCAPE FEATURE (MATERIAL NOTED)	— — — — —	— — — — —
LIMITS OF DISTURBANCE	— LOD — LOD —	— LOD — LOD —
LIMITS OF WORK	— LOW — LOW —	— LOW — LOW —
OVERHEAD WIRES	— —	— —
PAVEMENT MINI SKIP LINE	— — — — —	— — — — —
PAVEMENT SKIP LINE	— — — — —	— — — — —
PROPERTY LINE	— — — — —	— — — — —
RIGHT-OF-WAY LINE	— — — — —	— — — — —
ROOT PRUNING	— RP — RP —	— RP — RP —
SANITARY SEWER	— SAN — SAN —	— SAN — SAN —
X" SANITARY SEWER (SIZE INCLUDED IF AVAILABLE)	— — — — —	— — — — —
SILT FENCE	-X-X-X-X-X-	-X-X-X-X-X-
STORM (SIZE NOTED)	— STM — STM —	— — — — —
STREAM	—	—
STREET LIGHT CONDUIT	— SL — SL —	— SL — SL —
TELEPHONE (UNDERGROUND)	— UGT — UGT —	— UGT — UGT —
TREE LINE	— — — — —	— — — — —
TREE PROTECTION FENCE	— TP — TP —	— TP — TP —
WALL	— — — — —	— — — — —
WATER	— 6" w — — — —	— — — — —
X" WATER (SIZE INCLUDED IF AVAILABLE)	— — — — —	— — — — —

SYMBOL LEGEND

EXISTING	PROPOSED
EX CABLE PEDESTAL	PROP CABLE PEDESTAL
EX ELECTRIC BOX	PROP ELECTRIC BOX
EX FIRE HYDRANT	PROP FIRE HYDRANT
EX GAS VALVE	PROP GAS VALVE
EX GROUND LIGHT	PROP GROUND LIGHT
EX GUY WIRES	PROP GUY WIRES
EX IRON PIPE OR PIN	PROP IRON PIPE OR PIN
EX LIGHT POLE	PROP LIGHT POLE
EX MAILBOX	PROP MAILBOX
EX MONUMENT	PROP MONUMENT
EX PARKING METER	PROP PARKING METER
EX PAY STATION	PROP PAY STATION
EX SANITARY MANHOLE	PROP SANITARY MANHOLE
EX STORM BASIN	PROP STORM CATCH BASIN (TO SCALE)
EX STORM MANHOLE	PROP STORM MANHOLE
EX TELEPHONE PEDESTAL	PROP TELEPHONE PEDESTAL
EX TRAFFIC CONTROL BOX	PROP TRAFFIC CONTROL BOX
EX TRAFFIC SIGN	PROP TRAFFIC SIGN
EX TRASH CAN	PROP TRASH CAN
EX TRAVERSE	PROP TRAVERSE
EX TREES, WOODED AREA	PROPOSED TREE REMOVAL
EX UTILITY MANHOLE TYPE INDICATED ELECTRIC, TELE, ETC	PROP UTILITY MANHOLE
EX UTILITY POLE	PROP UTILITY POLE
EX WATER MANHOLE	PROP WATER MANHOLE
EX WATER METER	PROP WATER METER
EX WATER VALVE	PROP WATER VALVE
EX YARD INLET	PROP YARD INLET (TO SCALE)
EX BENCHMARK	PROP BENCHMARK
	CONSTRUCTION NOTES (LEADER TO AREA AFFECTED)
	CURVE NUMBER (SEE CURVE TABLE)
	LINE NUMBER (SEE LINE TABLE)
	TEST HOLE
	NORTH ARROW

LABEL LEGEND

EXISTING	PROPOSED
EXISTING SANITARY STRUCTURE NUMBER	PROPOSED SANITARY SEWER STRUCTURE NUMBER
EXISTING STORM SEWER STRUCTURE NUMBER	PROPOSED STORM SEWER STRUCTURE NUMBER

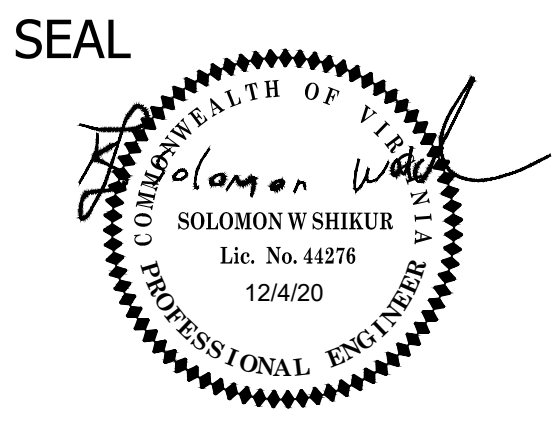
HATCH LEGEND

PROP MILL & OVERLAY	[Hatch Pattern]
PROP FULL DEPTH ASPHALT	[Hatch Pattern]
PROP CONCRETE	[Hatch Pattern]
REPLACE & MATCH EXISTING DRIVEWAY OR LEADWALK. SEE CONSTRUCTION NOTES	[Hatch Pattern]
DEMOLITION AREA	[Hatch Pattern]



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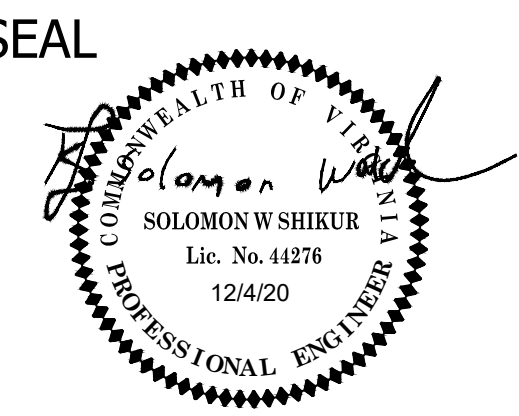
APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.W. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Carver</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 LEGEND

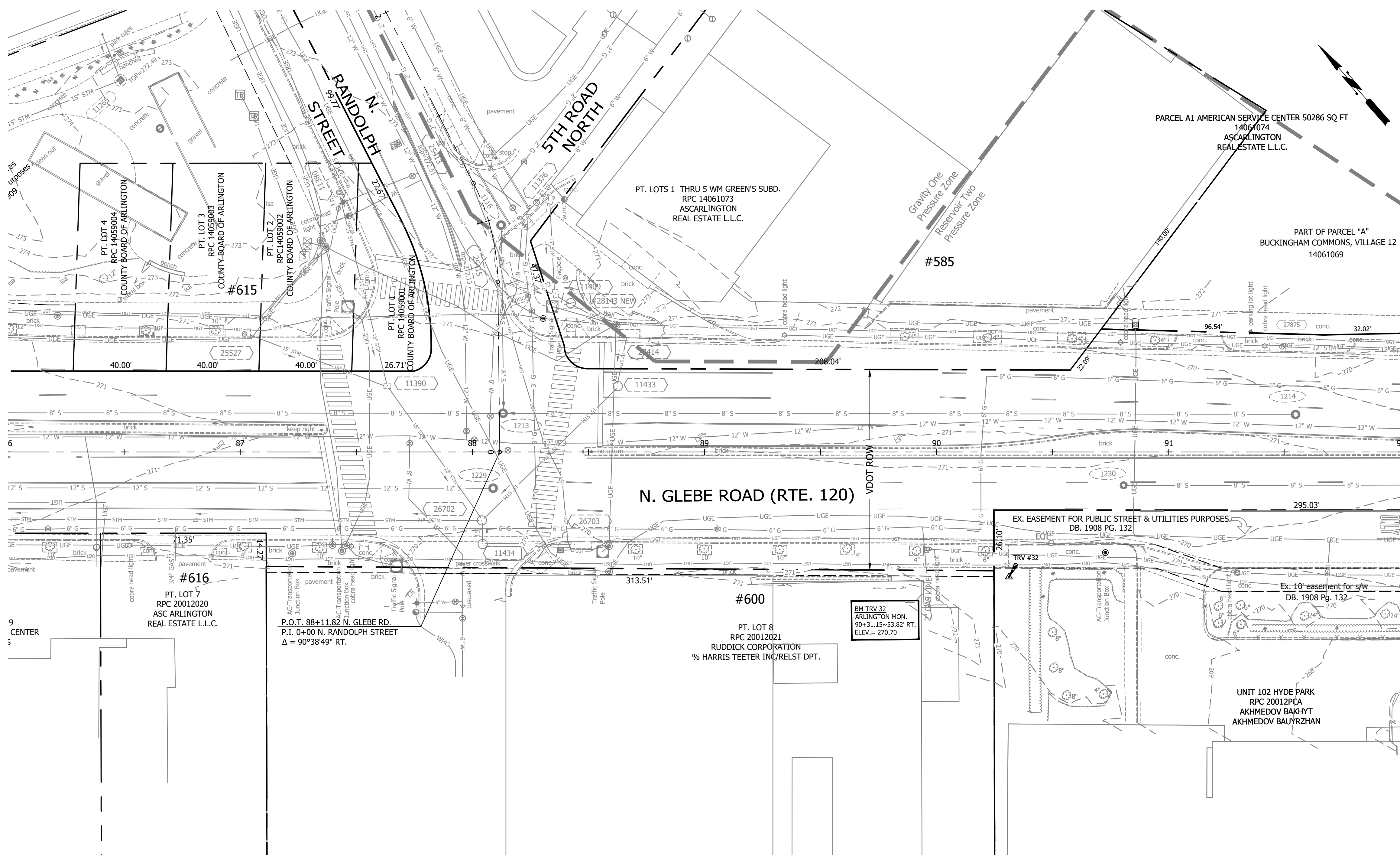
DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS
 PLOTTED: FEBRUARY 10 2021

SCALE:
 N/A



APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.V. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Caver</i> PROJECT MANAGER	01/27/2021

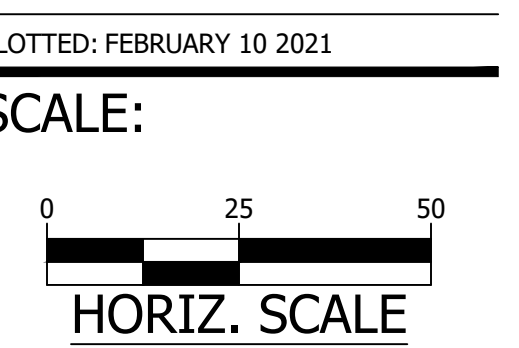
REVISIONS	DATE



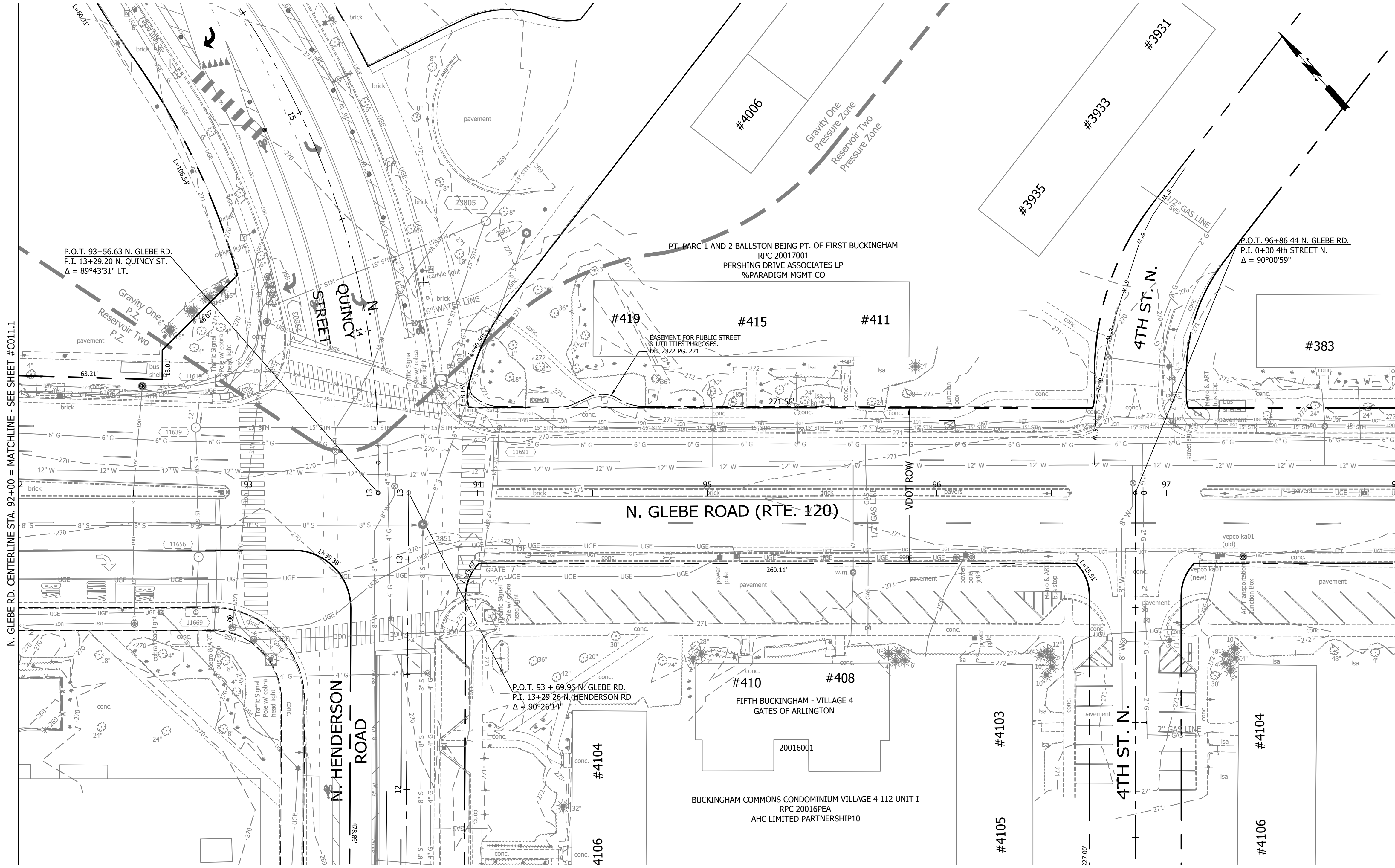
N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
EXISTING CONDITIONS PLAN - 1

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DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS



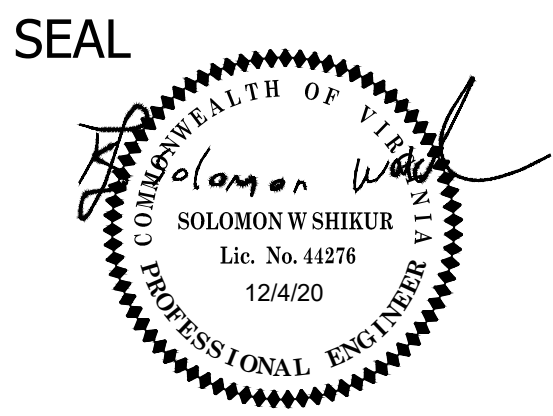
N. GLEBE RD. CENTERLINE STA. 92+00 = MATCHLINE - SEE SHEET #C011.1

N. GLEBE RD. CENTERLINE STA. 98+00 = MATCHLINE - SEE SHEET #C011.3



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APPROVALS	DATE
<i>Amy Pfleum</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.V. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Carver</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE

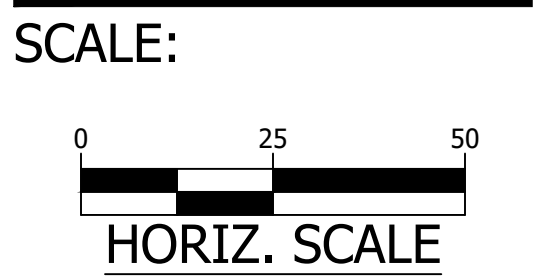
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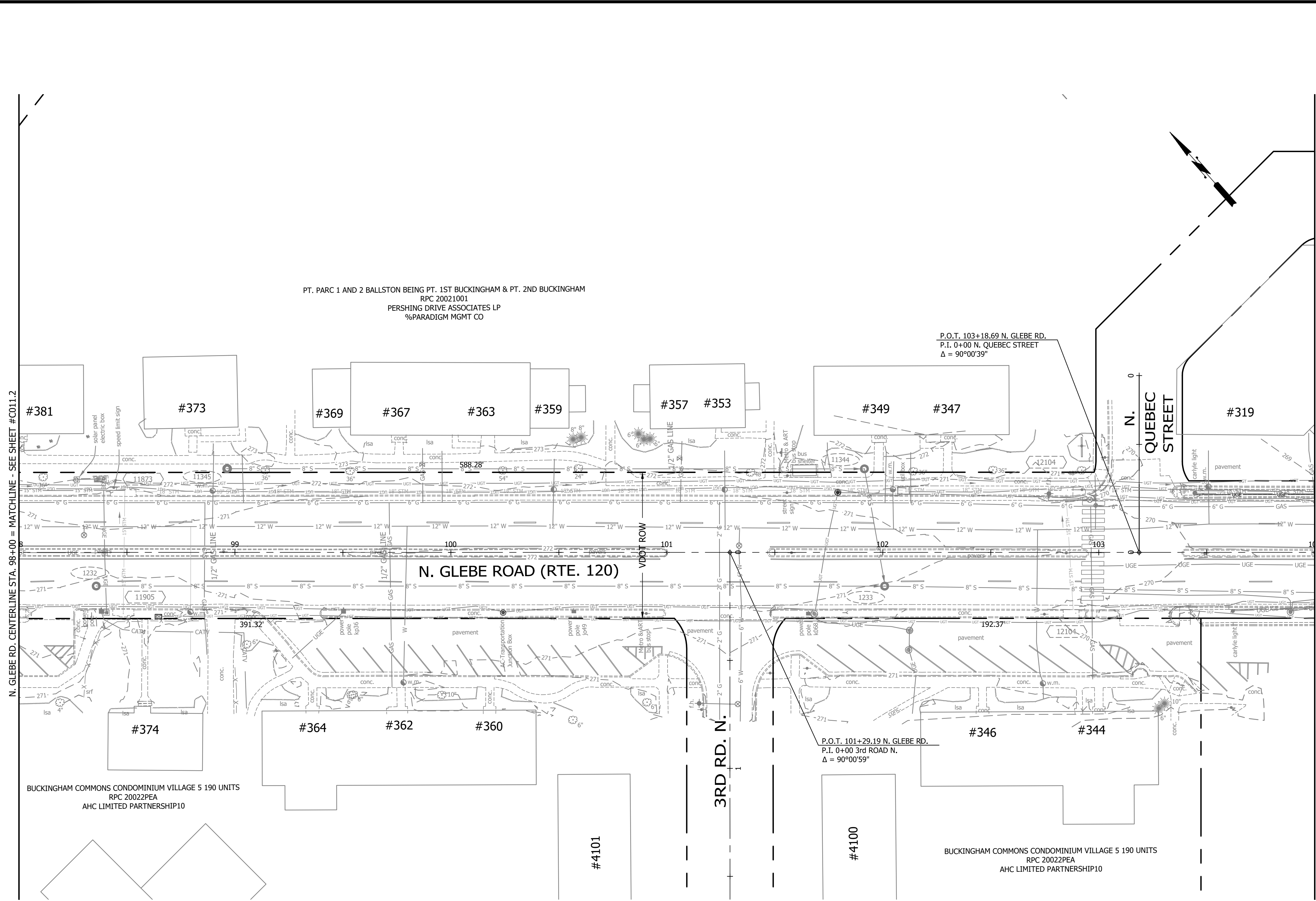
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DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021





STORM SEWER TABLE

#11376 TOP = 272.62 INV. IN = 268.17 15" RCP (11362) INV. OUT = 267.97 15" RCP (11409)	#11723 TOP = 270.32 INV. OUT = 266.61 15" RCP (11691)
#11380 TOP = 272.10 INV. OUT = 268.74 15" RCP (11390)	#11873 TOP = 271.10 INV. IN = NEEDS CLEANING (11905) INV. OUT = NEEDS CLEANING (12104)
#11390 TOP = 270.51 INV. IN = 266.56 15" RCP (25527) INV. IN = 266.61 15" RCP (11380) INV. OUT = 266.51 18" RCP (26702)	#11905 TOP = 270.99 INV. ???
#11409 TOP = 271.84 INV. IN = 267.89 15" RCP (25415) INV. IN = 267.94 15" RCP (11376) INV. OUT = 267.84 15" RCP (#28143 NEW)	#12104 TOP = 270.51 INV. IN = 262.57 18" RCP (11873) INV. IN = 263.65 15" RCP (12145) INV. OUT = 262.66 18" RCP (12227)
#11433 TOP = 270.19 INV. IN = 266.76 15" RCP (25414) INV. OUT = 266.41 15" RCP (26702)	#12145 TOP = 270.36 INV. OUT = 266.21 15" RCP (12104)
#11434 TOP = 269.83 INV. IN = 266.89 15" RCP (26703) INV. OUT = 266.67 15" RCP (26702)	#12227 TOP = 267.74 INV. IN = 262.01 18" RCP (12104) INV. OUT = 261.86 ??? (28062 NEW)
#11619 TOP = 269.92 INV. IN = 267.14 12" RCP (27875) INV. OUT = 267.04 12" RCP (11619)	#12230 TOP = 268.59 INV. IN = 263.57 15" RCP (#28482 NEW) INV. OUT = 262.88 15" RCP (12227)
#11639 TOP = 269.64 INV. IN = No access 12" RCP (11619) INV. IN = NO ACCESS 15" RCP (11656) INV. OUT = 266.15 15" RCP (11691)	#12419 TOP = 263.30 INV. IN = 259.78 15" RCP (12438) INV. INT = 258.93 24" RCP (NEW STR.)
#11656 TOP = 269.63 INV. IN = 266.89 12" RCP (11669) INV. OUT = 266.88 15" RCP (11639)	#12438 TOP = 263.98 INV. OUT = 259.46 15" RCP (12419)
#11691 TOP = 270.40 INV. IN = 265.37 15" RCP (11639) INV. IN = 266.38 15" RCP (11723) INV. OUT = 265.33 15" RCP (11873)	#23803 TOP = 269.25 INV. OUT = 266.55 15" RCP (23805)
#11669 TOP = 269.54 INV. OUT = 267.11 12" RCP (11656)	#23804 TOP = 269.97 INV. OUT = 266.82 15" RCP (23805)
#25413 TOP = 272.48 INV. OUT = 268.36 15" RCP (25415)	#23805 TOP = 269.82 INV. IN = 265.04 15" RCP (23803) INV. IN = 265.10 15" RCP (23804) INV. OUT = 264.99 15" RCP (23806)
#25414 TOP = 270.31 INV. IN = 267.36 15" RCP (#28143 NEW) INV. OUT = 266.53 15" RCP (11433)	#27402 TOP = 270.59 INV. IN = 263.03 24" RCP (#28189 NEW) INV. IN = 264.24 18" RCP (11130) INV. IN = 265.36 10" RCP (11206) INV. OUT = 262.19 36" RCP (11143)
#25415 TOP = 272.12 INV. IN = 267.04 15" RCP (25413) INV. OUT = 267.01 15" RCP (11409)	#27404 TOP = 271.35 INV. IN = 264.51 21" RCP (26702) INV. OUT = 264.35 24" RCP (27401)
#25527 TOP = 270.70 INV. OUT = 267.00 15" RCP (11390)	#28062 NEW TOP = 267.42 INV. IN = 261.80 18" RCP (12227) INV. OUT = 261.71 24" RCP (12419)
#26702 TOP = 270.15 INV. IN = 266.28 15" RCP (11434) INV. IN = 266.20 15" RCP (11433) INV. IN = 266.19 18" RCP (11390) INV. OUT = 266.05 21" RCP (27404)	#28189 NEW TOP = 270.79 INV. IN = CANT OPEN (27401) INV. OUT = CANT OPEN (27402)
#26703 TOP = 270.40 INV. OUT = 267.00 15" RCP (11434)	#28482 NEW TOP = 268.74 INV. OUT = 264.43 15" RCP (12230)
#28143 NEW TOP = 271.51 INV. IN = 267.66 15" RCP (11409) INV. OUT = 267.61 15" RCP (#25414)	
	#27401 TOP = 270.96 INV. IN = 263.46 24" RCP (27404) INV. IN = CANT ACCESS (11188) INV. OUT = 263.31 24" RCP (28189 NEW)

SANITARY SEWER TABLE

#1116 TOP = 272.26 C/L INV. = 261.44	#1228 TOP = 271.57 C/L INV. = 262.61	#2850 TOP = 268.34 C/L INV. = 264.00
#1211 TOP = 270.69 C/L INV. = 258.74	#1229 TOP = 270.48 C/L INV. = 264.48	#2851 TOP = 270.19 C/L INV. = COULD NOT OPEN
#1212 TOP = 271.60 C/L INV. = 259.12	#1230 TOP = 270.69 C/L INV. = COULD NOT OPEN	#2861 TOP = 269.44 C/L INV. = 261.59
#1213 TOP = 270.38 C/L INV. = 260.94	#1232 TOP = 270.98 C/L INV. = 260.18	#11344 TOP = 271.50 C/L INV. = 259.35
#1214 TOP = 270.13 C/L INV. = ALREADY HAVE	#1233 TOP = 270.96 C/L INV. = 257.88	#11345 TOP = 272.75 C/L INV. = 262.35
#1227 TOP = 270.66 C/L INV. = CANT OPEN	#1234 TOP = 267.73 C/L INV. 257.09	#13693 TOP = 270.67 C/L INV. = CANT OPEN

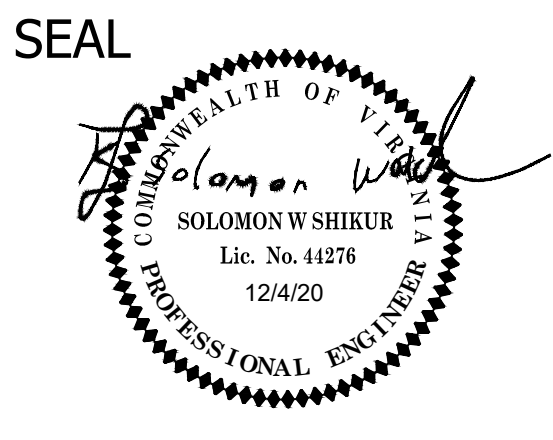
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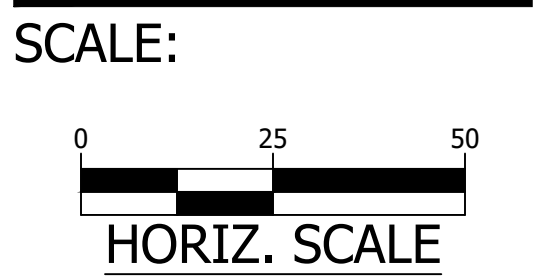
APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.W. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>John</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Cawen</i> PROJECT MANAGER	01/27/2021

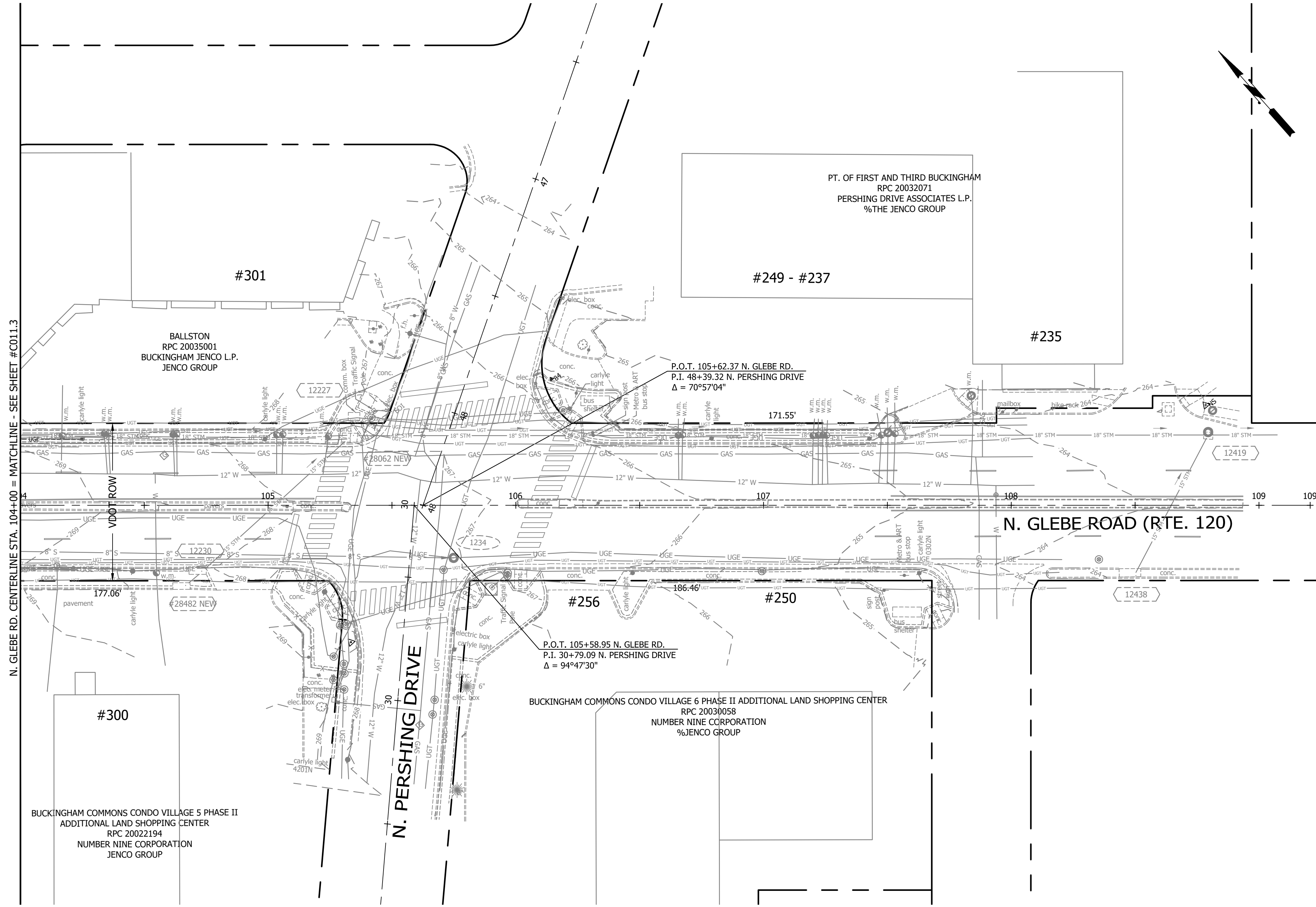
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 EXISTING CONDITIONS PLAN - 3

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

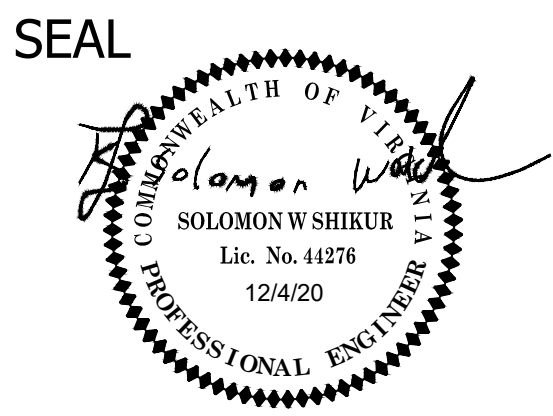
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<i>Debra</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Carver</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE

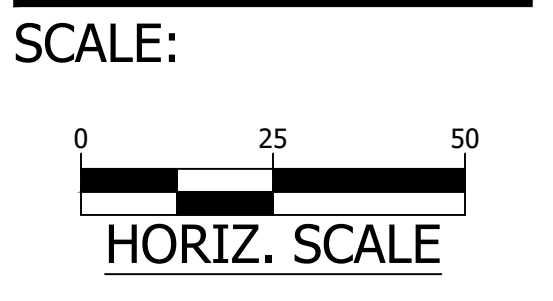
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 N. RANDOLPH ST. TO N. PERSHING DR.
 EXISTING CONDITIONS PLAN - 4

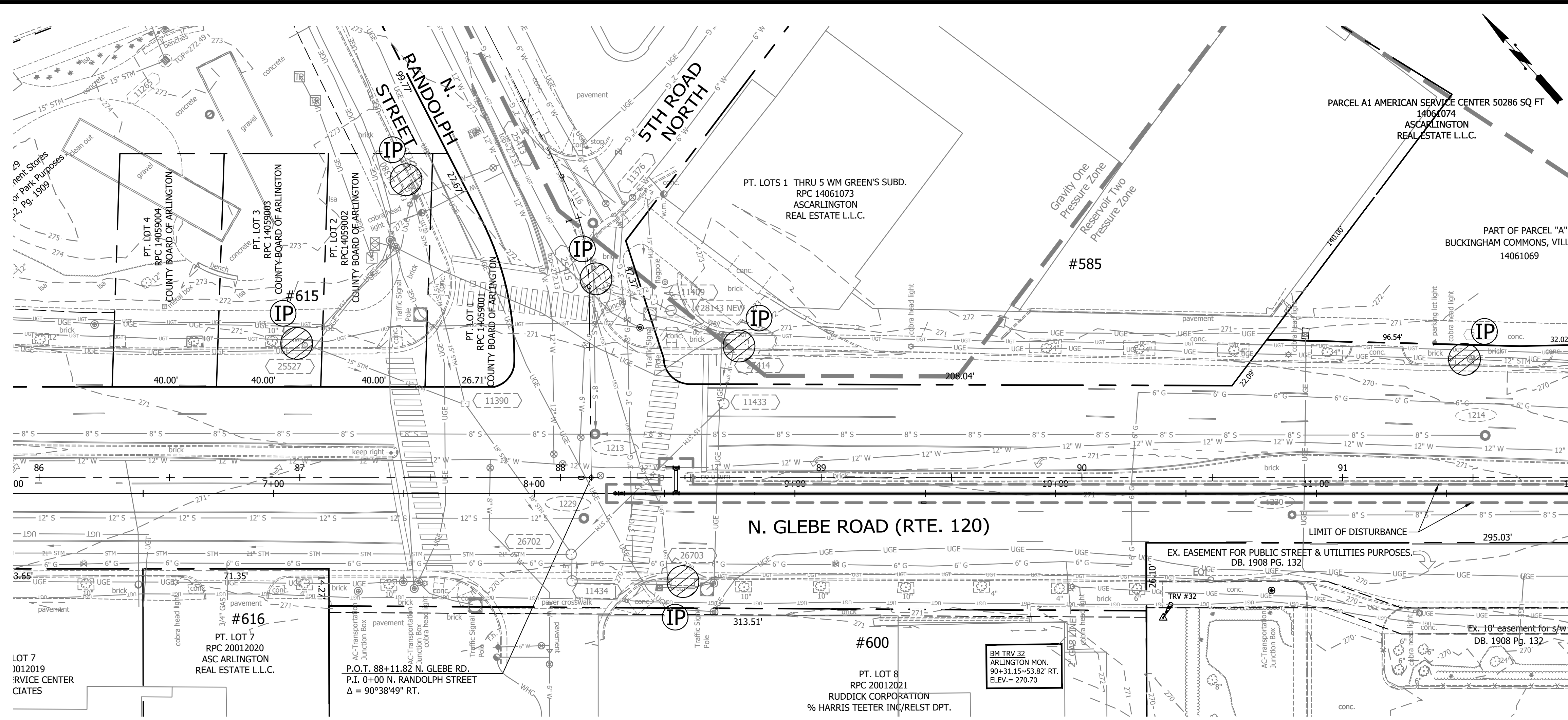
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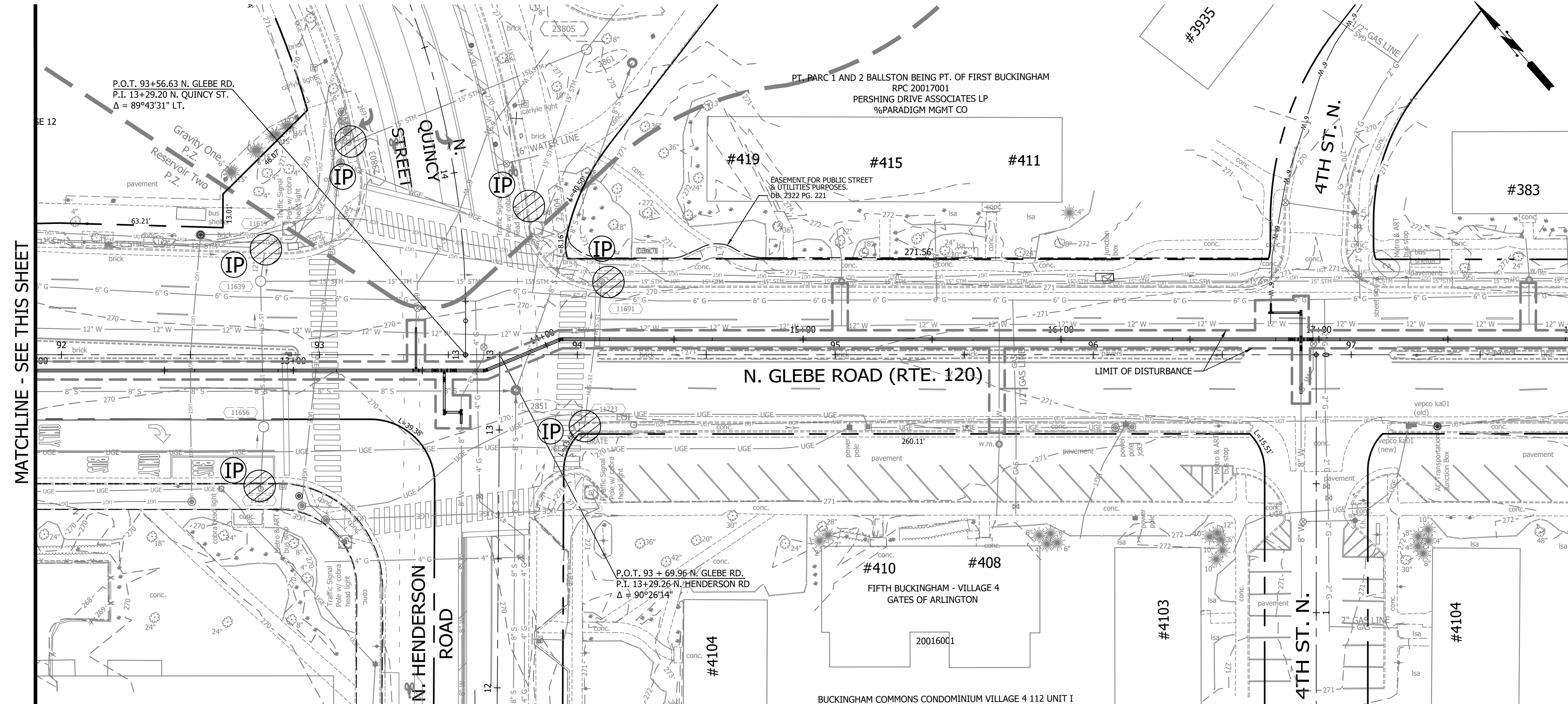
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PLOTTED: FEBRUARY 10 2021





MATCHLINE - SEE THIS SHEET



MATCHLINE - SEE SHEET C031.2

ARLINGTON VIRGINIA

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SEAL

SOLOMON W. SHUKUR
 Lic. No. 41276
 12/4/20
 PROFESSIONAL ENGINEER

APPROVALS	DATE
<i>Amy Pflaum</i>	2/1/2021
QUALITY CONTROL ENGINEER	
<i>R.V. Taktak</i>	2.3.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Oliver</i>	02.09.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	02/09/21
TRANSPORTATION DIRECTOR	
<i>Dabney R. Caver</i>	01/27/2021
PROJECT MANAGER	

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.

EROSION & SEDIMENT CONTROL PLAN - 1

DESIGNED: JK/LD
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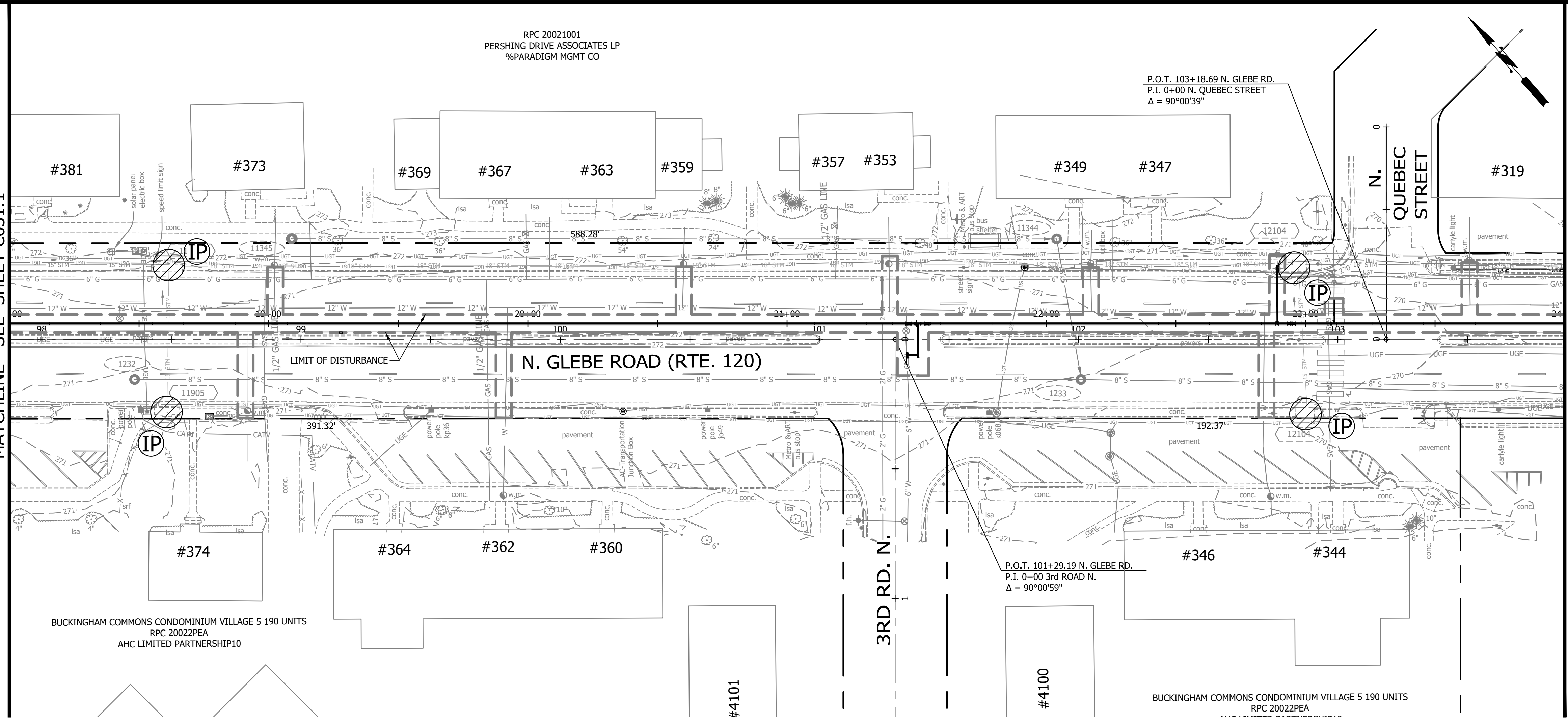
PLOTTED: FEBRUARY 10 2021

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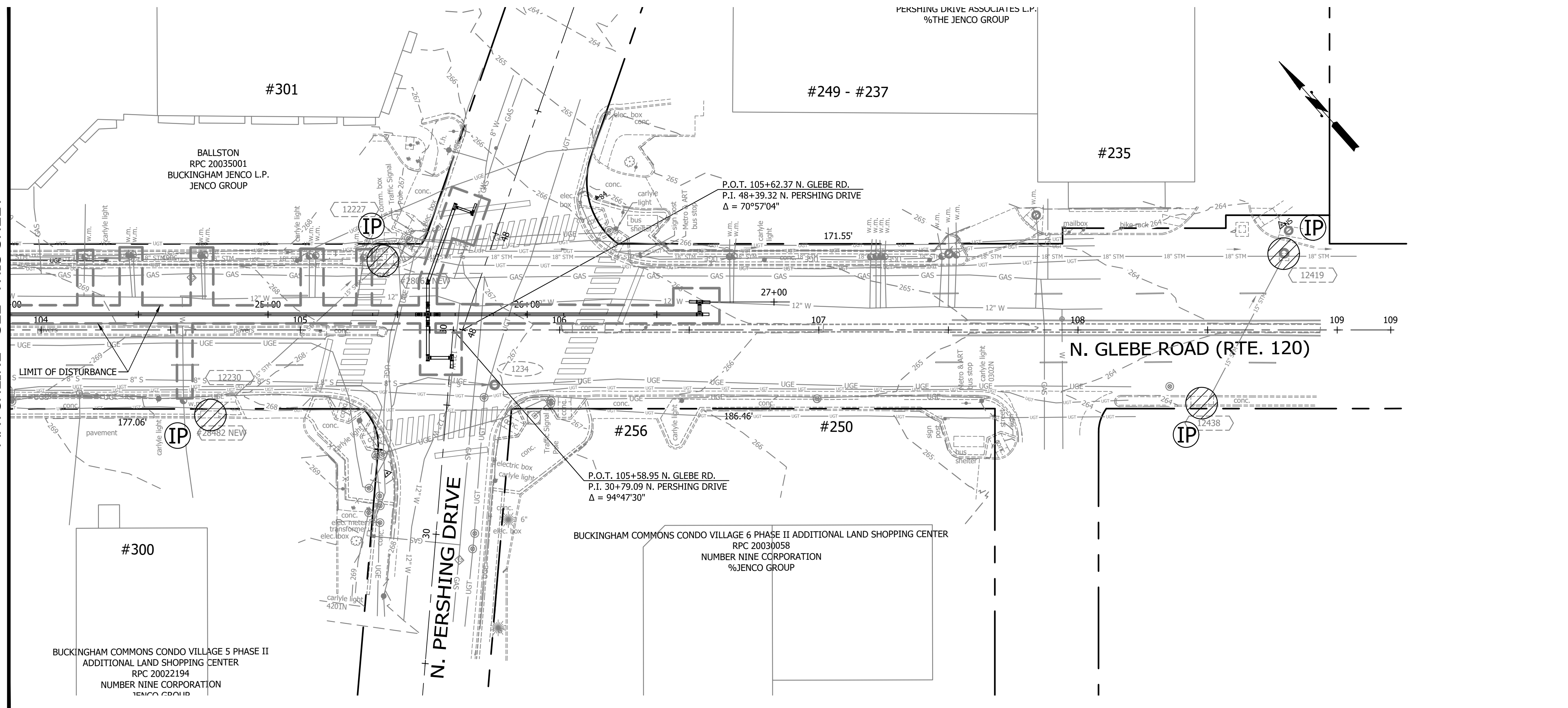
GRAPHIC SCALE

MATCHLINE - SEE SHEET C031.1

MATCHLINE - SEE THIS SHEET

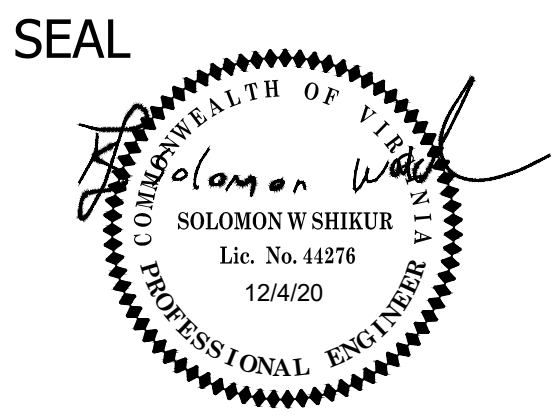


MATCHLINE - SEE THIS SHEET



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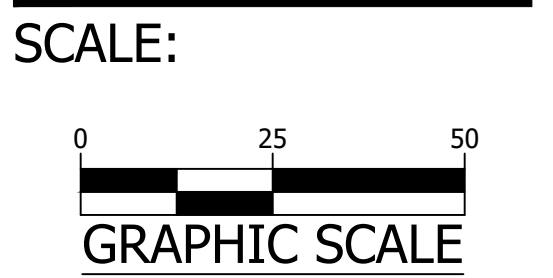
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N. RANDOLPH ST. TO N. PERSHING DR.

EROSION & SEDIMENT CONTROL PLAN - 2

DESIGNED: JK/LD
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 CHECKED: SS

PLOTTED: FEBRUARY 10 2021



EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:

THE COUNTY IS PROPOSING TO REPLACE THE EXISTING WATERMAIN TO 12-INCH DIAMETER WATERMAIN IN THE RIGHT OF WAY N. GLEBE ROAD, BETWEEN N. RANDOLPH RD. AND N. PERSHING RD. THE EXISTING WATERMAIN WAS INSTALLED IN THE 1920s AND IS REQUIRED TO BE UPGRADED. THIS PROJECT IS LOCATED WITHIN THE "DOCTOR'S BRANCH AND LUBBER RUN" WATERSHEDS AND ENDING UP IN THE POTOMAC RIVER AND DISTURBANCE AREA OF 0.41 AC.

EXISTING SITE CONDITIONS:

THE NORTH GLEBE ROAD IS A PAVED URBAN OTHER PRINCIPAL ARTERIAL WITH A SPEED LIMIT OF 30 MPH. THERE ARE NO STREET PARKING EITHER ON BOTH SIDES OF N. GLEBE ROAD.

ADJACENT PROPERTIES:

THERE ARE COMMERCIAL/ RESIDENTIAL PROPERTIES ON BOTH SIDES OF N. GLEBE ROAD.

OFF-SITE AREAS:

THERE ARE NO OFFSITES AREAS FOR THIS PROJECT.

CRITICAL AREAS:

THERE ARE NO STEEP SLOPES OR CRITICAL AREAS LOCATED WITHIN THE LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES:

THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA INCLUDE SAFETY FENCE AND INLET PROTECTION. INLET PROTECTION IS REQUIRED OUTSIDE THE PROJECT LIMITS WHEN/WHERE WATER FROM DISTURBED AREA FLOWS.

PERMANENT STABILIZATION:

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH GRASS, MULCH OR SOD. SEE THE PROPOSED PLANS FOR ADDITIONAL INFORMATION.

STORMWATER RUNOFF CONSIDERATIONS:

NO ADDITIONAL IMPERVIOUS AREA WILL BE ADDED TO THIS PROJECT.

TOTAL LAND DISTURBANCE.....= 17,680 SF (0.41 ACRE) LIMIT OF WORK WILL BE IN THE ROW

PRE-IMPROVEMENT IMPERVIOUS AREA.....= 17,680 SF (0.41 ACRE)

POST-IMPROVEMENT IMPERVIOUS AREA.....= 17,680 SF (0.41 ACRES)

INCREASED IMPERVIOUS AREA.....= 0 SF (0 ACRES)

SOILS INFORMATION:

THE FOLLOWING SOILS ARE FOUND ON SITE (SEE SOILS MAP ON SHEET C032.2 FOR LOCATION)

SOIL #:	SOIL NAME:	HYDROLOGIC GROUP:	ERODAB	ILITY:
---------	------------	-------------------	--------	--------

4	URBAN LAND - SASSAFRAS - NEABSCO COMPLEX	B & C		MODERATE (4B)
---	--	-------	--	---------------

12	URBAN LAND - UDORVENTHS COMPLEX	VARIABLE		VARIABLE
----	---------------------------------	----------	--	----------

FLOODPLAIN AND RESOURCE PROTECTION AREA (RPA):

THERE ARE NO FLOODPLAIN OR RESOURCE PROTECTION AREAS LOCATED WITHIN THIS PROJECT SITE

EROSION & SEDIMENT CONTROL PROJECT PHASING

1. PHASE I:

- a. PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, AND COUNTY INSPECTOR.
- b. INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE (IF NEEDED) IN THE LOCATION SHOWN ON THE E&S PHASE I PLAN. MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXISTING THE SITE.
- c. INSTALL PERIMETER TREE DEMARCATION FENCING IN THE FORM OF TREE PROTECTION FENCE (TP) AS SHOWN ON E&S PHASE I PLAN.
- d. PERFORM INITIAL PERIMETER CLEARING TO INSTALL REMAINDER OF PERIMETER CONTROLS SUCH AS DIVERSION DIKE (DD), SILT FENCE (SF), AND SUPER SILT FENCE (SSF) AS PER THE PHASE I PLAN.
- e. SEED AND MULCH ALL EARTHEN CONTROLS.
- f. CONTACT ARLINGTON COUNTY PROJECT OFFICER FOR A PERIMETER INSPECTION PRIOR TO CLEARING THE REMAINDER OF THE SITE IN ORDER TO OBTAIN PHASE II GRADING PERMIT.
- g. CLEAR THE SITE TO THE LIMITS AS SHOWN ON THE CONSTRUCTION PLANS.

2. PHASE II:

- a. BEGIN UTILITY CONSTRUCTION, INSTALL ALL UTILITIES UNDERGROUND UTILITIES AND BEGIN SITE GRADING.
- b. INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.
- c. ONCE THE SITE IS BOUGHT TO NEAR FINAL GRADE, AND THE UTILITY CONSTRUCTION IS COMPLETE, COMMENCE CONSTRUCTION OF CURB & GUTTER, STREET, SIDEWALKS, AND OTHER IMPROVEMENTS
- d. THE CONTROL MEASURES MAY NOT BE REMOVED UNTIL ALL OF THE DISTURBED AREAS HAVE BEEN STABILIZED AND ONLY AS APPROVED AND DIRECTED BY THE INSPECTOR.

RUNOFF SHALL BE TREATED WITH SILT FENCE AND INLET PROTECTION PRIOR TO ENTERING MAJOR STORM SEWER SYSTEMS.

EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE ARLINGTON COUNTY EROSION AND SEDIMENT CONTROL ORDINANCE. THE MINIMUM STANDARDS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

1. STRUCTURAL PRACTICES

- a. TEMPORARY CONSTRUCTION ENTRANCE - VESCH 3.02
 - a.a. A TEMPORARY CONSTRUCTION ENTRANCE WITH A WASH RACK SHALL BE INSTALLED AT THE EXISTING ACCESS POINT TO THE SITE. DURING MUDDY CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES WILL BE REQUIRED TO WASH THEIR WHEELS BEFORE RE-ENTERING THE LOCAL ROADWAYS.
 - a.b. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC WASHING OF THE MATS AND/OR REPLACEMENT OF WOOD CHIPS AS NECESSARY.
 - a.c. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
 - a.d. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED INTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
- b. SILT FENCE - VESCH 3.05
 - b.a. SILT FENCE WILL BE INSTALLED WITH THE E&S PLAN TO FILTER RUNOFF FROM DISTURBED AREAS. RUNOFF SHALL NOT BE DIRECTED PARALLEL TO THE INSTALLATION OF SILT FENCE.
 - b.b. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
 - b.c. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM UNDERCUTTING.
 - b.d. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
 - b.e. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 - b.f. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, THEN PREPARED AND SEEDED.
- c. TEMPORARY DIVERSION DIKE - VESCH 3.09
 - c.a. A SYSTEM OF TEMPORARY DIKES, TO DIRECT FLOW INTO PROPOSED & EXISTING STORM SEWER STRUCTURES WILL BE INSTALLED AS INDICATED IN EROSION & SEDIMENT CONTROL PLAN.
 - c.b. THE STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
- d. STORM DRAIN INLET PROTECTION - VESCH 3.07
 - d.a. ALL EXISTING & PROPOSED STORM SEWER INLETS IN AND AROUND THE PROJECT LIMITS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT-LADEN WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS.
 - d.b. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
 - d.c. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- e. DEWATERING STRUCTURE - VESCH 3.26
 - e.a. SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
 - e.b. THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.
 - e.c. THE ACCUMULATED SEDIMENT WHICH IS REMOVED FROM A DEWATERING DEVICE MUST BE SPREAD ON-SITE AND STABILIZED OR DISPOSED OF AT AN APPROVED DISPOSAL SITE AS PER THE APPROVED PLAN.

f. TREE PROTECTION - VESCH 3.38

- f.a. ALL TREES ARE TO BE PROTECTED UNLESS OTHERWISE DIRECTED BY THE COUNTY INSPECTOR AND URBAN FORESTER. THE COUNTY'S URBAN FORESTER (703-228-1863) SHALL INSPECT ALL TREE PROTECTION 72 HOURS PRIOR TO THE START OF CONSTRUCTION. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, THE FOLLOWING MAINTENANCE GUIDELINES SHALL BE FOLLOWED:
 - f.a.a. SOIL AERATION: IF THE SOIL HAS BECOME COMPACTED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHALL BE AERATED BY PUNCHING HOLES WITH AN IRON BAR. THE BAR SHALL BE DRIVEN 1-FOOT DEEP AND THEN MOVED BACK AND FORTH UNTIL THE SOIL IS LOOSENED. THIS PROCEDURE SHALL BE REPEATED EVERY 18 INCHES UNTIL ALL OF THE COMPACTED SOIL BENEATH THE CROWN OF THE TREE HAS BEEN LOOSENED.
 - f.a.b. REPAIR OF DAMAGE:
 - f.a.b.A. ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE RETAINED ON THE SITE SHALL BE REPAIRED IMMEDIATELY.
 - f.a.b.B. WHENEVER MAJOR ROOT OR BARK DAMAGE OCCURS, REMOVE SOME FOLIAGE TO REDUCE THE DEMAND FOR WATER AND NUTRIENTS.
 - f.a.b.C. DAMAGED ROOTS SHALL IMMEDIATELY BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA. CUT SURFACES SHALL BE PAINTED WITH APPROVED TREE PAINT, AND MOIST PEAT MOSS, BURLAP, OR TOPSOIL SHALL BE SPREAD OVER THE EXPOSED AREA.
 - f.a.b.D. TO TREAT BARK DAMAGE, CAREFULLY CUT AWAY ALL LOOSENED BARK BACK INTO THE UNDAMAGED AREA, TAPER THE CUT AT THE TOP AND BOTTOM, AND PROVIDE DRAINAGE AT THE BASE OF THE WOUND.
 - f.a.b.E. ALL TREE LIMBS DAMAGED DURING CONSTRUCTION OR REMOVED FOR ANY OTHER REASON SHALL BE CUT OFF ABOVE THE COLLAR AT THE PRECEDING BRANCH JUNCTION.
 - f.a.b.F. CARE FOR SERIOUS INJURIES SHALL BE PRESCRIBED BY A FORESTER OR A TREE SPECIALIST.
 - f.a.b. FERTILIZATION: BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID THEIR RECOVERY.
 - f.b.a. TREES SHALL BE FERTILIZED IN THE LATE FALL (AFTER OCTOBER 1) OR THE EARLY SPRING (FROM THE TIME FROST IS OUT OF THE GROUND UNTIL MAY 1). FALL APPLICATIONS ARE PREFERRED, AS THE NUTRIENTS WILL BE MADE AVAILABLE OVER A LONGER PERIOD OF TIME.
 - f.b.b. FERTILIZER SHALL BE APPLIED TO THE SOIL OVER THE FEEDER ROOTS. IN NO CASE SHALL IT BE APPLIED CLOSER THAN 3 FEET TO THE TRUNK. THE ROOT SYSTEM OF CONIFERS EXTENDS SOME DISTANCE BEYOND THE DRIP LINE. INCREASE THE AREA TO BE FERTILIZED BY ONE FOURTH THE AREA OF THE CROWN.
 - f.b.c. FERTILIZER SHALL BE APPLIED USING APPROVED FERTILIZATION METHODS AND EQUIPMENT.
 - f.b.d. FORMULATIONS AND APPLICATION RATES SHALL CONFORM TO THE GUIDELINES GIVEN IN TABLE 3.38-A OF VESCH.

2. VEGETATIVE PRACTICES

- a. TOPSOILING (STOCKPILE) - VESCH 3.30
 - a.a. TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS MAY HAVE TO BE LOCATED OFF-SITE AND ARE TO BE STABILIZED WITH TEMPORARY VEGETATION. PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY E&S PLAN (IF THE STOCKPILE IS LOCATED OFF-SITE). THIS SUPPLEMENTAL PLAN WOULD HAVE TO BE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY OFF-SITE ACTIVITY COMMENCES.
- b. TEMPORARY SEEDING - VESCH 3.31
 - b.a. ALL DENUDED AREAS, WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
 - b.b. SEE SHEET III-288 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) FOR ALLOWABLE PLANTING MATERIAL, SEEDING RATES, AND DATES. THE PLANTING REQUIREMENTS OF THE "SOUTH" SHALL BE FOLLOWED. LIMING SHALL BE BASED ON TABLE 3.31-A OF VESCH. FERTILIZERS SHALL BE APPLIED AS 600 LB/ACRE. THE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2-4" OF SOIL. SEED SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5" DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED.
 - c. EROSION CONTROL BLANKET AND MULCHING - VESCH 3.36 AND 3.35
 - c.a. EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND TO ALLOW SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS AND WILL BE APPLIED AS A SECOND STEP IN SEEDING OPERATION.
 - d. DUST CONTROL - VESCH 3.39
 - d.a. DUST SHALL BE CONTROLLED USING A VARIETY OF METHODS SUCH AS VEGETATIVE COVER, MULCH, TILLAGE, IRRIGATION, SPRAY-ON ADHESIVES, STONE BARRIERS, AND CALCIUM CHLORIDE. THE IMPLEMENTATION OF THE DUST CONTROL METHODS SHALL BE INSTALLED PER SECTION 3.39 OF VESCH
 - e. PERMANENT SEEDING - VESCH 3.32
 - e.a. SINCE THE SUBJECT SITE IS LOCATED WITHIN THE COASTAL PLAIN AREA OF VIRGINIA, SHEET III-304 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE FOLLOWED FOR FINAL SEEDING MATERIAL, SEEDING RATES, AND DATES OF APPLICATION.
 - f. SODDING - VESCH 3.33
 - f.a. SODDED AREAS SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLANS. SOIL TESTS SHALL BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. PRIOR TO LAYING SOD, SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS AND LARGE OBJECTS. QUALITY OF SOD SHALL BE STATE CERTIFIED TO ENSURE GENETIC PURITY AND HIGH QUALITY. SOD SHALL NOT BE LAID ON FROZEN SOIL SURFACE, OR IN EXCESSIVELY WET OR DRY WEATHER. SOD SHALL BE DELIVERED AND INSTALLED WITHIN 36 HOURS, AND SHALL BE INSTALLED PER PAGE III-339 OF VESCH.

THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD. IN ADDITION, NO SEDIMENT TRAPS OR BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE INSPECTOR.

EROSION AND SEDIMENT CONTROL MANAGEMENT MEASURES

LANDSCAPE / TREE PRESERVATION NOTES

PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT THE ARLINGTON COUNTY ARBORIST TO SCHEDULE AN INSPECTION.

LAND CONSERVATION NOTES:

- 1. NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.
- 2. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- 3. ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 100 FEET ARE TO BE OPEN AT ANY ONE TIME.
- 4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILLING.
- 5. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
- 6. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION.
- 7. ANY DISTURBED AREA NOT COVERED BY NOTE 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOV. 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE AND OVER-SEEDDED BY APRIL 15.
- 8. AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

EROSION & SEDIMENT CONTROL PROGRAM:

- 1. THE EROSION CONTROL PLAN IS INTENDED TO ESTABLISH ENTRANCES AND PERIMETER CONTROL MEASURES WHICH INCLUDES SILT FENCE (SF), INLET PROTECTION (IP), AND OTHER CONTROLS SPECIFIED ON THE PLANS.
- 2. WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL SHALL BE PLACED IN STREAMBEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 7 DAYS SHALL BE SEEDDED AND MULCHED. WHEN SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT SHALL BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE SHALL OUTLET IN A STABILIZED AREA OR A SEDIMENT TRAPPING DEVICE.
- 3. ALL PRACTICES AND CONTROL DEVICES DESCRIBED HEREIN SHALL CONFORM TO THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). IN ADDITION, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:
 - a. CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS, AND SHALL WORK THOSE AREAS TO MINIMIZE THE USE OF HEAVY EQUIPMENT. CONTRACTOR SHALL BRING DISTURBED AREAS TO GRADE (ROUGH OR FINISHED) AND STABILIZE THOSE AREAS WITH TEMPORARY OR PERMANENT VEGETATION. THESE DISTURBED AREAS SHALL BE STABILIZED PRIOR TO BEGINNING WORK IN ANOTHER AREA.
 - b. FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE KEPT ROUGH TO REDUCE SHEET EROSION OF THE SLOPES. CONTRACTOR SHALL RE-DIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZED OUTLETS.
 - c. CUT SLOPES SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS (ABOVE THE SLOPE) AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
- 4. MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA AND CHAPTER 57 OF THE ARLINGTON COUNTY CODE.
- 5. ALL AREAS, ON OR OFF-SITE, THAT ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE OR SOD THAT IS INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 3:1 AND GREATER SHALL BE RECEIVE SOIL STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS.
- 6. WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
- 7. FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- 1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
- 2. THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- 3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- 4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- 5. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN THE AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- 7. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- 8. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- 9. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- 10. ALL BIOFILTERS SHALL BE KEPT OFF-LINE UNTIL CONSTRUCTION IS COMPLETED AND ALL AREAS HAVE BEEN PROPERLY STABILIZED. THIS SHALL BE ACHIEVED BY USING INLET PROTECTION AT THE CURB CUTS AND STORMWATER CATCH BASINS LEADING DIRECTLY INTO THE BIOFILTERS.
- 11. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

PRE-Storm EROSION & SEDIMENTATION CHECKLIST:

PER GENERAL EROSION AND SEDIMENT CONTROL NOTE 6, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE COUNTY. THESE SUPPLEMENTARY PRACTICES ARE IN ADDITION TO THOSE SHOWN IN AN EROSION AND SEDIMENT CONTROL PLAN. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MODIFIED AS NEEDED TO ENSURE ONLY CLEAR WATER IS DISCHARGED FROM THE SITE.

THE FOLLOWING ACTIONS SHALL BE TAKEN PRIOR TO STORM EVENTS WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL TO PREVENT SEDIMENT DISCHARGES FROM A CONSTRUCTION SITE. A TYPICAL SUMMER THUNDERSTORM IS AN EXAMPLE OF A STORM EVENT WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL.

- 1. PERIMETER CONTROLS
 - a. SILT FENCE SHALL BE CHECKED FOR UNDERMINING, HOLES, OR DETERIORATION OF THE FABRIC. FENCING SHALL BE REPLACED IMMEDIATELY IF THE FABRIC IS DAMAGED OR WON. SILT FENCE MUST BE TRENCHED INTO THE GROUND PER STATE SPECIFICATIONS (VESCH STD & SPEC 3.09).
 - b. WOODEN STAKES OR STEEL POSTS SHALL BE PROPERLY SECURED UPRIGHT INTO THE GROUND. DAMAGED POSTS OR STAKES MUST BE REPLACED. SEDIMENT THAT HAS ACCUMULATED AGAINST THE SILT FENCE SHALL BE REMOVED. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE LEVEL REACHES ONE-HALF THE HEIGHT OF THE FENCING.
 - d. HAY BALES OR A STONE BERM SHALL BE PLACED ACROSS THE CONSTRUCTION ENTRANCE TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
- 2. EXPOSED SLOPES AND SOIL
 - a. EXPOSED SLOPES NOT AT THE FINAL STABILIZATION PHASE SHALL BE COVERED WITH TARPS, PLASTIC SHEETING, OR EROSION CONTROL MATTING. COVERING MATERIAL SHALL BE PROPERLY SECURED/ANCHORED.
 - b. CONTROLS SHALL BE INSTALLED TO PREVENT CONCENTRATED FLOW DOWN AN EXPOSED SLOPE. BERMS OR DIVERSION DIKES SHALL BE INSTALLED AT THE TOP OF CUT/EXPOSED SLOPES TO DIRECT STORM FLOW AROUND THE DISTURBED AREA.
 - c. EXPOSED SLOPES AT THE FINAL STABILIZATION PHASE SHALL BE STABILIZED USING SLOPE STABILIZATION PRACTICES SUCH AS SOIL STABILIZATION BLANKETS OR MATTING AS SPECIFIED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH STD & SPEC 3.36). BLANKETS OR MATS MUST BE PROPERLY SECURED AND ANCHORED TO THE SLOPE USING STAPLES, PINS, OR STAKES.
 - d. SEEDDED AREAS SHALL BE CHECKED AND RESEEDDED AS NECESSARY TO COVER EXPOSED SOIL. RECENTLY SEEDDED AREAS SHALL BE PROTECTED BY STRAW OR SOIL STABILIZATION BLANKETS TO PREVENT SEEDING FROM BEING WASHED AWAY.
- 3. STOCKPILES
 - a. STOCKPILED SOIL AND OTHER LOOSE MATERIALS THAT CAN BE WASHED AWAY SHALL BE COVERED WITH A TARP, PLASTIC SHEETING, OR OTHER STABILIZATION MATTING. THE COVER MUST BE PROPERLY SECURED/ANCHORED DOWN TO PREVENT IT FROM BEING BLOWN OFF AND EXPOSING MATERIALS TO RAIN. CONTROLS SUCH AS HAY BALES OR BOOMS SHALL BE PLACED ALONG THE PERIMETER OF THE STOCKPILE (DOWNHILL SIDE).
- 4. INLET PROTECTION
 - a. INLET PROTECTION CONTROLS SHALL BE INSPECTED TO ENSURE THEY ARE FUNCTIONING PROPERLY AND FLOODING WILL NOT OCCUR. CLOGGED OR DAMAGED CONTROLS MUST BE REPLACED IMMEDIATELY. ENSURE CONTROLS ALLOW FOR OVERFLOW/BYPASS OF STORMWATER RUNOFF DURING SIGNIFICANT STORM EVENTS.

IN ADDITION TO THESE PRE-STORM ACTIONS, ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES MUST BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL.

POLLUTION PREVENTION PLAN NOTES (STORMWATER MANUAL - SECTION 2.4)

- 1. ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S M54 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS:
 - a. WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIREFIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
- 2. APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S M54 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK.
- 3. PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

UTILITY INSTALLATION:

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

- 1. NO MORE THAN 100 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- 2. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- 3. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
- 4. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- 5. STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- 6. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- 9. ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDDED NO LATER THAN MAY 15TH.
- 10. AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED. ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.

MAINTENANCE PROGRAM:

THE FOLLOWING IS A PROGRAM OF MAINTENANCE FOR THE MECHANICAL CONTROLS SPECIFIED IN THIS NARRATIVE AND ON THE PLAN:

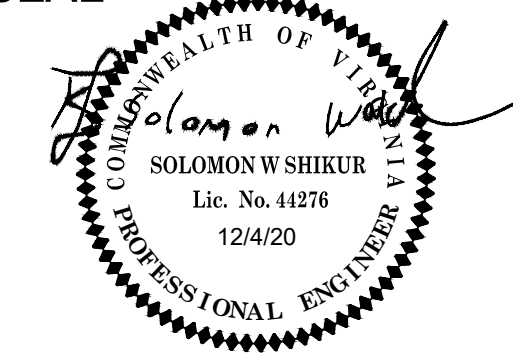
- 1. THE SITE SUPERINTENDENT OR HIS/HER REPRESENTATIVE SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREA (I.E. SEEDDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.
- 2. ALL SEDIMENT TRAPPING DEVICES SHALL BE CLEARED OUT AT 50% TRAP CAPACITY AND THE SEDIMENT SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR IF NOT SUITABLE FOR FILL, HAULING AWAY AND DEPOSITING AT AN ACCEPTABLE DUMP SITE.
- 3. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM BEING ENTERED ONTO EXISTING SWM/BMP FACILITIES OR DOWNSTREAM WATER WAYS. SHOULD OFF-SITE AREAS BECOME POLLUTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE AFFECTED AREAS TO THE SATISFACTION OF THE INSPECTOR.
- 4. AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ANY REMAINING DENUDED AREAS SHALL BE STABILIZED. CERTAIN DEVICES MAY BE REMOVED PRIOR TO CONSTRUCTION COMPLETION BUT ONLY WITH THE APPROVAL OF THE COUNTY INSPECTOR.
- 5. AFTER CONSTRUCTION OPERATIONS HAVE ENDED, ALL DISTURBED AREAS SHALL BE STABILIZED. UPON APPROVAL OF THE COUNTY INSPECTOR, MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED AND THE GROUND PERMANENTLY STABILIZED WITH VEGETATION WITHIN 30 DAYS.



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606

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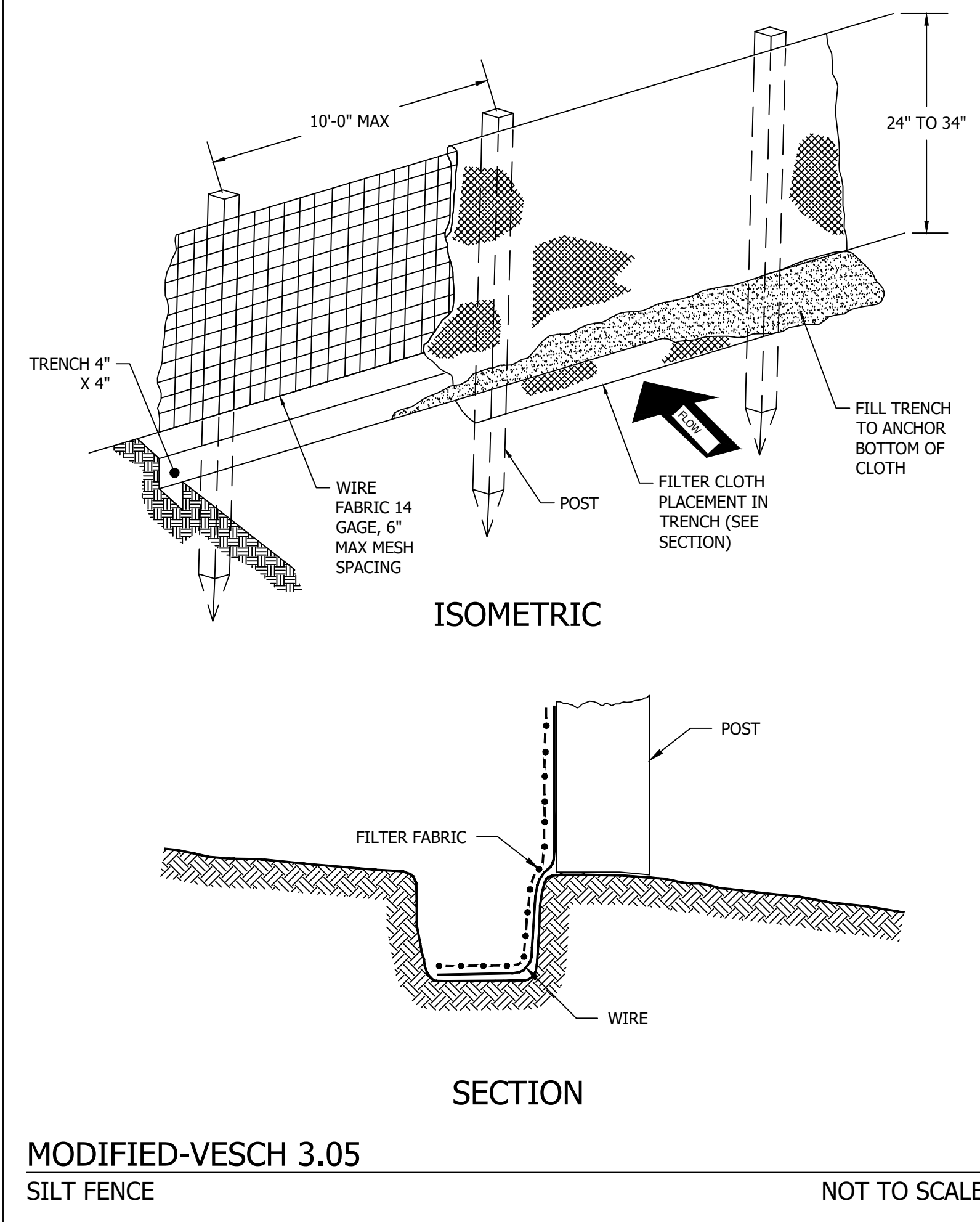
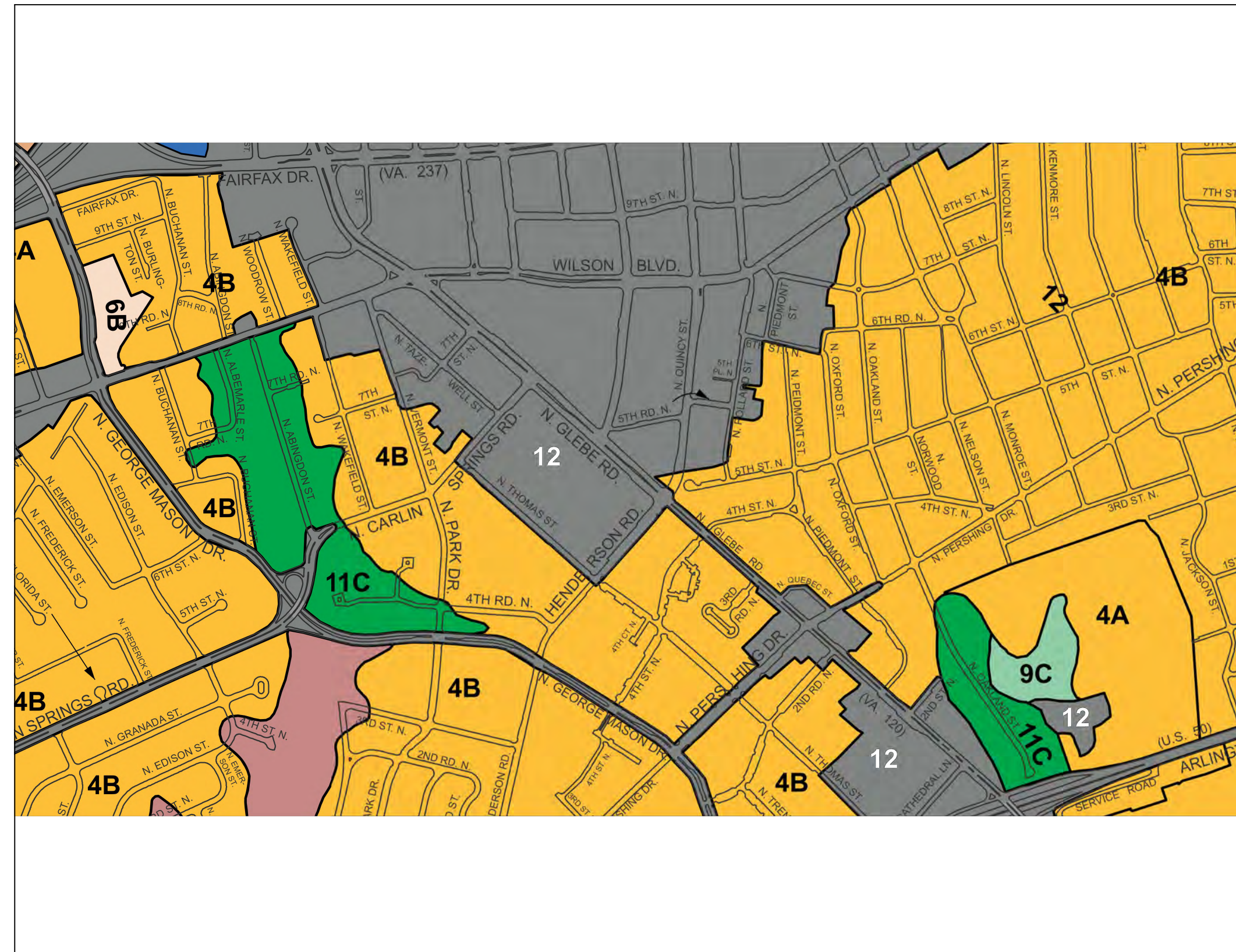
APPROVALS DATE

<i>Amy Pflaum</i>	2/1/2021
QUALITY CONTROL ENGINEER	
<i>K.W. Taktak</i>	2.3.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Quint</i>	02.09.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	02/09/21
TRANSPORTATION DIRECTOR	
<i>Dabney R. Cawen</i>	01/27/2021
PROJECT MANAGER	

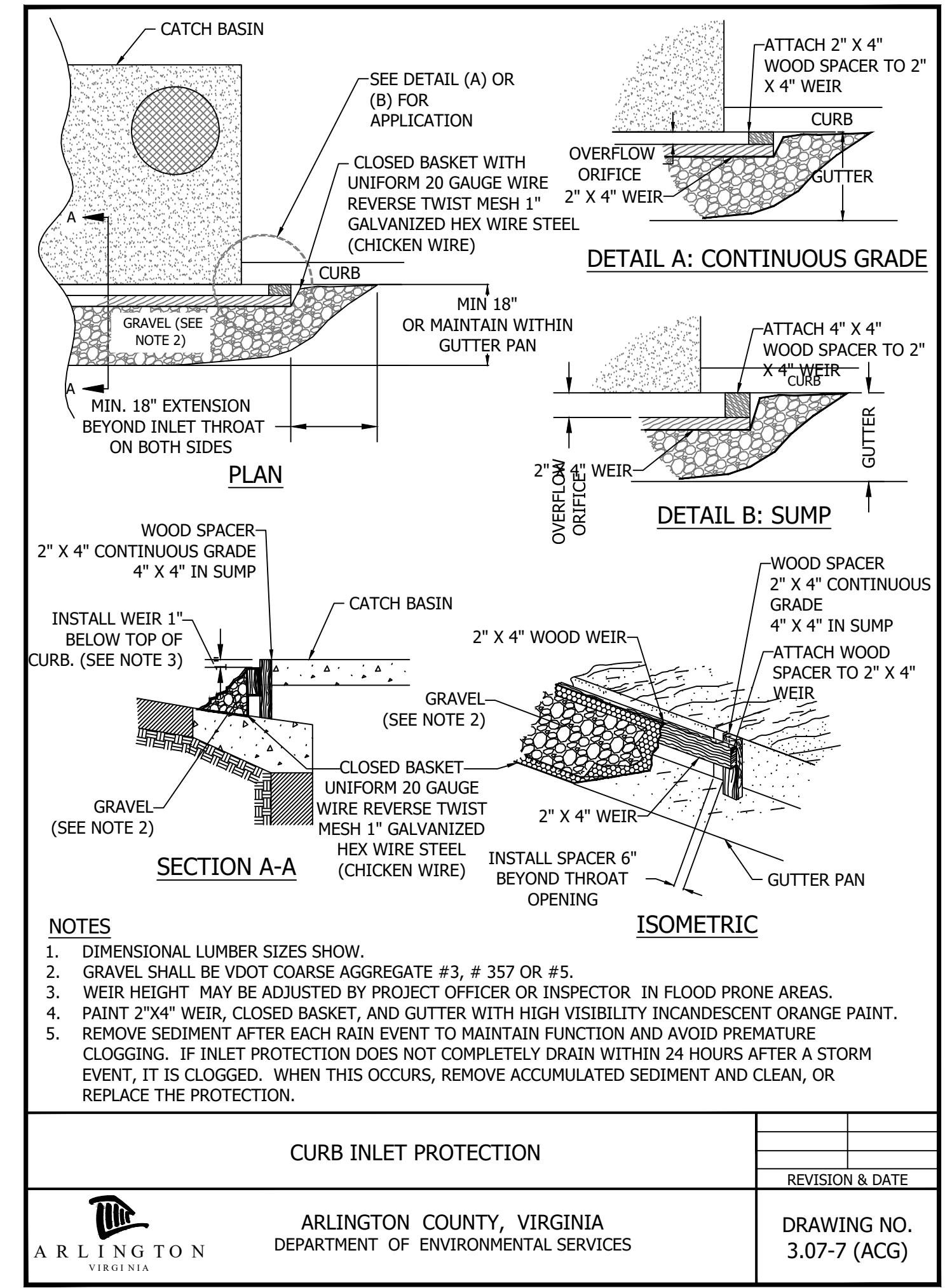
REVISIONS DATE

REVISIONS	DATE

HYDROLOGIC SOILS MAP (N.T.S.)



MODIFIED-VESCH 3.05
SILT FENCE NOT TO SCALE



CURB INLET PROTECTION
ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
DRAWING NO. 3.07-7 (ACG)

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

SEAL
Professional Engineer
Solomon W Shikur
Lic. No. 44276
12/4/20

APPROVALS DATE
Amy Pflaum 2/1/2021
QUALITY CONTROL ENGINEER
R.W. Taktak 2.3.21
CONSTRUCTION MANAGEMENT SUPERVISOR
Dennis M. Leach 02.09.2021
TRANSPORTATION DIRECTOR
Dabney R. Cawen 01/27/2021
PROJECT MANAGER

REVISIONS	DATE

July 1, 2020
date

Qianqian Li, P.E.
ESC Program Administrator
Department of Environmental Services
2100 Clarendon Boulevard, Suite 813
Arlington, Virginia 22201

Re: Erosion and Sediment Control Permit Application for:
N. Glebe Road Water Main Replacement
street address
From N Randolph St to N Pershing Dr
lot, block, section subdivision

permit number

Dear Mrs. Li:

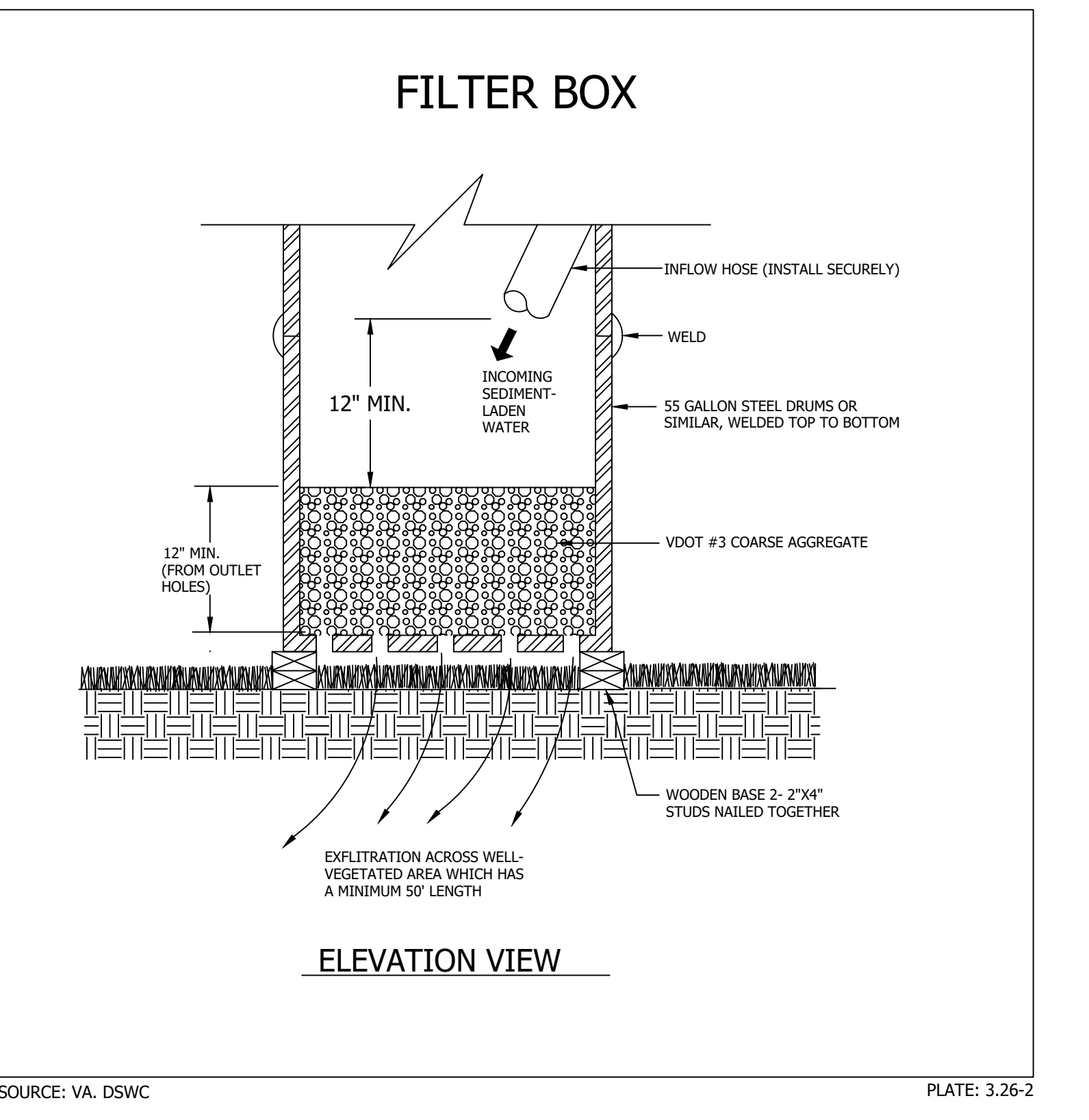
I hereby certify that I accept the responsibilities of Responsible Land Disturber for the above referenced project. I understand that these responsibilities include:

1. Reviewing the erosion and sedimentation (E&S) plan for the project.
2. Walking the site prior to construction to identify critical areas.
3. Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.
4. Regularly inspecting the site during construction to ensure that all E&S controls are functioning and are adequate to address erosion and sedimentation. Inspect the site 48 hours after a runoff-generating storm, and provide a copy of the inspection findings to the county.
5. Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
6. Ensuring that temporary soil stabilization is applied within 7 days to areas denuded that will remain undisturbed for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
7. Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at 703-228-3654 with questions about this plan or my execution of the duties of Responsible Land Disturber.
telephone number

Sincerely,

signed
Solomon Shikur
name printed
VA PE #44276
professional registration (type and number)



SOURCE: VA. DSWC PLATE: 3.26-2

EROSION AND SEDIMENT CONTROL LEGEND

3.05	TEMPORARY SILT FENCE	SF	
3.07	STORM DRAIN INLET PROTECTION	IP	
3.26	DEWATERING STRUCTURE	DS	

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
EROSION & SEDIMENT CONTROL NOTES
AND DETAILS - 1

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS
PLOTTED: FEBRUARY 10 2021
SCALE:
AS SHOWN

Spill Prevention & Response

Most spills can be cleaned up following manufacturer specifications. The priority should be to protect all people, equipment, property, and the environment. Enter the telephone number of your local fire and police departments.

Most spills can be cleaned up using a spill kit. Absorbent/dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at the project site.

- 1st Priority: Protect all people
2nd Priority: Protect equipment and property
3rd Priority: Protect the environment

- 1. Check for hazards (flammable material, noxious fumes, cause of spill) - if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.
2. Ensure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
3. Stop the spill source.
4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
5. If possible, stop spill from spreading and/or entering storm drains (use absorbent or other materials as necessary).
6. If spilled material has entered a storm drain, contact Arlington County Fire Department and project manager.
7. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
8. Properly dispose of cleanup materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Local Contacts
Arlington County Fire & Police 703-668-2222
DES Water, Sewer, Streets 24-Hour Emergency 703-228-6555
Washington Gas Emergency 703-790-1400

Nights, Holidays & Weekends
VA Dept. of Emergency Management 804-674-2400
24 Hour Reporting Service

Spill kit on site: Yes No

Location(s) of spill kit:

Potential Sources of Pollution & Pollution Prevention Practices

Identify the pollutant-generating activities likely to be present at the project site, implement and maintain the corresponding pollution prevention practices. If an unlisted pollutant-generating activity is likely to be present at the project site, describe it, identify the associated pollutant(s), and provide the corresponding pollution prevention practice(s) to be implemented and maintained.

Table with columns: Pollutant-Generating Activity, Likely Present at your Project Site?, Sediment, Nutrients, Heavy Metals, pH (acids and bases), Pesticides & Herbicides, Oil & Grease, Bacteria & Viruses, Trash/Debris/Solids, Other Toxic Chemicals, Pollution Prevention Practice, Responsible Party. Rows include: Clearing, grading, excavating, and un-stabilized areas; Paving and saw cutting operations; Concrete operations, washout, and cement waste; Washing / cleaning; Dewatering operations; Material / chemical use and storage; Equipment and vehicle maintenance; Waste management / disposal; Sanitary waste; Nutrient management.

Authorized Non-Stormwater Discharges

Identify the authorized non-stormwater discharges likely to be present at the project site. If an unlisted authorized non-stormwater discharge is likely to be present at the project site, provide it here.

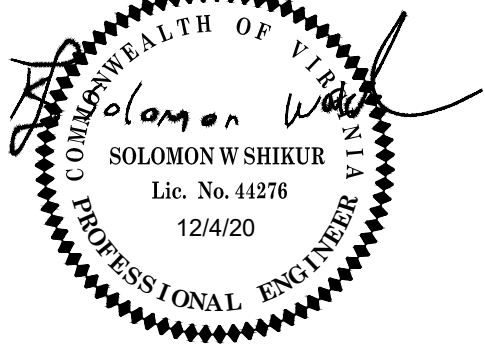
Table with columns: Type of Authorized Non-Stormwater Discharges, Likely Present at Your Project Site?. Rows include: Uncontaminated excavation dewatering, Landscape irrigation, Other (describe).



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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FAX: 703.228.3606

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APPROVALS DATE

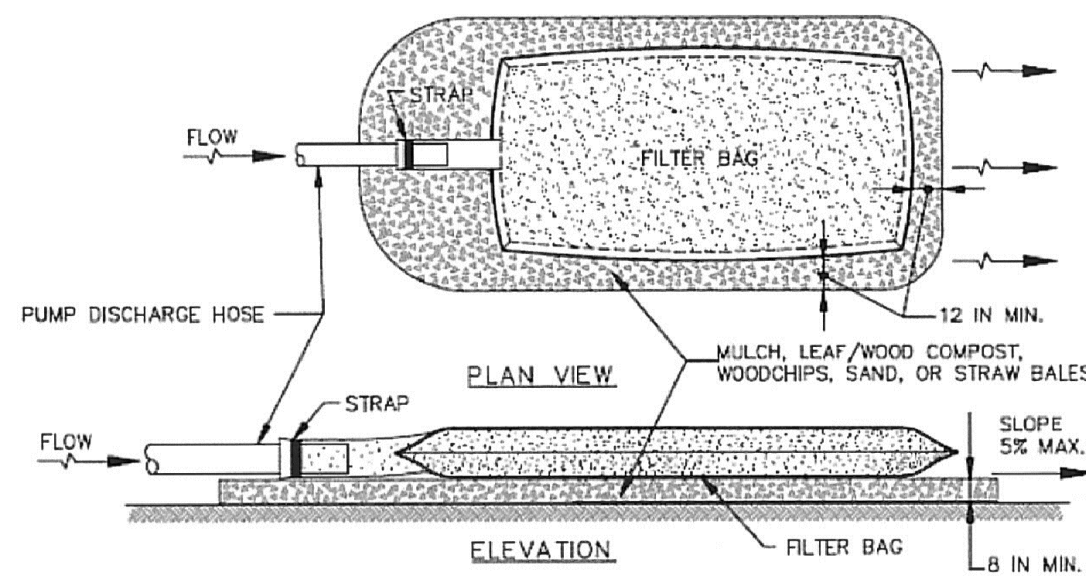
Amy Pfleum 2/1/2021
QUALITY CONTROL ENGINEER
R.W. Taktak 2.3.21
CONSTRUCTION MANAGEMENT SUPERVISOR
Dennis M. Leach 02/09/2021
TRANSPORTATION DIRECTOR
Dabney R. Cawen 01/27/2021
PROJECT MANAGER

REVISIONS DATE

Table with columns: REVISIONS, DATE. Multiple empty rows for revisions.

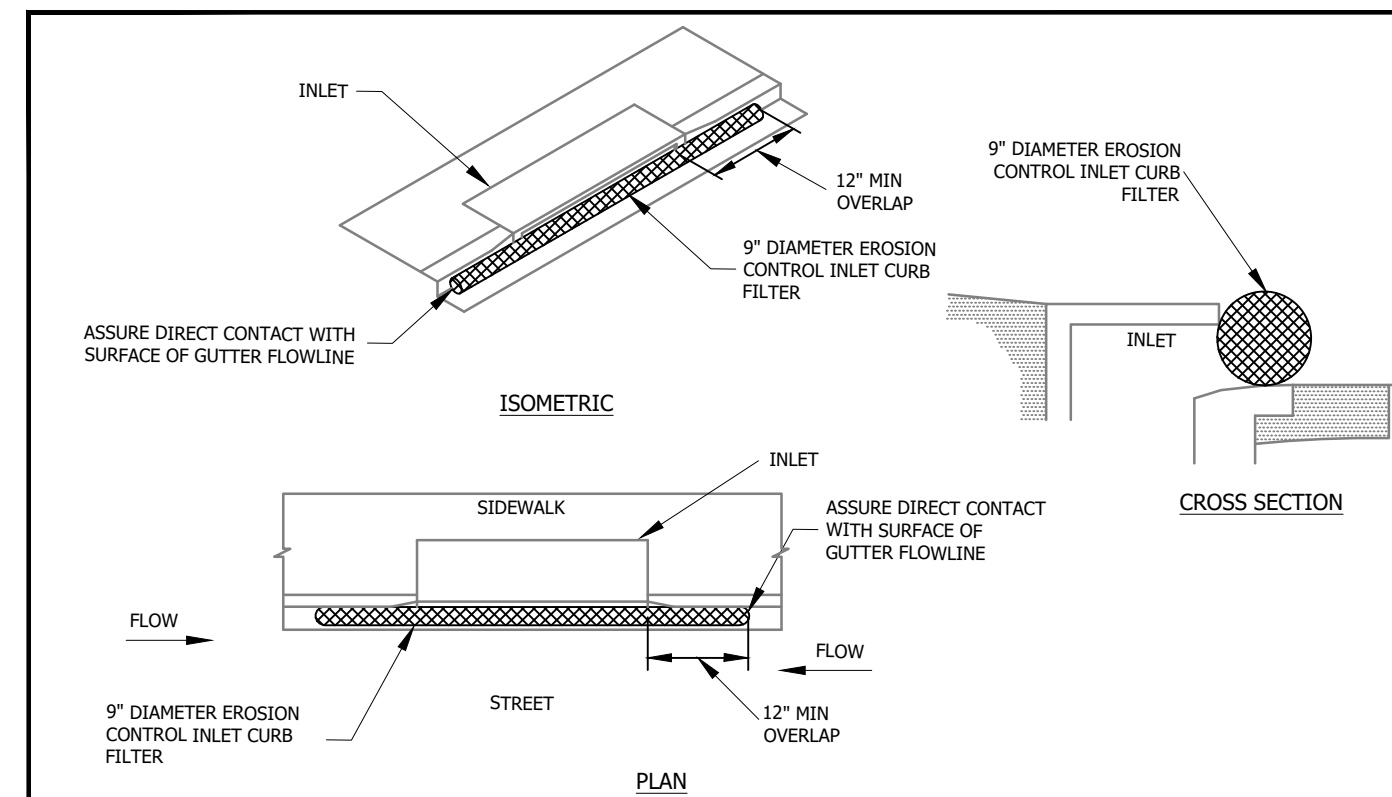
Filter Bag

The Maryland Standard F-4 for a filter bag is provided as an acceptable option for use in Arlington County if straw bales or stone are used as the layer under the filter bag. The use of mulch, leaf/wood compost, woodchips or sand is not acceptable.



CONSTRUCTION SPECIFICATIONS

- 1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:
GRAB TENSILE 250 LB ASTM D-4632
PUNCTURE 130 LB ASTM D-4833
FLOW RATE 70 GAL/MIN/FT² ASTM D-4491
PERMITTIVITY (SEC⁻¹) 1.2 SEC⁻¹ ASTM D-4491
UV RESISTANCE 70% STRENGTH @ 500 HOURS ASTM D-4355
APPARENT OPENING SIZE (AOS) 0.15-0.18 MM ASTM D-4751
SEAM STRENGTH 90% ASTM D-4632
6. REPLACE FILTER BAG IF BAG CLODS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.



- NOTES:
1. CONTRACTOR TO OBTAIN PERMISSION FROM ARLINGTON COUNTY PRIOR TO USE ON SITE.
2. THE SEDIMENT FILTER SOCK TO BE INSTALLED DAILY AT THE BEGINNING OF CONSTRUCTION AND TO BE REMOVED AFTER THE STREET IS SWEEP OR FLUSHED WHENEVER APPLICABLE AT THE END OF THE CONSTRUCTION DAY.

SEDIMENT FILTER SOCK INLET PROTECTION
ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES



N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
EROSION & SEDIMENT CONTROL
NOTES AND DETAILS - 2

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: FEBRUARY 10 2021

SCALE:

AS SHOWN

REVISED ON 05/23/2018

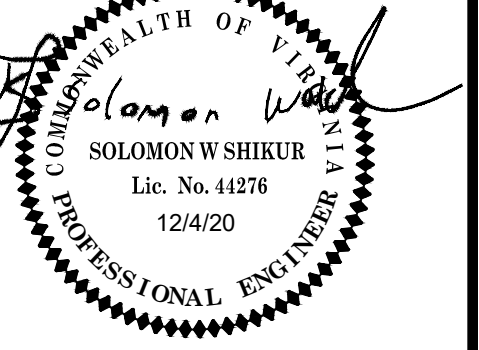
FILENAME: R014-216-GEOMETRIC_CONTROL_PLAN.DWG PATH: Q:\DATA\AR014\DESIGN\CAD\ACTIVE PLOTTED BY: LDJ\AKL DESIGN PLANS - SIGNED 2/9/21



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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ARLINGTON, VA 22201
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FAX: 703.228.3606

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APPROVALS DATE

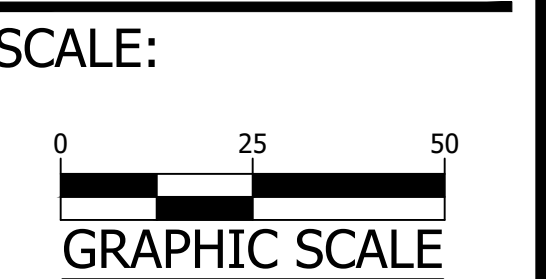
<i>Amy Pflaum</i>	2/1/2021
QUALITY CONTROL ENGINEER	
<i>R.W. Taktak</i>	2.3.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Oliver</i>	02.09.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	02/09/21
TRANSPORTATION DIRECTOR	
<i>Dabney R. Carver</i>	01/27/2021
PROJECT MANAGER	

REVISIONS DATE

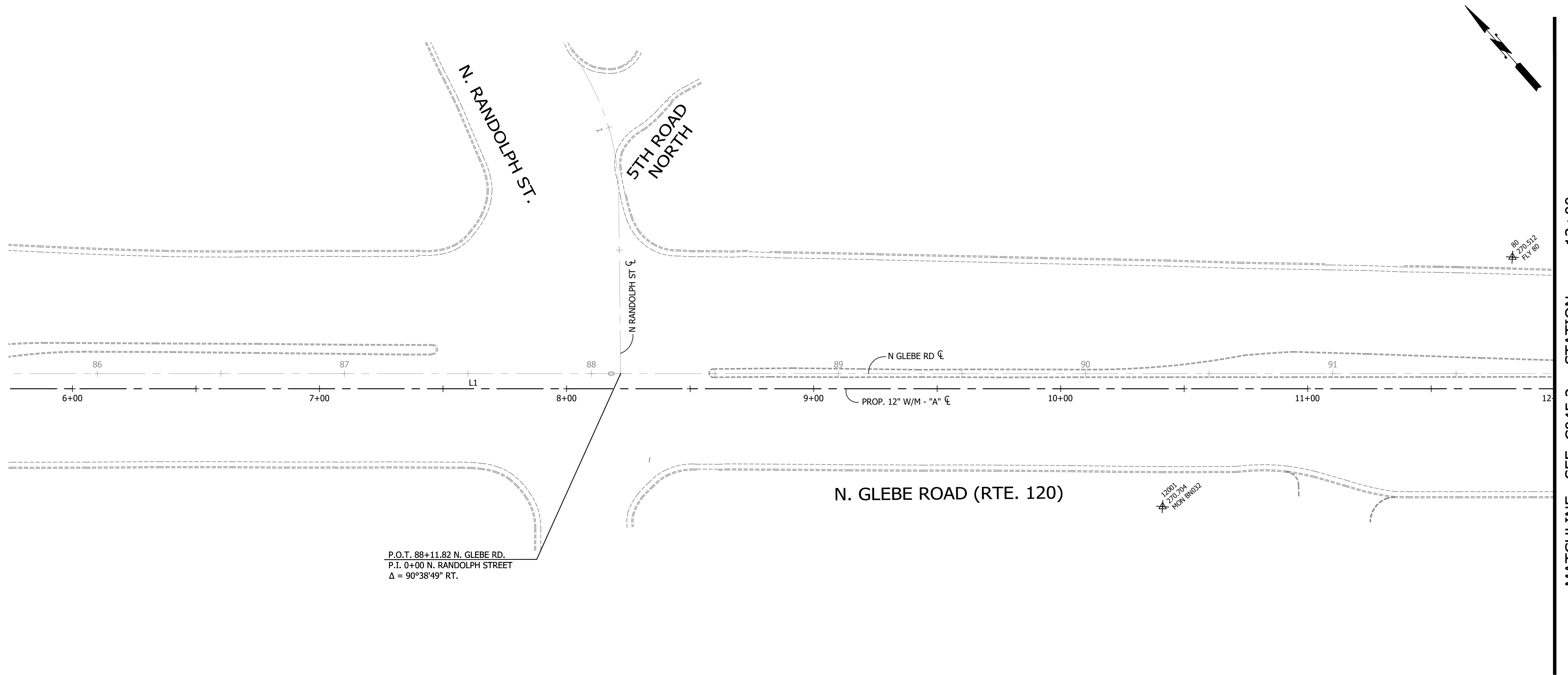
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
GEOMETRIC CONTROL PLAN - 1

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS
PLOTTED: FEBRUARY 10 2021



C045.1



P.O.T. 88+11.82 N. GLEBE RD.
P.I. 0+00 N. RANDOLPH STREET
 $\Delta = 90^{\circ}38'49''$ RT.

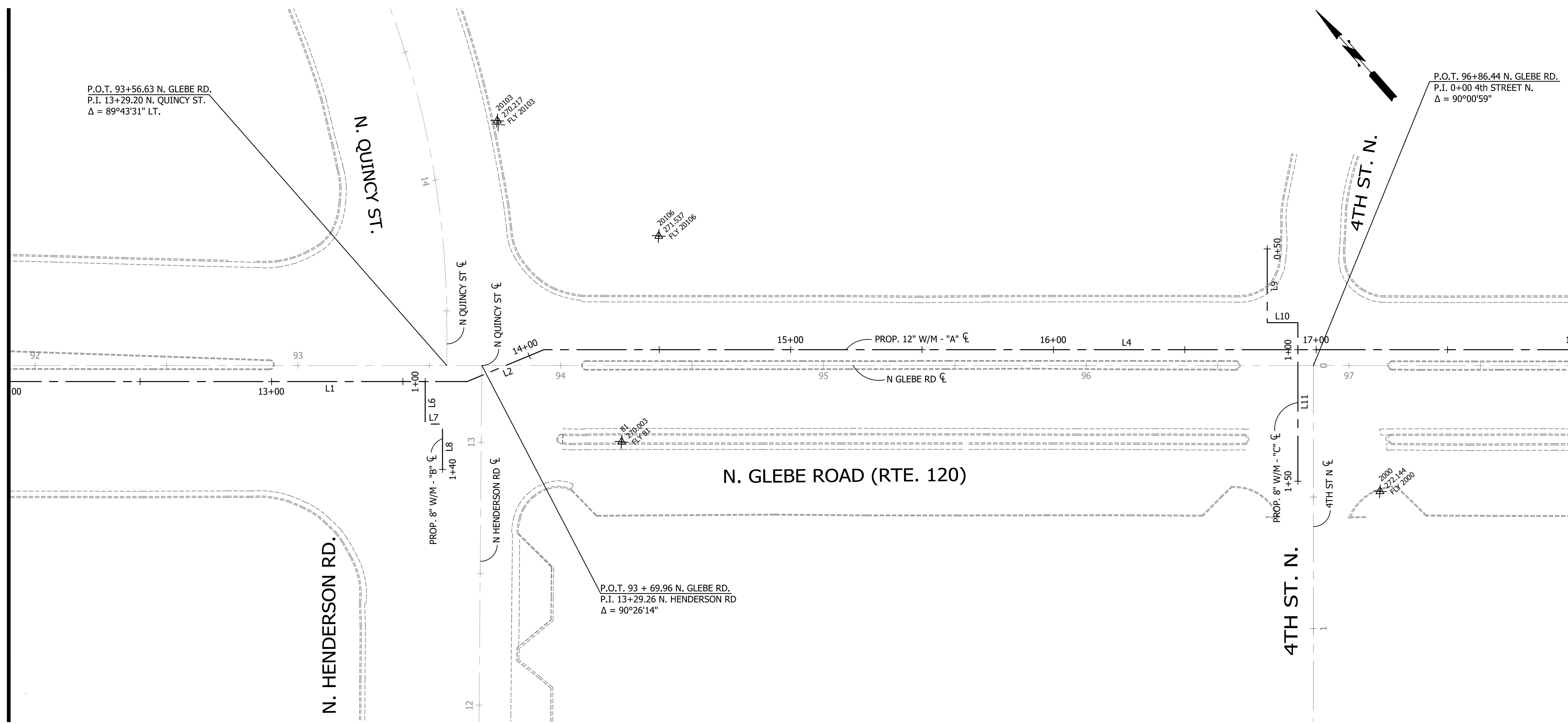
PROP. 12" W/M - "A" ϕ (GLEBE RD)
ALIGNMENT: PROP. 12 IN WM - A

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L1	S 48° 28' 44" E	1224.45'	1+50.00	13+74.45	7005916.17, 11878183.96	7005104.49, 11879100.72
L2	S 70° 58' 44" E	31.62'	13+74.45	14+06.07	7005104.49, 11879100.72	7005094.18, 11879130.61
L3	S 48° 28' 44" E	34.73'	26+71.29	27+06.02	7004262.21, 11880077.49	7004239.18, 11880103.49
L4	S 48° 28' 44" E	1260.45'	14+06.07	26+66.52	7005094.18, 11879130.61	7004258.64, 11880074.33
L5	N 41° 31' 16" E	4.77'	26+66.52	26+71.29	7004258.64, 11880074.33	7004262.21, 11880077.49

Survey Control				
PT#	Northing	Easting	Elev.	Desc.
80	7005271.3718	11878992.5720	270.512	FLY 80
81	7005048.3454	11879129.5612	270.003	FLY 81
82	7004672.7291	11879662.6703	272.042	FLY 82
83	7004297.1561	11879947.3900	268.255	FLY 83
84	7004323.5920	11880078.3563	266.146	FLY 84
2000	7004842.9269	11879333.1376	272.144	FLY 2000
12001	7005289.6542	11878819.6077	270.704	MON BN032
12002	7005911.8017	11878229.6394	271.180	FLY 100
12003	7006013.3953	11878414.1516	265.130	FLY 105
20005	7005692.2603	11878451.6045	272.560	TRV 216
20103	7005171.1772	11879175.0800	270.217	FLY 20103
20106	7005097.6034	11879192.0160	271.537	FLY 20106

MATCHLINE - SEE C045.1 - STATION 12+00

MATCHLINE - SEE C045.3 - STATION 18+00



PROP. 12" W/M - "A" C (GLEBE RD)

ALIGNMENT: PROP. 12 IN WM - A

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L1	S 48° 28' 44" E	1224.45'	1+50.00	13+74.45	7005916.17, 11878183.96	7005104.49, 11879100.72
L2	S 70° 58' 44" E	31.62'	13+74.45	14+06.07	7005104.49, 11879100.72	7005094.18, 11879130.61
L3	S 48° 28' 44" E	34.73'	26+71.29	27+06.02	7004262.21, 11880077.49	7004239.18, 11880103.49
L4	S 48° 28' 44" E	1260.45'	14+06.07	26+66.52	7005094.18, 11879130.61	7004258.64, 11880074.33
L5	N 41° 31' 16" E	4.77'	26+66.52	26+71.29	7004258.64, 11880074.33	7004262.21, 11880077.49

PROP. 8" W/M - "C" C (4th ST N)

ALIGNMENT: PROP. 8 IN WM - C

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L9	S 41° 31' 16" W	28.05'	0+50.00	0+78.05	7004940.40, 11879362.17	7004919.39, 11879343.57
L10	S 48° 28' 44" E	11.65'	0+78.05	0+89.70	7004919.39, 11879343.57	7004911.67, 11879352.29
L11	S 41° 31' 16" W	60.30'	0+89.70	1+50.00	7004911.67, 11879352.29	7004866.53, 11879312.32

Survey Control				
PT#	Northing	Easting	Elev.	Desc.
80	7005271.3718	11878992.5720	270.512	FLY 80
81	7005048.3454	11879129.5612	270.003	FLY 81
82	7004672.7291	11879662.6703	272.042	FLY 82
83	7004297.1561	11879947.3900	268.255	FLY 83
84	7004323.5920	11880078.3563	266.146	FLY 84
2000	7004842.9269	11879333.1376	272.144	FLY 2000
12001	7005289.6542	11878819.6077	270.704	MON BN032
12002	7005911.8017	11878229.6394	271.180	FLY 100
12003	7006013.3953	11878414.1516	265.130	FLY 105
20005	7005692.2603	11878451.6045	272.560	TRV 216
20103	7005171.1772	11879175.0800	270.217	FLY 20103
20106	7005097.6034	11879192.0160	271.537	FLY 20106

PROP. 8" W/M - "B" C (HENDERSON RD)

ALIGNMENT: PROP. 8 IN WM - B

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L6	S 41° 31' 16" W	16.19'	1+00.00	1+16.19	7005115.07, 11879088.78	7005102.95, 11879078.05
L7	S 48° 28' 44" E	6.60'	1+16.19	1+22.78	7005102.95, 11879078.05	7005098.58, 11879082.98
L8	S 41° 31' 16" W	17.22'	1+22.78	1+40.00	7005098.58, 11879082.98	7005085.68, 11879071.57

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
 2100 CLARENDON BOULEVARD, SUITE 813
 ARLINGTON, VA 22201
 PHONE: 703.228.3629
 FAX: 703.228.3606

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SEAL

SOLOMON W SHUKUR
 Lic. No. 44576
 12/4/20
 PROFESSIONAL ENGINEER

APPROVALS	DATE
<i>Amy Pfleum</i>	2/1/2021
QUALITY CONTROL ENGINEER	
<i>R.W. Taktak</i>	2.3.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Oliver</i>	02.09.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	02/09/21
TRANSPORTATION DIRECTOR	
<i>Dabney R. Caver</i>	01/27/2021
PROJECT MANAGER	

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 GEOMETRIC CONTROL PLAN - 2

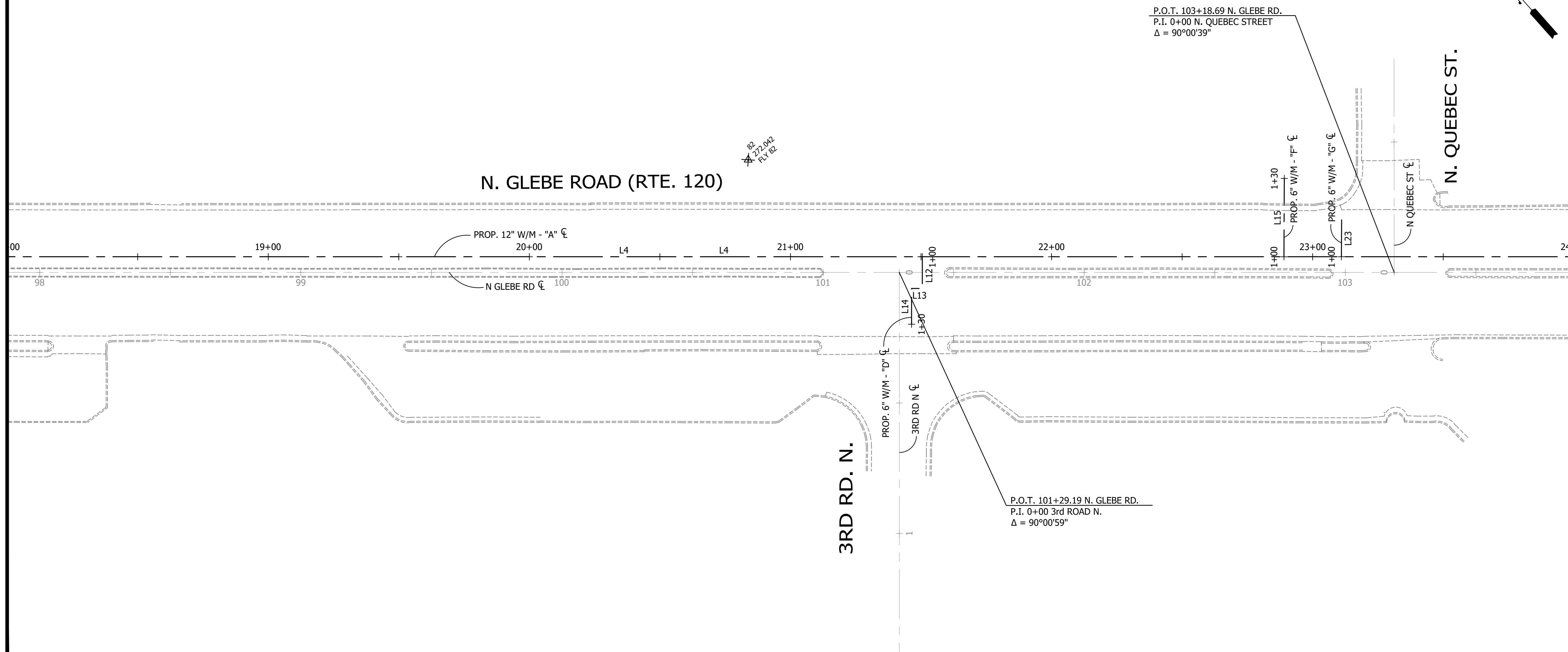
DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021

SCALE:

GRAPHIC SCALE

MATCHLINE - SEE C045.2 - STATION 18+00



MATCHLINE - SEE C045.4 - STATION 24+00

PROP. 12" W/M - "A" C (GLEBE RD)

ALIGNMENT: PROP. 12 IN WM - A

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L1	S 48° 28' 44" E	1224.45'	1+50.00	13+74.45	7005916.17, 11878183.96	7005104.49, 11879100.72
L2	S 70° 58' 44" E	31.62'	13+74.45	14+06.07	7005104.49, 11879100.72	7005094.18, 11879130.61
L3	S 48° 28' 44" E	34.73'	26+71.29	27+06.02	7004262.21, 11880077.49	7004239.18, 11880103.49
L4	S 48° 28' 44" E	1260.45'	14+06.07	26+66.52	7005094.18, 11879130.61	7004258.64, 11880074.33
L5	N 41° 31' 16" E	4.77'	26+66.52	26+71.29	7004258.64, 11880074.33	7004262.21, 11880077.49

PROP. 6" W/M - "F" C (QUEBEC ST)

ALIGNMENT: PROP. 6 INCH WM - F

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L15	N 41° 45' 34" E	30.00'	1+00.00	1+30.00	7004508.90, 11879791.66	7004531.28, 11879811.64

PROP. 6" W/M - "G" C (QUEBEC ST)

ALIGNMENT: PROP. 6 INCH WM - G

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L23	N 41° 46' 17" E	14.14'	1+00.00	1+14.14	7004494.33, 11879808.15	7004504.88, 11879817.57

Survey Control				
PT#	Northing	Easting	Elev.	Desc.
80	7005271.3718	11878992.5720	270.512	FLY 80
81	7005048.3454	11879129.5612	270.003	FLY 81
82	7004672.7291	11879662.6703	272.042	FLY 82
83	7004297.1561	11879947.3900	268.255	FLY 83
84	7004323.5920	11880078.3563	266.146	FLY 84
2000	7004842.9269	11879333.1376	272.144	FLY 2000
12001	7005289.6542	11878819.6077	270.704	MON BN032
12002	7005911.8017	11878229.6394	271.180	FLY 100
12003	7006013.3953	11878414.1516	265.130	FLY 105
20005	7005692.2603	11878451.6045	272.560	TRV 216
20103	7005171.1772	11879175.0800	270.217	FLY 20103
20106	7005097.6034	11879192.0160	271.537	FLY 20106

PROP. 6" W/M - "D" C (3rd RD N)

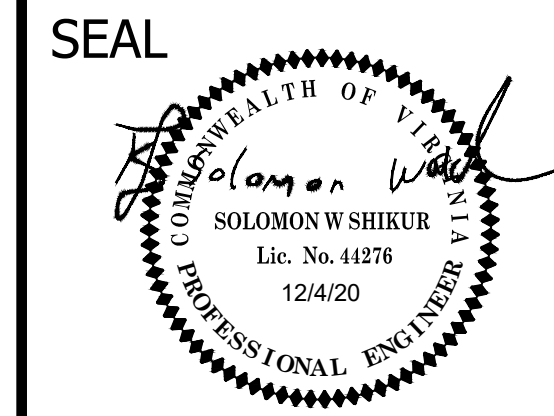
ALIGNMENT: PROP. 6 IN WM - D

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L12	S 41° 31' 16" W	12.16'	1+00.00	1+12.16	7004600.69, 11879687.99	7004591.59, 11879679.93
L13	N 48° 28' 44" W	4.16'	1+12.16	1+16.32	7004591.59, 11879679.93	7004594.34, 11879676.81
L14	S 41° 31' 16" W	13.68'	1+16.32	1+30.00	7004594.34, 11879676.81	7004584.10, 11879667.75



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 FAX: 703.228.3606

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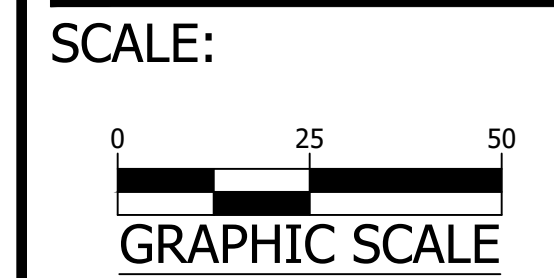
APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.V. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>Quintus</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Carver</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE

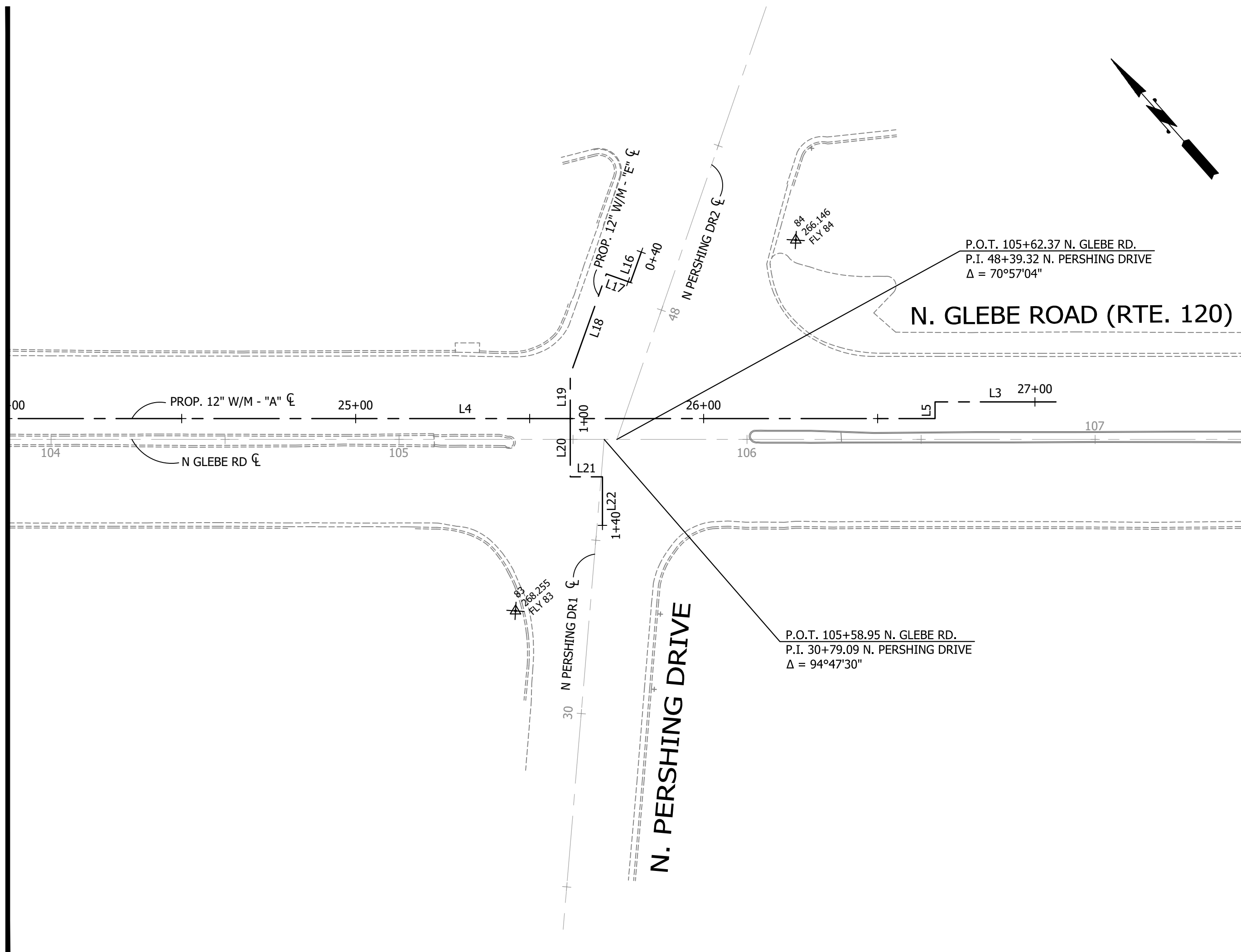
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 GEOMETRIC CONTROL PLAN - 3

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021



MATCHLINE - SEE C045.3 - STATION 24+00



PROP. 12" W/M - "A" C (GLEBE RD)
ALIGNMENT: PROP. 12 IN WM - A

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L1	S 48° 28' 44" E	1224.45'	1+50.00	13+74.45	7005916.17, 11878183.96	7005104.49, 11879100.72
L2	S 70° 58' 44" E	31.62'	13+74.45	14+06.07	7005104.49, 11879100.72	7005094.18, 11879130.61
L3	S 48° 28' 44" E	34.73'	26+71.29	27+06.02	7004262.21, 11880077.49	7004239.18, 11880103.49
L4	S 48° 28' 44" E	1260.45'	14+06.07	26+66.52	7005094.18, 11879130.61	7004258.64, 11880074.33
L5	N 41° 31' 16" E	4.77'	26+66.52	26+71.29	7004258.64, 11880074.33	7004262.21, 11880077.49

Survey Control				
PT#	Northing	Easting	Elev.	Desc.
80	7005271.3719	11878992.5720	270.512	FLY 80
81	7005048.3454	11879129.5612	270.003	FLY 81
82	7004672.7291	11879662.6703	272.042	FLY 82
83	7004297.1561	11879947.3900	268.255	FLY 83
84	7004323.5920	11880078.3563	266.146	FLY 84
2000	7004842.9269	11879333.1376	272.144	FLY 2000
12001	7005289.6542	11878819.6077	270.704	MON BN032
12002	7005911.8017	11878229.6394	271.180	FLY 100
12003	7006013.3953	11878414.1516	265.130	FLY 105
20005	7005692.2603	11878451.6045	272.560	TRV 216
20103	7005171.1772	11879175.0800	270.217	FLY 20103
20106	7005097.6034	11879192.0160	271.537	FLY 20106

PROP. 12" W/M - "E" C (PERSHING DR)
ALIGNMENT: PROP. 12 IN WM - E

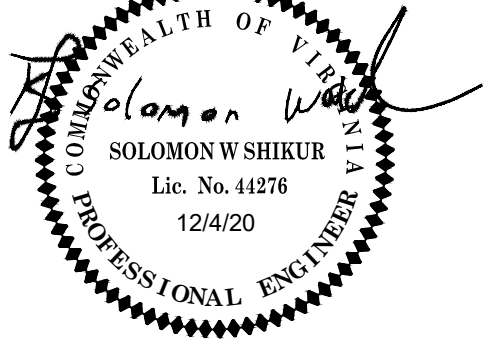
LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L16	S 61° 09' 56" W	9.29'	0+40.00	0+49.29	7004350.44, 11880042.83	7004345.95, 11880034.69
L17	N 28° 50' 04" W	7.34'	0+49.29	0+56.63	7004345.95, 11880034.69	7004352.39, 11880031.15
L18	S 61° 09' 56" W	30.87'	0+56.63	0+87.51	7004352.39, 11880031.15	7004337.50, 11880004.11
L19	S 41° 31' 16" W	12.49'	0+87.51	1+00.00	7004337.50, 11880004.11	7004328.14, 11879995.82
L20	S 41° 31' 16" W	16.76'	1+00.00	1+16.76	7004328.14, 11879995.82	7004315.60, 11879984.72
L21	S 48° 28' 44" E	9.27'	1+16.76	1+26.02	7004315.60, 11879984.72	7004309.45, 11879991.65
L22	S 41° 31' 16" W	13.98'	1+26.02	1+40.00	7004309.45, 11879991.65	7004298.99, 11879982.39



DEPARTMENT OF ENVIRONMENTAL SERVICES
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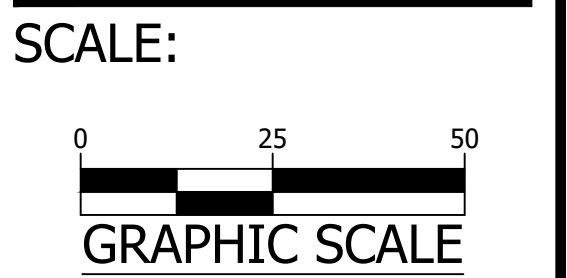
APPROVALS	DATE
<i>Amy Pfeiffer</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.W. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>Quinn</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Carver</i> PROJECT MANAGER	01/27/2021

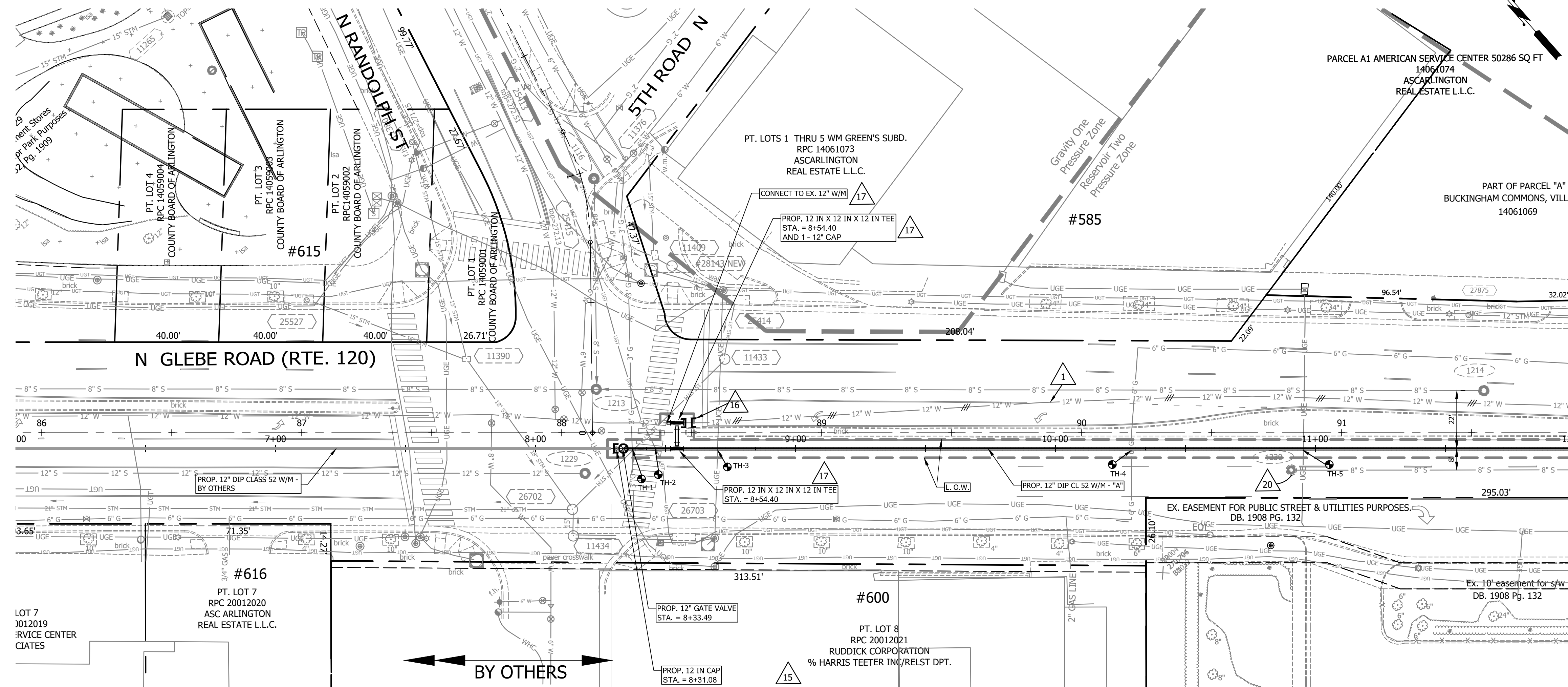
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
GEOMETRIC CONTROL PLAN - 4

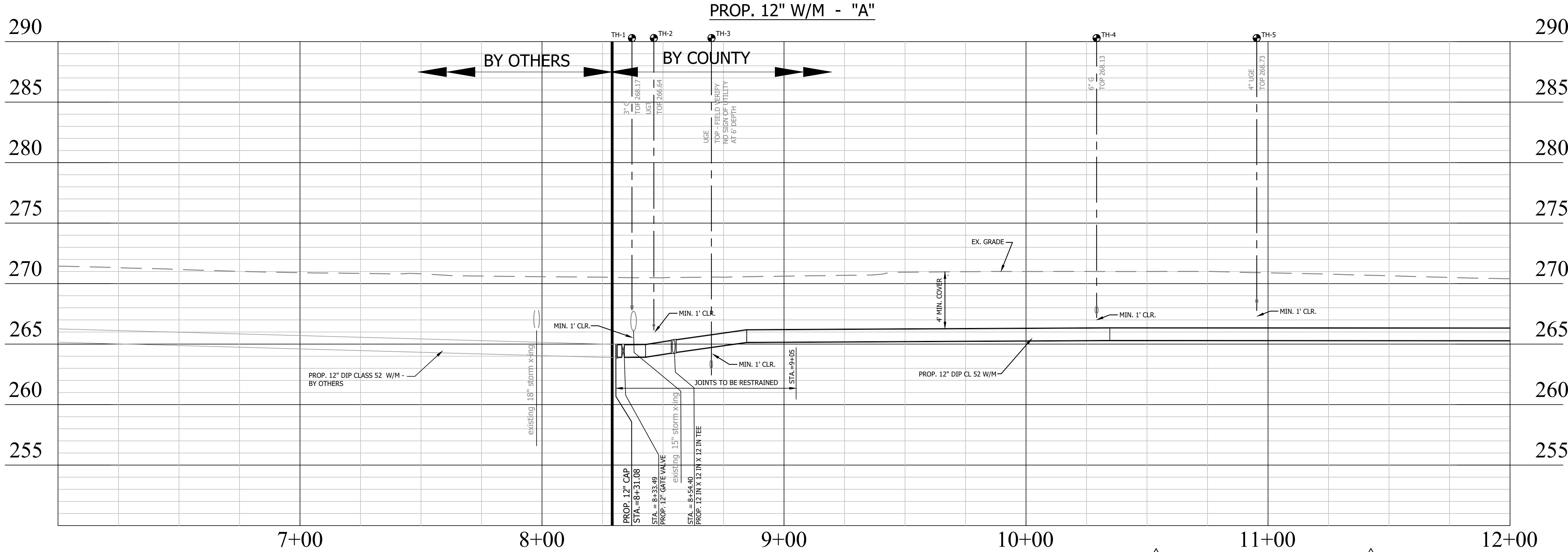
DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: FEBRUARY 10 2021





MATCHLINE - SEE C051.2 - STATION 12+00



WATERMAIN CONSTRUCTION NOTES:

- INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF PROPOSED WATERMAIN, OR ABANDONED IN PLACE PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
- PROPOSED BENDS SHOWN ON THE PLAN ARE BASED ON BEST AVAILABLE INFORMATION. DURING CONSTRUCTION IT MAY NEED TO DEFLECT PIPES AND INSTALL ADDITIONAL BENDS AS NECESSARY TO ACCOMPLISH THE INSTALLATION OF WATER MAINS AS SHOWN ON THE PROPOSED PLAN AT NO ADDITIONAL COST TO THE COUNTY.
- SEE DETAIL INSTRUCTION ON SHEET C052.1 FOR THE POLYETHYLENE ENCASUREMENT OF THE PROPOSED PIPES.
- SEE ASPHALT PAVEMENT WIDENING (WP-2) & PIPE TRENCH REINSTATEMENT FOR HCC WITH ASPHALT OVERLAY DETAILS ON SHEET C052.1 FOR THE PAVEMENT RESTORATION AFTER COMPLETION OF THE WATERMAIN INSTALLATION AND TESTING.
- ALL DEMOLISHED CURB AND GUTTER AND SIDEWALK FOR THE INSTALLATION OF PROPOSED WATERMAIN SHALL BE RESTORED AS PER ARLINGTON COUNTY STANDARDS WITHIN COUNTY RIGHT OF WAY AND VDOT STANDARDS WITHIN VDOT RIGHT OF WAY.
- DEMOLISHED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED UP TO THE NEAREST JOINT.
- ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.
- TH # IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.
- REFER PROFILE VIEW FOR ELEVATION INFORMATION.
- TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND INVERTS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
- ALL WATER MAIN JOINTS INCLUDING ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. SHALL BE RESTRAINED AS PER ARLINGTON COUNTY SPECIFICATION 02550. THE CONTRACTOR SHALL SUBMIT JOINT RESTRAINT DETAILS DESIGNED FOR PRESSURE OF 250 PSI PRIOR TO INSTALLATION OF PIPE. ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. IN CONJUNCTION WITH JOINT RESTRAINT SHALL ALSO BE RESTRAINED WITH CONCRETE THRUST BLOCKS AS SHOWN ON SHEET C052.1.

12. A TOTAL OF 20 WATER SERVICE CONNECTIONS TO THE EXISTING 12" WATER MAIN WILL BE TRANSFERRED TO THE PROPOSED 12" WATER MAIN.

13. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
5/8"	3/4"	1"	

14. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
3/4"	Not Required	1"	Field Verification of the Ex. service Line Size is Required

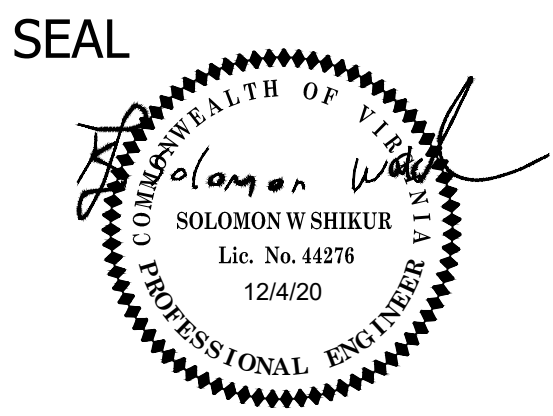
15. IF THE WATERMAIN WEST OF RANDOLPH ST IS INSTALLED BY OTHERS BEFORE THIS PLAN, REMOVE CAP AND CONNECT TO THE EXISTING 12" WATERMAIN.
16. ONCE THE NEW THE 12" MAIN IS IN SERVICE, CUT & CAP THE EXISTING 12"/8"6" WATERMAIN WHERE NECESSARY AND ABANDON THESE EXISTING WATERMANS AS INDICATED IN-PLACE. EXISTING VALVES TO BE ABANDONED SHALL BE ABANDONED IN-PLACE. THE EXISTING VALVE BOX SHALL BE REMOVED AND THE RESULTING VOID SHALL BE STABILIZED VIA USE OF FLOWABLE FILL OR OTHER APPROVED MEANS TO AVOID FUTURE SETTLEMENT.
17. IF THE WATERMAIN BY OTHERS PRECEDES THE WATERMAIN PROPOSED WITH THIS PLAN, THERE SHALL BE NO NEED FOR THIS CONNECTION.
18. EXISTING FIRE HYDRANT TO BE REMOVED AND DISPOSED. THE CONTRACTOR IS REQUIRED TO CAP HYDRANT LEAD CAP, INSTALL THRUST RESTRAINT BEHIND THE VALVE, ABANDON THE EXISTING VALVE IN PLACE AND REMOVE THE VALVE BOX AND STABILIZED THE VOID.

19. SERVICE RE-TAPS - 1 1/2" AND 2" (TAP MAIN, INSTALL COPPER TUBING AND CONNECT TO EXISTING SERVICE LINE.
20. SANITARY MANHOLE #1230 SHALL BE TESTED IN PLACE FOR BEING WATERTIGHT. IF ANY LEAKS ARE DETECTED MEASURES SHALL BE TAKEN TO MAKE THEM WATERTIGHT IN ACCORDANCE WITH THE COUNTY'S SANITARY MANHOLE CONSTRUCTION SPECIFICATIONS.



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APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/11/2021
<i>R.W. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>Quinn</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Cawver</i> PROJECT MANAGER	01/27/2021

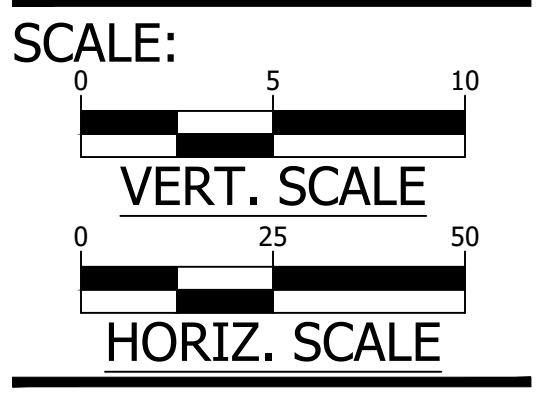
REVISIONS

NO.	DATE	DESCRIPTION

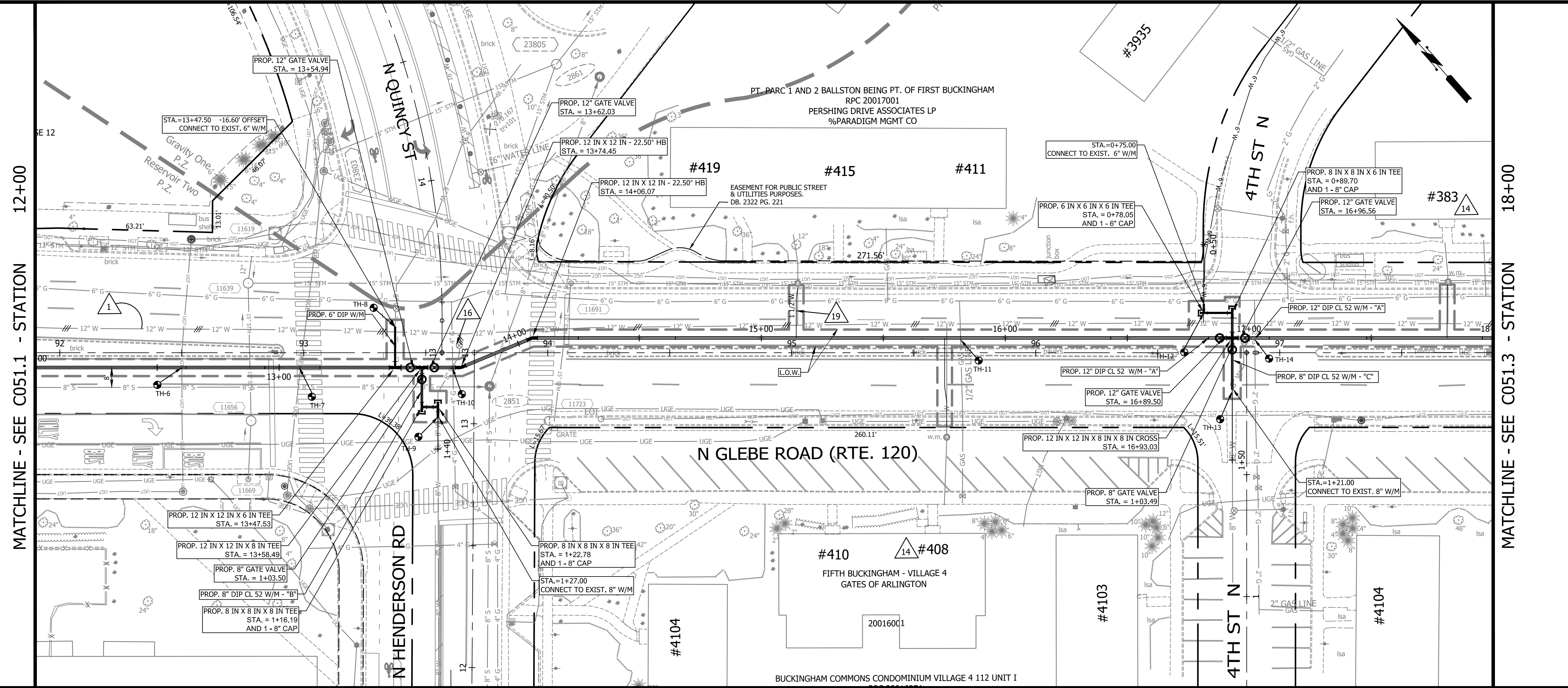
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 1

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021



C051.1



WATERMAIN CONSTRUCTION NOTES:

- INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF PROPOSED WATERMAIN, OR ABANDONED IN PLACE FOR PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
- PROPOSED BENDS SHOWN ON THE PLAN ARE BASED ON BEST AVAILABLE INFORMATION. DURING CONSTRUCTION IT MAY NEED TO DEFLECT PIPES AND INSTALL ADDITIONAL BENDS AS NECESSARY TO ACCOMPLISH THE INSTALLATION OF WATER MAINS AS SHOWN ON THE PROPOSED PLAN AT NO ADDITIONAL COST TO THE COUNTY.
- SEE DETAIL INSTRUCTION ON SHEET C052.1 FOR THE POLYETHYLENE ENCASUREMENT OF THE PROPOSED PIPES.
- SEE ASPHALT PAVEMENT WIDENING (WP-2) & PIPE TRENCH REINSTATEMENT FOR HCC WITH ASPHALT OVERLAY DETAILS ON SHEET C052.1 FOR THE PAVEMENT RESTORATION AFTER COMPLETION OF THE WATERMAIN INSTALLATION AND TESTING.
- ALL DEMOLISHED CURB AND GUTTER AND SIDEWALK FOR THE INSTALLATION OF PROPOSED WATERMAIN SHALL BE RESTORED AS PER ARLINGTON COUNTY STANDARDS WITHIN COUNTY RIGHT OF WAY AND VDOT STANDARDS WITHIN VDOT RIGHT OF WAY.
- DEMOLISHED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED UP TO THE NEAREST JOINT.
- ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.
- TH # IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.
- REFER PROFILE VIEW FOR ELEVATION INFORMATION.
- TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND INVERTS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
- ALL WATER MAIN JOINTS INCLUDING ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. SHALL BE RESTRAINED AS PER ARLINGTON COUNTY SPECIFICATION 02550. THE CONTRACTOR SHALL SUBMIT JOINT RESTRAINT DETAILS DESIGNED FOR PRESSURE OF 250 PSI PRIOR TO INSTALLATION OF PIPE. ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. IN CONJUNCTION WITH JOINT RESTRAINT SHALL ALSO BE RESTRAINED WITH CONCRETE THRUST BLOCKS AS SHOWN ON SHEET C052.1.
- A TOTAL OF 20 WATER SERVICE CONNECTIONS TO THE EXISTING 12" WATER MAIN WILL BE TRANSFERRED TO THE PROPOSED 12" WATER MAIN.
- SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
5/8"	3/4"	1"	

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
3/4"	Not Required	1"	Field Verification of the Ex. service Line Size is Required

- IF THE WATERMAIN WEST OF RANDOLPH ST IS INSTALLED BY OTHERS BEFORE THIS PLAN, REMOVE CAP AND CONNECT TO THE EXISTING 12" WATERMAIN.
- ONCE THE NEW THE 12" MAIN IS IN SERVICE, CUT & CAP THE EXISTING 12"/8" WATERMAIN WHERE NECESSARY AND ABANDON THESE EXISTING WATERMANS AS INDICATED IN-PLACE. EXISTING VALVES TO BE ABANDONED SHALL BE ABANDONED IN-PLACE. THE EXISTING VALVE BOX SHALL BE REMOVED AND THE RESULTING VOID SHALL BE STABILIZED VIA USE OF FLOWABLE FILL OR OTHER APPROVED MEANS TO AVOID FUTURE SETTLEMENT.
- IF THE WATERMAIN BY OTHERS PRECEDES THE WATERMAIN PROPOSED WITH THIS PLAN, THERE SHALL BE NO NEED FOR THIS CONNECTION.
- EXISTING FIRE HYDRANT TO BE REMOVED AND DISPOSED. THE CONTRACTOR IS REQUIRED TO CAP HYDRANT LEAD CAP, INSTALL THRUST RESTRAINT BEHIND THE VALVE, ABANDON THE EXISTING VALVE IN PLACE AND REMOVE THE VALVE BOX AND STABILIZED THE VOID.

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS
 PLOTTED: FEBRUARY 10 2021

SCALE:
 0 5 10
 VERT. SCALE
 0 25 50
 HORIZ. SCALE

C051.2

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
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SEAL
 COMMONWEALTH OF VIRGINIA
 SOLOMON W SHIKUR
 Lic. No. 44576
 12/4/20
 PROFESSIONAL ENGINEER

APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/11/2021
<i>R.W. Tabbak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>John J. ...</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Caver</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.

WATERMAIN PLAN AND PROFILE - 2

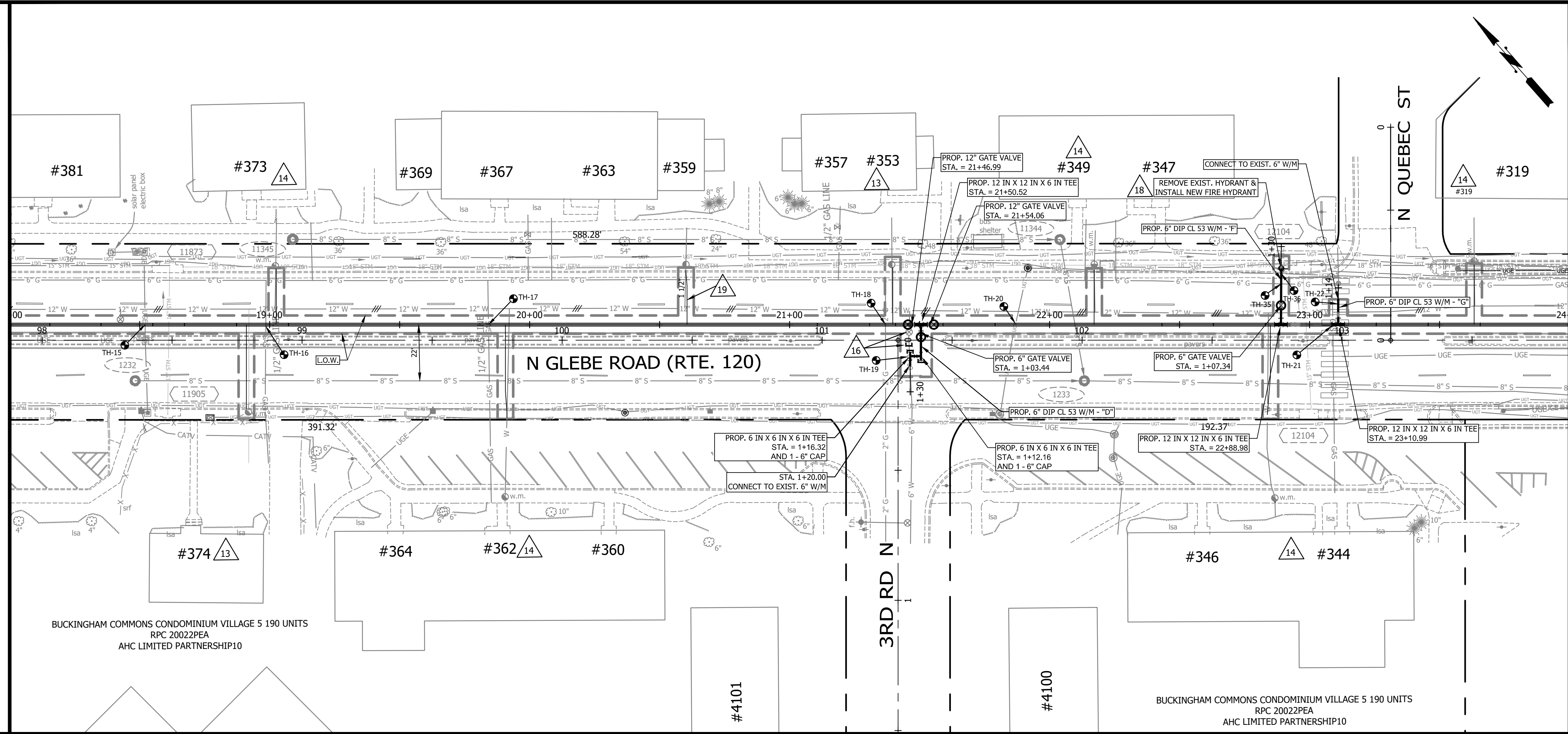
DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS
 PLOTTED: FEBRUARY 10 2021

SCALE:
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 VERT. SCALE
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 HORIZ. SCALE

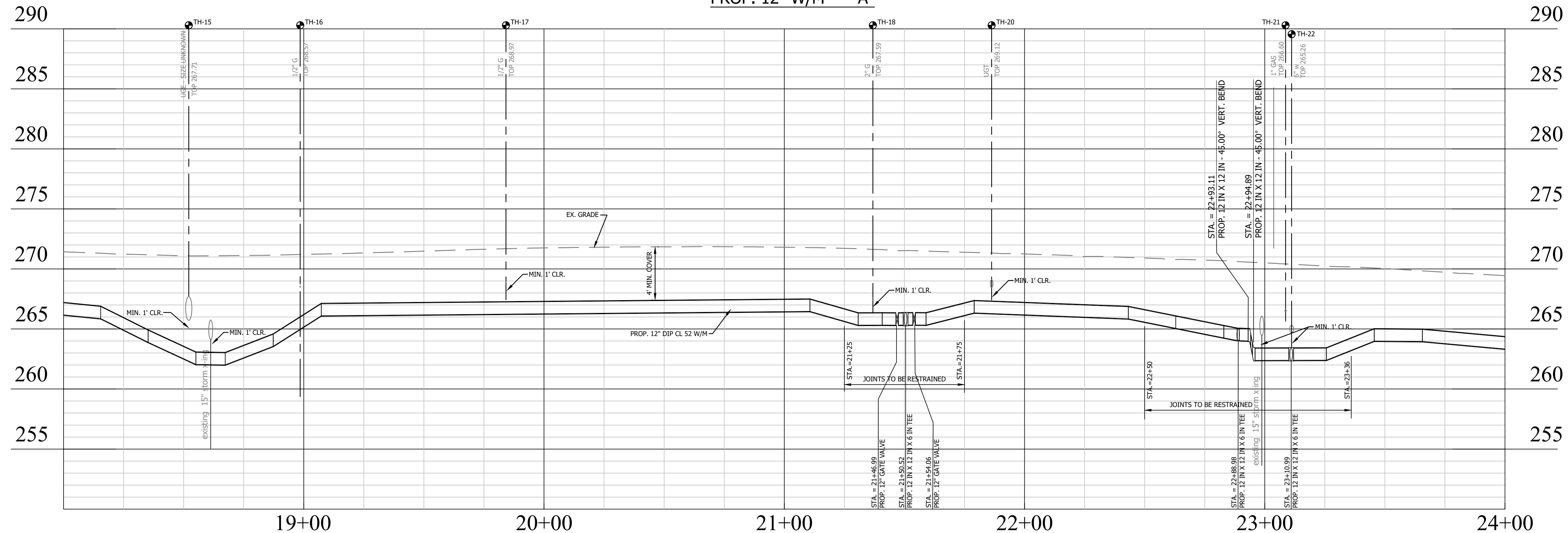
C051.2

MATCHLINE - SEE C051.2 - STATION 18+00

MATCHLINE - SEE C051.4 - STATION 24+00



PROP. 12" W/M - "A"



19. SERVICE RE-TAPS - 1 1/2" AND 2" (TAP MAIN, INSTALL COPPER TUBING AND CONNECT TO EXISTING SERVICE LINE.)

WATERMAIN CONSTRUCTION NOTES:

- INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF PROPOSED WATERMAIN, OR ABANDONED IN PLACE FOR PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
- PROPOSED BENDS SHOWN ON THE PLAN ARE BASED ON BEST AVAILABLE INFORMATION. DURING CONSTRUCTION IT MAY NEED TO DEFLECT PIPES AND INSTALL ADDITIONAL BENDS AS NECESSARY TO ACCOMPLISH THE INSTALLATION OF WATER MAINS AS SHOWN ON THE PROPOSED PLAN AT NO ADDITIONAL COST TO THE COUNTY.
- SEE DETAIL INSTRUCTION ON SHEET C052.1 FOR THE POLYETHYLENE ENCASUREMENT OF THE PROPOSED PIPES.
- SEE ASPHALT PAVEMENT WIDENING (WP-2) & PIPE TRENCH REINSTATEMENT FOR HCC WITH ASPHALT OVERLAY DETAILS ON SHEET C052.1 FOR THE PAVEMENT RESTORATION AFTER COMPLETION OF THE WATERMAIN INSTALLATION AND TESTING.
- ALL DEMOLISHED CURB AND GUTTER AND SIDEWALK FOR THE INSTALLATION OF PROPOSED WATERMAIN SHALL BE RESTORED AS PER ARLINGTON COUNTY STANDARDS WITHIN COUNTY RIGHT OF WAY AND VDOT STANDARDS WITHIN VDOT RIGHT OF WAY.
- DEMOLISHED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED UP TO THE NEAREST JOINT.
- ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.
- TH # IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.
- REFER PROFILE VIEW FOR ELEVATION INFORMATION.
- TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND INVERTS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
- ALL WATER MAIN JOINTS INCLUDING ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. SHALL BE RESTRAINED AS PER ARLINGTON COUNTY SPECIFICATION 02550. THE CONTRACTOR SHALL SUBMIT JOINT RESTRAINT DETAILS DESIGNED FOR PRESSURE OF 250 PSI PRIOR TO INSTALLATION OF PIPE. ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. IN CONJUNCTION WITH JOINT RESTRAINT SHALL ALSO BE RESTRAINED WITH CONCRETE THRUST BLOCKS AS SHOWN ON SHEET C052.1.

- A TOTAL OF 20 WATER SERVICE CONNECTIONS TO THE EXISTING 12" WATER MAIN WILL BE TRANSFERRED TO THE PROPOSED 12" WATER MAIN.
- SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
5/8"	3/4"	1"	

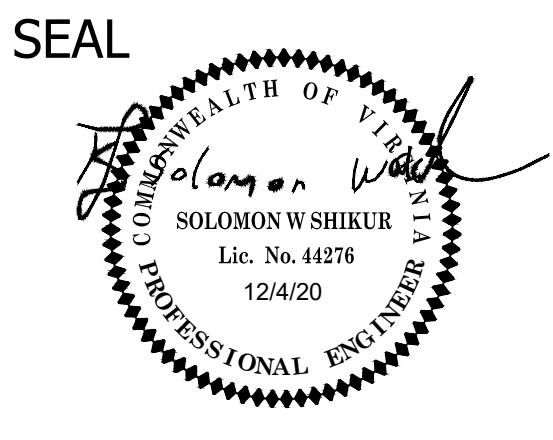
Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
3/4"	Not Required	1"	Field Verification of the Ex. service Line Size is Required

- IF THE WATERMAIN WEST OF RANDOLPH ST IS INSTALLED BY OTHERS BEFORE THIS PLAN, REMOVE CAP AND CONNECT TO THE EXISTING 12" WATERMAIN.
- ONCE THE NEW THE 12" MAIN IS IN SERVICE, CUT & CAP THE EXISTING 12"/8"/6" WATERMAIN WHERE NECESSARY AND ABANDON THESE EXISTING WATERMANS AS INDICATED IN-PLACE. EXISTING VALVES TO BE ABANDONED SHALL BE ABANDONED IN-PLACE. THE EXISTING VALVE BOX SHALL BE REMOVED AND THE RESULTING VOID SHALL BE STABILIZED VIA USE OF FLOWABLE FILL OR OTHER APPROVED MEANS TO AVOID FUTURE SETTLEMENT.
- IF THE WATERMAIN BY OTHERS PRECEDES THE WATERMAIN PROPOSED WITH THIS PLAN, THERE SHALL BE NO NEED FOR THIS CONNECTION.
- EXISTING FIRE HYDRANT TO BE REMOVED AND DISPOSED. THE CONTRACTOR IS REQUIRED TO CAP HYDRANT LEAD CAP, INSTALL THRUST RESTRAINT BEHIND THE VALVE, ABANDON THE EXISTING VALVE IN PLACE AND REMOVE THE VALVE BOX AND STABILIZED THE VOID.



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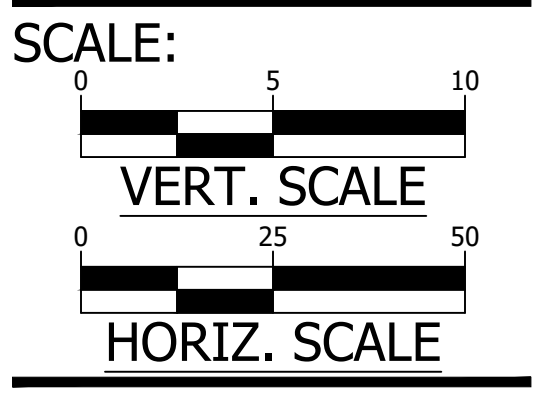
APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/11/2021
<i>R.N. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>Quinn</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Cawver</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 3

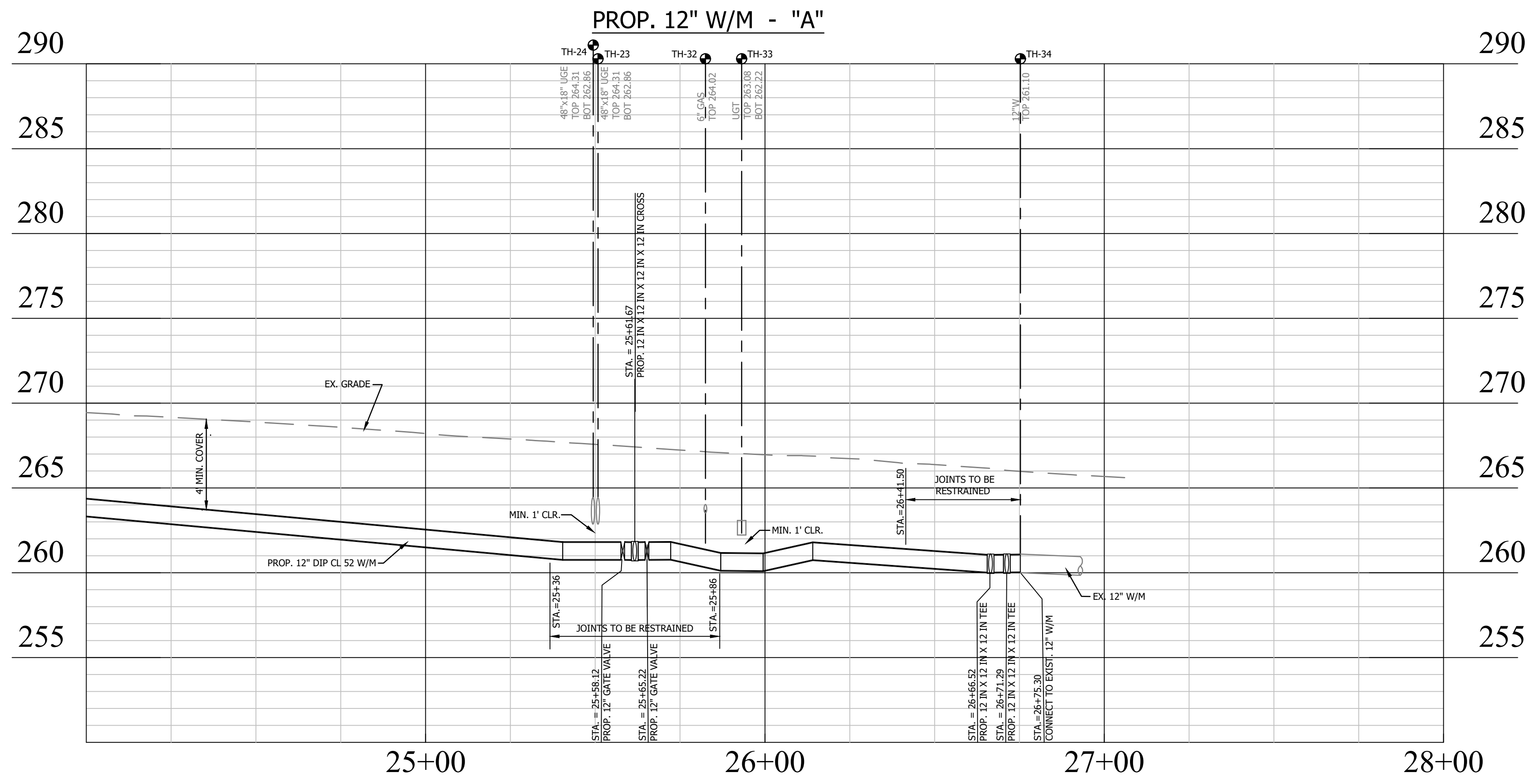
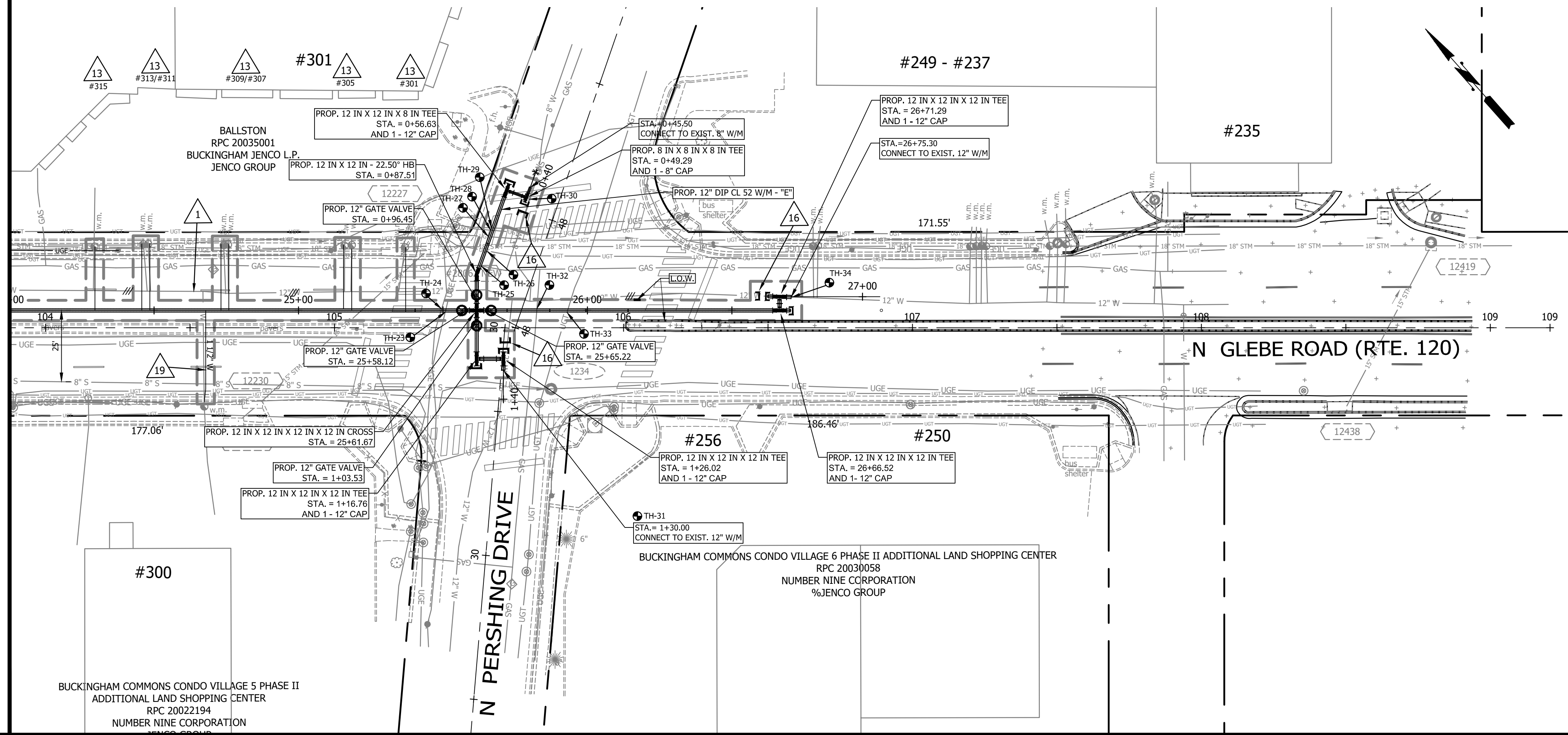
DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021



C051.3

MATCHLINE - SEE C051.3 - STATION 24+00



19. SERVICE RE-TAPS - 1 1/2" AND 2" (TAP MAIN), INSTALL COPPER TUBING AND CONNECT TO EXISTING SERVICE LINE.

WATERMAIN CONSTRUCTION NOTES:

- INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF PROPOSED WATERMAIN, OR ABANDONED IN PLACE FOR PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
- PROPOSED BENDS SHOWN ON THE PLAN ARE BASED ON BEST AVAILABLE INFORMATION. DURING CONSTRUCTION IT MAY NEED TO DEFLECT PIPES AND INSTALL ADDITIONAL BENDS AS NECESSARY TO ACCOMPLISH THE INSTALLATION OF WATER MAINS AS SHOWN ON THE PROPOSED PLAN AT NO ADDITIONAL COST TO THE COUNTY.
- SEE DETAIL INSTRUCTION ON SHEET C052.1 FOR THE POLYETHYLENE ENCASEMENT OF THE PROPOSED PIPES.
- SEE ASPHALT PAVEMENT WIDENING (WP-2) & PIPE TRENCH REINSTATEMENT FOR HCC WITH ASPHALT OVERLAY DETAILS ON SHEET C052.1 FOR THE PAVEMENT RESTORATION AFTER COMPLETION OF THE WATERMAIN INSTALLATION AND TESTING.
- ALL DEMOLISHED CURB AND GUTTER AND SIDEWALK FOR THE INSTALLATION OF PROPOSED WATERMAIN SHALL BE RESTORED AS PER ARLINGTON COUNTY STANDARDS WITHIN COUNTY RIGHT OF WAY AND VDOT STANDARDS WITHIN VDOT RIGHT OF WAY.
- DEMOLISHED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED UP TO THE NEAREST JOINT.
- ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.
- TH # IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.
- REFER PROFILE VIEW FOR ELEVATION INFORMATION.
- TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND INVERTS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
- ALL WATER MAIN JOINTS INCLUDING ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. SHALL BE RESTRAINED AS PER ARLINGTON COUNTY SPECIFICATION 02550. THE CONTRACTOR SHALL SUBMIT JOINT RESTRAINT DETAILS DESIGNED FOR PRESSURE OF 250 PSI PRIOR TO INSTALLATION OF PIPE. ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. IN CONJUNCTION WITH JOINT RESTRAINT SHALL ALSO BE RESTRAINED WITH CONCRETE THRUST BLOCKS AS SHOWN ON SHEET C052.1.

12. A TOTAL OF 20 WATER SERVICE CONNECTIONS TO THE EXISTING 12" WATER MAIN WILL BE TRANSFERRED TO THE PROPOSED 12" WATER MAIN.

13. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
5/8"	3/4"	1"	

14. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
3/4"	Not Required	1"	Field Verification of the Ex. service Line Size is Required

15. IF THE WATERMAIN WEST OF RANDOLPH ST IS INSTALLED BY OTHERS BEFORE THIS PLAN, REMOVE CAP AND CONNECT TO THE EXISTING 12" WATERMAIN.

16. ONCE THE NEW THE 12" MAIN IS IN SERVICE, CUT & CAP THE EXISTING 12"/8" WATERMAIN WHERE NECESSARY AND ABANDON THESE EXISTING WATERMANS AS INDICATED IN-PLACE. EXISTING VALVES TO BE ABANDONED SHALL BE ABANDONED IN-PLACE. THE EXISTING VALVE BOX SHALL BE REMOVED AND THE RESULTING VOID SHALL BE STABILIZED VIA USE OF FLOWABLE FILL OR OTHER APPROVED MEANS TO AVOID FUTURE SETTLEMENT.

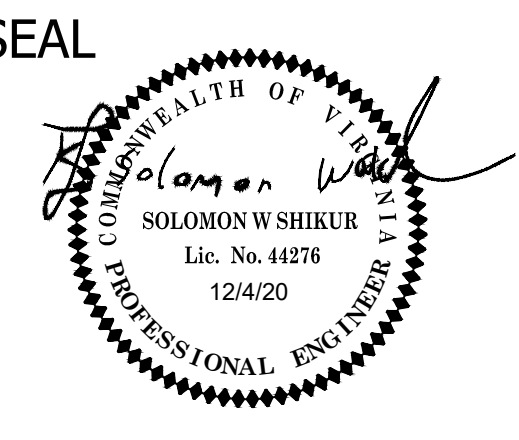
17. IF THE WATERMAIN BY OTHERS PRECEDES THE WATERMAIN PROPOSED WITH THIS PLAN, THERE SHALL BE NO NEED FOR THIS CONNECTION.

18. EXISTING FIRE HYDRANT TO BE REMOVED AND DISPOSED. THE CONTRACTOR IS REQUIRED TO CAP HYDRANT LEAD CAP, INSTALL THRUST RESTRAINT BEHIND THE VALVE, ABANDON THE EXISTING VALVE IN PLACE AND REMOVE THE VALVE BOX AND STABILIZED THE VOID.



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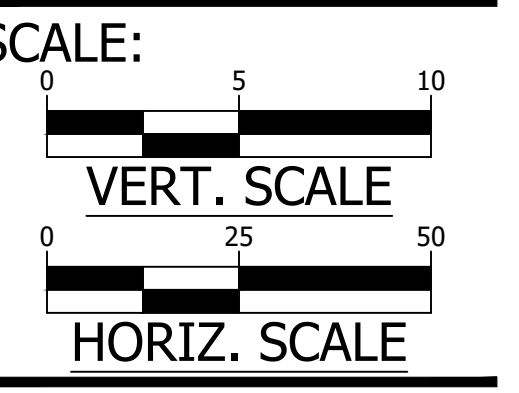
APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/11/2021
<i>R.N. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>Quintus</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Cawer</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE

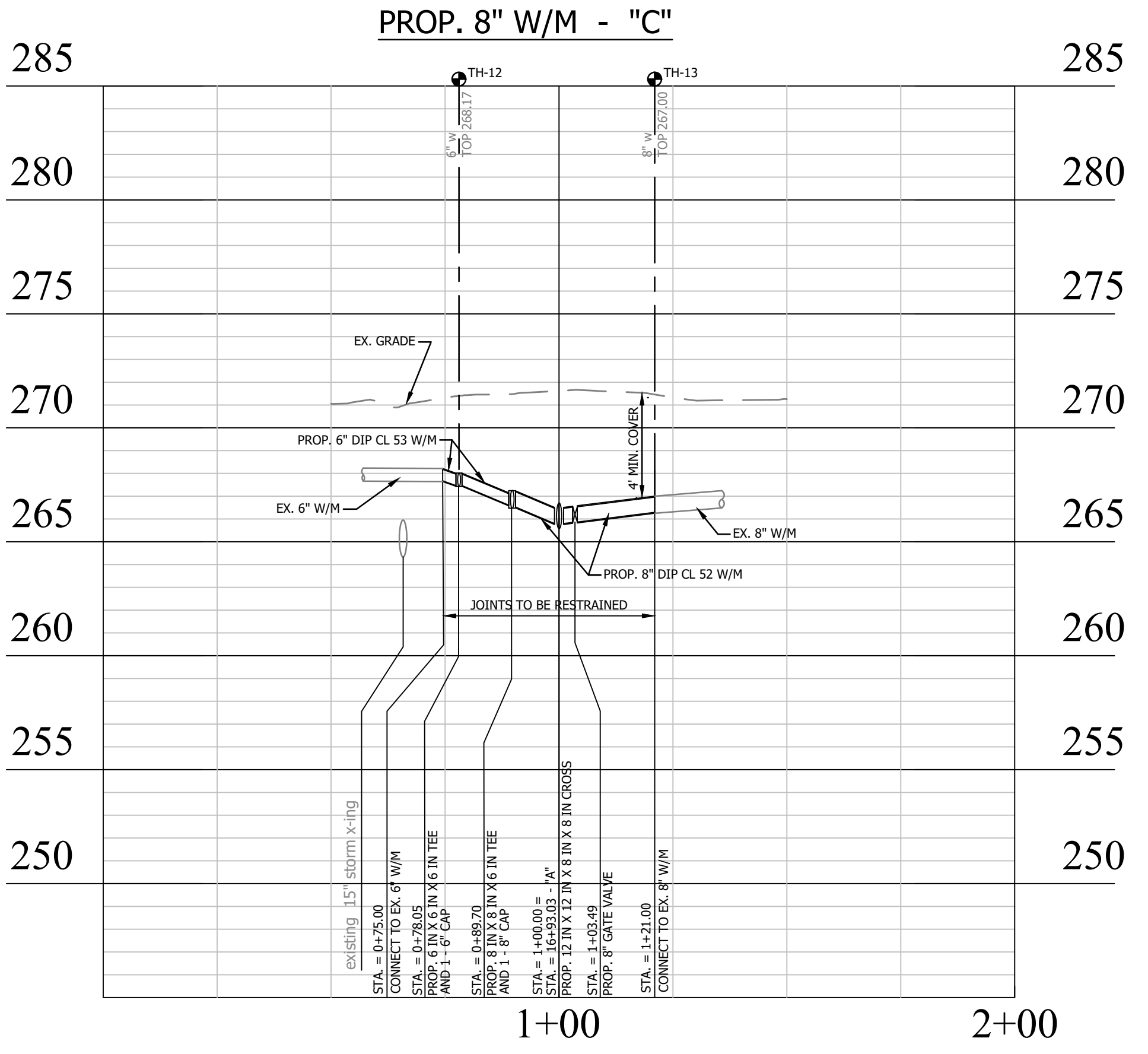
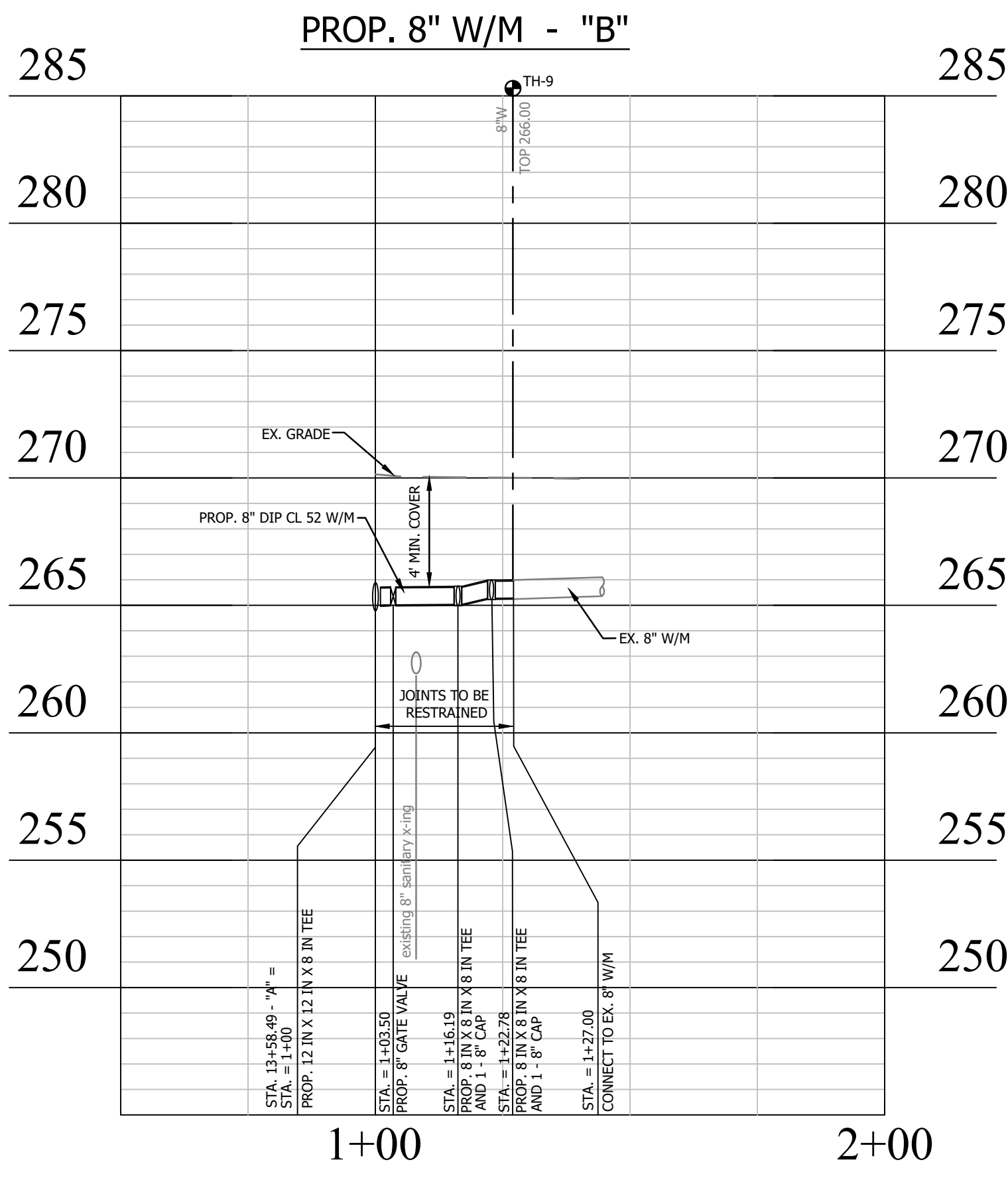
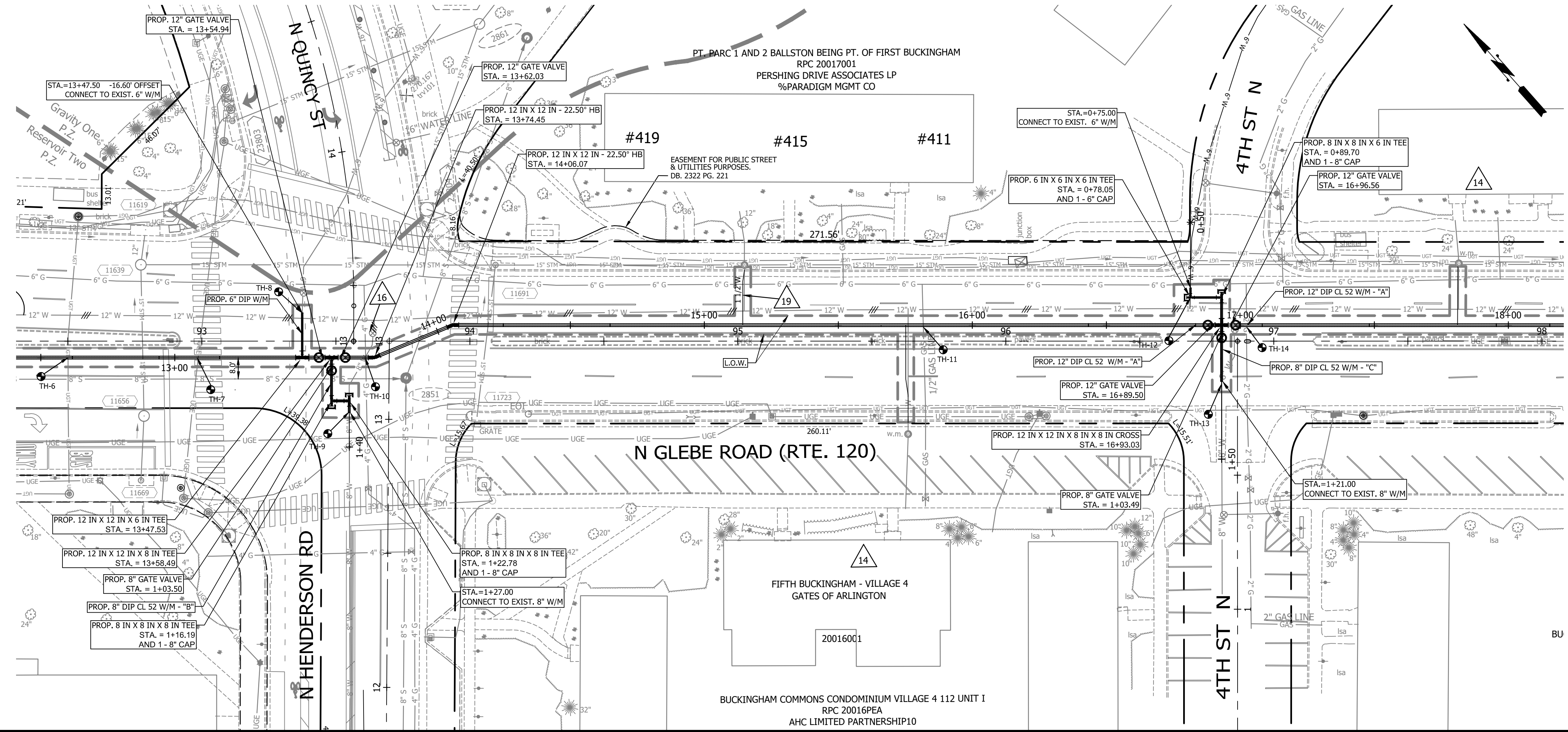
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 4

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021



C051.4



19. SERVICE RE-TAPS - 1 1/2" AND 2" (TAP MAIN, INSTALL COPPER TUBING AND CONNECT TO EXISTING SERVICE LINE.)

WATERMAIN CONSTRUCTION NOTES:

- INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF PROPOSED WATERMAIN, OR ABANDONED IN PLACE FOR PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
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- SEE DETAIL INSTRUCTION ON SHEET C052.1 FOR THE POLYETHYLENE ENCASEMENT OF THE PROPOSED PIPES.
- SEE ASPHALT PAVEMENT WIDENING (WP-2) & PIPE TRENCH REINSTATEMENT FOR HCC WITH ASPHALT OVERLAY DETAILS ON SHEET C052.1 FOR THE PAVEMENT RESTORATION AFTER COMPLETION OF THE WATERMAIN INSTALLATION AND TESTING.
- ALL DEMOLISHED CURB AND GUTTER AND SIDEWALK FOR THE INSTALLATION OF PROPOSED WATERMAIN SHALL BE RESTORED AS PER ARLINGTON COUNTY STANDARDS WITHIN COUNTY RIGHT OF WAY AND VDOT STANDARDS WITHIN VDOT RIGHT OF WAY.
- DEMOLISHED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED UP TO THE NEAREST JOINT.
- ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.
- TH # IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.
- REFER PROFILE VIEW FOR ELEVATION INFORMATION.
- TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND INVERTS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
- ALL WATER MAIN JOINTS INCLUDING ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. SHALL BE RESTRAINED AS PER ARLINGTON COUNTY SPECIFICATION 02550. THE CONTRACTOR SHALL SUBMIT JOINT RESTRAINT DETAILS DESIGNED FOR PRESSURE OF 250 PSI PRIOR TO INSTALLATION OF PIPE. ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. IN CONJUNCTION WITH JOINT RESTRAINT SHALL ALSO BE RESTRAINED WITH CONCRETE THRUST BLOCKS AS SHOWN ON SHEET C052.1.

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13. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
5/8"	3/4"	1"	

14. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
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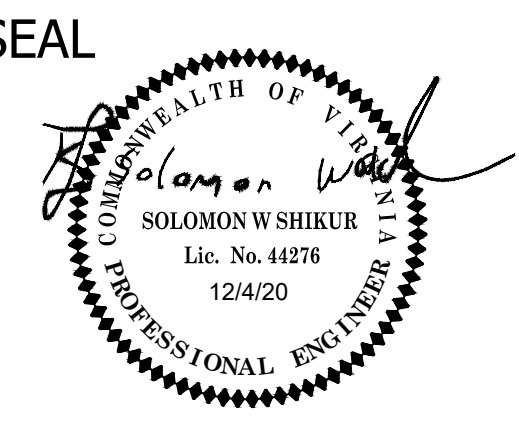
17. IF THE WATERMAIN BY OTHERS PRECEDES THE WATERMAIN PROPOSED WITH THIS PLAN, THERE SHALL BE NO NEED FOR THIS CONNECTION.

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APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/11/2021
<i>R.N. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
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<i>Dabney R. Cawver</i> PROJECT MANAGER	01/27/2021

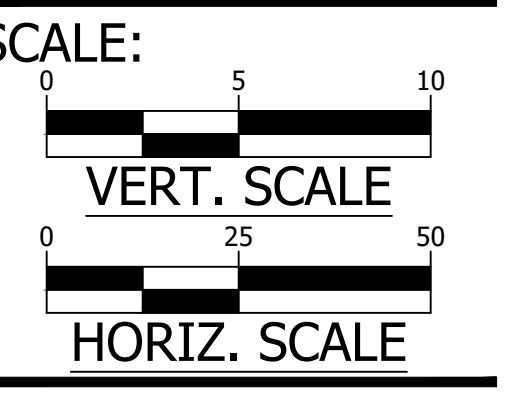
REVISIONS

NO.	DESCRIPTION	DATE

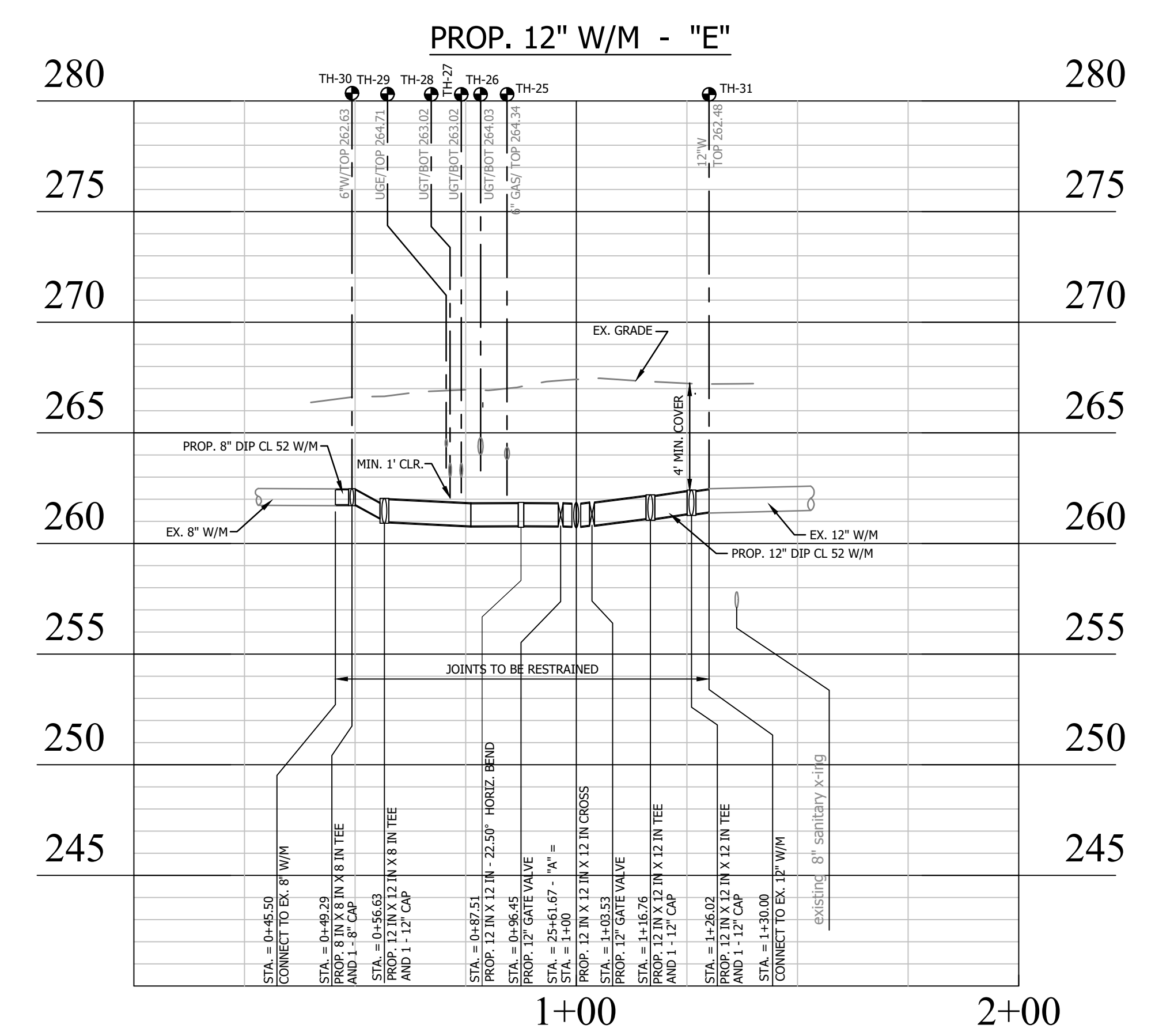
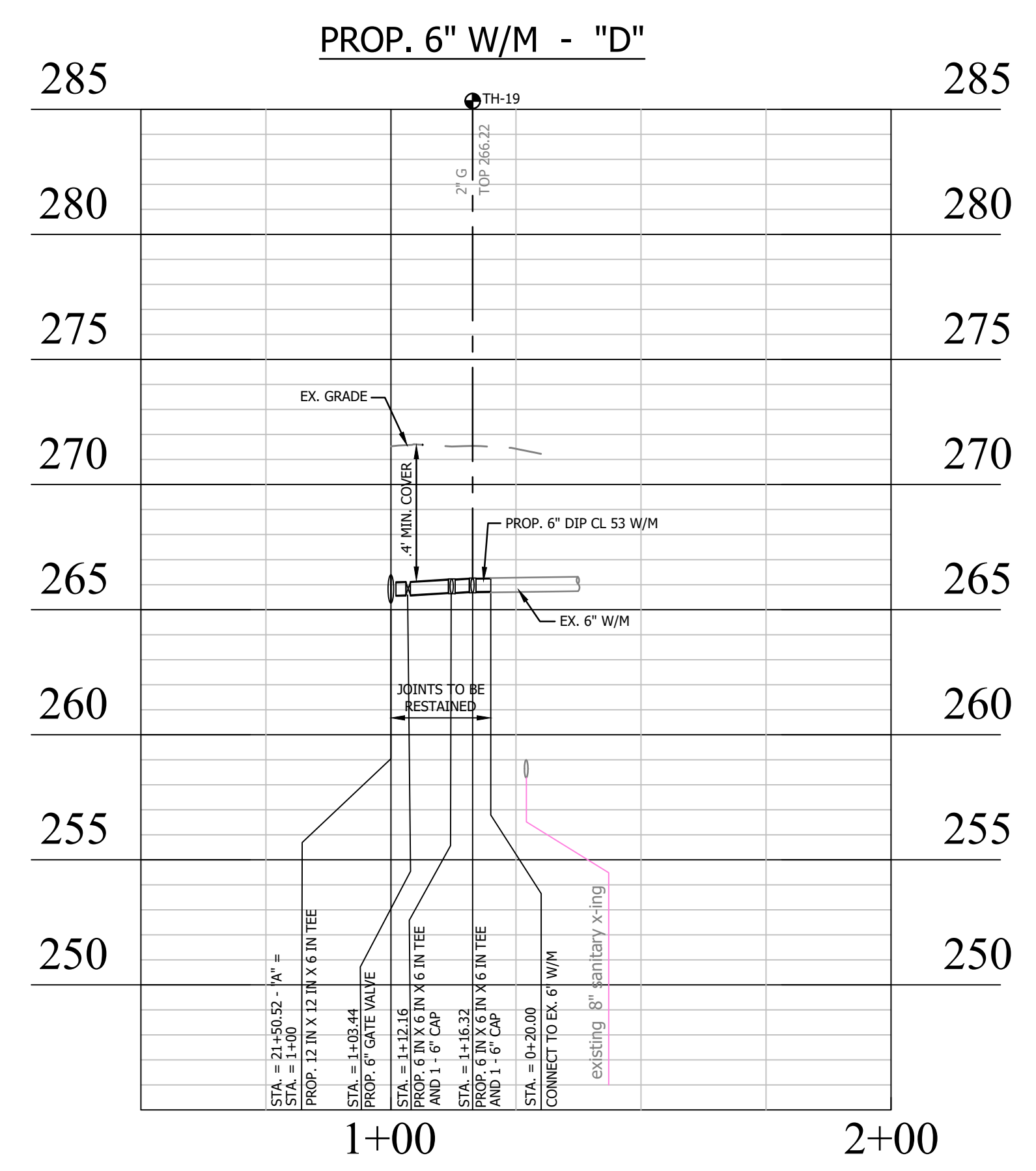
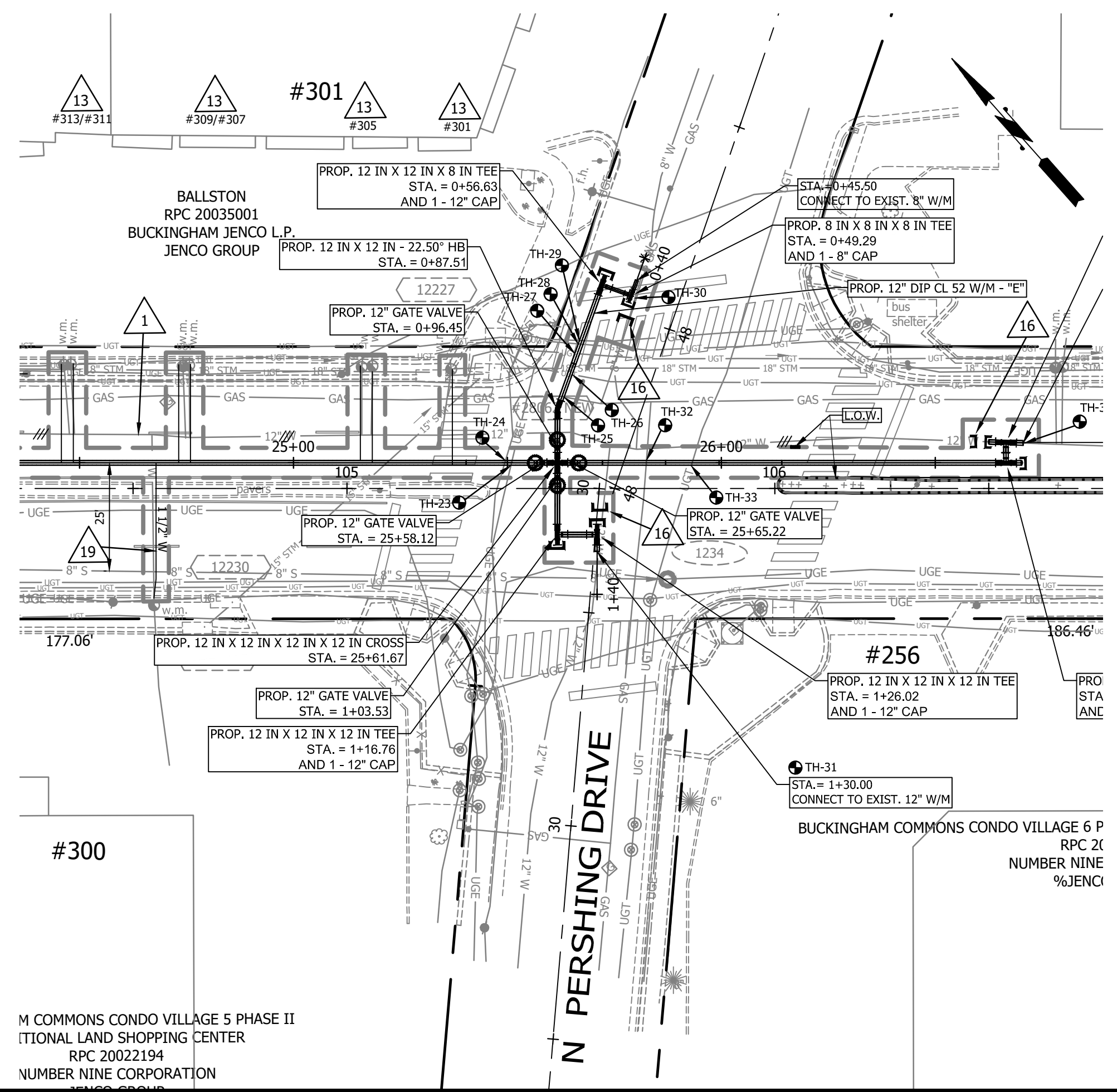
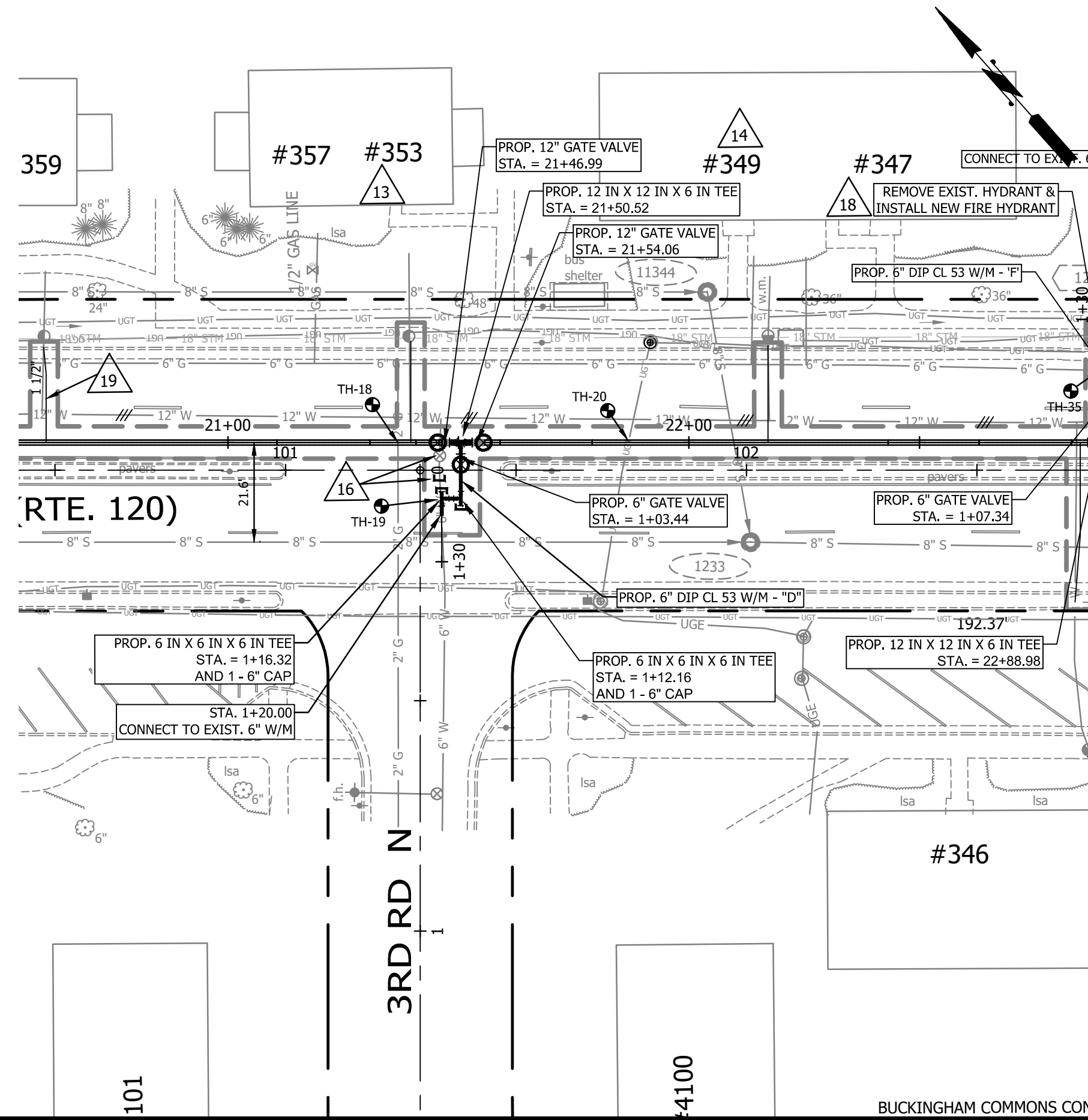
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 5

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021



C051.5



19. SERVICE RE-TAPS - 1 1/2" AND 2" (TAP MAIN, INSTALL COPPER TUBING AND CONNECT TO EXISTING SERVICE LINE.)

WATERMAIN CONSTRUCTION NOTES:

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- SEE DETAIL INSTRUCTION ON SHEET C052.1 FOR THE POLYETHYLENE ENCASEMENT OF THE PROPOSED PIPES.
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- TH # IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.
- REFER PROFILE VIEW FOR ELEVATION INFORMATION.
- TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND INVERTS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
- ALL WATER MAIN JOINTS INCLUDING ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. SHALL BE RESTRAINED AS PER ARLINGTON COUNTY SPECIFICATION 02550. THE CONTRACTOR SHALL SUBMIT JOINT RESTRAINT DETAILS DESIGNED FOR PRESSURE OF 250 PSI PRIOR TO INSTALLATION OF PIPE. ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. IN CONJUNCTION WITH JOINT RESTRAINT SHALL ALSO BE RESTRAINED WITH CONCRETE THRUST BLOCKS AS SHOWN ON SHEET C052.1.

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13. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
5/8"	3/4"	1"	

14. SEE PROPERTY ADDRESS ON THE PLAN:

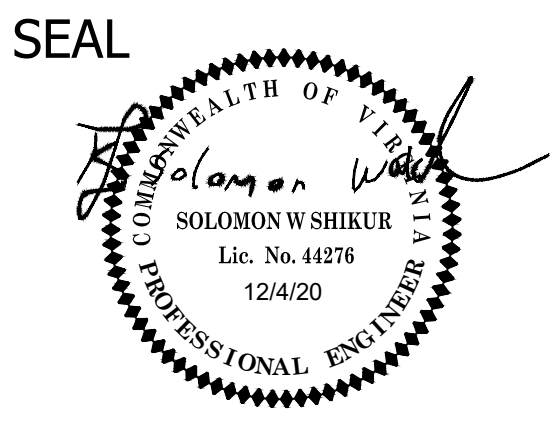
Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
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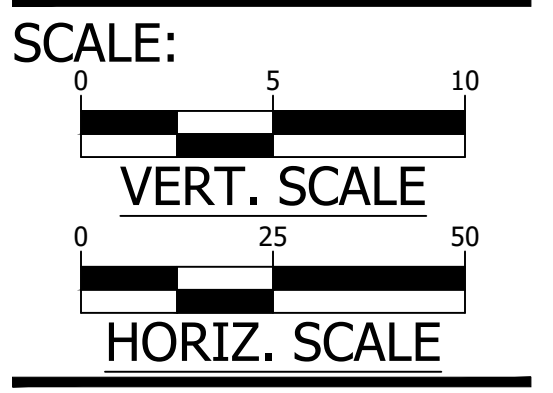
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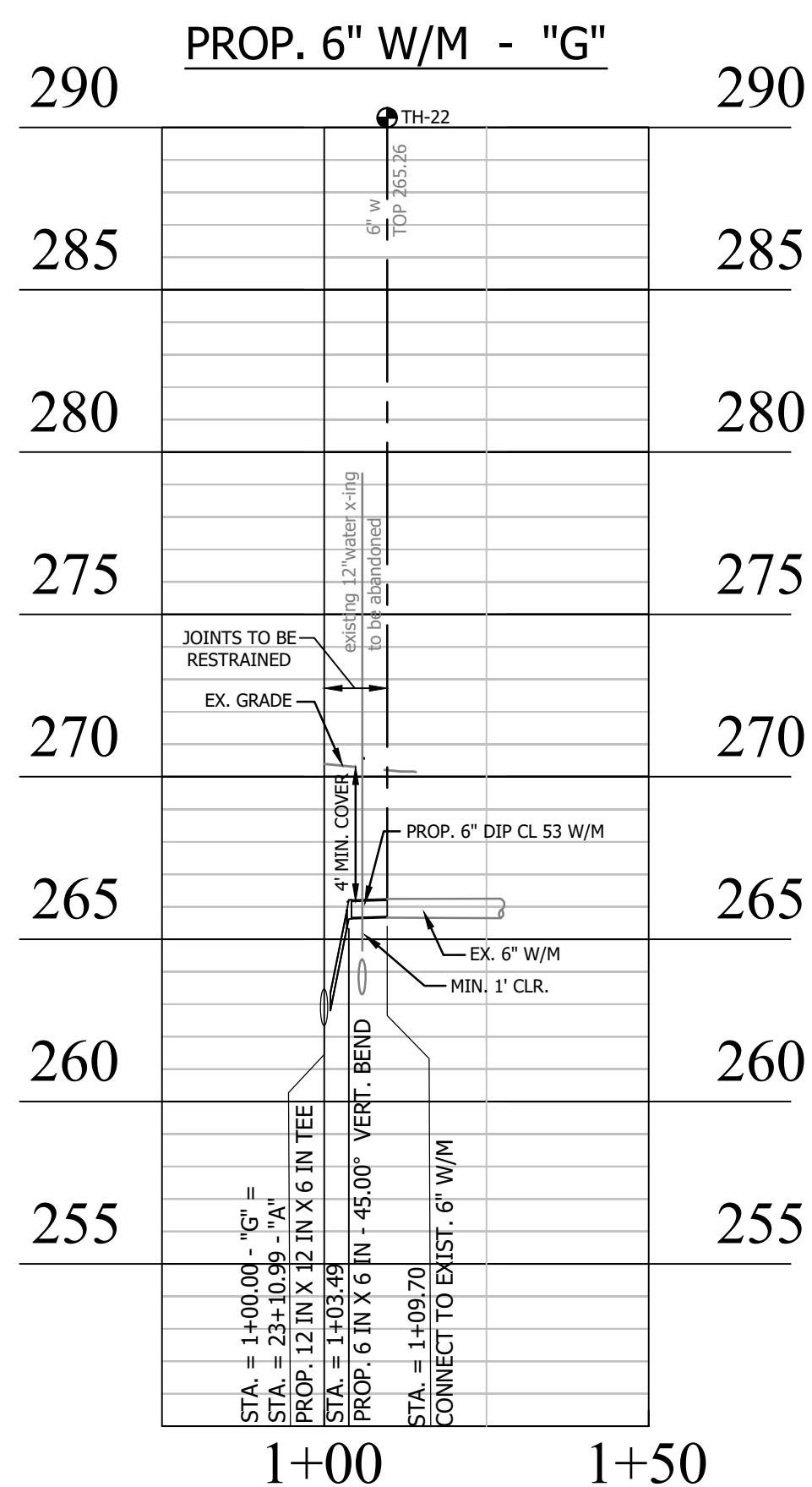
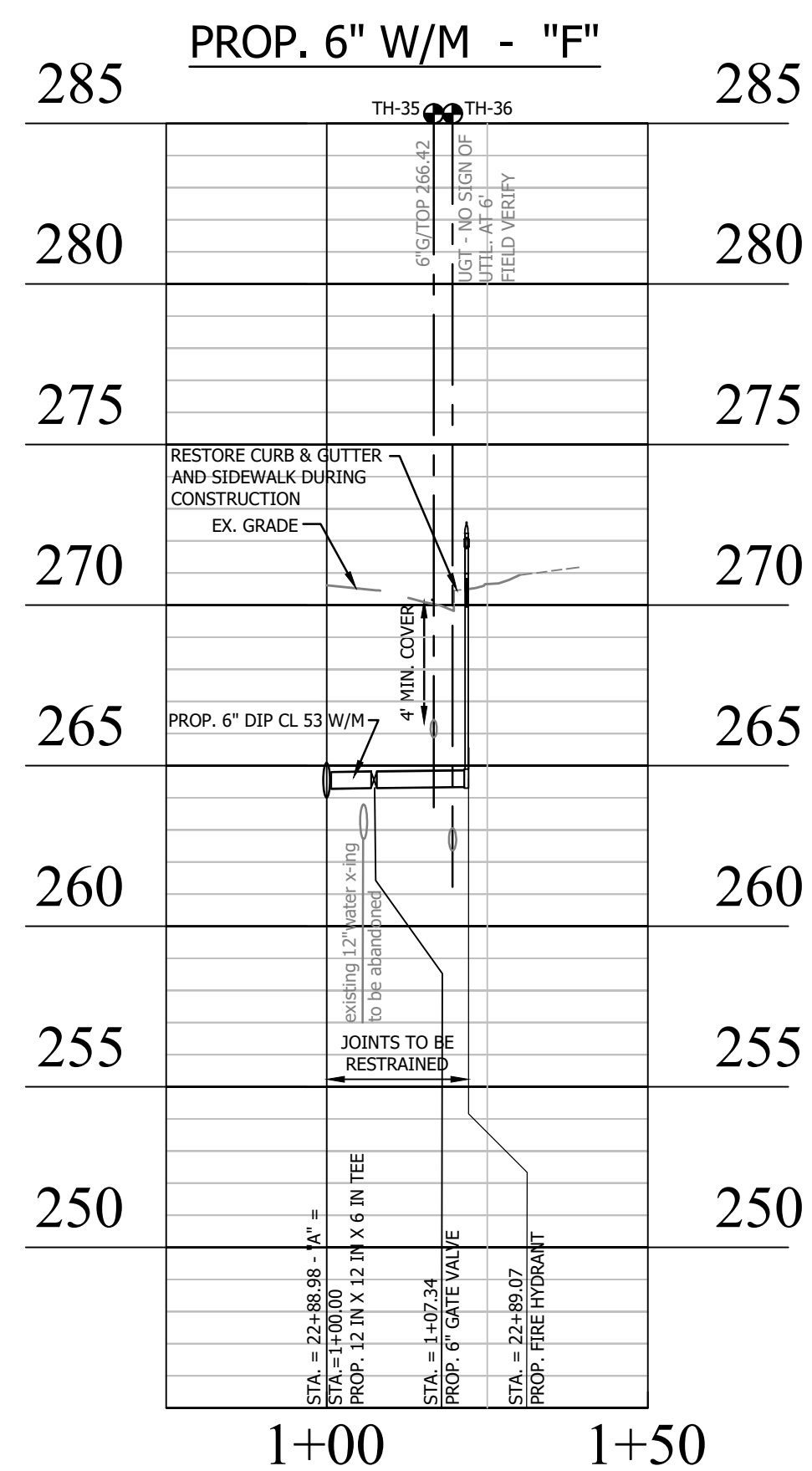
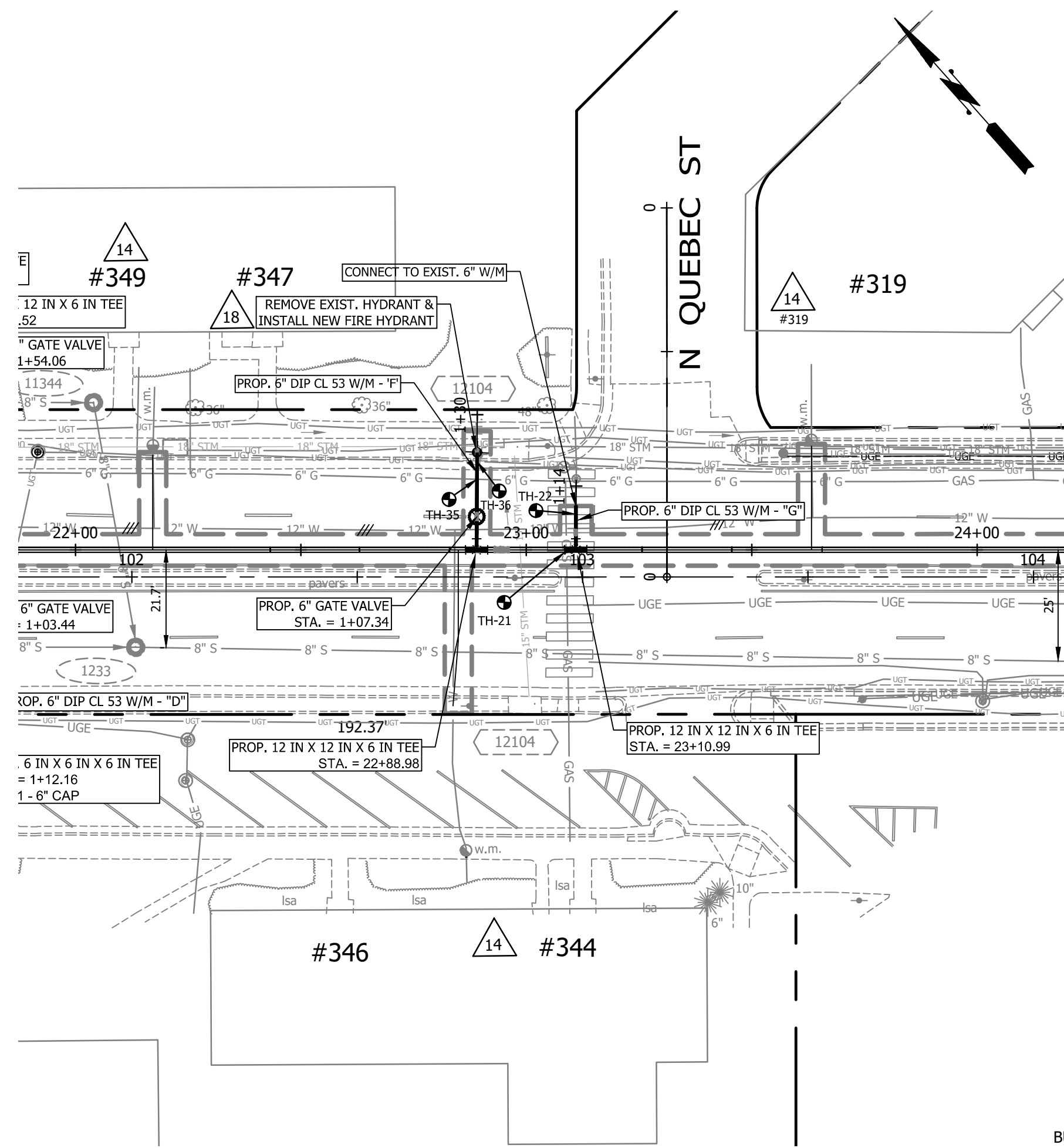
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 6

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021



C051.6



19. SERVICE RE-TAPS - 1 1/2" AND 2" (TAP MAIN), INSTALL COPPER TUBING AND CONNECT TO EXISTING SERVICE LINE.

WATERMAIN CONSTRUCTION NOTES:

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Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
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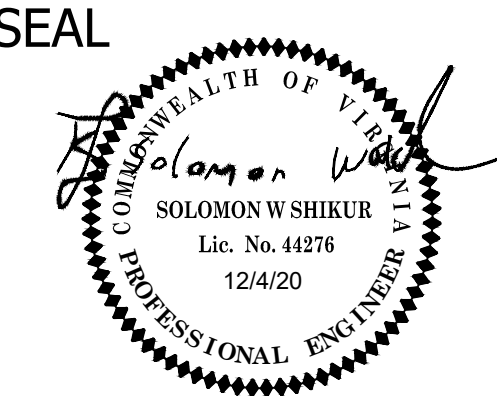
Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
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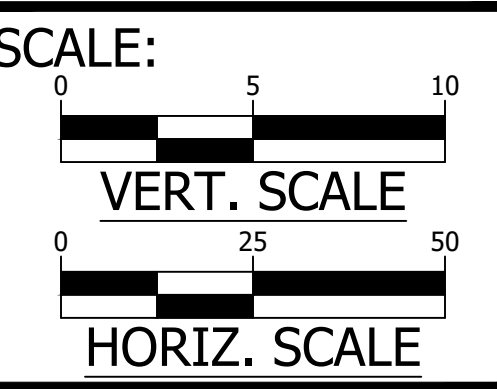
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<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/11/2021
<i>R.W. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>John...</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Carver</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 7

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021

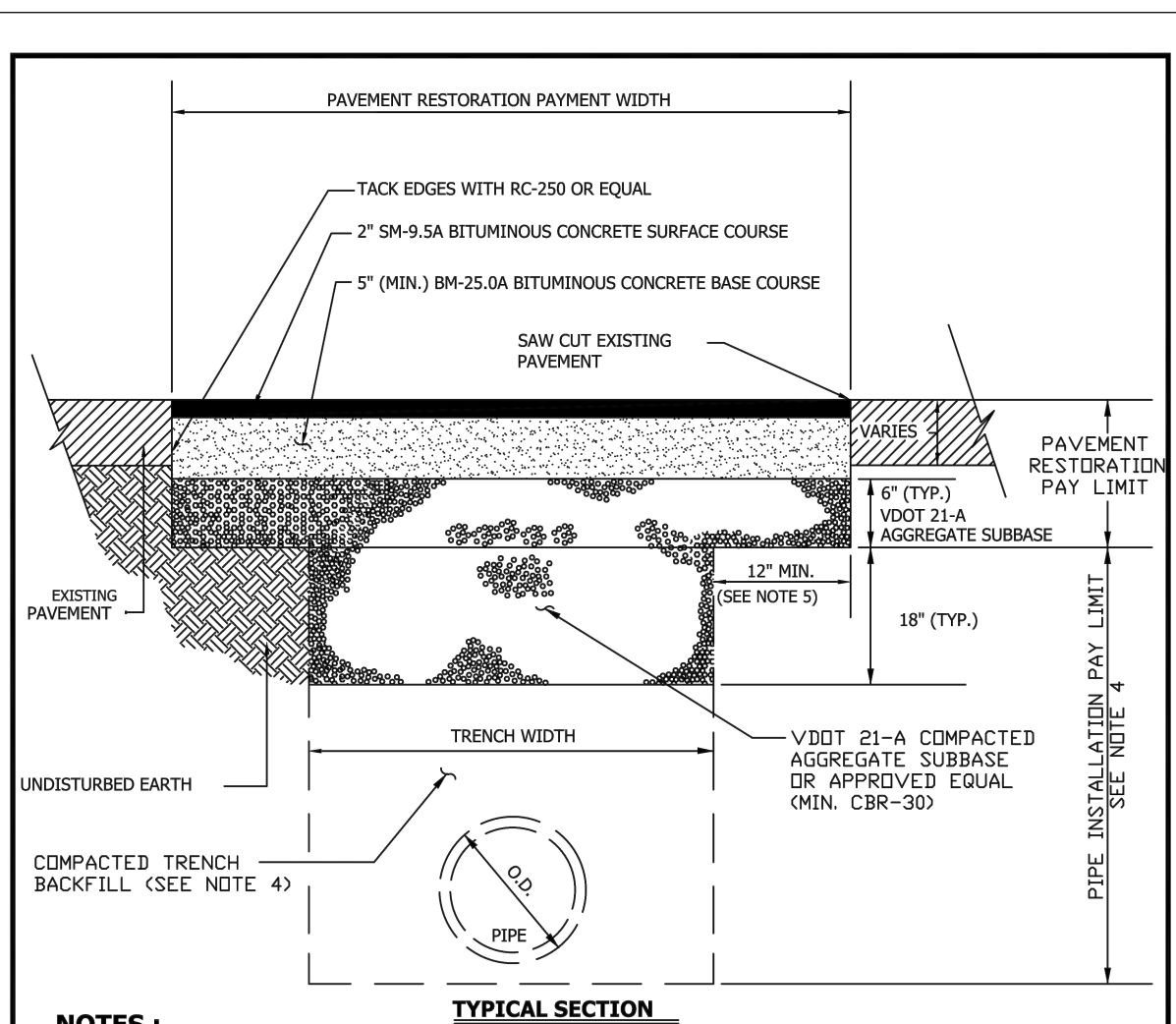
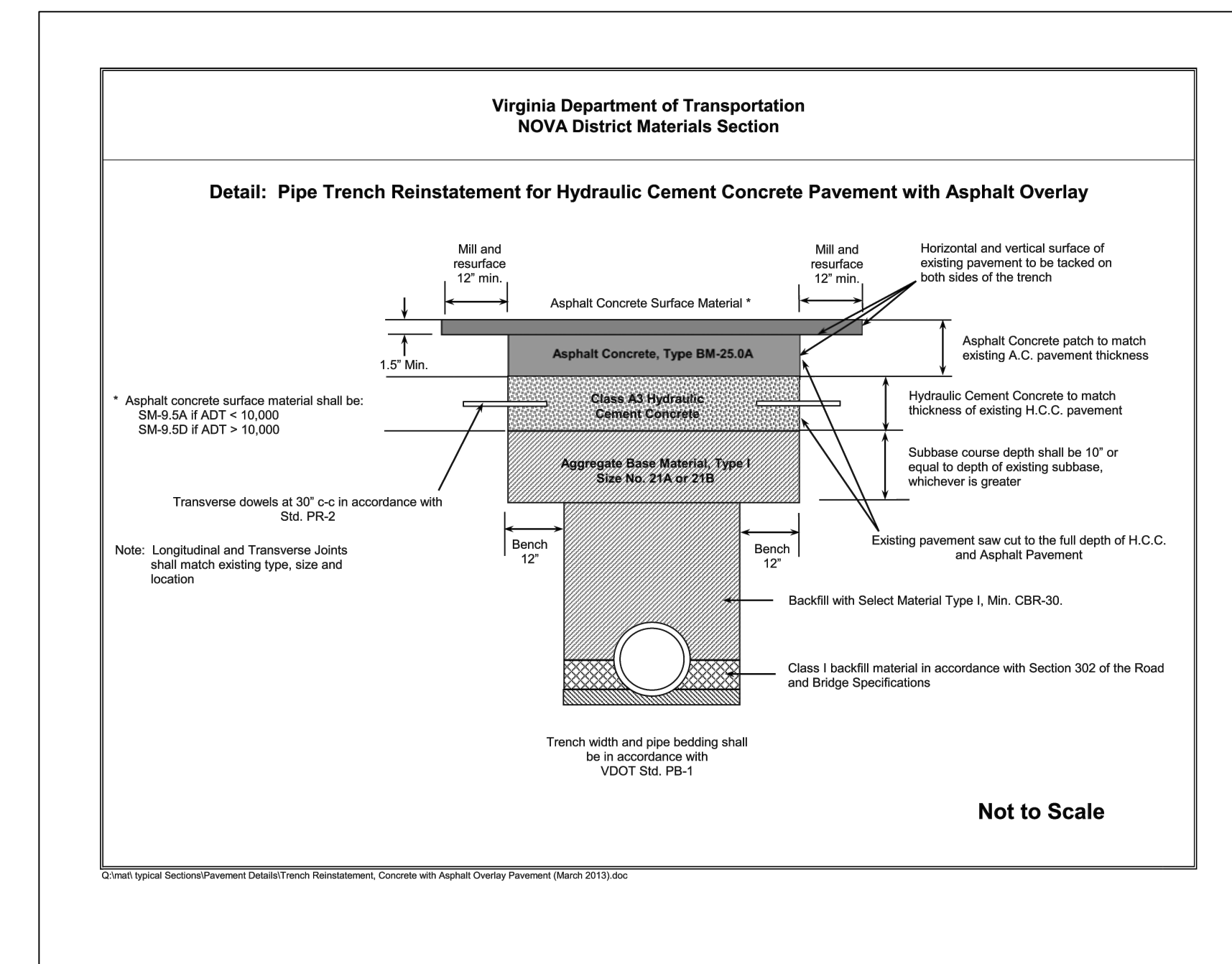
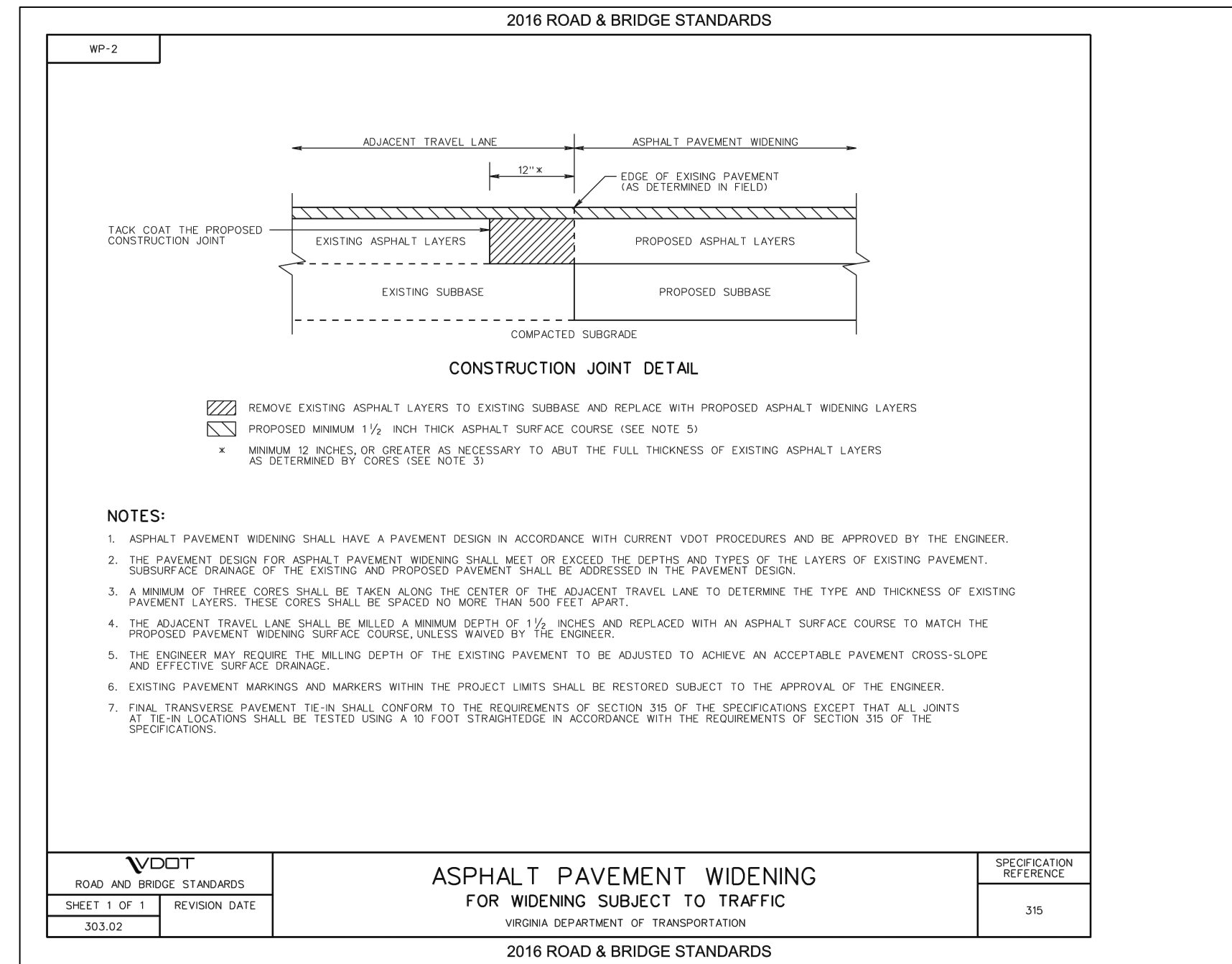
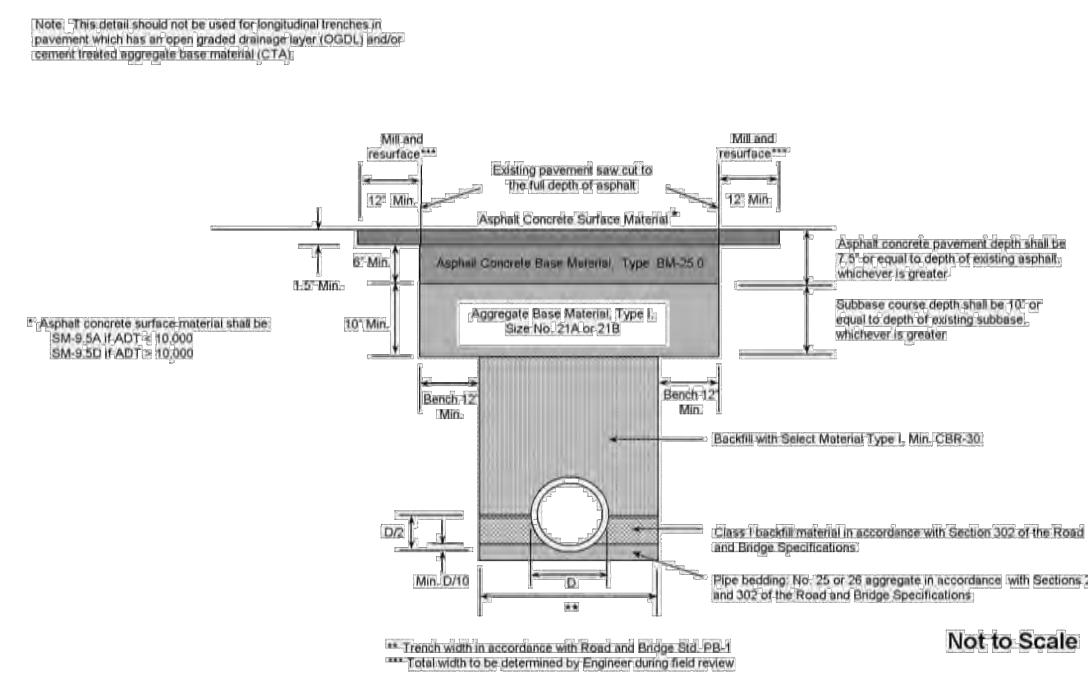


NOTE: Pavement restoration is a minimum 10' each side of the trench width for roads up to 5,000 ADT
NOTE: Pavement restoration is a minimum 25' each side of the trench width for roads above 5,000 ADT

ADT (Average Daily Traffic)

Virginia Department of Transportation NOVA District Materials Section

Detail: Pipe Bedding, Backfill and Asphalt Concrete Pavement Reinstatement



- NOTES: 1. WHEN THE DISTANCE FROM THE EDGE OF EXISTING PAVEMENT TO THE EDGE OF THE PAVEMENT RESTORATION PAYMENT WIDTH IS 3' OR LESS THEN THE ADDITIONAL PAVEMENT SHALL BE REMOVED AND REPLACED BACK TO THE EDGE. 2. THICKNESS OF BM-25.0A BASE MAY BE REDUCED TO 3" WHEN PATCH IS BEING MADE IN PAVEMENTS OF SURFACE TREATED GRAVEL, AND DIRECTED BY THE ENGINEER. 3. WHEN WIDENING OR PATCHING A STREET WITH ASPHALT, A NEAT, CLEAN JOINT OF AT LEAST ONE (1) INCH IN DEPTH BETWEEN OLD AND NEW PAVEMENT SHALL BE PROVIDED FOR TOPPING SO AS TO ELIMINATE THE NEED FOR FEATHERING OF THE OVERLAY. 4. FOR TRENCH AND BEDDING DETAILS, SEE DRAWING M-3.0. 5. WHEN THE UTILITY TRENCH REQUIRES SHEETING & SHORING, A WIDER PAYMENT WIDTH SHALL BE APPROVED BY THE ENGINEER TO ACCOMMODATE TRENCH BOX.

Table with columns: STANDARD PAVEMENT RESTORATION FOR UTILITY CUTS, REVISION & DATE, DRAWING NO. M-6.0

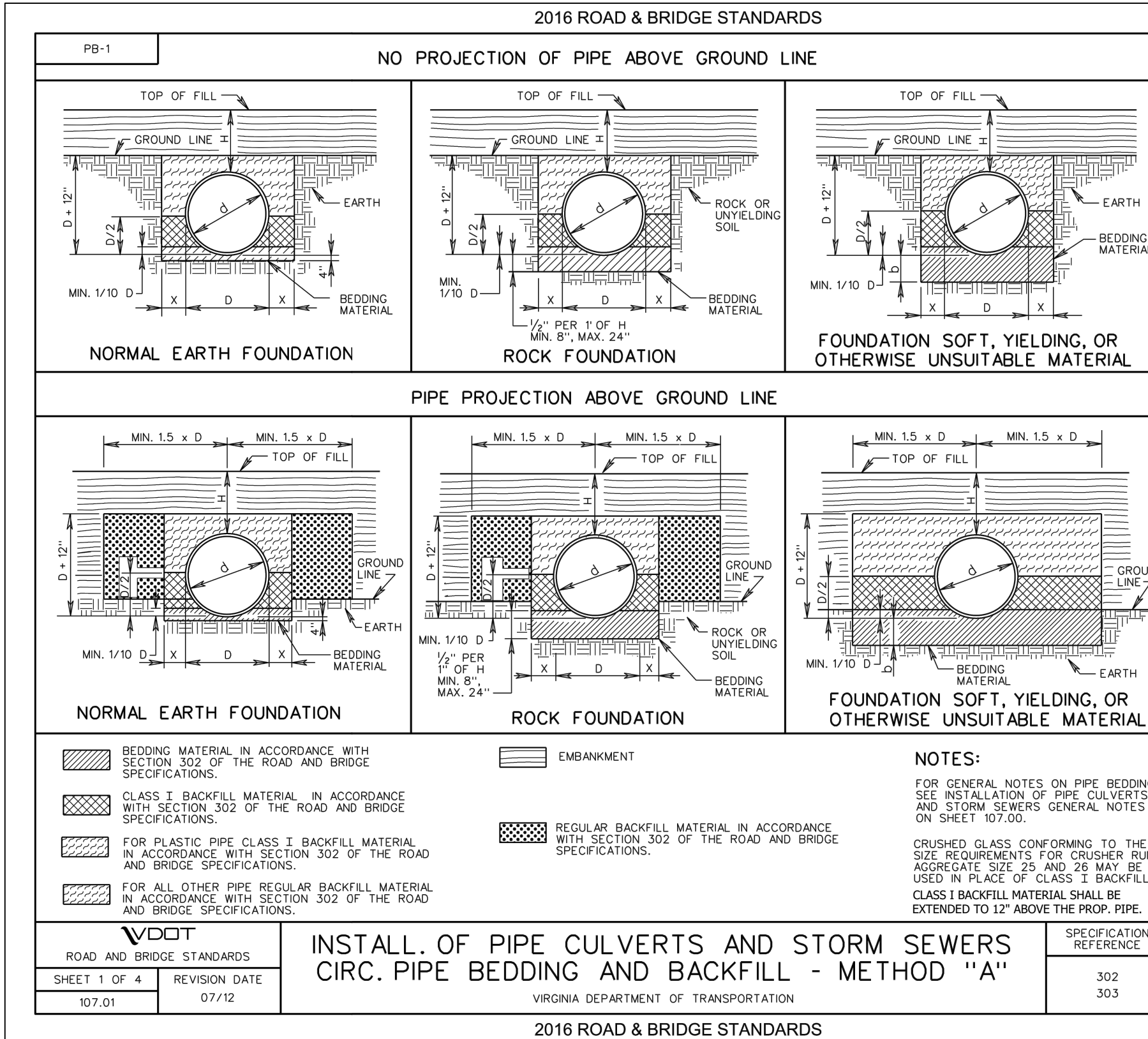


Table with columns: ROAD AND BRIDGE STANDARDS, SHEET 1 OF 4, REVISION DATE 07/12, SPECIFICATION REFERENCE 302, 303

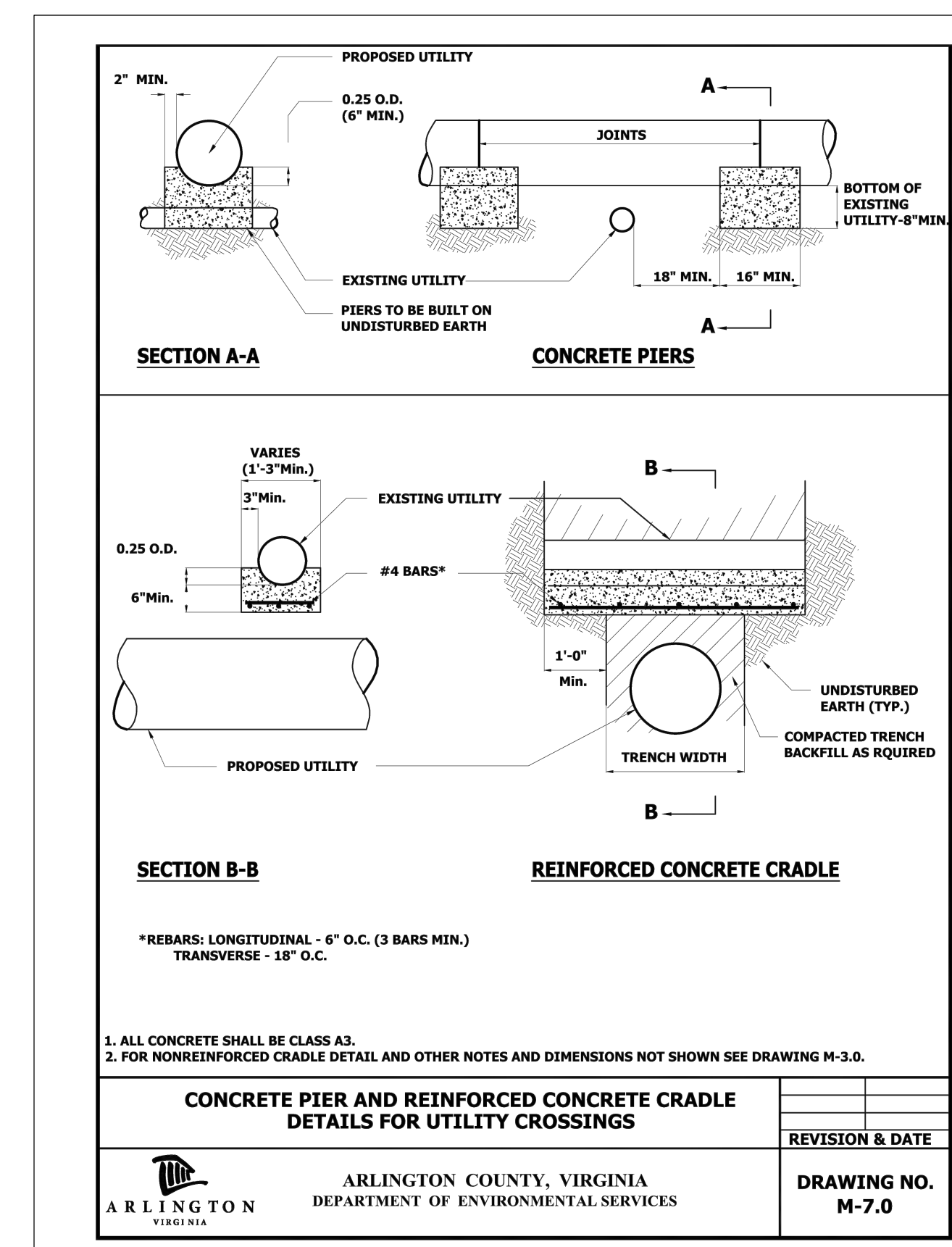


Table with columns: CONCRETE PIER AND REINFORCED CONCRETE CRADLE DETAILS FOR UTILITY CROSSINGS, REVISION & DATE, DRAWING NO. M-7.0



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606

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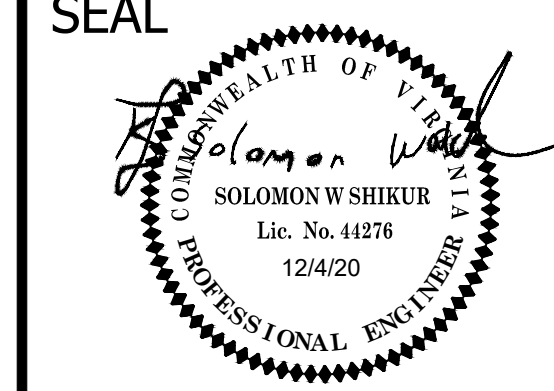


Table with columns: APPROVALS, DATE. Includes signatures and dates for Amy Pflaum (2/1/2021), R.W. Taktak (2.3.21), and Dennis M. Leach (02/09/21).

Table with columns: REVISIONS, DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT R014 N. RANDOLPH ST. TO N. PERSHING DR. WATERMAIN NOTES & DETAILS - 1

DESIGNED: JK/LD DRAWN: JK/LD CHECKED: SS

PLOTTED: FEBRUARY 10 2021

SCALE: AS SHOWN

POLYETHYLENE ENCASEMENT

INSTALLATION INSTRUCTIONS:

TAPING OVER POLYETHYLENE ENCASEMENT ALLOWS DIRECT TAPS TO BE MADE THROUGH THE TAPE AND POLYETHYLENE ENCASEMENT. ELIMINATES POTENTIAL REPAIRS TO EXPOSED AREA.

TIE STRAPS ALLOW EASY, QUICK, SECURE TIE DOWN OF POLYETHYLENE ENCASEMENT BEHIND THE BELL CONTOUR AND ON OVERLAPS AGAINST THE PIPE SURFACE.

FIGURE 1. REMOVE ALL LUMPS OF CLAY, MUD, CINDERS, ETC. WHICH MAY HAVE ACCUMULATED ON THE SURFACE OF THE PIPE. A POLYETHYLENE TUBE SHOULD BE CUT SO THAT IT IS APPROXIMATELY TWO FEET LONGER THAN THE PIPE SECTION. SLIP THE TUBE ONTO THE PIPE. ALLOW APPROXIMATELY ONE FOOT OF THE TUBE TO OVERHANG EACH END OF THE PIPE.

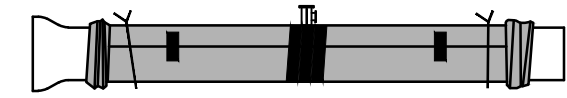


FIGURE 2. PUSH BACK THE OVERHANGING TUBE ENDS UNTIL THEY CLEAR THE PIPE ENDS.

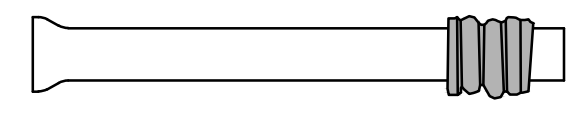


FIGURE 3. TAKE UP THE SLACK IN THE TUBE TO MAKE A SNUG BUT NOT TIGHT FIT. FOLD EXCESS BACK OVER THE TOP OF THE PIPE.

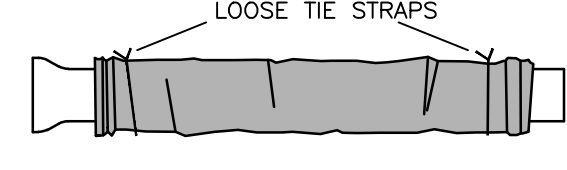


FIGURE 4. SECURE THE FOLD WITH POLYETHYLENE COMPATIBLE ADHESIVE TAPE AT SEVERAL LOCATIONS ALONG THE PIPE BARREL.

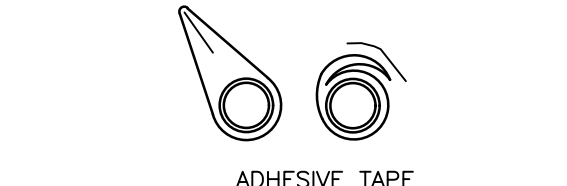


FIGURE 5. DIG A SHALLOW BELL-HOLE IN THE TRENCH BOTTOM AT THE JOINT LOCATION.

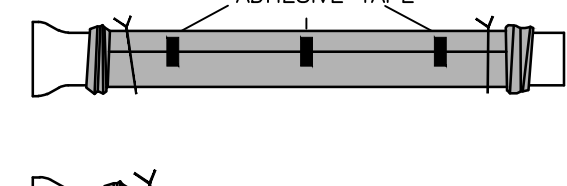


FIGURE 6. PLACE THE PIPE INTO THE TRENCH.

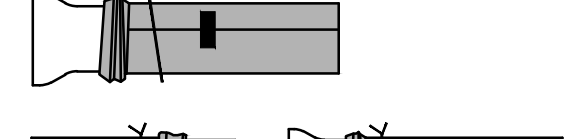


FIGURE 7. ASSEMBLE THE JOINT.

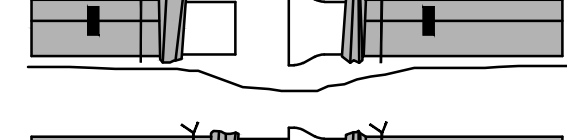


FIGURE 8. PULL THE POLYETHYLENE TUBE END OF THE PREVIOUSLY INSTALLED PIPE OVER THE NEW PIPE AND SECURE WITH THE TIE STRAP FROM THE PRECEDING PIPE BELL.

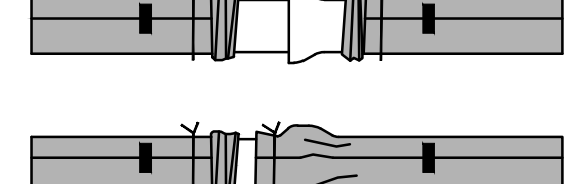


FIGURE 9. OVERLAP THE SECURED TUBE END OF THE NEW PIPE SECTION. SECURE THE NEW TUBE END IN PLACE WITH THE SPIGOT END TIE STRAP.

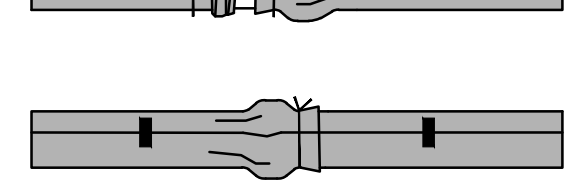


FIGURE 10. REPAIR ALL RIPS, TEARS, OR OTHER TUBE DAMAGE WITH SUITABLE ADHESIVE TAPE. EXPERIENCE HAS SHOWN THAT VERY SMALL PIN POINT SIZED PUNCTURES NEED NOT BE REPAIRED.

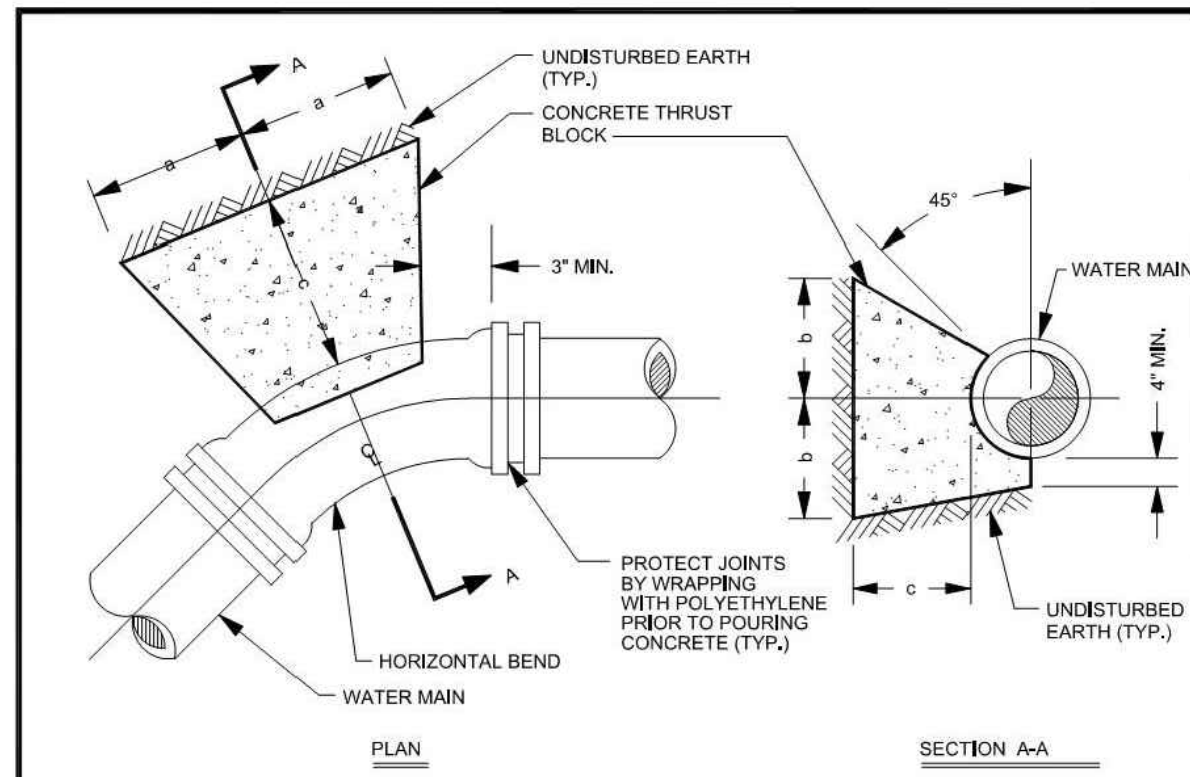
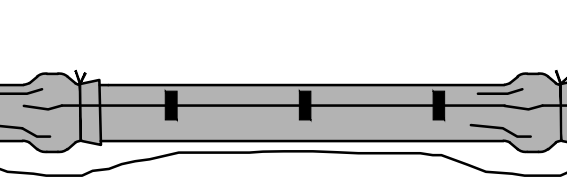


Table with columns for PIPE DIA., HORIZONTAL BEND (11 1/4", 22 1/2", 45", 90"), and MIN. C.

- NOTES: 1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF...

CONCRETE THRUST BLOCKS FOR HORIZONTAL BENDS

Project information including ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES, and DRAWING NO. W-2.0.

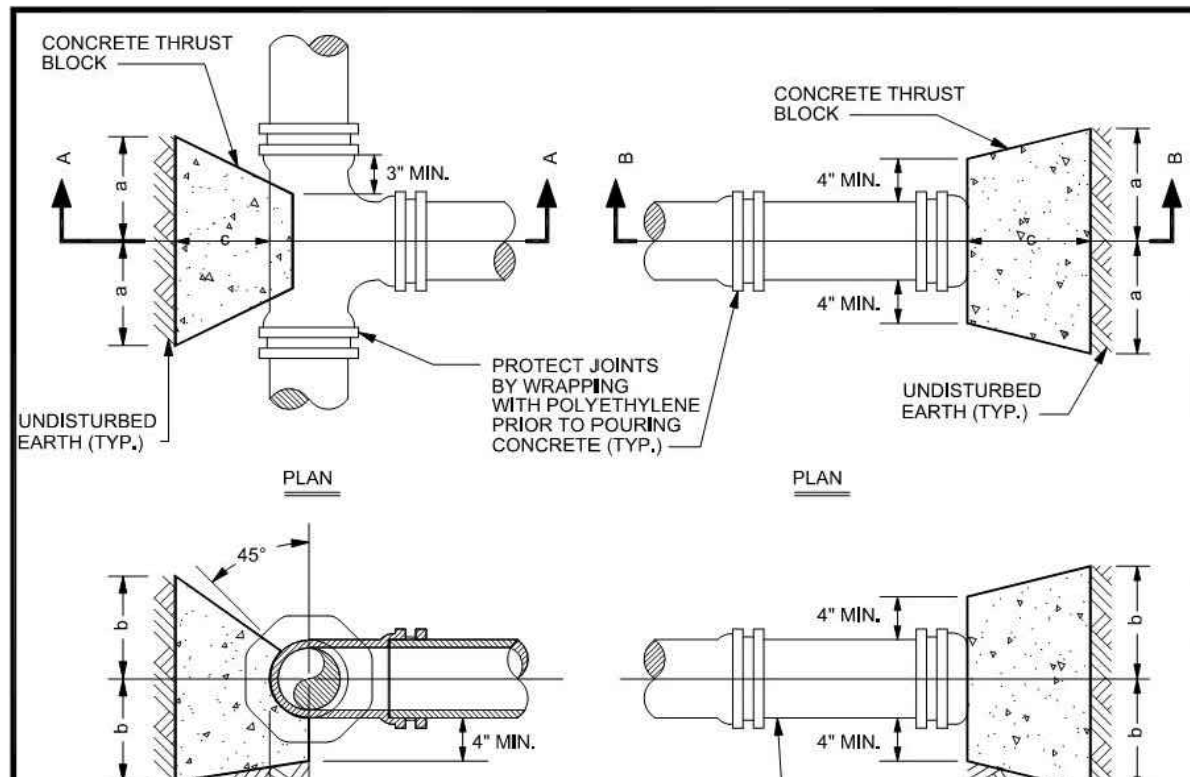
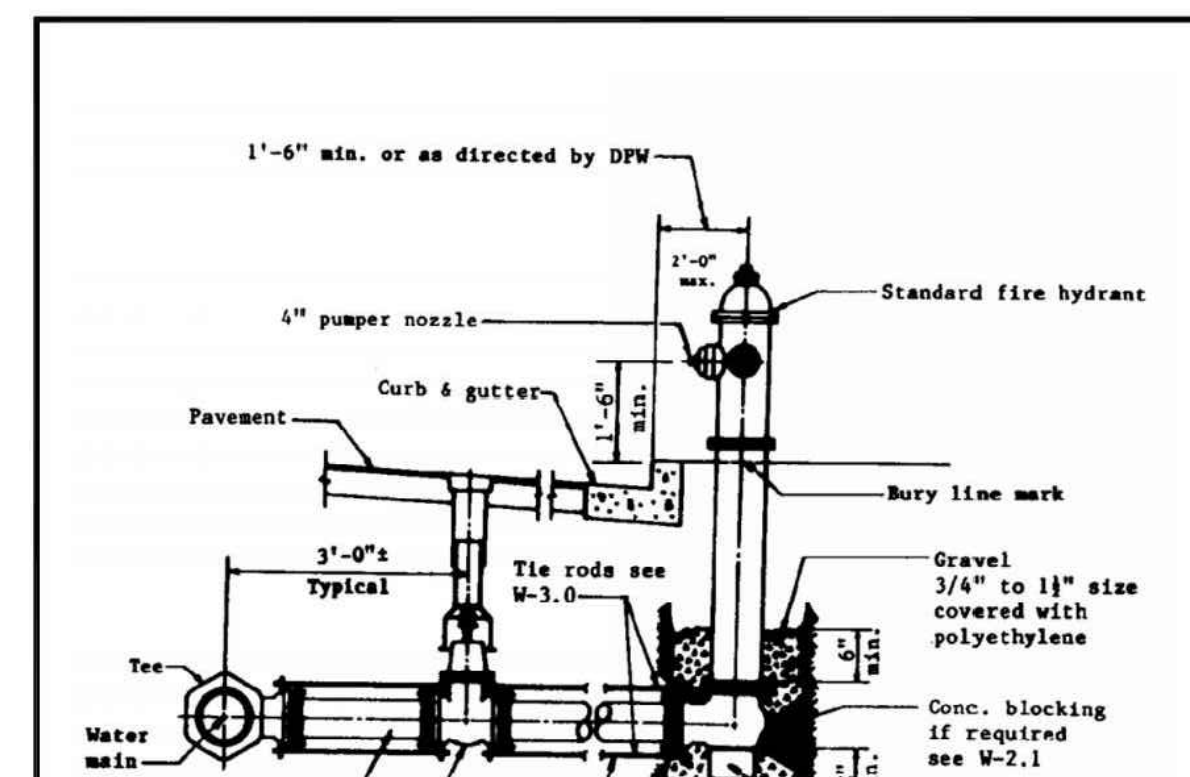


Table with columns for PIPE DIAMETER, MIN. C, TEES, and CAPS.

- NOTES: 1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF...

CONCRETE THRUST BLOCKS FOR TEES AND CAPS

Project information including ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES, and DRAWING NO. W-2.1.



- NOTES: 1. All valves and fire hydrants shall be strapped to main unless directed otherwise.

FIRE HYDRANT SETTING

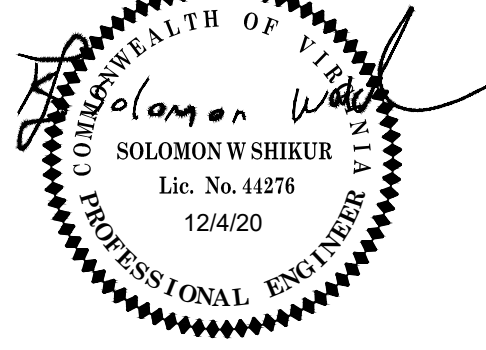
Project information including ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES, and DRAWING NO. W-7.0.



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201

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SEAL



APPROVALS DATE

Amy Pflaum 2/11/2021 QUALITY CONTROL ENGINEER

R.W. Taktak 2.3.21 CONSTRUCTION MANAGEMENT SUPERVISOR

02.09.2021 WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 02/09/21 TRANSPORTATION DIRECTOR

Dabney R. Cawen 01/27/2021 PROJECT MANAGER

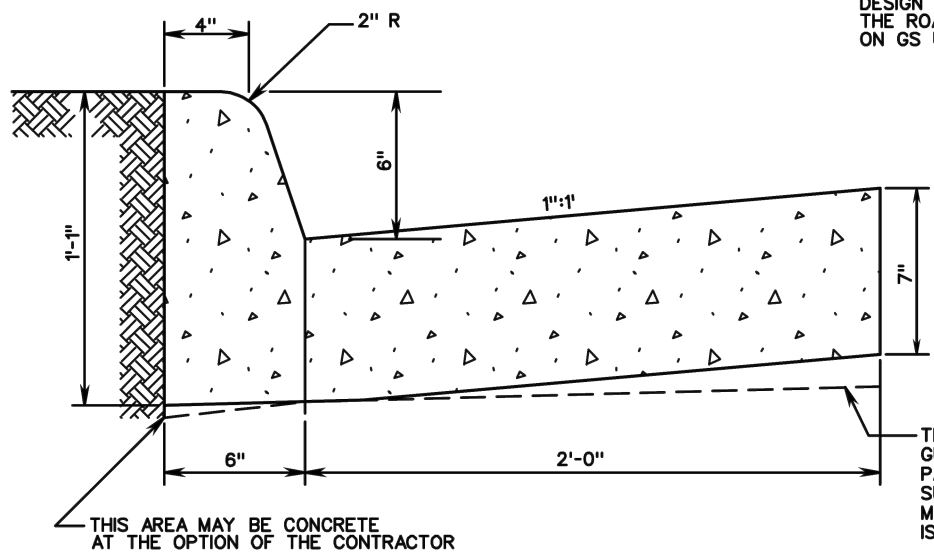
REVISIONS DATE

2016 ROAD & BRIDGE STANDARDS

CG-6

NOTES:

- 1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE. 2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.



THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES PROVIDED A MINIMUM DEPTH OF 7" IS MAINTAINED.

COMBINATION 6" CURB AND GUTTER

VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT ROAD AND BRIDGE STANDARDS, SHEET 1 OF 1, 2010.3

2016 ROAD & BRIDGE STANDARDS

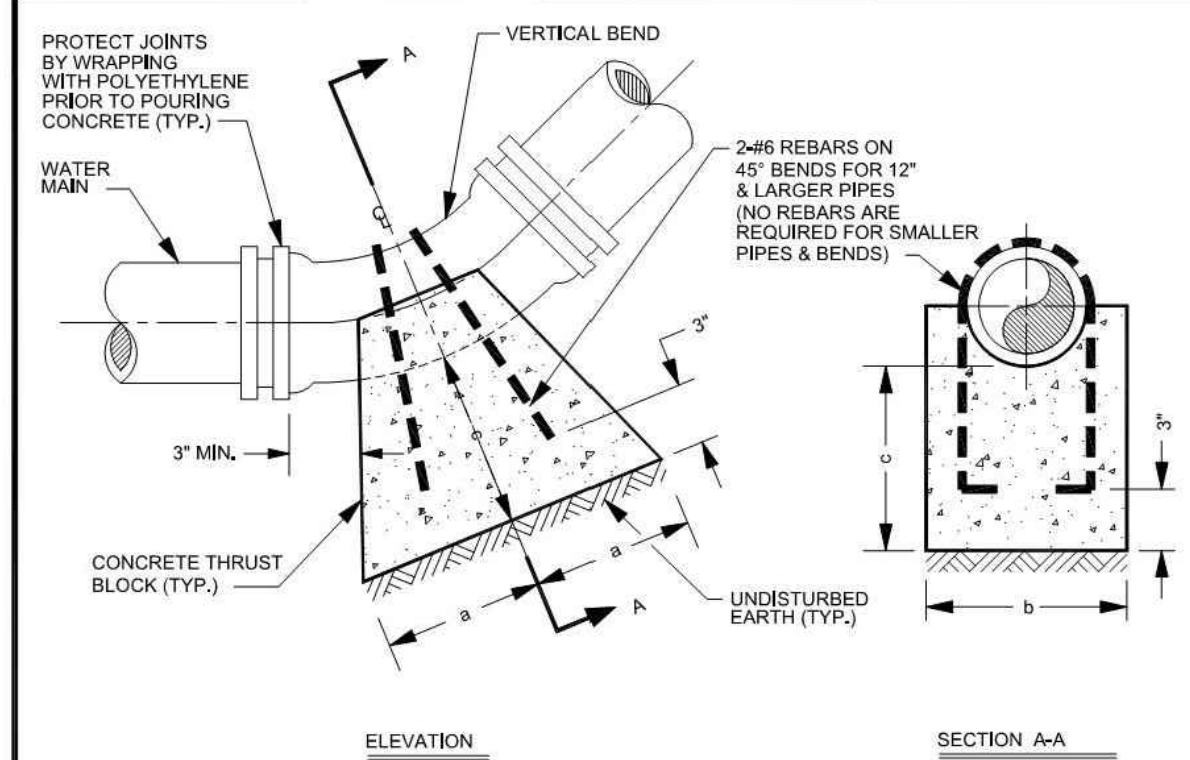


Table with columns for PIPE DIA., LOWER VERTICAL BEND (11 1/4", 22 1/2", 45"), and MIN. C.

- NOTES: 1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF...

CONCRETE THRUST BLOCKS FOR LOWER VERTICAL BENDS

Project information including ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES, and DRAWING NO. W-2.2.

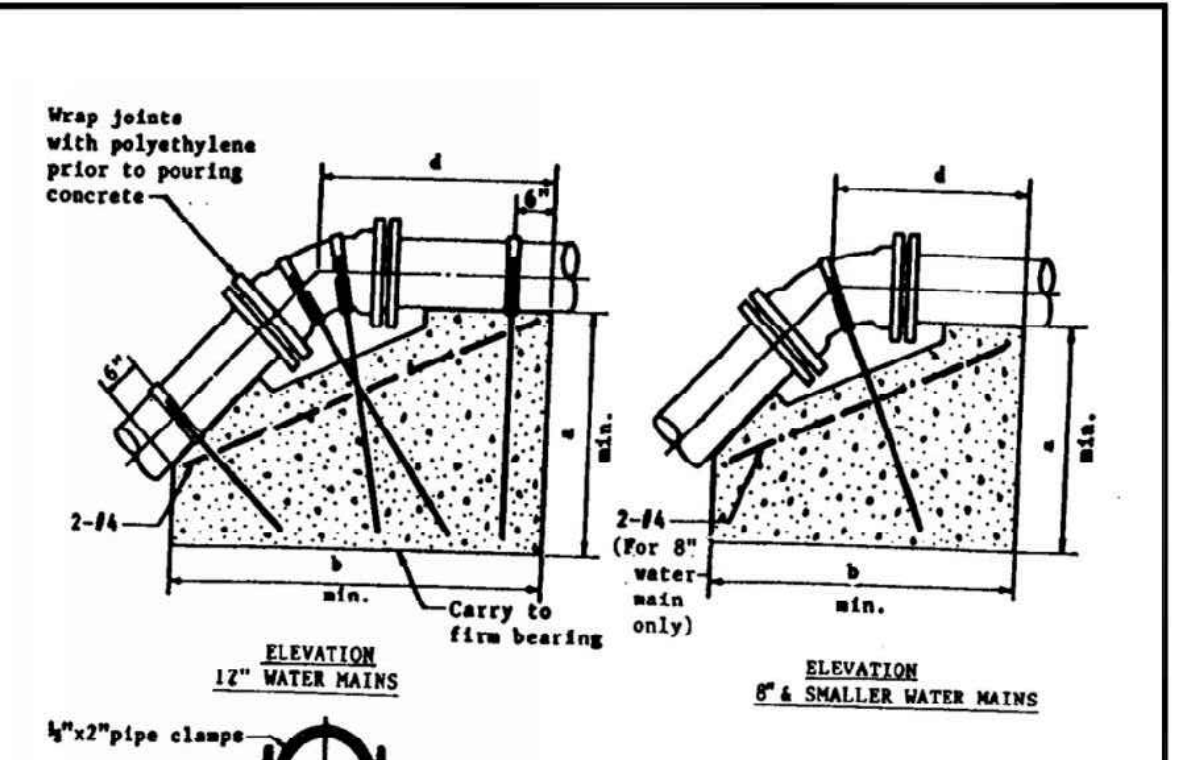


Table with columns for Bend (11 1/4", 22 1/2", 45") and various dimensions (a, b, c).

- NOTES: 1. Blocking shown is for maximum static pressure of 120 psi plus water hammer allowance of 120 psi. Special blocking shall be designed for sizes and conditions other than those indicated.

CONCRETE THRUST BLOCKS UPPER VERTICAL BENDS

Project information including ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES, and DRAWING NO. W-2.3.

N. GLEBE ROAD WATERMAIN REPLACEMENT R014

N. RANDOLPH ST. TO N. PERSHING DR.

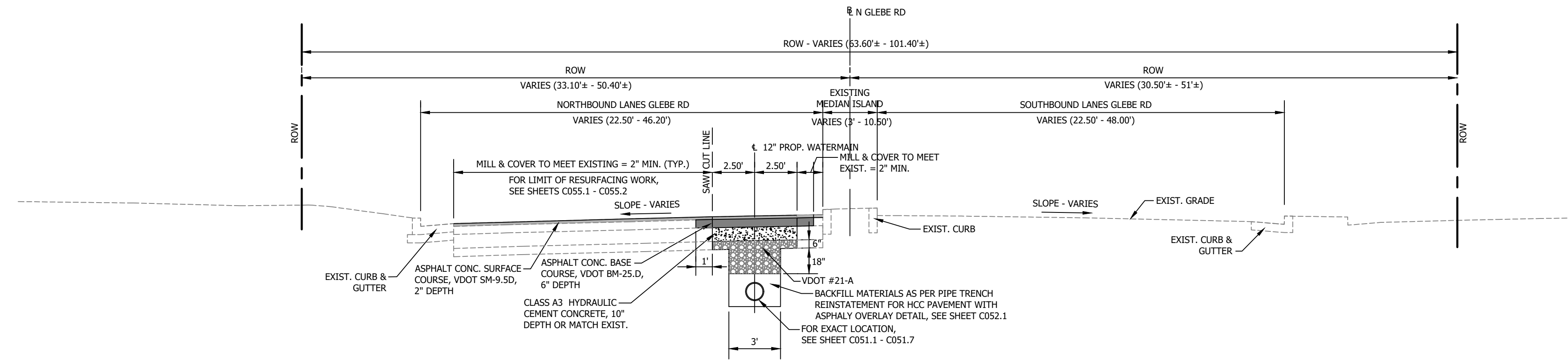
WATERMAIN NOTES & DETAILS - 2

DESIGNED: JK/LD DRAWN: JK/LD CHECKED: SS

PLOTTED: FEBRUARY 10 2021

SCALE:

AS SHOWN



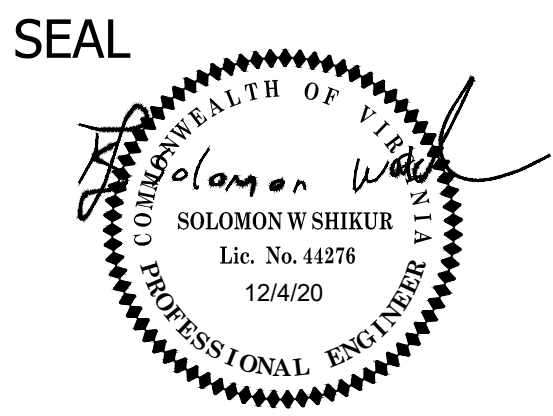
TYPICAL ROADWAY SECTION - N. GLEBE ROAD

SCALE: 1" = 5'



DEPARTMENT OF ENVIRONMENTAL SERVICES
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APPROVALS	DATE
<i>Amy Pfeiffer</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.W. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>David...</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Carver</i> PROJECT MANAGER	01/27/2021

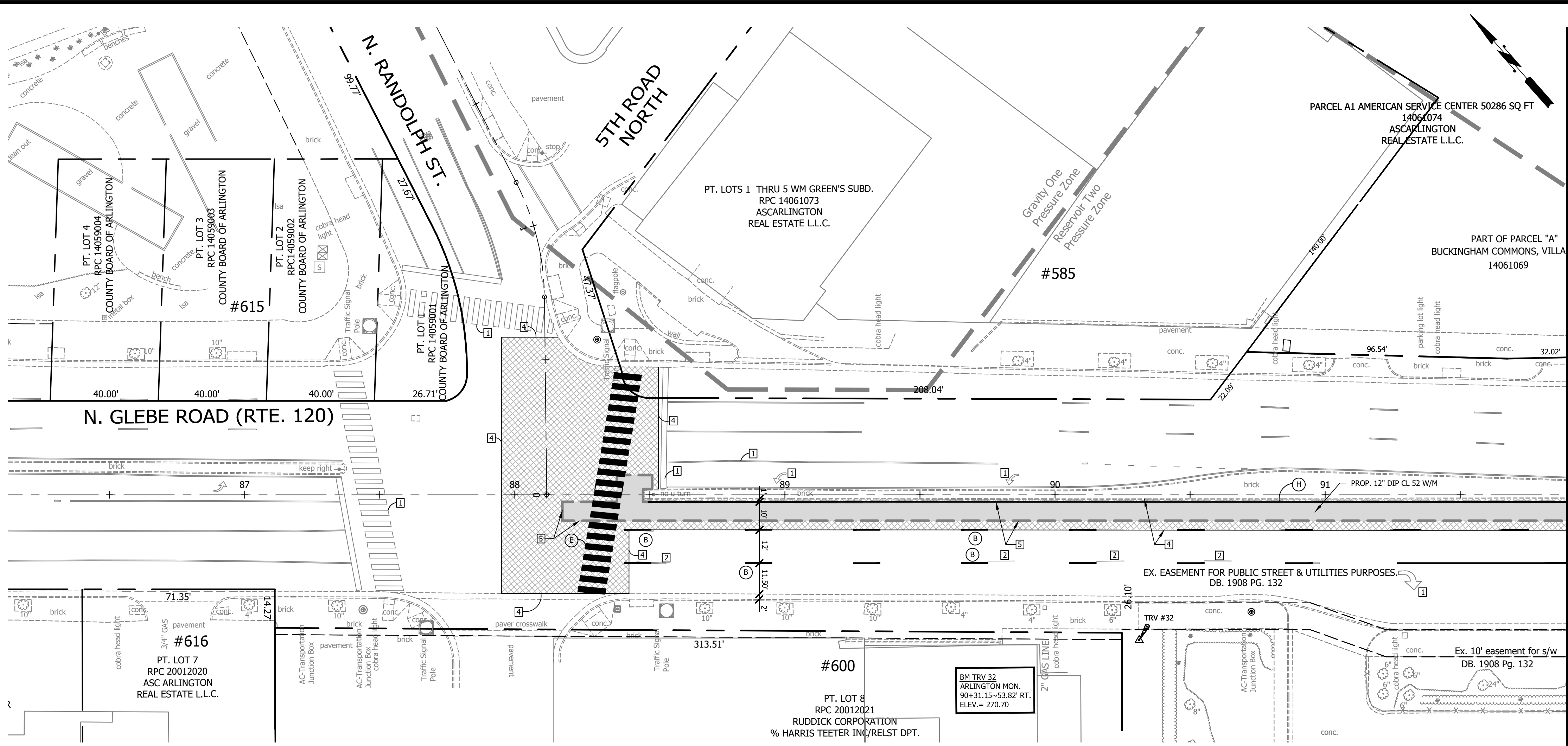
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN NOTES & DETAILS - 3

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS
 PLOTTED: FEBRUARY 10 2021

SCALE:

AS SHOWN



MATCHLINE - SEE THIS SHEET

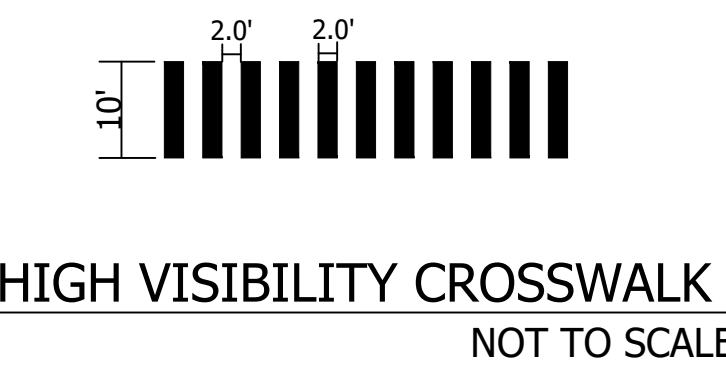
STANDARD PAVEMENT MARKING LEGEND:

Ⓐ TYPE B CLASS 1.....WHITE 4" WIDTH	PARKING LANES, EDGE LINES, LANE LINES
Ⓑ TYPE B CLASS 1.....WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
Ⓒ TYPE B CLASS 1.....WHITE 6" WIDTH, 2' LONG, 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
Ⓓ TYPE B CLASS 1.....WHITE 18" WIDTH	STOP BARS
Ⓔ TYPE B CLASS 1.....WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
Ⓕ TYPE B CLASS 1.....WHITE 6" WIDTH	TURN LANES, TRANSVERSE CROSSWALKS, BIKE LANES
Ⓖ TYPE B CLASS 1.....YELLOW 4" WIDTH, 10' LONG, 30' SPACING	DIVIDED TRAFFIC, TWO WAY TURN LANES
Ⓗ TYPE B CLASS 1.....YELLOW 4" WIDTH	EDGE LINES
Ⓘ TYPE B CLASS 1.....YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING	CENTERLINES
Ⓝ TYPE B CLASS 1.....WHITE 6" WIDTH, 10' SPACING @45 DEGREE	HATCH LINES, SAFETY ZONES
Ⓚ TYPE B CLASS 1.....WHITE SINGLE ARROW	TURN LANES
Ⓛ TYPE B CLASS 1.....WHITE COMBINATION ARROW	TURN LANES
Ⓜ TYPE B CLASS 1.....WHITE 8" LETTERS	PAVEMENT LETTERS (STOP, YIELD, BUS, ONLY etc.)
Ⓝ TYPE B CLASS 1.....WHITE 6" WIDTH, 2' LONG, 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
Ⓟ TYPE B CLASS 1.....WHITE 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS
Ⓠ TYPE B CLASS 1.....YELLOW 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS
Ⓡ TYPE B CLASS 1.....WHITE 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS

- SIGN AND PAVEMENT MARKING NOTES:**
- STREET WIDTH MEASUREMENTS ARE FROM FACE OF CURB TO FACE OF CURB. LANES ARE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING.
 - CONTACT DENNIS HOWELL OR HIS DESIGNEE AT 703-228-6598 OR (871) 437-1077 TO APPROVE MARKING LAYOUT 48 HRS. PRIOR TO INSTALLATION OF MARKINGS.
 - PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE FOLLOWING AND ANY REVISIONS HERE TO:
 - A) THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - B) ARLINGTON COUNTY MARKING STANDARDS.
 - ALL MARKINGS SHALL BE THERMOPLASTIC PER ARLINGTON COUNTY MARKING STANDARDS.
 - STOP BARS SHALL BE A MINIMUM OF 4' IN ADVANCE OF A MARKED CROSSWALK. IF THERE IS NO MARKED CROSSWALK, STOP BAR SHALL BE NO MORE THAN 30' FROM THE NEAREST EDGE OF THE INTERSECTED TRAVELED WAY.
 - CROSSWALKS SHALL BE 10' WIDE UNLESS OTHERWISE NOTED.
 - LEFT TURN ARROWS SHALL BE LOCATED 25' BACK FROM STOP BAR. FOR ADDITIONAL ARROWS FOLLOW COUNTY MARKING STANDARDS.
 - ON-STREET PARKING LANE IS 7' WIDE (UNLESS OTHERWISE NOTED) AND MARKED WITH 4" WIDE WHITE LINES. BEGINNING AND END OF PARKING SHALL BE MARKED WITH AN END LINE PERPENDICULAR TO CURB EXCEPT AT NUBS OR WHERE OTHERWISE INDICATED.
 - SHARED LANE MARKINGS SHALL BE PLACED IN CENTER OF LANE, 250' APART UNLESS OTHERWISE SPECIFIED.
 - BIKE LANE SYMBOLS TO BE PLACED 330' APART UNLESS OTHERWISE SPECIFIED.

LEGEND

	EXISTING		PROPOSED
	BUS STOP		FIRE HYDRANT
	FIRE HYDRANT		PARKING METER
	PARKING METER		SIGN
	SIGN		STRIPING
	STRIPING		STRIPING

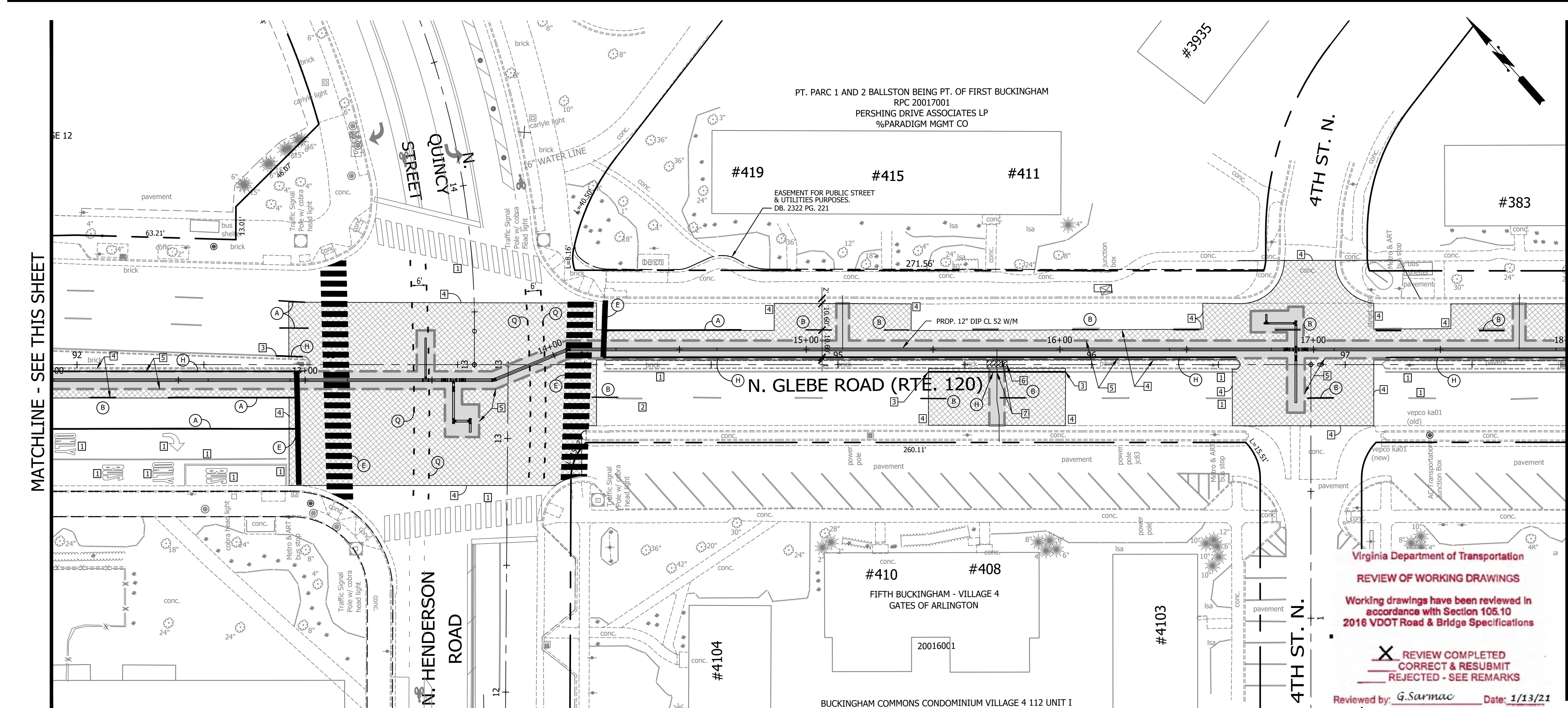


- CONSTRUCTION NOTES:**
- EXISTING PAVEMENT MARKINGS TO REMAIN.
 - ERADICATE EXISTING PAVEMENT MARKINGS.
 - TIE INTO EXISTING PAVEMENT MARKINGS.
 - LIMIT OF MILL & RESURFACE OF EXIST. PAVEMENT
 - LIMIT OF FULL DEPTH PAVEMENT REPLACEMENT
 - REMOVE AND REPLACE CONCRETE AND BRICK PAVERS (ARLINGTON COUNTY DETAIL R-2.1)
 - REMOVE AND REPLACE CONCRETE CURB, STANDARD 6" (VDOT CG-2)

PAVEMENT LEGEND:

	EXIST. PAVEMENT TO BE REMOVED (FULL DEPTH SAW CUT AND REPLACE WITH NEW PAVEMENT)
	MILL AND RESURFACE EXISTING PAVEMENT (PROVIDE 1 1/2" MIN. MILLING DEPTH)

Virginia Department of Transportation
REVIEW OF WORKING DRAWINGS
 Working drawings have been reviewed in accordance with Section 105.10 2016 VDOT Road & Bridge Specifications
 X REVIEW COMPLETED
 CORRECT & RESUBMIT
 REJECTED - SEE REMARKS
 Reviewed by: G.Sarmac Date: 1/13/21



MATCHLINE - SEE THIS SHEET

MATCHLINE - SEE SHEET C031.2

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
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SEAL

SOLOMON W SHIKUR
 Lic. No. 41276
 12/4/20
 PROFESSIONAL ENGINEER

APPROVALS

<i>Amy Pflaum</i>	2/1/2021
QUALITY CONTROL ENGINEER	
<i>R.V. Takrab</i>	2.3.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>John</i>	02.09.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	02/09/21
TRANSPORTATION DIRECTOR	
<i>Dabney R. Caver</i>	01/27/2021
PROJECT MANAGER	

REVISIONS

	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 PAVING AND PAVEMENT MARKING PLAN - 1

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS
 PLOTTED: FEBRUARY 10 2021

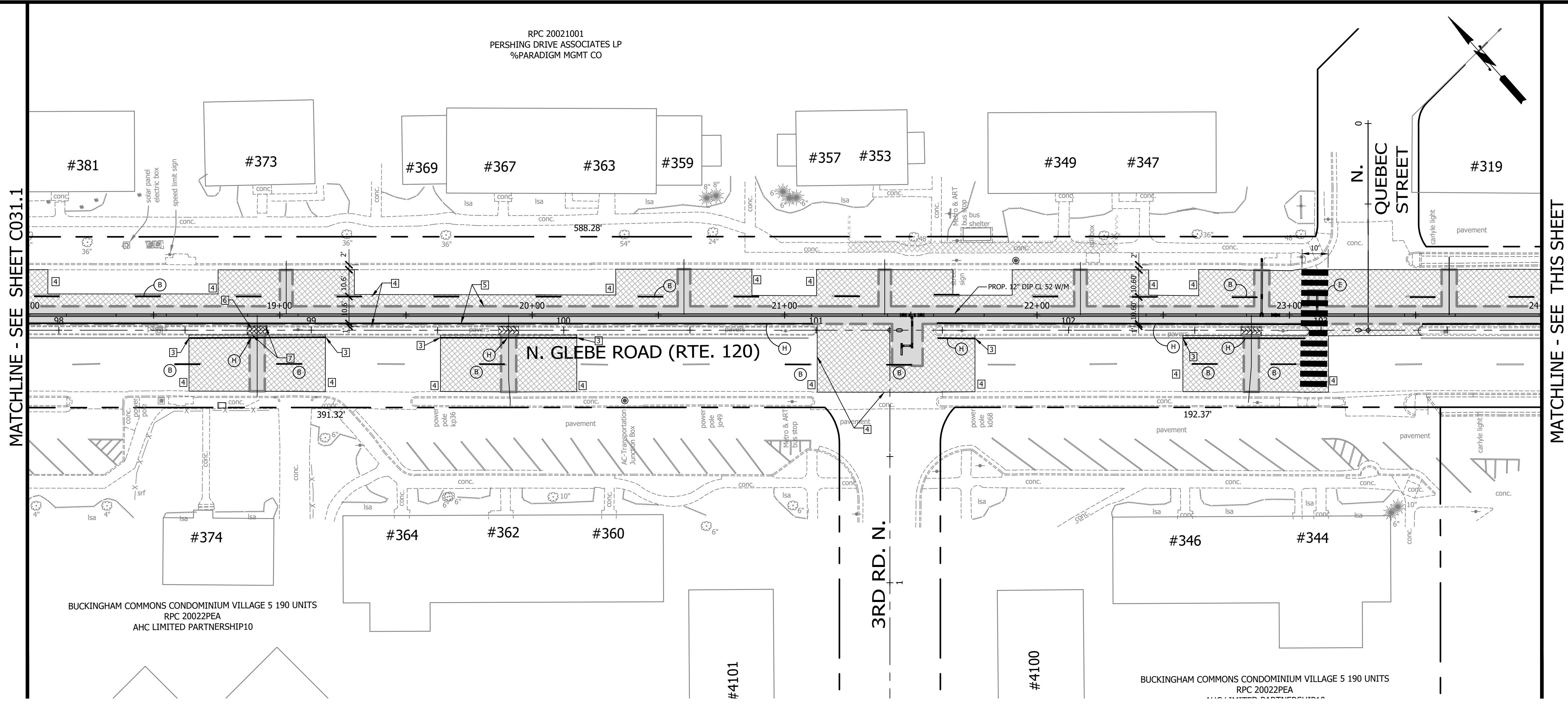
SCALE:

GRAPHIC SCALE

C055.1

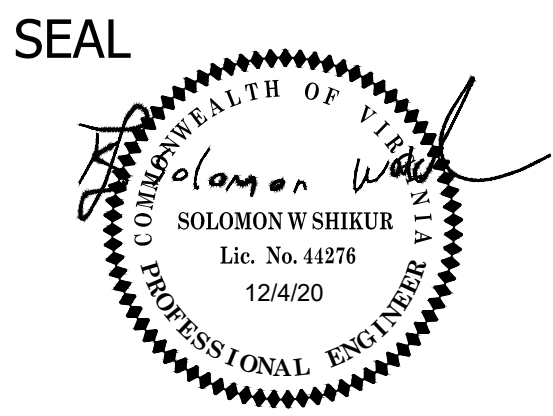
MATCHLINE - SEE SHEET C031.1

MATCHLINE - SEE THIS SHEET



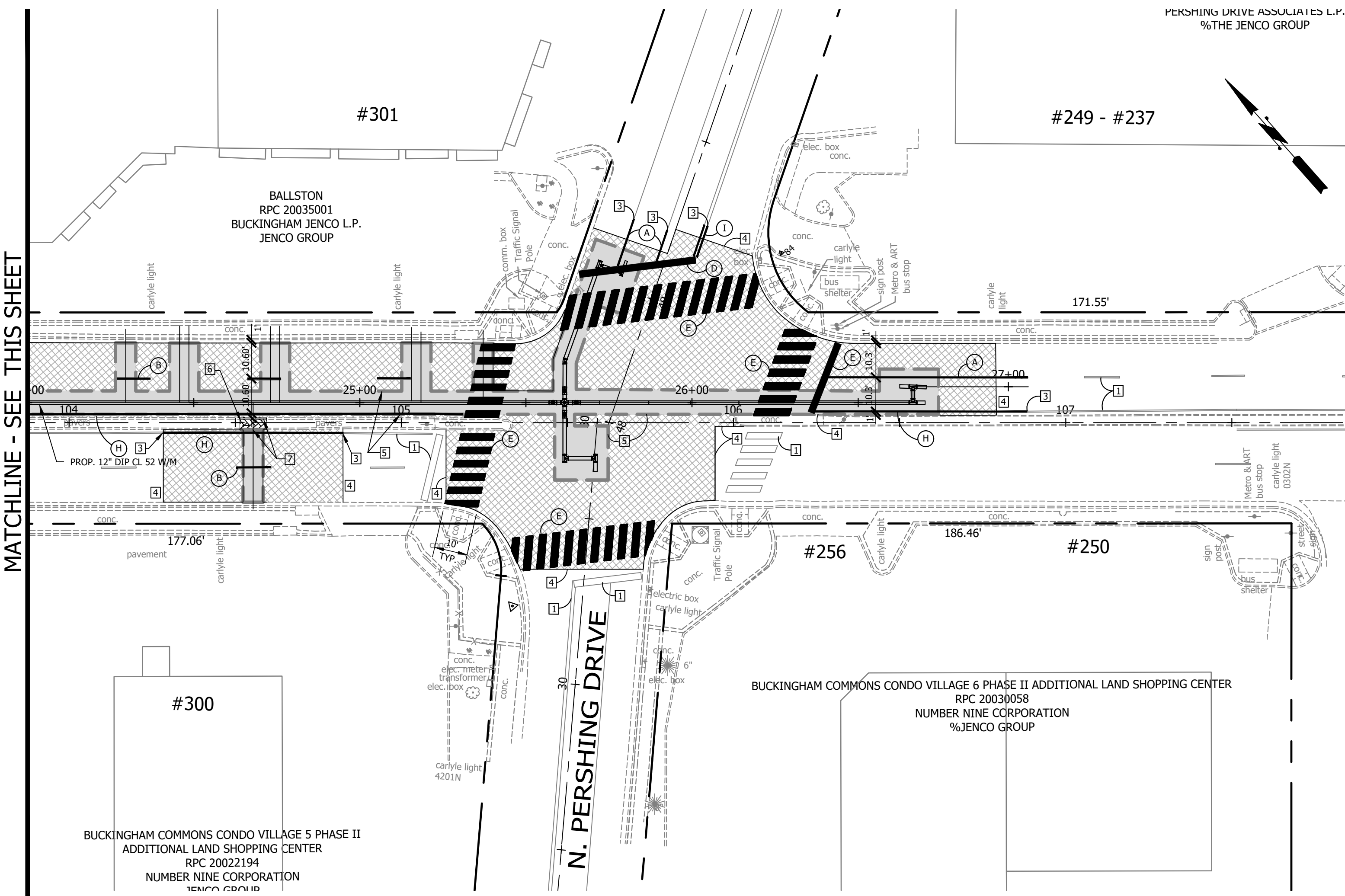
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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<i>R.W. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>Oluf</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Cawen</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE



STANDARD PAVEMENT MARKING LEGEND:

(A) TYPE B CLASS 1.....WHITE 4" WIDTH	PARKING LANES, EDGE LINES, LANE LINES
(B) TYPE B CLASS 1.....WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
(C) TYPE B CLASS 1.....WHITE 4" WIDTH, 2' LONG, 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
(D) TYPE B CLASS 1.....WHITE 18" WIDTH	STOP BARS
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(F) TYPE B CLASS 1.....WHITE 6" WIDTH	TURN LANES, TRANSVERSE CROSSWALKS, BIKE LANES
(G) TYPE B CLASS 1.....YELLOW 4" WIDTH, 10' LONG, 30' SPACING	DIVIDED TRAFFIC, TWO WAY TURN LANES
(H) TYPE B CLASS 1.....YELLOW 4" WIDTH	EDGE LINES
(I) TYPE B CLASS 1.....YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING	CENTERLINES
(J) TYPE B CLASS 1.....WHITE 6" WIDTH, 10' SPACING @45 DEGREE	HATCH LINES, SAFETY ZONES
(K) TYPE B CLASS 1.....WHITE SINGLE ARROW	TURN LANES
(L) TYPE B CLASS 1.....WHITE COMBINATION ARROW	TURN LANES
(M) TYPE B CLASS 1.....WHITE 8" LETTERS	PAVEMENT LETTERS (STOP, YIELD, BUS, ONLY etc.)
(N) TYPE B CLASS 1.....WHITE 6" WIDTH, 2' LONG, 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
(O) TYPE B CLASS 1.....WHITE 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS
(P) TYPE B CLASS 1.....YELLOW 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS
(Q) TYPE B CLASS 1.....WHITE 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS

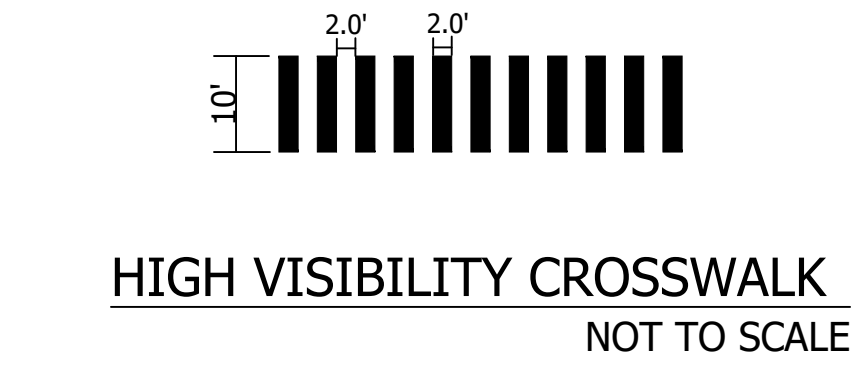
- SIGN AND PAVEMENT MARKING NOTES:**
- STREET WIDTH MEASUREMENTS ARE FROM FACE OF CURB TO FACE OF CURB. LANES ARE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING.
 - CONTACT DENNIS HOWELL OR HIS DESIGNEE AT 703-228-6598 OR (571) 437-1077 TO APPROVE MARKING LAYOUT 48 HRS. PRIOR TO INSTALLATION OF MARKINGS.
 - PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE FOLLOWING AND ANY REVISIONS HERE TO:
A) THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
B) ARLINGTON COUNTY MARKING STANDARDS.
 - ALL MARKINGS SHALL BE THERMOPLASTIC PER ARLINGTON COUNTY MARKING STANDARDS.
 - STOP BARS SHALL BE A MINIMUM OF 4' IN ADVANCE OF A MARKED CROSSWALK. IF THERE IS NO MARKED CROSSWALK, STOP BAR SHALL BE NO MORE THAN 30' FROM THE NEAREST EDGE OF THE INTERSECTED TRAVELED WAY.
 - CROSSWALKS SHALL BE 10' WIDE UNLESS OTHERWISE NOTED.
 - LEFT TURN ARROWS SHALL BE LOCATED 25' BACK FROM STOP BAR. FOR ADDITIONAL ARROWS FOLLOW COUNTY MARKING STANDARDS.
 - ON-STREET PARKING LANE IS 7' WIDE (UNLESS OTHERWISE NOTED) AND MARKED WITH 4" WIDE WHITE LINES. BEGINNING AND END OF PARKING SHALL BE MARKED WITH AN END LINE PERPENDICULAR TO CURB EXCEPT AT NUBS OR WHERE OTHERWISE INDICATED.
 - SHARED LANE MARKINGS SHALL BE PLACED IN CENTER OF LANE, 250' APART UNLESS OTHERWISE SPECIFIED.
 - BIKE LANE SYMBOLS TO BE PLACED 330' APART UNLESS OTHERWISE SPECIFIED.

PAVEMENT LEGEND:

	EXIST. PAVEMENT TO BE REMOVED (FULL DEPTH SAW CUT AND REPLACE WITH NEW PAVEMENT)
	MILL AND RESURFACE EXISTING PAVEMENT (PROVIDE 1 1/2" MIN. MILLING DEPTH)

LEGEND

	EXISTING	PROPOSED
	BUS STOP	
	FIRE HYDRANT	
	PARKING METER	
	SIGN	
	STRIPING	



- CONSTRUCTION NOTES:**
- EXISTING PAVEMENT MARKINGS TO REMAIN.
 - ERADICATE EXISTING PAVEMENT MARKINGS.
 - TIE INTO EXISTING PAVEMENT MARKINGS.
 - LIMIT OF MILL & RESURFACE OF EXIST. PAVEMENT
 - LIMIT OF FULL DEPTH PAVEMENT REPLACEMENT
 - REMOVE AND REPLACE CONCRETE AND BRICK PAVERS (ARLINGTON COUNTY DETAIL R-2.1)
 - REMOVE AND REPLACE CONCRETE CURB, STANDARD 6" (VDOT CG-2)

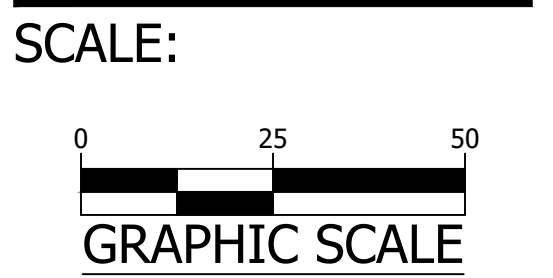
Virginia Department of Transportation
REVIEW OF WORKING DRAWINGS
Working drawings have been reviewed in accordance with Section 105.10 2016 VDOT Road & Bridge Specifications

REVIEW COMPLETED
CORRECT & RESUBMIT
REJECTED - SEE REMARKS

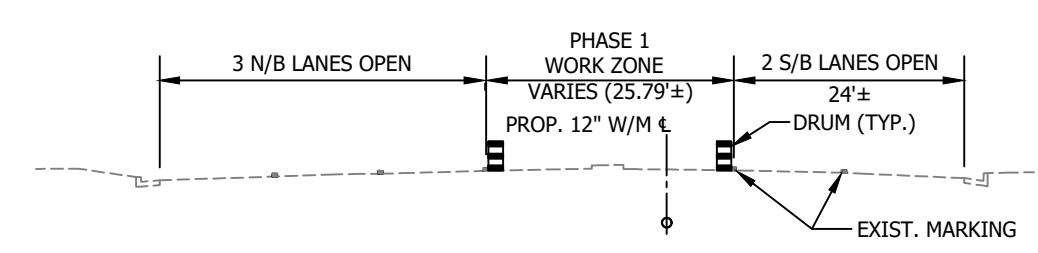
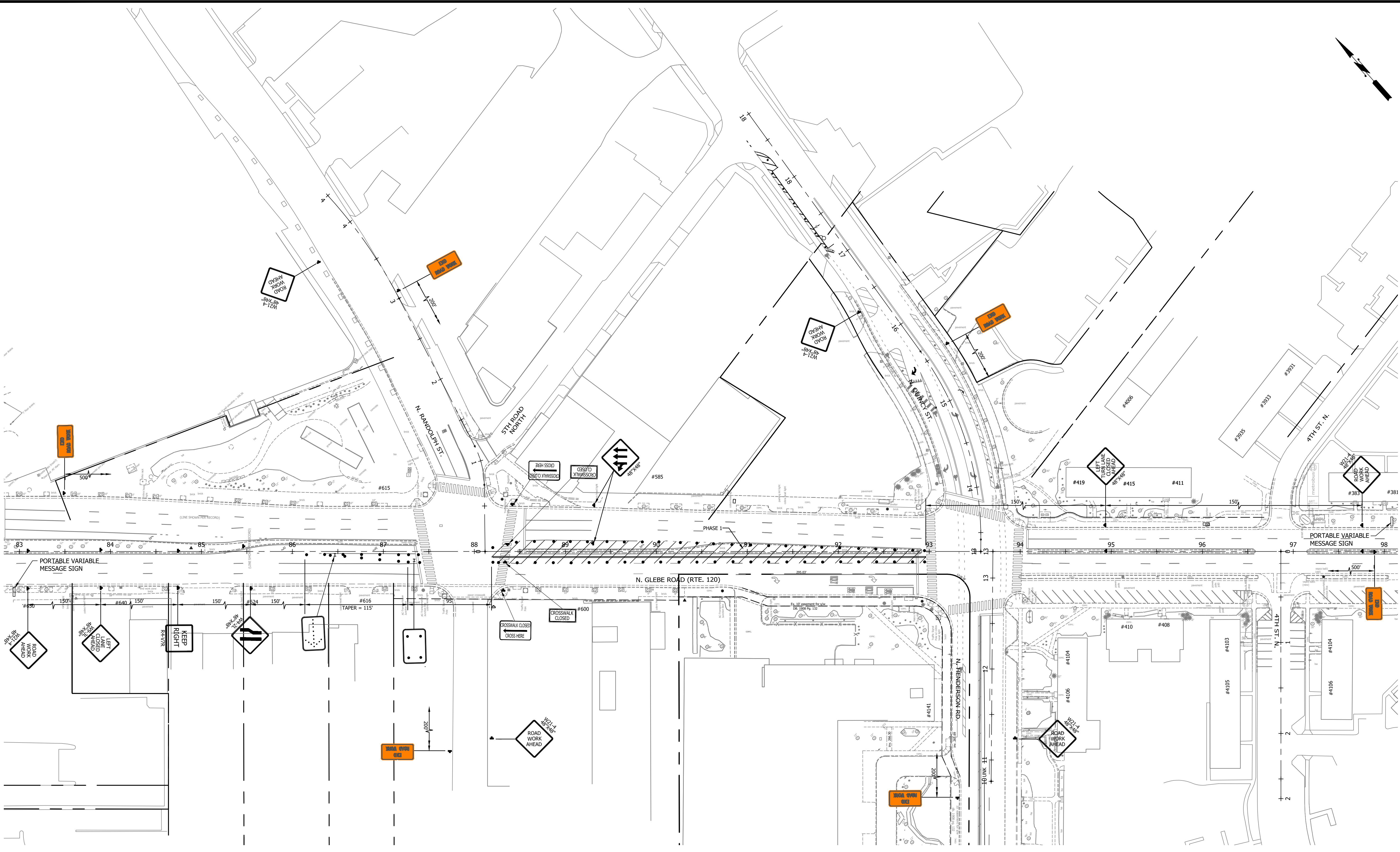
Reviewed by: G.Sarmac Date: 1/13/21

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
PAVING AND PAVEMENT MARKING PLAN - 2

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS
PLOTTED: FEBRUARY 10 2021



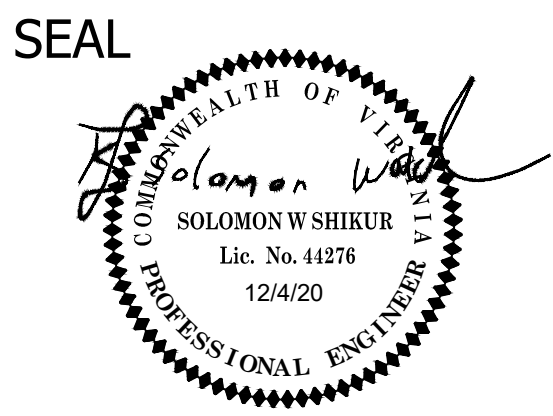
C055.2



PHASE 1 - N. GLEBE ROAD

NOTES:

- PHASE 1 WORK SHALL BE COMPLETED IN 22 CALENDAR DAYS.
- TYPICAL FIGURES USED IN THIS PHASE:
(A) TTC-17.2
(B) TTC-23.2
- CONTRACTOR TO NOTIFY COUNTY STAFF TO INSTALL TEMPORARY NO PARKING SIGNS 1 WEEK PRIOR TO CONSTRUCTION.



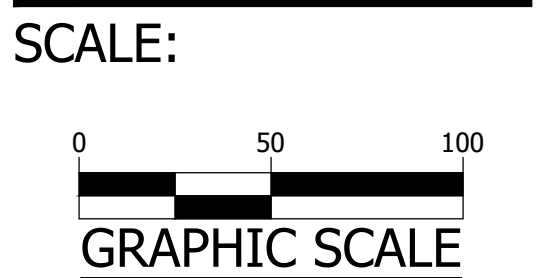
APPROVALS	DATE
<i>Amy Pflaum</i>	2/1/2021
QUALITY CONTROL ENGINEER	2.3.21
<i>R.V. Taktak</i>	02.09.2021
CONSTRUCTION MANAGEMENT SUPERVISOR	02/09/21
<i>Dennis M. Leach</i>	02/09/21
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dabney R. Carver</i>	01/27/2021
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

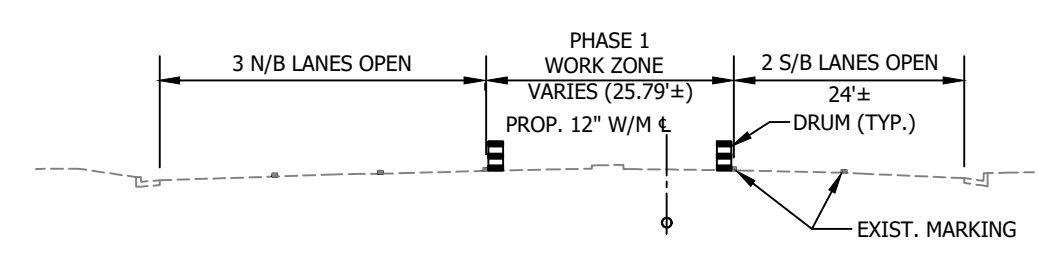
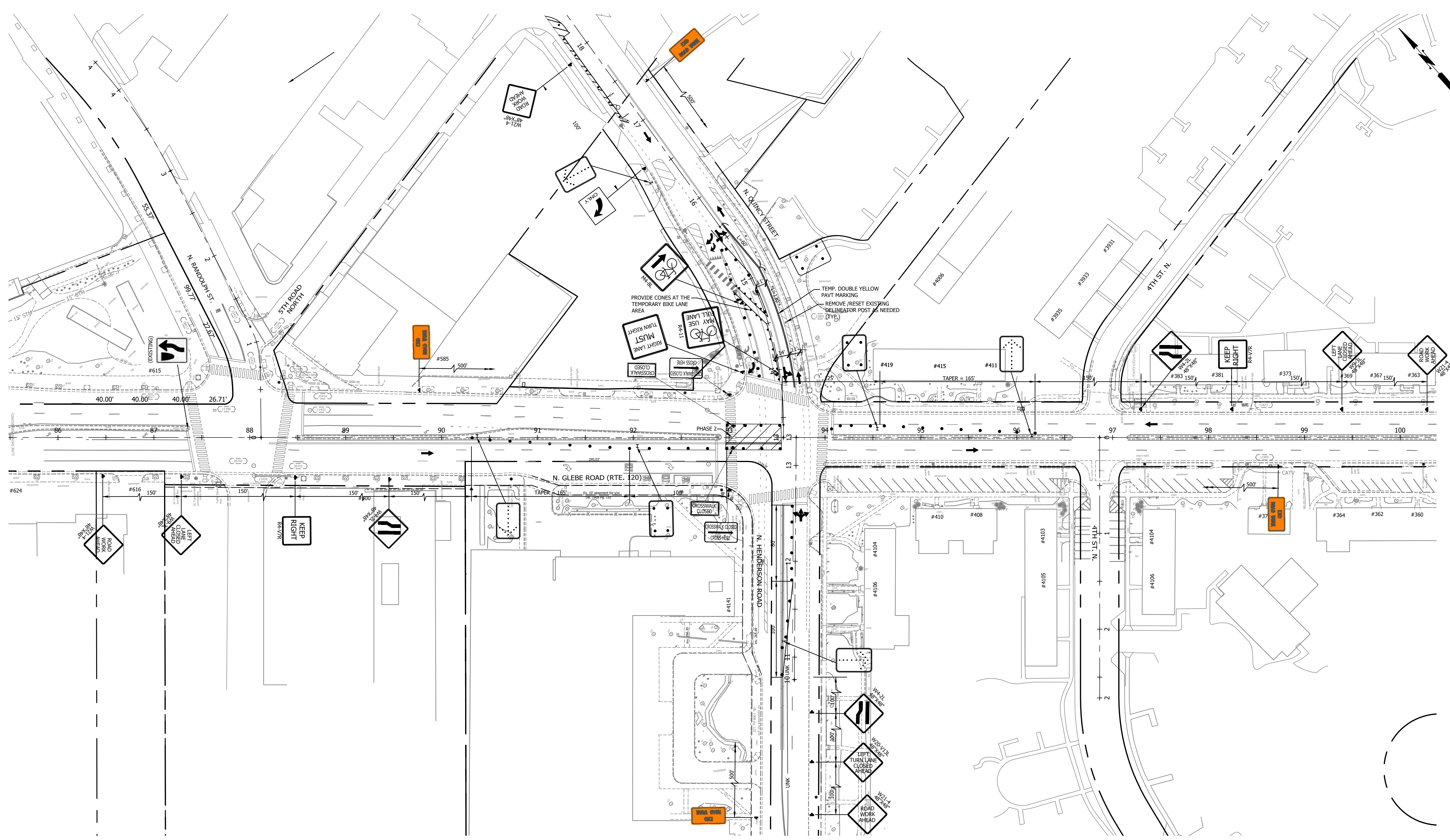
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
MAINTENANCE OF TRAFFIC PLAN - 1
PHASE 1

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: FEBRUARY 10 2021





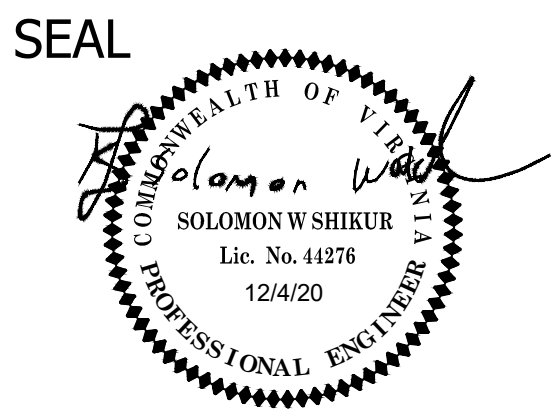
PHASE 1 - N. GLEBE ROAD

- NOTES:**
1. PHASE 2 WORK SHALL BE COMPLETED IN 6 CALENDAR DAYS.
 2. TYPICAL FIGURES USED IN THIS PHASE:
(A) TTC-17.2
(B) TTC-23.2
(C) TTC-27.2
 3. CONTRACTOR TO NOTIFY COUNTY STAFF TO INSTALL TEMPORARY NO PARKING SIGNS 1 WEEK PRIOR TO CONSTRUCTION.
 4. CONTRACTORS MUST HAVE FLAGGERS & POLICE ASSISTANCE DURING CONSTRUCTION. CONTRACTOR TO CONSIDER NIGHT WORK DURING THE CONSTRUCTION ON THE INTERSECTION AREAS.



DEPARTMENT OF ENVIRONMENTAL SERVICES
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 ENGINEERING BUREAU
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 FAX: 703.228.3606

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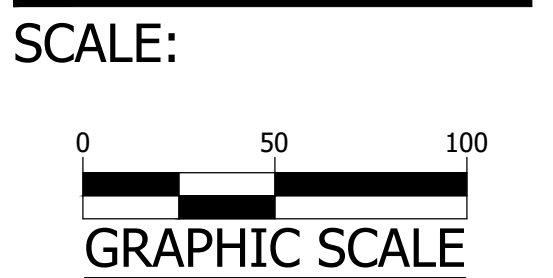
APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.W. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Caver</i> PROJECT MANAGER	01/27/2021

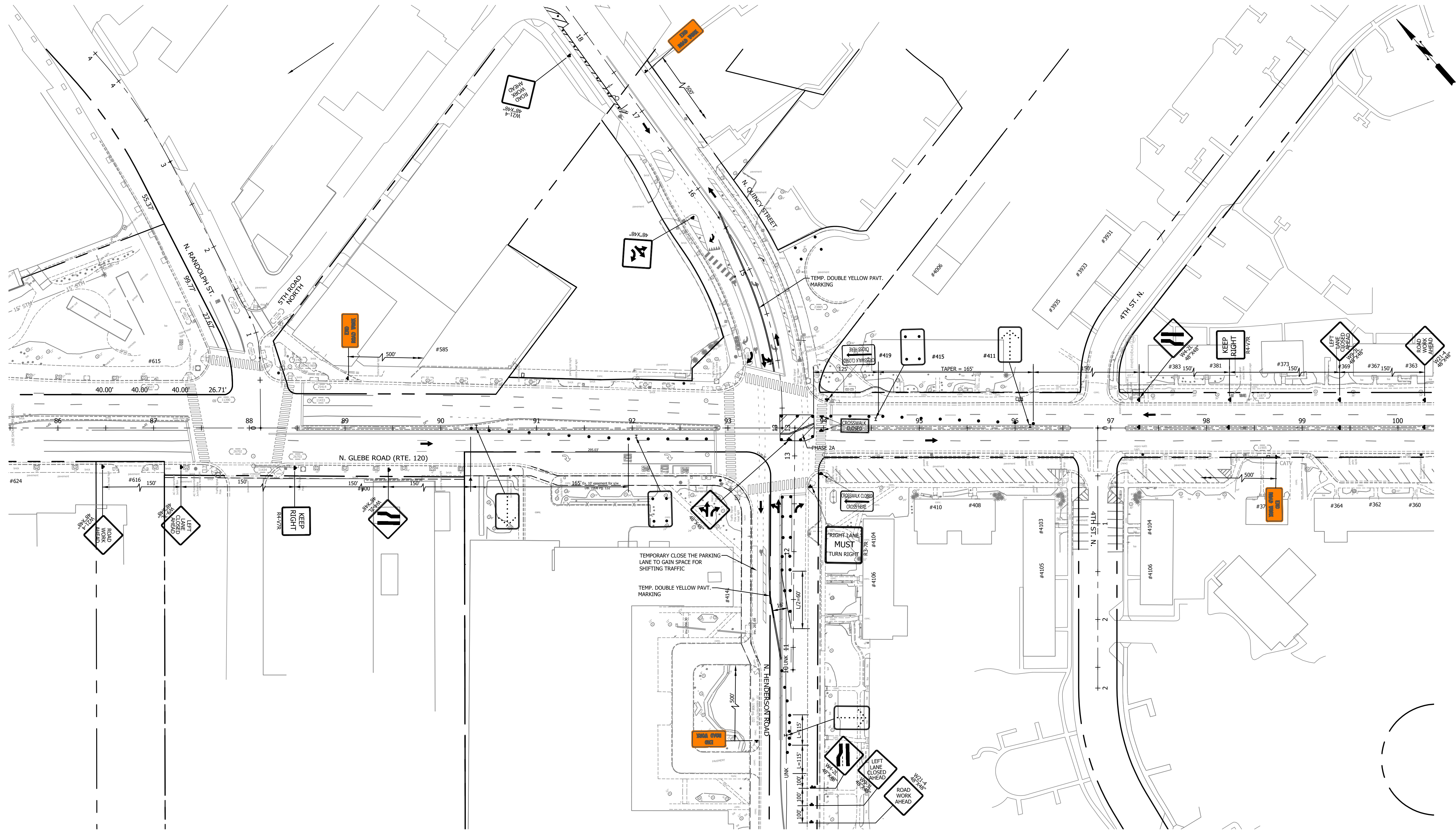
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 MAINTENANCE OF TRAFFIC PLAN - 2
 PHASE 2

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021



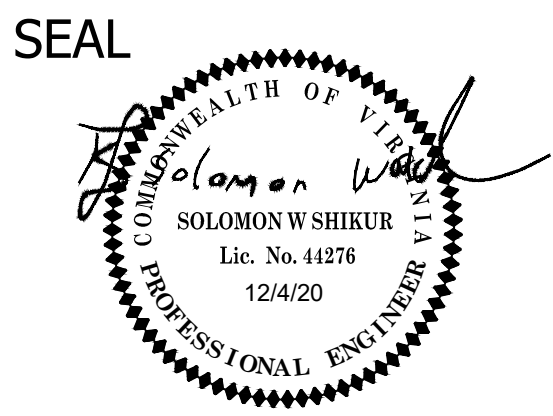


- NOTES:**
1. PHASE 2 WORK SHALL BE COMPLETED IN 2 CALENDAR DAYS.
 2. TYPICAL FIGURES USED IN THIS PHASE:
(A) TTC-17.2
(B) TTC-23.2
(C) TTC-29.2
 3. CONTRACTOR TO NOTIFY COUNTY STAFF TO INSTALL TEMPORARY NO PARKING SIGNS 1 WEEK PRIOR TO CONSTRUCTION.
 4. CONTRACTORS MUST HAVE FLAGGERS & POLICE ASSISTANCE DURING CONSTRUCTION.
CONTRACTOR TO CONSIDER NIGHT WORK DURING THE CONSTRUCTION ON THE INTERSECTION AREAS.



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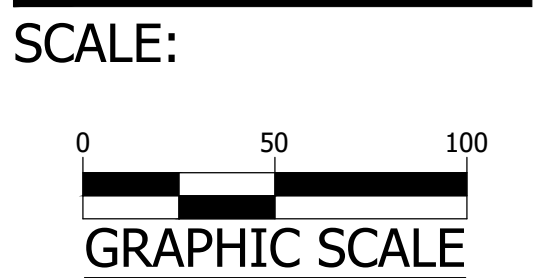
APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.V. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>Oliver</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Caver</i> PROJECT MANAGER	01/27/2021

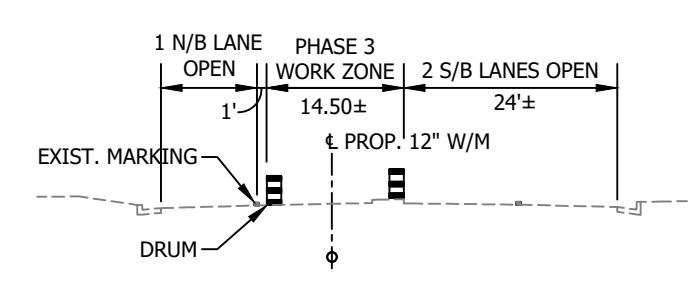
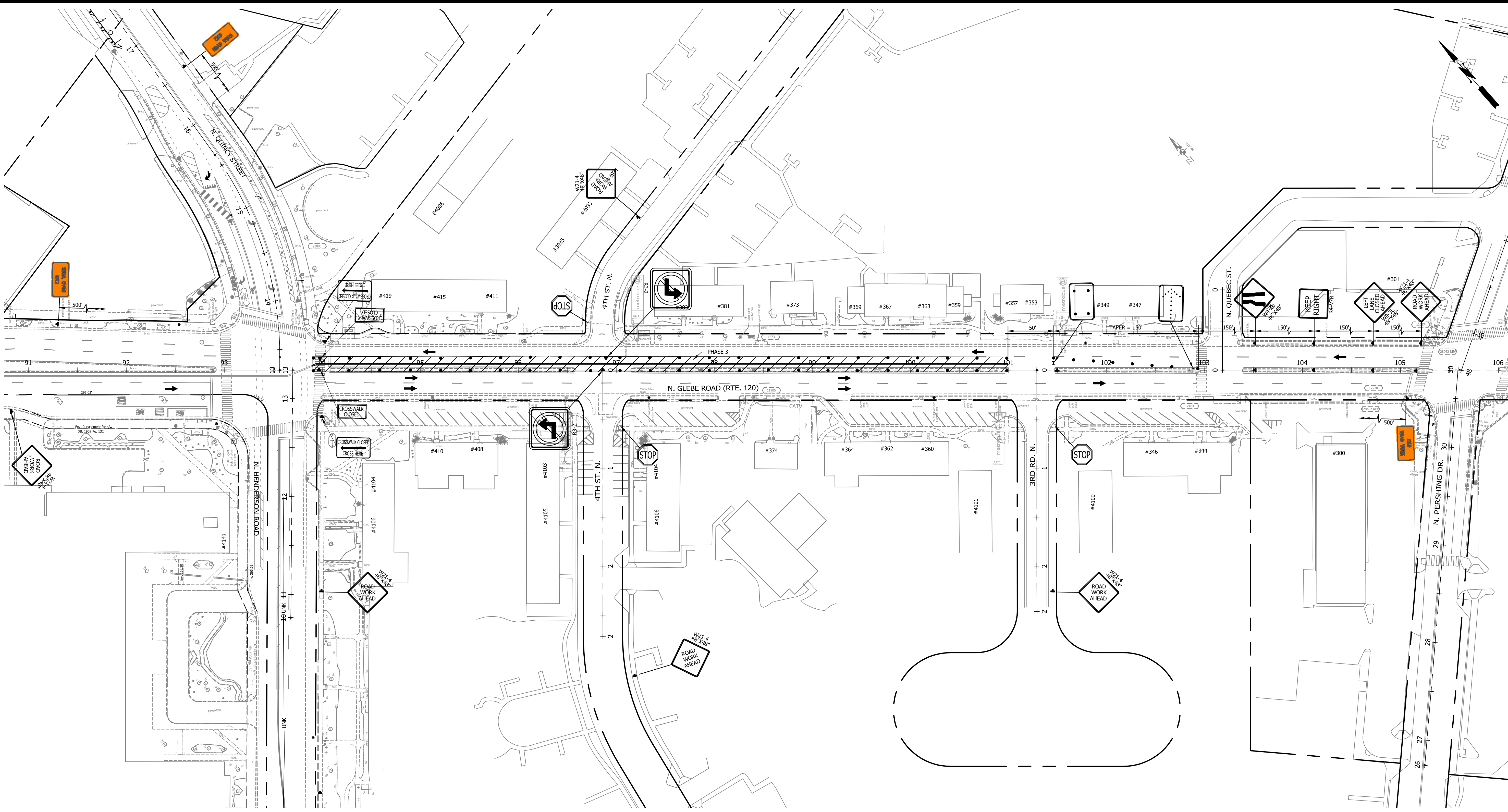
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
MAINTENANCE OF TRAFFIC PLAN - 2A
 PHASE 2A

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021





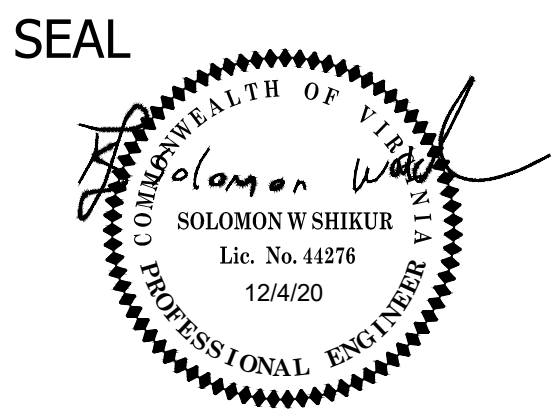
PHASE 3 - N. GLEBE ROAD

- NOTES:**
1. PHASE 3 WORK SHALL BE COMPLETED IN 36 CALENDAR DAYS.
 2. TYPICAL FIGURES USED IN THIS PHASE:
(A) TTC-17.2
(B) TTC-23.2
 3. CONTRACTOR TO NOTIFY COUNTY STAFF TO INSTALL TEMPORARY NO PARKING SIGNS 1 WEEK PRIOR TO CONSTRUCTION.



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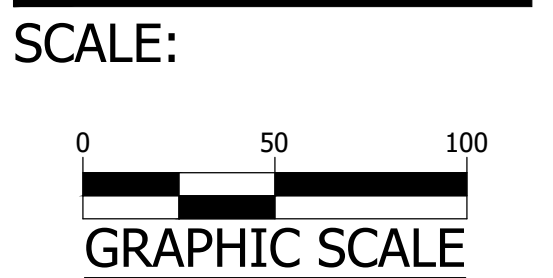
APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	2/1/2021
R.V. Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
Oliver WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	02/09/21
Dabney R. Caver PROJECT MANAGER	01/27/2021

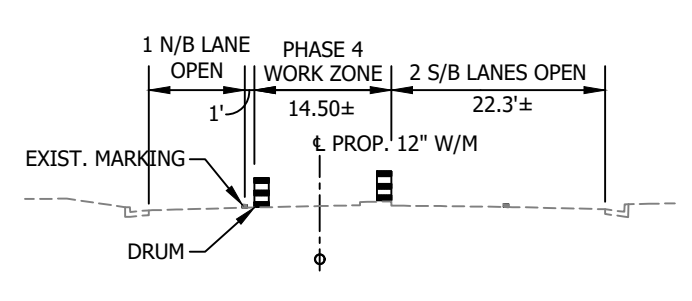
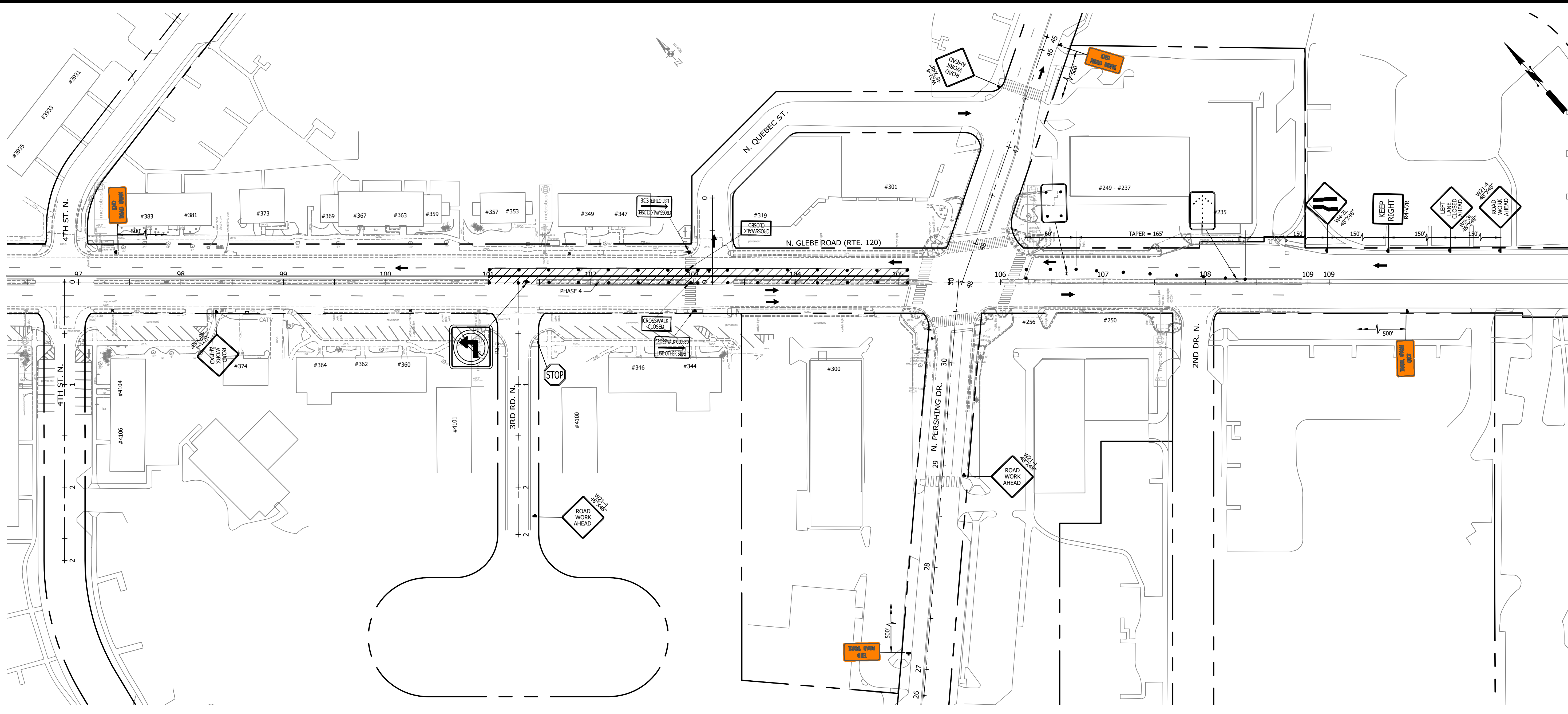
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 MAINTENANCE OF TRAFFIC PLAN - 3
 PHASE 3

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021





PHASE 4 - N. GLEBE ROAD

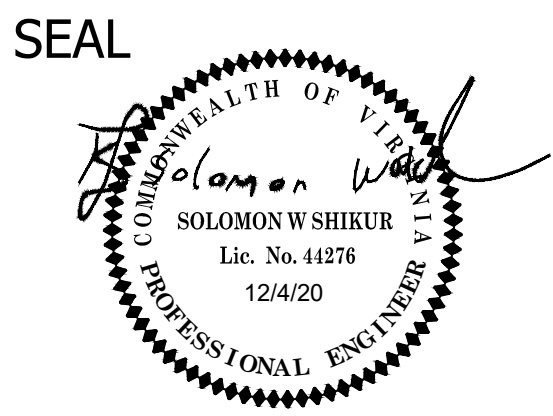
NOTES:

- PHASE 4 WORK SHALL BE COMPLETED IN 20 CALENDAR DAYS.
- TYPICAL FIGURES USED IN THIS PHASE:
(A) TTC-17.2
(B) TTC-23.2
- CONTRACTOR TO NOTIFY COUNTY STAFF TO INSTALL TEMPORARY NO PARKING SIGNS 1 WEEK PRIOR TO CONSTRUCTION.



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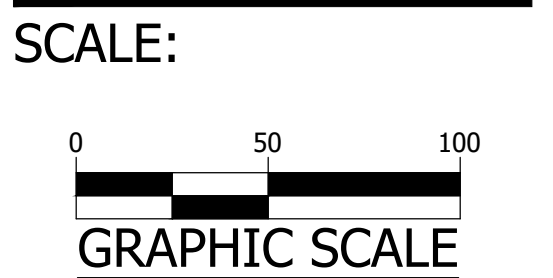
APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/11/2021
<i>R.V. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Carver</i> PROJECT MANAGER	01/27/2021

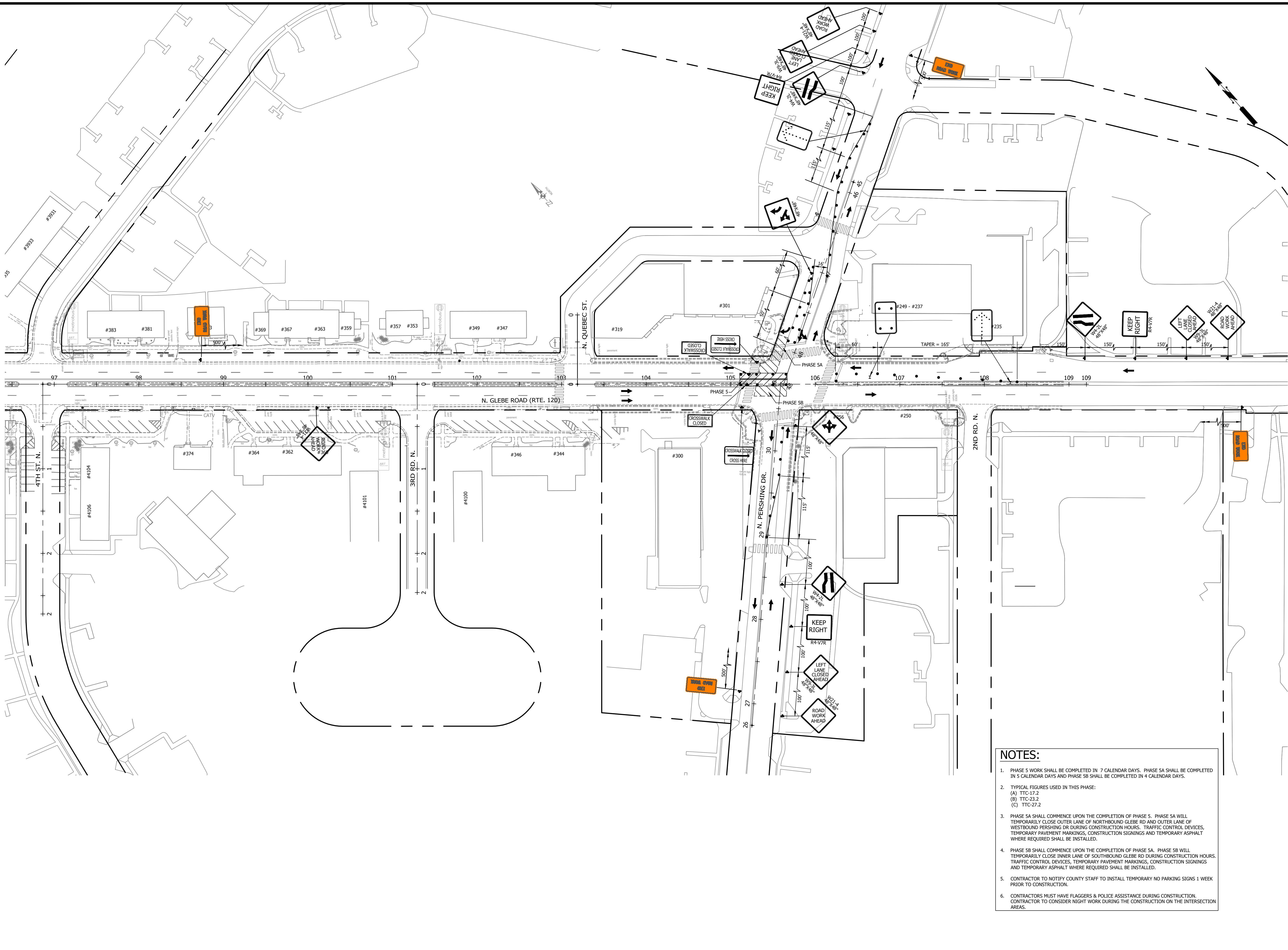
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
MAINTENANCE OF TRAFFIC PLAN - 4
PHASE 4

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: FEBRUARY 10 2021





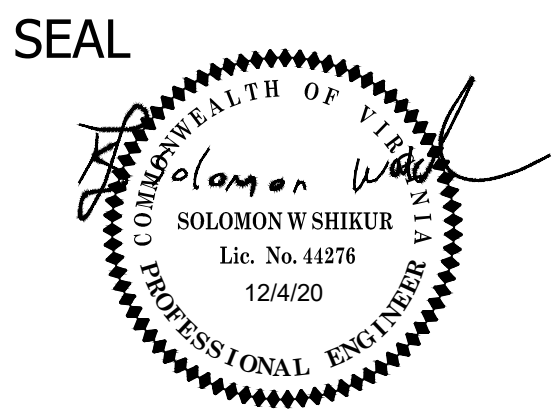
NOTES:

- PHASE 5 WORK SHALL BE COMPLETED IN 7 CALENDAR DAYS. PHASE 5A SHALL BE COMPLETED IN 5 CALENDAR DAYS AND PHASE 5B SHALL BE COMPLETED IN 4 CALENDAR DAYS.
- TYPICAL FIGURES USED IN THIS PHASE:
 (A) TTC-17.2
 (B) TTC-23.2
 (C) TTC-27.2
- PHASE 5A SHALL COMMENCE UPON THE COMPLETION OF PHASE 5. PHASE 5A WILL TEMPORARILY CLOSE OUTER LANE OF NORTHBOUND GLEBE RD AND OUTER LANE OF WESTBOUND PERSHING DR. DURING CONSTRUCTION HOURS. TRAFFIC CONTROL DEVICES, TEMPORARY PAVEMENT MARKINGS, CONSTRUCTION SIGNINGS AND TEMPORARY ASPHALT WHERE REQUIRED SHALL BE INSTALLED.
- PHASE 5B SHALL COMMENCE UPON THE COMPLETION OF PHASE 5A. PHASE 5B WILL TEMPORARILY CLOSE INNER LANE OF SOUTHBOUND GLEBE RD DURING CONSTRUCTION HOURS. TRAFFIC CONTROL DEVICES, TEMPORARY PAVEMENT MARKINGS, CONSTRUCTION SIGNINGS AND TEMPORARY ASPHALT WHERE REQUIRED SHALL BE INSTALLED.
- CONTRACTOR TO NOTIFY COUNTY STAFF TO INSTALL TEMPORARY NO PARKING SIGNS 1 WEEK PRIOR TO CONSTRUCTION.
- CONTRACTORS MUST HAVE FLAGGERS & POLICE ASSISTANCE DURING CONSTRUCTION. CONTRACTOR TO CONSIDER NIGHT WORK DURING THE CONSTRUCTION ON THE INTERSECTION AREAS.



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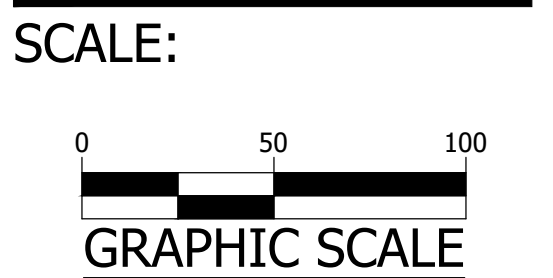
APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.V. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>Debra</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Caver</i> PROJECT MANAGER	01/27/2021

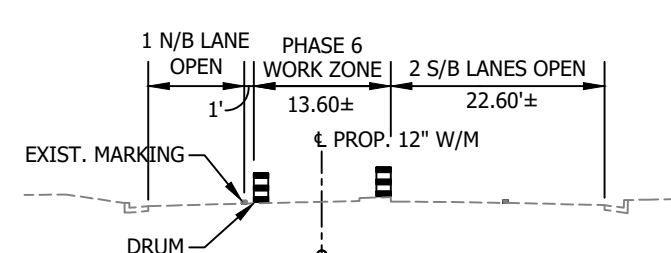
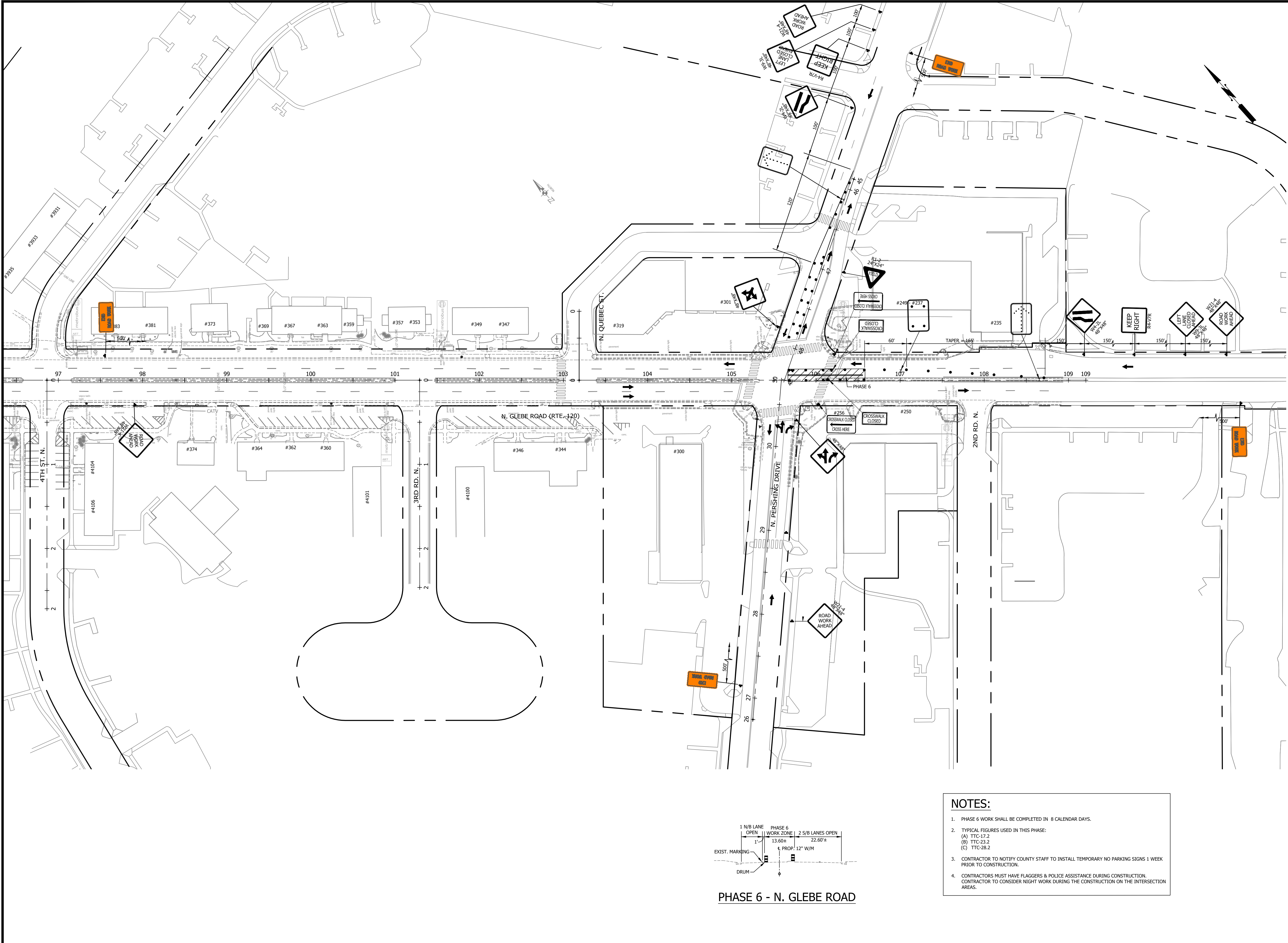
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 MAINTENANCE OF TRAFFIC PLAN - 5
 PHASE 5, 5A & 5B

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021





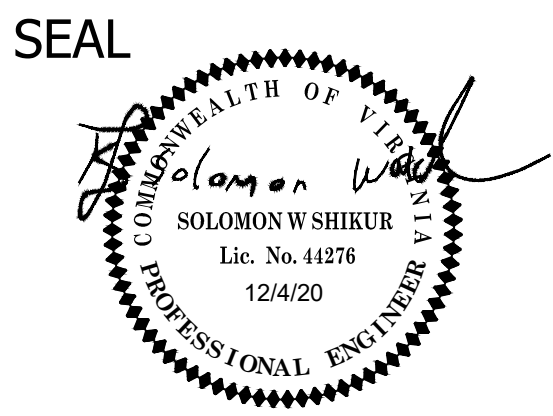
PHASE 6 - N. GLEBE ROAD

- NOTES:**
1. PHASE 6 WORK SHALL BE COMPLETED IN 8 CALENDAR DAYS.
 2. TYPICAL FIGURES USED IN THIS PHASE:
(A) TTC-17.2
(B) TTC-23.2
(C) TTC-28.2
 3. CONTRACTOR TO NOTIFY COUNTY STAFF TO INSTALL TEMPORARY NO PARKING SIGNS 1 WEEK PRIOR TO CONSTRUCTION.
 4. CONTRACTORS MUST HAVE FLAGGERS & POLICE ASSISTANCE DURING CONSTRUCTION. CONTRACTOR TO CONSIDER NIGHT WORK DURING THE CONSTRUCTION ON THE INTERSECTION AREAS.



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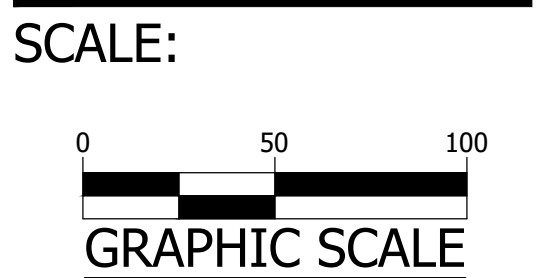
APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.V. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>Quinn</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Caver</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 MAINTENANCE OF TRAFFIC PLAN - 6
 PHASE 6

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: FEBRUARY 10 2021



N. GLEBE ROAD WATERMAIN REPLACEMENT PROJECT N. RANDOPH ST. TO N. PERSHING DR. TRANSPORTATION MANAGEMENT PLAN (TMP)

GENERAL TMP NOTES:

1. PROJECT IS A "TYPE A" TMP PROJECT. THIS PROJECT SUPPORTS FOR THE IMPROVEMENT OF N GLEBE ROAD WATERMAIN REPLACEMENT . THE DESIGN FOR THE N. GLEBE ROAD WATERMAIN IMPROVEMENT PROJECT INCLUDES THE UPGRADING OF THE 8" EXISTING WATERMAIN TO 12" WATERMAIN.

2. FOR WATERMAIN REPLACEMENT WORK (ONE-LANE CLOSURE), THE WORKING HOURS ALONG VDOT RIGHT-OF-WAY AREA ARE AS FOLLOWS:

MON. TO THU.	FRIDAY	MON. TO FRI.	FRI. TO SAT.	SUNDAY
9:30 AM TO 3:00 PM	9:30 AM TO 2:00 PM	10:00 PM TO 5:00 AM	10:00 PM TO 9:00 AM	*NOT ALLOWED

3. THE WORKING HOURS WITHIN ARLINGTON COUNTY RIGHT-OF-WAY ARE AS FOLLOWS:

MON. TO FRI.	NIGHT WORK	SUNDAY
9:00 AM TO 4:00 PM	10:00 PM TO 5:00 AM	*Not Allowed

- BEFORE AND AFTER WORKING HOURS, ALL TRAVEL LANES SHALL BE OPENED TO THE MOTORISTS.
- NO LANE CLOSURES WILL BE ALLOWED FROM NOON ON THE DAY BEFORE A HOLIDAY UNTIL NOON ON THE WORKDAY FOLLOWING THE HOLIDAY. HOLIDAYS INCLUDE ALL STATE AND FEDERAL HOLIDAYS.
- MAINTENANCE OF TRAFFIC (MOT) PLAN WHICH INCLUDE THE SEQUENCE OF CONSTRUCTION (SOC) WAS REVIEWED AND APPROVED BY THE ARLINGTON COUNTY TRANSPORTATION ENGINEERING AND OPERATION (TE&O) BUREAU.
- NO DRIVEWAY ENTRANCES ARE BEING AFFECTED BY THE PROPOSED WORK ALONG VDOT R-O-W.
- THE CONTRACTOR SHALL COORDINATE WITH ARLINGTON COUNTY TRANSIT BUREAU (703-228-3049) AT LEAST 4 WEEKS PRIOR TO COMMENCEMENT OF WORK FOR APPROVAL, IF TRANSIT IS AFFECTED.
- THE CONTRACTOR SHALL RETAIN PEDESTRIAN ACCESS TO THE BUS STOPS LOCATED WITHIN THE CONSTRUCTION ZONE FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL :
 - DESIGNATE A PERSON ASSIGNED TO THE PROJECT WHO WILL HAVE THE PRIMARY RESPONSIBILITY, WITH SUFFICIENT AUTHORITY, FOR IMPLEMENTING THE TMP/MOT/SOC AND OTHER SAFETY AND MOBILITY ASPECTS OF THE PERMIT WORK. THIS PERSON SHALL COORDINATE WITH THE ARLINGTON COUNTY CONSTRUCTION MANAGER FOR THE DURATION OF THE PROJECT.
 - ENSURE THAT PERSONNEL ASSIGNED TO THE PROJECT ARE TRAINED IN TRAFFIC CONTROL TO A LEVEL COMMENSURATE WITH THEIR RESPONSIBILITIES IN ACCORDANCE WITH VDOT'S WORK ZONE TRAFFIC CONTROL TRAINING GUIDELINES.
 - PERFORM REVIEWS OF THE CONSTRUCTION AREA TO ENSURE COMPLIANCE WITH CONTRACT DOCUMENTS AT REGULARLY SCHEDULED INTERVALS AT THE DIRECTION OF THE ENGINEER. CONTRACTORS SHALL MAINTAIN AN APPROVED COPY OF THE TEMPORARY TRAFFIC CONTROL PLAN AT THE WORK SITE AT ALL TIMES.
- THIS TMP/MOT/SOC PLAN IS INTENDED AS A GUIDE. IT IS NOT TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH PHASE, BUT ONLY TO SHOW THE GENERAL HANDLING OF EXISTING TRAFFIC. IF THE CONTRACTOR IS TO DEVIATE FROM THE APPROVED TMP, A NEW OR REVISED TMP MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
- ALL AREAS EXCAVATED BELOW THE EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED UP TO EXISTING PAVEMENT OR NEWLY CONSTRUCTED PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADD ANY ADDITIONAL TEMPORARY MEASURES NECESSARY TO FACILITATE PROPER, POSITIVE DRAINAGE FOR THE DURATION OF CONSTRUCTION.
- EACH PHASE OF CONSTRUCTION SHALL BE COMPLETED PRIOR TO THE START OF THE NEXT PHASE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- PUBLIC COMMUNICATION PLAN
THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
 - NOTIFYING THE VDOT PROJECT MANAGER/RESIDENCY ADMINISTRATOR OF SCHEDULED WORK PLANS AT LEAST 48 HOURS PRIOR TO BEGINNING EACH PHASE OF THE MAINTENANCE OF TRAFFIC OPERATIONS.
 - NOTIFYING THE VDOT PROJECT MANAGER/RESIDENCY ADMINISTRATOR, REGIONAL OPERATION MANAGER AND THE PUBLIC AFFAIRS STAFF OF ANY UNSCHEDULED TRAFFIC DELAYS THAT THAT MAY OCCUR.
 - INSTALLING PORTABLE VARIABLE MESSAGE SIGNBOARDS (VMS) WITH PROJECT START DATE INFORMATION APPROXIMATELY 500' BEFORE AND AFTER THE PROJECT SITE LIMIT THREE (3) WEEKS ADVANCE PRIOR TO START OF ANY ROADWORK AND LANE CLOSURE.
- TRANSPORTATION OPERATION PLANS
THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND PROVIDING THE FOLLOWING:
 - NOTIFYING THE VDOT REGIONAL TRANSPORTATION OPERATIONS CENTER (TOC) 48 HOURS IN ADVANCE IN ORDER TO PLACE LANE CLOSURE INFORMATION ON THE 511 SYSTEM AND VA-TRAFFIC. FOR ADDITIONAL INFORMATION, PLEASE CALL CARLENE MC WHIRT AT 571-350-2078.
 - HAVING THE LIST OF LOCAL EMERGENCY RESPONSE AGENCIES AVAILABLE AT THE WORK SITE AT ALL TIMES.
 - IMMEDIATELY REPORTING ANY TRAFFIC INCIDENTS THAT MAY OCCUR IN THE WORK ZONE.
 - NOTIFY THE PROJECT'S CONSTRUCTION MANAGER AND CORRESPONDING ENGINEER OF ANY INCIDENTS AND EXPECTED TRAFFIC DELAYS.
 - WITHIN 24 HOURS OF ANY INCIDENTS WITHIN THE CONSTRUCTION WORK ZONE, A REVIEW OF THE TRAFFIC CONTROLS SHALL BE IMPLEMENTED AND NECESSARY ADJUSTMENTS MADE TO REDUCE THE FREQUENCY AND SEVERITY OF ANY FUTURE ACCIDENTS.
 - EMERGENCY CONTACTS DURING THE DURATION OF THE PROJECTS ARE THE FOLLOWING:
 - KAMAL TAKTAK - CONSTRUCTION MANAGEMENT SUPERVISOR - 703-228-7527
 - SOLOMON SHIKUR - ENGINEERING DESIGN TEAM SUPERVISOR - 703-228-3654
 - DES R-O-W PERMITTING SECTION - 703-228-4798
 - ARLINGTON COUNTY TRANSIT BUREAU - 703-228-3049
 - WATER, SEWER AND STREET OPERATION - 703-228-6555
 - ARLINGTON COUNTY POLICE - 703-558-2222
 - EMERGENCY CALL - 911
 - VDOT PROJECT CONSTRUCTION INSPECTOR - TBD

FIRE DEPARTMENT NOTES:

- ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.

MAINTENANCE OF TRAFFIC (MOT) GENERAL NOTES:

- TRAFFIC CONTROL DEVICES AND SAFETY MEASURES SHALL COMPLY WITH THE LATEST EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL, VDOT'S GUIDELINES FOR TEMPORARY TRAFFIC CONTROL, FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, ARLINGTON COUNTY STANDARDS, THE TRAFFIC CONTROL PLANS INCLUDED IN THE CONSTRUCTION DRAWINGS, AND/OR AS DIRECTED BY THE PROJECT OFFICER.
- THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE WHICH INDICATES START AND FINISH DATES FOR EACH SEGMENT OF THE WORK. THE SCHEDULE SHALL INDICATE THE DURATION OF ALL LANE OR SHOULDER CLOSURES. THE CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF PROCEEDING TO THE NEXT WORK SEGMENT.
- THE CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER OF PARKING RESTRICTION NEEDS A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCEMENT OF WORK FOR EACH SEGMENT. COUNTY PROJECT OFFICER SHALL RESTRICT PARKING BY CONTACTING DES - PERMITTING SECTION, 703-228-4798.
- PORTABLE VARIABLE MESSAGE SIGNS WITH CLOSURE INFORMATION MUST BE INSTALLED AHEAD OF WORK AREA 3 WEEKS PRIOR TO CLOSURE.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL EITHER MAINTAIN APPROPRIATE SIGHT DISTANCE TO ALL TRAFFIC SIGNS OR PROVIDE FOR TEMPORARY SIGNAGE OR FLAGGERS TO GUIDE TRAFFIC THROUGH WORK ZONES.
- THE CONTRACTOR SHALL MINIMIZE THE DURATION OF ANY BLOCKAGE TO PRIVATE ENTRANCES AND DRIVEWAYS. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF DRIVEWAY CLOSURE FOR APPROVAL BY THE PROJECT OFFICER. THE PROJECT OFFICER SHALL BE NOTIFIED A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF SUCH ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE TEMPORARY CLOSURE OF ACCESS TO THE PROPERTY. THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORKDAY.
- WHEN DOING WORK AT THE INTERSECTION AN ARLINGTON COUNTY POLICE OFFICER(S) SHALL BE PRESENT TO DIRECT OR MONITOR ROAD USERS DURING MOT OPERATIONS AT THE CONTRACTOR'S EXPENSE. CONTACT ARLINGTON COUNTY POLICE DEPARTMENT LT. ROBERT DESO OR HIS ASSIGNEE AT 703-228-7460 FOR DETAILS AT LEAST 2 WEEKS IN ADVANCE PRIOR TO START OF WORK AT FOLLOWING INTERSECTIONS SHOWN BELOW.
 - N. GLEBE ROAD / N. HENDERSON ROAD / N. QUINCY STREET INTERSECTION
 - N. GLEBE ROAD / N. PERSHING DRIVE INTERSECTION
- ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE PROJECT OFFICER TO REMAIN OPEN PAST NORMAL WORKING HOURS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PROTECTED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND AS APPROVED BY THE PROJECT OFFICER.
- PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS, UNLESS OTHERWISE APPROVED IN THE PLANS.
- PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH MUTCD.
- ADEQUATE PROVISIONS FOR PERSONS WITH DISABILITIES SHALL BE PROVIDED AT ALL TIMES PER ADA REQUIREMENTS.
- WHEN NECESSARY, PEDESTRIANS SHALL BE APPROPRIATELY DIRECTED WITH ADVANCED WARNING SIGNS PLACED AT INTERSECTIONS, TO CROSS TO THE OPPOSITE SIDE OF THE ROADWAY IN ORDER TO PREVENT CONFLICT WITH MIDDLEBLOCK WORK SITES.
- PEDESTRIANS SHALL NOT BE LED INTO CONFLICT WITH WORK SITE EQUIPMENT, OPERATIONS, AND/OR VEHICLES MOVING THROUGH OR AROUND THE WORK SITE.
- THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY TRANSIT BUREAU, 703-228-3049, A MINIMUM OF 4 WEEKS PRIOR TO COMMENCEMENT OF WORK, IF TRANSIT IS AFFECTED.
- AT SIGNALIZED INTERSECTIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING VEHICLE DETECTION AT ALL TIMES DURING THE PROJECT. TRAFFIC SENSORS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION STATE PRIOR TO THE COMPLETION OF THIS PROJECT.
- THE CONTRACTOR SHALL COMPLY WITH "RESTRICTED" WORKING HOURS AS DEFINED BY VDOT AND AS NOTED ON THE APPROVED VDOT PERMIT WHEN WORKING WITHIN THE VDOT RIGHT-OF-WAY. THE CONTRACTOR IS RESPONSIBLE FOR SATISFYING ALL VDOT PERMIT REQUIREMENTS.
- MAINTENANCE OF TRAFFIC PLANS AND DETAILS SHOWN HERE SHALL BE FOLLOWED BY THE CONTRACTOR DURING CONSTRUCTION. SHOULD THE CONTRACTOR DESIRE TO FOLLOW AN ALTERNATE PLAN, HE SHALL SUBMIT THE PLAN PRIOR TO CONSTRUCTION FOR REVIEW AND APPROVAL. ALTERNATIVE PLAN PREPARATION SHALL BE NO COST TO THE COUNTY.
- DIRECTIONAL ARROWS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS ARE FOR INFORMATION ONLY AND ARE NOT TO BE PLACED AS PAVEMENT MARKINGS.
- THE CONTRACTOR SHALL COVER ANY EXISTING SIGNS WHICH ARE NOT APPLICABLE OR ARE IN CONFLICT WITH THIS MOT PLAN.
- THE CONTRACTOR SHALL ERADICATE AND RE-STRIPE AS NECESSARY ANY EXISTING PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH OR DO NOT ALIGN WITH THE TEMPORARY PAVEMENT MARKINGS OR NEW TRAFFIC PATTERNS.
- THE CONTRACTOR SHALL ERADICATE ALL TEMPORARY PAVEMENT MARKINGS, INCLUDING TEMPORARY MARKED CROSSWALKS ONCE THE WORK AREA(S) ASSOCIATED WITH THE MARKINGS HAS BEEN COMPLETED.
- CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY PUBLIC SCHOOLS TWO WEEKS PRIOR TO STARTING CONSTRUCTION.
- ALL TEMPORARY AND BUS TRAVEL LANES SHALL BE 11' WIDE.

LEGEND:

- ILLUMINTAED FLASHING AMBER ARROW PANEL TYPE C
- ILLUMINTAED FLASHING AMBER (CAUTION MODE) ARROW PANEL TYPE B OR C
- AREA UNDER CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- ARROW PANEL
- SIGN
- TYPE III BARRICADE
- FLAGGER STATION

DRUM GROUP 2

Virginia Department of Transportation
REVIEW OF WORKING DRAWINGS

Working drawings have been reviewed in accordance with Section 105.10 2016 VDOT Road & Bridge Specifications

REVIEW COMPLETED
 CORRECT & RESUBMIT
 REJECTED - SEE REMARKS

Reviewed by: _____ Date: _____

REVIEWED
By Brian E. Fry at 10:50 am, Jan 19, 2021

Commonwealth of Virginia
Virginia Department of Transportation VDOT

VERIFICATION OF COMPLETION OF ADVANCED WORK ZONE TRAFFIC CONTROL TRAINING AND FLAGGER CERTIFICATION

This is to verify that Solomon Shikur has successfully completed training and an examination by the Department on the proper practices and methods for the installation, maintenance, removal of temporary traffic control devices and flagging operations.

Date: 8/2/2019
Sign: Solomon Shikur
Sign Title: Engineer
Expiration Date: 8/31/2023
Verification No.: 080219116

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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SEAL

SOLOMON W. SHIKUR
Lic. No. 44576
12/4/20
PROFESSIONAL ENGINEER

APPROVALS	DATE
<i>Amy Pflaum</i> QUALITY CONTROL ENGINEER	2/1/2021
<i>R.W. Taktrak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	2.3.21
<i>Q. Leach</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	02/09/21
<i>Dabney R. Carver</i> PROJECT MANAGER	01/27/2021

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
MOT NOTES & DETAILS - 1

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: FEBRUARY 10 2021

SCALE:

25 0 25
HORIZ: SCALE: 1" = 25'

Typical Traffic Control Outside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-16.2) NOTES

- Standard: 1. On divided highways having a median wider than 8', right and left sign assemblies shall be required. Guidance: 2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less. 3. When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed. 4. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired. 5. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement. Standard: 6. Taper length (L) and channelizing device spacing shall be at the following: [Table 6H-2: Taper Length L and Channelizing Device Spacing] 7. Channelizing device spacing shall be at the following: [Table 6H-3: Channelizing Device Spacing] 8. An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18). 9. The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit. 10. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used. 11. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights but can be used to supplement the amber rotating, flashing, or oscillating lights. 12. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed. Option: 13. PTRS and their supporting signs may be used, see Sections 6F-99 and 6G-25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F-99 and TTC-20. 14. The supplemental PTRS may be eliminated. 1: Revision 1 - 4/1/2015 2: Revision 2 - 9/1/2019

Typical Traffic Control Inside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-17.2) NOTES

- Standard: 1. On divided highways having a median wider than 8', right and left sign assemblies shall be required. Guidance: 2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less. 3. When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed. 4. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired. 5. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement. Standard: 6. Taper length (L) and channelizing device spacing shall be at the following: [Table 6H-2: Taper Length L and Channelizing Device Spacing] 7. Channelizing device spacing shall be at the following: [Table 6H-3: Channelizing Device Spacing] 8. An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18). 9. The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit. 10. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used. 11. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights but can be used to supplement the amber rotating, flashing, or oscillating lights. 12. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed. Option: 13. PTRS and their supporting signs may be used, see sections 6F-99 and 6G-25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F-99 and TTC-20. 14. The supplemental PTRS may be eliminated. 1: Revision 1 - 4/1/2015 2: Revision 2 - 9/1/2019

Typical Traffic Control Lane Closure on a Two-Lane Roadway Using Flaggers (Figure TTC-23.2) NOTES

- Guidance: 1. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph. 2. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger. 3. To maintain efficient traffic flow in a flagging operation on a two-lane roadway, the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07. Standard: 4. Portable Temporary Rumble Strips (PTRS) shall be used as noted in Section 6F-99. 5. Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for flagging traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5). 6. All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers). 7. Cone spacing shall be based on the posted speed limit and the values in Table 6H-4 on Page 6H-6. 8. A shadow vehicle with at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew. Option: 8. A SLOW (W21-V10) sign may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic. Guidance: 9. If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the PTRS should be readjusted at greater distances. 10. When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-36 for additional information on highway-rail crossings). Standard: 11. At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08). Option: 12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less. 13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6F). Standard: 14. When used, three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized. 1: Revision 1 - 4/1/2015 2: Revision 2 - 9/1/2019

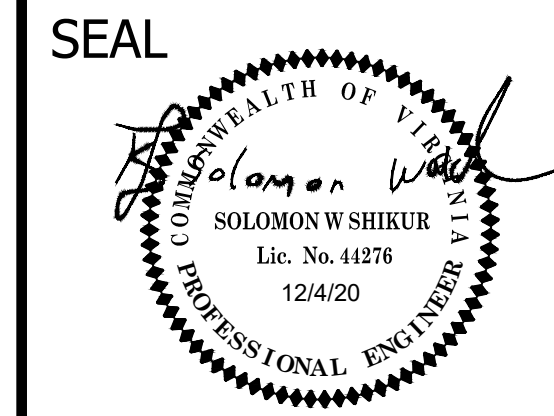
Typical Traffic Control Lane Closure Operation - Far Side of an Intersection (Figure TTC-27.2) NOTES

- Guidance: 1. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph. Standard: 2. On divided highways having a median wider than 8', right and left sign assemblies shall be required. 3. Taper length (L) shall be at the following: [Table 6H-2: Taper Length L and Channelizing Device Spacing] 4. Channelizing device spacing shall be at the following: [Table 6H-3: Channelizing Device Spacing] Guidance: 5. If room permits, a shadow vehicle with at least one amber rotating, oscillating, or high intensity flashing light should be parked 80'-120' in advance of the first work crew. Standard: 6. If the posted speed limit is 45 mph or greater, the shadow vehicle shall have a truck-mounted attenuator. 7. For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or high intensity amber flashing or oscillating lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used. Guidance: 8. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36. Standard: 9. If the left turn lane is closed a NO LEFT TURN (Symbol) (R3-2) shall be used. Option: 10. PTRS may be used as shown in Figure TTC-17 and in accordance with Section 6F-99. 11. The supplemental PTRS may be eliminated. 1: Revision 1 - 4/1/2015 2: Revision 2 - 9/1/2019



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606

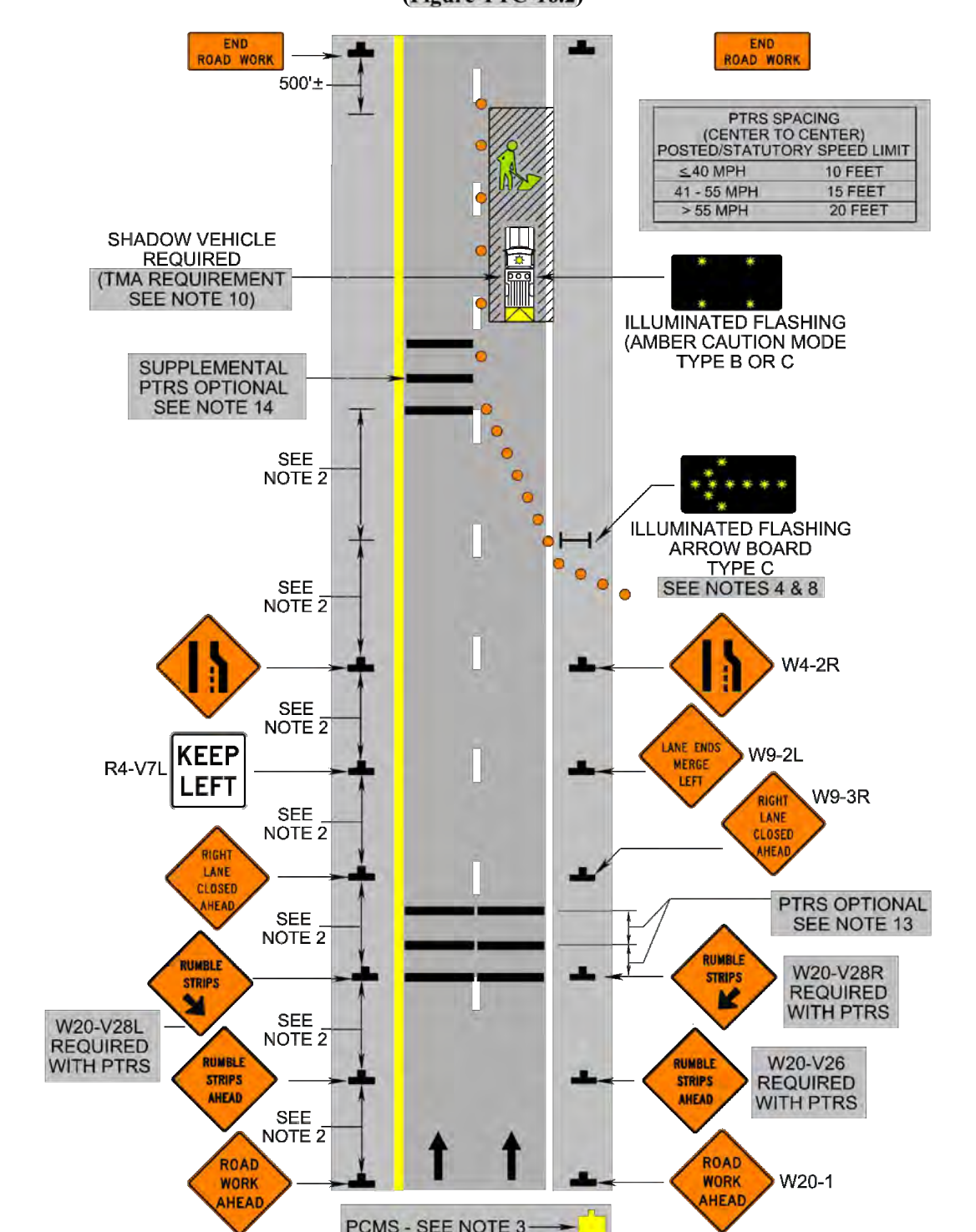
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APPROVALS DATE Amy Pflaum 2/1/2021 QUALITY CONTROL ENGINEER R.W. Taktak 2.3.21 CONSTRUCTION MANAGEMENT SUPERVISOR Dennis M. Leach 02/09/21 TRANSPORTATION DIRECTOR Dabney R. Cawen 01/27/2021 PROJECT MANAGER

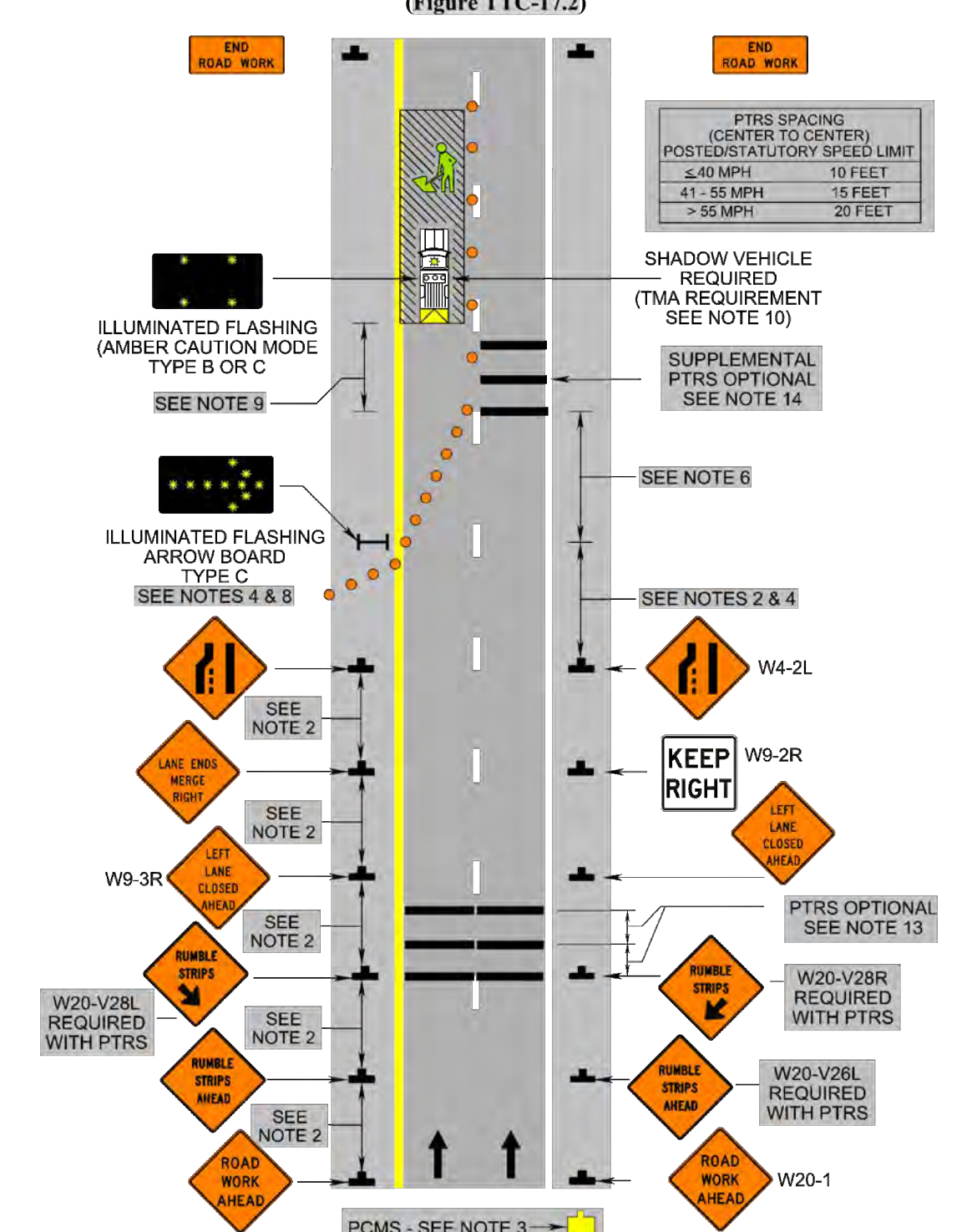
REVISIONS DATE

Outside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-16.2)



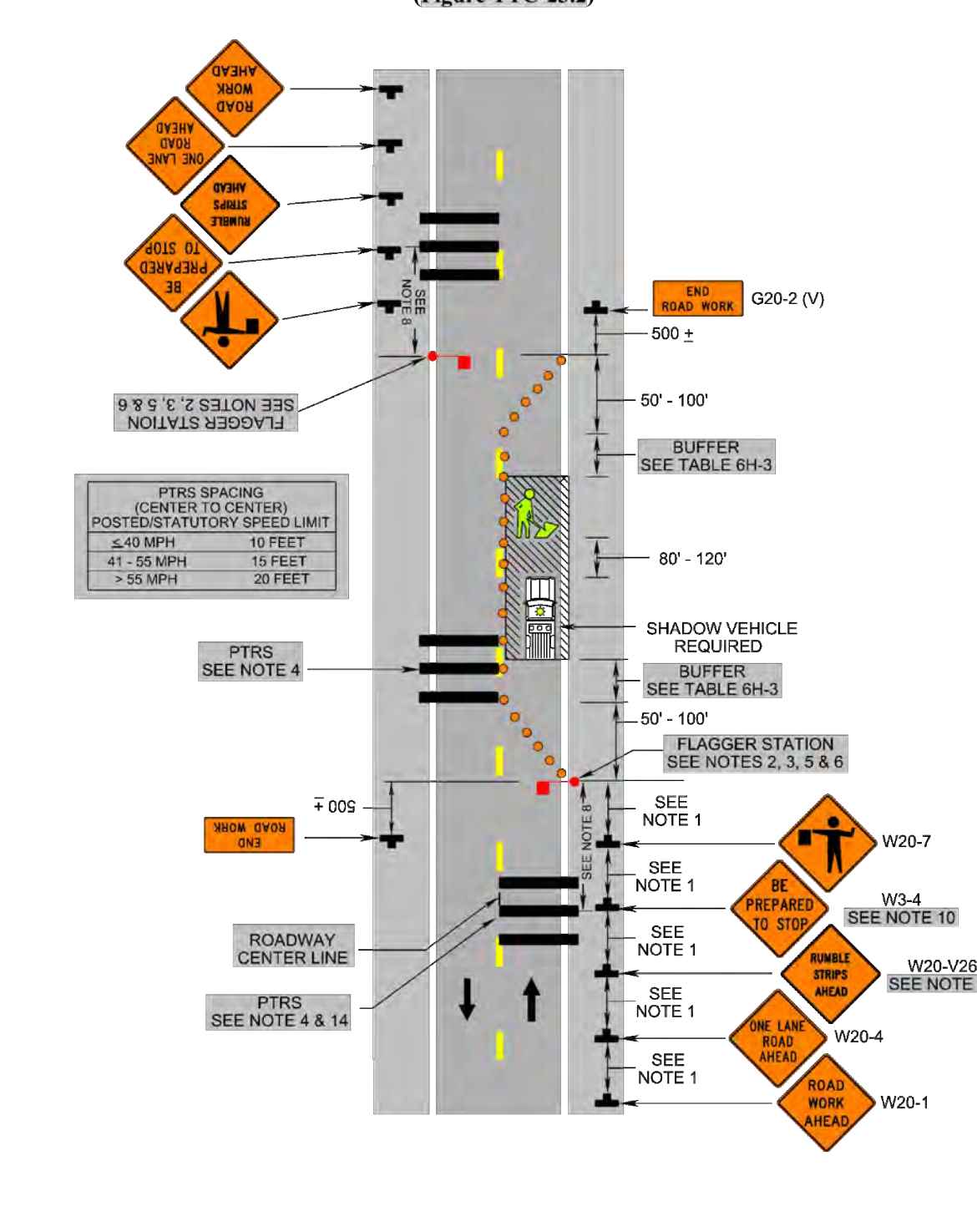
2: Revision 2 - 9/1/2019

Inside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-17.2)



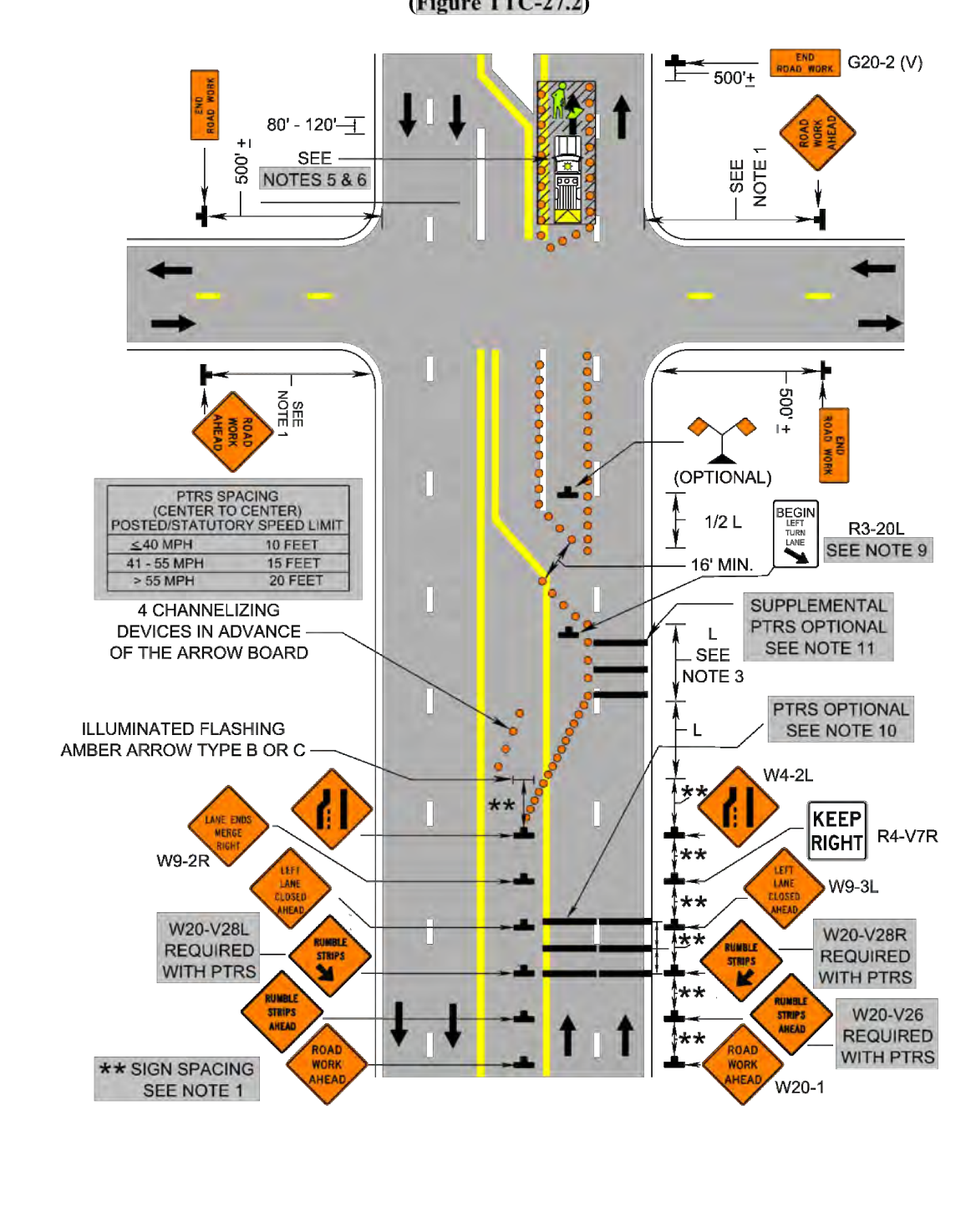
2: Revision 2 - 9/1/2019

Lane Closure on a Two-Lane Roadway Using Flaggers (Figure TTC-23.2)



1: Revision 1 - 4/1/2015 2: Revision 2 - 9/1/2019

Lane Closure Operation - Far Side of an Intersection (Figure TTC-27.2)



1: Revision 1 - 4/1/2015 2: Revision 2 - 9/1/2019

N. GLEBE ROAD WATERMAIN REPLACEMENT R014 N. RANDOLPH ST. TO N. PERSHING DR. MOT NOTES & DETAILS - 2

DESIGNED: JK/LD DRAWN: JK/LD CHECKED: SS PLOTTED: FEBRUARY 10 2021

SCALE: AS SHOWN

Typical Traffic Control Lane Closure Operation in an Intersection (Figure TTC-28.2) NOTES

Guidance:

- 1. The control of traffic through the intersection in order of preference should be: a. Obtain the services of law enforcement personnel. b. Detour the effective routes to other roads and streets as approved and directed by the District Traffic Engineer. c. Place a state certified flagger on each leg of the intersection controlling a single lane of traffic. Appropriate signing as shown should be used for law enforcement and flagging operations. For detour signs see Figure TTC-34. 2. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph. 3. To maintain efficient traffic flow in a flagging operation on a two-lane roadway the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.3

Standard:

- 4. Channelizing device spacing shall be on 20' centers or less. 5. PTRS shall be used as noted in Section 6F.99.

Guidance:

- 6. If room permits, a shadow vehicle with at least one rotating amber light or high intensity amber flashing or oscillating light should be parked 80'-120' in advance of the first work crew.

Support:

- 7. For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or high intensity amber flashing or oscillating lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used. 8. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36. 9. Turns can be prohibited as required by vehicular traffic conditions. Unless the streets are wide, it might be physically impossible to make certain turns, especially for large vehicles.

1: Revision 1 - 4/1/2015 2: Revision 2 - 9/1/2019

Typical Traffic Control Turn Lane Closure Operation (Figure TTC-29.2) NOTES

Guidance:

- 1. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.

Standard:

- 2. On divided highways having a median wider than 8', right and left sign assemblies shall be required. 3. To prevent accidental intrusion into the work area, channelizing device spacing shall not exceed 10' on centers or as directed by the Engineer.

Option:

- 4. This layout may be used for either right or left turn lane closures. 5. For a high volume of turning movements, additional traffic control devices, such as signs (graphic NO LEFT TURN (R3-2) or LEFT LANE MUST TURN LEFT (R3-7L)), channelizing devices and vehicles may be used.

Standard:

- 6. Taper length (L) shall be at the following:

Table with columns: Speed Limit (mph), Lane Width (Feet), Remarks, Taper Length L. Includes sub-table for Shoulder Taper = 1/2 L Minimum.

7. Length of the Longitudinal Buffer spacing shall be at the following:

Table with columns: Posted Speed Limit (mph), Distance (Feet).

Guidance:

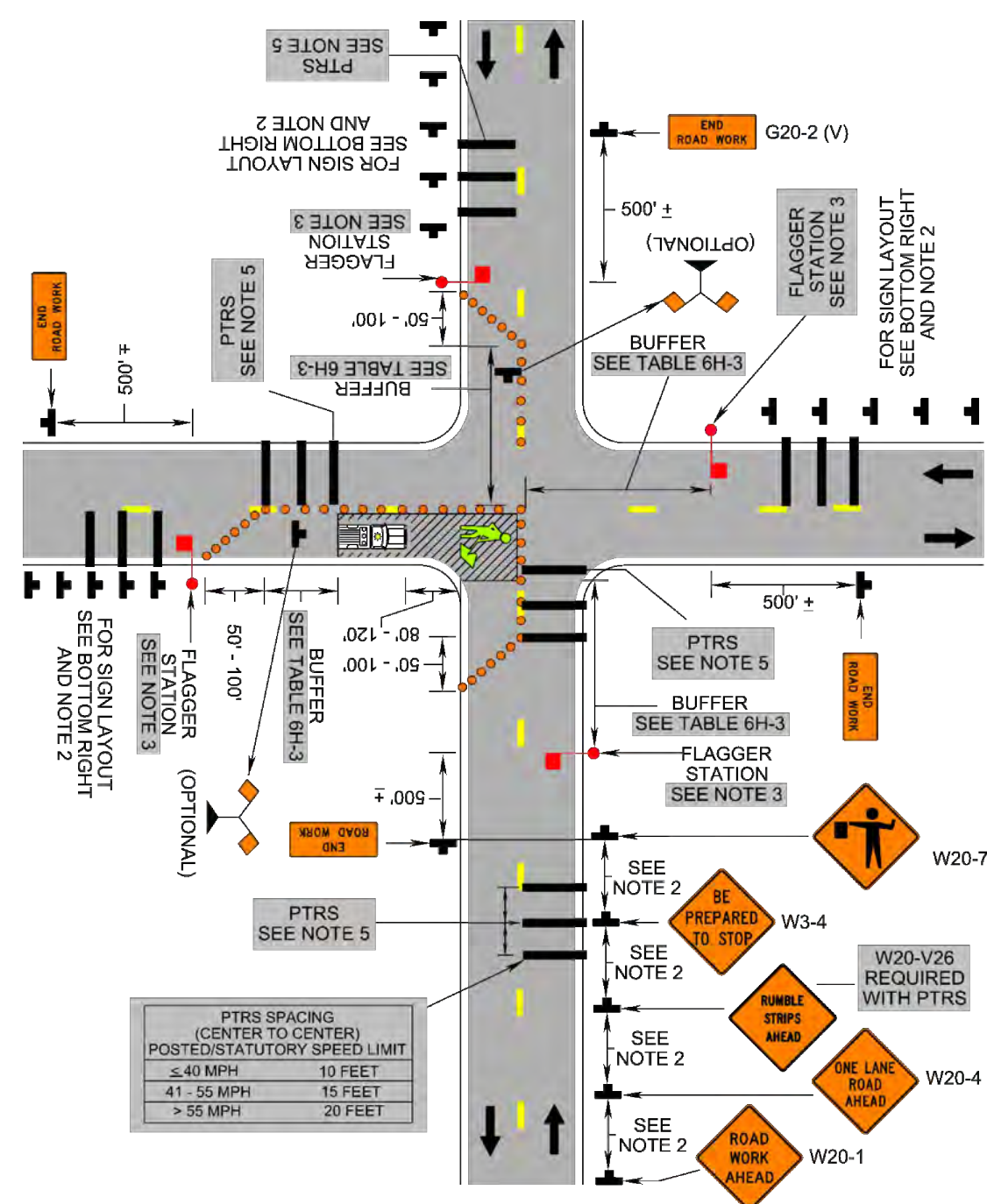
- 8. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.

Support:

- 9. Turns can be prohibited as required by vehicular traffic conditions. Unless the streets are wide, it might be physically impossible to make certain turns, especially for large vehicles.

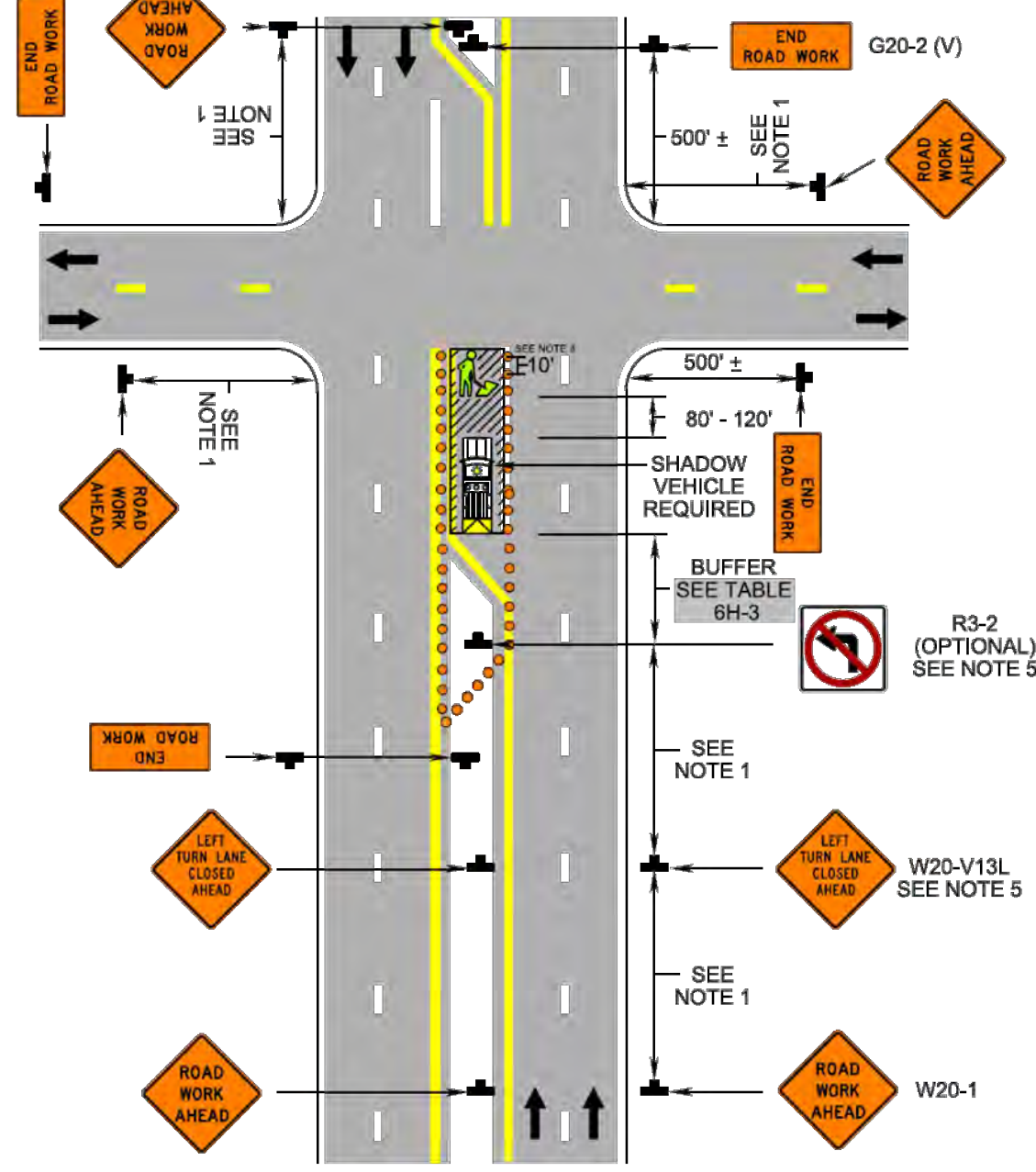
1: Revision 1 - 4/1/2015 2: Revision 2 - 9/1/2019

Lane Closure Operation in an Intersection (Figure TTC-28.2)



2: Revision 2 - 9/1/2019

Turn Lane Closure Operation (Figure TTC-29.2)



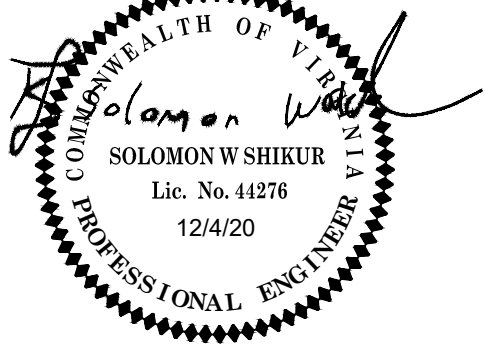
2: Revision 2 - 9/1/2019



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606

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SEAL



APPROVALS DATE

Approval signatures and dates for Amy Pfleum, R.W. Taktak, Dennis M. Leach, and Dabney R. Carver.

REVISIONS DATE

Table for tracking revisions with columns for revision number and date.

N. GLEBE ROAD WATERMAIN REPLACEMENT R014 N. RANDOLPH ST. TO N. PERSHING DR. MOT NOTES & DETAILS - 3

DESIGNED: JK/LD DRAWN: JK/LD CHECKED: SS

PLOTTED: FEBRUARY 10 2021

SCALE:

AS SHOWN

EXHIBIT F

ARLINGTON COUNTY, VIRGINIA

2100 Clarendon Boulevard, Arlington, VA 22201



ARLINGTON
VIRGINIA

Approved: 8/30/2020
Subject to field inspection
LDA20163

8/30/2020

PERMIT SUMMARY

Permit Number	Address	Floor	Unit	Use Group	Sq ft
LDA20163					0

ADDITIONAL INFORMATION

Permit Holder	
Contractor	
Type of Work	Land Disturbance Activity
Brief Description of Work	
Code Cycle	

PLANS APPROVED BY

Area of Approval	Reviewer Name	Date
DPR Urban Forestry	Adam Lipera	08/11/2020
DES Stormwater Management	Nader Mahmoudpour	08/28/2020
DES Wet Utilities	Amos Jallah	08/30/2020

PLANS APPROVED AS NOTED BY THE FOLLOWING COMMENTS

ARLINGTON COUNTY, VIRGINIA

2100 Clarendon Boulevard, Arlington, VA 22201



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Approved: 8/30/2020
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LDA NO. 16430

SWM NO. _____



Project: **N. Glebe Road Watermain Replacement**

Project Account No. **519-43542-R014-0337-0000**

SUBMISSION DATE: **August 4, 2020**

SUBMITTED BY: **Solomon Shikur X3654**

sshikur@arlingtonva.us

Leo Dizon X0585

Ldizon@arlingtonva.us



**ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
DIVISION OF TRANSPORTATION
2100 CLARENDON BLVD, SUITE 800
ARLINGTON, VA 22201**



APPLICATION FOR LAND DISTURBING ACTIVITIES

ALL APPLICANTS MUST COMPLETE ITEMS 1 THRU 26: (Please print legibly)

**Approved: 8/30/2020
Subject to field inspection
LDA20163**

Application Information (Office Use Only)	LDA Permit No.	Building/Demolition Permit No.	Application Date
Applicant or Contractor Information	1. Individual or Company Full Legal Name (if applicable) <u>Arlington County - Department of Environmental Services</u>		
	2. Name of Representative (First, MI, Last) <u>Solomon Shikur</u>		3. Title of Representative
	4. Telephone No. <u>703-228-3654</u>	5. Cell Phone No.	6. Fax No.
	7. E-mail address <u>Sshikur@arlingtonva.us</u>		
	8. Address <u>2100 Clarendon Blvd., Suite 813</u>		9. City, State, Zip Code <u>Arlington, VA 22201</u>
Property Owner Information	10. State Contractor's License No.		11. Arlington Business License No.
	12. Full Legal Name (First and Last Name) <u>Arlington County Government</u>		13. Telephone No. <u>703-228-3654</u>
	14. Owner's Legal Address		15. City, State, Zip Code

16. Street name & address(es): (Exact location of proposed work) _____

17. Purpose of work or activity: (Check all that apply)

Construction:

- New Residential
- New Commercial
- Detached Structure
- Building Addition (includes decks)
- Driveway/Parking Lot

- Clearing/Grading
- Excavation/Fill
- Tree Planting/Landscaping
- Other Water Replacement

Demolition:

- Commercial Structure
- Multi-family Dwelling
- Single Family Dwelling
- Tree Removal - specify type, diameter below
- Other _____

18. Full Description of Work or Activity: This is a watermain replacement project and consist of installation of 2,230 linear feet of 12 Inch, 8 Inch and 6 Inch DIP watermain starting from N Randolph St to N Pershing Dr.

19. Total Area of Land Disturbance: 17,680 Square Feet

(Any type of land disturbing activity – 1 acre or more in area – requires this permit and a Construction General Permit from the Virginia Department of Environmental Quality (DEQ) for discharges of storm water from construction activities)

20. Is any part of this property located within a Resource Protection Area (RPA)? Yes No

21. Is any part of this property located within a Floodplain? Yes No

22. Responsible Land Disturber (RLD): Solomon Shikur Certification No.: _____ Phone: 703-228-3654

(Applicant must provide a signed RLD Form, including the name of person with RLD certification prior to starting any land disturbing activity)

I hereby certify that: I have the full authority to make the foregoing Application; the information in this Application and the Applicant's required submittals are complete and correct; and the Work shall comply with all laws of the Commonwealth of Virginia, and all ordinances, rules, regulations, policies, and special conditions of the County and of the County Board of Arlington County, Virginia.

23. Signature of Applicant/Permittee: 24. Date: 8/5/20

25. Print Name: Solomon Shikur 26. Phone No.: 703-228-3654

NOTE: This permit shall become invalid if the authorized work is not started within six (6) months from the date issued, and/or if the authorized work is suspended for a period of six (6) months after the time for commencing the work. This permit is not a substitute for other permits that may be required from the County, State, and Federal Government. Inspections by the County DES Inspector assigned to this permit are only for activities related to land disturbance. If the proposed flow pattern will be affected by any new features that is not part of the original approved plan (Grading, fence, and retaining wall, etc.), this permit shall become invalid.

STORMWATER POLLUTION PREVENTION PLAN
N. Glebe Road Watermain Replacement

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) COVER PAGE



For Construction Activities At:

N. Glebe Road Watermain Replacement
N. Randolph St. to N. Pershing Dr.
Arlington, VA 22203

Latitude: 38.875629 N (decimal degrees)

Longitude: -77.108137 W (decimal degrees)

Construction Activity Operator:

TBD

SWPPP Preparation Date:

August 3, 2020

CERTIFICATION

"I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator Name: _____

Title: _____

Signature: _____

Date: _____

STORMWATER POLLUTION PREVENTION PLAN
 N. Glebe Road Watermain Replacement



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1.0 SWPPP Documents Located Onsite & Available for Review

SWPPP Document Type	Located Onsite & Available	
Registration Statement	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NA
Notice of Coverage Letter	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NA
Construction General Permit	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NA
Pollution Prevention Plan	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> NA
Erosion & Sediment Control Plan (or agreement in lieu of)	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> NA
Stormwater Management Plan	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NA

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharge	Likely Present at Your Project Site?	
External buildings wash down	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Untamminated foundation or footing drains	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Untamminated excavation dewatering	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Landscape irrigation	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Others	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

3.0 Pollution Prevention Awareness

Employees will be given a “walk through” of the site identifying areas of possible pollution and will be shown Erosion and Sediment Controls and Pollution Prevention Practices (identified in Sections 4.0 and 5.0 of this SWPPP) that are applicable to their assigned job duties. A refresher meeting and “walk through” will be conducted on an as needed basis.

4.0 Erosion & Sediment Controls

Select all that apply	Erosion & Sediment Control	Estimated Installation Date	Estimated Removal Date	Responsible Party
<input type="checkbox"/>	Construction Entrance (Std. & Spec. 3.02)			Construction Activity Operator (See Cover Page of this SWPPP)
<input type="checkbox"/>	Silt Fence (Std. & Spec. 3.05)			
<input type="checkbox"/>	Culvert Inlet Protection (Std. & Spec. 3.08)			
<input type="checkbox"/>	Outlet Protection (Std. & Spec. 3.18)		NA	
<input type="checkbox"/>	Temporary Seeding (Std. & Spec. 3.31)		NA	
<input type="checkbox"/>	Permanent Seeding (Std. & Spec. 3.32)		NA	
<input type="checkbox"/>	Sodding (Std. & Spec. 3.33)		NA	
<input type="checkbox"/>	Mulching (Std. & Spec. 3.35)		NA	
<input type="checkbox"/>	Safety Fence (Std. & Spec 3.01)			

STORMWATER POLLUTION PREVENTION PLAN
 N. Glebe Road Watermain Replacement



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<input checked="" type="checkbox"/>	Storm Drain Inlet Protection (Std. & Spec 3.08)		
<input type="checkbox"/>	Dewatering (Std. & Spec 3.26)		
<input type="checkbox"/>	Turbidity Curtain (Std. & Spec 3.27)		
<input type="checkbox"/>	Tree Protection (Arlington County Std. & Spec.)		
<input type="checkbox"/>	Others		



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5.0 Potential Sources of Pollution & Pollution Prevention Practices

Pollutant-Generating Activity	Pollutants										Pollution Prevention Practice	Responsible Party
	Likely Present at your Project Site?	Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals		
Clearing, grading, excavating, and un-stabilized areas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X							X		(1)	Construction Activity Operator (See Cover Page of this SWPPP)
Paving operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X					X		X		(2)	
Concrete washout and cement waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			X	X				X		(3)	
Structure construction, stucco, painting, and cleaning	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			X	X				X	X	(4)	
Dewatering operations	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X	X						X		(5)	
Material delivery and storage	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X		X		X	X	(6)	
Material use during building process	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		X	X	X		X		X	X	(7)	
Solid waste disposal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								X	X	(8)	
Sanitary waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		X		X			X			(9)	
Landscaping operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X			X			X	X	(10)	

STORMWATER POLLUTION PREVENTION PLAN
 N. Glebe Road Watermain Relocation



ARLINGTON
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Approved: 8/30/2020
Subject to field inspection
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Pollution Prevention Practices:

- (1) **Clearing, grading, excavating and un-stabilized areas** – Utilize erosion and sediment control measures to prevent sediment laden or turbid runoff from leaving the construction site. Dispose of clearing and excavation materials at approved disposal sites. Apply permanent or temporary stabilization, sodding and/or mulching to exposed areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities.
- (2) **Paving operations** – Cover storm drain inlets during paving operations and utilize pollution prevention materials such as drip pans and absorbent/oil dry for all paving machines to limit leaks and spills of paving materials and fluids.
- (3) **Concrete washout and cement waste** – Direct concrete wash water into a leak-proof container or leak-proof settling basin that is designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes.
- (4) **Structure construction, stucco, painting and cleaning** – Enclose, cover or berm building material storage areas if susceptible to contaminated stormwater runoff. Conduct painting operations consistent with local air quality and OSHA regulations. Mix paint indoors, in a containment area or in a flat unpaved area. Prevent the discharge of soaps, solvents, detergents and wash water from construction materials, including the clean-up of stucco paint, form release oils and curing compounds.
- (5) **Dewatering operations** – Construction site dewatering from building footings or other sources may not be discharged without treatment. Sediment laden or turbid water shall be filtered, settled or similarly treated prior to discharge.
- (6) **Material delivery and storage** – Designate areas of the construction site for material delivery and storage. Place near construction entrances, away from waterways, and avoid transport near drainage paths or waterways.
- (7) **Material use during building process** – Use materials only where and when needed to complete the construction activity. Follow manufacturer’s instructions regarding uses, protective equipment, ventilation, flammability and mixing of chemicals.
- (8) **Solid waste disposal** – Designate a waste collection area on the construction site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterway. Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible. Schedule waste collection to prevent the containers from overflowing.
- (9) **Sanitary waste** – Prevent the discharge of sanitary waste by providing convenient and well-maintained portable sanitary facilities. Locate sanitary facilities in a convenient location away from waterways.
- (10) **Landscaping operations** – Maintain as much existing vegetation as practicable. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities. Apply nutrients in accordance with manufacturer’s recommendations and not during rainfall events.
- (11) **Others** – If applicable, describe your Pollution Prevention Practice.

6.0 Stormwater Management Controls

Select all that apply	Stormwater Management Control	Estimated Installation Date	Responsible Party
<input type="checkbox"/>	Post-development Stormwater Management Controls provided by a Larger Common Plan of Development or Sale	NA	Common Plan Construction Activity Operator
<input type="checkbox"/>	Rooftop Disconnection	Insert Date	Construction Activity Operator (See Cover Page of this SWPPP)
<input type="checkbox"/>	Sheet flow to Vegetated Filter (1 or 2)	Insert Date	
<input type="checkbox"/>	Grass Channel	Insert Date	
<input type="checkbox"/>	Rainwater Harvesting	Insert Date	
<input type="checkbox"/>	Permeable Pavement (1 or 2)	Insert Date	

STORMWATER POLLUTION PREVENTION PLAN
N. Glebe Road Watermain Replacement



ARLINGTON
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Approved: 8/30/2020
Subject to field inspection
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Select all that apply	Stormwater Management Control	Estimated Installation Date	
<input type="checkbox"/>	Infiltration (1 or 2)		Construction Activity Operator (See Cover Page of this SWPPP)
<input type="checkbox"/>	Bioretention (1 or 2)		
<input type="checkbox"/>	Others		
<input type="checkbox"/>	Exempted	NA	NA

7.0 Spill Prevention & Response

Most spills can be cleaned up following manufacturer specifications. Absorbent/oil dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at this location.

- 1st Priority: Protect all people
- 2nd Priority: Protect equipment and property
- 3rd Priority: Protect the environment

1. Check for hazards (flammable material, noxious fumes, cause of spill) – if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.
2. Make Sure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
3. Stop the spill source.
4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
5. If possible, stop spill from entering drains (use absorbent or other material as necessary).
6. Stop spill from spreading (use absorbent or other material)
7. If spilled material has entered a storm sewer; contact locality's storm water department.
8. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
9. Properly dispose of cleaning materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Normal Working Hours

DEQ Northern Regional Office 703-583-3800

Nights, Holidays & Weekends

VA Dept. of Emergency Management 804-674-2400
 24 Hour Reporting Service

Local Contacts

Arlington County Fire & Police 703-558-2222
 DES Water, Sewer, Streets 24-Hour Emergency 703-228-6555
 Washington Gas Emergency 703-750-1400

STORMWATER POLLUTION PREVENTION PLAN
N. Glebe Road Watermain Replacement



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8.0 Self Inspections Report & Corrective Action Log (make additional copies as neces:

Qualified Inspector

Company/Organization:
Name:
Telephone Number:
Qualifications:

Inspection Schedule

Discharges to impaired waters, surface waters within a TMDL watershed, or exceptional waters:

Once every 4 business days.

Inspection Date:

Type of Inspection: Regular Pre-storm event During storm event Post-storm event

Phase of construction: Pre-Con DEMO Clearing Building Grading Final Stabilization

Is a copy of the SWPPP available on site? Yes No Is the SWPPP complete? Yes No

Are there any discharges at the time of this inspection? Yes No If yes, describe:

Have any discharge occurred since the last inspection? Yes No If yes, describe:

Best Management Practices (BMPs)	In Compliance with SWPPP?	Corrective Action Needed; Responsible Party & Notes	Date Corrective Action Taken
Are all construction exits preventing sediment from being tracked onto the adjacent streets?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are perimeter controls and sediment barriers adequately installed and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are storm drain inlets properly protected? (on-site and adjacent)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are discharge points and receiving waters free of any sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		

STORMWATER POLLUTION PREVENTION PLAN
 N. Glebe Road Watermain Relacement



ARLINGTON
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Best Management Practices (BMPs)	In Compliance with SWPPP?	Corrective Action Needed; Responsible Party & Notes
Are all slopes and disturbed areas not actively being worked properly stabilized?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are washout facilities (e.g., concrete, paint, stucco) available, clearly marked and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Is trash/litter from work areas collected and contained in dumpsters?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are natural resources (e.g., streams, wetlands, mature trees) area protected with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are vehicle and equipment fueling, cleaning and maintenance areas free of spills, leaks, or other deleterious material?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are materials that are potential stormwater contaminants stored inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Are disturbed areas stabilized within 7 days, if areas denuded will remain undisturbed for 14 days?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	

Non – Compliance

Describe any incidents of non-compliance not described above (use another page is necessary)

Certification

"I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator or Assigned Qualified Personnel Name: _____

Signature: _____

Date: _____

STORMWATER POLLUTION PREVENTION PLAN
 N. Glebe Road Watermain Replacement



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9.0 Grading & Stabilization Activities Log

Date Grading Activity Initiated	Description of the Grading Activity (including location)	Date Grading Activity Ceased	Date Stabilization Measures Initiated	Description of Stabilization Measures (including location)

10.0 SWPPP Modification & Update Log

Modification Date	Description of the Modification / Update (name & title that request the modification)	Modification Prepared By (name & title)

**INSTRUCTIONS for COMPLETING the
SINGLE FAMILY RESIDENCE, COMMON PLAN of DEVELOPMENT or SΔI F
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)**



ARLINGTON
VIRGINIA

**Approved: 8/30/2020
Subject to field inspection
LDA20163**

General

A Stormwater Pollution Prevention Plan (SWPPP) must be developed prior to obtaining locality (e.g., City, County) to commence land disturbance.

SWPPP Cover Page

For a construction activity, enter the project/site name and physical address (if available), including city (or town), state and zip code. Enter the latitude and longitude in decimal degrees of the construction activity.

Enter the Construction Activity Operator's company/organization name, the Operator's name and mailing address, including city (or town), state, and zip code, telephone number, email address (if available), and a 24-hour emergency contact.

Enter the SWPPP preparation date.

The Construction Activity Operator identified on the cover page of the SWPPP is responsible for certifying the information contained therein. Please sign the certification in INK. Please note that state statutes require the SWPPP to be signed as follows:

- (1) For a corporation: by a responsible corporate officer;
- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
- (3) For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

Section 1.0 SWPPP Documents Located Onsite & Available for Review

Utilize the provided checklist to ensure that the required SWPPP documents are located onsite and are available for review, if applicable.

Section 2.0 Authorized Non-Stormwater Discharges

Identify the authorized non-stormwater discharges likely to be present at the project site. If an unlisted authorized non-stormwater discharge is likely to be present at the project site, provide it here.

Section 3.0 Pollution Prevention Awareness

Provide employees with a "walk through" of the project site and identify areas of possible pollution, erosion and sediment controls, and pollution prevention practices which are applicable to their assigned job duties. Conduct refresher meetings and perform additional "walk throughs" on an as needed basis.

Section 4.0 Erosion & Sediment Controls

Identify the erosion and sediment controls to be implemented at the project site. For each erosion and sediment control, enter the estimated installation date and estimated removal date. If an unlisted erosion and sediment control will be implemented at the project site, provide the applicable information here.

Section 5.0 Potential Sources of Pollution & Pollution Prevention Practices

Identify the pollutant-generating activities likely to be present at the project site; implement and maintain the corresponding pollution prevention practices. If an unlisted pollutant-generating activity is likely to be present at the project site, describe it, identify the associated pollutant(s), and provide the corresponding pollution prevention practice(s) to be implemented and maintained.

Section 6.0 Stormwater Management Controls

Identify the stormwater management controls to be implemented at the project site, if applicable. For each stormwater management control, enter the estimated installation date. If an unlisted stormwater management control will be implemented at the project site, provide the applicable information here.

Section 7.0 Spill Prevention & Response

Most spills can be cleaned up following manufacturer specifications. The priority should be to protect all people, equipment, property, and the environment. Enter the telephone number of your local fire and police departments.

Section 8.0 Inspections & Corrective Action Log

Enter the qualified inspector's company/organization name, the inspector's name, telephone number, and qualifications. Select the applicable inspection type, enter the construction activity inspection date, and enter the date and rainfall amount of the last measurable storm event (if applicable). Identify if the implemented best management practices are in compliance with the SWPPP. Enter corrective actions needed; the party responsible for implementing the corrective actions, and the date corrective actions were taken, if applicable. Make additional copies of the inspection and corrective action log as necessary.

Section 9.0 Grading & Stabilization Activities Log

Enter the date grading activities were initiated, a description of the grading activities including location, the date grading activities ceased, the date stabilization measures were initiated, and a description of the stabilization measures including location.

Section 10.0 SWPPP Modification & Update Log

Enter the SWPPP modification date, description of the SWPPP modification/update, and the name and title of the SWPPP modification preparer, if applicable.



Department of Environmental Services
LDA Permit SWPPP Minimum Acceptance Criteria (MAC)




February 2018

Approved: 8/30/2020
 Subject to field inspection
 LDA20163


Instructions: Complete this required Front Counter Minimum Acceptance Criteria (MAC) Checklist to ensure the intake of your plan upon submission at 1st submission. If applicable, also complete all attached MAC Checklists for requirements pertaining to the individual review of plan elements.

Project Name: N. Glebe Road Watermain Replacement	
Address: N. Glebe Road from N. Randolph St. to N. Pershing Dr.	Date: August 3, 2020

General Items		yes	n/a	no	sheet
1	Completion of this Front Counter MAC Checklist and all applicable Plan Review MAC Checklists.	X			1
2	Submit and sign the MAC Checklist with the civil engineering plan for first submittal only.	X			
3	Include a Cover Sheet with the following information	X			C000.1
a	Name of project	X			C000.1
b	Include the address, if known at the time of submission.	X			C000.1
c	Vicinity Map indicating the North arrow; label all streets	X			C000.1
d	Name, address, phone number and email of Contractor	X			C032.1
e	Name, address, phone number and email of Owner	X			C000.1
f	Name, address, phone number and email of Engineer	X			C000.1
g	Table of Contents/ Sheet Index	X			C000.1
h	Horizontal Datum: All plans shall be referenced to the Virginia Coordinate System of 1983 (VCS 83). The following note should be present on the cover sheet: "The site shown hereon is referenced to the Virginia Coordinate System of 1983 as computed from a field run boundary and horizontal control survey."	X			C011.1
i	Vertical Datum: All plans shall be referenced to the North American Vertical Datum of 1988 (NAVD 88). The following note should be present on the cover sheet: "The site shown hereon is referenced to the North American Vertical Datum of 1988 as computed from a field run vertical control survey."	X			C011.1
j	Site plan/use permit number and/or which FBC if the project is pursuant to a 4.1 site plan, or a use permit, or a Form Based Code project.		X		
4	Include an Existing Conditions Plan Sheet, Demolition Plan Sheet and Site Plan Sheet	X			C011.1 -
5	Include the following within the Plan, on applicable Plan Sheets		X		
a	Graphic Scale on ALL plan sheets	X			
b	North Arrow on ALL plan sheets	X			
c	Current Field Survey Topography (certified)	X			C011.1
d	Site Areas (Post Dedication and Post Vacation)				
e	Total site area of property in sq ft and acres		X		
f	Existing and Proposed Easements on an exhibit		X		
g	Real Property Identification Map Number, RPC Numbers	X			C011.1
h	Legends	X			C006.1
6	Engineer's Seal/ Signature - Signed and dated on all sheets	X			

Erosion and Sediment Control Plan		 ARLINGTON VIRGINIA Approved: 8/30/2020 Subject to field inspection LDA20163			sheet
1	Include the Following on Erosion and Sediment Control Plan Sheets				22
a	E&S Control Plan and Site Plans				
b	E&S Control Narrative				
c	E&S Control practices detail drawing (dewatering device, etc..)				
d	E&S Control Plan Legend		X		
e	Virginia Erosion and Sediment Control Handbook (VESCH) specification numbers		X		
f	Blank Responsible Land Disturber Letter	X			
2	General E&S Control Notes, General Land Conservation Notes, and Pre-Storm Erosion and Sediment Control Checklist.		X		
3	Landscape Conservation Plan with the following clearly indicated		X		
a	Determination of the critical root zone		X		
b	Tree protection fencing		X		
c	Signage		X		
d	Critical Root zone mitigation, such as root pruning, padding, or other root protection methods		X		
e	Note requiring county arborist inspection before any land disturbance activity		X		
f	Tree inventory of all trees larger than 3 inches DBH, either on site or with a critical root zone encroaching the limit of disturbance. This list will contain information on species, size, health, whether the tree is to be protected or not, and other issues, such as location in the RPA, disease concerns, or invasive species presence		X		
g	Tree canopy coverage calculation		X		
h	RPA delineation, if applicable		X		
i	For 4.1 site plans and use permits, a copy of all relevant approved conditions, including, but not limited to, the landscape plan and tree preservation plan		X		
j	For 4.1 site plans and use permits, a copy of the tree preservation plan and the calculation of the tree replacement value of removed trees approved by the County Board, if these were part of the approval		X		
k	For public projects which do not have a tree preservation condition approved by the County Board, a calculation of the tree replacement value of removed trees		X		

Stormwater Management Plan		YES	NO	N/A	sheet
1	Include the following on Stormwater Management Plan Sheets		X		
a	Runoff Reduction Spreadsheet		X		
b	Design details and reference of stormwater facilities listed in the Runoff Reduction Spreadsheet		X		
c	Facility detail, maintenance schedule, material specifications and construction inspection checklist for each stormwater facility proposed		X		
d	Drainage area boundary and runoff flow arrows		X		
e	Water Quantity Energy Balance Worksheet		X		
f	Waterproofing Note, if applicable		X		
g	Meet requirement for sheetflow and statement of no adverse impact to adjacent properties		X		
h	Indicate sump pump discharge location, tie into the public storm sewer system when possible.		X		
i	Indicate Floodplain boundary and floodplain study OR certification on plan that no floodplain is present		X		
j	Indicate Resource Protection Area (RPA) boundary on plan OR include certified note on plan that no RPA is present. If RPA is present, include Completed Water Quality Impact Assessment (WQIA) form with required elements. Include Completed Exception Request Form on plan (if required), and proposed RPA mitigation		X		
k	Blank Stormwater Facility Maintenance and Monitoring Agreement		X		
l	SWM# on the coversheet, once assigned after 1st review		X		

m	For 4.1 site plans and use permits, a copy of the conceptual SWM plan and calculations from the County Board-approved 4.1 or use permit plans for information only				
		 ARLINGTON VIRGINIA Approved: 8/30/2020 Subject to field inspection LDA20163			
Pollution Prevention Plan					
1	Include the following on the Pollution Prevention Plan				
a	Standard notes from Stormwater Manual Section 2.4		X		
b	Authorized Non-Stormwater Discharge (Section 2.0), Potential Sources of Pollution & Pollution Prevention Practices (Section 5.0), and Spill Prevention & Response (Section 7.0) from SWPPP Template (Appendix B) of the Stormwater Manual	X			
Wet Utility Requirements					
a	for a new development with a new building or for additions that will upgrade to more than 3 toilets (WCs), the water meter and service line shall have as existing, or be upgraded to a minimum ¾" and 1", respectively.		X		
b	the location of the existing and proposed meter/service shall clearly be shown on the plan to be within the utility strip (where applicable) or sidewalk but not on private property without the provision of an easement ,nor in driveway/apron, nor within five (5) tormwater Management Facility and Site Data Spreadsheet	X			
c	if the water service and meter are relocated from the existing meter location and the service line crosses other utilities (water, sewer, gas, underground dry utility) between the water main and meter , a depth profile shall be provided to clearly show the separation from these utilities with a minimum vertical separation of twelve (12) inches. The plan must be certified by a licensed professional	X			
d	the location of the new meter shall be staked out by the developer/owner with information to be provided to the County meter installers.from these utilities with a minimum vertical separation of twelve (12) inches. The plan must be certified by a licensed professional	X			
Attachments (one 8.5"x 11" hard copy stapled to the SWPPP plan)					
a	Registration Statement for project with land disturbance equal to or greater than 1 acre		X		
b	Stormwater Management Facility and Site Data Spreadsheet		X		
c	Stormwater Prevention Plan (P2) Template of the Stormwater Manual	X			
d	Planning & Field Guide for Pollution Prevention (P2)	X			

I certiv that the above is true and accurate to the best of my knowledge.

B. Solomon Walsh

Signature

August 3, 2020

Date

Planning & Field Guide for Pollution Prevention (P2)

Attachment to the P2 Plan for (insert address below):

N GLEBE ROAD WATERMAIN REPLACEMENT

FROM N. RANDOLPH ST. TO N. PERSHING DR.

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Introduction

This supplement highlights some of the common pollution-preventing practices that are intended to assist you with the creation of the required Stormwater Pollution Prevention Plan (SWPPP). This supplement provides suggestions of practices that help prevent pollution. Most pollution-releasing activities at construction sites could have been avoided with the proper planning and implementation. Each practice should be appropriately sized for the specific project site where it will be implemented. The design, maintenance and adjustment, when necessary, of the practice is the responsibility of the construction site manager to ensure that only clean, clear stormwater leaves the site.

Some practices from Maryland’s Department of the Environment are provided in this guide. These are acceptable examples that could be used in Arlington County. The drawings and their detail are available at:

http://mde.maryland.gov/programs/Water/StormwaterManagementProgram/SoilErosionandSedimentControl/Pages/2011_ESC_details.aspx

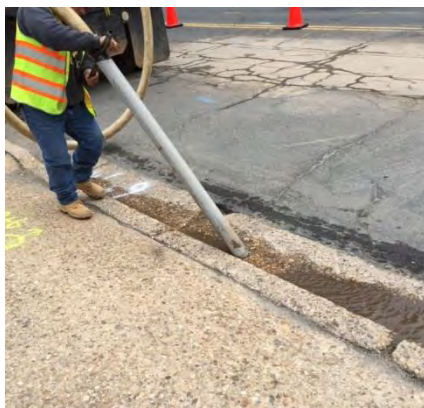
Monitor the Weather

It is extremely important to regularly monitor the weather forecast and plan accordingly when a construction site is active and/or unstabilized. It is the contractor’s responsibility to:

- Schedule time to implement pre-storm plan when precipitation is predicted.
- Check containment practices after a precipitation event and maintain as necessary.

Good Housekeeping

Clean up sediment and debris along the curb and in the street every day using “dry” methods, such as shoveling, sweeping or vacuuming. The use of water to remove sediment and debris from the right-of-way will not be permitted under any circumstance. Remember - only clean, clear stormwater may leave a construction site.



Example cleanup methods. Left photo: vacuuming. Right photo: sweeping debris away from the storm drain.

Concrete Washout

Concrete wash water is directed into a leak-proof container or settling basin. The container is adequately sized to ensure overflows do not occur, whether due to precipitation or inadequate concrete washes are removed and disposed of in a manner consistent with handling concrete and mortar work must also utilize a washout device.

Best Practices:

- ✓ Washouts must be sized appropriately for the needs of the site.
- ✓ Do not locate washouts near storm drains.
- ✓ Concrete washouts cannot be used for the purpose of dewatering. Concrete washouts and dewatering devices are not interchangeable.
- ✓ Don't mix more fresh concrete or cement than you will use in a two-hour period.
- ✓ Set up and operate small mixers on top of plywood that is covered by tarps or heavy plastic drop cloths, and bermed with stones around the edge.
- ✓ Set up mortar containers on top of a tarp or heavy plastic drop cloth.
- ✓ When cleaning up after driveway or sidewalk construction, use DRY methods such as sweeping, shoveling or use a street sweeper/vacuum truck.
- ✓ Wash down exposed aggregate concrete only when the wash water can drain onto a bermed surface from which it can be pumped and disposed of properly or be vacuumed from a catchment created by blocking a storm drain inlet. If necessary, divert runoff with temporary berms.
- ✓ Wash out concrete mixers in designated wash-out areas where the water flows into a temporary waste pit.
- ✓ Dispose of settled, hardened concrete as garbage.
- ✓ Ensure that tracking does not occur from the concrete washout area.
- ✓ Dewatering of accumulated stormwater can only be done through a chemical filtering sock.
- ✓ Concrete wash water and sawcut slurry are not allowed to enter a storm drain.



If debris is in the curb, a vacuum truck may be needed to clean up the area.



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Check which practice you will implement. Drawings and descriptions are in the fo

If choosing "Other," supply a drawing and detailed description (including mainte

Excavated Washout Structure

Washout Structure with Wood Planks

Washout Structure with Straw Bales

Prefabricated Containment System

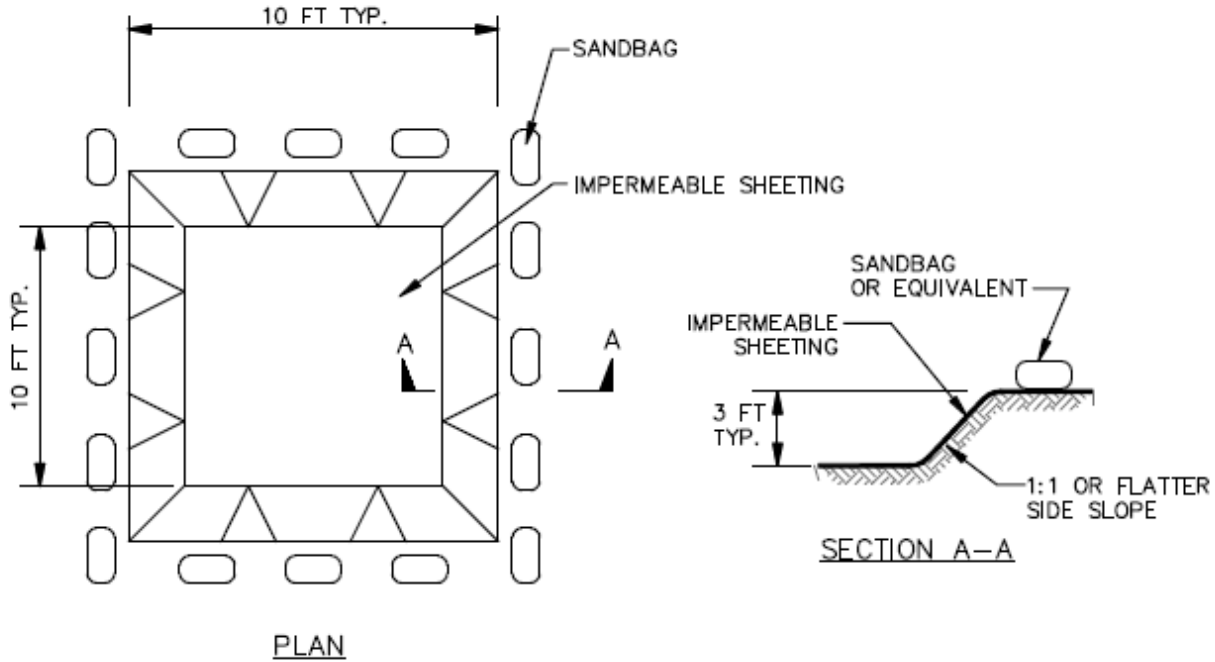
- Name of manufacturer: _____
- Size: _____
- Attach the manufacturer's specification sheet and detail of how it will be maintained.

Other

Approved Concrete Washout Practice Drawings & Descriptions

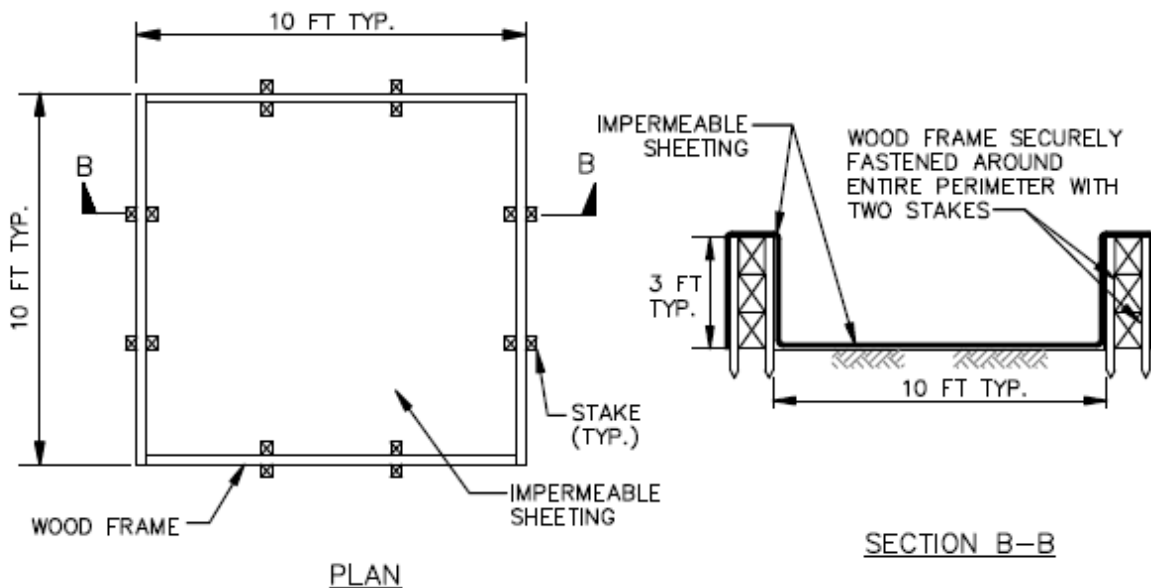
Excavated Washout Structure

The Maryland Standard H-6 for an onsite concrete washout structure is provided as an option for use in Arlington County.



Washout Structure with Wood Planks

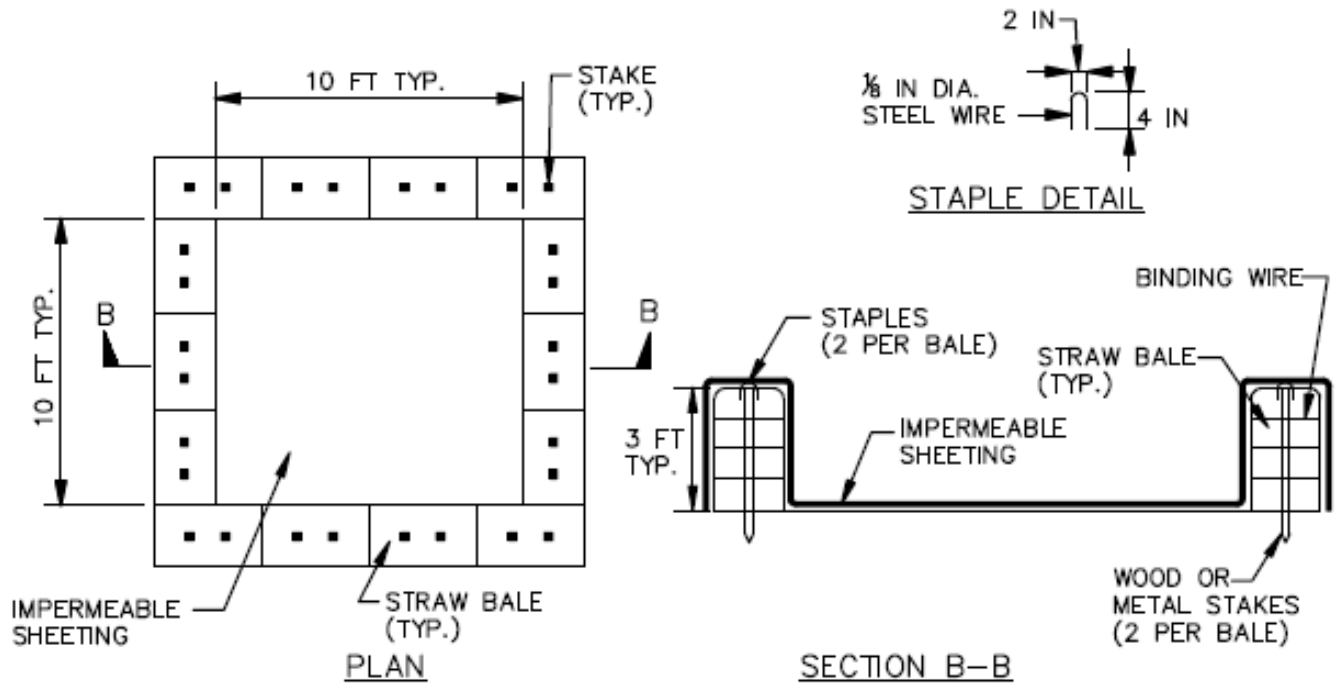
The Maryland Standard H-6 for an onsite concrete washout structure is provided as an acceptable option for use in Arlington County.



Washout Structure with Straw Bales

The Maryland Standard H-6 for an onsite concrete washout structure is provided as an option for use in Arlington County.


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NOTE: CAN BE TWO STACKED BALES
OR PARTIALLY EXCAVATED TO
REACH 3 FT DEPTH



Example washout structures. Note that each example is fully lined and the washout is contained.

Prefabricated Containment System


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Prefabricated containment example.

Concrete Washout Other

Supply a drawing and detailed description. Include information on practice



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Structure Construction, Stucco, Painting and Cleaning

Enclose, cover or berm building material storage areas if susceptible to contaminated stormwater runoff. Conduct painting operations consistent with local air quality and OSHA regulations. Mix and apply paint in a containment area or a flat unpaved area. Prevent the discharge of soaps, solvents, detergents, and other cleaning materials, including the cleanup of stucco paint, form release oils and other cleaning materials.



Best Practices:

- ✓ Liquid waste may not enter a storm drain.
- ✓ Liquid wastes are to be contained in a controlled area, such as a portable tank.
- ✓ Containment must be structurally sound and leak-free.
- ✓ Containment must be sized appropriately for the needs of the site.
- ✓ Locate containment areas away from storm drains.

Examples for Structure Construction, Stucco, Painting and Cleaning Practices



Example paint washout structure.



Example small-scale concrete and paint washout area.

Structure Construction, Stucco, Painting and Cleaning Other

Supply a drawing and detailed description. Include information on practice



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Dewatering Operations

Construction site dewatering from building footings or other sources may not be discharged directly into receiving waters. Sediment laden or turbid water must be filtered, settled or similarly treated prior to discharge. The structure must be sized to allow pumped water to flow through the filtering device without clogging. Use a combination of filtering and inlet protection approaches described below. Clear water leaves the site. Closely monitor and maintain the sediment removal devices to ensure they are not clogged and operate correctly. Make adjustments as site conditions change.



Check which filtering practice(s) you will implement. Drawings and descriptions are in the following section. If choosing “Other,” supply a drawing and detailed description that includes information on maintenance on page 17.

Filter Box

Straw Bale/Silt Fence Pit

Portable Sediment Tank

Filter Bag

Pump from Settling Pit

Manufactured System

- Name of manufacturer: _____
- Size: _____
- Attach the manufacturer’s specification sheet and detail of how it will be maintained.

Other

Check which inlet protection practice(s) you will couple with the filtering practice. See Arlington’s *Erosion and Sediment Control Supplement* and/or the Virginia Department of Environmental Quality’s *Virginia Erosion and Sediment Control Handbook* for inlet protection practice specifications.

If choosing “Other,” supply a drawing and detailed description that includes information on maintenance on page 8 of the E&S Supplement.

Filter Fabric Inlet Protection

Gravel Curb Inlet Sediment Filter

Block and Gravel Curb Inlet Sediment Filter

Block and Gravel Drop Inlet Sediment Filter

Silt Fence Drop Inlet Protection

Median Inlet Protection

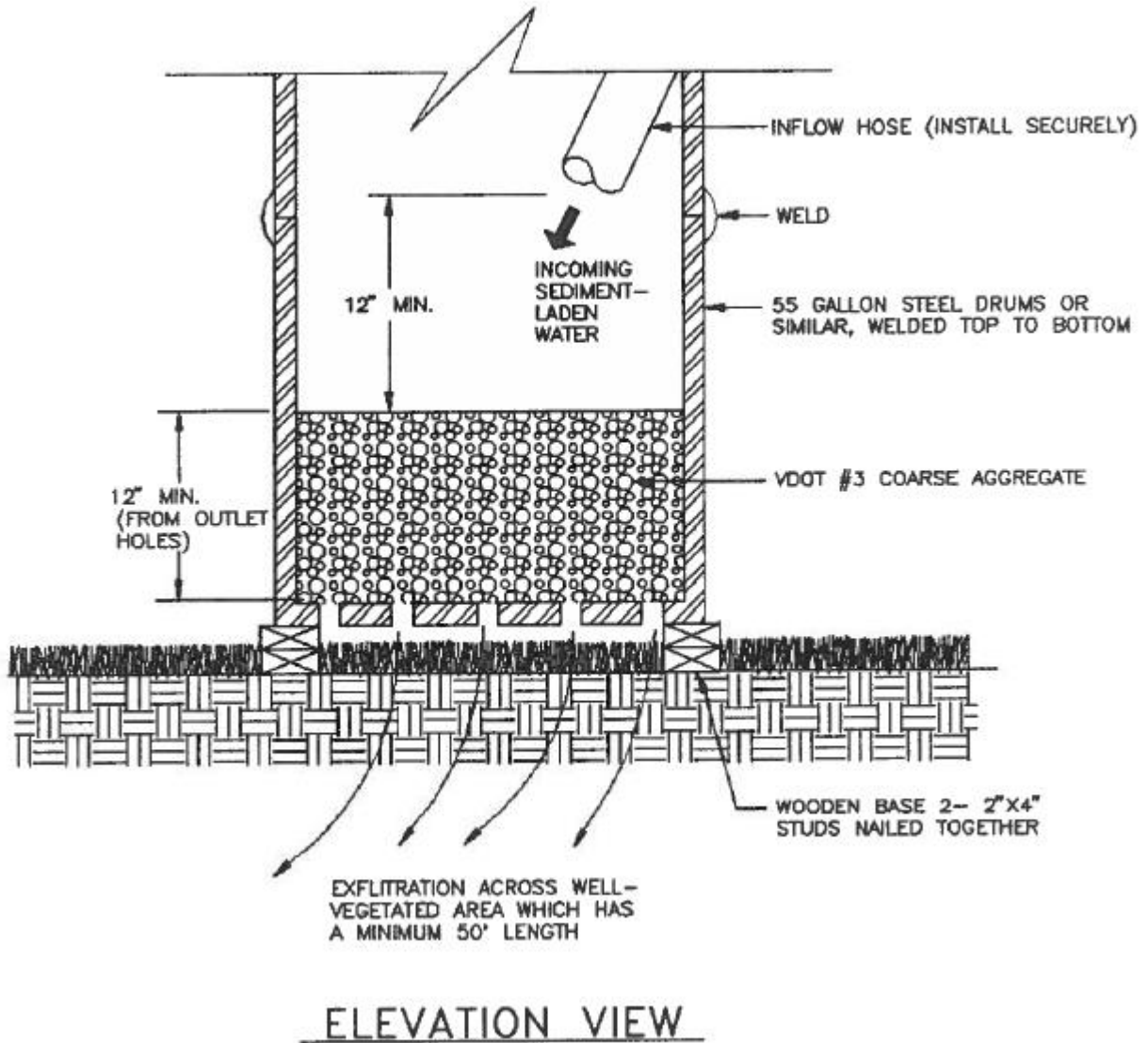
Other

Approved Dewatering Practice Drawings & Descriptions

Filter Box

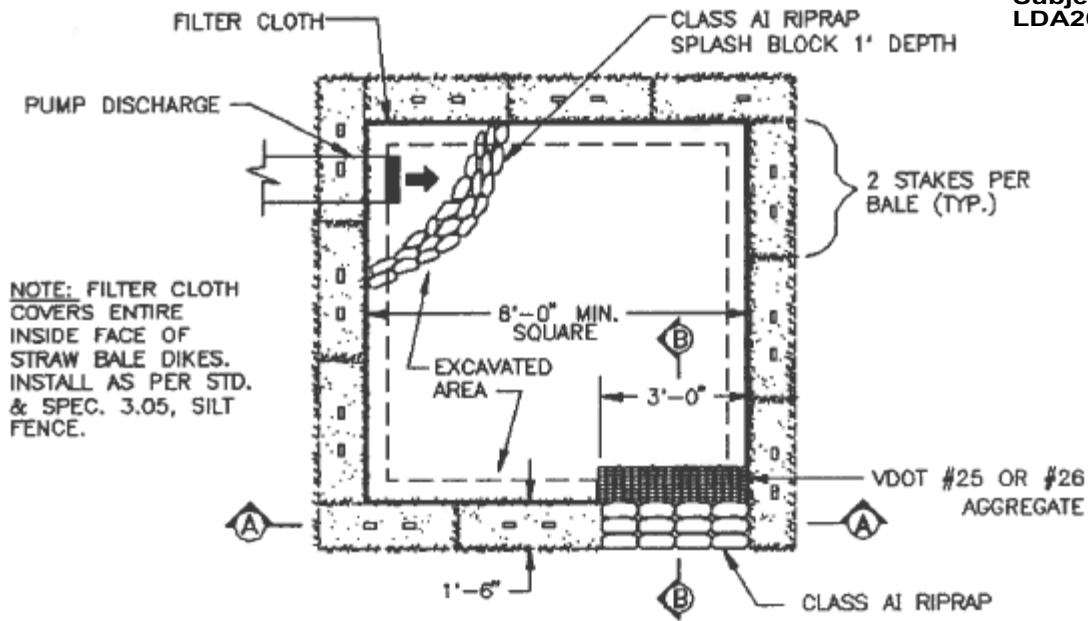
See the Virginia Department of Environmental Quality's *Virginia Erosion and Sediment* Chapter 3-3.26 for additional design specifications. The box must be cleaned out once or if filled with sediment. If the stones become clogged and the box stops properly function removed, cleaned and replaced.


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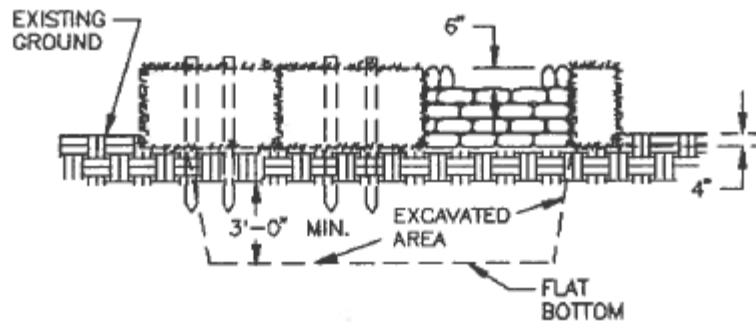


Straw Bale/Silt Fence Pit

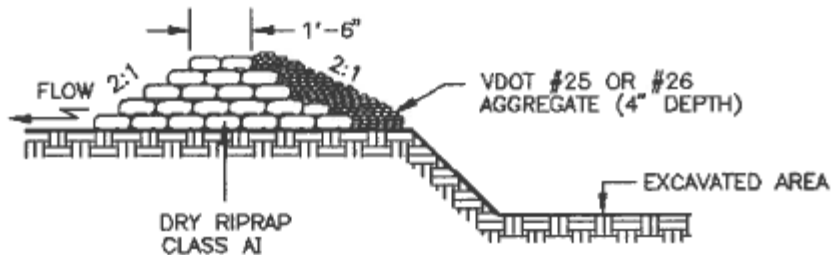
See the Virginia Department of Environmental Quality's *Virginia Erosion and Sediment* Chapter 3-3.26 for additional design specifications.



PLAN VIEW



CROSS-SECTION A-A



CROSS-SECTION B-B

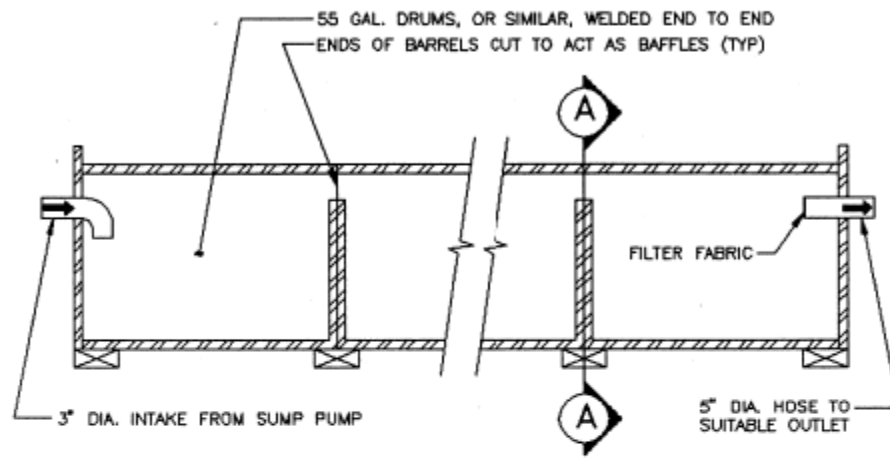
Portable Sediment Tank

See the Virginia Department of Environmental Quality's *Virginia Erosion and Sediment* Chapter 3-3.26 for additional design specifications. Storage volume of the sediment tank

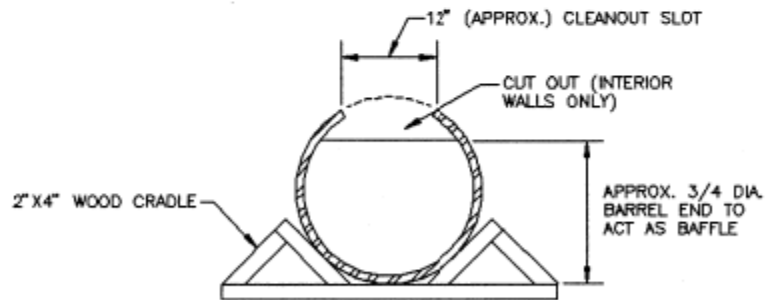
$$\text{Pump discharge (g.p.m.)} \times 16 = \text{cubic feet of storage required}$$


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PORTABLE SEDIMENT TANK

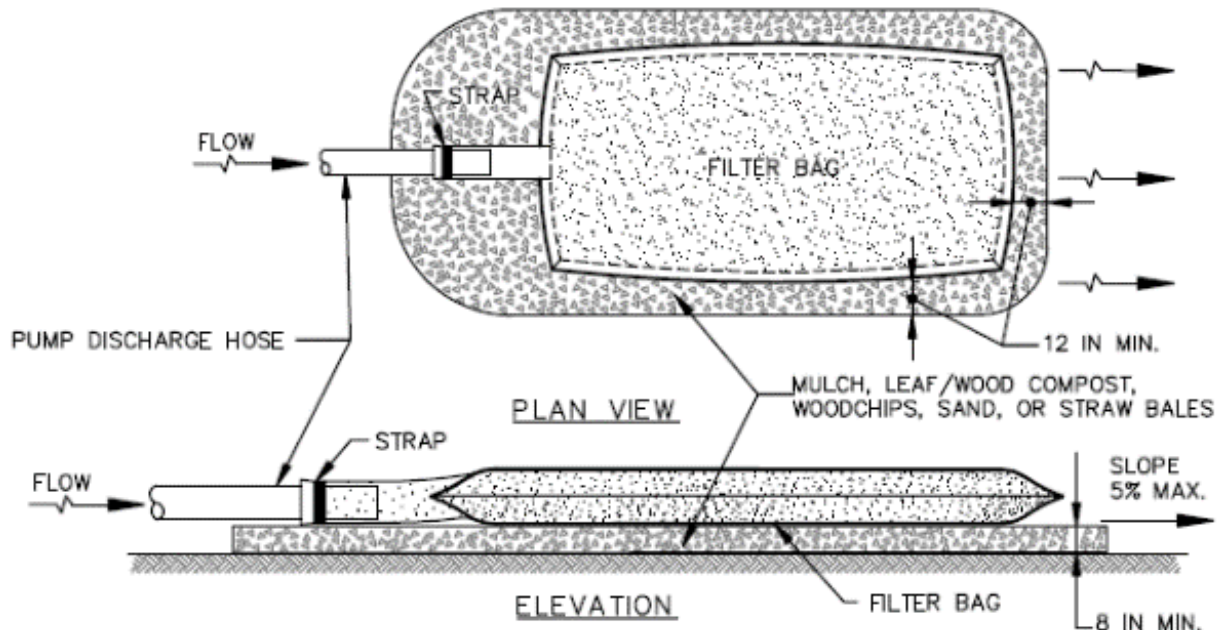


ELEVATION



CROSS-SECTION A-A

The Maryland Standard F-4 for a filter bag is provided as an acceptable option for use in County if straw bales or stone are used as the layer under the filter bag. The use of mulch, compost, woodchips or sand is not acceptable.



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT ²	ASTM D-4491
PERMITTIVITY (SEC ⁻¹)	1.2 SEC ⁻¹	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632
6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

Pump from Settling Pit

Dig a small pit and fill with fine gravel. Draw water from the top of the pit, not the bottom ensure that you are drawing only clear water from the pit.



Manufactured System

There are a variety of manufactured systems on the market. Choose one that fits the size constraints of your site and can adequately meet your dewatering needs.

Dewatering Practice Other

Supply a drawing and detailed description. Include information on practice m



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Material Delivery and Storage

Eliminate or minimize the chances of contact with runoff and a pollution discharge even site. Designate areas of the construction site for material delivery and storage. Place near away from waterways, and avoid transport near drainage paths or waterways.

Best Practices

- ✓ Train employees and subcontractors on the proper material delivery and storage practices.
- ✓ Keep materials dry and protected from wind and rain. Install berms or curbs when necessary to prevent runoff.
- ✓ Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks or channels.
- ✓ Cover dry and wet materials, including exposed piles of soil and construction materials, with plastic sheeting or temporary roofs when not in use.
- ✓ Secure bags of cement after they are open. Be sure to keep wind-blown cement powder away from streets, gutters, storm drains, rainfall and runoff.
- ✓ Provide secondary containment around tanks or at a minimum berm them.
- ✓ Place a stockpile of spill cleanup materials, such as brooms, dustpans and vacuum sweepers (if desired), near the storage area where it will be readily accessible.
- ✓ Keep outdoor storage containers in good condition.



Example of a manufacturer's storage container. Note that the doors are closed and that the area surrounding the container is clean (except for some residual snow).

Chemical and Fuel Management and Storage

Best Practices



- ✓ Establish a designated fueling area where all vehicles and equipment are fueled.
- ✓ Place temporary “caps” over nearby catch basins or manhole covers so that if a spill occurs it is prevented from entering the storm drain.
- ✓ Cover fueling and chemical storage areas with an overhanging roof structure or canopy so that precipitation cannot come in contact.
- ✓ Place a stockpile of spill cleanup materials where it will be readily accessible. Include portable absorbent booms (long flexible shafts or barriers made of absorbent material) in unbermed fueling areas.
- ✓ Use DRY methods such as adsorbent materials on small spills. Remove the adsorbent materials after use promptly.
- ✓ Install protective guards around tanks and piping to prevent vehicle or forklift damage.
- ✓ Use a perimeter drain or slope pavement inward with drainage to sump. Pave area with concrete rather than asphalt.
 - Where covering is not feasible and the fuel island is surrounded by pavement, apply a suitable sealant that protects the asphalt from spilled fuels.
- ✓ Install overflow protection devices on tank systems to warn the operator to automatically shutdown transfer pumps when the tank reaches full capacity.
- ✓ Install clear tagging or labeling of all valves to reduce human error.
- ✓ Fit fuel dispensing nozzles with "hold-open latches" (automatic shutoffs) except where prohibited by local fire departments.
- ✓ Post signs at the fuel dispenser or fuel island warning vehicle owners/operators against "topping off" of vehicle fuel tanks.
- ✓ Use secondary containment when transferring fuel from the tank truck to the fuel tank.
- ✓ Regularly inspect fuel and chemical containers.
 - Check for external corrosion and structural failures such as cracks, scratches and other physical damage that may weaken the tank or container system.
 - Check for leaks or spills while pumping liquids or gases from truck to a storage facility or vice versa.
 - Check tank foundations, connections, coatings, tank walls and piping system for failures.
 - Visually inspect new tank or container installation for loose fittings, poor welding, and improper or poorly fitted gaskets.
- ✓ Integrity testing should be conducted periodically by a qualified professional.

- ✓ Report significant spills to your site inspector. Immediately call 703-558-2222 if a Hazmat team is required to address the spill.



Fuel storage example. Cans are closed and located inside of a lined, secondary containment. The cans are also covered by a plastic liner to protect them from the elements.



Chemical storage example. Containers are closed, covered by a tarp, and off of the ground.



Portable refueling mat example. The mat catches drips that may occur during the fueling process.

Material Delivery and Storage, and Chemical and Fuel management and Storage Other

Supply a drawing and detailed description. Include information on practice m



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Solid Waste Disposal

Designate a waste collection area on the construction site that does not receive a substance from upland areas and does not drain directly to a waterway. Ensure that containers have covers before periods of rain, and keep containers in a covered area whenever possible. Collect waste to prevent the containers from overflowing.



Best Practices

- ✓ A sufficient number of waste containers must be kept on a site to handle the quantity of waste produced.
- ✓ Keep waste collection areas clean.
- ✓ Keep dumpster lids closed.
- ✓ Have the dumpster emptied before it becomes full and overflows its contents.
- ✓ Waste containers must be water tight.
- ✓ Check waste containers frequently for leaks and clean using DRY methods when necessary.
 - Never clean out a dumpster by power washing or hosing it out.
- ✓ Replace containers that are leaking, corroded, or otherwise deteriorating.
- ✓ Place waste containers under roofs, or cover with tarps or plastic sheeting secured around the outside of the dumpster.
- ✓ Never bury waste material. Dispose of excess dry concrete, grout and mortar in the trash.
- ✓ Create designated hazardous waste collection areas on-site.
- ✓ Place hazardous waste containers in secondary containment.
- ✓ When breaking up pavement, pick up all the pieces and dispose of them properly. Recycle large chunks of broken concrete at a landfill.



Good example of dumpster best practices. The dumpster is tarped and the tarp is secured. Traffic cones keep the area around the dumpster free of traffic and reflective tape (see bottom photo) is affixed to the ends of the dumpster.

Solid Waste Disposal Other

Supply a drawing and detailed description. Include information on practice m



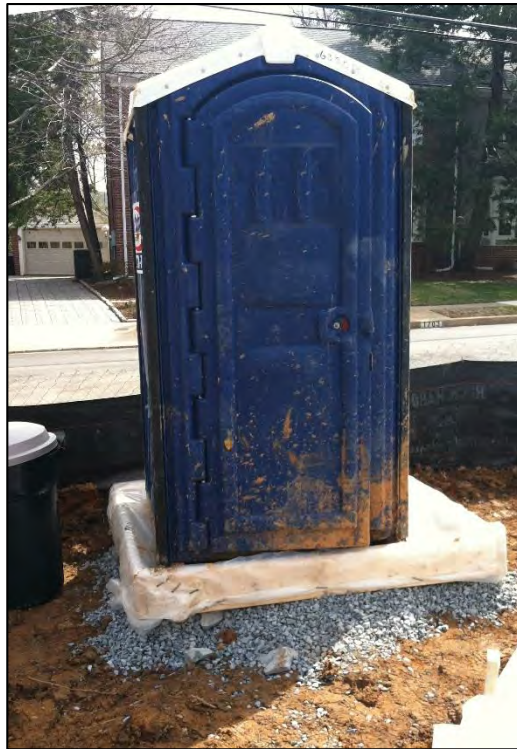
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Sanitary Waste

Best Practices

- ✓ Place portable toilets away from storm drains and waterways, preferably in a vegetated area. The toilet would ideally be downhill of storm drains and waterways.
- ✓ Locate portable toilets on level ground.
- ✓ Make sure portable toilets are in good working order. Check frequently for leaks.
- ✓ Regularly schedule pump outs of portable toilets.
- ✓ It is the responsibility of the construction site operator to ensure that the location and cleanliness of the portable toilet is acceptable.


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*Portable toilet is located on level ground,
and is inside secondary containment.*

Sanitary Waste Other

Supply a drawing and detailed description. Include information on practice m



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Equipment and Vehicle Maintenance

Use a designated area, away from storm drains, to refuel or perform vehicle or equipment



Best Practices

- ✓ Designate one area of the site for auto parking, vehicle refueling, and routine equipment maintenance. The designated area should be away from streams or storm drain inlets.
- ✓ Storm drain inlets should be protected. See the Inlet Protection section of the Planning & Field Guide for Erosion & Sediment Control for details.
- ✓ Maintain vehicles and equipment to ensure leaks are quickly found and repaired.
- ✓ Collect all spent fluids, store in separate containers, and properly dispose as hazardous waste (recycle whenever possible).
- ✓ Make major vehicle and equipment repairs off site.
- ✓ Clean up leaks, drips and other spills immediately.
- ✓ Paved surfaces are clear of drip and spill residues, and are stain-free.
- ✓ Use DRY cleanup methods (absorbent materials, cat litter and/or rags). Sweep, shovel or vacuum up and dispose of absorbent materials.
- ✓ Remove construction equipment as soon as possible from the job site. Do not store equipment onsite.
- ✓ Cover exposed fifth wheel hitches and other oily or greasy equipment during rain events.
- ✓ Report significant spills to your site inspector. Immediately call 703-558-2222 if a Hazmat team is required to address the spill.

Equipment and Vehicle Maintenance Other

Supply a drawing and detailed description. Include information on practice m



ARLINGTON
VIRGINIA
Approved: 8/30/2020
Subject to field inspection
LDA20163

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July 1, 2020

date



Qianqian Li, P.E.
ESC Program Administrator
Department of Environmental Services
2100 Clarendon Boulevard, Suite 813
Arlington, Virginia 22201

Re: Erosion and Sediment Control Permit Application for:

N. Glebe Road Water Main Replacement
street address

From N. Randolph St. to N. Pershing Dr.
lot, block, section subdivision

permit number

Dear Mrs. Li:

I hereby certify that I accept the responsibilities of Responsible Land Disturber for the above referenced project. I understand that these responsibilities include:

1. Reviewing the erosion and sedimentation (E&S) plan for the project.
2. Walking the site prior to construction to identify critical areas.
3. Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.
4. Regularly inspecting the site during construction to ensure that all E&S controls are functioning and are adequate to address erosion and sedimentation. Inspect the site 48 hours after a runoff-generating storm, and provide a copy of the inspection findings to the county.
5. Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
6. Ensuring that temporary soil stabilization is applied within 7 days to areas denuded that will remain undisturbed for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
7. Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at 703-228-3654 with questions about this plan or my execution of the duties of
telephone number
Responsible Land Disturber.

Sincerely,

A handwritten signature in black ink that reads "Solomon Shikur".

signed

Solomon Shikur

name printed

VA PE #44276
professional registration (type and number)



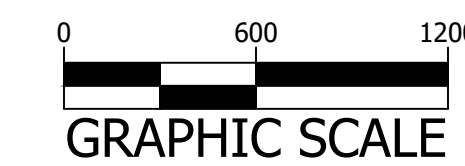
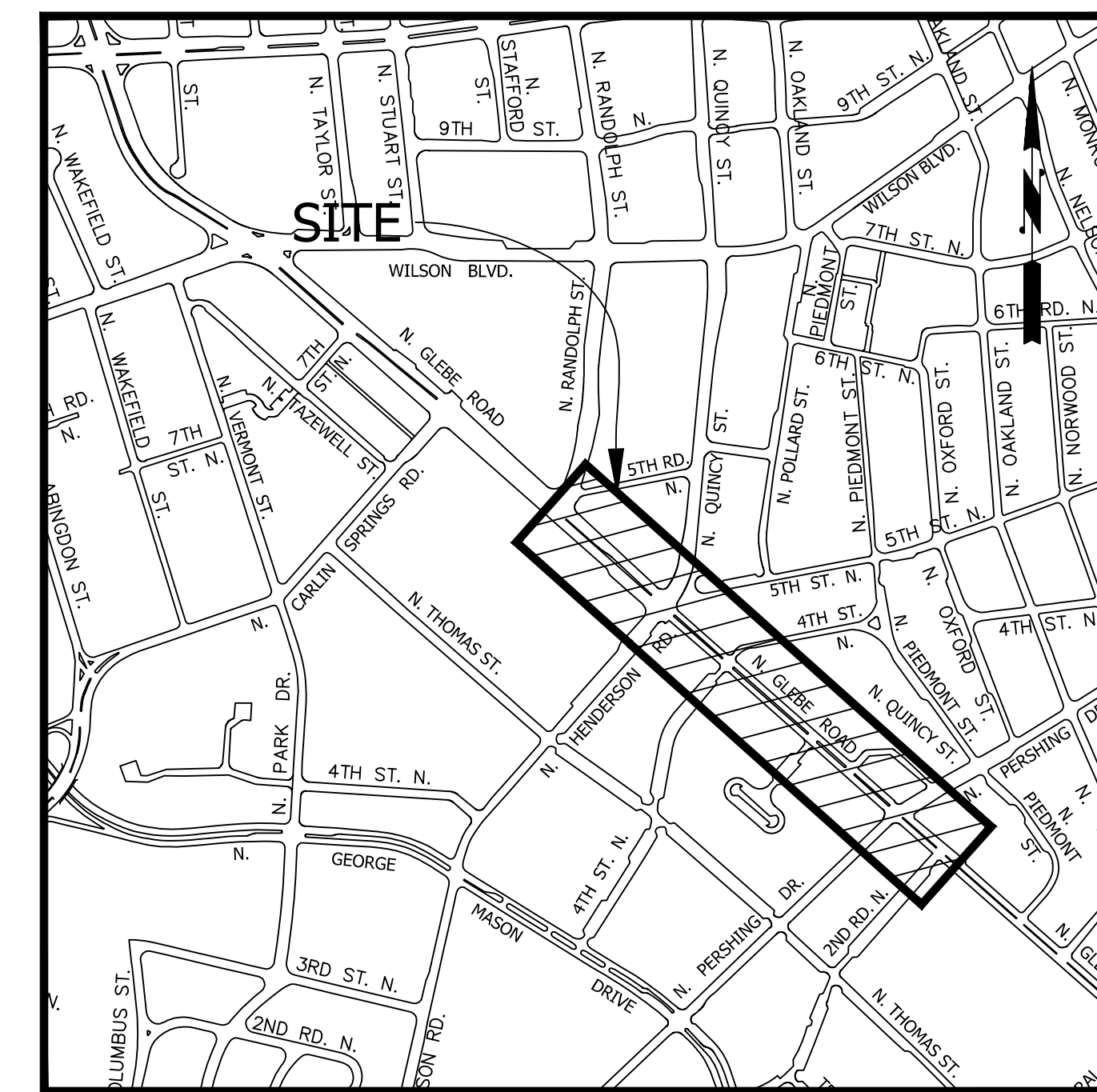
ENGINEER
DEPARTMENT OF
ENVIRONMENTAL SERVICES

FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629 FAX: 703.228.3606
WWW.ARLINGTONVA.US

OWNER
DES/OD/WSS

CONTRACTOR
TO BE DETERMINED

LOCATION MAP



CONSTRUCTION DRAWINGS FOR:

N. GLEBE ROAD WATERMAIN REPLACEMENT
FROM N. RANDOLPH STREET TO N. PERSHING DRIVE

PROJECT NUMBER: R014

GENERAL NOTES:

GENERAL CONSTRUCTION NOTES

- 1. ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS...
2. ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL...
3. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS...
4. THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 FOR MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES...
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT THE WORK AND SHALL RETAIN A PROFESSIONAL LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA TO PROVIDE ALL NECESSARY CONSTRUCTION LAYOUTS...
6. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED TO BE APPROXIMATE...
7. EXISTING MANHOLE FRAMES, COVERS, VALVE BOXES, AND OTHER APPURTENANCES SHALL BE ADJUSTED TO THE FINAL GRADE OR REPLACED, AS NECESSARY...
8. THE CONTRACTOR SHALL PROVIDE ADA COMPLIANT ACCESS THROUGH OR AROUND THE SITE AT ALL TIMES AND SHALL ENSURE THE SAFETY OF ALL THOSE PASSING THROUGH OR ADJACENT TO THE SITE...
9. ALL SIDEWALK AND CURB AND GUTTER DEMOLITION SHALL BEGIN AND END AT THE CONSTRUCTION JOINT NEAREST TO THE DEPICTED DEMOLITION EXTENTS WITH A NEAT SAWCUT LINE TO FULL DEPTH OF PAVEMENT SECTION.

STORMWATER AND ENVIRONMENTAL PROTECTION

- 10. THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, TO INCLUDE STORAGE OF EQUIPMENT AND OR MATERIALS, ACCESS TO THE WORK, FORMWORK, ETC. TO WITHIN THE DESIGNATED LIMITS OF DISTURBANCE (LOD).

TREE PROTECTION

- 11. TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF ARLINGTON PARKS & RECREATION STANDARD.

TRAFFIC CONTROL

- 12. CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.
13. THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED...
14. THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS...
15. WHEN THE APPROVED PLAN CALLS FOR THE REMOVAL OF ANY PARKING METER THE CONTRACTOR MUST MAKE A REQUEST TO THE PROJECT OFFICER AT LEAST ONE WEEK IN ADVANCE OF THE DESIRED REMOVAL...
16. THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESSIBILITY THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS...
17. WHEN CONDITIONS WARRANT DUE TO TRAFFIC VOLUMES, PATTERNS, OR SPECIAL EVENTS, THE COUNTY MAY SUSPEND OR OTHERWISE DIRECT THE CONTRACTOR'S ACTIVITIES TO PROTECT THE PUBLIC AND OR THE COUNTY'S TRANSPORTATION NETWORK.

WATER DISTRIBUTION, STORM AND SANITARY SEWER SYSTEMS

- 18. UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED OPERATION.
19. IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-6555 AND THE PROJECT OFFICER.
20. THE CONTRACTOR SHALL COORDINATE ALL UTILITY SHUTOFFS, DISCONNECTS, AND/OR ABANDONMENT WITH UTILITY OWNER AND PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED INTERRUPTION.

FIRE DEPARTMENT NOTES:

- 21. ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBTURSED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
22. ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE...
23. IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.

Sheet List

Table with 2 columns: Sheet Number, Sheet Title. Lists sheets C000.1 through C122.2 including COVER, LEGEND, EXISTING CONDITIONS PLANS, EROSION & SEDIMENT CONTROL PLANS, GEOMETRIC CONTROL PLANS, WATERMAIN PLANS AND PROFILES, PAVING PLANS, MAINTENANCE OF TRAFFIC PLANS, and MOT NOTES & DETAILS.

LDA 20163
SWM# 20-0176

ADT

27,000 - N. GLEBE ROAD (FROM FAIRFAX DR. TO ARLINGTON BLVD.) - 2017 - VDOT _ DAILY TRAFFIC VOLUME ESTIMATES
8,400 - N. RANDOLPH ROAD (WILSON BLVD TO GLEBE RD) - 2019 - VDOT _ANNUAL AVERAGE DAILY TRAFFIC
12,000 - N. QUINCY STREET (GLEBE RD TO WILSON BLVD) - 2019 - VDOT _ANNUAL AVERAGE DAILY TRAFFIC
8,000 - N. HENDERSON ROAD (GLEBE RD TO G. MASON DR) - 2019 - VDOT _ANNUAL AVERAGE DAILY TRAFFIC
4TH STREET N. - NO TRAFFIC INFORMATION
3RD STREET N. - NO TRAFFIC INFORMATION
N. QUEBEC STREET - NO TRAFFIC INFORMATION
8,300 - N. PERSHING DRIVE (GLEBE RD TO WASHINGTON BLVD) - 2019 - VDOT _ANNUAL AVERAGE DAILY TRAFFIC
6,300 - N. PERSHING DRIVE (G. MASON DR TO GLEBE RD) - 2019 - VDOT _ANNUAL AVERAGE DAILY TRAFFIC

STREET CLASSIFICATION

N. GLEBE ROAD - PRINCIPAL ARTERIAL
N. RANDOLPH RD - MINOR ARTERIAL
N. QUINCY STREET - MINOR ARTERIAL
N. HENDERSON ROAD - MINOR ARTERIAL
N. PERSHING DRIVE - MINOR ARTERIAL

POSTED SPEED

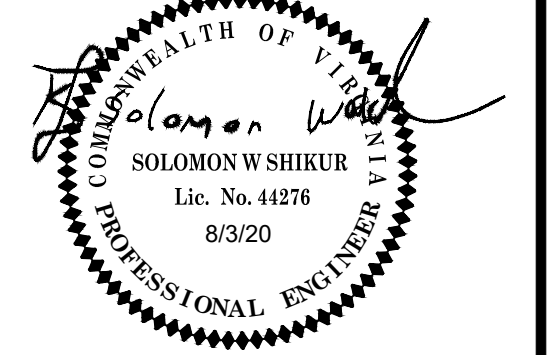
N. GLEBE ROAD - 30 MPH
N. RANDOLPH ROAD - 25 MPH
N. QUINCY STREET - 25 MPH
N. HENDERSON ROAD - 25 MPH
4TH STREET N. / 3RD STREET N. / N. QUEBEC STREET - 25 MPH
N. PERSHING DRIVE - 25 MPH



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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SEAL



APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.

COVER

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: AUGUST 25 2020

SCALE:

(AS SHOWN)

C000.1

LINETYPE LEGEND

FEATURE	EXISTING	PROPOSED
BUILDING	— — — — —	— — — — —
CENTERLINE / BASELINE	— — — — —	— — — — —
COMMUNICATIONS CABLE	— COM — COM —	— COM — COM —
CONTOURS MAJOR; MINOR	--- 250 --- 250 ---	— — — — —
CRITICAL ROOT ZONE	— CRZ — CRZ —	— CRZ — CRZ —
EASEMENT	— — — — —	— — — — —
ELECTRIC (UNDERGROUND)	— UGE — UGE —	— UGE — UGE —
FENCE (MATERIAL NOTED)	— X — X — X — X — X —	— X — X — X — X — X —
FIBER OPTIC	— FO — FO —	— FO — FO —
GAS LINE	— GAS — GAS —	— GAS — GAS —
X" GAS LINE (SIZE INCLUDED IF AVAILABLE)	— — — — —	— — — — —
GUARDRAIL	. o . o . o . o . o . o .	. o . o . o . o . o . o .
HARDSCAPE FEATURE (MATERIAL NOTED)	— — — — —	— — — — —
LIMITS OF DISTURBANCE	— LOD — LOD —	— LOD — LOD —
LIMITS OF WORK	— LOW — LOW —	— LOW — LOW —
OVERHEAD WIRES	— —	— —
PAVEMENT MINI SKIP LINE	— — — — —	— — — — —
PAVEMENT SKIP LINE	— — — — —	— — — — —
PROPERTY LINE	— — — — —	— — — — —
RIGHT-OF-WAY LINE	— — — — —	— — — — —
ROOT PRUNING	— RP — RP —	— RP — RP —
SANITARY SEWER	— SAN — SAN —	— SAN — SAN —
X" SANITARY SEWER (SIZE INCLUDED IF AVAILABLE)	— — — — —	— — — — —
SILT FENCE	— X — X — X — X — X —	— X — X — X — X — X —
STORM (SIZE NOTED)	— STM — STM —	— — — — —
STREAM	—	—
STREET LIGHT CONDUIT	— SL — SL —	— SL — SL —
TELEPHONE (UNDERGROUND)	— UGT — UGT —	— UGT — UGT —
TREE LINE	— ~ ~ ~ ~ ~	— ~ ~ ~ ~ ~
TREE PROTECTION FENCE	— TP — TP —	— TP — TP —
WALL	— — — — —	— — — — —
WATER	— 6" w — — — —	— — — — —
X" WATER (SIZE INCLUDED IF AVAILABLE)	— — — — —	— — — — —

SYMBOL LEGEND

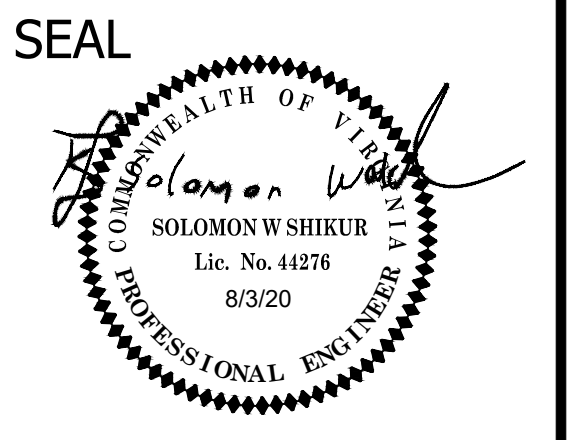
EXISTING	PROPOSED
EX CABLE PEDESTAL	PROP CABLE PEDESTAL
EX ELECTRIC BOX	PROP ELECTRIC BOX
EX FIRE HYDRANT	PROP FIRE HYDRANT
EX GAS VALVE	PROP GAS VALVE
EX GROUND LIGHT	PROP GROUND LIGHT
EX GUY WIRES	PROP GUY WIRES
EX IRON PIPE OR PIN	PROP IRON PIPE OR PIN
EX LIGHT POLE	PROP LIGHT POLE
EX MAILBOX	PROP MAILBOX
EX MONUMENT	PROP MONUMENT
EX PARKING METER	PROP PARKING METER
EX PAY STATION	PROP PAY STATION
EX SANITARY MANHOLE	PROP SANITARY MANHOLE
EX STORM BASIN	PROP STORM CATCH BASIN (TO SCALE)
EX STORM MANHOLE	PROP STORM MANHOLE
EX TELEPHONE PEDESTAL	PROP TELEPHONE PEDESTAL
EX TRAFFIC CONTROL BOX	PROP TRAFFIC CONTROL BOX
EX TRAFFIC SIGN	PROP TRAFFIC SIGN
EX TRASH CAN	PROP TRASH CAN
EX TRAVERSE	PROP TRAVERSE
EX TREES, WOODED AREA	PROPOSED TREE REMOVAL
EX UTILITY MANHOLE TYPE INDICATED ELECTRIC, TELE, ETC	PROP UTILITY MANHOLE
EX UTILITY POLE	PROP UTILITY POLE
EX WATER MANHOLE	PROP WATER MANHOLE
EX WATER METER	PROP WATER METER
EX WATER VALVE	PROP WATER VALVE
EX YARD INLET	PROP YARD INLET (TO SCALE)
EX BENCHMARK	PROP BENCHMARK
	CONSTRUCTION NOTES (LEADER TO AREA AFFECTED)
	CURVE NUMBER (SEE CURVE TABLE)
	LINE NUMBER (SEE LINE TABLE)
	TEST HOLE
	NORTH ARROW

LABEL LEGEND

EXISTING	PROPOSED
EXISTING SANITARY STRUCTURE NUMBER	PROPOSED SANITARY SEWER STRUCTURE NUMBER
EXISTING STORM SEWER STRUCTURE NUMBER	PROPOSED STORM SEWER STRUCTURE NUMBER

HATCH LEGEND

PROP MILL & OVERLAY	[Hatch Pattern]
PROP FULL DEPTH ASPHALT	[Hatch Pattern]
PROP CONCRETE	[Hatch Pattern]
REPLACE & MATCH EXISTING DRIVEWAY OR LEADWALK. SEE CONSTRUCTION NOTES	[Hatch Pattern]
DEMOLITION AREA	[Hatch Pattern]



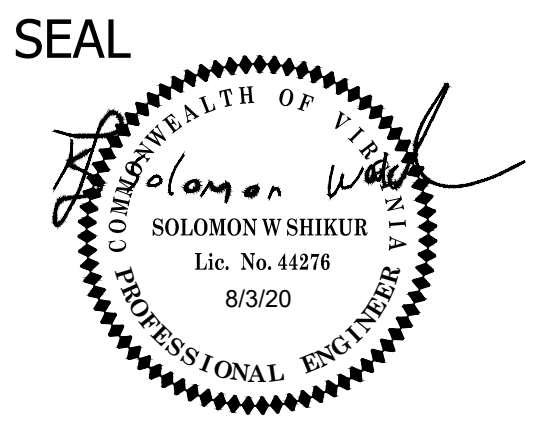
APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 LEGEND

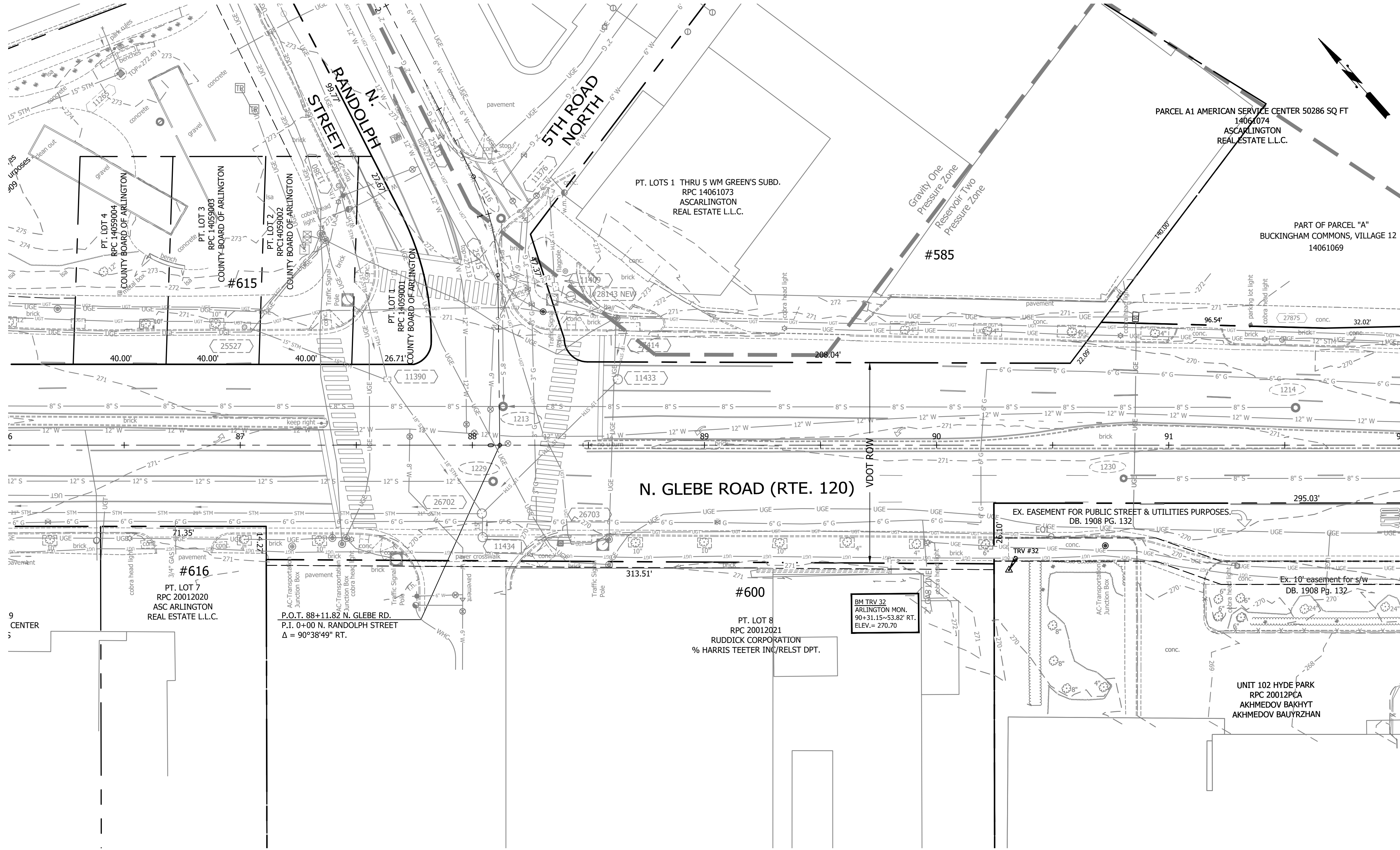
DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS
 PLOTTED: AUGUST 4 2020

SCALE:
 N/A



APPROVALS	DATE

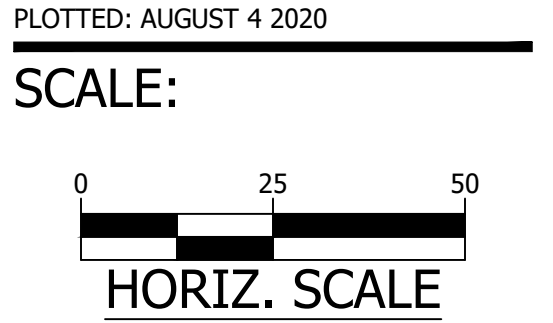
REVISIONS	DATE

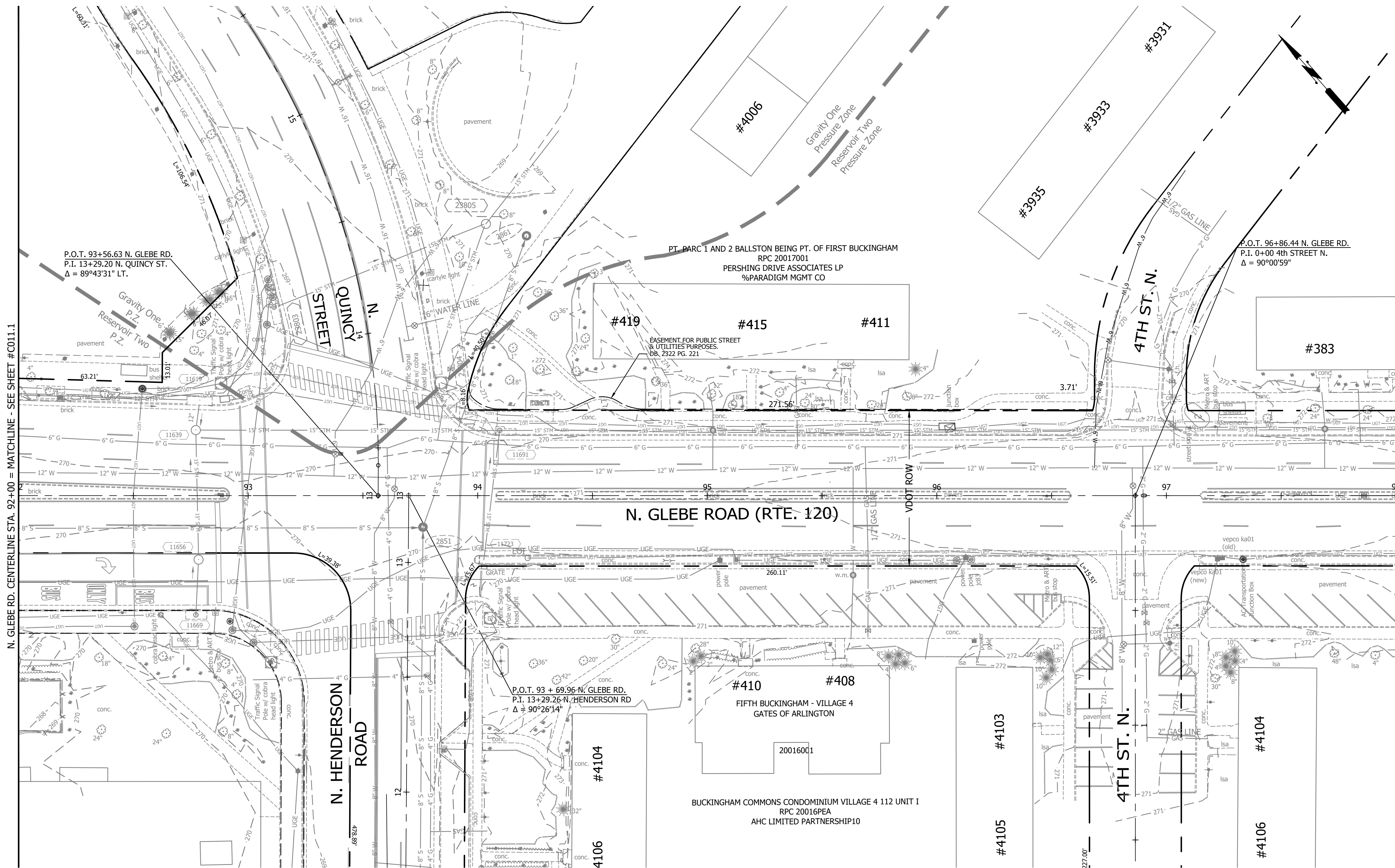


N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
EXISTING CONDITIONS PLAN - 1

GENERAL SURVEY NOTES:

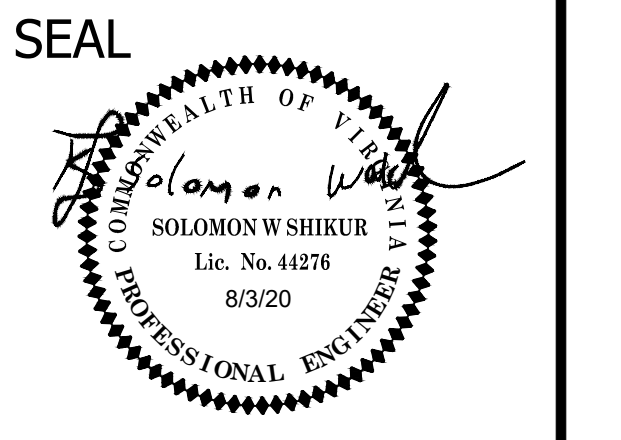
- THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM A COMBINATION OF ARLINGTON COUNTY G.I.S. INFORMATION AND AN ACTUAL GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 06/2014 TO 07/2014 WITH A SUPPLEMENTAL SURVEY OBTAINED FROM 07/2018 TO 09/2018; AND THIS PLAN, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
- HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.
- VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
- CONTOUR INTERVAL: 1'
- BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.





N. GLEBE RD. CENTERLINE STA. 92+00 = MATCHLINE - SEE SHEET #C011.1

N. GLEBE RD. CENTERLINE STA. 98+00 = MATCHLINE - SEE SHEET #C011.3



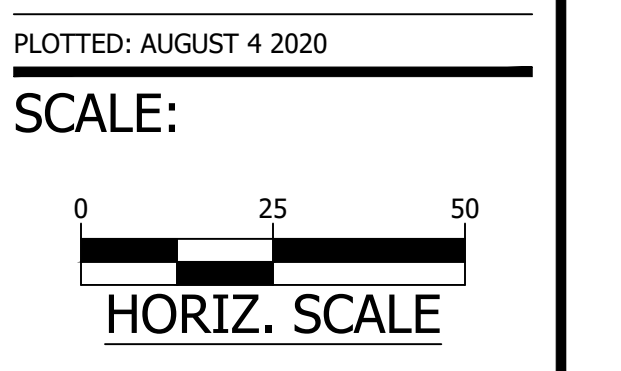
APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 EXISTING CONDITIONS PLAN - 2

GENERAL SURVEY NOTES:

- THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM A COMBINATION OF ARLINGTON COUNTY G.I.S. INFORMATION AND AN ACTUAL GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 06/2014 TO 07/2014 WITH A SUPPLEMENTAL SURVEY OBTAINED FROM 07/2018 TO 09/2018; AND THIS PLAN, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
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- CONTOUR INTERVAL: 1'
- BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.



STORM SEWER TABLE

#11376 TOP = 272.62 INV. IN = 268.17 15" RCP (11362) INV. OUT = 267.97 15" RCP (11409)	#11723 TOP = 270.32 INV. OUT = 266.61 15" RCP (11691)
#11380 TOP = 272.10 INV. OUT = 268.74 15" RCP (11390)	#11873 TOP = 271.10 INV. IN = NEEDS CLEANING (11905) INV. OUT = NEEDS CLEANING (12104)
#11390 TOP = 270.51 INV. IN = 266.56 15" RCP (25527) INV. IN = 266.61 15" RCP (11380) INV. OUT = 266.51 18" RCP (26702)	#11905 TOP = 270.99 INV. ???
#11409 TOP = 271.84 INV. IN = 267.89 15" RCP (25415) INV. IN = 267.94 15" RCP (11376) INV. OUT = 267.84 15" RCP (#28143 NEW)	#12104 TOP = 270.51 INV. IN = 262.57 18" RCP (11873) INV. IN = 263.65 15" RCP (12145) INV. OUT = 262.66 18" RCP (12227)
#11433 TOP = 270.19 INV. IN = 266.76 15" RCP (25414) INV. OUT = 266.41 15" RCP (26702)	#12145 TOP = 270.36 INV. OUT = 266.21 15" RCP (12104)
#11434 TOP = 269.83 INV. IN = 266.89 15" RCP (26703) INV. OUT = 266.67 15" RCP (26702)	#12227 TOP = 267.74 INV. IN = 262.01 18" RCP (12104) INV. OUT = 261.86 ??? (28062 NEW)
#11619 TOP = 269.92 INV. IN = 267.14 12" RCP (27875) INV. OUT = 267.04 12" RCP (11619)	#12230 TOP = 268.59 INV. IN = 263.57 15" RCP (#28482 NEW) INV. OUT = 262.88 15" RCP (12227)
#11639 TOP = 269.64 INV. IN = No access 12" RCP (11619) INV. IN = NO ACCESS 15" RCP (11656) INV. OUT = 266.15 15" RCP (11691)	#12419 TOP = 263.30 INV. IN = 259.78 15" RCP (12438) INV. INT = 258.93 24" RCP (NEW STR.)
#11656 TOP = 269.63 INV. IN = 266.89 12" RCP (11669) INV. OUT = 266.88 15" RCP (11639)	#12438 TOP = 263.98 INV. OUT = 259.46 15" RCP (12419)
#11691 TOP = 270.40 INV. IN = 265.37 15" RCP (11639) INV. IN = 266.38 15" RCP (11723) INV. OUT = 265.33 15" RCP (11873)	#23803 TOP = 269.25 INV. OUT = 266.55 15" RCP (23805)
#11669 TOP = 269.54 INV. OUT = 267.11 12" RCP (11656)	#23804 TOP = 269.97 INV. OUT = 266.82 15" RCP (23805)
#25413 TOP = 272.48 INV. OUT = 268.36 15" RCP (25415)	#23805 TOP = 269.82 INV. IN = 265.04 15" RCP (23803) INV. IN = 265.10 15" RCP (23804) INV. OUT = 264.99 15" RCP (23806)
#25414 TOP = 270.31 INV. IN = 267.36 15" RCP (#28143 NEW) INV. OUT = 266.53 15" RCP (11433)	#27402 TOP = 270.59 INV. IN = 263.03 24" RCP (#28189 NEW) INV. IN = 264.24 18" RCP (11130) INV. IN = 265.36 10" RCP (11206) INV. OUT = 262.19 36" RCP (11143)
#25415 TOP = 272.12 INV. IN = 267.04 15" RCP (25413) INV. OUT = 267.01 15" RCP (11409)	#27404 TOP = 271.35 INV. IN = 264.51 21" RCP (26702) INV. OUT = 264.35 24" RCP (27401)
#25527 TOP = 270.70 INV. OUT = 267.00 15" RCP (11390)	#28062 NEW TOP = 267.42 INV. IN = 261.80 18" RCP (12227) INV. OUT = 261.71 24" RCP (12419)
#26702 TOP = 270.15 INV. IN = 266.28 15" RCP (11434) INV. IN = 266.20 15" RCP (11433) INV. IN = 266.19 18" RCP (11390) INV. OUT = 266.05 21" RCP (27404)	#28189 NEW TOP = 270.79 INV. IN = CANT OPEN (27401) INV. OUT = CANT OPEN (27402)
#26703 TOP = 270.40 INV. OUT = 267.00 15" RCP (11434)	#28482 NEW TOP = 268.74 INV. OUT = 264.43 15" RCP (12230)
#28143 NEW TOP = 271.51 INV. IN = 267.66 15" RCP (11409) INV. OUT = 267.61 15" RCP (#25414)	

SANITARY SEWER TABLE

#1116 TOP = 272.26 C/L INV. = 261.44	#1228 TOP = 271.57 C/L INV. = 262.61	#2850 TOP = 268.34 C/L INV. = 264.00
#1211 TOP = 270.69 C/L INV. = 258.74	#1229 TOP = 270.48 C/L INV. = 264.48	#2851 TOP = 270.19 C/L INV. = COULD NOT OPEN
#1212 TOP = 271.60 C/L INV. = 259.12	#1230 TOP = 270.69 C/L INV. = COULD NOT OPEN	#2861 TOP = 269.44 C/L INV. = 261.59
#1213 TOP = 270.38 C/L INV. = 260.94	#1232 TOP = 270.98 C/L INV. = 260.18	#11344 TOP = 271.50 C/L INV. = 259.35
#1214 TOP = 270.13 C/L INV. = ALREADY HAVE	#1233 TOP = 270.96 C/L INV. = 257.88	#11345 TOP = 272.75 C/L INV. = 262.35
#1227 TOP = 270.66 C/L INV. = CANT OPEN	#1234 TOP = 267.73 C/L INV. = 257.09	#13693 TOP = 270.67 C/L INV. = CANT OPEN

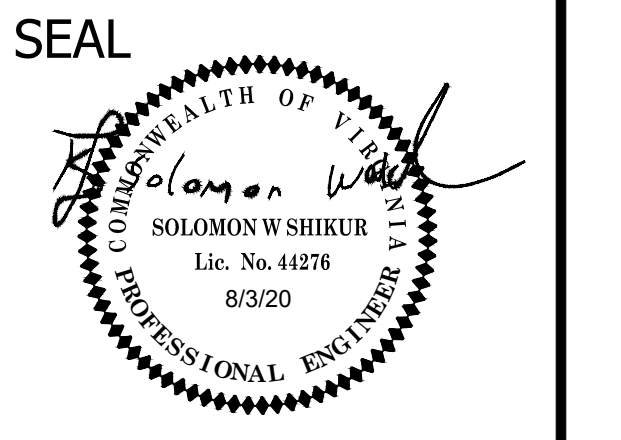
GENERAL SURVEY NOTES:

- THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM A COMBINATION OF ARLINGTON COUNTY G.I.S. INFORMATION AND AN ACTUAL GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 06/2014 TO 07/2014 WITH A SUPPLEMENTAL SURVEY OBTAINED FROM 07/2018 TO 09/2018; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
- HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.
- VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
- CONTOUR INTERVAL: 1'
- BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.



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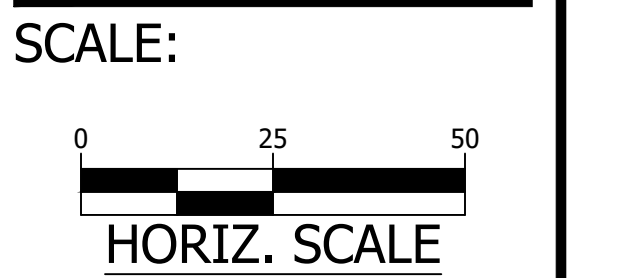
APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
EXISTING CONDITIONS PLAN - 3

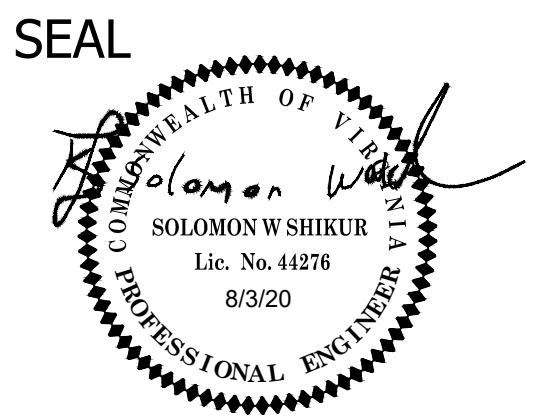
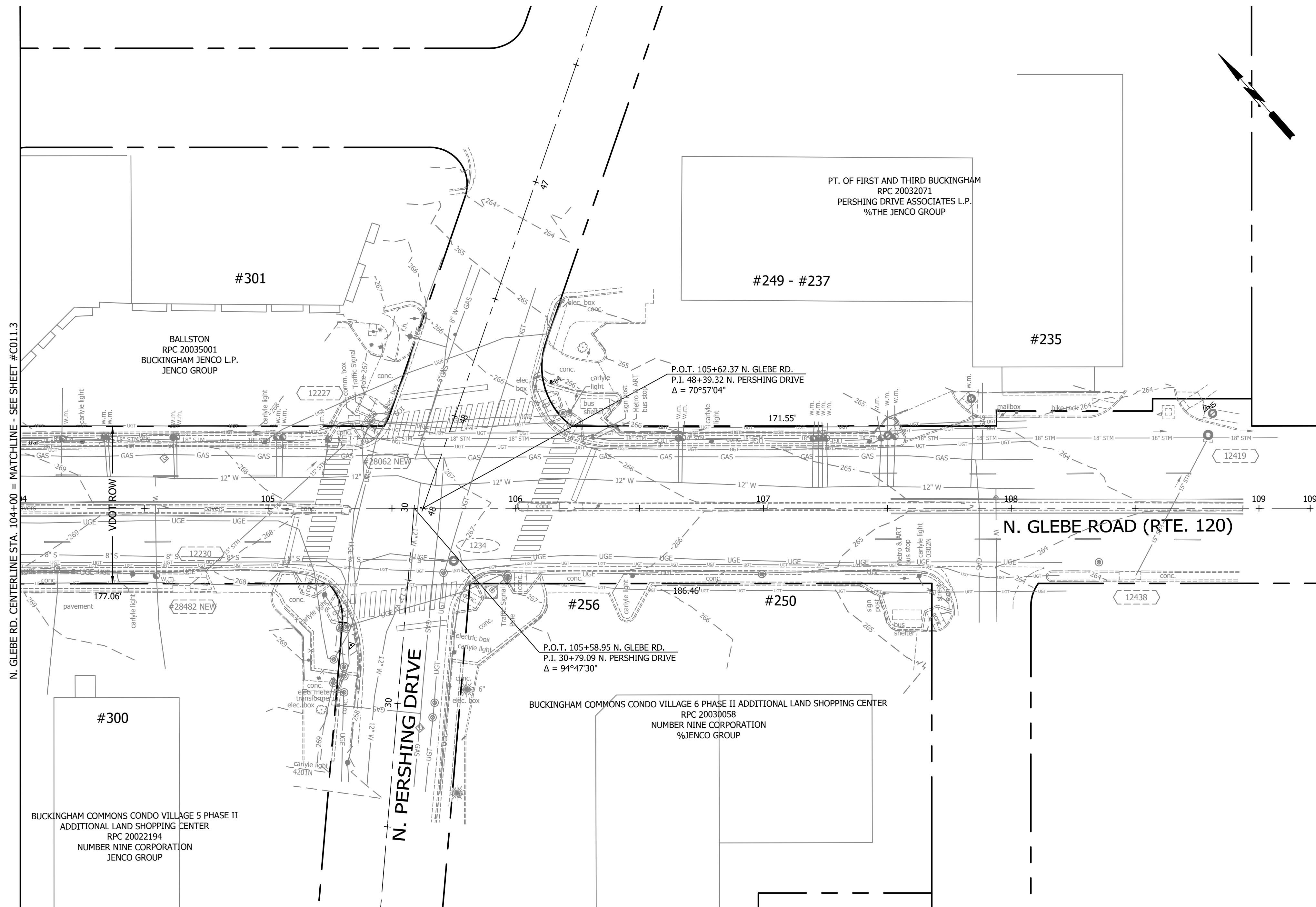
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PLOTTED: AUGUST 4 2020



SCALE:

C011.3



APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

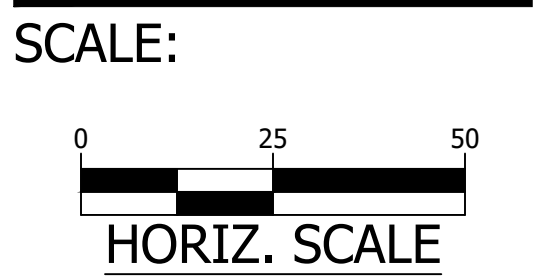
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 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 EXISTING CONDITIONS PLAN - 4

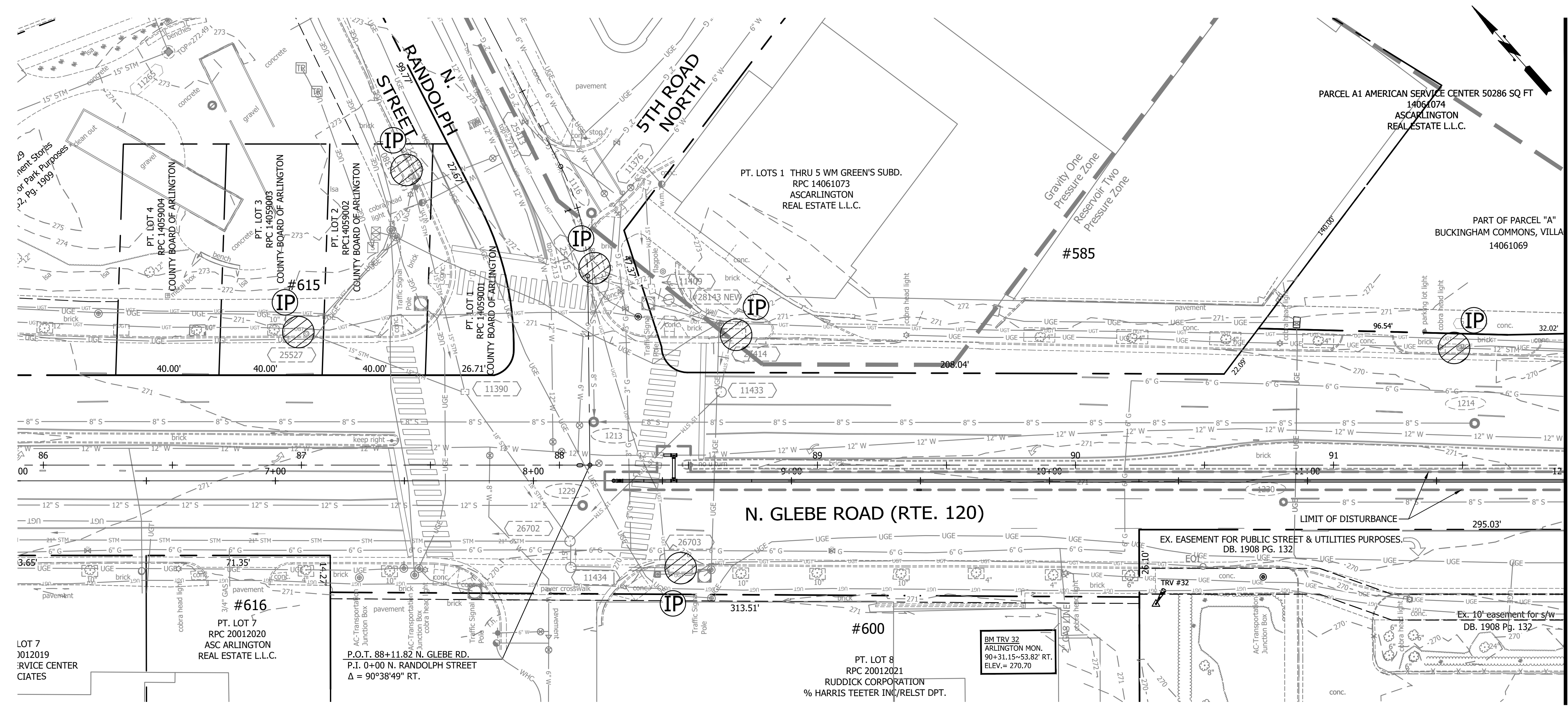
GENERAL SURVEY NOTES:

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- CONTOUR INTERVAL: 1'
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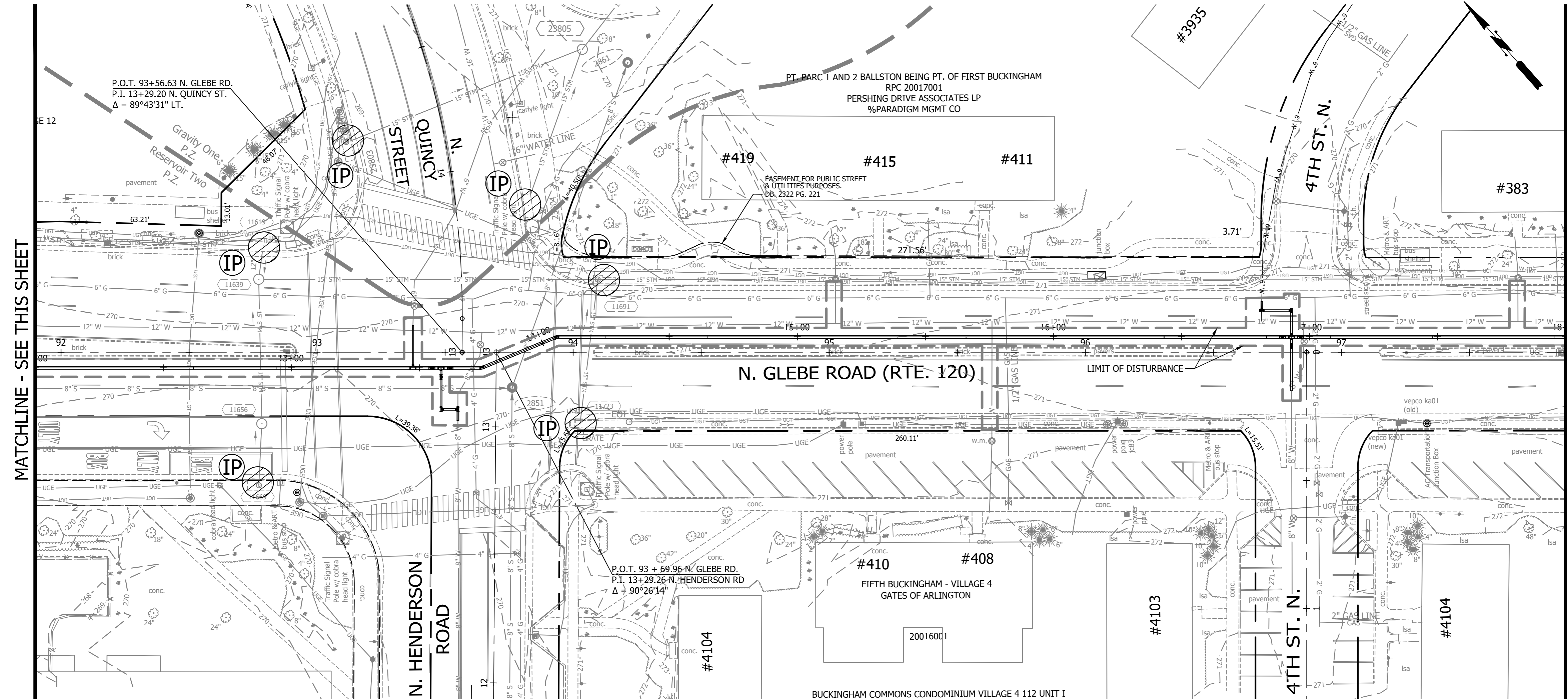
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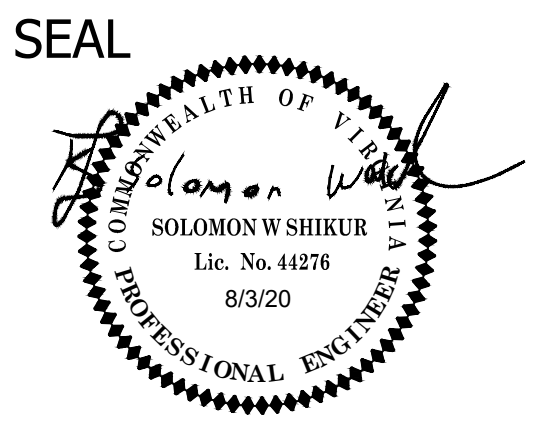


MATCHLINE - SEE THIS SHEET



MATCHLINE - SEE THIS SHEET

MATCHLINE - SEE SHEET C031.2



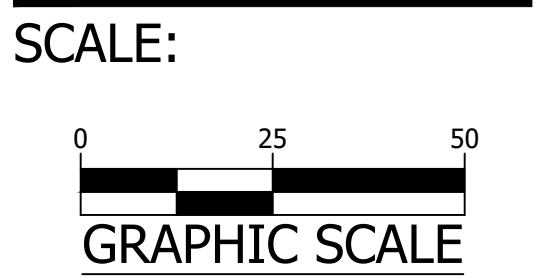
APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014

N. RANDOLPH ST. TO N. PERSHING DR.

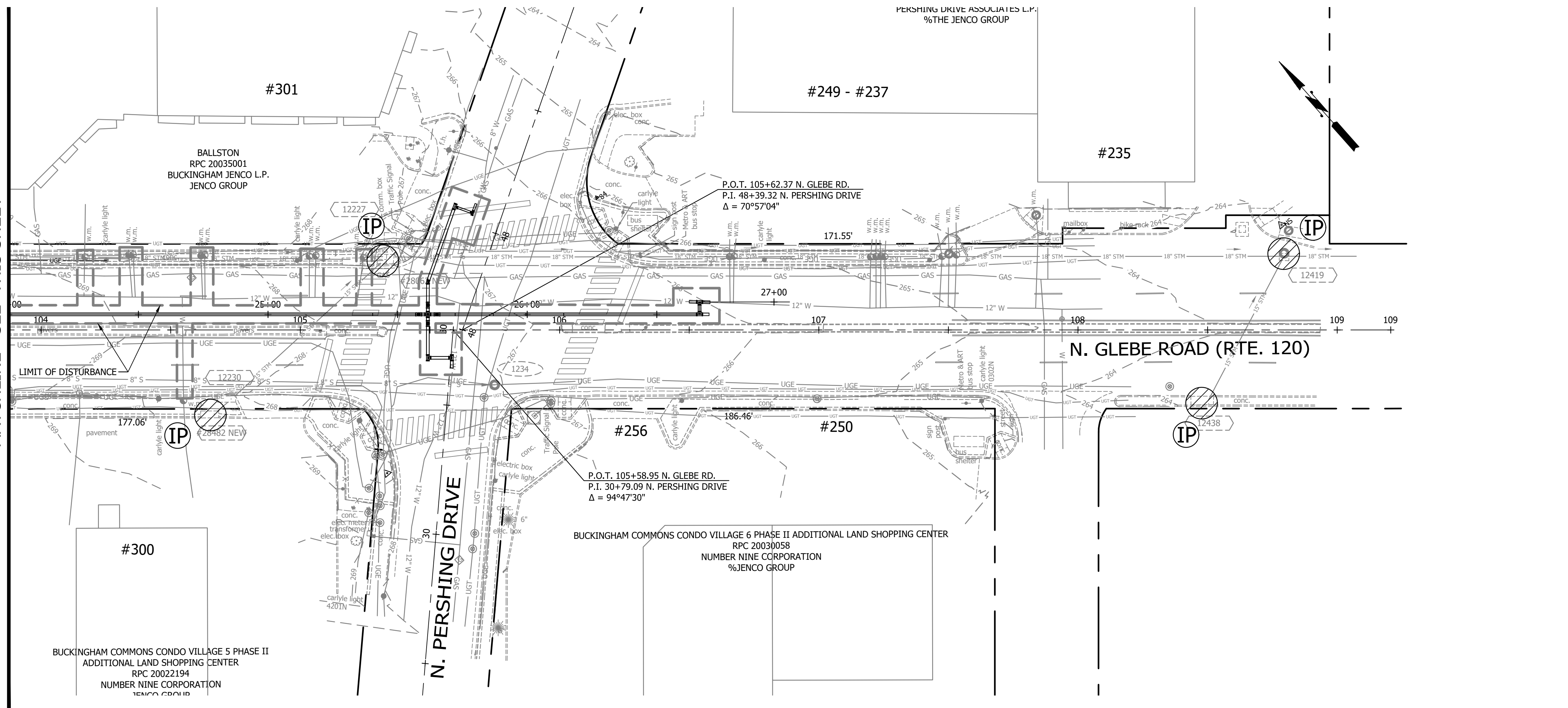
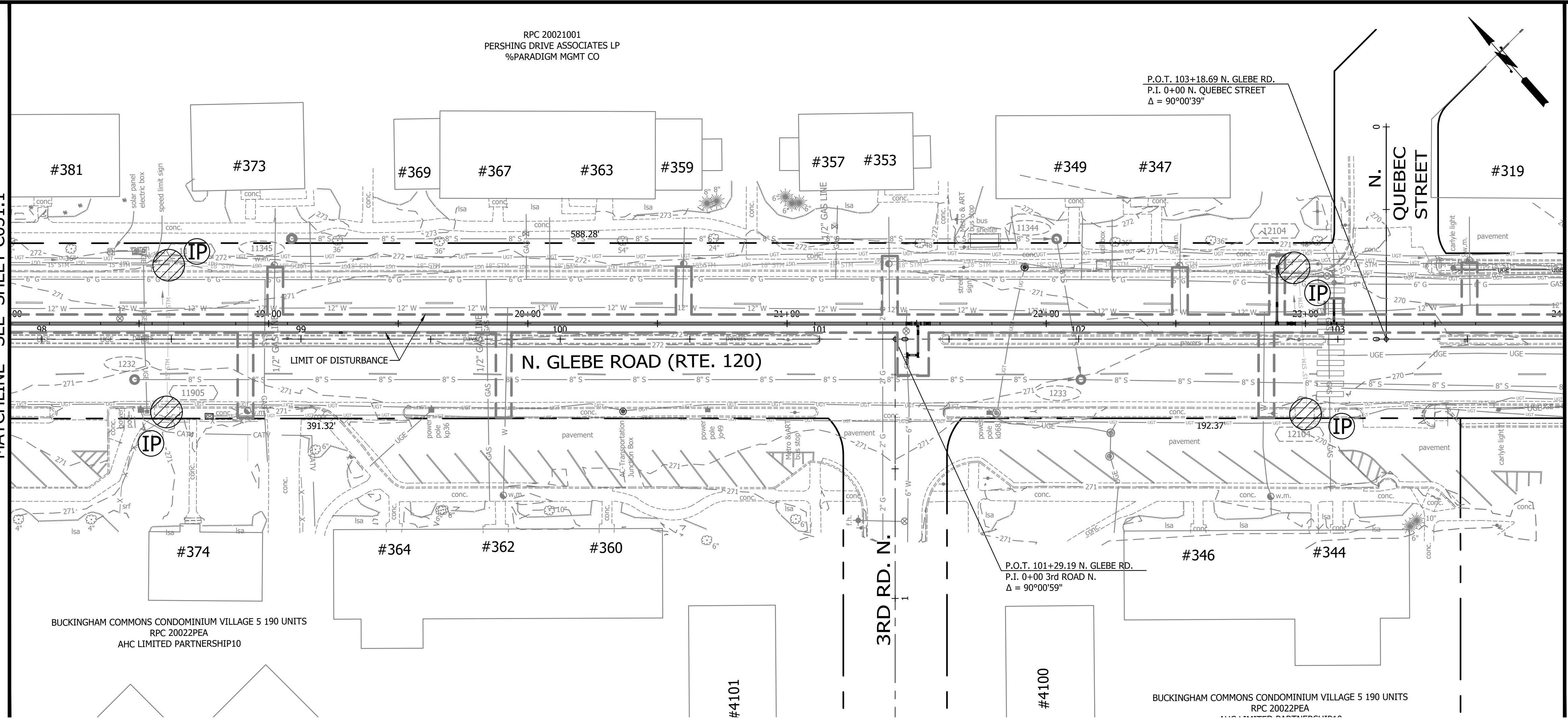
EROSION & SEDIMENT CONTROL PLAN - 1

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APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
EROSION & SEDIMENT CONTROL PLAN - 2

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS
PLOTTED: AUGUST 4 2020
SCALE:
0 25 50
GRAPHIC SCALE

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:

THE COUNTY IS PROPOSING TO REPLACE THE EXISTING WATERMAIN TO 12-INCH DIAMETER WATERMAIN IN THE RIGHT OF WAY N. GLEBE ROAD, BETWEEN N. RANDOLPH RD. AND N. PERSHING RD. THE EXISTING WATERMAIN WAS INSTALLED IN THE 1920s AND IS REQUIRED TO BE UPGRADED. THIS PROJECT IS LOCATED WITHIN THE "DOCTOR'S BRANCH AND LUBBER RUN" WATERSHEDS AND ENDING UP IN THE POTOMAC RIVER AND DISTURBANCE AREA OF 0.41 AC.

EXISTING SITE CONDITIONS:

THE NORTH GLEBE ROAD IS A PAVED URBAN OTHER PRINCIPAL ARTERIAL WITH A SPEED LIMIT OF 30 MPH. THERE ARE NO STREET PARKING EITHER ON BOTH SIDES OF N. GLEBE ROAD.

ADJACENT PROPERTIES:

THERE ARE COMMERCIAL/ RESIDENTIAL PROPERTIES ON BOTH SIDES OF N. GLEBE ROAD.

OFF-SITE AREAS:

THERE ARE NO OFFSITES AREAS FOR THIS PROJECT.

CRITICAL AREAS:

THERE ARE NO STEEP SLOPES OR CRITICAL AREAS LOCATED WITHIN THE LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES:

THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA INCLUDE SAFETY FENCE AND INLET PROTECTION. INLET PROTECTION IS REQUIRED OUTSIDE THE PROJECT LIMITS WHEN/WHERE WATER FROM DISTURBED AREA FLOWS.

PERMANENT STABILIZATION:

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH GRASS, MULCH OR SOD. SEE THE PROPOSED PLANS FOR ADDITIONAL INFORMATION.

STORMWATER RUNOFF CONSIDERATIONS:

NO ADDITIONAL IMPERVIOUS AREA WILL BE ADDED TO THIS PROJECT.

TOTAL LAND DISTURBANCE.....= 17,680 SF (0.41 ACRE) LIMIT OF WORK WILL BE IN THE ROW

PRE-IMPROVEMENT IMPERVIOUS AREA.....= 17,680 SF (0.41 ACRE)

POST-IMPROVEMENT IMPERVIOUS AREA.....= 17,680 SF (0.41 ACRES)

INCREASED IMPERVIOUS AREA.....= 0 SF (0 ACRES)

SOILS INFORMATION:

THE FOLLOWING SOILS ARE FOUND ON SITE (SEE SOILS MAP ON SHEET C032.2 FOR LOCATION)

SOIL #:	SOIL NAME:	HYDROLOGIC GROUP:	ERODAB	ILITY:
---------	------------	-------------------	--------	--------

4	URBAN LAND - SASSAFRAS - NEABSCO COMPLEX	B & C		MODERATE (4B)
---	--	-------	--	---------------

12	URBAN LAND - UDORThENTS COMPLEX	VARIABLE		VARIABLE
----	---------------------------------	----------	--	----------

FLOODPLAIN AND RESOURCE PROTECTION AREA (RPA):

THERE ARE NO FLOODPLAIN OR RESOURCE PROTECTION AREAS LOCATED WITHIN THIS PROJECT SITE

EROSION & SEDIMENT CONTROL PROJECT PHASING

1. PHASE I:

- a. PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, AND COUNTY INSPECTOR.
- b. INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE (IF NEEDED) IN THE LOCATION SHOWN ON THE E&S PHASE I PLAN. MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXISTING THE SITE.
- c. INSTALL PERIMETER TREE DEMARCATION FENCING IN THE FORM OF TREE PROTECTION FENCE (TP) AS SHOWN ON E&S PHASE I PLAN.
- d. PERFORM INITIAL PERIMETER CLEARING TO INSTALL REMAINDER OF PERIMETER CONTROLS SUCH AS DIVERSION DIKE (DD), SILT FENCE (SF), AND SUPER SILT FENCE (SSF) AS PER THE PHASE I PLAN.
- e. SEED AND MULCH ALL EARTHEN CONTROLS.
- f. CONTACT ARLINGTON COUNTY PROJECT OFFICER FOR A PERIMETER INSPECTION PRIOR TO CLEARING THE REMAINDER OF THE SITE IN ORDER TO OBTAIN PHASE II GRADING PERMIT.
- g. CLEAR THE SITE TO THE LIMITS AS SHOWN ON THE CONSTRUCTION PLANS.

2. PHASE II:

- a. BEGIN UTILITY CONSTRUCTION, INSTALL ALL UTILITIES UNDERGROUND UTILITIES AND BEGIN SITE GRADING.
- b. INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.
- c. ONCE THE SITE IS BOUGHT TO NEAR FINAL GRADE, AND THE UTILITY CONSTRUCTION IS COMPLETE, COMMENCE CONSTRUCTION OF CURB & GUTTER, STREET, SIDEWALKS, AND OTHER IMPROVEMENTS
- d. THE CONTROL MEASURES MAY NOT BE REMOVED UNTIL ALL OF THE DISTURBED AREAS HAVE BEEN STABILIZED AND ONLY AS APPROVED AND DIRECTED BY THE INSPECTOR.

RUNOFF SHALL BE TREATED WITH SILT FENCE AND INLET PROTECTION PRIOR TO ENTERING MAJOR STORM SEWER SYSTEMS.

EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE ARLINGTON COUNTY EROSION AND SEDIMENT CONTROL ORDINANCE. THE MINIMUM STANDARDS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

1. STRUCTURAL PRACTICES

- a. TEMPORARY CONSTRUCTION ENTRANCE - VESCH 3.02
 - a.a. A TEMPORARY CONSTRUCTION ENTRANCE WITH A WASH RACK SHALL BE INSTALLED AT THE EXISTING ACCESS POINT TO THE SITE. DURING MUDDY CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES WILL BE REQUIRED TO WASH THEIR WHEELS BEFORE RE-ENTERING THE LOCAL ROADWAYS.
 - a.b. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC WASHING OF THE MATS AND/OR REPLACEMENT OF WOOD CHIPS AS NECESSARY.
 - a.c. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
 - a.d. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED INTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
- b. SILT FENCE - VESCH 3.05
 - b.a. SILT FENCE WILL BE INSTALLED WITH THE E&S PLAN TO FILTER RUNOFF FROM DISTURBED AREAS. RUNOFF SHALL NOT BE DIRECTED PARALLEL TO THE INSTALLATION OF SILT FENCE.
 - b.b. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
 - b.c. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM UNDERCUTTING.
 - b.d. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
 - b.e. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 - b.f. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, THEN PREPARED AND SEEDED.
- c. TEMPORARY DIVERSION DIKE - VESCH 3.09
 - c.a. A SYSTEM OF TEMPORARY DIKES, TO DIRECT FLOW INTO PROPOSED & EXISTING STORM SEWER STRUCTURES WILL BE INSTALLED AS INDICATED IN EROSION & SEDIMENT CONTROL PLAN.
 - c.b. THE STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
- d. STORM DRAIN INLET PROTECTION - VESCH 3.07
 - d.a. ALL EXISTING & PROPOSED STORM SEWER INLETS IN AND AROUND THE PROJECT LIMITS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT-LADEN WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS.
 - d.b. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
 - d.c. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- e. DEWATERING STRUCTURE - VESCH 3.26
 - e.a. SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
 - e.b. THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.
 - e.c. THE ACCUMULATED SEDIMENT WHICH IS REMOVED FROM A DEWATERING DEVICE MUST BE SPREAD ON-SITE AND STABILIZED OR DISPOSED OF AT AN APPROVED DISPOSAL SITE AS PER THE APPROVED PLAN.

f. TREE PROTECTION - VESCH 3.38

- f.a. ALL TREES ARE TO BE PROTECTED UNLESS OTHERWISE DIRECTED BY THE COUNTY INSPECTOR AND URBAN FORESTER. THE COUNTY'S URBAN FORESTER (703-228-1863) SHALL INSPECT ALL TREE PROTECTION 72 HOURS PRIOR TO THE START OF CONSTRUCTION. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, THE FOLLOWING MAINTENANCE GUIDELINES SHALL BE FOLLOWED:
 - f.a.a. SOIL AERATION: IF THE SOIL HAS BECOME COMPACTED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHALL BE AERATED BY PUNCHING HOLES WITH AN IRON BAR. THE BAR SHALL BE DRIVEN 1-FOOT DEEP AND THEN MOVED BACK AND FORTH UNTIL THE SOIL IS LOOSENEED. THIS PROCEDURE SHALL BE REPEATED EVERY 18 INCHES UNTIL ALL OF THE COMPACTED SOIL BENEATH THE CROWN OF THE TREE HAS BEEN LOOSENEED.
 - f.a.b. REPAIR OF DAMAGE:
 - f.a.b.a. ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE RETAINED ON THE SITE SHALL BE REPAIRED IMMEDIATELY.
 - f.a.b.b. WHENEVER MAJOR ROOT OR BARK DAMAGE OCCURS, REMOVE SOME FOLIAGE TO REDUCE THE DEMAND FOR WATER AND NUTRIENTS.
 - f.a.b.c. DAMAGED ROOTS SHALL IMMEDIATELY BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA. CUT SURFACES SHALL BE PAINTED WITH APPROVED TREE PAINT, AND MOIST PEAT MOSS, BURLAP, OR TOPSOIL SHALL BE SPREAD OVER THE EXPOSED AREA.
 - f.a.b.d. TO TREAT BARK DAMAGE, CAREFULLY CUT AWAY ALL LOOSENEED BARK BACK INTO THE UNDAMAGED AREA, TAPER THE CUT AT THE TOP AND BOTTOM, AND PROVIDE DRAINAGE AT THE BASE OF THE WOUND.
 - f.a.b.e. ALL TREE LIMBS DAMAGED DURING CONSTRUCTION OR REMOVED FOR ANY OTHER REASON SHALL BE CUT OFF ABOVE THE COLLAR AT THE PRECEDING BRANCH JUNCTION.
 - f.a.b.f. CARE FOR SERIOUS INJURIES SHALL BE PRESCRIBED BY A FORESTER OR A TREE SPECIALIST.
 - f.a.b. FERTILIZATION: BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID THEIR RECOVERY.
 - f.a.b.a. TREES SHALL BE FERTILIZED IN THE LATE FALL (AFTER OCTOBER 1) OR THE EARLY SPRING (FROM THE TIME FROST IS OUT OF THE GROUND UNTIL MAY 1). FALL APPLICATIONS ARE PREFERRED, AS THE NUTRIENTS WILL BE MADE AVAILABLE OVER A LONGER PERIOD OF TIME.
 - f.a.b.b. FERTILIZER SHALL BE APPLIED TO THE SOIL OVER THE FEEDER ROOTS. IN NO CASE SHALL IT BE APPLIED CLOSER THAN 3 FEET TO THE TRUNK. THE ROOT SYSTEM OF CONIFERS EXTENDS SOME DISTANCE BEYOND THE DRIP LINE. INCREASE THE AREA TO BE FERTILIZED BY ONE FOURTH THE AREA OF THE CROWN.
 - f.a.b.c. FERTILIZER SHALL BE APPLIED USING APPROVED FERTILIZATION METHODS AND EQUIPMENT.
 - f.a.b.d. FORMULATIONS AND APPLICATION RATES SHALL CONFORM TO THE GUIDELINES GIVEN IN TABLE 3.38-A OF VESCH.

2. VEGETATIVE PRACTICES

- a. TOPSOILING (STOCKPILE) - VESCH 3.30
 - a.a. TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS MAY HAVE TO BE LOCATED OFF-SITE AND ARE TO BE STABILIZED WITH TEMPORARY VEGETATION. PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY E&S PLAN (IF THE STOCKPILE IS LOCATED OFF-SITE). THIS SUPPLEMENTAL PLAN WOULD HAVE TO BE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY OFF-SITE ACTIVITY COMMENCES.
- b. TEMPORARY SEEDING - VESCH 3.31
 - b.a. ALL DENUDED AREAS, WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
 - b.b. SEE SHEET III-288 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) FOR ALLOWABLE PLANTING MATERIAL, SEEDING RATES, AND DATES. THE PLANTING REQUIREMENTS OF THE "SOUTH" SHALL BE FOLLOWED. LIMING SHALL BE BASED ON TABLE 3.31-A OF VESCH. FERTILIZERS SHALL BE APPLIED AS 600 LB/ACRE. THE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2-4" OF SOIL. SEED SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5" DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED.
 - c. EROSION CONTROL BLANKET AND MULCHING - VESCH 3.36 AND 3.35
 - c.a. EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND TO ALLOW SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS AND WILL BE APPLIED AS A SECOND STEP IN SEEDING OPERATION.
 - d. DUST CONTROL - VESCH 3.39
 - d.a. DUST SHALL BE CONTROLLED USING A VARIETY OF METHODS SUCH AS VEGETATIVE COVER, MULCH, TILLAGE, IRRIGATION, SPRAY-ON ADHESIVES, STONE BARRIERS, AND CALCIUM CHLORIDE. THE IMPLEMENTATION OF THE DUST CONTROL METHODS SHALL BE INSTALLED PER SECTION 3.39 OF VESCH
 - e. PERMANENT SEEDING - VESCH 3.32
 - e.a. SINCE THE SUBJECT SITE IS LOCATED WITHIN THE COASTAL PLAIN AREA OF VIRGINIA, SHEET III-304 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE FOLLOWED FOR FINAL SEEDING MATERIAL, SEEDING RATES, AND DATES OF APPLICATION.
 - f. SODDING - VESCH 3.33
 - f.a. SODDED AREAS SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLANS. SOIL TESTS SHALL BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. PRIOR TO LAYING SOD, SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS AND LARGE OBJECTS. QUALITY OF SOD SHALL BE STATE CERTIFIED TO ENSURE GENETIC PURITY AND HIGH QUALITY. SOD SHALL NOT BE LAID ON FROZEN SOIL SURFACE, OR IN EXCESSIVELY WET OR DRY WEATHER. SOD SHALL BE DELIVERED AND INSTALLED WITHIN 36 HOURS, AND SHALL BE INSTALLED PER PAGE III-339 OF VESCH.

THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD. IN ADDITION, NO SEDIMENT TRAPS OR BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE INSPECTOR.

EROSION AND SEDIMENT CONTROL MANAGEMENT MEASURES

LANDSCAPE / TREE PRESERVATION NOTES

PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT THE ARLINGTON COUNTY ARBORIST TO SCHEDULE AN INSPECTION.

LAND CONSERVATION NOTES:

- 1. NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.
- 2. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- 3. ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 100 FEET ARE TO BE OPEN AT ANY ONE TIME.
- 4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILLING.
- 5. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
- 6. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION.
- 7. ANY DISTURBED AREA NOT COVERED BY NOTE 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOV. 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE AND OVER-SEEDED BY APRIL 15.
- 8. AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROL CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

EROSION & SEDIMENT CONTROL PROGRAM:

- 1. THE EROSION CONTROL PLAN IS INTENDED TO ESTABLISH ENTRANCES AND PERIMETER CONTROL MEASURES WHICH INCLUDES SILT FENCE (SF), INLET PROTECTION (IP), AND OTHER CONTROLS SPECIFIED ON THE PLANS.
- 2. WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL SHALL BE PLACED IN STREAMBEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 7 DAYS SHALL BE SEEDED AND MULCHED. WHEN SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT SHALL BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE SHALL OUTLET IN A STABILIZED AREA OR A SEDIMENT TRAPPING DEVICE.
- 3. ALL PRACTICES AND CONTROL DEVICES DESCRIBED HEREIN SHALL CONFORM TO THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). IN ADDITION, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:
 - a. CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS, AND SHALL WORK THOSE AREAS TO MINIMIZE THE USE OF HEAVY EQUIPMENT. CONTRACTOR SHALL BRING DISTURBED AREAS TO GRADE (ROUGH OR FINISHED) AND STABILIZE THOSE AREAS WITH TEMPORARY OR PERMANENT VEGETATION. THESE DISTURBED AREAS SHALL BE STABILIZED PRIOR TO BEGINNING WORK IN ANOTHER AREA.
 - b. FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE KEPT ROUGH TO REDUCE SHEET EROSION OF THE SLOPES. CONTRACTOR SHALL RE-DIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZED OUTLETS.
 - c. CUT SLOPES SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS (ABOVE THE SLOPE) AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
- 4. MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA AND CHAPTER 57 OF THE ARLINGTON COUNTY CODE.
- 5. ALL AREAS, ON OR OFF-SITE, THAT ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE OR SOD THAT IS INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 3:1 AND GREATER SHALL BE RECEIVE SOIL STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS.
- 6. WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
- 7. FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- 1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
- 2. THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- 3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- 4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- 5. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN THE AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- 7. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- 8. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- 9. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- 10. ALL BIOFILTERS SHALL BE KEPT OFF-LINE UNTIL CONSTRUCTION IS COMPLETED AND ALL AREAS HAVE BEEN PROPERLY STABILIZED. THIS SHALL BE ACHIEVED BY USING INLET PROTECTION AT THE CURB CUTS AND STORMWATER CATCH BASINS LEADING DIRECTLY INTO THE BIOFILTERS.
- 11. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

PRE-STORM EROSION & SEDIMENTATION CHECKLIST:

PER GENERAL EROSION AND SEDIMENT CONTROL NOTE 6, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE COUNTY. THESE SUPPLEMENTARY PRACTICES ARE IN ADDITION TO THOSE SHOWN IN AN EROSION AND SEDIMENT CONTROL PLAN. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MODIFIED AS NEEDED TO ENSURE ONLY CLEAR WATER IS DISCHARGED FROM THE SITE.

THE FOLLOWING ACTIONS SHALL BE TAKEN PRIOR TO STORM EVENTS WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL TO PREVENT SEDIMENT DISCHARGES FROM A CONSTRUCTION SITE. A TYPICAL SUMMER THUNDERSTORM IS AN EXAMPLE OF A STORM EVENT WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL.

- 1. PERIMETER CONTROLS
 - a. SILT FENCE SHALL BE CHECKED FOR UNDERMINING, HOLES, OR DETERIORATION OF THE FABRIC. FENCING SHALL BE REPLACED IMMEDIATELY IF THE FABRIC IS DAMAGED OR WON. SILT FENCE MUST BE TRENCHED INTO THE GROUND PER STATE SPECIFICATIONS (VESCH STD & SPEC 3.09).
 - b. WOODEN STAKES OR STEEL POSTS SHALL BE PROPERLY SECURED UPRIGHT INTO THE GROUND. DAMAGED POSTS OR STAKES MUST BE REPLACED. SEDIMENT THAT HAS ACCUMULATED AGAINST THE SILT FENCE SHALL BE REMOVED. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE LEVEL REACHES ONE-HALF THE HEIGHT OF THE FENCING.
 - d. HAY BALES OR A STONE BERM SHALL BE PLACED ACROSS THE CONSTRUCTION ENTRANCE TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
- 2. EXPOSED SLOPES AND SOIL
 - a. EXPOSED SLOPES NOT AT THE FINAL STABILIZATION PHASE SHALL BE COVERED WITH TARPS, PLASTIC SHEETING, OR EROSION CONTROL MATTING. COVERING MATERIAL SHALL BE PROPERLY SECURED/ANCHORED.
 - b. CONTROLS SHALL BE INSTALLED TO PREVENT CONCENTRATED FLOW DOWN AN EXPOSED SLOPE. BERMS OR DIVERSION DIKES SHALL BE INSTALLED AT THE TOP OF CUT/EXPOSED SLOPES TO DIRECT STORM FLOW AROUND THE DISTURBED AREA.
 - c. EXPOSED SLOPES AT THE FINAL STABILIZATION PHASE SHALL BE STABILIZED USING SLOPE STABILIZATION PRACTICES SUCH AS SOIL STABILIZATION BLANKETS OR MATTING AS SPECIFIED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH STD & SPEC 3.36). BLANKETS OR MATS MUST BE PROPERLY SECURED AND ANCHORED TO THE SLOPE USING STAPLES, PINS, OR STAKES.
 - d. SEEDED AREAS SHALL BE CHECKED AND RESEEDED AS NECESSARY TO COVER EXPOSED SOIL. RECENTLY SEEDED AREAS SHALL BE PROTECTED BY STRAW OR SOIL STABILIZATION BLANKETS TO PREVENT SEEDING FROM BEING WASHED AWAY.
- 3. STOCKPILES
 - a. STOCKPILED SOIL AND OTHER LOOSE MATERIALS THAT CAN BE WASHED AWAY SHALL BE COVERED WITH A TARP, PLASTIC SHEETING, OR OTHER STABILIZATION MATTING. THE COVER MUST BE PROPERLY SECURED/ANCHORED DOWN TO PREVENT IT FROM BEING BLOWN OFF AND EXPOSING MATERIALS TO RAIN. CONTROLS SUCH AS HAY BALES OR BOOMS SHALL BE PLACED ALONG THE PERIMETER OF THE STOCKPILE (DOWNHILL SIDE).
- 4. INLET PROTECTION
 - a. INLET PROTECTION CONTROLS SHALL BE INSPECTED TO ENSURE THEY ARE FUNCTIONING PROPERLY AND FLOODING WILL NOT OCCUR. CLOGGED OR DAMAGED CONTROLS MUST BE REPLACED IMMEDIATELY. ENSURE CONTROLS ALLOW FOR OVERFLOW/BYPASS OF STORMWATER RUNOFF DURING SIGNIFICANT STORM EVENTS.

IN ADDITION TO THESE PRE-STORM ACTIONS, ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES MUST BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL.

POLLUTION PREVENTION PLAN NOTES (STORMWATER MANUAL - SECTION 2.4)

- 1. ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S M54 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS:
 - a. WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIREFIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
- 2. APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S M54 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK.
- 3. PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

UTILITY INSTALLATION:

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

- 1. NO MORE THAN 100 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- 2. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- 3. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
- 4. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- 5. STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- 6. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- 9. ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
- 10. AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED. ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.

MAINTENANCE PROGRAM:

THE FOLLOWING IS A PROGRAM OF MAINTENANCE FOR THE MECHANICAL CONTROLS SPECIFIED IN THIS NARRATIVE AND ON THE PLAN:

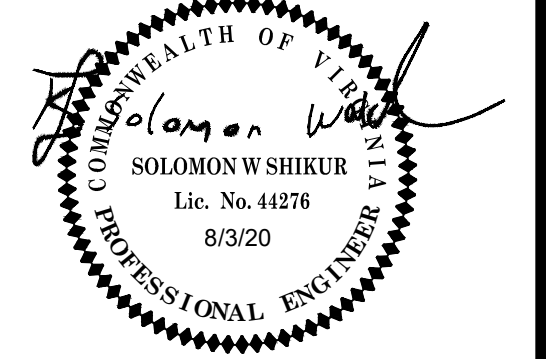
- 1. THE SITE SUPERINTENDENT OR HIS/HER REPRESENTATIVE SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREA (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEEDING AND MULCHING OR RE-SODDING IF NECESSARY.
- 2. ALL SEDIMENT TRAPPING DEVICES SHALL BE CLEARED OUT AT 50% TRAP CAPACITY AND THE SEDIMENT SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR IF NOT SUITABLE FOR FILL, HAULING AWAY AND DEPOSITING AT AN ACCEPTABLE DUMP SITE.
- 3. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM BEING ENTERED ONTO EXISTING SWM/BMP FACILITIES OR DOWNSTREAM WATER WAYS. SHOULD OFF-SITE AREAS BECOME POLLUTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE AFFECTED AREAS TO THE SATISFACTION OF THE INSPECTOR.
- 4. AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ANY REMAINING DENUDED AREAS SHALL BE STABILIZED. CERTAIN DEVICES MAY BE REMOVED PRIOR TO CONSTRUCTION COMPLETION BUT ONLY WITH THE APPROVAL OF THE COUNTY INSPECTOR.
- 5. AFTER CONSTRUCTION OPERATIONS HAVE ENDED, ALL DISTURBED AREAS SHALL BE STABILIZED. UPON APPROVAL OF THE COUNTY INSPECTOR, MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED AND THE GROUND PERMANENTLY STABILIZED WITH VEGETATION WITHIN 30 DAYS.



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606

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SEAL



APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

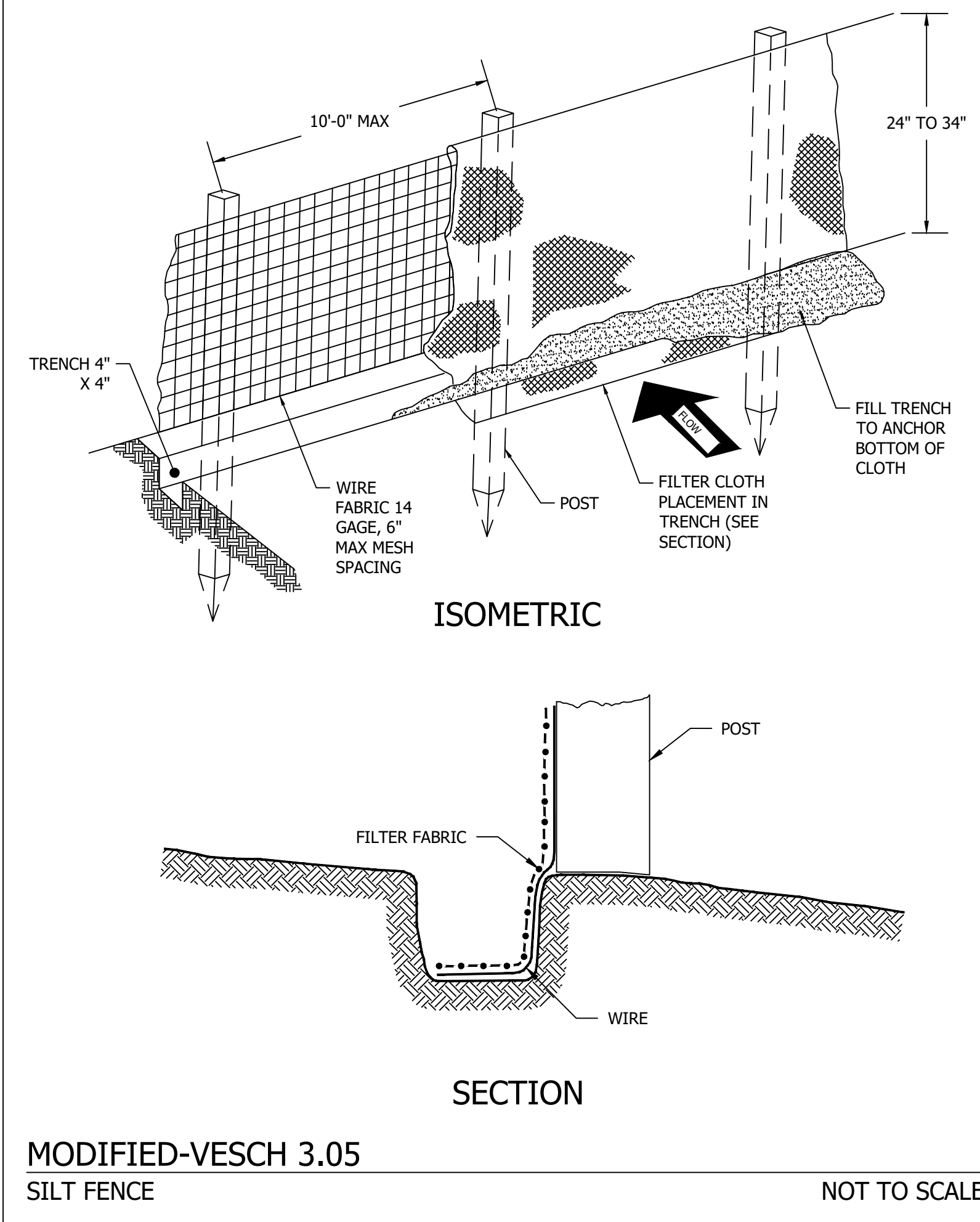
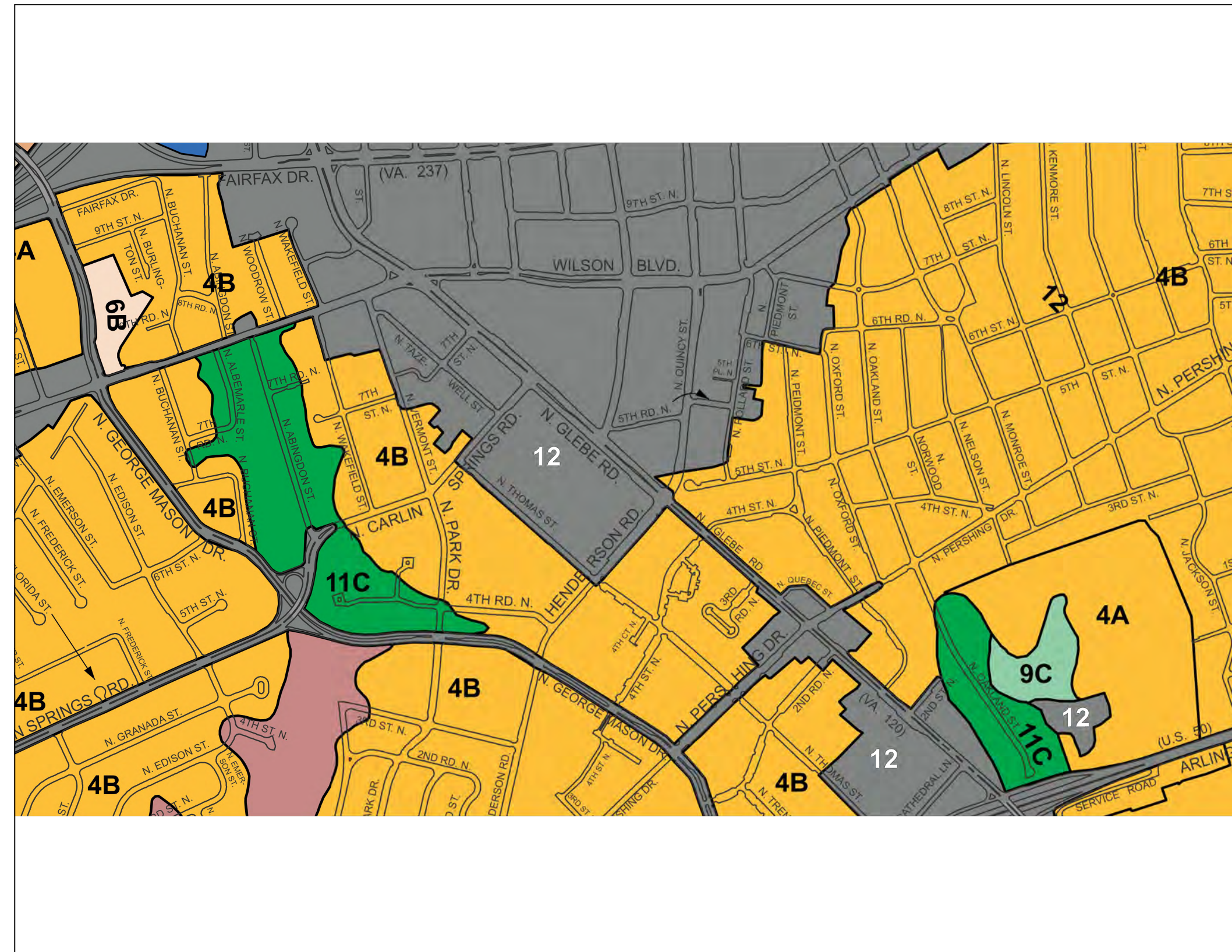
WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

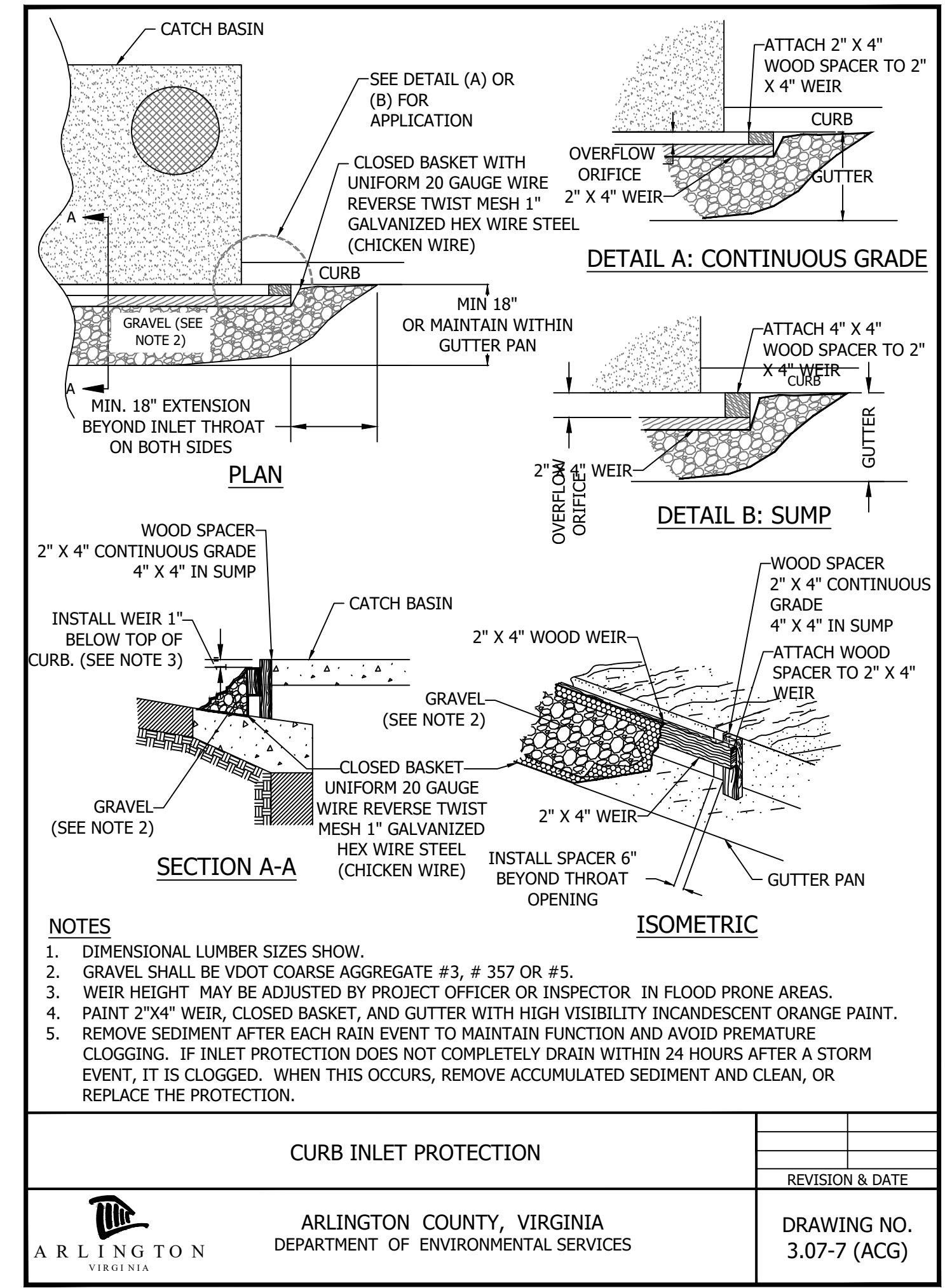
PROJECT MANAGER

REVISIONS DATE

HYDROLOGIC SOILS MAP (N.T.S.)



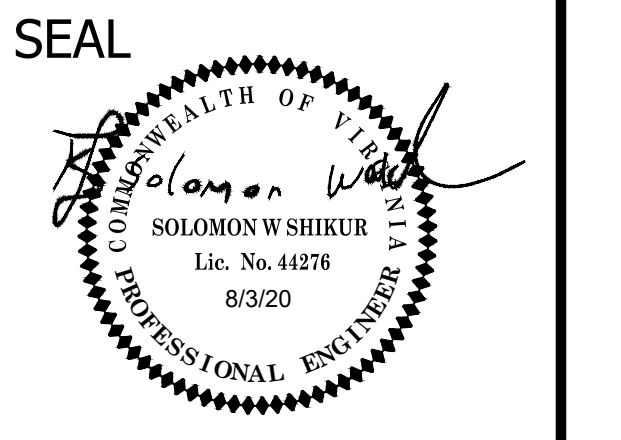
MODIFIED-VESCH 3.05
SILT FENCE NOT TO SCALE



ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO. 3.07-7 (ACG)

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606



APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

July 1, 2020
date

Qianqian Li, P.E.
ESC Program Administrator
Department of Environmental Services
2100 Clarendon Boulevard, Suite 813
Arlington, Virginia 22201

Re: Erosion and Sediment Control Permit Application for:
N. Glebe Road Water Main Replacement
street address
From N Randolph St to N Pershing Dr
lot, block, section subdivision

permit number

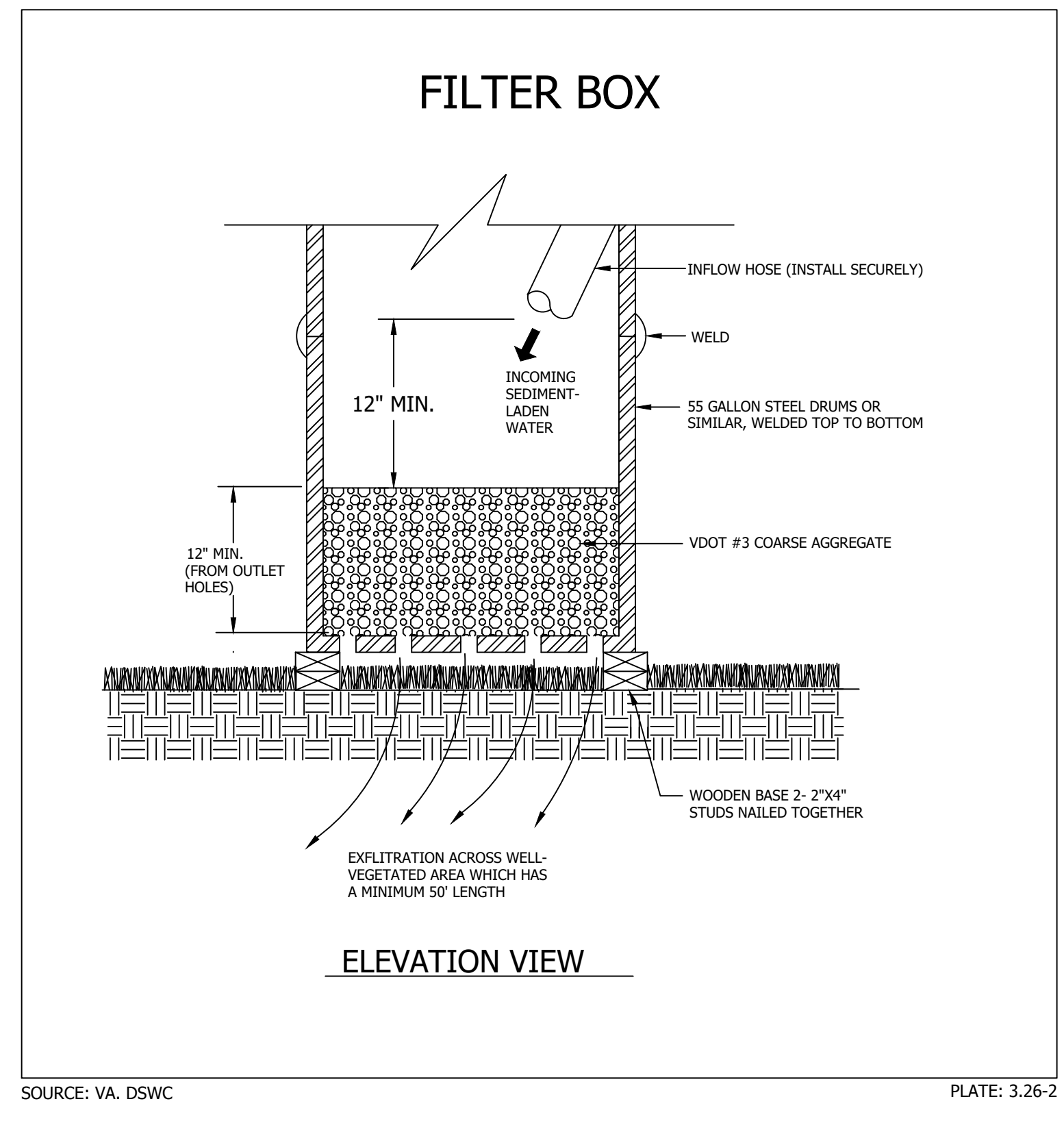
Dear Mrs. Li:

I hereby certify that I accept the responsibilities of Responsible Land Disturber for the above referenced project. I understand that these responsibilities include:

1. Reviewing the erosion and sedimentation (E&S) plan for the project.
2. Walking the site prior to construction to identify critical areas.
3. Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.
4. Regularly inspecting the site during construction to ensure that all E&S controls are functioning and are adequate to address erosion and sedimentation. Inspect the site 48 hours after a runoff-generating storm, and provide a copy of the inspection findings to the county.
5. Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
6. Ensuring that temporary soil stabilization is applied within 7 days to areas denuded that will remain undisturbed for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
7. Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at 703-228-3654 with questions about this plan or my execution of the duties of Responsible Land Disturber.

Sincerely,
Solomon W. Shikur
signed
Solomon Shikur
name printed
VA PE #44276
professional registration (type and number)



SOURCE: VA. DSWC PLATE: 3.26-2

EROSION AND SEDIMENT CONTROL LEGEND

3.05	TEMPORARY SILT FENCE	SF	—X—X—
3.07	STORM DRAIN INLET PROTECTION	IP	⊗
3.26	DEWATERING STRUCTURE	DS	⊞

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.

EROSION & SEDIMENT CONTROL NOTES AND DETAILS - 1

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS
PLOTTED: AUGUST 4 2020

SCALE:
AS SHOWN

Spill Prevention & Response

Most spills can be cleaned up following manufacturer specifications. The priority should be to protect all people, equipment, property, and the environment. Enter the telephone number of your local fire and police departments.

Most spills can be cleaned up using a spill kit. Absorbent/dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at the project site.

- 1st Priority: Protect all people
- 2nd Priority: Protect equipment and property
- 3rd Priority: Protect the environment

1. Check for hazards (flammable material, noxious fumes, cause of spill) – if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. **LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.**
2. Ensure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
3. Stop the spill source.
4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
5. If possible, stop spill from spreading and/or entering storm drains (use absorbent or other materials as necessary).
6. If spilled material has entered a storm drain, contact Arlington County Fire Department and project manager.
7. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
8. Properly dispose of cleanup materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Local Contacts
 Arlington County Fire & Police 703-698-2222
 DES Water, Sewer, Streets 24-Hour Emergency 703-228-6555
 Washington Gas Emergency 703-790-1400

Nights, Holidays & Weekends
 VA Dept. of Emergency Management 804-674-2400
 24 Hour Reporting Service

Spill kit on site: Yes No

Location(s) of spill kit: _____

Potential Sources of Pollution & Pollution Prevention Practices

Identify the pollutant-generating activities likely to be present at the project site; implement and maintain the corresponding pollution prevention practices. If an unlisted pollutant-generating activity is likely to be present at the project site, describe it, identify the associated pollutant(s), and provide the corresponding pollution prevention practice(s) to be implemented and maintained.

Pollutant-Generating Activity	Likely Present at your Project Site?	Pollutants										Pollution Prevention Practice	Responsible Party
		Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals			
Clearing, grading, excavating, and un-stabilized areas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X	X								X	(1)	Construction Activity Operator (See Cover Page of this SWPPP)
Paving and saw cutting operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X					X			X		(2)	
Concrete operations, washout, and cement waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			X	X					X		(3)	
Washing / cleaning	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X		X		X	X	X	(4)	
Dewatering operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X							X		(5)	
Material / chemical use and storage	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X	X	X	X	X	X	X	(6)	
Equipment and vehicle maintenance	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				X		X		X	X		(7)	
Waste management / disposal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								X	X		(8)	
Sanitary waste	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		X	X					X			(9)	
Nutrient management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X	X							X	X	(10)	

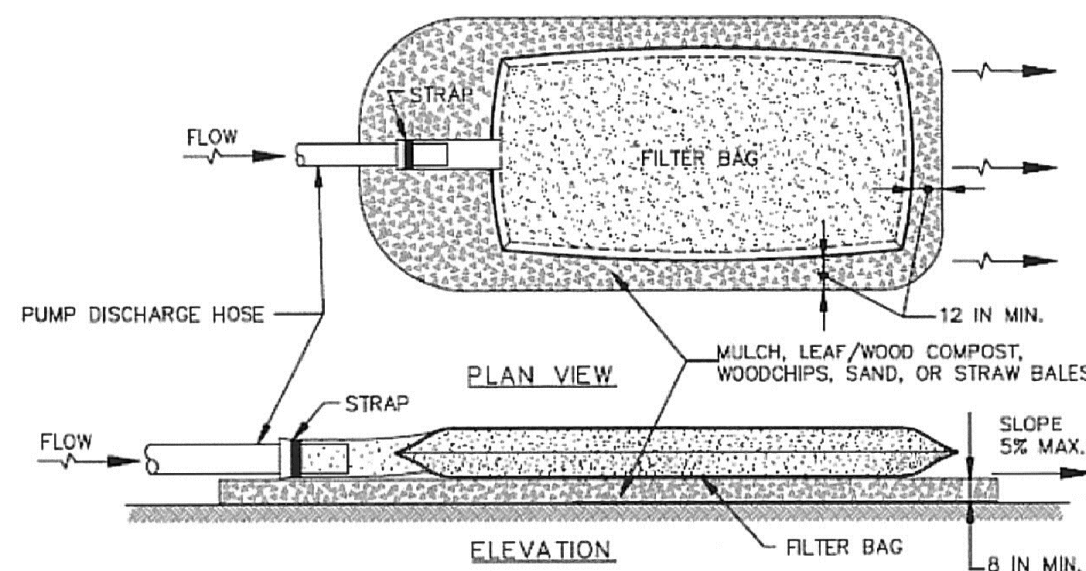
Authorized Non-Stormwater Discharges

Identify the authorized non-stormwater discharges likely to be present at the project site. If an unlisted authorized non-stormwater discharge is likely to be present at the project site, provide it here.

Type of Authorized Non-Stormwater Discharges	Likely Present at Your Project Site?	
Uncontaminated excavation dewatering	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Landscape irrigation	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Others (describe)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Filter Bag

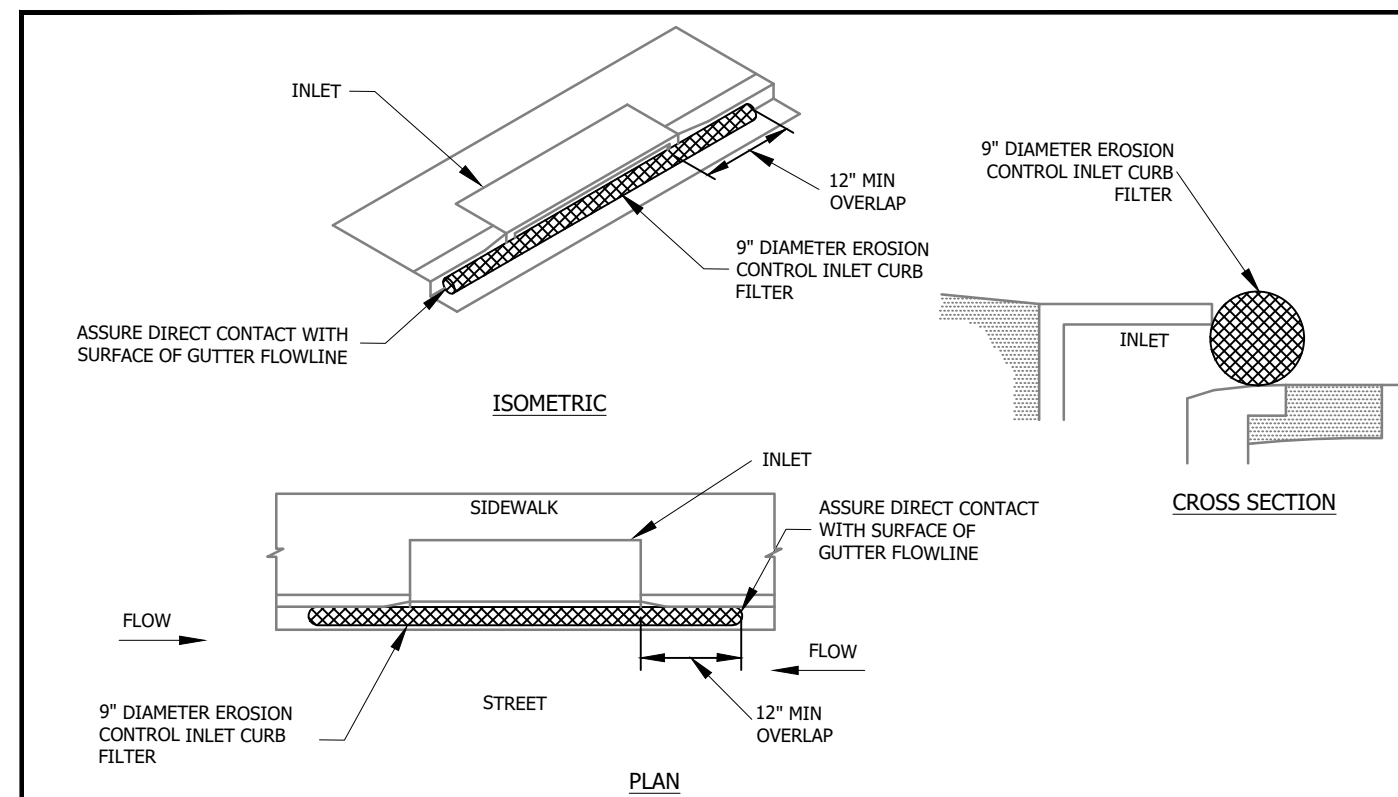
The Maryland Standard F-4 for a filter bag is provided as an acceptable option for use in Arlington County if straw bales or stone are used as the layer under the filter bag. The use of mulch, leaf/wood compost, woodchips or sand is not acceptable.



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	130 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT ²	ASTM D-4491
PERMITTIVITY (SEC ⁻²)	1.2 SEC ⁻²	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632
6. REPLACE FILTER BAG IF BAG CLODS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.



- NOTES:**
1. CONTRACTOR TO OBTAIN PERMISSION FROM ARLINGTON COUNTY PRIOR TO USE ON SITE.
 2. THE SEDIMENT FILTER SOCK TO BE INSTALLED DAILY AT THE BEGINNING OF CONSTRUCTION AND TO BE REMOVED AFTER THE STREET IS SWEEP OR FLUSHED WHENEVER APPLICABLE AT THE END OF THE CONSTRUCTION DAY.

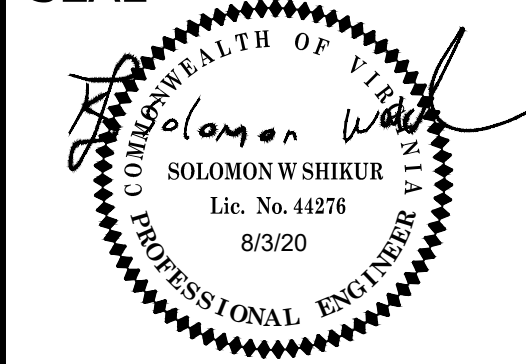
SEDIMENT FILTER SOCK INLET PROTECTION
 ARLINGTON COUNTY, VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL SERVICES



DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
 2100 CLARENDON BOULEVARD, SUITE 813
 ARLINGTON, VA 22201
 PHONE: 703.228.3629
 FAX: 703.228.3606

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SEAL



APPROVALS _____ DATE _____

QUALITY CONTROL ENGINEER _____

CONSTRUCTION MANAGEMENT SUPERVISOR _____

WATER, SEWER, STREETS BUREAU CHIEF _____

TRANSPORTATION DIRECTOR _____

PROJECT MANAGER _____

REVISIONS _____ DATE _____

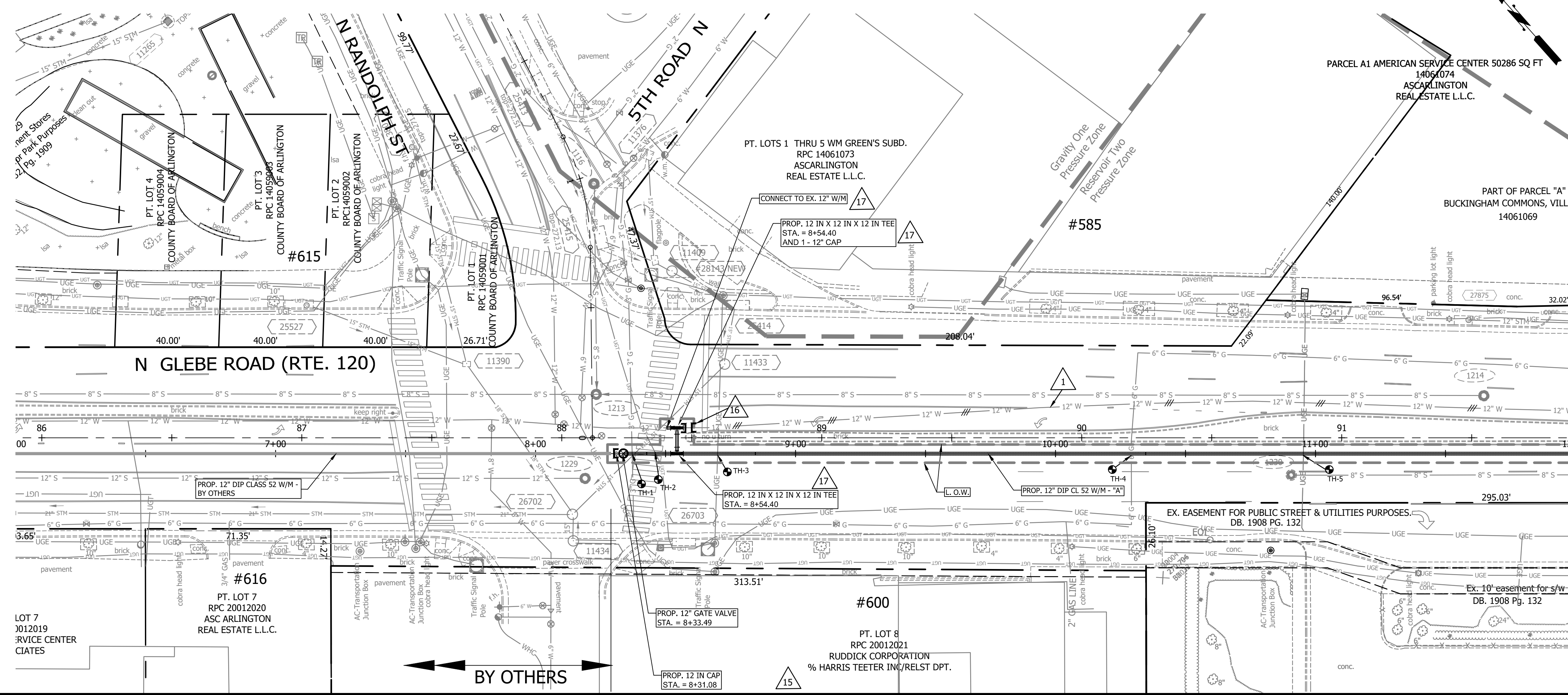
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
EROSION & SEDIMENT CONTROL
NOTES AND DETAILS - 2

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

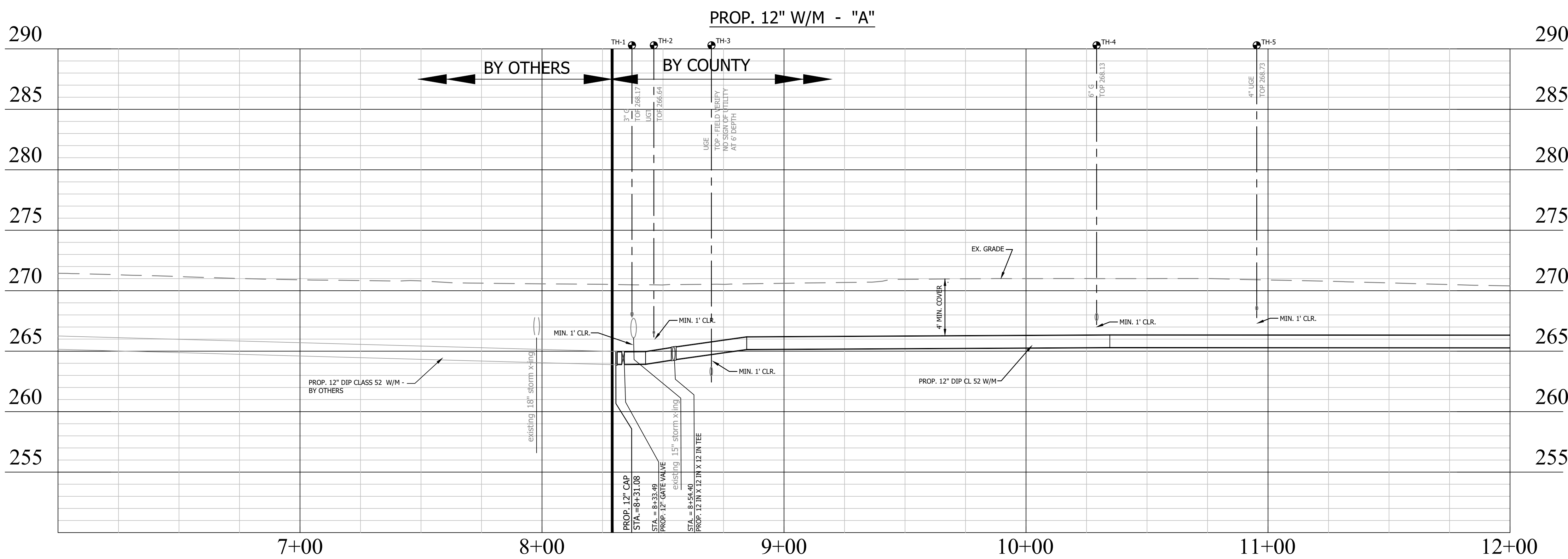
PLOTTED: AUGUST 4 2020

SCALE:

AS SHOWN



MATCHLINE - SEE C051.2 - STATION 12+00



WATERMAIN CONSTRUCTION NOTES:

- INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF PROPOSED WATERMAIN, OR ABANDONED IN PLACE PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
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- ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.
- TH # IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.
- REFER PROFILE VIEW FOR ELEVATION INFORMATION.
- TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND INVERTS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
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- A TOTAL OF 21 WATER SERVICE CONNECTIONS TO THE EXISTING 12" WATER MAIN WILL BE TRANSFERRED TO THE PROPOSED 12" WATER MAIN.
 - SEE PROPERTY ADDRESS ON THE PLAN:
- | Ex. Water Meter | NEW Water Meter to Be Installed | NEW Service Line to Be Installed | Remark |
|-----------------|---------------------------------|----------------------------------|--------|
| 5/8" | 3/4" | 1" | |
- SEE PROPERTY ADDRESS ON THE PLAN:
- | Ex. Water Meter | NEW Water Meter to Be Installed | NEW Service Line to Be Installed | Remark |
|-----------------|---------------------------------|----------------------------------|---|
| 3/4" | Not Required | 1" | Field Verification of the Ex. service Line Size is Required |
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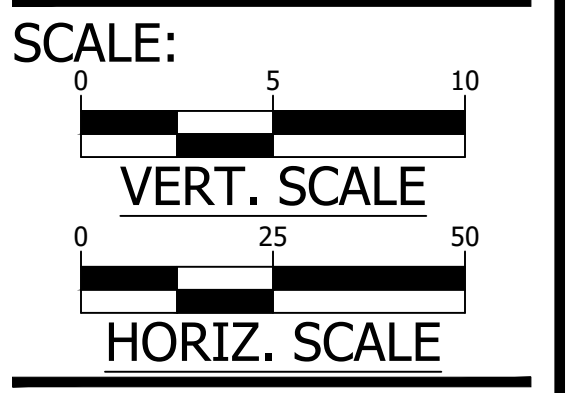
APPROVALS _____ DATE _____
 QUALITY CONTROL ENGINEER _____
 CONSTRUCTION MANAGEMENT SUPERVISOR _____
 WATER, SEWER, STREETS BUREAU CHIEF _____
 TRANSPORTATION DIRECTOR _____
 PROJECT MANAGER _____

REVISIONS _____ DATE _____

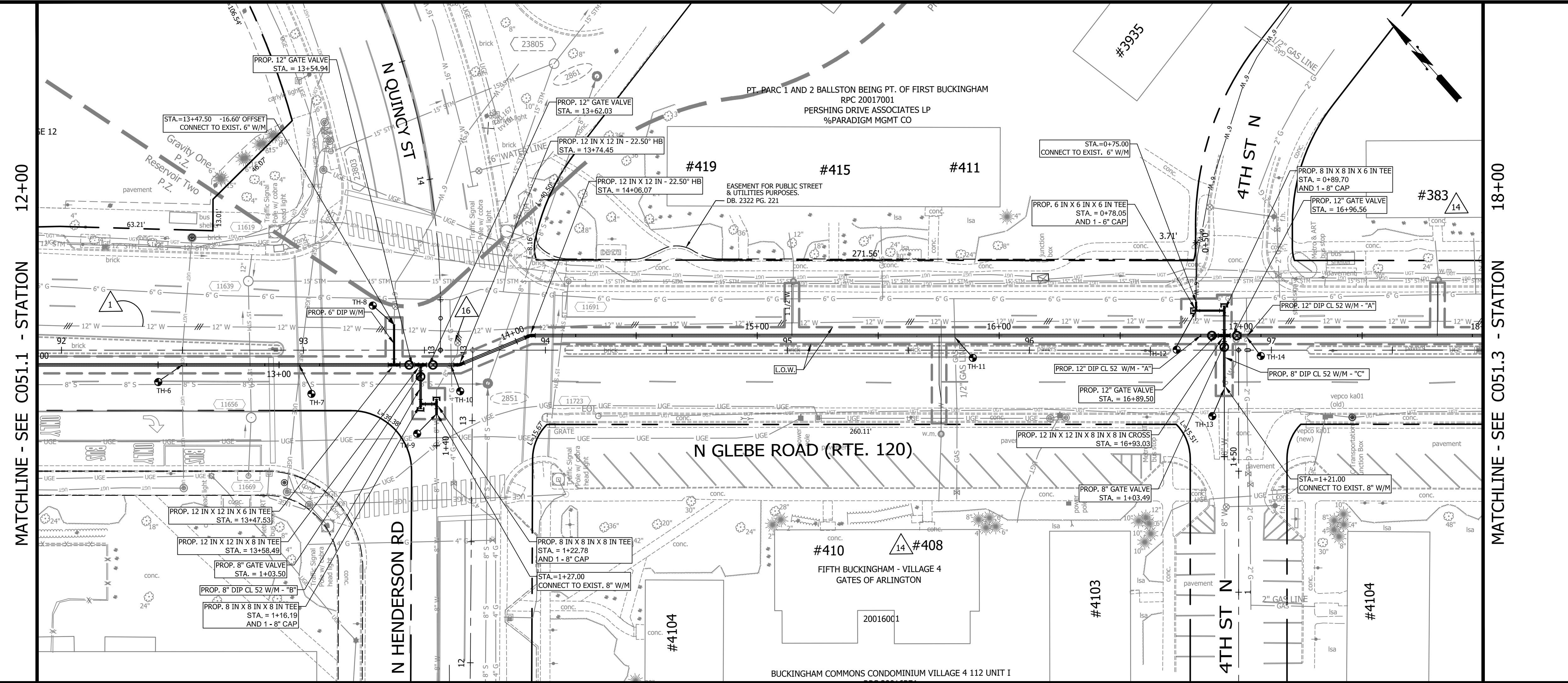
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 1

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: AUGUST 4 2020



C051.1



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- SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
5/8"	3/4"	1"	

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
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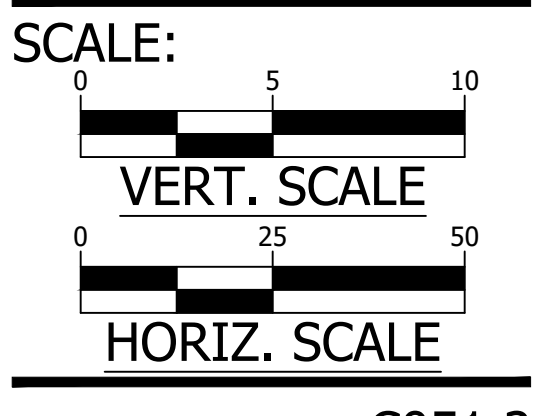
APPROVALS DATE
 QUALITY CONTROL ENGINEER
 CONSTRUCTION MANAGEMENT SUPERVISOR
 WATER, SEWER, STREETS BUREAU CHIEF
 TRANSPORTATION DIRECTOR
 PROJECT MANAGER

REVISIONS DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 2

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

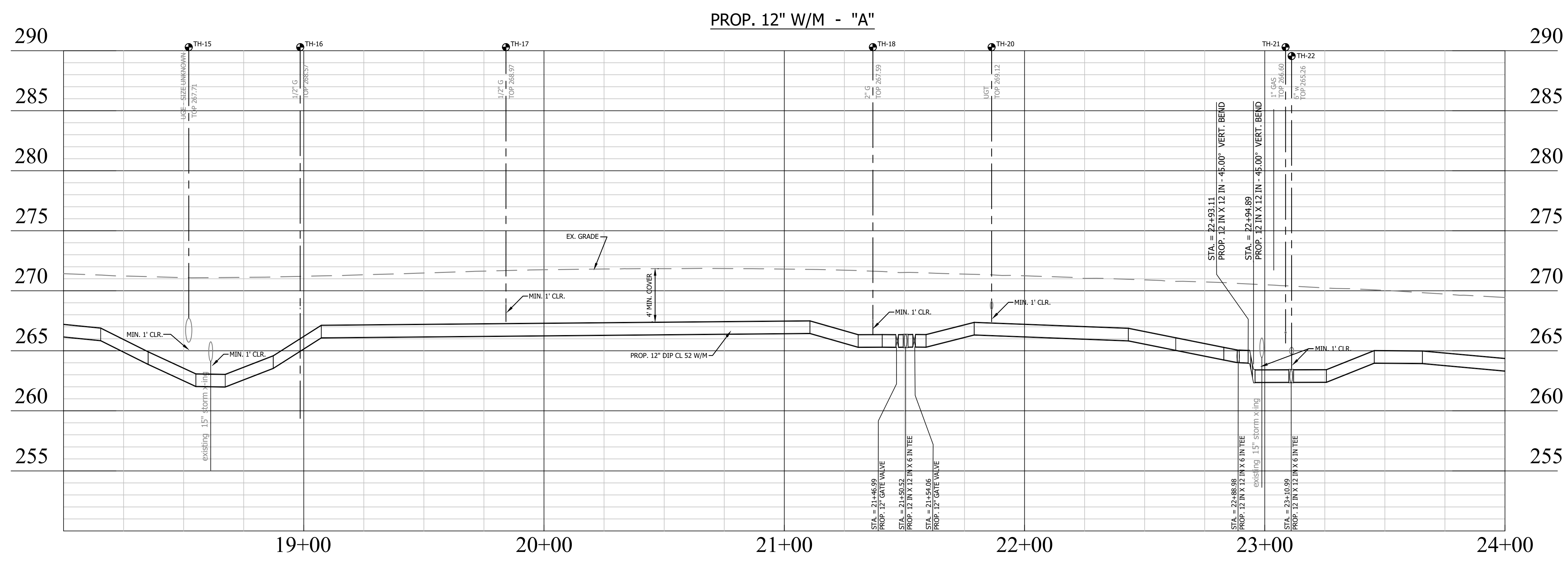
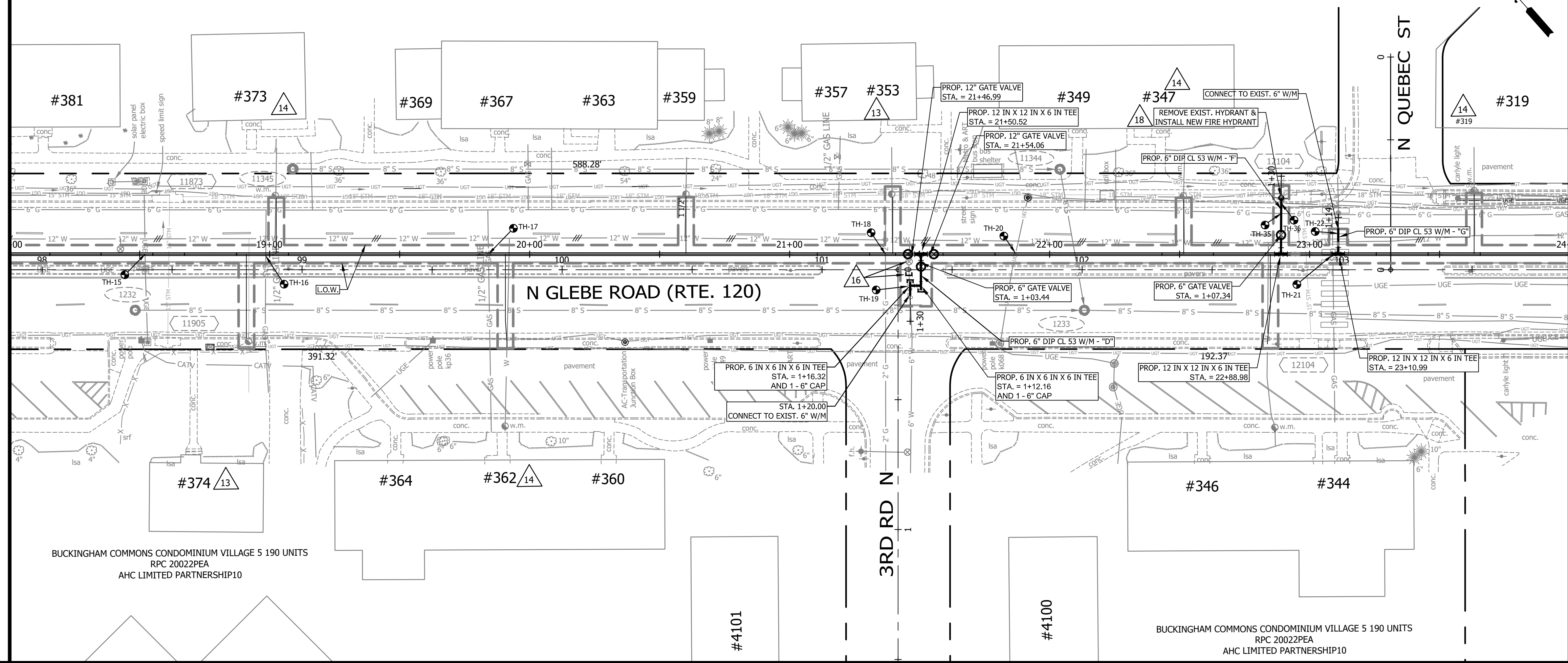
PLOTTED: AUGUST 4 2020



C051.2

MATCHLINE - SEE C051.2 - STATION 18+00

MATCHLINE - SEE C051.4 - STATION 24+00



WATERMAIN CONSTRUCTION NOTES:

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12. A TOTAL OF 21 WATER SERVICE CONNECTIONS TO THE EXISTING 12" WATER MAIN WILL BE TRANSFERRED TO THE PROPOSED 12" WATER MAIN.

13. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	New Water Meter to Be Installed	New Service Line to Be Installed	Remark
5/8"	3/4"	1"	

14. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	New Water Meter to Be Installed	New Service Line to Be Installed	Remark
3/4"	Not Required	1"	Field Verification of the Ex. service Line Size is Required

15. IF THE WATERMAIN WEST OF RANDOLPH ST IS INSTALLED BY OTHERS BEFORE THIS PLAN, REMOVE CAP AND CONNECT TO THE EXISTING 12" WATERMAIN.

16. AFTER THE 12" WATERMAIN IN SERVICE, CUT & CAP THE EXISTING 12"/8"/6" WATERMAIN WHERE NECESSARY AND ABANDON THESE EXISTING WATERMANS AS INDICATED IN-PLACE. EXISTING VALVES TO BE ABANDONED SHALL BE ABANDONED IN-PLACE. THE EXISTING VALVE BOX SHALL BE REMOVED AND THE RESULTING VOID SHALL BE STABILIZED VIA USE OF FLOWABLE FILL OR OTHER APPROVED MEANS TO AVOID FUTURE SETTLEMENT.

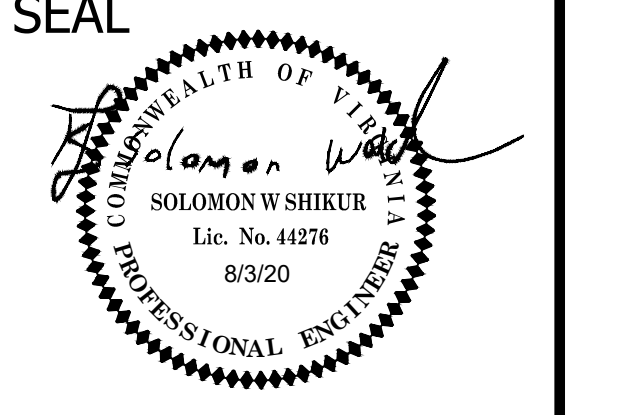
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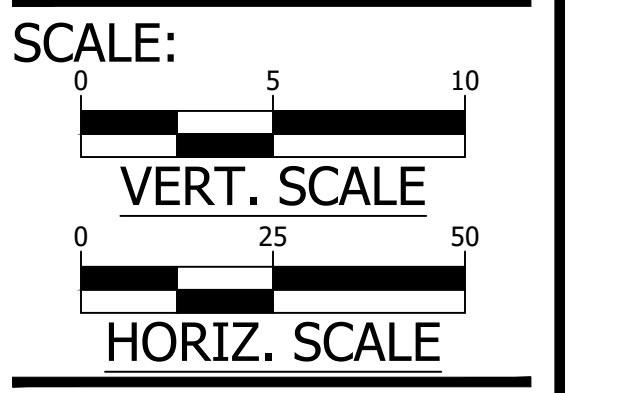
APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 3

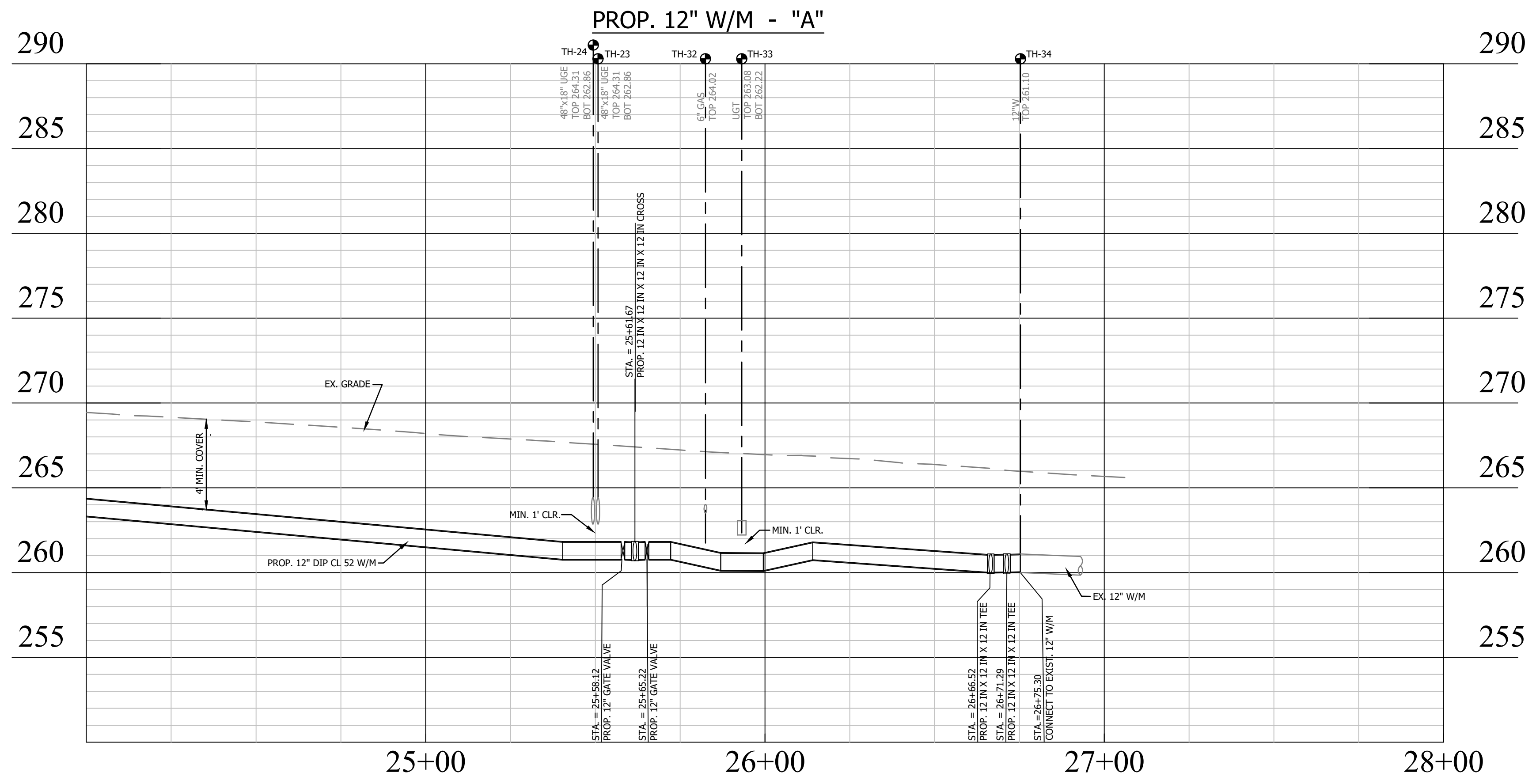
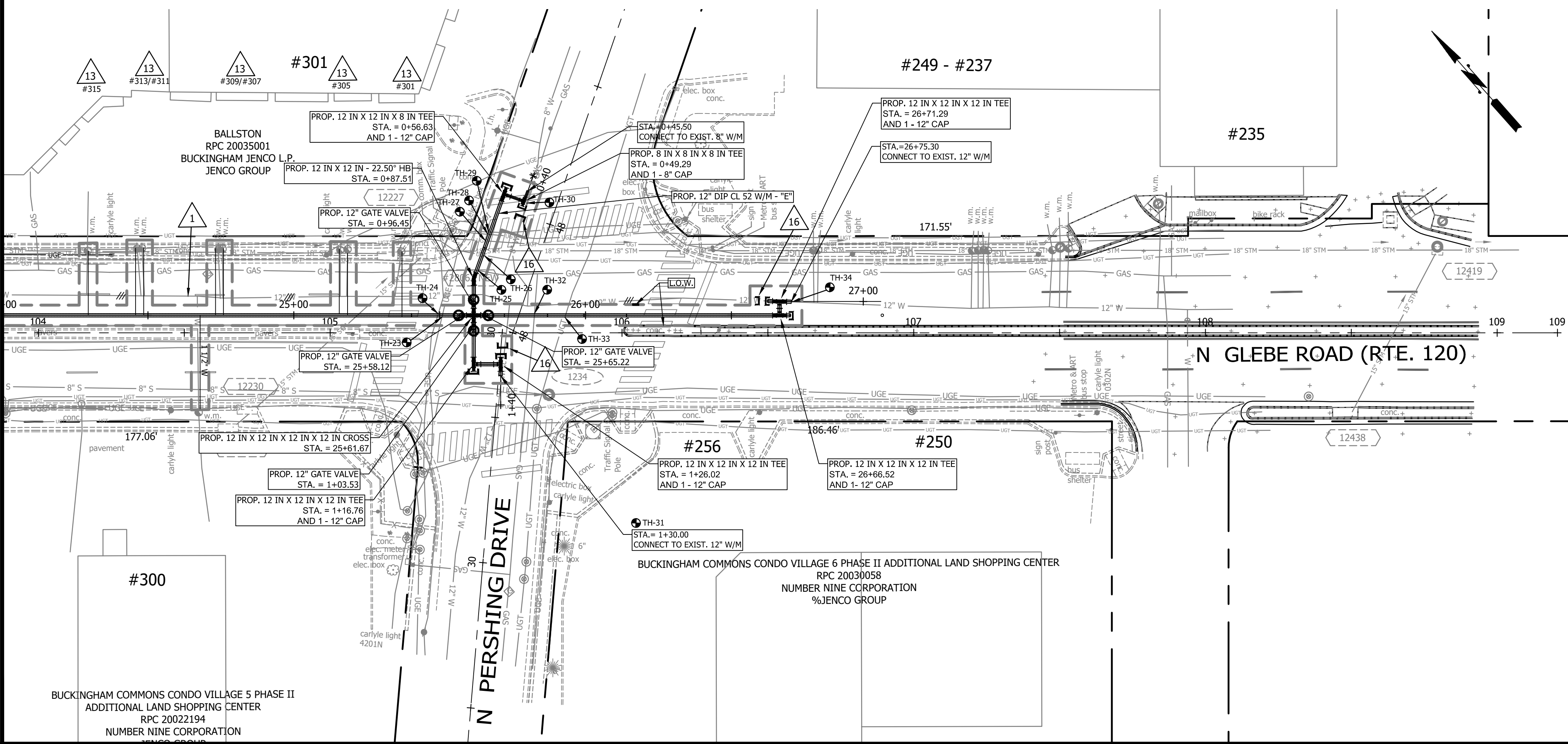
DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: AUGUST 4 2020



C051.3

MATCHLINE - SEE C051.3 - STATION 24+00



WATERMAIN CONSTRUCTION NOTES:

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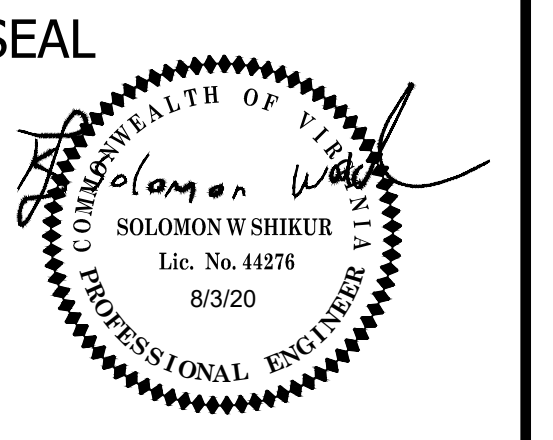
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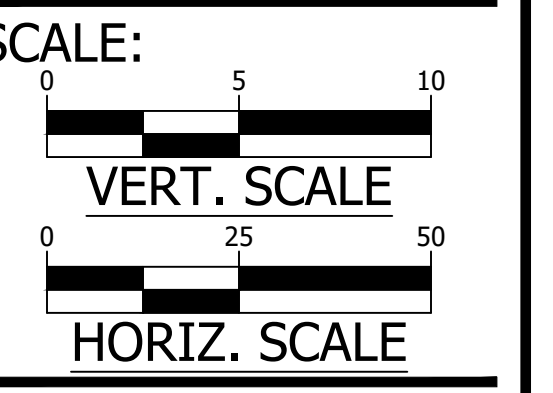
APPROVALS DATE
QUALITY CONTROL ENGINEER
CONSTRUCTION MANAGEMENT SUPERVISOR
WATER, SEWER, STREETS BUREAU CHIEF
TRANSPORTATION DIRECTOR
PROJECT MANAGER

REVISIONS DATE

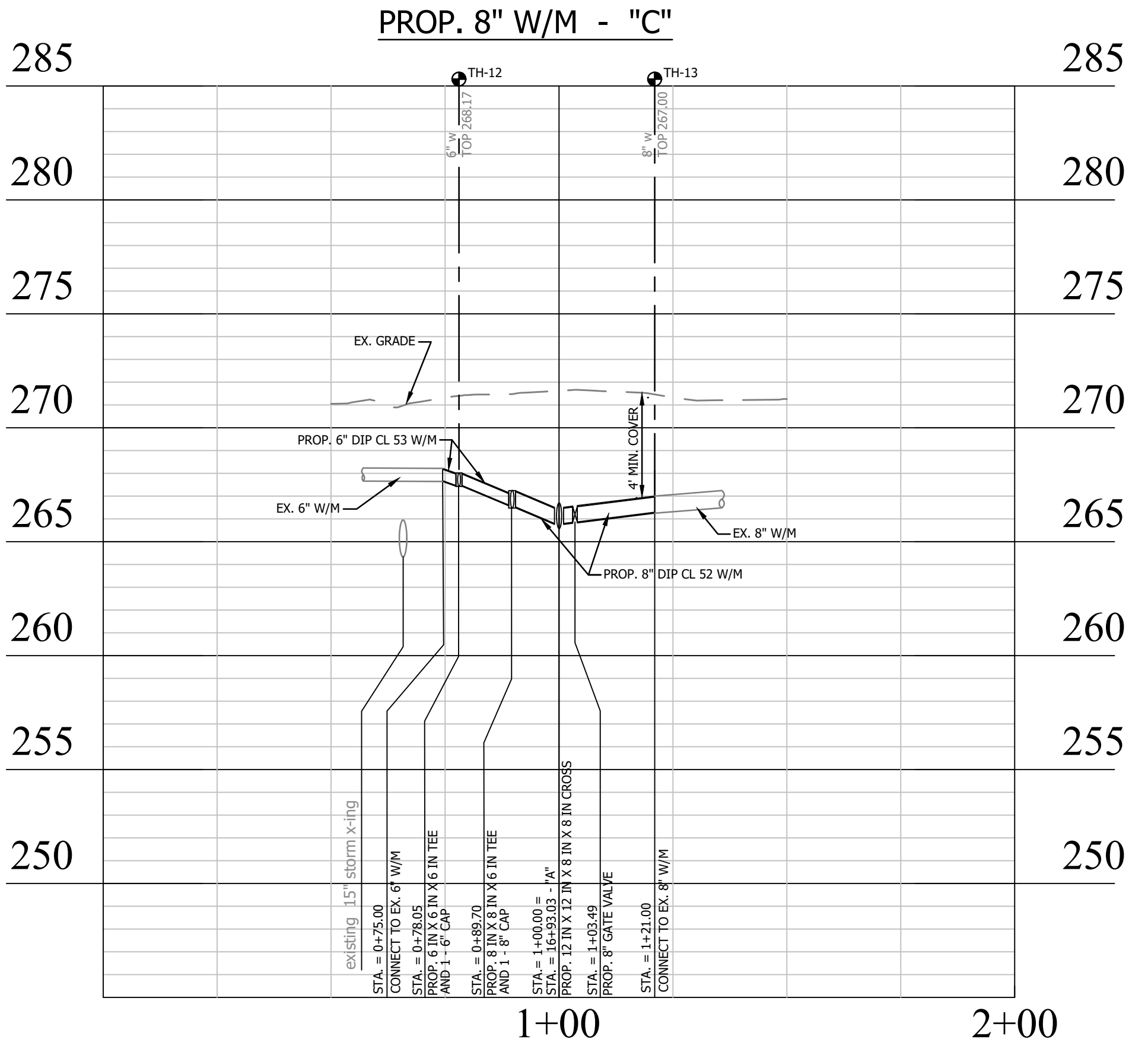
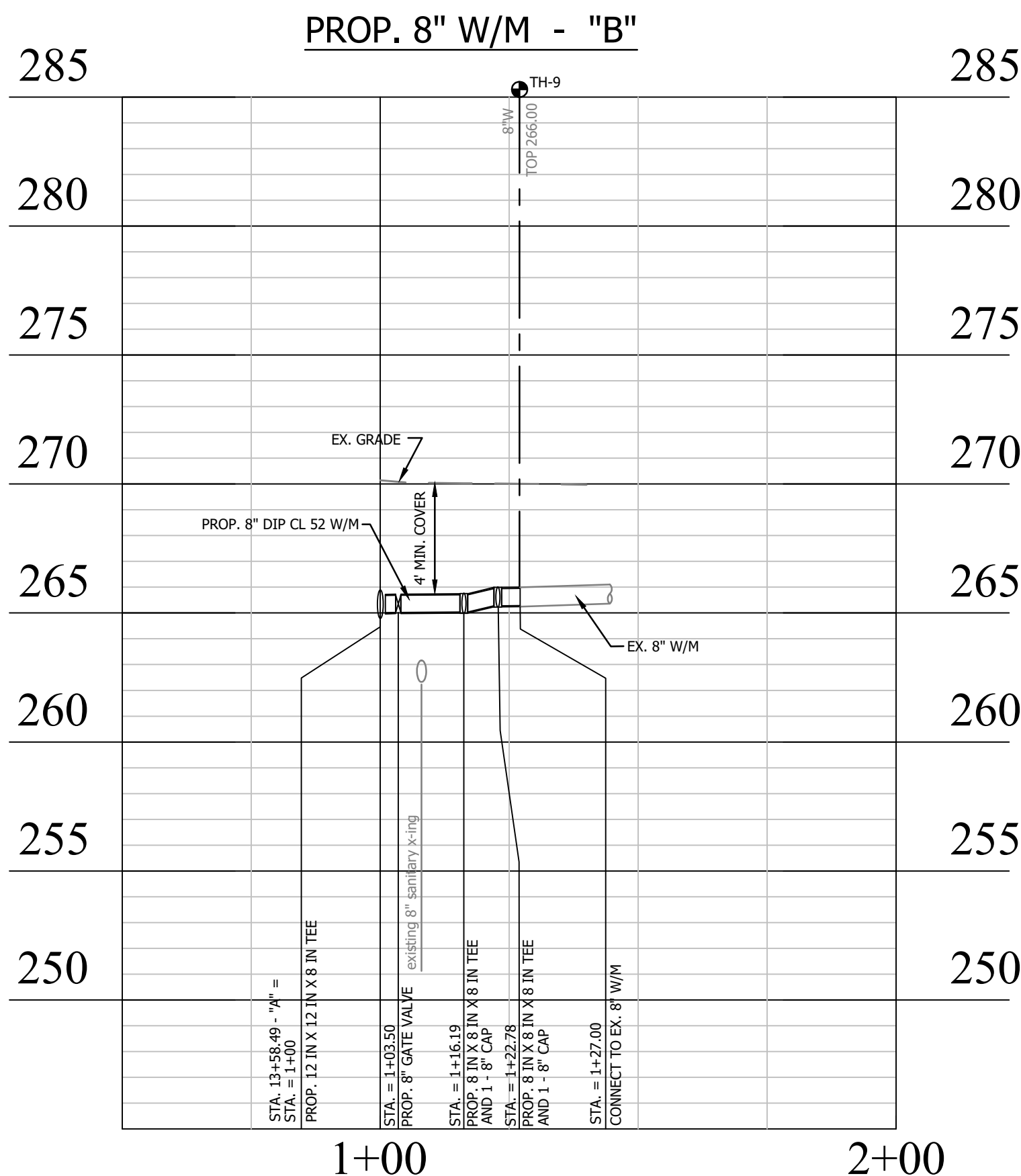
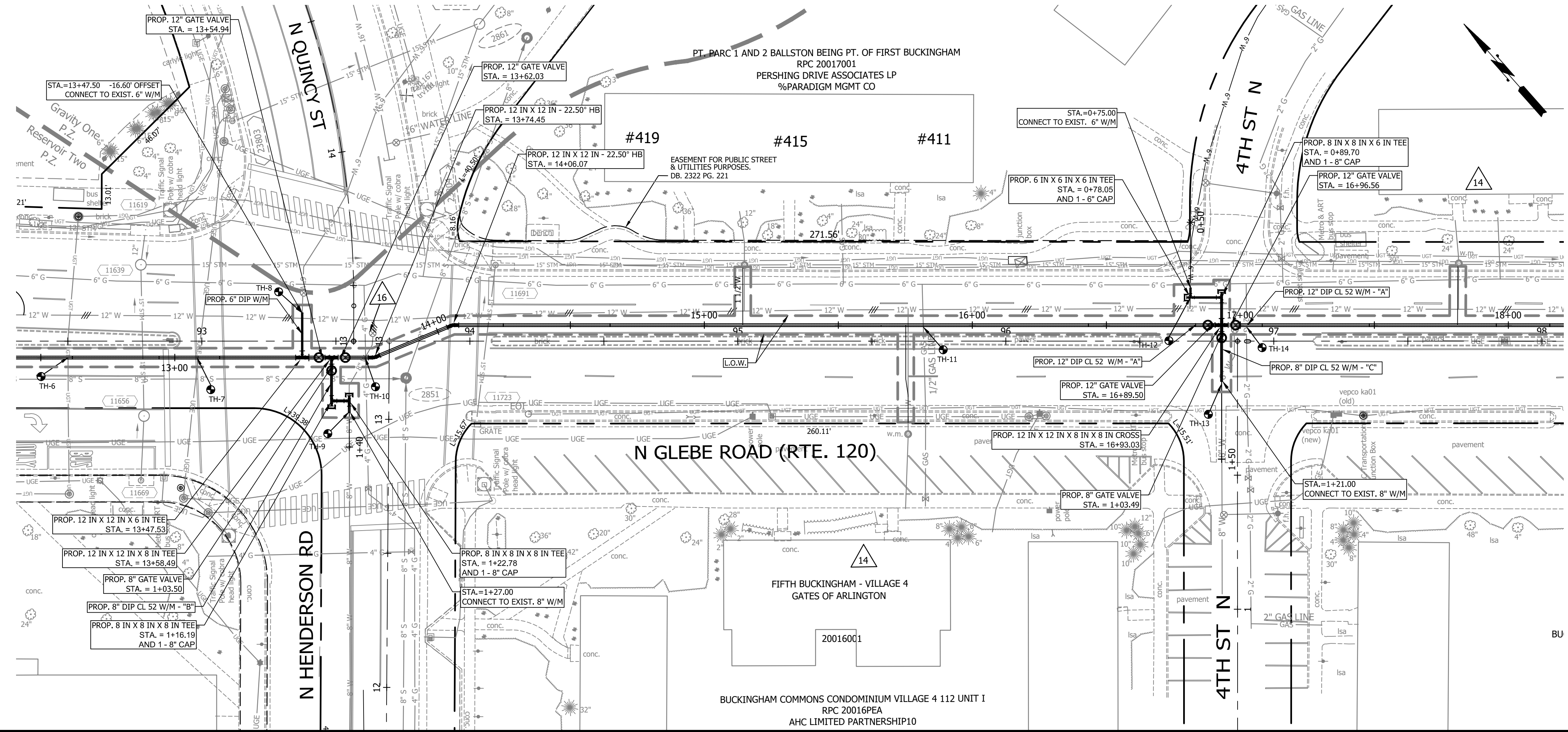
N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
WATERMAIN PLAN AND PROFILE - 4

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: AUGUST 4 2020



C051.4



WATERMAIN CONSTRUCTION NOTES:

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- TEST PITTS SHALL BE MADE TO VERIFY EXACT LOCATION AND INVERTS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITTS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
- ALL WATER MAIN JOINTS INCLUDING ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. SHALL BE RESTRAINED USING "MEGALUG", "TR-FLEX PIPE", OR APPROVED EQUAL. THE CONTRACTOR SHALL SUBMIT JOINT RESTRAINT DETAILS DESIGNED FOR PRESSURE OF 250 PSI PRIOR TO INSTALLATION OF PIPE. ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. IN CONJUNCTION WITH JOINT RESTRAINT SHALL ALSO BE RESTRAINED WITH CONCRETE THRUST BLOCKS AS SHOWN ON SHEET C052.1.

12. A TOTAL OF 21 WATER SERVICE CONNECTIONS TO THE EXISTING 12" WATER MAIN WILL BE TRANSFERRED TO THE PROPOSED 12" WATER MAIN.

13. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
5/8"	3/4"	1"	

14. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
3/4"	Not Required	1"	Field Verification of the Ex. service Line Size is Required

15. IF THE WATERMAIN WEST OF RANDOLPH ST IS INSTALLED BY OTHERS BEFORE THIS PLAN, REMOVE CAP AND CONNECT TO THE EXISTING 12" WATERMAIN.

16. AFTER THE 12" WATERMAIN IN SERVICE, CUT & CAP THE EXISTING 12"/8"/6" WATERMAIN WHERE NECESSARY AND ABANDON THESE EXISTING WATERMANS AS INDICATED IN-PLACE. EXISTING VALVES TO BE ABANDONED SHALL BE ABANDONED IN-PLACE. THE EXISTING VALVE BOX SHALL BE REMOVED AND THE RESULTING VOID SHALL BE STABILIZED VIA USE OF FLOWABLE FILL OR OTHER APPROVED MEANS TO AVOID FUTURE SETTLEMENT.

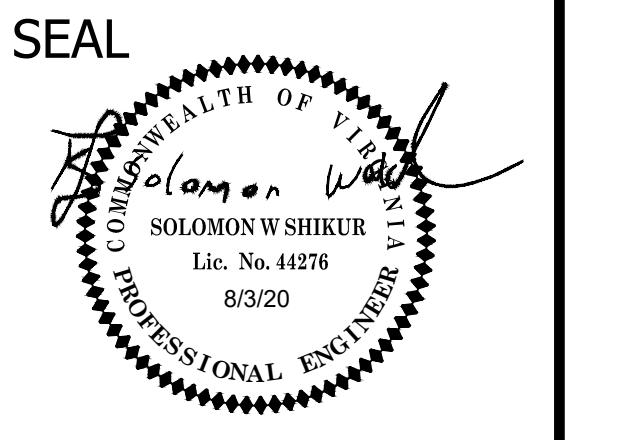
17. IF THE WATERMAIN BY OTHERS PRECEDES THE WATERMAIN PROPOSED WITH THIS PLAN, THERE SHALL BE NO NEED FOR THIS CONNECTION.

18. EXISTING FIRE HYDRANT TO BE REMOVED AND DISPOSED. THE CONTRACTOR IS REQUIRED TO CAP HYDRANT LEAD CAP, INSTALL THRUST RESTRAINT BEHIND THE VALVE, ABANDON THE EXISTING VALVE IN PLACE AND REMOVE THE VALVE BOX AND STABILIZED THE VOID.



DEPARTMENT OF ENVIRONMENTAL SERVICES
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 ENGINEERING BUREAU
 2100 CLARENDON BOULEVARD, SUITE 813
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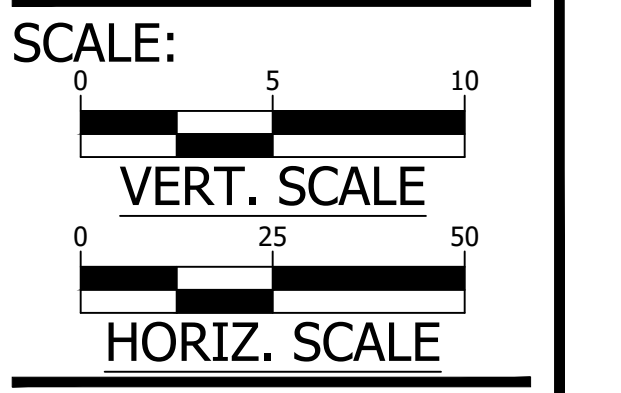
APPROVALS _____ DATE _____
 QUALITY CONTROL ENGINEER _____
 CONSTRUCTION MANAGEMENT SUPERVISOR _____
 WATER, SEWER, STREETS BUREAU CHIEF _____
 TRANSPORTATION DIRECTOR _____
 PROJECT MANAGER _____

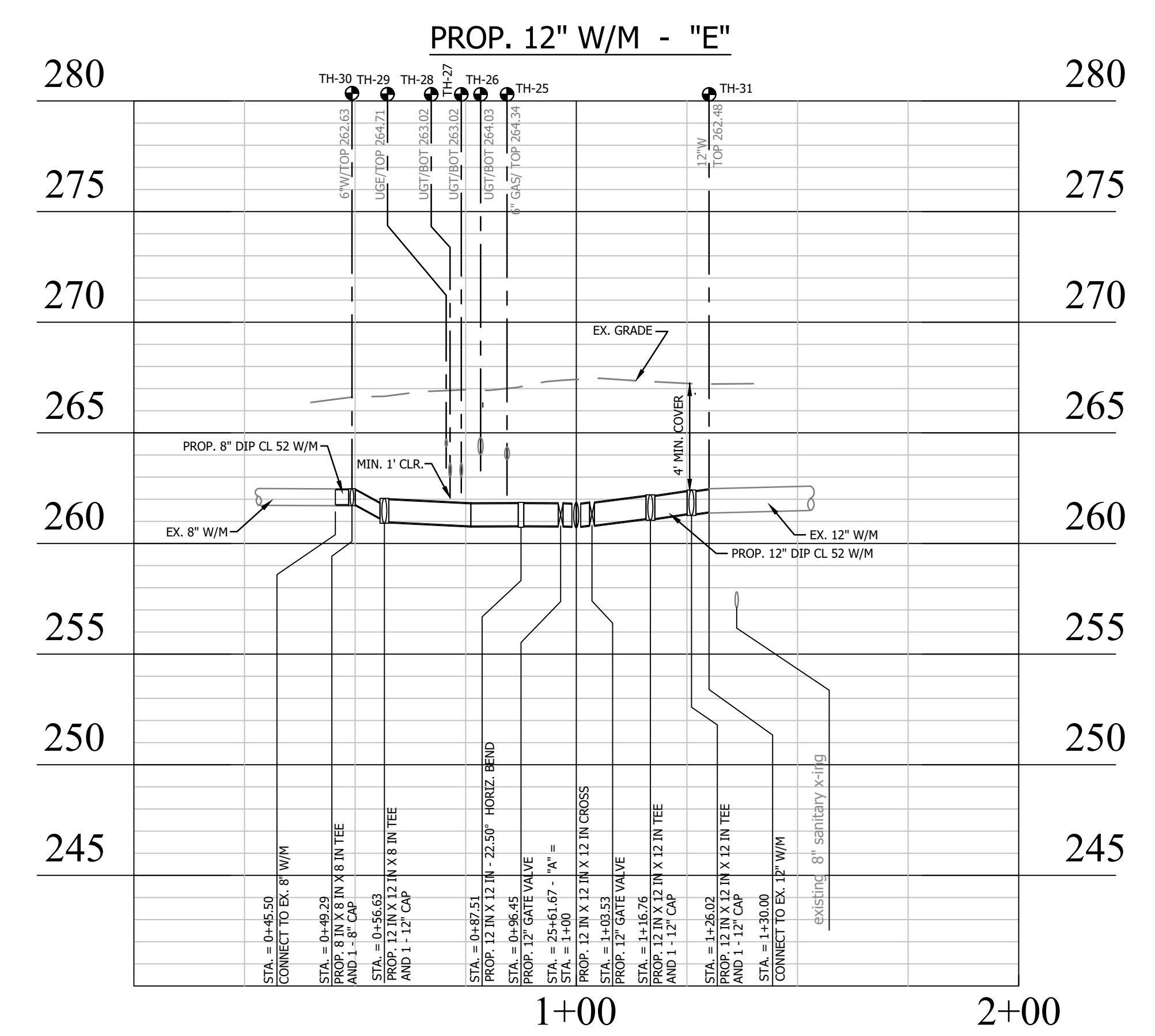
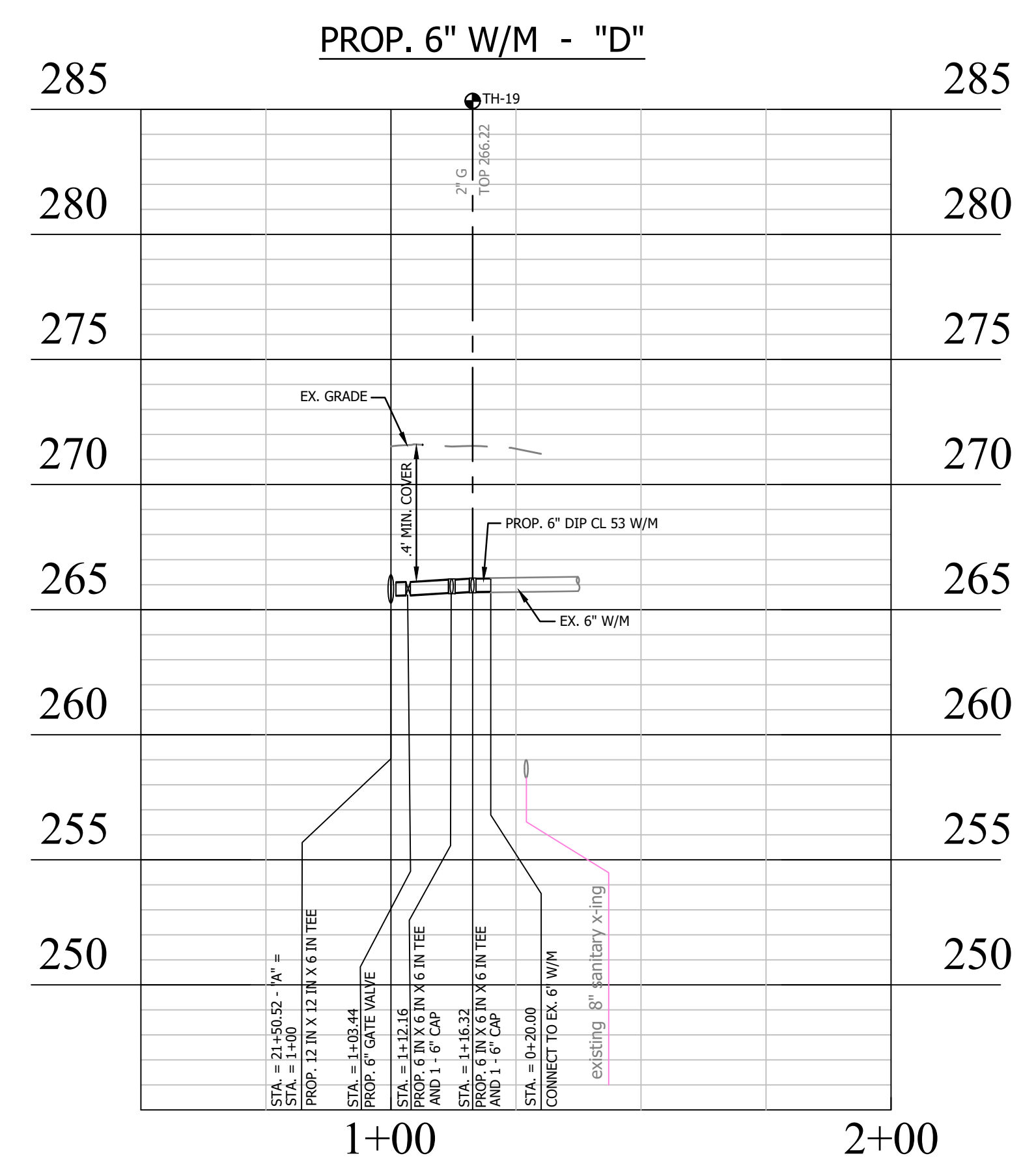
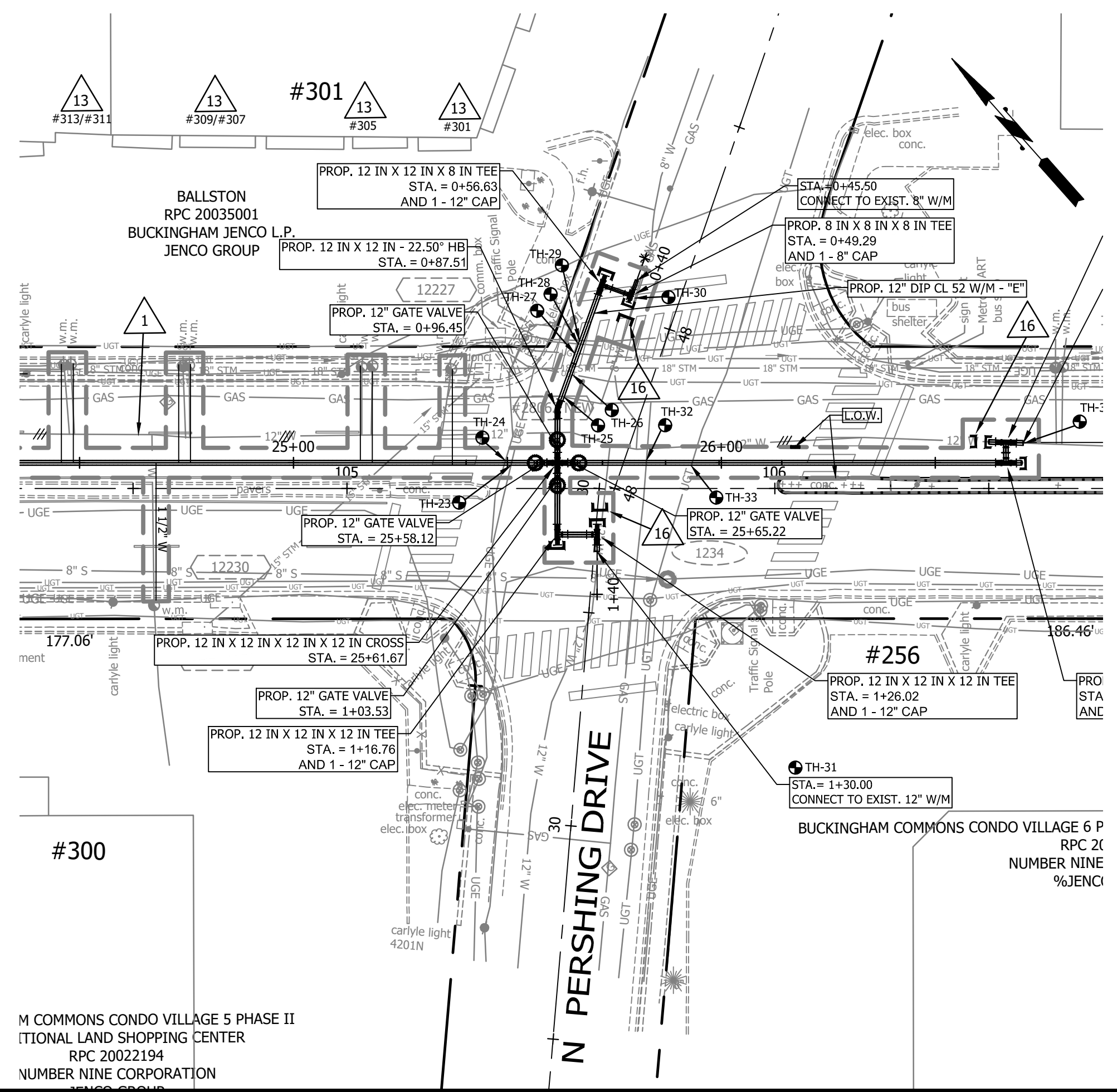
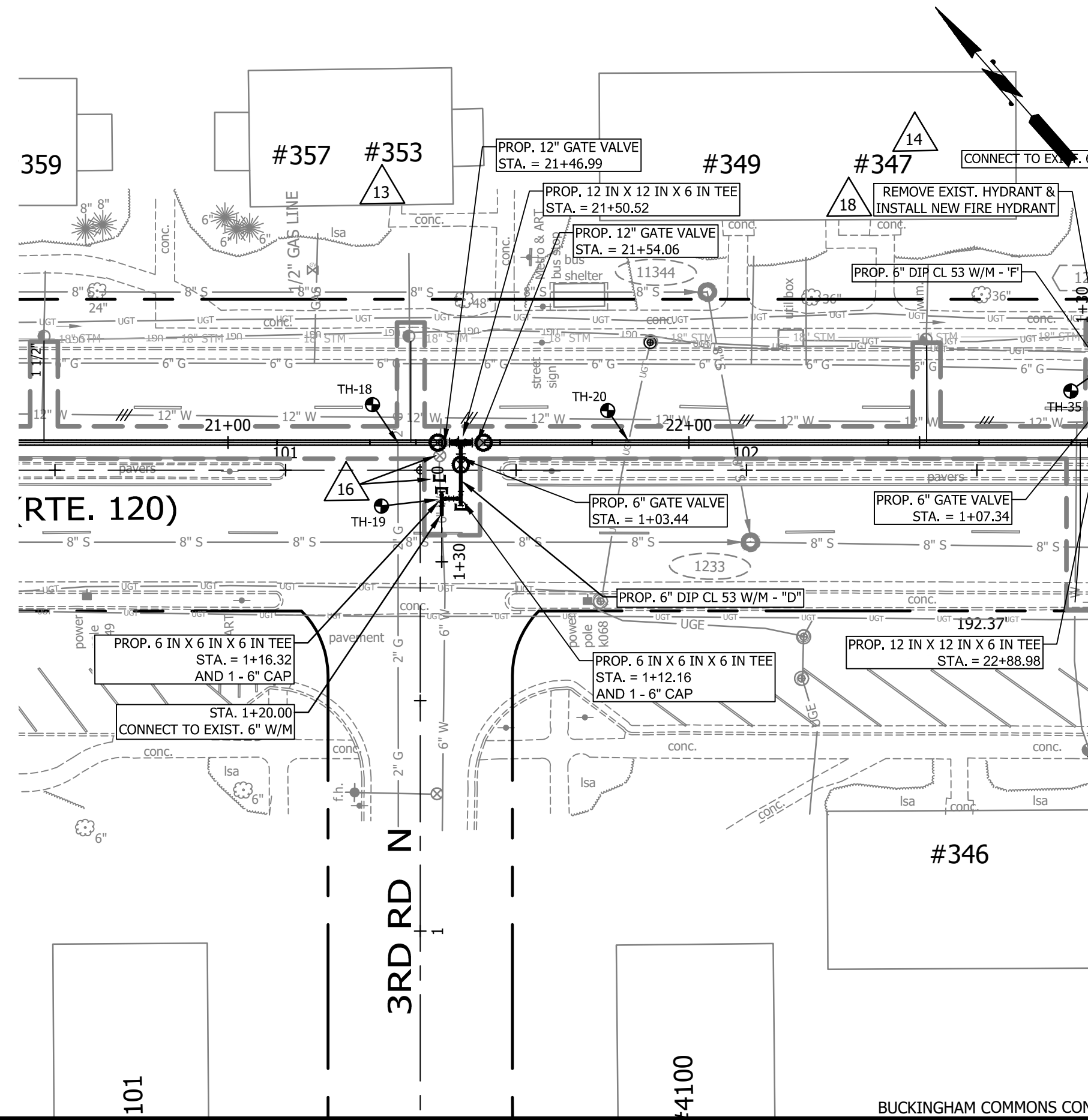
REVISIONS _____ DATE _____

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 5

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: AUGUST 4 2020





WATERMAIN CONSTRUCTION NOTES:

1. // - // - // INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF PROPOSED WATERMAIN, OR ABANDONED IN PLACE FOR PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
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3. SEE DETAIL INSTRUCTION ON SHEET C052.1 FOR THE POLYETHYLENE ENCASEMENT OF THE PROPOSED PIPES.
4. SEE DETAILS ON SHEET C052.1 FOR THE PAVEMENT RESTORATION AFTER COMPLETION OF THE WATERMAIN INSTALLATION AND TESTING.
5. ALL DEMOLISHED CURB AND GUTTER AND SIDEWALK FOR THE INSTALLATION OF PROPOSED WATERMAIN SHALL BE RESTORED AS PER ARLINGTON COUNTY STANDARDS WITHIN THE COUNTY RIGHT OF WAY.
6. DEMOLISHED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED UP TO THE NEAREST JOINT.
7. ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.
8. TH # IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.
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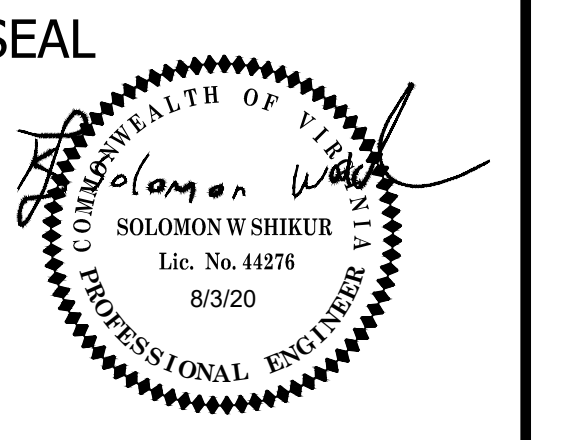
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APPROVALS	DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

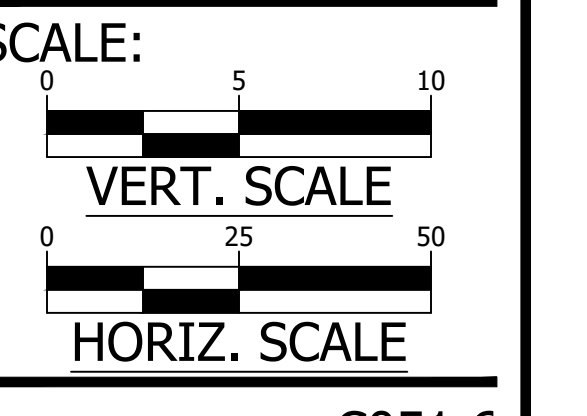
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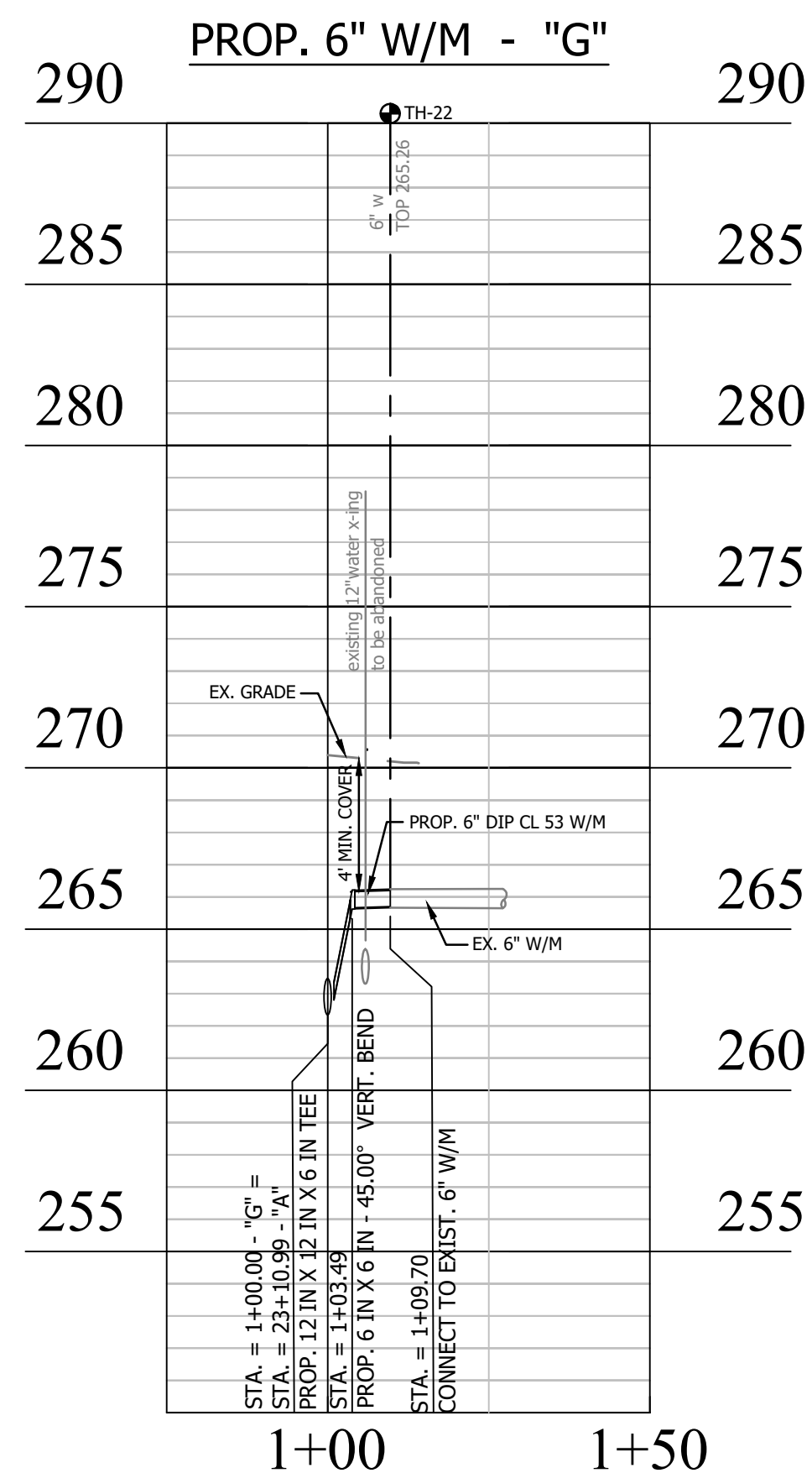
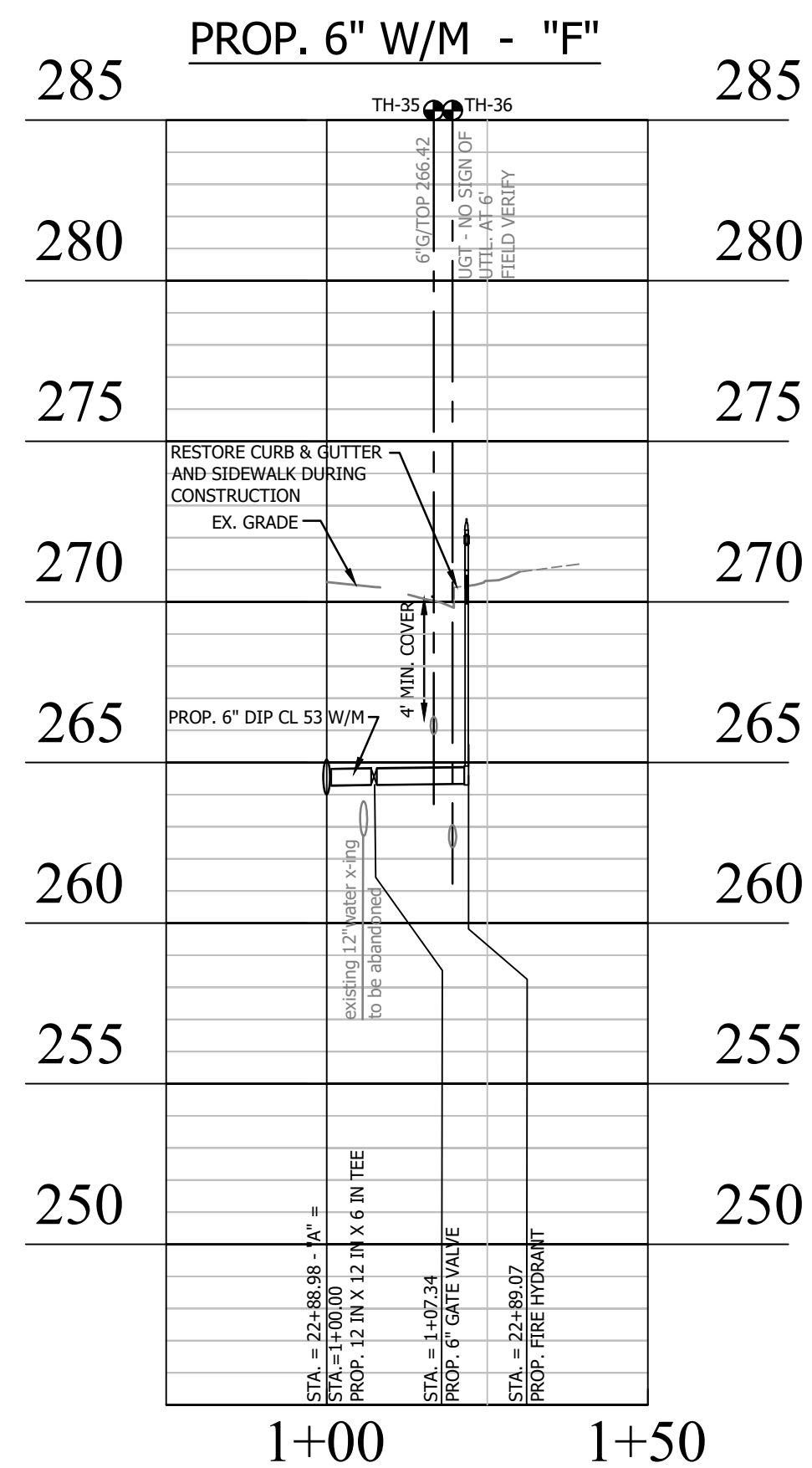
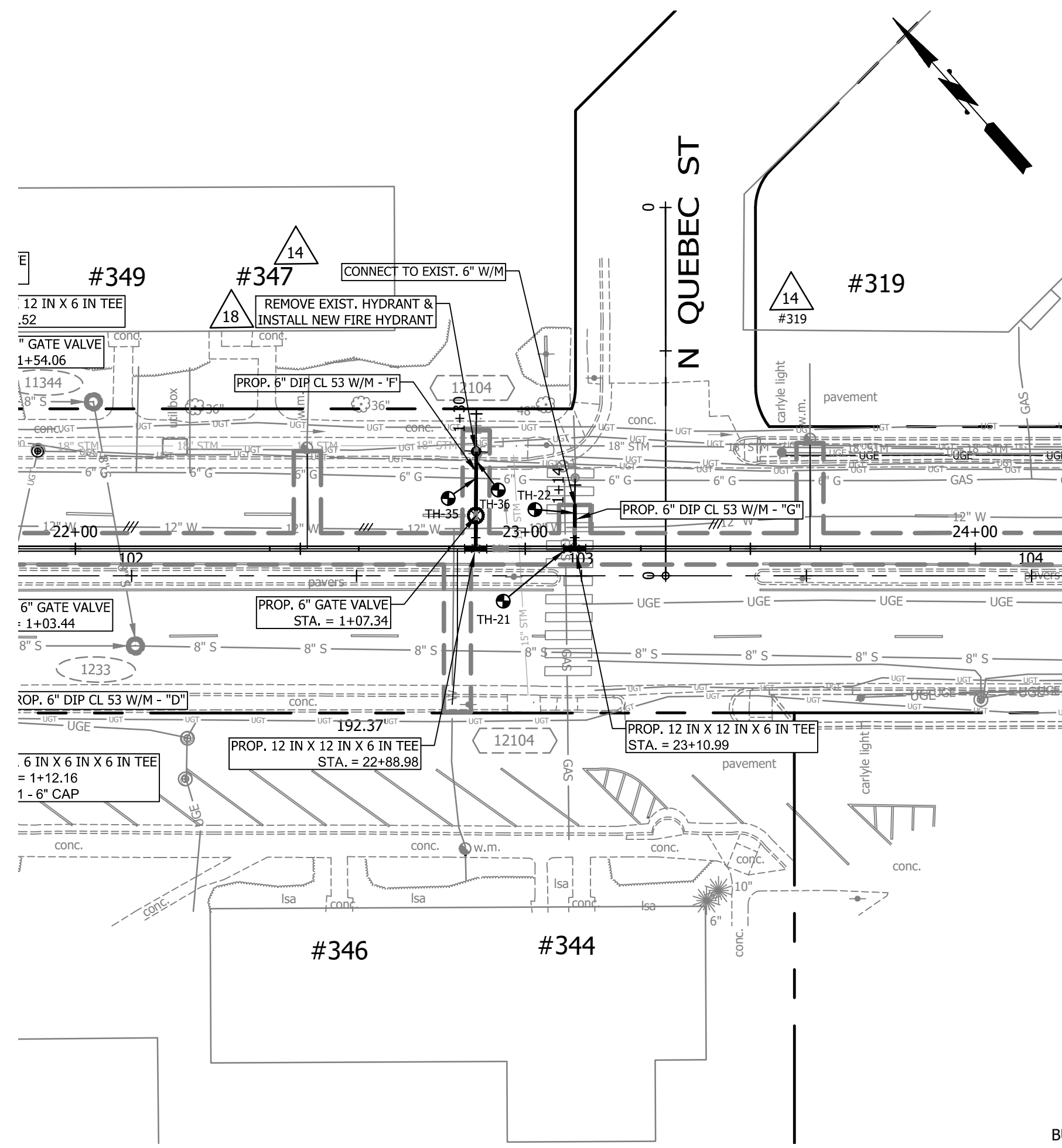
REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 6

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: AUGUST 4 2020





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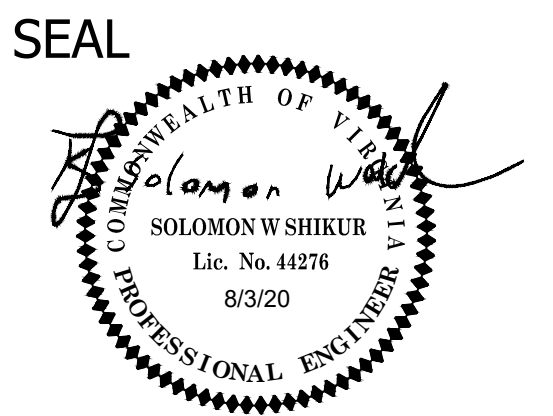
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APPROVALS DATE
QUALITY CONTROL ENGINEER
CONSTRUCTION MANAGEMENT SUPERVISOR
WATER, SEWER, STREETS BUREAU CHIEF
TRANSPORTATION DIRECTOR
PROJECT MANAGER

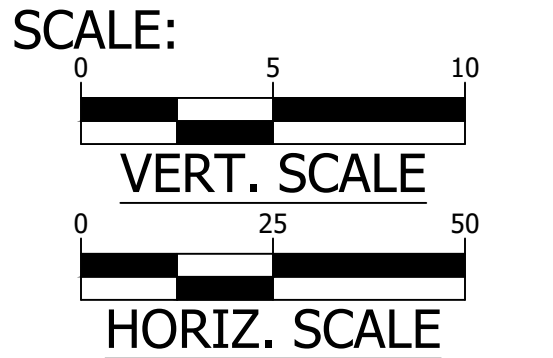
REVISIONS DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014

N. RANDOLPH ST. TO N. PERSHING DR.

WATERMAIN PLAN AND PROFILE - 7

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS
PLOTTED: AUGUST 4 2020

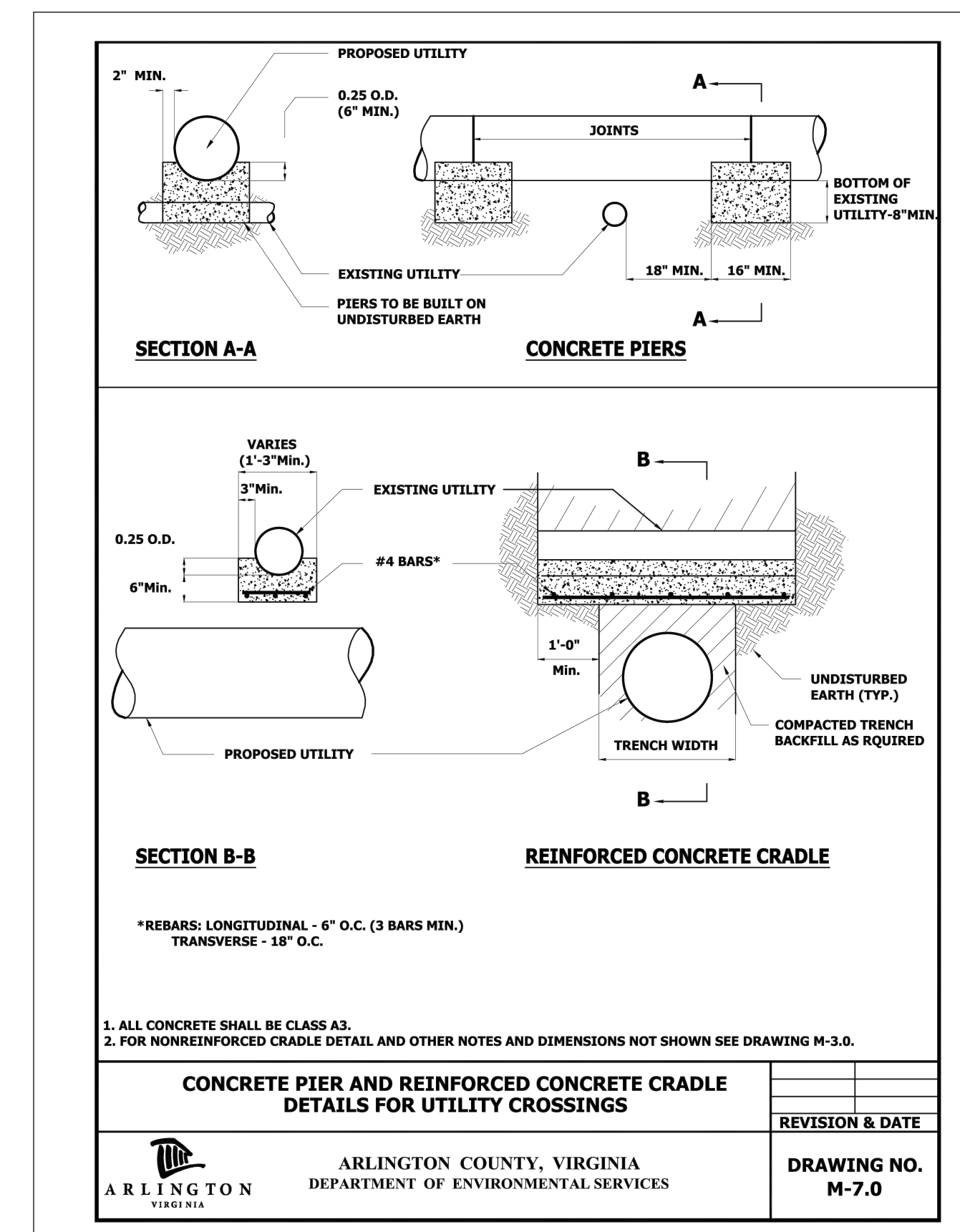
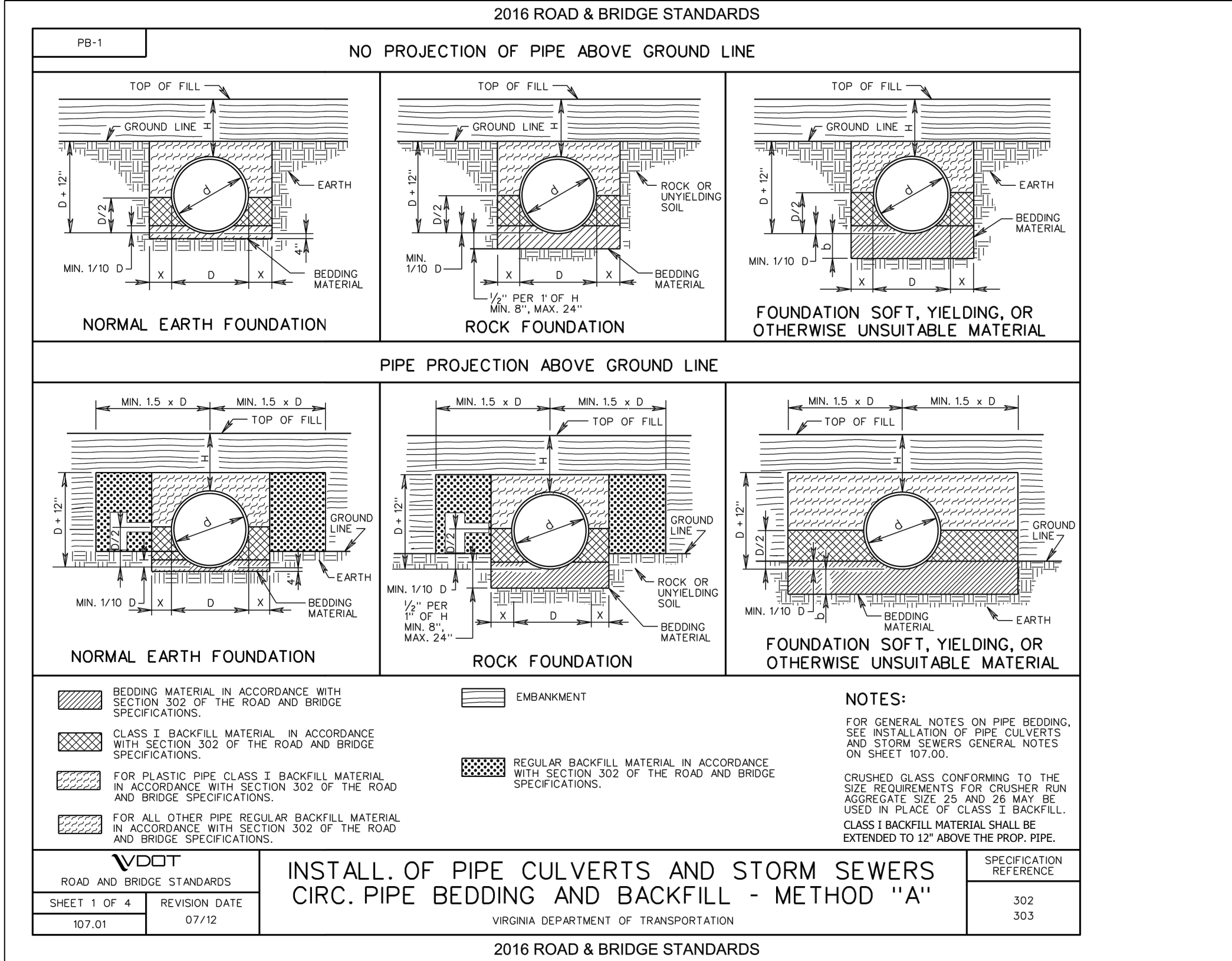
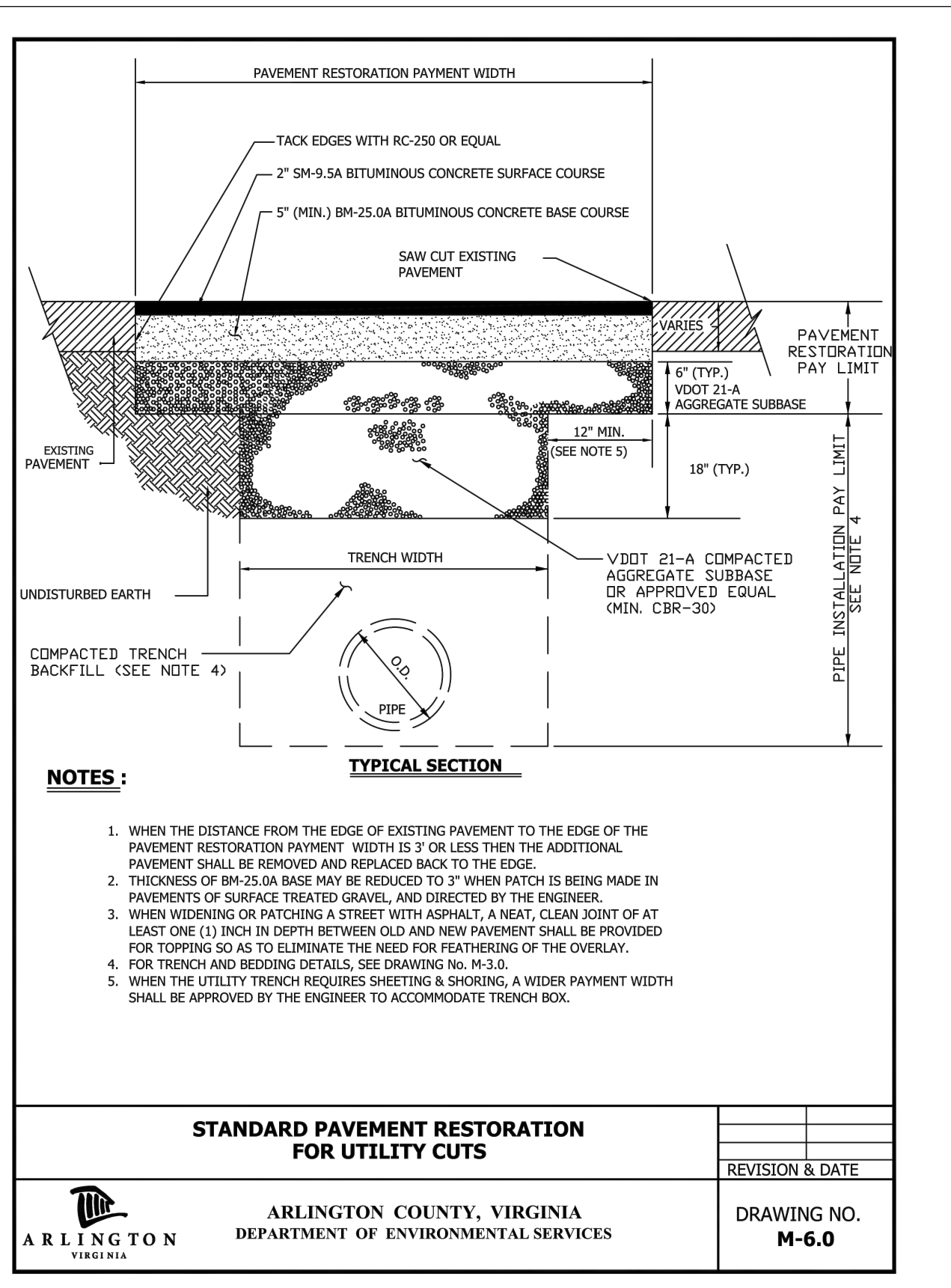
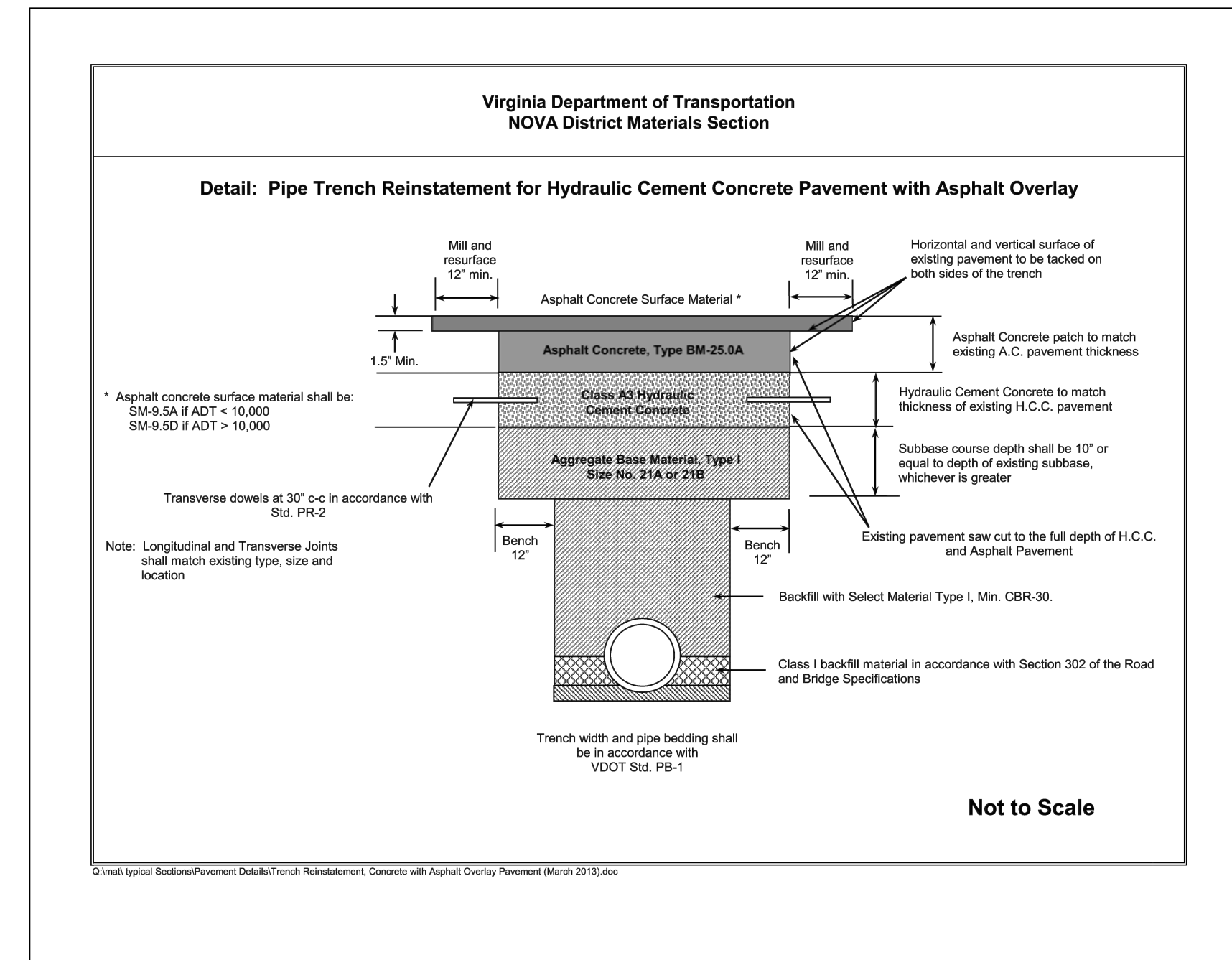
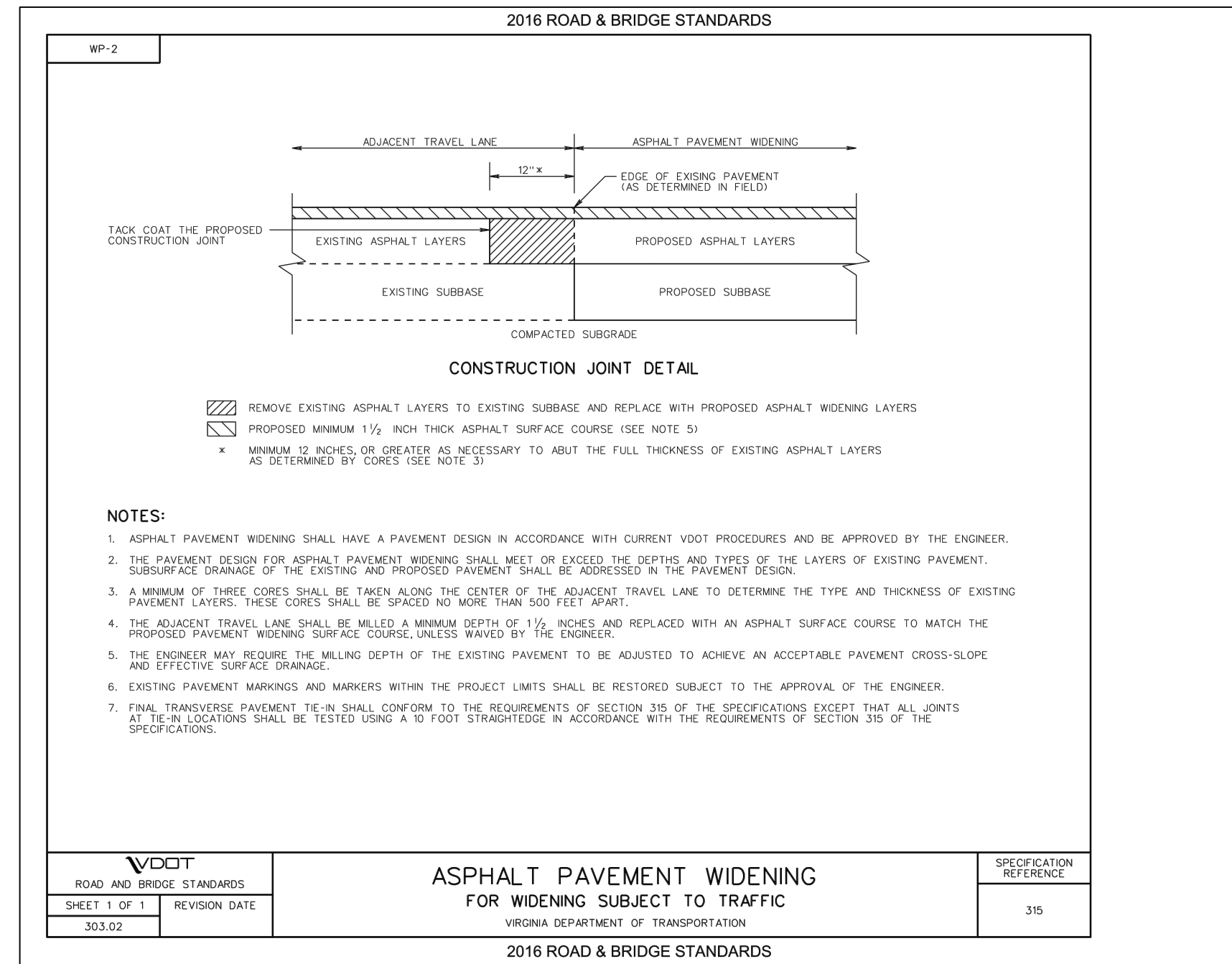
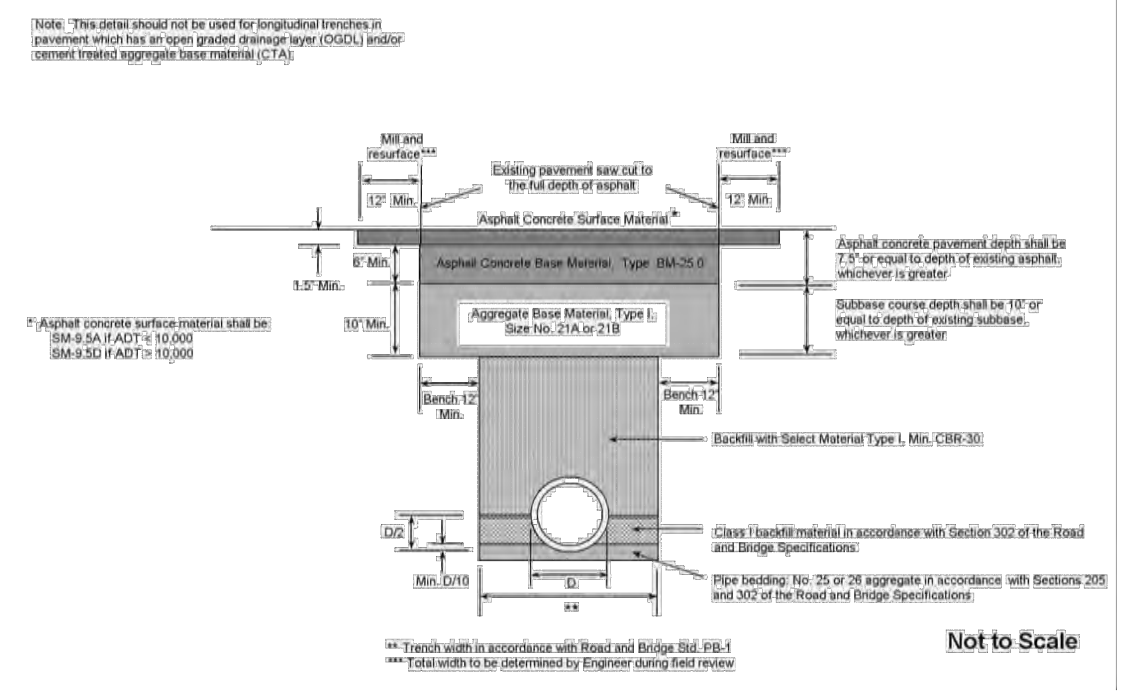


NOTE: Pavement restoration is a minimum 10' each side of the trench width for roads up to 5,000 ADT
NOTE: Pavement restoration is a minimum 25' each side of the trench width for roads above 5,000 ADT

ADT (Average Daily Traffic)

Virginia Department of Transportation NOVA District Materials Section

Detail: Pipe Bedding, Backfill and Asphalt Concrete Pavement Reinstatement



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201

APPROVALS DATE
QUALITY CONTROL ENGINEER
CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF
TRANSPORTATION DIRECTOR
PROJECT MANAGER

REVISIONS DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT R014 N. RANDOLPH ST. TO N. PERSHING DR. WATERMAIN NOTES & DETAILS - 1

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: AUGUST 4 2020
SCALE: AS SHOWN

POLYETHYLENE ENCASEMENT

INSTALLATION INSTRUCTIONS:

TAPING OVER POLYETHYLENE ENCASEMENT ALLOWS DIRECT TAPS TO BE MADE THROUGH THE TAPE AND POLYETHYLENE ENCASEMENT. ELIMINATES POTENTIAL REPAIRS TO EXPOSED AREA.

TIE STRAPS ALLOW EASY, QUICK, SECURE TIE DOWN OF POLYETHYLENE ENCASEMENT BEHIND THE BELL CONTOUR AND ON OVERLAPS AGAINST THE PIPE SURFACE.

FIGURE 1. REMOVE ALL LUMPS OF CLAY, MUD, CINDERS, ETC. WHICH MAY HAVE ACCUMULATED ON THE SURFACE OF THE PIPE. A POLYETHYLENE TUBE SHOULD BE CUT SO THAT IT IS APPROXIMATELY TWO FEET LONGER THAN THE PIPE SECTION. SLIP THE TUBE ONTO THE PIPE. ALLOW APPROXIMATELY ONE FOOT OF THE TUBE TO OVERHANG EACH END OF THE PIPE.

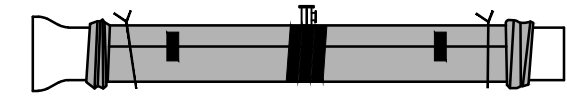


FIGURE 2. PUSH BACK THE OVERHANGING TUBE ENDS UNTIL THEY CLEAR THE PIPE ENDS.

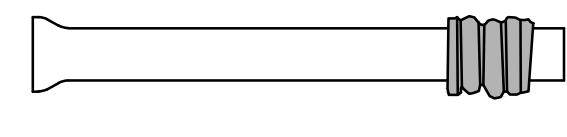


FIGURE 3. TAKE UP THE SLACK IN THE TUBE TO MAKE A SNUG BUT NOT TIGHT FIT. FOLD EXCESS BACK OVER THE TOP OF THE PIPE.

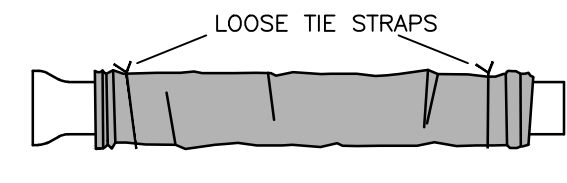


FIGURE 4. SECURE THE FOLD WITH POLYETHYLENE COMPATIBLE ADHESIVE TAPE AT SEVERAL LOCATIONS ALONG THE PIPE BARREL.

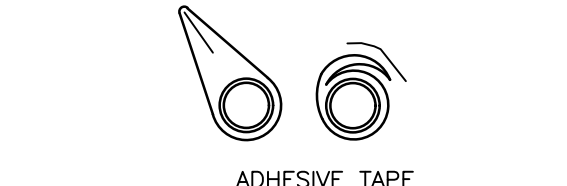


FIGURE 5. DIG A SHALLOW BELL-HOLE IN THE TRENCH BOTTOM AT THE JOINT LOCATION.

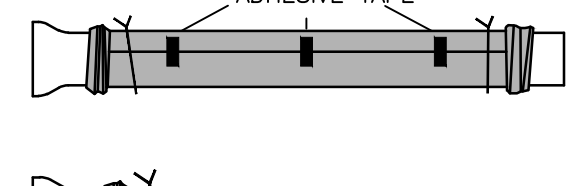


FIGURE 6. PLACE THE PIPE INTO THE TRENCH.

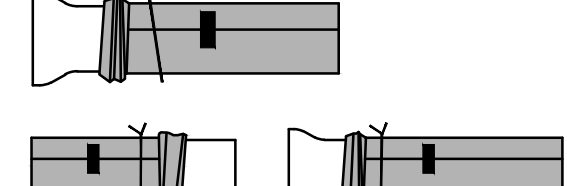


FIGURE 7. ASSEMBLE THE JOINT.

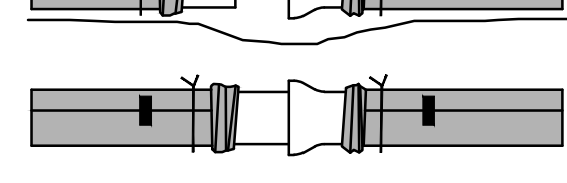


FIGURE 8. PULL THE POLYETHYLENE TUBE END OF THE PREVIOUSLY INSTALLED PIPE OVER THE NEW PIPE AND SECURE WITH THE TIE STRAP FROM THE PRECEDING PIPE BELL.

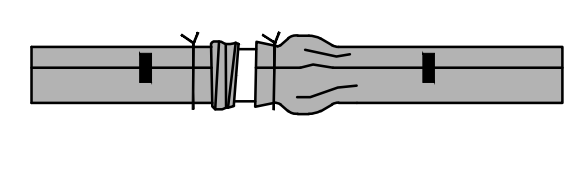


FIGURE 9. OVERLAP THE SECURED TUBE END OF THE NEW PIPE SECTION. SECURE THE NEW TUBE END IN PLACE WITH THE SPIGOT END TIE STRAP.

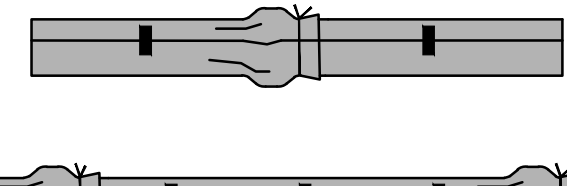


FIGURE 10. REPAIR ALL RIPS, TEARS, OR OTHER TUBE DAMAGE WITH SUITABLE ADHESIVE TAPE. EXPERIENCE HAS SHOWN THAT VERY SMALL PIN POINT SIZED PUNCTURES NEED NOT BE REPAIRED.

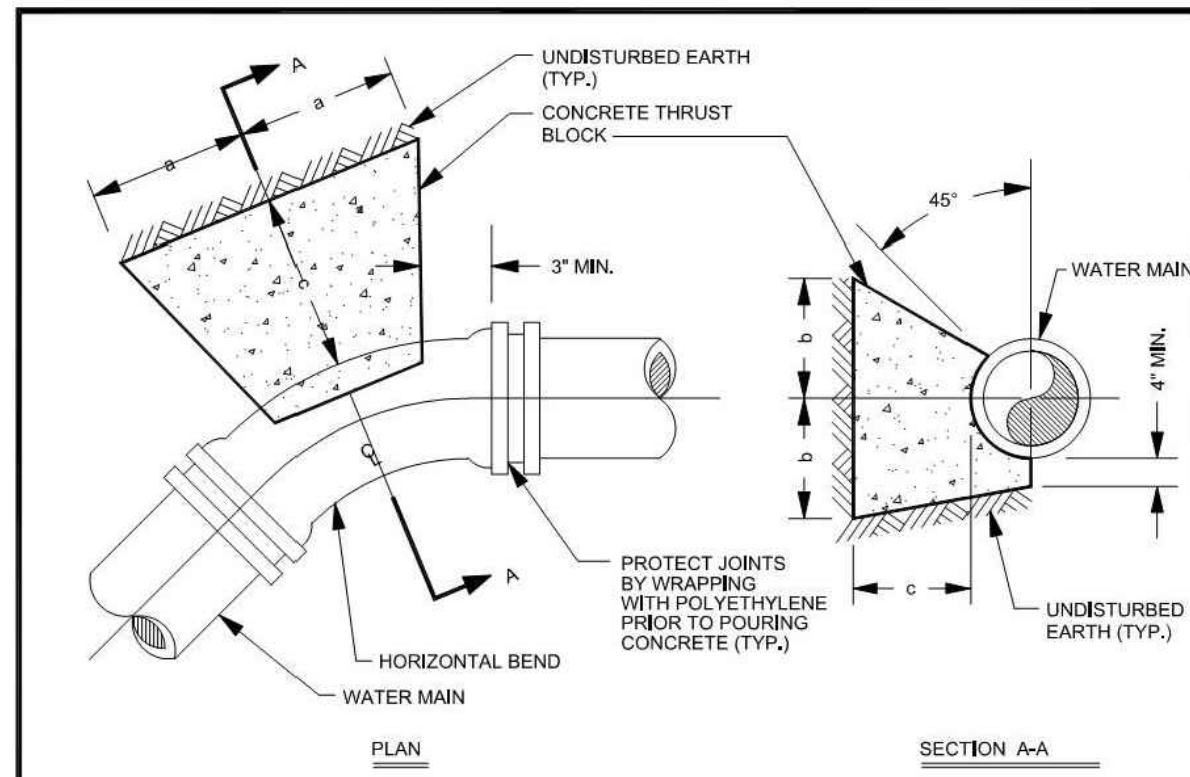
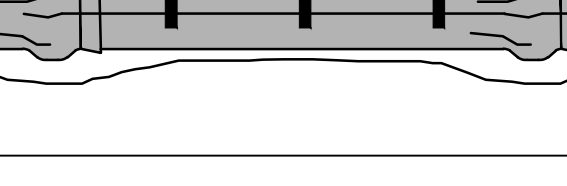


Table with columns for Pipe Dia., Horizontal Bend (11 1/4", 22 1/2", 45", 90"), and Min. C. Dimensions a, b, c.

- NOTES: 1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF... 2. BLOCKING SHOWN IS FOR A MAXIMUM STATIC PRESSURE OF 120 PSI PLUS WATER HAMMER ALLOWANCE OF 120 PSI... 3. FORM THE NON-BEARING SIDES OF THRUST BLOCKS BY USING PROPER FORMWORK... 4. SPECIAL BLOCKING DESIGN SHALL BE REQUIRED FOR CONDITIONS AND SIZES OTHER THAN THOSE INDICATED ON THIS SHEET.

CONCRETE THRUST BLOCKS FOR HORIZONTAL BENDS

Project information for Arlington County, Virginia, Department of Environmental Services, Drawing No. W-2.0.

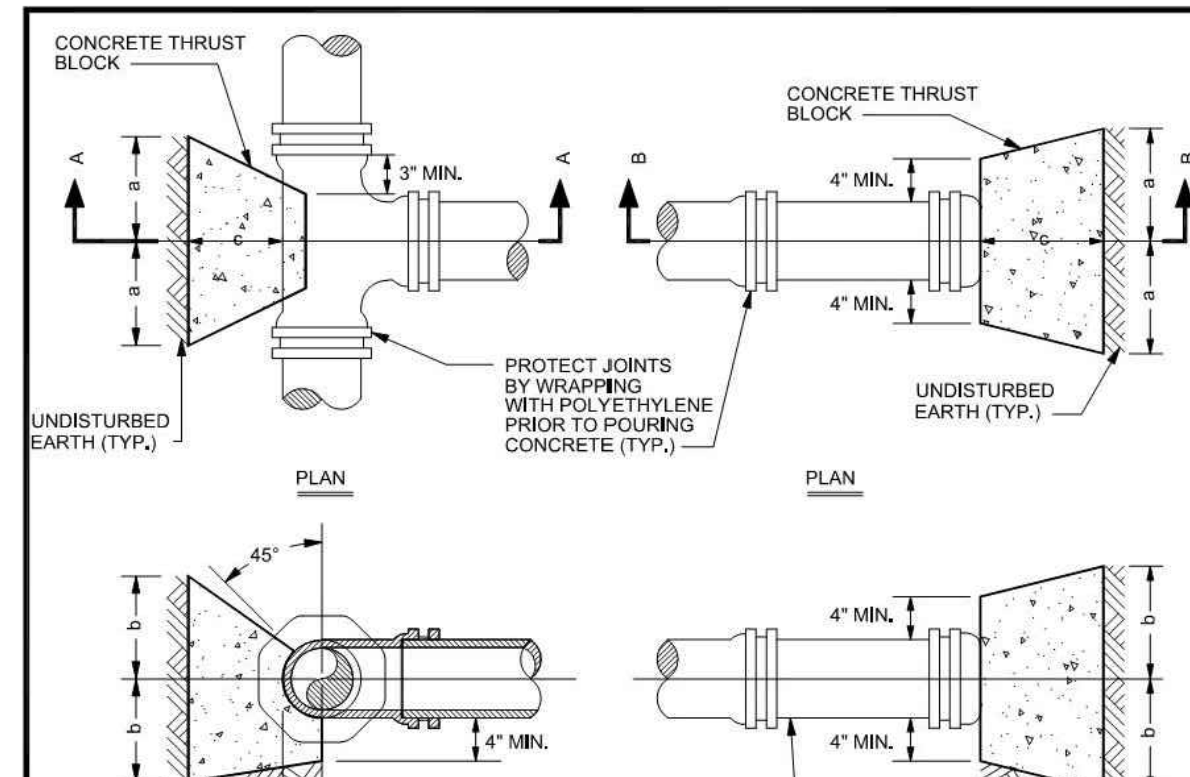
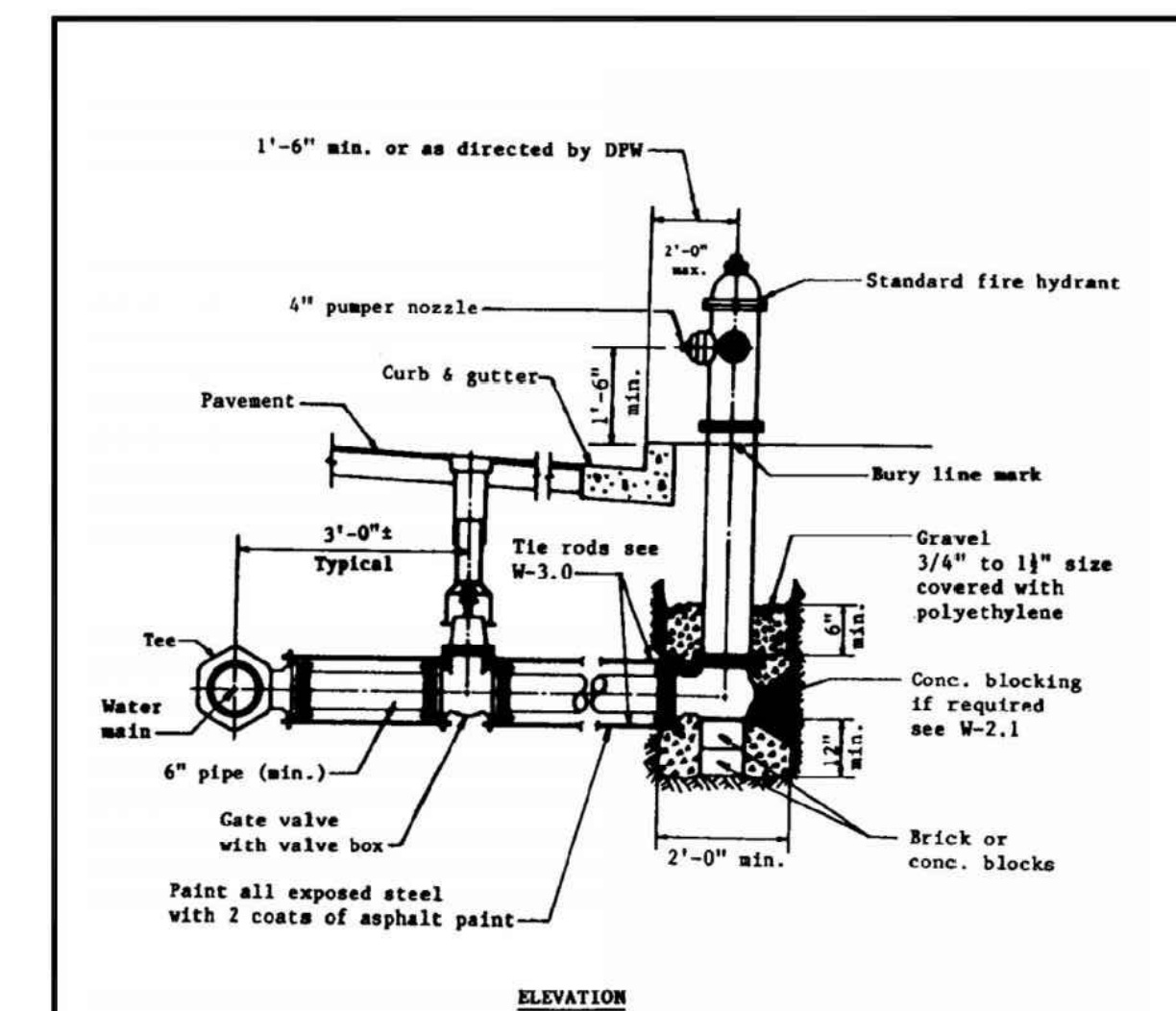


Table with columns for Tee/Cap, Pipe Diameter, and dimensions a, b, c.

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CONCRETE THRUST BLOCKS FOR TEES AND CAPS

Project information for Arlington County, Virginia, Department of Environmental Services, Drawing No. W-2.1.



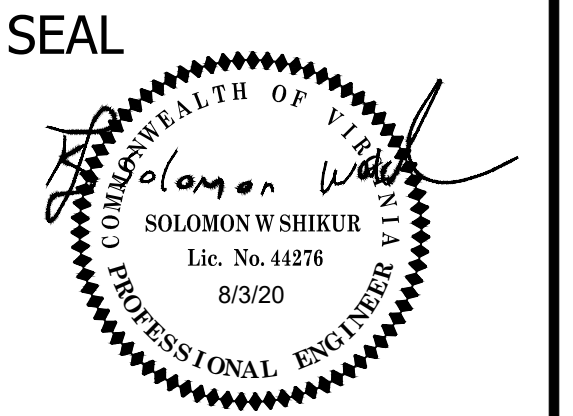
- NOTES: 1. All valves and fire hydrants shall be strapped to main unless directed otherwise. 2. Provide vertical offsets or bends as required to set hydrants at proper grade. 3. Maximum bury depth of fire hydrant is 6' unless approved otherwise.

FIRE HYDRANT SETTING

Project information for Arlington County, Virginia, Department of Environmental Services, Drawing No. W-7.0.

DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606

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TRANSPORTATION DIRECTOR

PROJECT MANAGER

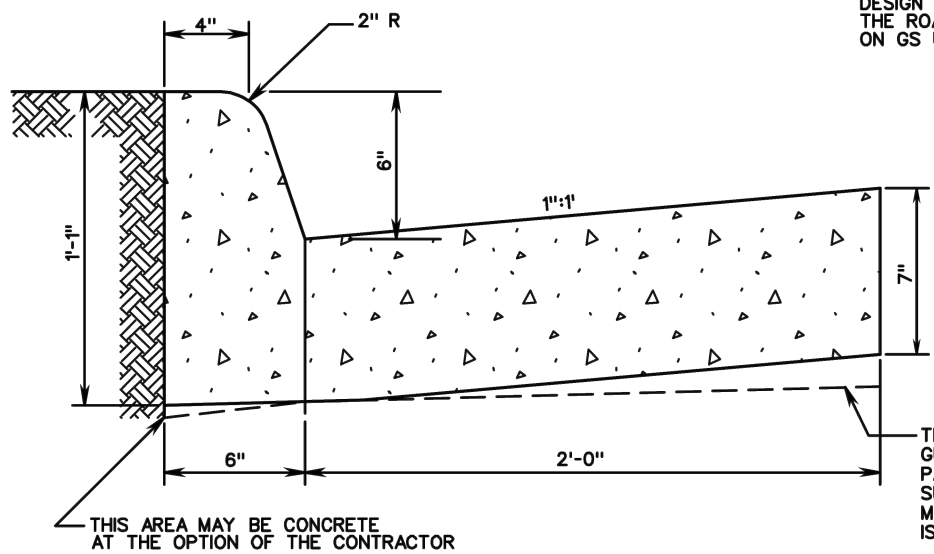
REVISIONS DATE

2016 ROAD & BRIDGE STANDARDS

CG-6

NOTES:

- 1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE. 2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST. 3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 200 FEET OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS RADIAL COMBINATION CURB & GUTTER. 4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB & GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT. 5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON CG URBAN STANDARDS.



THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES PROVIDED A MINIMUM DEPTH OF 7" IS MAINTAINED.

THIS AREA MAY BE CONCRETE AT THE OPTION OF THE CONTRACTOR

SPECIFICATION REFERENCE 105 502

COMBINATION 6" CURB AND GUTTER

2016 ROAD & BRIDGE STANDARDS

VDOT ROAD AND BRIDGE STANDARDS REVISION DATE SHEET 1 OF 1 2010.03

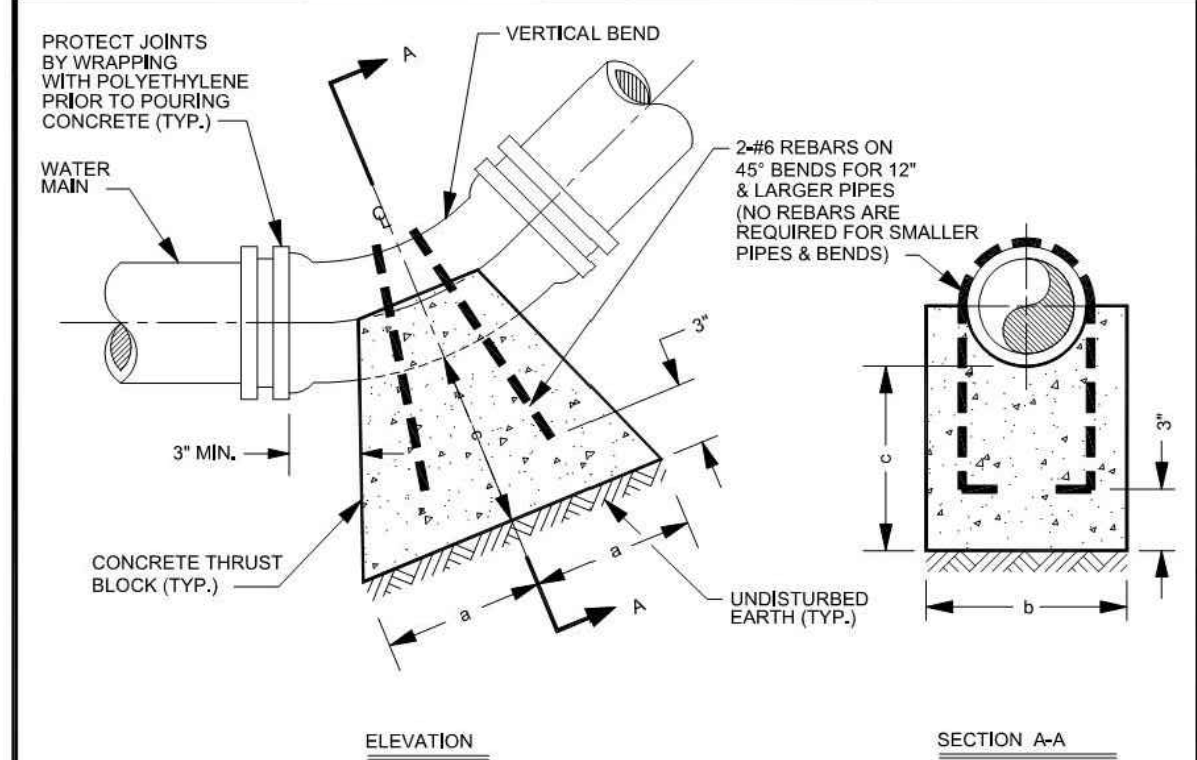


Table with columns for Pipe Dia., Lower Vertical Bend (11 1/4", 22 1/2", 45"), and dimensions a, b, c.

- NOTES: 1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF... 2. BLOCKING SHOWN IS FOR A MAXIMUM STATIC PRESSURE OF 120 PSI PLUS WATER HAMMER ALLOWANCE OF 120 PSI... 3. FORM THE NON-BEARING SIDES OF THRUST BLOCKS BY USING PROPER FORMWORK... 4. PAINT ALL EXPOSED STEEL WITH TWO COATS OF ASPHALT PAINT.

CONCRETE THRUST BLOCKS FOR LOWER VERTICAL BENDS

Project information for Arlington County, Virginia, Department of Environmental Services, Drawing No. W-2.2.

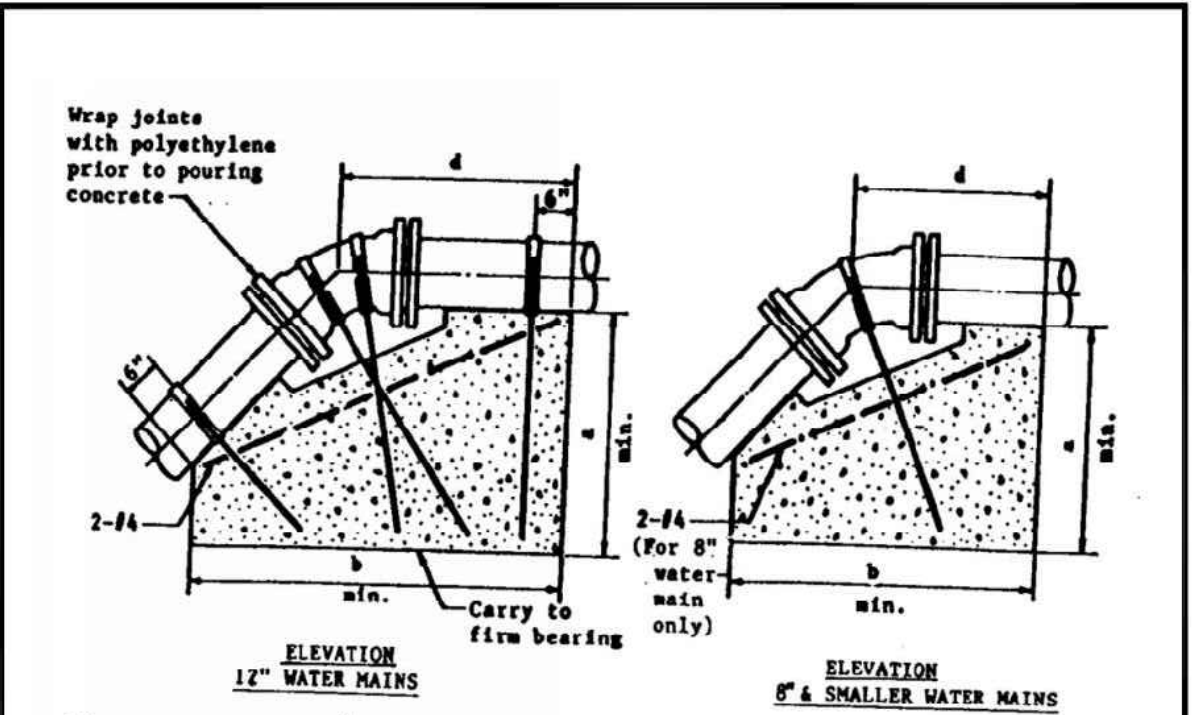


Table with columns for Bend (11 1/4", 22 1/2", 45") and dimensions a, b, c.

- NOTES: 1. Blocking shown is for maximum static pressure of 120 psi plus water hammer allowance of 120 psi. Special blocking shall be designed for sizes and conditions other than those indicated. 2. Paint all exposed steel with 2 coats of asphalt paint. 3. Form sides of thrust blocks.

CONCRETE THRUST BLOCKS UPPER VERTICAL BENDS

Project information for Arlington County, Virginia, Department of Environmental Services, Drawing No. W-2.3.

N. GLEBE ROAD WATERMAIN REPLACEMENT R014 N. RANDOLPH ST. TO N. PERSHING DR. WATERMAIN NOTES & DETAILS - 2

DESIGNED: JK/LD DRAWN: JK/LD CHECKED: SS

PLOTTED: AUGUST 4 2020

SCALE:

AS SHOWN

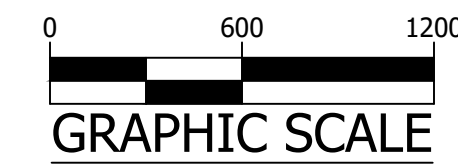
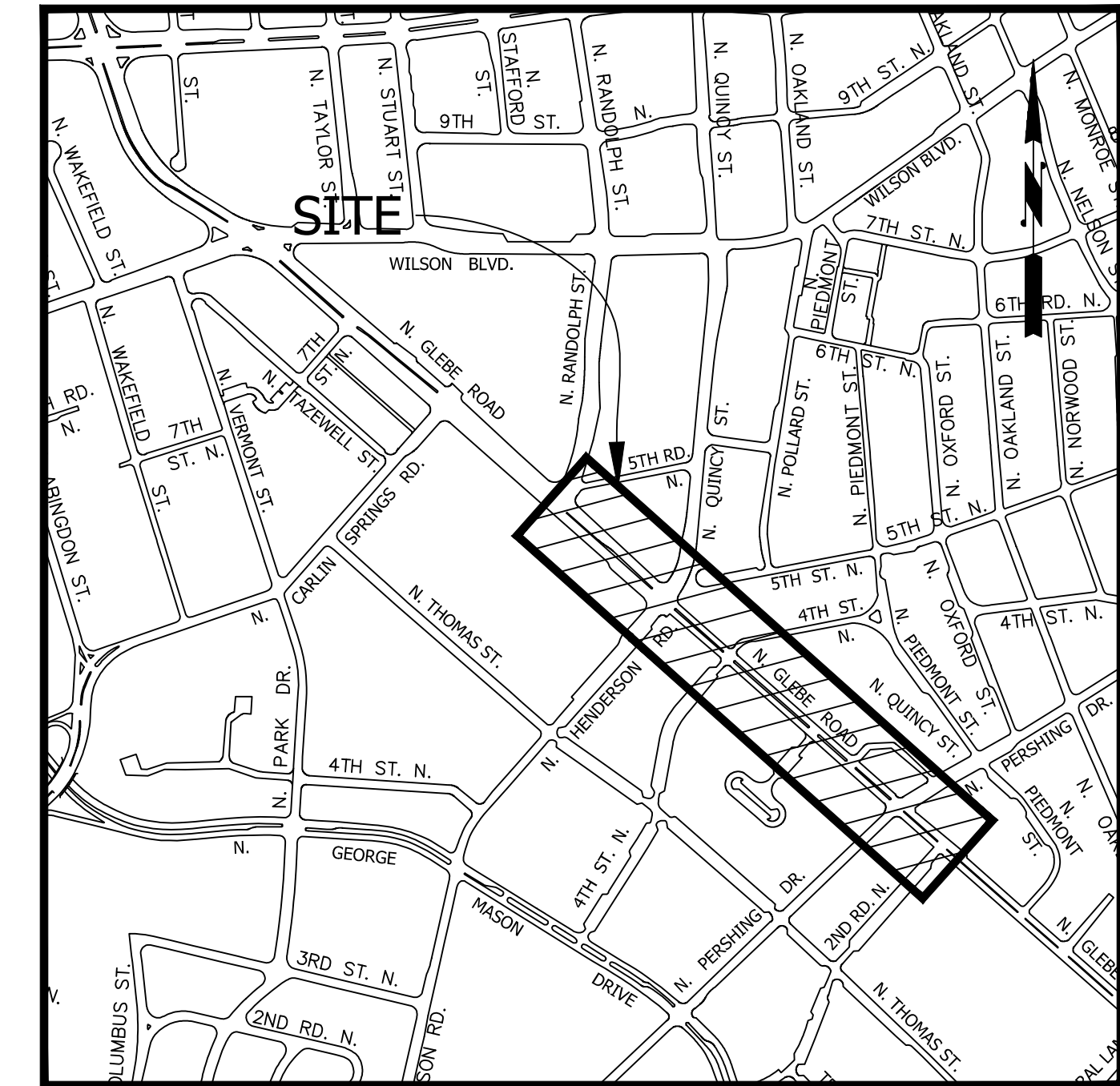


ENGINEER DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606 WWW.ARLINGTONVA.US

OWNER DES/OD/WSS

CONTRACTOR TO BE DETERMINED

LOCATION MAP



CONSTRUCTION DRAWINGS FOR:

N. GLEBE ROAD WATERMAIN REPLACEMENT FROM N. RANDOLPH STREET TO N. PERSHING DRIVE

PROJECT NUMBER: R014

GENERAL NOTES:

GENERAL CONSTRUCTION NOTES

- 1. ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS. THE LATEST EDITIONS OF EACH RELEVANT MANUAL SHALL BE USED.
2. ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.
3. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
4. THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 FOR MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES (I.E. WATER, SEWER, GAS, TELEPHONE, ELECTRIC, AND CABLE TV) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO IDENTIFY AND PROTECT ALL OTHER UTILITY LINES FOUND IN THE WORK SITE AREA BELONGING TO OTHER OWNERS THAT ARE NOT MEMBERS OF "MISS UTILITY". PRIVATE WATER, SEWER AND GAS LATERALS WILL NOT BE MARKED BY MISS UTILITY OR THE COUNTY. THE CONTRACTOR SHALL LOCATE AND PROTECT THESE SERVICES DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT THE WORK AND SHALL RETAIN A PROFESSIONAL LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA TO PROVIDE ALL NECESSARY CONSTRUCTION LAYOUTS AND ESTABLISH ALL CONTROL LINES, GRADES, AND ELEVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A COPY OF ALL CUT SHEETS FOR REVIEW, PER THE SPECIFICATIONS. THE COST OF ALL NECESSARY SURVEYING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND, UNLESS OTHERWISE SPECIFIED, THE COST SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
6. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED TO BE APPROXIMATE. WHEN CONSTRUCTION ACTIVITY REACHES IN PROXIMITY TO EXISTING UTILITIES, THE TRENCH(ES) SHALL BE OPENED A SUFFICIENT DISTANCE AHEAD OF THE WORK OR TEST PITS SHALL BE MADE TO VERIFY THE EXACT LOCATION AND INVERTS OF THE UTILITY TO ALLOW FOR POSSIBLE CHANGES IN THE LINE OR GRADE AS DIRECTED BY OFFICER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES AND THE RELATED STRUCTURES. ALL EXISTING UTILITY SYSTEMS SHALL BE PROTECTED TO PREVENT DAMAGE DURING THE CONTRACTOR'S OPERATIONS. ANY SYSTEM DAMAGED SHALL BE PROMPTLY REPAIRED AT NO COST TO THE OWNER.
7. EXISTING MANHOLE FRAMES, COVERS, VALVE BOXES, AND OTHER APPURTENANCES SHALL BE ADJUSTED TO THE FINAL GRADE OR REPLACED, AS NECESSARY. UNLESS OTHERWISE SPECIFIED, THE COST FOR THIS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
8. THE CONTRACTOR SHALL PROVIDE ADA COMPLIANT ACCESS THROUGH OR AROUND THE SITE AT ALL TIMES AND SHALL ENSURE THE SAFETY OF ALL THOSE PASSING THROUGH OR ADJACENT TO THE SITE.
9. ALL SIDEWALK AND CURB AND GUTTER DEMOLITION SHALL BEGIN AND END AT THE CONSTRUCTION JOINT NEAREST TO THE DEPICTED DEMOLITION EXTENTS WITH A NEAT SAWCUT LINE TO FULL DEPTH OF PAVEMENT SECTION.

STORMWATER AND ENVIRONMENTAL PROTECTION

- 10. THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, TO INCLUDE STORAGE OF EQUIPMENT AND OR MATERIALS, ACCESS TO THE WORK, FORMWORK, ETC. TO WITHIN THE DESIGNATED LIMITS OF DISTURBANCE (LOD).

TREE PROTECTION

- 11. TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF ARLINGTON PARKS & RECREATION STANDARD.

TRAFFIC CONTROL

- 12. CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.
13. THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PREMARKING MAY CONSIST OF TYPE D TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW 3 WORKING DAYS FOR THE INSPECTION AND APPROVAL OF THE PREMARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.
14. THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS. PRIOR TO A REQUEST FOR THE REMOVAL OF ACCESS TO ANY ADA PARKING SPACE THE CONTRACTOR MUST HAVE MADE PROVISION FOR ALTERNATIVE ADA PARKING AS INDICATED ON THE APPROVED PLAN OR AS DIRECTED BY THE PROJECT OFFICER.
15. WHEN THE APPROVED PLAN CALLS FOR THE REMOVAL OF ANY PARKING METER THE CONTRACTOR MUST MAKE A REQUEST TO THE PROJECT OFFICER AT LEAST ONE WEEK IN ADVANCE OF THE DESIRED REMOVAL. THE PROJECT OFFICER WILL THEN COORDINATE THE PARKING METER REMOVAL WITH TRAFFIC ENGINEERING AND OPERATIONS.
16. THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESSIBILITY THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS. THE CONTRACTOR SHALL NOT CLOSE, RELOCATE, OR OTHERWISE MODIFY A BUS STOP WITHOUT PRIOR REQUEST OF THE PROJECT OFFICER. ANY RELOCATION OR CLOSURE OF A BUS STOP SHALL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR - 703-228-3049.
17. WHEN CONDITIONS WARRANT DUE TO TRAFFIC VOLUMES, PATTERNS, OR SPECIAL EVENTS, THE COUNTY MAY SUSPEND OR OTHERWISE DIRECT THE CONTRACTOR'S ACTIVITIES TO PROTECT THE PUBLIC AND OR THE COUNTY'S TRANSPORTATION NETWORK.

WATER DISTRIBUTION, STORM AND SANITARY SEWER SYSTEMS

- 18. UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED OPERATION.
19. IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-6555 AND THE PROJECT OFFICER.
20. THE CONTRACTOR SHALL COORDINATE ALL UTILITY SHUTOFFS, DISCONNECTS, AND/OR ABANDONMENT WITH UTILITY OWNER AND PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED INTERRUPTION.

FIRE DEPARTMENT NOTES:

- 21. ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBTURSED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
22. ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
23. IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.

Sheet List

Table with 2 columns: Sheet Number, Sheet Title. Lists sheets C000.1 through C122.2 including COVER, LEGEND, EXISTING CONDITIONS PLANS, EROSION & SEDIMENT CONTROL PLANS, GEOMETRIC CONTROL PLANS, WATERMAIN PLANS AND PROFILES, PAVING PLANS, MAINTENANCE OF TRAFFIC PLANS, and MOT NOTES & DETAILS.

LDA

SWM#

ADT

27,000 - N. GLEBE ROAD (FROM FAIRFAX DR. TO ARLINGTON BLVD.) - 2017 - VDOT _ DAILY TRAFFIC VOLUME ESTIMATES
8,400 - N. RANDOLPH ROAD (WILSON BLVD TO GLEBE RD) - 2019 - VDOT _ ANNUAL AVERAGE DAILY TRAFFIC
12,000 - N. QUINCY STREET (GLEBE RD TO WILSON BLVD) - 2019 - VDOT _ ANNUAL AVERAGE DAILY TRAFFIC
8,000 - N. HENDERSON ROAD (GLEBE RD TO G. MASON DR) - 2019 - VDOT _ ANNUAL AVERAGE DAILY TRAFFIC
4TH STREET N. - NO TRAFFIC INFORMATION
3RD STREET N. - NO TRAFFIC INFORMATION
N. QUEBEC STREET - NO TRAFFIC INFORMATION
8,300 - N. PERSHING DRIVE (GLEBE RD TO WASHINGTON BLVD) - 2019 - VDOT _ ANNUAL AVERAGE DAILY TRAFFIC
6,300 - N. PERSHING DRIVE (G. MASON DR TO GLEBE RD) - 2019 - VDOT _ ANNUAL AVERAGE DAILY TRAFFIC

STREET CLASSIFICATION

N. GLEBE ROAD - PRINCIPAL ARTERIAL
N. RANDOLPH RD - MINOR ARTERIAL
N. QUINCY STREET - MINOR ARTERIAL
N. HENDERSON ROAD - MINOR ARTERIAL
N. PERSHING DRIVE - MINOR ARTERIAL

POSTED SPEED

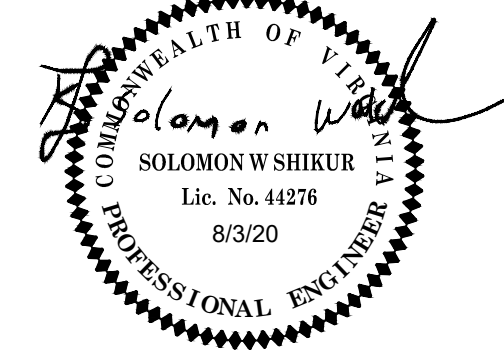
N. GLEBE ROAD - 30 MPH
N. RANDOLPH ROAD - 25 MPH
N. QUINCY STREET - 25 MPH
N. HENDERSON ROAD - 25 MPH
4TH STREET N. / 3RD STREET N. / N. QUEBEC STREET - 25 MPH
N. PERSHING DRIVE - 25 MPH



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606

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SEAL



APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT R014

N. RANDOLPH ST. TO N. PERSHING DR.

COVER

DESIGNED: JK/LD DRAWN: JK/LD CHECKED: SS

PLOTTED: AUGUST 4 2020

SCALE:

(AS SHOWN)

C000.1

LINETYPE LEGEND

FEATURE	EXISTING	PROPOSED
BUILDING	— — — — —	— — — — —
CENTERLINE / BASELINE	— — — — —	— — — — —
COMMUNICATIONS CABLE	— COM — COM —	— COM — COM —
CONTOURS MAJOR; MINOR	--- 250 --- 250 ---	— — — — —
CRITICAL ROOT ZONE	— CRZ — CRZ —	— CRZ — CRZ —
EASEMENT	— — — — —	— — — — —
ELECTRIC (UNDERGROUND)	— UGE — UGE —	— UGE — UGE —
FENCE (MATERIAL NOTED)	-X-X-X-X-X-	-X-X-X-X-X-
FIBER OPTIC	— FO — FO —	— FO — FO —
GAS LINE	— GAS — GAS —	— GAS — GAS —
X" GAS LINE (SIZE INCLUDED IF AVAILABLE)	— — — — —	— — — — —
GUARDRAIL	. o . o . o . o . o . o	. o . o . o . o . o . o
HARDSCAPE FEATURE (MATERIAL NOTED)	— — — — —	— — — — —
LIMITS OF DISTURBANCE	— LOD — LOD —	— LOD — LOD —
LIMITS OF WORK	— LOW — LOW —	— LOW — LOW —
OVERHEAD WIRES	— —	— —
PAVEMENT MINI SKIP LINE	— — — — —	— — — — —
PAVEMENT SKIP LINE	— — — — —	— — — — —
PROPERTY LINE	— — — — —	— — — — —
RIGHT-OF-WAY LINE	— — — — —	— — — — —
ROOT PRUNING	— RP — RP —	— RP — RP —
SANITARY SEWER	— SAN — SAN —	— SAN — SAN —
X" SANITARY SEWER (SIZE INCLUDED IF AVAILABLE)	— — — — —	— — — — —
SILT FENCE	-X-X-X-X-X-	-X-X-X-X-X-
STORM (SIZE NOTED)	— STM — STM —	— — — — —
STREAM	—	—
STREET LIGHT CONDUIT	— SL — SL —	— SL — SL —
TELEPHONE (UNDERGROUND)	— UGT — UGT —	— UGT — UGT —
TREE LINE	— — — — —	— — — — —
TREE PROTECTION FENCE	— TP — TP —	— TP — TP —
WALL	— — — — —	— — — — —
WATER	— 6" w — — — —	— — — — —
X" WATER (SIZE INCLUDED IF AVAILABLE)	— — — — —	— — — — —

SYMBOL LEGEND

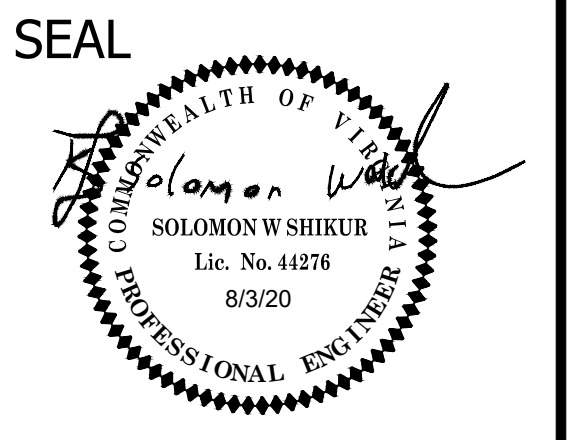
EXISTING	PROPOSED
EX CABLE PEDESTAL	PROP CABLE PEDESTAL
EX ELECTRIC BOX	PROP ELECTRIC BOX
EX FIRE HYDRANT	PROP FIRE HYDRANT
EX GAS VALVE	PROP GAS VALVE
EX GROUND LIGHT	PROP GROUND LIGHT
EX GUY WIRES	PROP GUY WIRES
EX IRON PIPE OR PIN	PROP IRON PIPE OR PIN
EX LIGHT POLE	PROP LIGHT POLE
EX MAILBOX	PROP MAILBOX
EX MONUMENT	PROP MONUMENT
EX PARKING METER	PROP PARKING METER
EX PAY STATION	PROP PAY STATION
EX SANITARY MANHOLE	PROP SANITARY MANHOLE
EX STORM BASIN	PROP STORM CATCH BASIN (TO SCALE)
EX STORM MANHOLE	PROP STORM MANHOLE
EX TELEPHONE PEDESTAL	PROP TELEPHONE PEDESTAL
EX TRAFFIC CONTROL BOX	PROP TRAFFIC CONTROL BOX
EX TRAFFIC SIGN	PROP TRAFFIC SIGN
EX TRASH CAN	PROP TRASH CAN
EX TRAVERSE	PROP TRAVERSE
EX TREES, WOODED AREA	PROPOSED TREE REMOVAL
EX UTILITY MANHOLE TYPE INDICATED ELECTRIC, TELE, ETC	PROP UTILITY MANHOLE
EX UTILITY POLE	PROP UTILITY POLE
EX WATER MANHOLE	PROP WATER MANHOLE
EX WATER METER	PROP WATER METER
EX WATER VALVE	PROP WATER VALVE
EX YARD INLET	PROP YARD INLET (TO SCALE)
EX BENCHMARK	PROP BENCHMARK
	CONSTRUCTION NOTES (LEADER TO AREA AFFECTED)
	CURVE NUMBER (SEE CURVE TABLE)
	LINE NUMBER (SEE LINE TABLE)
	TEST HOLE
	NORTH ARROW

LABEL LEGEND

EXISTING	PROPOSED
EXISTING SANITARY STRUCTURE NUMBER	PROPOSED SANITARY SEWER STRUCTURE NUMBER
EXISTING STORM SEWER STRUCTURE NUMBER	PROPOSED STORM SEWER STRUCTURE NUMBER

HATCH LEGEND

PROP MILL & OVERLAY	[Hatch Pattern]
PROP FULL DEPTH ASPHALT	[Hatch Pattern]
PROP CONCRETE	[Hatch Pattern]
REPLACE & MATCH EXISTING DRIVEWAY OR LEADWALK. SEE CONSTRUCTION NOTES	[Hatch Pattern]
DEMOLITION AREA	[Hatch Pattern]



APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	
REVISIONS	DATE

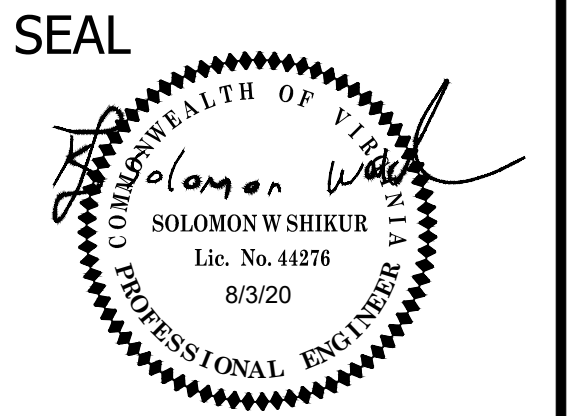
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 LEGEND

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS
 PLOTTED: AUGUST 4 2020

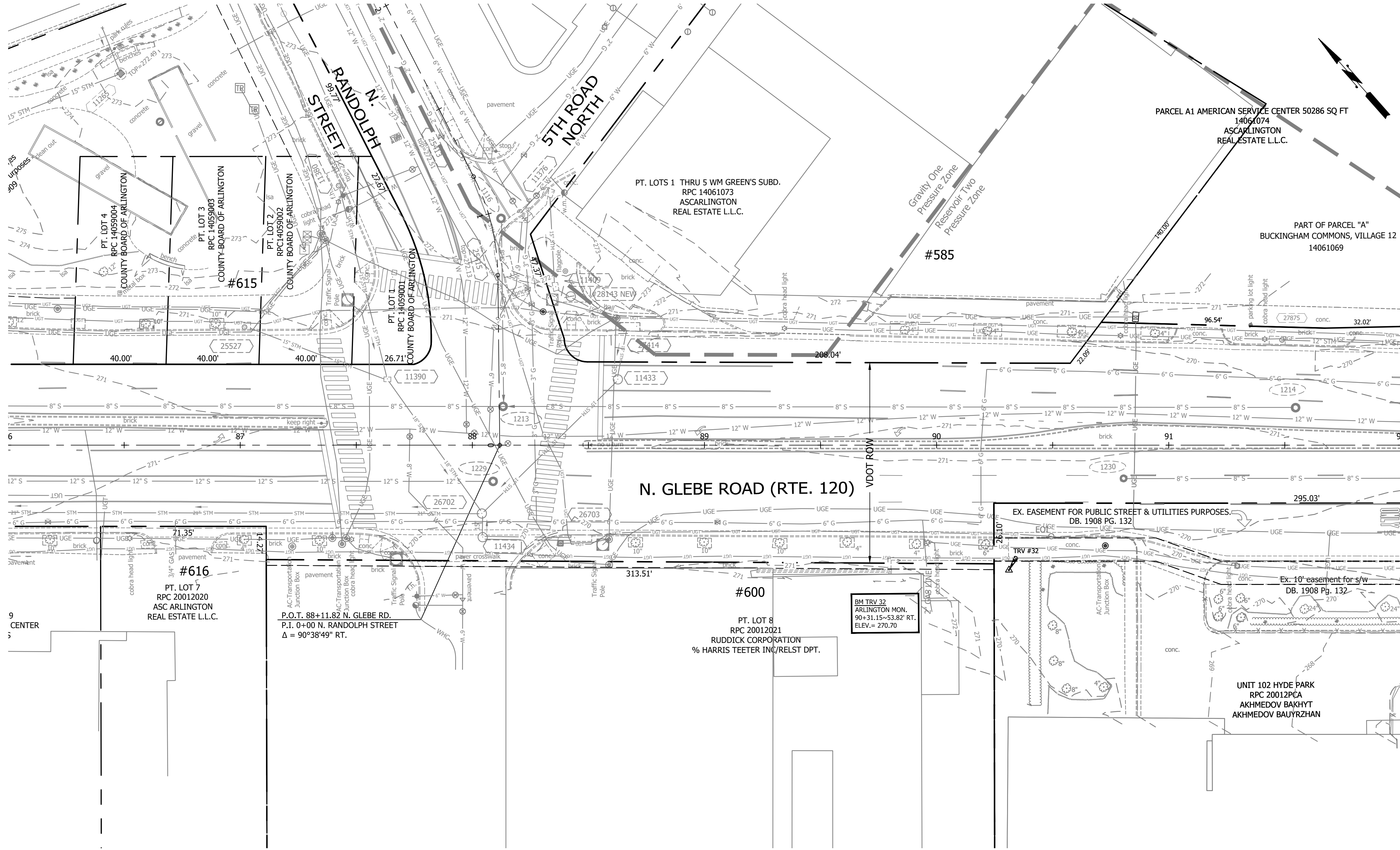
SCALE:
 N/A

DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
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 ARLINGTON, VA 22201
 PHONE: 703.228.3629
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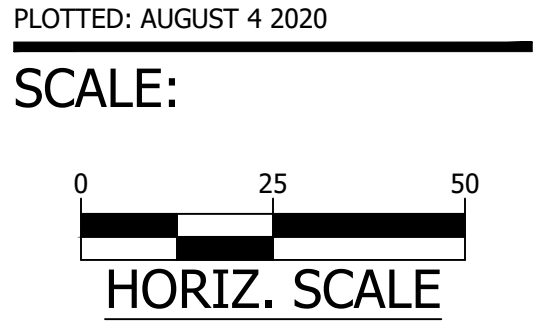
APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	
REVISIONS	DATE

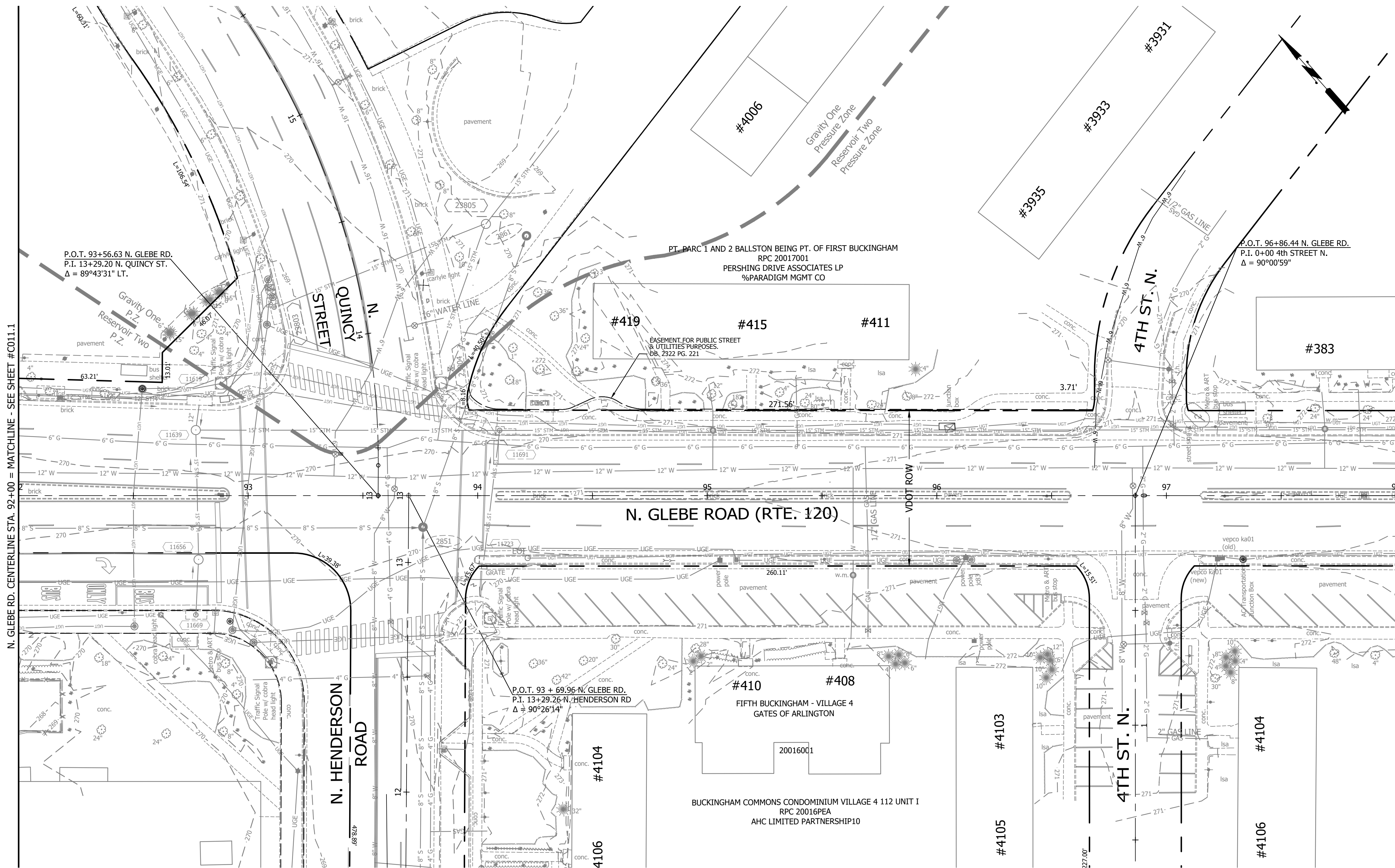


N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
EXISTING CONDITIONS PLAN - 1

GENERAL SURVEY NOTES:

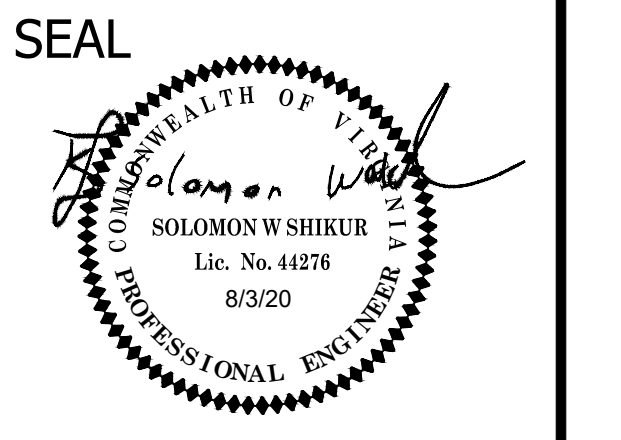
- THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM A COMBINATION OF ARLINGTON COUNTY G.I.S. INFORMATION AND AN ACTUAL GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 06/2014 TO 07/2014 WITH A SUPPLEMENTAL SURVEY OBTAINED FROM 07/2018 TO 09/2018; AND THIS PLAN, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
- HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.
- VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
- CONTOUR INTERVAL: 1'
- BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.





N. GLEBE RD. CENTERLINE STA. 92+00 = MATCHLINE - SEE SHEET #C011.1

N. GLEBE RD. CENTERLINE STA. 98+00 = MATCHLINE - SEE SHEET #C011.3



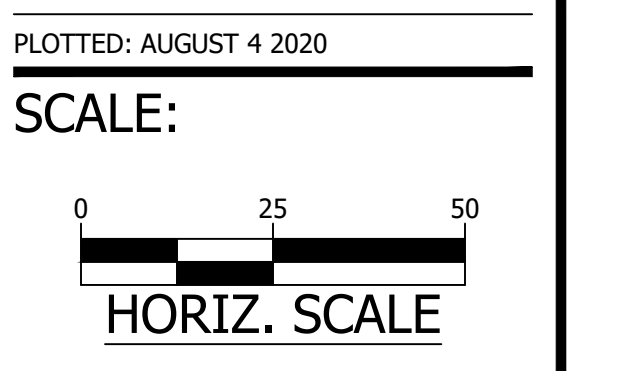
APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 EXISTING CONDITIONS PLAN - 2

GENERAL SURVEY NOTES:

- THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM A COMBINATION OF ARLINGTON COUNTY G.I.S. INFORMATION AND AN ACTUAL GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 06/2014 TO 07/2014 WITH A SUPPLEMENTAL SURVEY OBTAINED FROM 07/2018 TO 09/2018; AND THIS PLAN, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
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- CONTOUR INTERVAL: 1'
- BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.



STORM SEWER TABLE

#11376 TOP = 272.62 INV. IN = 268.17 15" RCP (11362) INV. OUT = 267.97 15" RCP (11409)	#11723 TOP = 270.32 INV. OUT = 266.61 15" RCP (11691)
#11380 TOP = 272.10 INV. OUT = 268.74 15" RCP (11390)	#11873 TOP = 271.10 INV. IN = NEEDS CLEANING (11905) INV. OUT = NEEDS CLEANING (12104)
#11390 TOP = 270.51 INV. IN = 266.56 15" RCP (25527) INV. IN = 266.61 15" RCP (11380) INV. OUT = 266.51 18" RCP (26702)	#11905 TOP = 270.99 INV. ???
#11409 TOP = 271.84 INV. IN = 267.89 15" RCP (25415) INV. IN = 267.94 15" RCP (11376) INV. OUT = 267.84 15" RCP (#28143 NEW)	#12104 TOP = 270.51 INV. IN = 262.57 18" RCP (11873) INV. IN = 263.65 15" RCP (12145) INV. OUT = 262.66 18" RCP (12227)
#11433 TOP = 270.19 INV. IN = 266.76 15" RCP (25414) INV. OUT = 266.41 15" RCP (26702)	#12145 TOP = 270.36 INV. OUT = 266.21 15" RCP (12104)
#11434 TOP = 269.83 INV. IN = 266.89 15" RCP (26703) INV. OUT = 266.67 15" RCP (26702)	#12227 TOP = 267.74 INV. IN = 262.01 18" RCP (12104) INV. OUT = 261.86 ??? (28062 NEW)
#11619 TOP = 269.92 INV. IN = 267.14 12" RCP (27875) INV. OUT = 267.04 12" RCP (11619)	#12230 TOP = 268.59 INV. IN = 263.57 15" RCP (#28482 NEW) INV. OUT = 262.88 15" RCP (12227)
#11639 TOP = 269.64 INV. IN = No access 12" RCP (11619) INV. IN = NO ACCESS 15" RCP (11656) INV. OUT = 266.15 15" RCP (11691)	#12419 TOP = 263.30 INV. IN = 259.78 15" RCP (12438) INV. INT = 258.93 24" RCP (NEW STR.)
#11656 TOP = 269.63 INV. IN = 266.89 12" RCP (11669) INV. OUT = 266.88 15" RCP (11639)	#12438 TOP = 263.98 INV. OUT = 259.46 15" RCP (12419)
#11691 TOP = 270.40 INV. IN = 265.37 15" RCP (11639) INV. IN = 266.38 15" RCP (11723) INV. OUT = 265.33 15" RCP (11873)	#23803 TOP = 269.25 INV. OUT = 266.55 15" RCP (23805)
#11669 TOP = 269.54 INV. OUT = 267.11 12" RCP (11656)	#23804 TOP = 269.97 INV. OUT = 266.82 15" RCP (23805)
#25413 TOP = 272.48 INV. OUT = 268.36 15" RCP (25415)	#23805 TOP = 269.82 INV. IN = 265.04 15" RCP (23803) INV. IN = 265.10 15" RCP (23804) INV. OUT = 264.99 15" RCP (23806)
#25414 TOP = 270.31 INV. IN = 267.36 15" RCP (#28143 NEW) INV. OUT = 266.53 15" RCP (11433)	#27402 TOP = 270.59 INV. IN = 263.03 24" RCP (#28189 NEW) INV. IN = 264.24 18" RCP (11130) INV. IN = 265.36 10" RCP (11206) INV. OUT = 262.19 36" RCP (11143)
#25415 TOP = 272.12 INV. IN = 267.04 15" RCP (25413) INV. OUT = 267.01 15" RCP (11409)	#27404 TOP = 271.35 INV. IN = 264.51 21" RCP (26702) INV. OUT = 264.35 24" RCP (27401)
#25527 TOP = 270.70 INV. OUT = 267.00 15" RCP (11390)	#28062 NEW TOP = 267.42 INV. IN = 261.80 18" RCP (12227) INV. OUT = 261.71 24" RCP (12419)
#26702 TOP = 270.15 INV. IN = 266.28 15" RCP (11434) INV. IN = 266.20 15" RCP (11433) INV. IN = 266.19 18" RCP (11390) INV. OUT = 266.05 21" RCP (27404)	#28189 NEW TOP = 270.79 INV. IN = CANT OPEN (27401) INV. OUT = CANT OPEN (27402)
#26703 TOP = 270.40 INV. OUT = 267.00 15" RCP (11434)	#28482 NEW TOP = 268.74 INV. OUT = 264.43 15" RCP (12230)
#28143 NEW TOP = 271.51 INV. IN = 267.66 15" RCP (11409) INV. OUT = 267.61 15" RCP (#25414)	

SANITARY SEWER TABLE

#1116 TOP = 272.26 C/L INV. = 261.44	#1228 TOP = 271.57 C/L INV. = 262.61	#2850 TOP = 268.34 C/L INV. = 264.00
#1211 TOP = 270.69 C/L INV. = 258.74	#1229 TOP = 270.48 C/L INV. = 264.48	#2851 TOP = 270.19 C/L INV. = COULD NOT OPEN
#1212 TOP = 271.60 C/L INV. = 259.12	#1230 TOP = 270.69 C/L INV. = COULD NOT OPEN	#2861 TOP = 269.44 C/L INV. = 261.59
#1213 TOP = 270.38 C/L INV. = 260.94	#1232 TOP = 270.98 C/L INV. = 260.18	#11344 TOP = 271.50 C/L INV. = 259.35
#1214 TOP = 270.13 C/L INV. = ALREADY HAVE	#1233 TOP = 270.96 C/L INV. = 257.88	#11345 TOP = 272.75 C/L INV. = 262.35
#1227 TOP = 270.66 C/L INV. = CANT OPEN	#1234 TOP = 267.73 C/L INV. 257.09	#13693 TOP = 270.67 C/L INV. = CANT OPEN

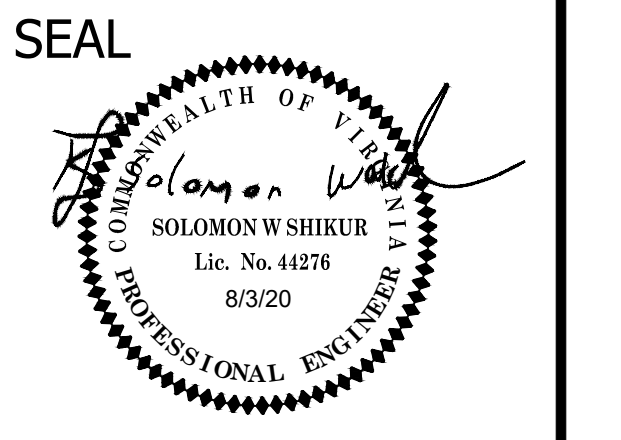
GENERAL SURVEY NOTES:

- THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM A COMBINATION OF ARLINGTON COUNTY G.I.S. INFORMATION AND AN ACTUAL GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 06/2014 TO 07/2014 WITH A SUPPLEMENTAL SURVEY OBTAINED FROM 07/2018 TO 09/2018; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
- HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.
- VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
- CONTOUR INTERVAL: 1'
- BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.



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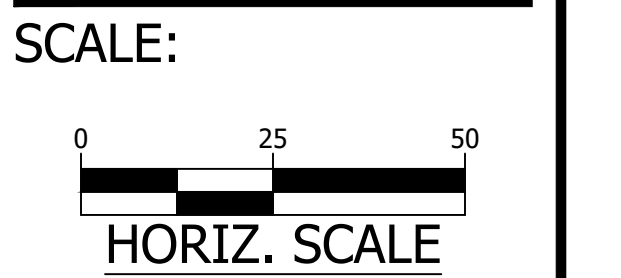
APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

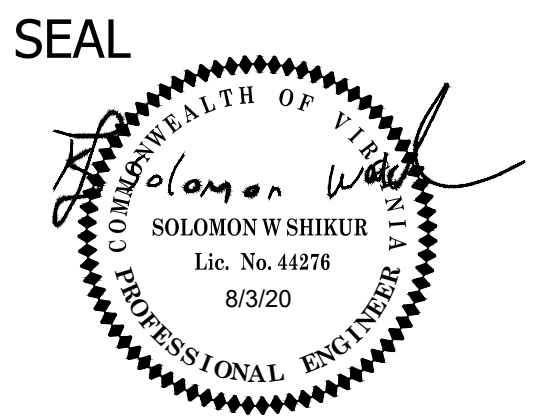
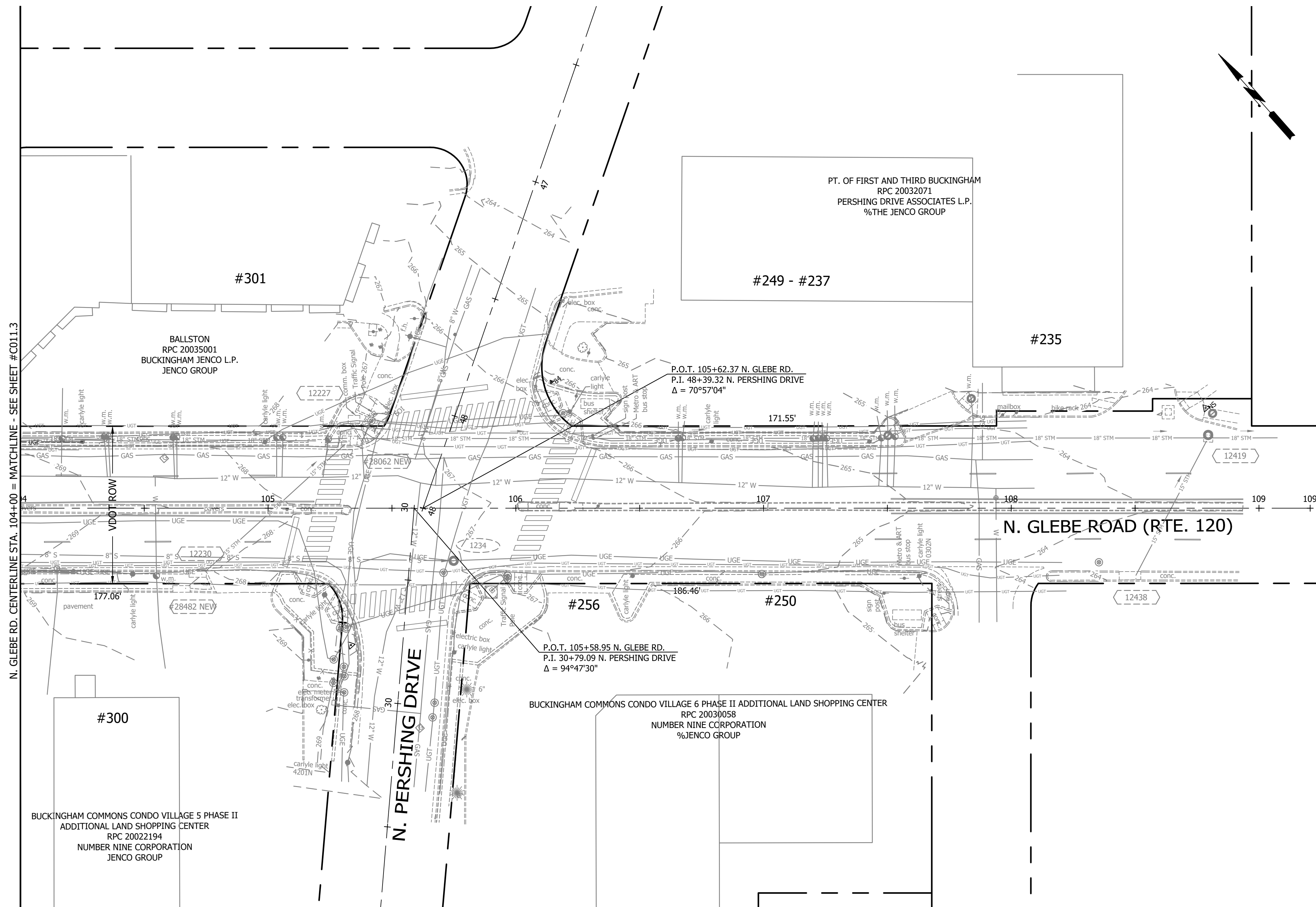
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 EXISTING CONDITIONS PLAN - 3

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: AUGUST 4 2020



C011.3



APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

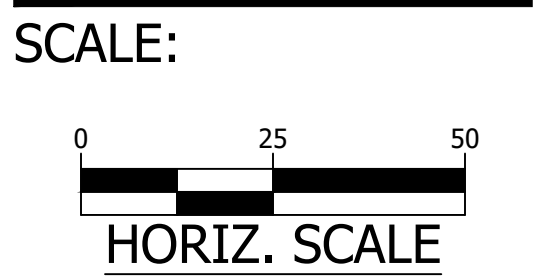
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 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 EXISTING CONDITIONS PLAN - 4

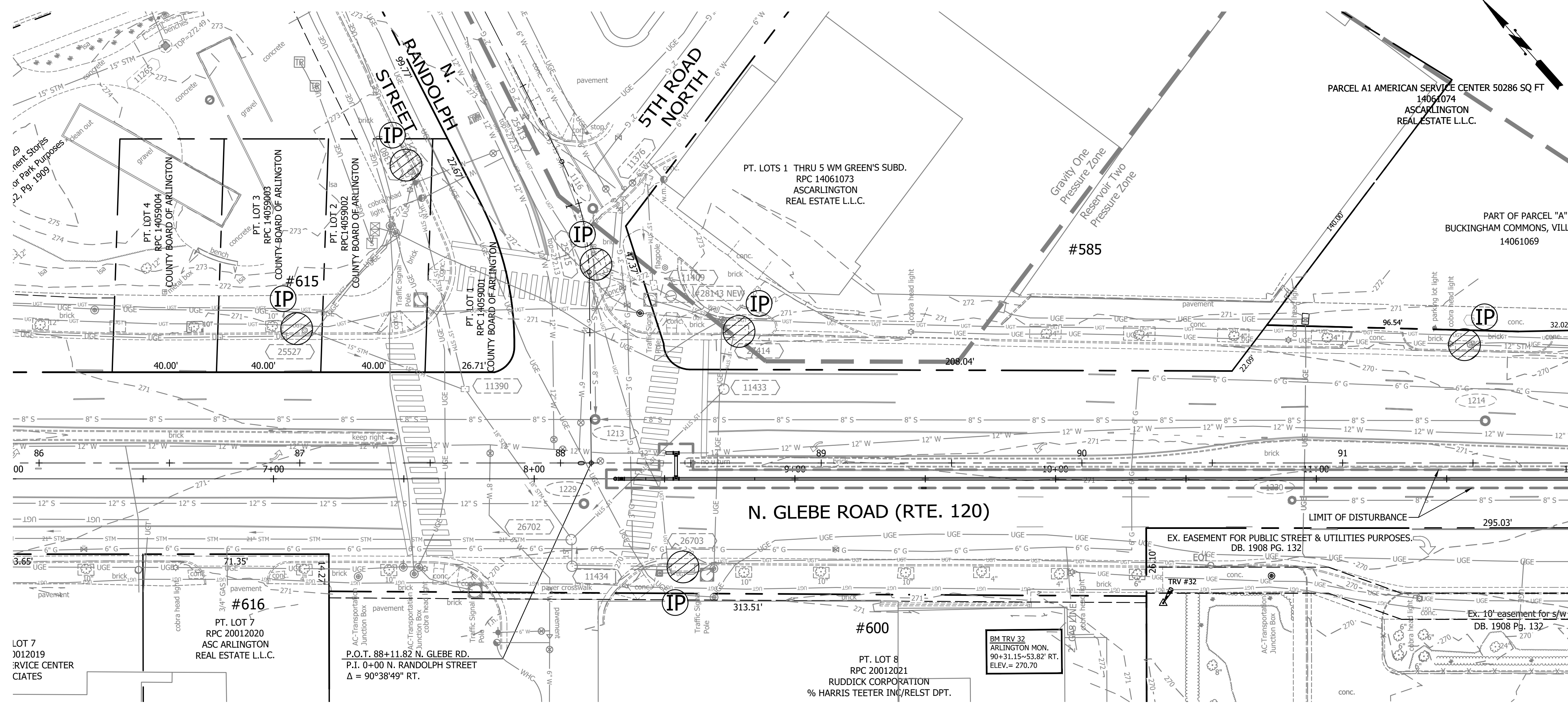
GENERAL SURVEY NOTES:

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- VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
- CONTOUR INTERVAL: 1'
- BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.

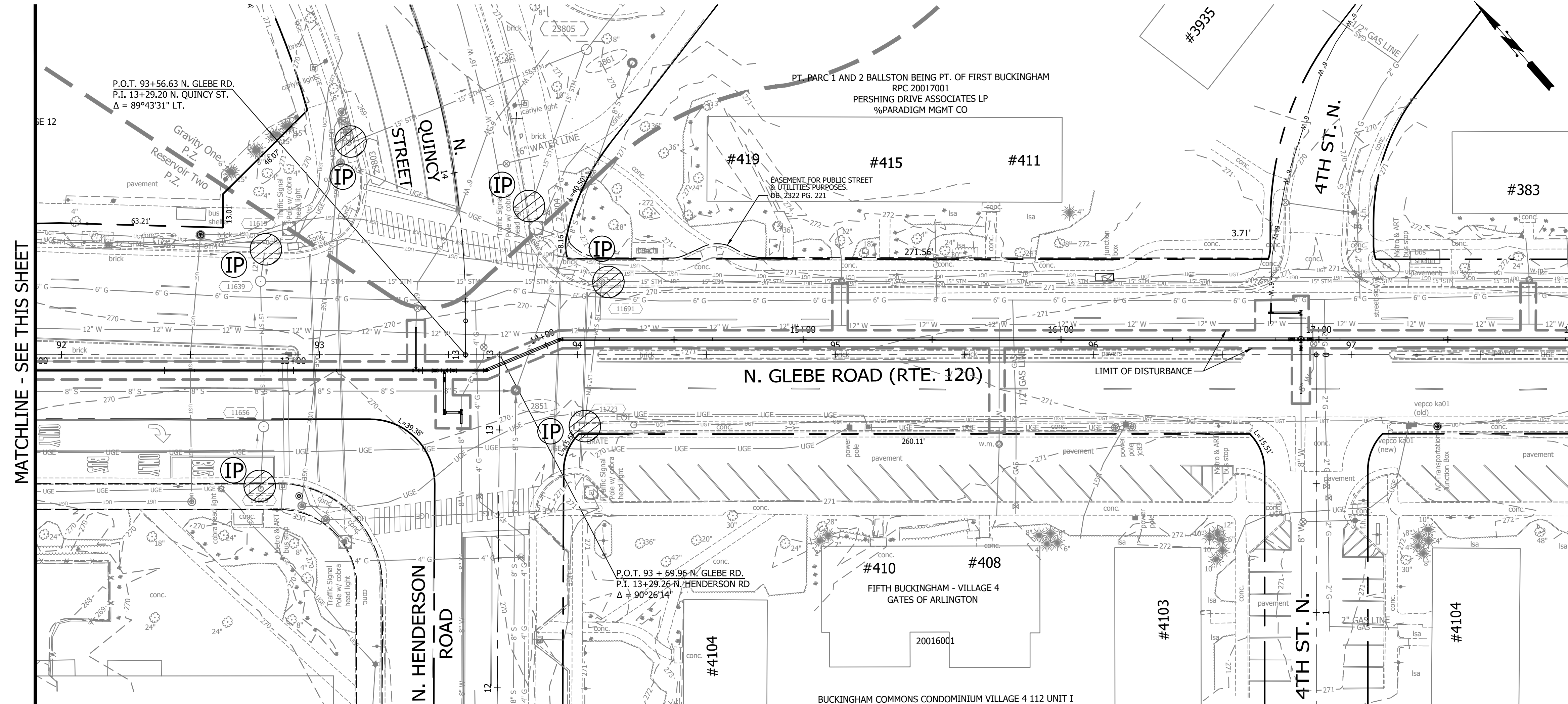
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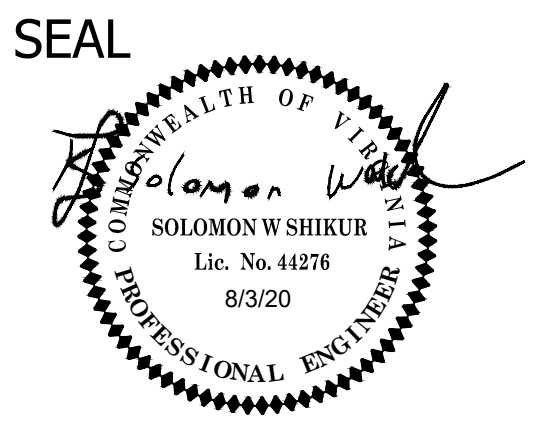




MATCHLINE - SEE THIS SHEET



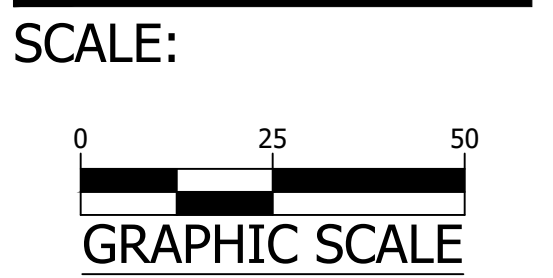
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APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	
REVISIONS	DATE

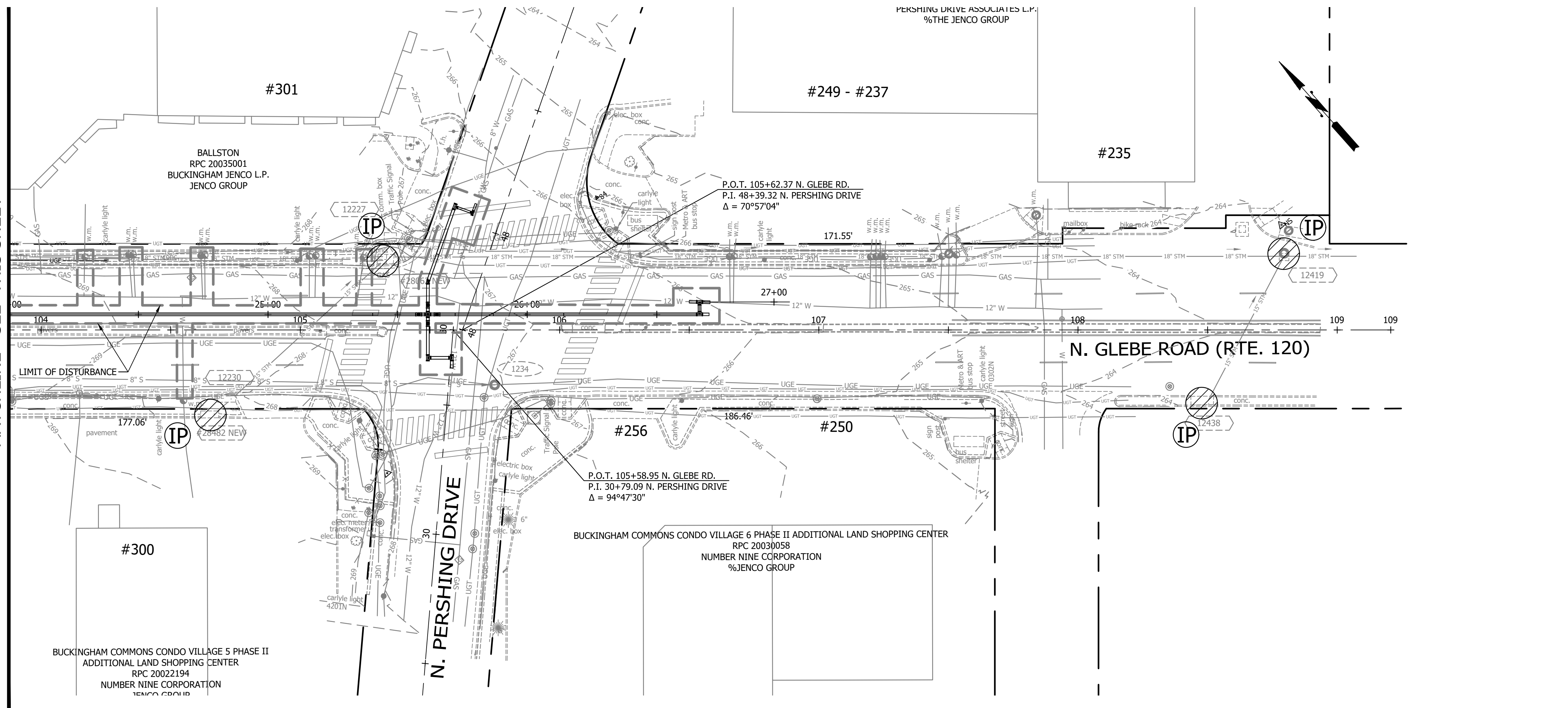
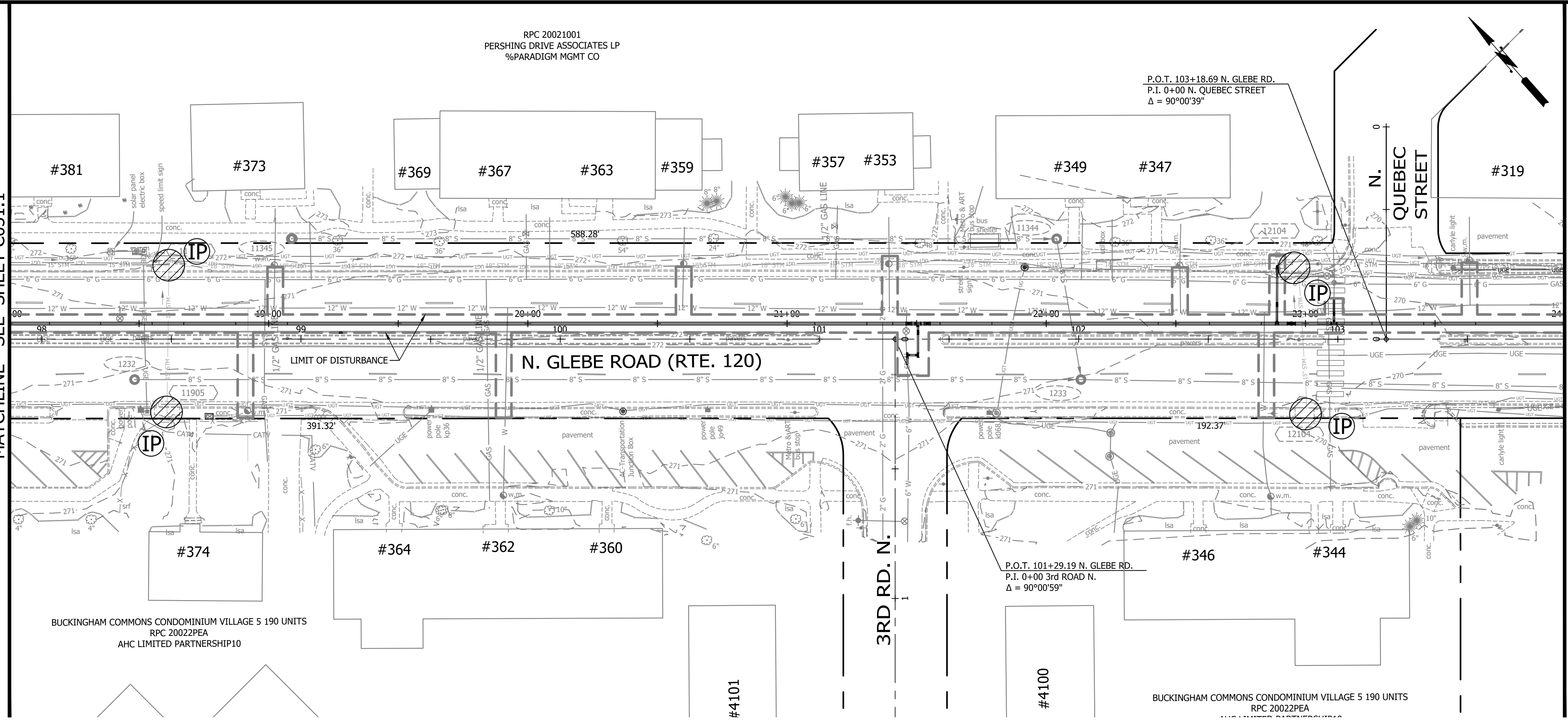
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 EROSION & SEDIMENT CONTROL PLAN - 1

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS
 PLOTTED: AUGUST 4 2020



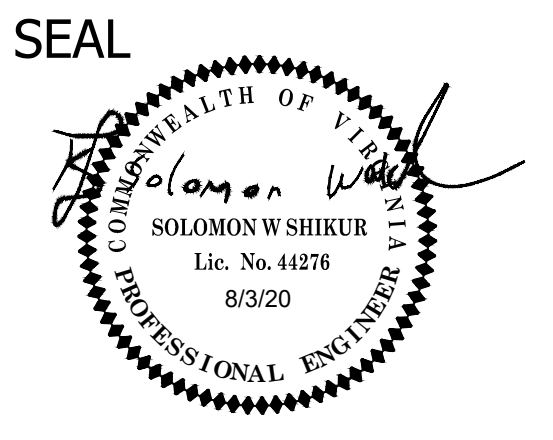
MATCHLINE - SEE SHEET C031.1

MATCHLINE - SEE THIS SHEET



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APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

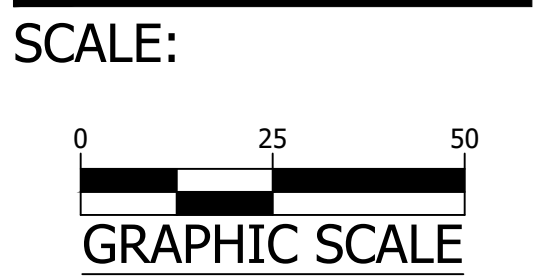
N. GLEBE ROAD WATERMAIN REPLACEMENT
R014

N. RANDOLPH ST. TO N. PERSHING DR.

EROSION & SEDIMENT CONTROL PLAN - 2

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: AUGUST 4 2020



EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:

THE COUNTY IS PROPOSING TO REPLACE THE EXISTING WATERMAIN TO 12-INCH DIAMETER WATERMAIN IN THE RIGHT OF WAY N. GLEBE ROAD, BETWEEN N. RANDOLPH RD AND N. PERSHING RD. THE EXISTING WATERMAIN WAS INSTALLED IN THE 1920s AND IS REQUIRED TO BE UPGRADED.

EXISTING SITE CONDITIONS:

THE NORTH GLEBE ROAD IS A PAVED URBAN OTHER PRINCIPAL ARTERIAL WITH A SPEED LIMIT OF 30 MPH. THERE ARE NO STREET PARKING EITHER ON BOTH SIDES OF N. GLEBE ROAD.

ADJACENT PROPERTIES:

THERE ARE COMMERCIAL/ RESIDENTIAL PROPERTIES ON BOTH SIDES OF N. GLEBE ROAD.

OFF-SITE AREAS:

THERE ARE NO OFFSITES AREAS FOR THIS PROJECT.

CRITICAL AREAS:

THERE ARE NO STEEP SLOPES OR CRITICAL AREAS LOCATED WITHIN THE LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES:

THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA INCLUDE SAFETY FENCE AND INLET PROTECTION. INLET PROTECTION IS REQUIRED OUTSIDE THE PROJECT LIMITS WHEN/WHERE WATER FROM DISTURBED AREA FLOWS.

PERMANENT STABILIZATION:

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH GRASS, MULCH OR SOD. SEE THE PROPOSED PLANS FOR ADDITIONAL INFORMATION.

STORMWATER RUNOFF CONSIDERATIONS:

NO ADDITIONAL IMPERVIOUS AREA WILL BE ADDED TO THIS PROJECT.

TOTAL LAND DISTURBANCE.....= 17,680 SF (0.41 ACRE) LIMIT OF WORK WILL BE IN THE ROW
PRE-IMPROVEMENT IMPERVIOUS AREA.....= 17,680 SF (0.41 ACRE)
POST-IMPROVEMENT IMPERVIOUS AREA.....= 17,680 SF (0.41 ACRES)
INCREASED IMPERVIOUS AREA.....= 0 SF (0 ACRES)

SOILS INFORMATION:

THE FOLLOWING SOILS ARE FOUND ON SITE (SEE SOILS MAP ON SHEET C032.2 FOR LOCATION)

SOIL#:	SOIL NAME:	HYDROLOGIC GROUP:	ERODABILITY:
4	URBAN LAND - SASSAFRAS -	B & C	MODERATE (4B)
	NEABSCO COMPLEX		
12	URBAN LAND - UDORThENTS COMPLEX	VARIABLE	VARIABLE

FLOODPLAIN AND RESOURCE PROTECTION AREA (RPA):

THERE ARE NO FLOODPLAIN OR RESOURCE PROTECTION AREAS LOCATED WITHIN THIS PROJECT SITE

EROSION & SEDIMENT CONTROL PROJECT PHASING

1. PHASE I:

- PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, AND COUNTY INSPECTOR.
- INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE (IF NEEDED) IN THE LOCATION SHOWN ON THE E&S PHASE I PLAN. MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXISTING THE SITE.
- INSTALL PERIMETER TREE DEMARCATION FENCING IN THE FORM OF TREE PROTECTION FENCE (TP) AS SHOWN ON E&S PHASE I PLAN.
- PERFORM INITIAL PERIMETER CLEARING TO INSTALL REMAINDER OF PERIMETER CONTROLS SUCH AS DIVERSION DIKE (DD), SILT FENCE (SF), AND SUPER SILT FENCE (SSF) AS PER THE PHASE I PLAN.
- SEED AND MULCH ALL EARTHEN CONTROLS.
- CONTACT ARLINGTON COUNTY PROJECT OFFICER FOR A PERIMETER INSPECTION PRIOR TO CLEARING THE REMAINDER OF THE SITE IN ORDER TO OBTAIN PHASE II GRADING PERMIT.
- CLEAR THE SITE TO THE LIMITS AS SHOWN ON THE CONSTRUCTION PLANS.

2. PHASE II:

- BEGIN UTILITY CONSTRUCTION, INSTALL ALL UTILITIES UNDERGROUND UTILITIES AND BEGIN SITE GRADING.
- INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.
- ONCE THE SITE IS BOUGHT TO NEAR FINAL GRADE, AND THE UTILITY CONSTRUCTION IS COMPLETE, COMMENCE CONSTRUCTION OF CURB & GUTTER, STREET, SIDEWALKS, AND OTHER IMPROVEMENTS
- THE CONTROL MEASURES MAY NOT BE REMOVED UNTIL ALL OF THE DISTURBED AREAS HAVE BEEN STABILIZED AND ONLY AS APPROVED AND DIRECTED BY THE INSPECTOR.

RUNOFF SHALL BE TREATED WITH SILT FENCE AND INLET PROTECTION PRIOR TO ENTERING MAJOR STORM SEWER SYSTEMS.

EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE ARLINGTON COUNTY EROSION AND SEDIMENT CONTROL ORDINANCE. THE MINIMUM STANDARDS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

1. STRUCTURAL PRACTICES

- TEMPORARY CONSTRUCTION ENTRANCE - VESCH 3.02
 - A TEMPORARY CONSTRUCTION ENTRANCE WITH A WASH RACK SHALL BE INSTALLED AT THE EXISTING ACCESS POINT TO THE SITE. DURING MUDDY CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES WILL BE REQUIRED TO WASH THEIR WHEELS BEFORE RE-ENTERING THE LOCAL ROADWAYS.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC WASHING OF THE MATS AND/OR REPLACEMENT OF WOOD CHIPS AS NECESSARY.
 - ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
 - THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED INTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
- SILT FENCE - VESCH 3.05
 - SILT FENCE WILL BE INSTALLED WITH THE E&S PLAN TO FILTER RUNOFF FROM DISTURBED AREAS. RUNOFF SHALL NOT BE DIRECTED PARALLEL TO THE INSTALLATION OF SILT FENCE.
 - SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
 - CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM UNDERCUTTING.
 - SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
 - SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 - ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, THEN PREPARED AND SEEDED.
- TEMPORARY DIVERSION DIKE - VESCH 3.09
 - A SYSTEM OF TEMPORARY DIKES, TO DIRECT FLOW INTO PROPOSED & EXISTING STORM SEWER STRUCTURES WILL BE INSTALLED AS INDICATED IN EROSION & SEDIMENT CONTROL PLAN.
 - THE STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
 - STORM DRAIN INLET PROTECTION - VESCH 3.07
 - ALL EXISTING & PROPOSED STORM SEWER INLETS IN AND AROUND THE PROJECT LIMITS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT-LADEN WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS.
 - THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
 - STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- DEWATERING STRUCTURE - VESCH 3.26
 - SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
 - THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.
 - THE ACCUMULATED SEDIMENT WHICH IS REMOVED FROM A DEWATERING DEVICE MUST BE SPREAD ON-SITE AND STABILIZED OR DISPOSED OF AT AN APPROVED DISPOSAL SITE AS PER THE APPROVED PLAN.

f. TREE PROTECTION - VESCH 3.38

- ALL TREES ARE TO BE PROTECTED UNLESS OTHERWISE DIRECTED BY THE COUNTY INSPECTOR AND URBAN FORESTER. THE COUNTY'S URBAN FORESTER (703-228-1863) SHALL INSPECT ALL TREE PROTECTION 72 HOURS PRIOR TO THE START OF CONSTRUCTION. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, THE FOLLOWING MAINTENANCE GUIDELINES SHALL BE FOLLOWED:
 - SOIL AERATION: IF THE SOIL HAS BECOME COMPACTED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHALL BE AERATED BY PUNCHING HOLES WITH AN IRON BAR. THE BAR SHALL BE DRIVEN 1-FOOT DEEP AND THEN MOVED BACK AND FORTH UNTIL THE SOIL IS LOOSENED. THIS PROCEDURE SHALL BE REPEATED EVERY 18 INCHES UNTIL ALL OF THE COMPACTED SOIL BENEATH THE CROWN OF THE TREE HAS BEEN LOOSENED.
 - REPAIR OF DAMAGE:
 - ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE RETAINED ON THE SITE SHALL BE REPAIRED IMMEDIATELY.
 - WHENEVER MAJOR ROOT OR BARK DAMAGE OCCURS, REMOVE SOME FOLIAGE TO REDUCE THE DEMAND FOR WATER AND NUTRIENTS.
 - DAMAGED ROOTS SHALL IMMEDIATELY BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA. CUT SURFACES SHALL BE PAINTED WITH APPROVED TREE PAINT, AND MOIST PEAT MOSS, BURLAP, OR TOPSOIL SHALL BE SPREAD OVER THE EXPOSED AREA.
 - TO TREAT BARK DAMAGE, CAREFULLY CUT AWAY ALL LOOSENED BARK BACK INTO THE UNDAMAGED AREA, TAPER THE CUT AT THE TOP AND BOTTOM, AND PROVIDE DRAINAGE AT THE BASE OF THE WOUND.
 - ALL TREE LIMBS DAMAGED DURING CONSTRUCTION OR REMOVED FOR ANY OTHER REASON SHALL BE CUT OFF ABOVE THE COLLAR AT THE PRECEDING BRANCH JUNCTION.
 - CARE FOR SERIOUS INJURIES SHALL BE PRESCRIBED BY A FORESTER OR A TREE SPECIALIST.
 - FERTILIZATION: BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID THEIR RECOVERY.
 - TREES SHALL BE FERTILIZED IN THE LATE FALL (AFTER OCTOBER 1) OR THE EARLY SPRING (FROM THE TIME FROST IS OUT OF THE GROUND UNTIL MAY 1). FALL APPLICATIONS ARE PREFERRED, AS THE NUTRIENTS WILL BE MADE AVAILABLE OVER A LONGER PERIOD OF TIME.
 - FERTILIZER SHALL BE APPLIED TO THE SOIL OVER THE FEEDER ROOTS. IN NO CASE SHALL IT BE APPLIED CLOSER THAN 3 FEET TO THE TRUNK. THE ROOT SYSTEM OF CONIFERS EXTENDS SOME DISTANCE BEYOND THE DRIP LINE. INCREASE THE AREA TO BE FERTILIZED BY ONE FOURTH THE AREA OF THE CROWN.
 - FERTILIZER SHALL BE APPLIED USING APPROVED FERTILIZATION METHODS AND EQUIPMENT.
 - FORMULATIONS AND APPLICATION RATES SHALL CONFORM TO THE GUIDELINES GIVEN IN TABLE 3.38-A OF VESCH.

2. VEGETATIVE PRACTICES

- TOPSOILING (STOCKPILE) - VESCH 3.30
 - TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS MAY HAVE TO BE LOCATED OFF-SITE AND ARE TO BE STABILIZED WITH TEMPORARY VEGETATION. PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY E&S PLAN (IF THE STOCKPILE IS LOCATED OFF-SITE). THIS SUPPLEMENTAL PLAN WOULD HAVE TO BE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY OFF-SITE ACTIVITY COMMENCES.
- TEMPORARY SEEDING - VESCH 3.31
 - ALL DENUDED AREAS, WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
 - SEE SHEET III-288 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) FOR ALLOWABLE PLANTING MATERIAL, SEEDING RATES, AND DATES. THE PLANTING REQUIREMENTS OF THE "SOUTH" SHALL BE FOLLOWED. LIMING SHALL BE BASED ON TABLE 3.31-A OF VESCH. FERTILIZERS SHALL BE APPLIED AS 600 LB/ACRE. THE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2-4" OF SOIL. SEED SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5" DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED.
 - EROSION CONTROL BLANKET AND MULCHING - VESCH 3.36 AND 3.35
 - EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND TO ALLOW SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS AND WILL BE APPLIED AS A SECOND STEP IN SEEDING OPERATION.
 - DUST CONTROL - VESCH 3.39
 - DUST SHALL BE CONTROLLED USING A VARIETY OF METHODS SUCH AS VEGETATIVE COVER, MULCH, TILLAGE, IRRIGATION, SPRAY-ON ADHESIVES, STONE BARRIERS, AND CALCIUM CHLORIDE. THE IMPLEMENTATION OF THE DUST CONTROL METHODS SHALL BE INSTALLED PER SECTION 3.39 OF VESCH
 - PERMANENT SEEDING - VESCH 3.32
 - SINCE THE SUBJECT SITE IS LOCATED WITHIN THE COASTAL PLAIN AREA OF VIRGINIA, SHEET III-304 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE FOLLOWED FOR FINAL SEEDING MATERIAL, SEEDING RATES, AND DATES OF APPLICATION.
 - SODDING - VESCH 3.33
 - SODDED AREAS SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLANS. SOIL TESTS SHALL BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. PRIOR TO LAYING SOD, SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS AND LARGE OBJECTS. QUALITY OF SOD SHALL BE STATE CERTIFIED TO ENSURE GENETIC PURITY AND HIGH QUALITY. SOD SHALL NOT BE LAID ON FROZEN SOIL SURFACE, OR IN EXCESSIVELY WET OR DRY WEATHER. SOD SHALL BE DELIVERED AND INSTALLED WITHIN 36 HOURS, AND SHALL BE INSTALLED PER PAGE III-339 OF VESCH.

THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD. IN ADDITION, NO SEDIMENT TRAPS OR BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE INSPECTOR.

EROSION AND SEDIMENT CONTROL MANAGEMENT MEASURES

LANDSCAPE / TREE PRESERVATION NOTES

PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT THE ARLINGTON COUNTY ARBORIST TO SCHEDULE AN INSPECTION.

LAND CONSERVATION NOTES:

- NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 100 FEET ARE TO BE OPEN AT ANY ONE TIME.
- ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILLING.
- ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
- DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION.
- ANY DISTURBED AREA NOT COVERED BY NOTE 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOV. 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE AND OVER-SEEDED BY APRIL 15.
- AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

EROSION & SEDIMENT CONTROL PROGRAM:

- THE EROSION CONTROL PLAN IS INTENDED TO ESTABLISH ENTRANCES AND PERIMETER CONTROL MEASURES WHICH INCLUDES SILT FENCE (SF), INLET PROTECTION (IP), AND OTHER CONTROLS SPECIFIED ON THE PLANS.
- WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL SHALL BE PLACED IN STREAMBEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 7 DAYS SHALL BE SEEDED AND MULCHED. WHEN SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT SHALL BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE SHALL OUTLET IN A STABILIZED AREA OR A SEDIMENT TRAPPING DEVICE.
- ALL PRACTICES AND CONTROL DEVICES DESCRIBED HEREIN SHALL CONFORM TO THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). IN ADDITION, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:
 - CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS, AND SHALL WORK THOSE AREAS TO MINIMIZE THE USE OF HEAVY EQUIPMENT. CONTRACTOR SHALL BRING DISTURBED AREAS TO GRADE (ROUGH OR FINISHED) AND STABILIZE THOSE AREAS WITH TEMPORARY OR PERMANENT VEGETATION. THESE DISTURBED AREAS SHALL BE STABILIZED PRIOR TO BEGINNING WORK IN ANOTHER AREA.
 - FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE KEPT ROUGH TO REDUCE SHEET EROSION ON THE SLOPES. CONTRACTOR SHALL RE-DIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZED OUTLETS.
 - CUT SLOPES SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS (ABOVE THE SLOPE) AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
- MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA AND CHAPTER 57 OF THE ARLINGTON COUNTY CODE.
- ALL AREAS, ON OR OFF-SITE, THAT ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE OR SOD THAT IS INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 3:1 AND GREATER SHALL BE RECEIVE SOIL STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS.
- WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
- FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
- THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN THE AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- ALL BIOFILTERS SHALL BE KEPT OFF-LINE UNTIL CONSTRUCTION IS COMPLETED AND ALL AREAS HAVE BEEN PROPERLY STABILIZED. THIS SHALL BE ACHIEVED BY USING INLET PROTECTION AT THE CURB CUTS AND STORMWATER CATCH BASINS LEADING DIRECTLY INTO THE BIOFILTERS.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

PRE-STORM EROSION & SEDIMENTATION CHECKLIST:

PER GENERAL EROSION AND SEDIMENT CONTROL NOTE 6, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE COUNTY. THESE SUPPLEMENTARY PRACTICES ARE IN ADDITION TO THOSE SHOWN IN AN EROSION AND SEDIMENT CONTROL PLAN. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MODIFIED AS NEEDED TO ENSURE ONLY CLEAR WATER IS DISCHARGED FROM THE SITE.

THE FOLLOWING ACTIONS SHALL BE TAKEN PRIOR TO STORM EVENTS WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL TO PREVENT SEDIMENT DISCHARGES FROM A CONSTRUCTION SITE. A TYPICAL SUMMER THUNDERSTORM IS AN EXAMPLE OF A STORM EVENT WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL.

- PERIMETER CONTROLS
 - SILT FENCE SHALL BE CHECKED FOR UNDERMINING, HOLES, OR DETERIORATION OF THE FABRIC. FENCING SHALL BE REPLACED IMMEDIATELY IF THE FABRIC IS DAMAGED OR WON. SILT FENCE MUST BE TRENCHED INTO THE GROUND PER STATE SPECIFICATIONS (VESCH STD & SPEC 3.09).
 - WOODEN STAKES OR STEEL POSTS SHALL BE PROPERLY SECURED UPRIGHT INTO THE GROUND. DAMAGED POSTS OR STAKES MUST BE REPLACED. SEDIMENT THAT HAS ACCUMULATED AGAINST THE SILT FENCE SHALL BE REMOVED. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE LEVEL REACHES ONE-HALF THE HEIGHT OF THE FENCING.
 - HAY BALES OR A STONE BERM SHALL BE PLACED ACROSS THE CONSTRUCTION ENTRANCE TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
- EXPOSED SLOPES AND SOIL
 - EXPOSED SLOPES NOT AT THE FINAL STABILIZATION PHASE SHALL BE COVERED WITH TARPS, PLASTIC SHEETING, OR EROSION CONTROL MATTING. COVERING MATERIAL SHALL BE PROPERLY SECURED/ANCHORED.
 - CONTROLS SHALL BE INSTALLED TO PREVENT CONCENTRATED FLOW DOWN AN EXPOSED SLOPE. BERMS OR DIVERSION DIKES SHALL BE INSTALLED AT THE TOP OF CUT/EXPOSED SLOPES TO DIRECT STORM FLOW AROUND THE DISTURBED AREA.
 - EXPOSED SLOPES AT THE FINAL STABILIZATION PHASE SHALL BE STABILIZED USING SLOPE STABILIZATION PRACTICES SUCH AS SOIL STABILIZATION BLANKETS OR MATTING AS SPECIFIED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH STD & SPEC 3.36). BLANKETS OR MATS MUST BE PROPERLY SECURED AND ANCHORED TO THE SLOPE USING STAPLES, PINS, OR STAKES.
 - SEEDED AREAS SHALL BE CHECKED AND RESEEDED AS NECESSARY TO COVER EXPOSED SOIL. RECENTLY SEEDED AREAS SHALL BE PROTECTED BY STRAW OR SOIL STABILIZATION BLANKETS TO PREVENT SEEDING FROM BEING WASHED AWAY.
- STOCKPILES
 - STOCKPILED SOIL AND OTHER LOOSE MATERIALS THAT CAN BE WASHED AWAY SHALL BE COVERED WITH A TARP, PLASTIC SHEETING, OR OTHER STABILIZATION MATTING. THE COVER MUST BE PROPERLY SECURED/ANCHORED DOWN TO PREVENT IT FROM BEING BLOWN OFF AND EXPOSING MATERIALS TO RAIN. CONTROLS SUCH AS HAY BALES OR BOOMS SHALL BE PLACED ALONG THE PERIMETER OF THE STOCKPILE (DOWNHILL SIDE).
- INLET PROTECTION
 - INLET PROTECTION CONTROLS SHALL BE INSPECTED TO ENSURE THEY ARE FUNCTIONING PROPERLY AND FLOODING WILL NOT OCCUR. CLOGGED OR DAMAGED CONTROLS MUST BE REPLACED IMMEDIATELY. ENSURE CONTROLS ALLOW FOR OVERFLOW/BYPASS OF STORMWATER RUNOFF DURING SIGNIFICANT STORM EVENTS.

IN ADDITION TO THESE PRE-STORM ACTIONS, ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES MUST BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL.

POLLUTION PREVENTION PLAN NOTES (STORMWATER MANUAL - SECTION 2.4)

- ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S M54 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS:
 - WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIREFIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
- APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S M54 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK.
- PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

UTILITY INSTALLATION:

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

- NO MORE THAN 100 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
- MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
- AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED. ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.

MAINTENANCE PROGRAM:

THE FOLLOWING IS A PROGRAM OF MAINTENANCE FOR THE MECHANICAL CONTROLS SPECIFIED IN THIS NARRATIVE AND ON THE PLAN:

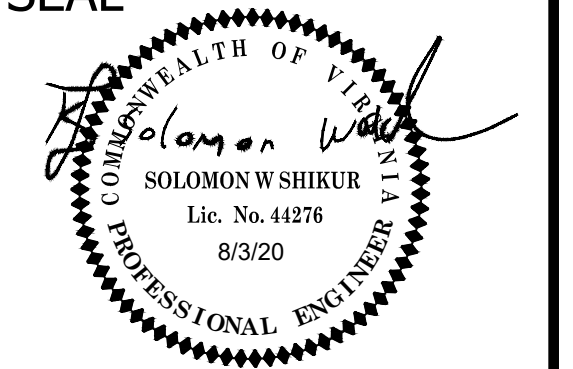
- THE SITE SUPERINTENDENT OR HIS/HER REPRESENTATIVE SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREA (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.
- ALL SEDIMENT TRAPPING DEVICES SHALL BE CLEARED OUT AT 50% TRAP CAPACITY AND THE SEDIMENT SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR IF NOT SUITABLE FOR FILL, HAULING AWAY AND DEPOSITING AT AN ACCEPTABLE DUMP SITE.
- THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM BEING ENTERED ONTO EXISTING SWM/BMP FACILITIES OR DOWNSTREAM WATER WAYS. SHOULD OFF-SITE AREAS BECOME POLLUTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE AFFECTED AREAS TO THE SATISFACTION OF THE INSPECTOR.
- AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ANY REMAINING DENUDED AREAS SHALL BE STABILIZED. CERTAIN DEVICES MAY BE REMOVED PRIOR TO CONSTRUCTION COMPLETION BUT ONLY WITH THE APPROVAL OF THE COUNTY INSPECTOR.
- AFTER CONSTRUCTION OPERATIONS HAVE ENDED, ALL DISTURBED AREAS SHALL BE STABILIZED. UPON APPROVAL OF THE COUNTY INSPECTOR, MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED AND THE GROUND PERMANENTLY STABILIZED WITH VEGETATION WITHIN 30 DAYS.



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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SEAL



APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

NO.	DESCRIPTION	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
EROSION & SEDIMENT CONTROL NOTES

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

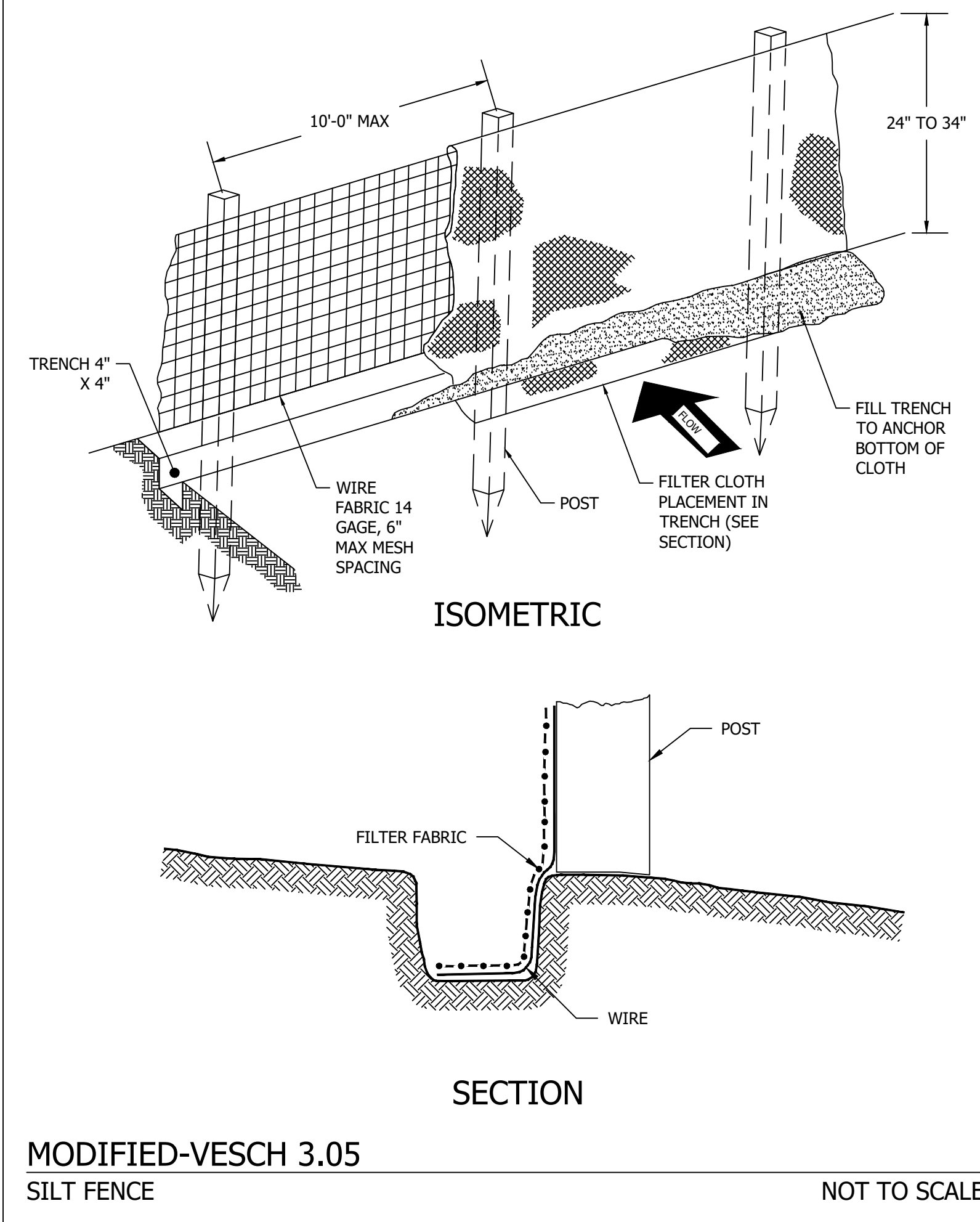
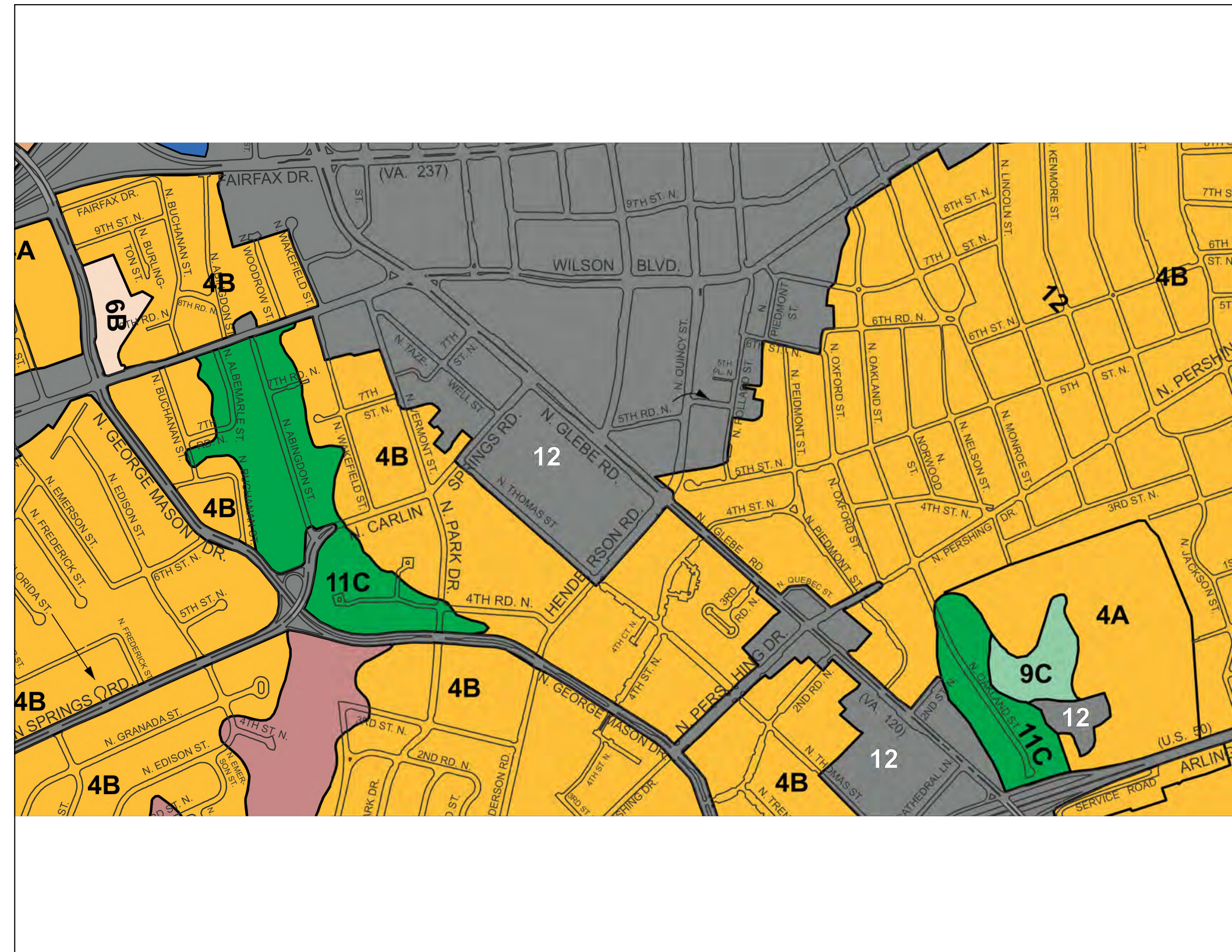
PLOTTED: AUGUST 4 2020

SCALE:

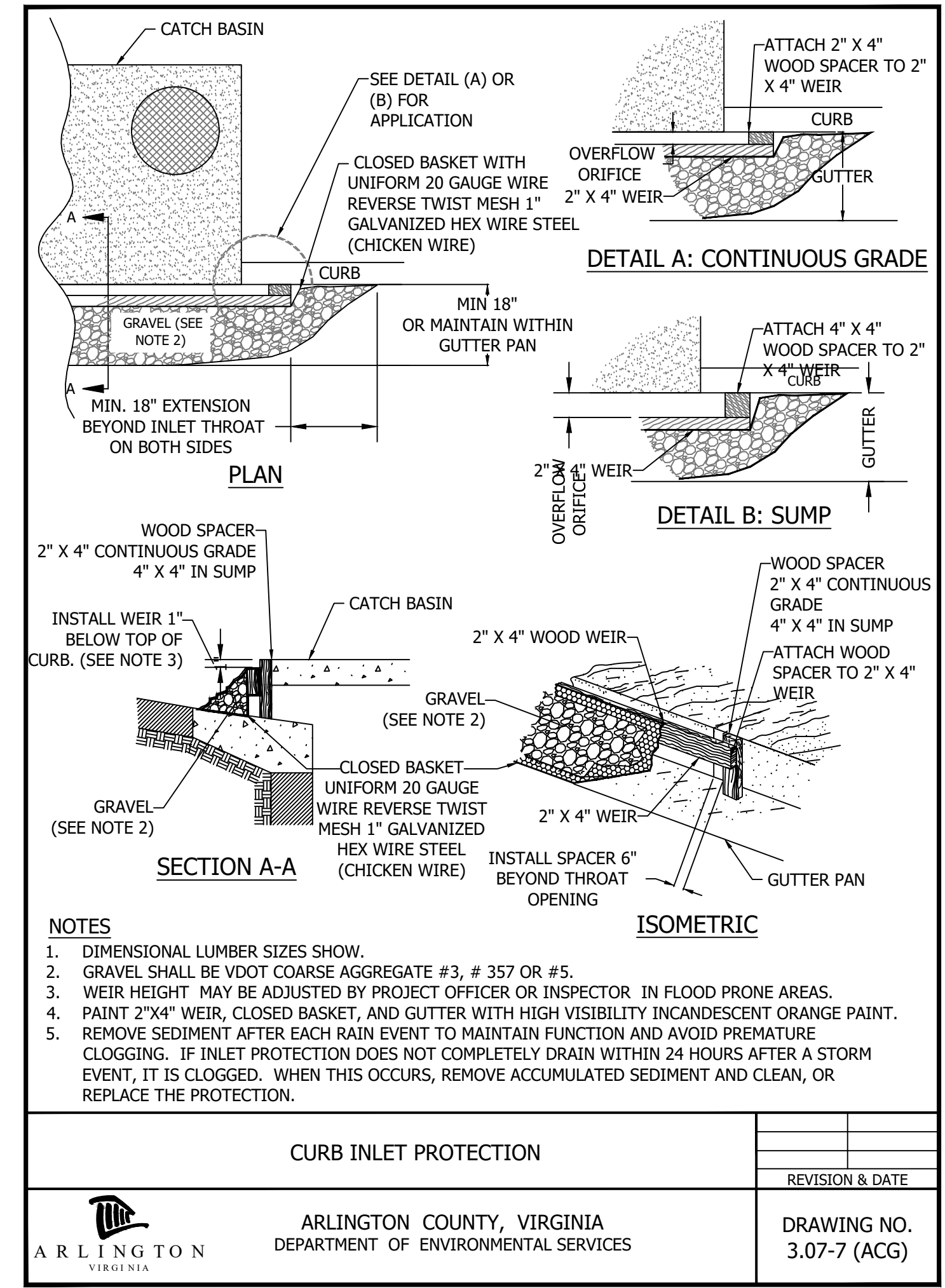
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C032.1

HYDROLOGIC SOILS MAP (N.T.S.)



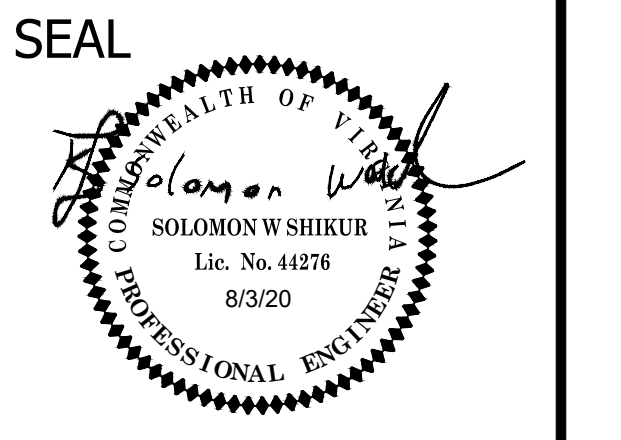
MODIFIED-VESCH 3.05
SILT FENCE
NOT TO SCALE



CURB INLET PROTECTION
ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
DRAWING NO. 3.07-7 (ACG)

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
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APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

July 1, 2020
date

Qianqian Li, P.E.
ESC Program Administrator
Department of Environmental Services
2100 Clarendon Boulevard, Suite 813
Arlington, Virginia 22201

Re: Erosion and Sediment Control Permit Application for:
N. Glebe Road Water Main Replacement
street address
From N Randolph St to N Pershing Dr
lot, block, section subdivision

permit number

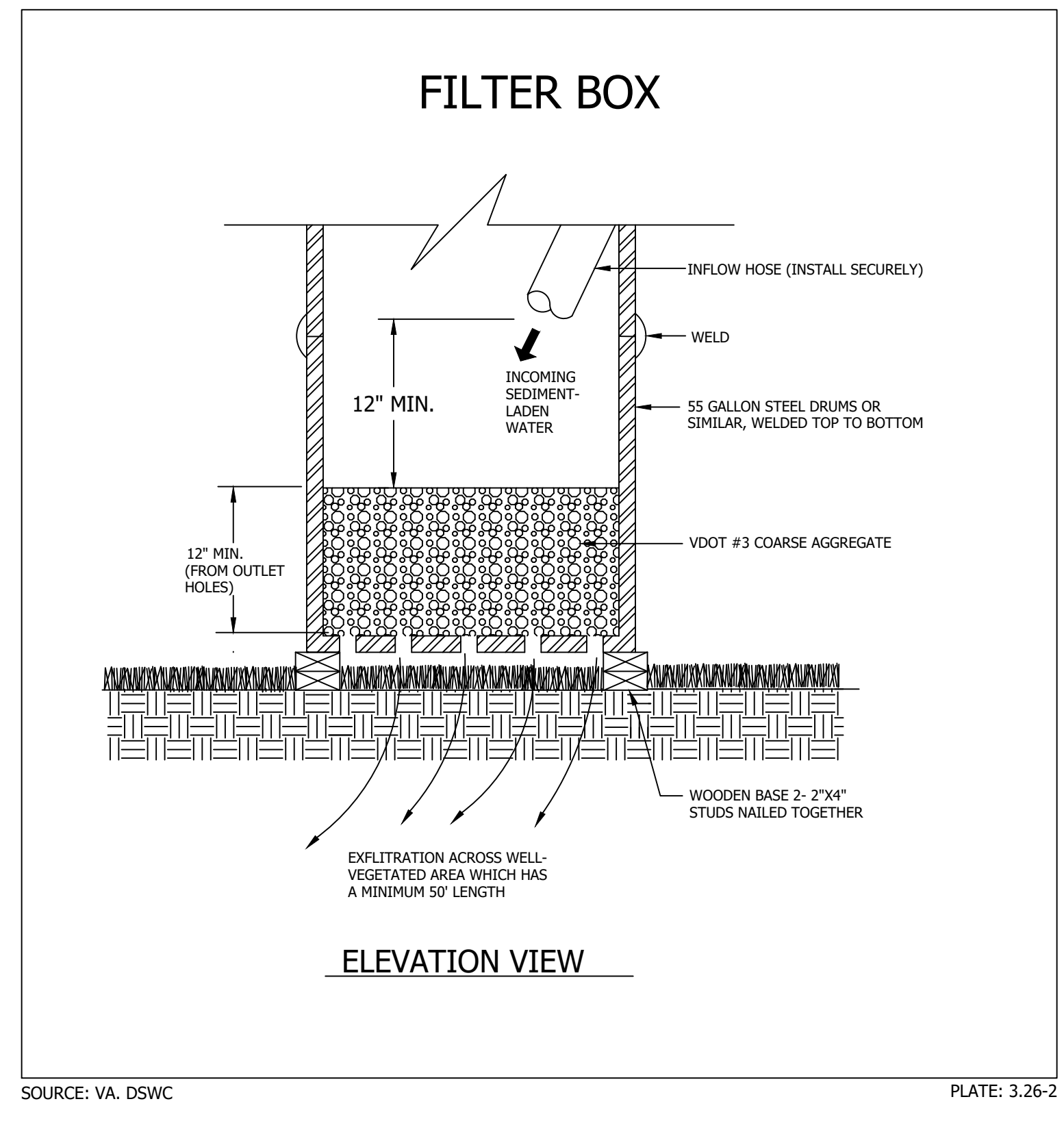
Dear Mrs. Li:

I hereby certify that I accept the responsibilities of Responsible Land Disturber for the above referenced project. I understand that these responsibilities include:

1. Reviewing the erosion and sedimentation (E&S) plan for the project.
2. Walking the site prior to construction to identify critical areas.
3. Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.
4. Regularly inspecting the site during construction to ensure that all E&S controls are functioning and are adequate to address erosion and sedimentation. Inspect the site 48 hours after a runoff-generating storm, and provide a copy of the inspection findings to the county.
5. Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
6. Ensuring that temporary soil stabilization is applied within 7 days to areas denuded that will remain undisturbed for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
7. Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at 703-228-3654 with questions about this plan or my execution of the duties of Responsible Land Disturber.

Sincerely,
Solomon Shikur
signed
Solomon Shikur
name printed
VA PE #44276
professional registration (type and number)



SOURCE: VA. DSWC
PLATE: 3.26-2

EROSION AND SEDIMENT CONTROL LEGEND

3.05	TEMPORARY SILT FENCE	SF	—X—X—
3.07	STORM DRAIN INLET PROTECTION	IP	⊗
3.26	DEWATERING STRUCTURE	DS	⊞

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
EROSION & SEDIMENT CONTROL NOTES AND DETAILS - 1

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS
PLOTTED: AUGUST 4 2020

SCALE:
AS SHOWN

Spill Prevention & Response

Most spills can be cleaned up following manufacturer specifications. The priority should be to protect all people, equipment, property, and the environment. Enter the telephone number of your local fire and police departments.

Most spills can be cleaned up using a spill kit. Absorbent/dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at the project site.

- 1st Priority: Protect all people
- 2nd Priority: Protect equipment and property
- 3rd Priority: Protect the environment

1. Check for hazards (flammable material, noxious fumes, cause of spill) – if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. **LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.**
2. Ensure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
3. Stop the spill source.
4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
5. If possible, stop spill from spreading and/or entering storm drains (use absorbent or other materials as necessary).
6. If spilled material has entered a storm drain, contact Arlington County Fire Department and project manager.
7. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
8. Properly dispose of cleanup materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Local Contacts
 Arlington County Fire & Police 703-698-2222
 DES Water, Sewer, Streets 24-Hour Emergency 703-228-6555
 Washington Gas Emergency 703-790-1400

Nights, Holidays & Weekends
 VA Dept. of Emergency Management 804-674-2400
 24 Hour Reporting Service

Spill kit on site: Yes No

Location(s) of spill kit: _____

Potential Sources of Pollution & Pollution Prevention Practices

Identify the pollutant-generating activities likely to be present at the project site; implement and maintain the corresponding pollution prevention practices. If an unlisted pollutant-generating activity is likely to be present at the project site, describe it, identify the associated pollutant(s), and provide the corresponding pollution prevention practice(s) to be implemented and maintained.

Pollutant-Generating Activity	Likely Present at your Project Site?	Pollutants										Pollution Prevention Practice	Responsible Party
		Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash/Debris/Solids	Other Toxic Chemicals			
Clearing, grading, excavating, and un-stabilized areas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X	X								X	(1)	Construction Activity Operator (See Cover Page of this SWPPP)
Paving and saw cutting operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X				X	X				X	(2)	
Concrete operations, washout, and cement waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			X	X						X	(3)	
Washing / cleaning	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X	X	X	X	X	X	X	(4)	
Dewatering operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X							X	X	(5)	
Material / chemical use and storage	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X	X	X	X	X	X	X	(6)	
Equipment and vehicle maintenance	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				X	X	X	X	X	X	X	(7)	
Waste management / disposal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							X	X	X	X	(8)	
Sanitary waste	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		X	X				X				(9)	
Nutrient management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X	X							X	X	(10)	

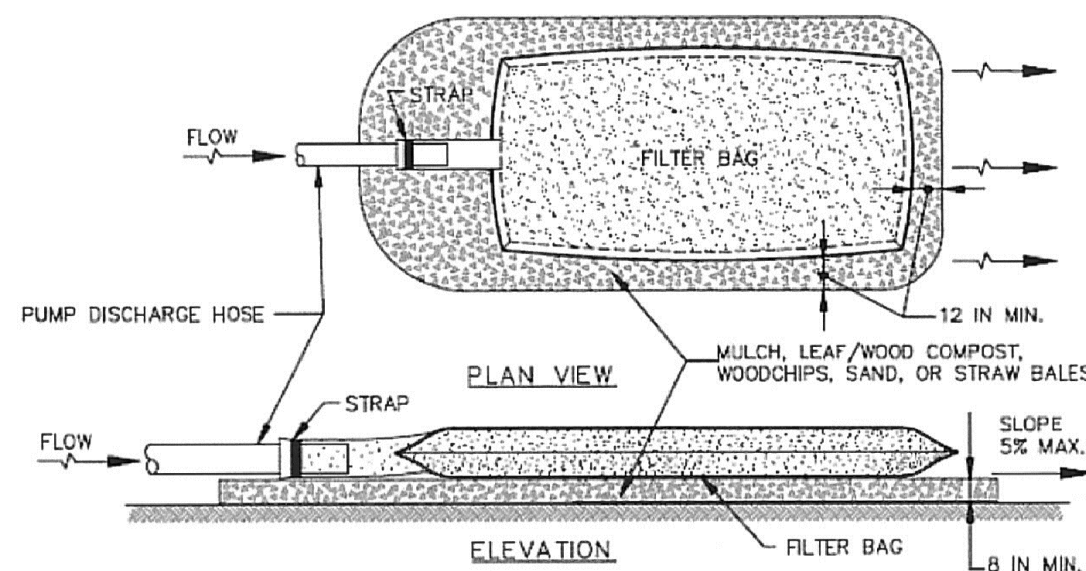
Authorized Non-Stormwater Discharges

Identify the authorized non-stormwater discharges likely to be present at the project site. If an unlisted authorized non-stormwater discharge is likely to be present at the project site, provide it here.

Type of Authorized Non-Stormwater Discharges	Likely Present at Your Project Site?	
Uncontaminated excavation dewatering	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Landscape irrigation	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Others (describe)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Filter Bag

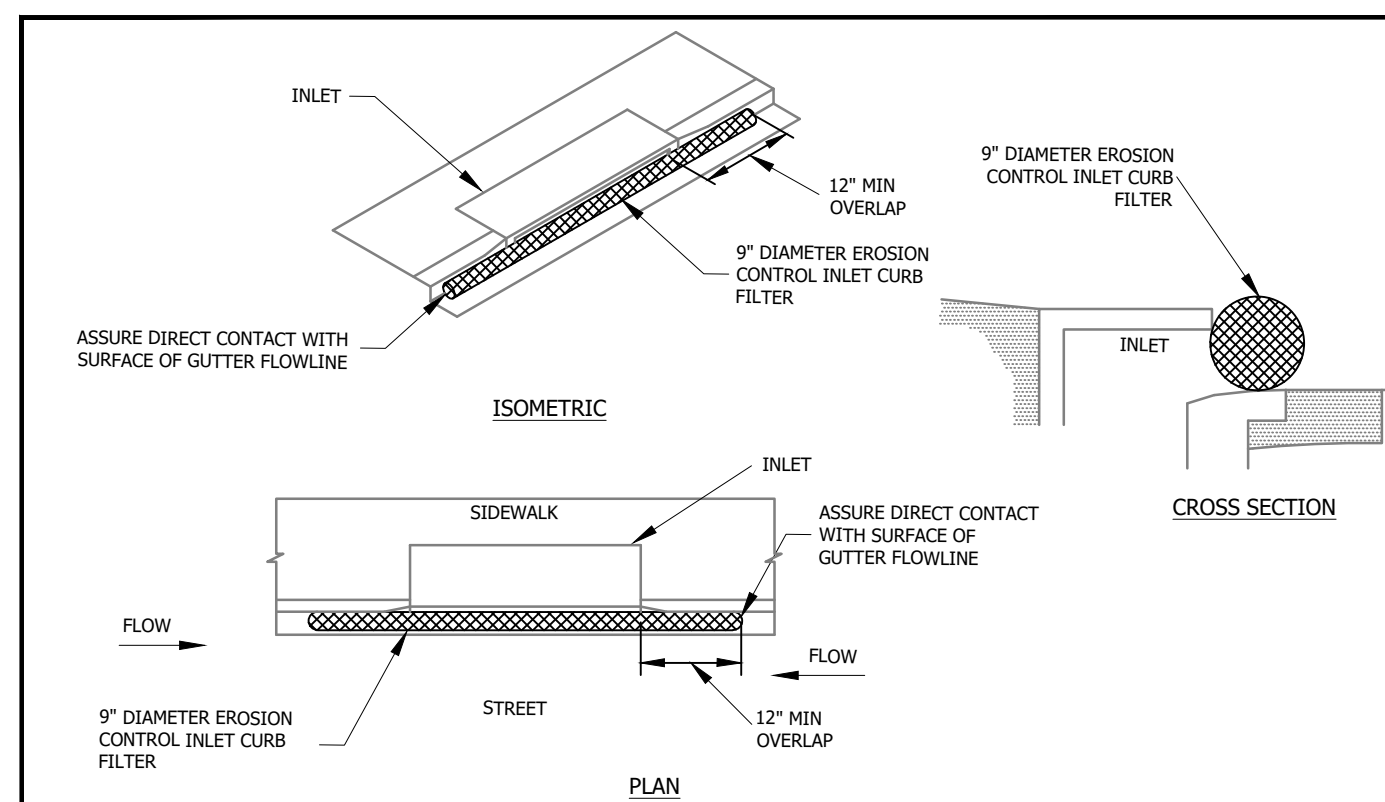
The Maryland Standard F-4 for a filter bag is provided as an acceptable option for use in Arlington County if straw bales or stone are used as the layer under the filter bag. The use of mulch, leaf/wood compost, woodchips or sand is not acceptable.



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	130 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT ²	ASTM D-4491
PERMITTIVITY (SEC ⁻²)	1.2 SEC ⁻²	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632
6. REPLACE FILTER BAG IF BAG CLODS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.



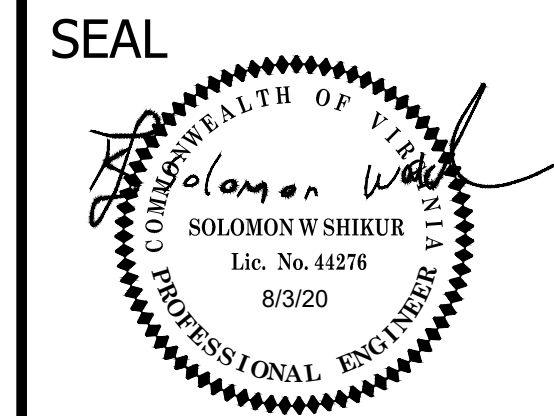
- NOTES:**
1. CONTRACTOR TO OBTAIN PERMISSION FROM ARLINGTON COUNTY PRIOR TO USE ON SITE.
 2. THE SEDIMENT FILTER SOCK TO BE INSTALLED DAILY AT THE BEGINNING OF CONSTRUCTION AND TO BE REMOVED AFTER THE STREET IS SWEEP OR FLUSHED WHENEVER APPLICABLE AT THE END OF THE CONSTRUCTION DAY.

SEDIMENT FILTER SOCK INLET PROTECTION
 ARLINGTON COUNTY, VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL SERVICES



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 FACILITIES & ENGINEERING DIVISION
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 FAX: 703.228.3606

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APPROVALS _____ **DATE** _____

QUALITY CONTROL ENGINEER _____

CONSTRUCTION MANAGEMENT SUPERVISOR _____

WATER, SEWER, STREETS BUREAU CHIEF _____

TRANSPORTATION DIRECTOR _____

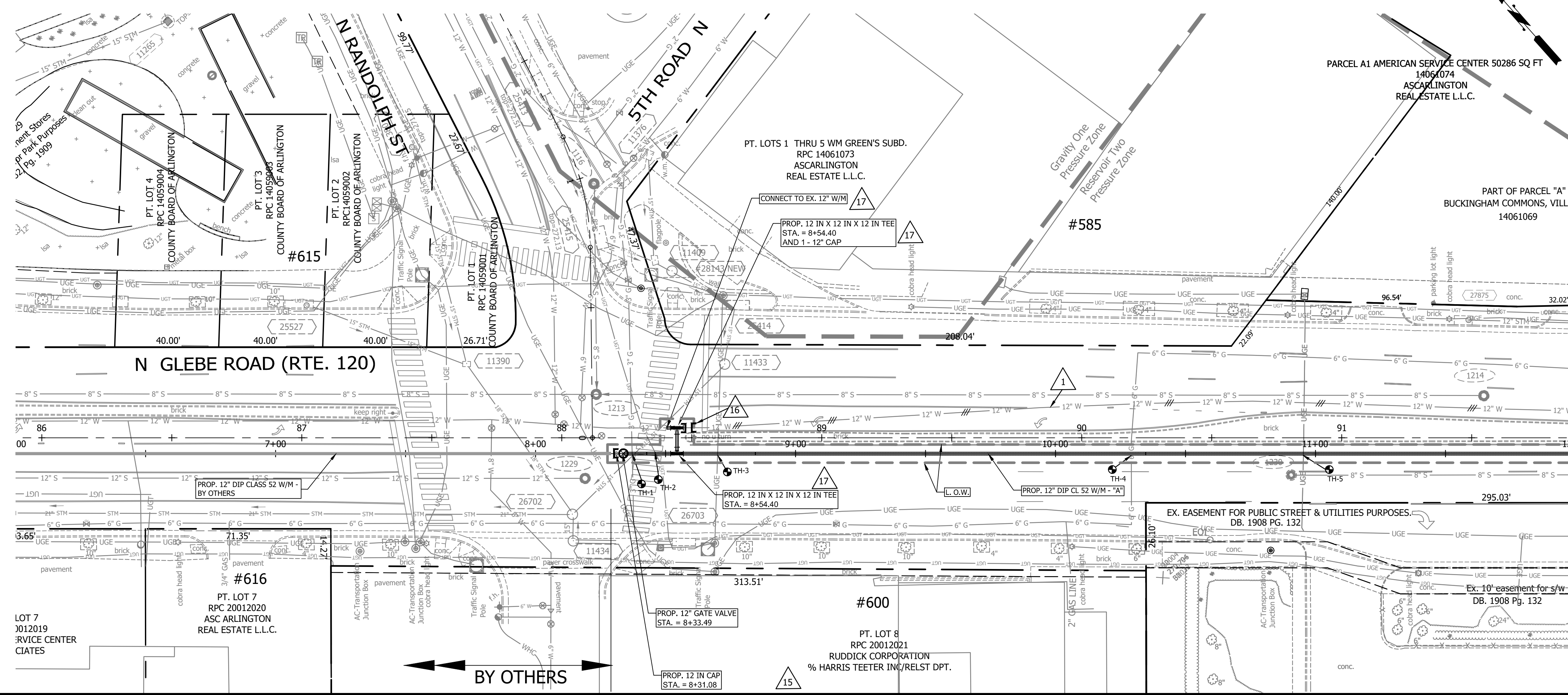
PROJECT MANAGER _____

REVISIONS _____ **DATE** _____

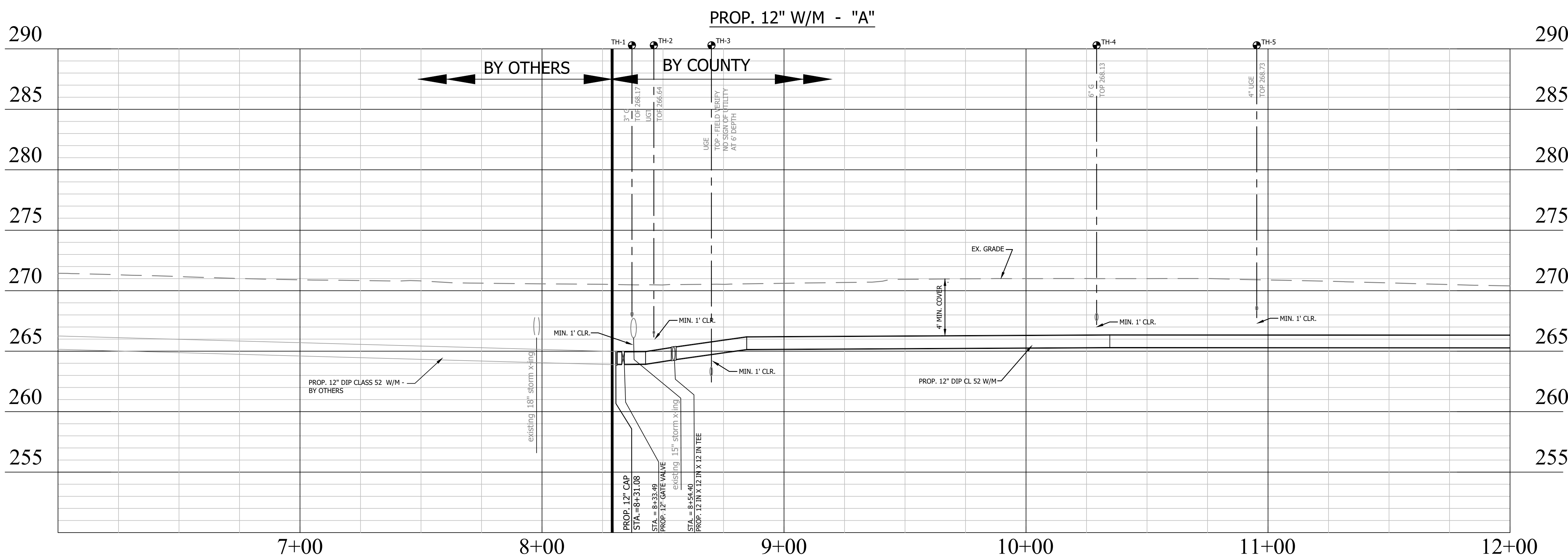
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
EROSION & SEDIMENT CONTROL
NOTES AND DETAILS - 2

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS
 PLOTTED: AUGUST 4 2020

SCALE:
 AS SHOWN



MATCHLINE - SEE C051.2 - STATION 12+00



WATERMAIN CONSTRUCTION NOTES:

- INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF PROPOSED WATERMAIN, OR ABANDONED IN PLACE PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
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- REFER PROFILE VIEW FOR ELEVATION INFORMATION.
- TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND INVERTS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
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12. A TOTAL OF 21 WATER SERVICE CONNECTIONS TO THE EXISTING 12" WATER MAIN WILL BE TRANSFERRED TO THE PROPOSED 12" WATER MAIN.

13. SEE PROPERTY ADDRESS ON THE PLAN:

Ex. Water Meter	NEW Water Meter to Be Installed	NEW Service Line to Be Installed	Remark
5/8"	3/4"	1"	

14. SEE PROPERTY ADDRESS ON THE PLAN:

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3/4"	Not Required	1"	Field Verification of the Ex. service Line Size is Required

15. IF THE WATERMAIN WEST OF RANDOLPH ST IS INSTALLED BY OTHERS BEFORE THIS PLAN, REMOVE CAP AND CONNECT TO THE EXISTING 12" WATERMAIN.

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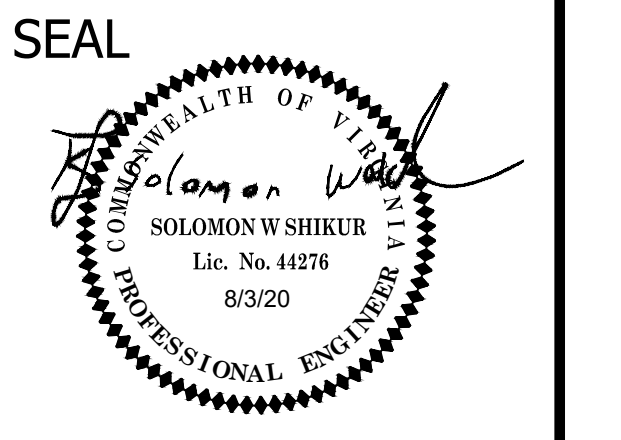
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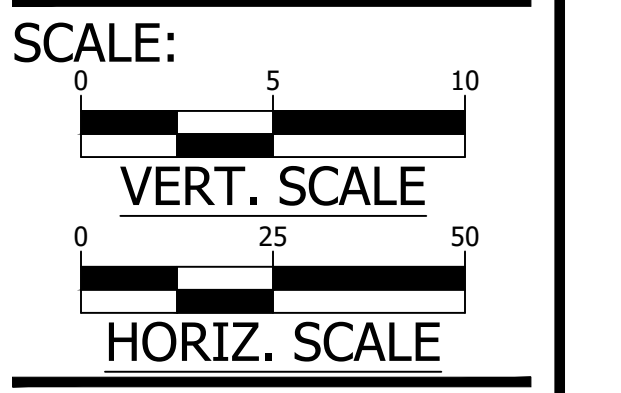
APPROVALS _____ DATE _____
 QUALITY CONTROL ENGINEER _____
 CONSTRUCTION MANAGEMENT SUPERVISOR _____
 WATER, SEWER, STREETS BUREAU CHIEF _____
 TRANSPORTATION DIRECTOR _____
 PROJECT MANAGER _____

REVISIONS _____ DATE _____

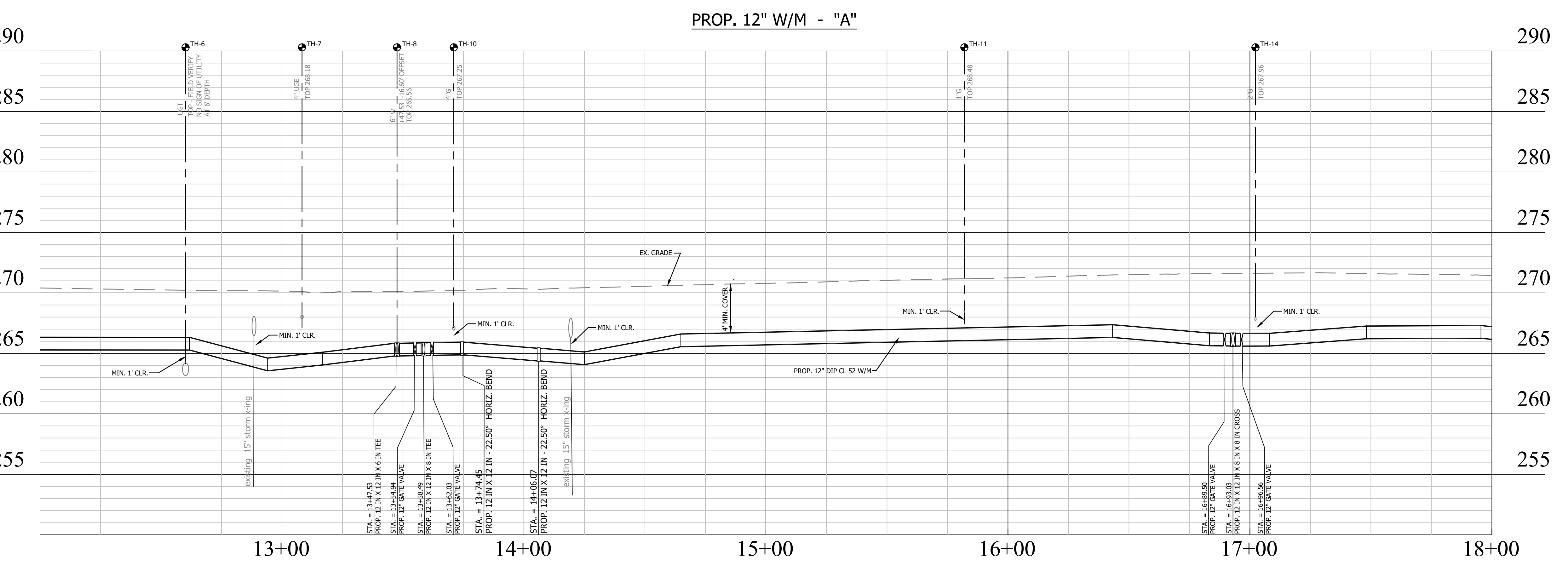
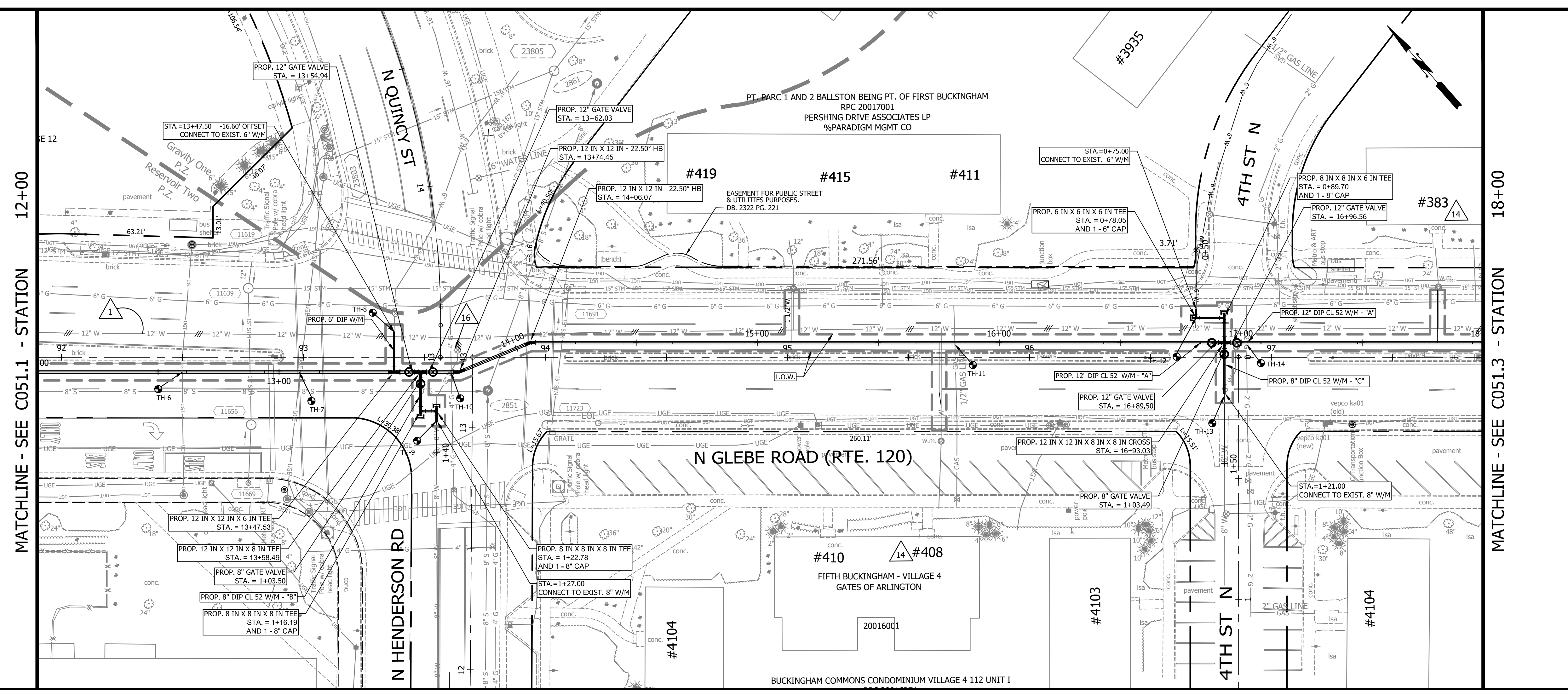
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 1

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: AUGUST 4 2020



C051.1



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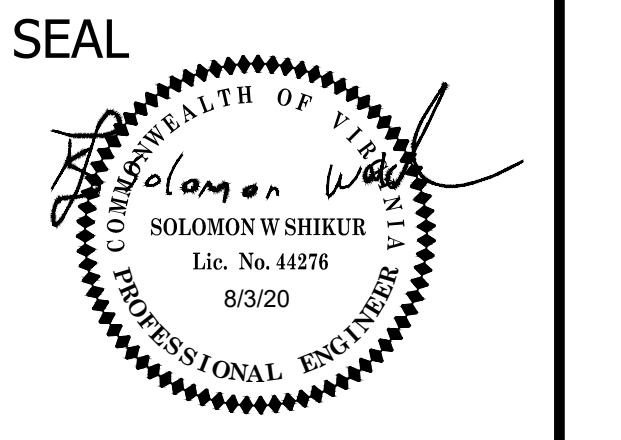
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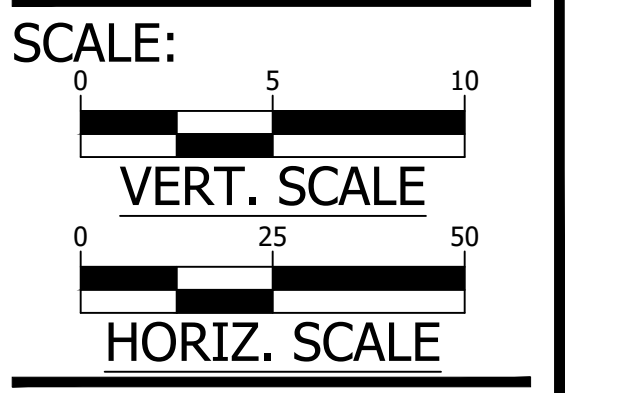
APPROVALS DATE
QUALITY CONTROL ENGINEER
CONSTRUCTION MANAGEMENT SUPERVISOR
WATER, SEWER, STREETS BUREAU CHIEF
TRANSPORTATION DIRECTOR
PROJECT MANAGER

REVISIONS DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
R014
N. RANDOLPH ST. TO N. PERSHING DR.
WATERMAIN PLAN AND PROFILE - 2

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

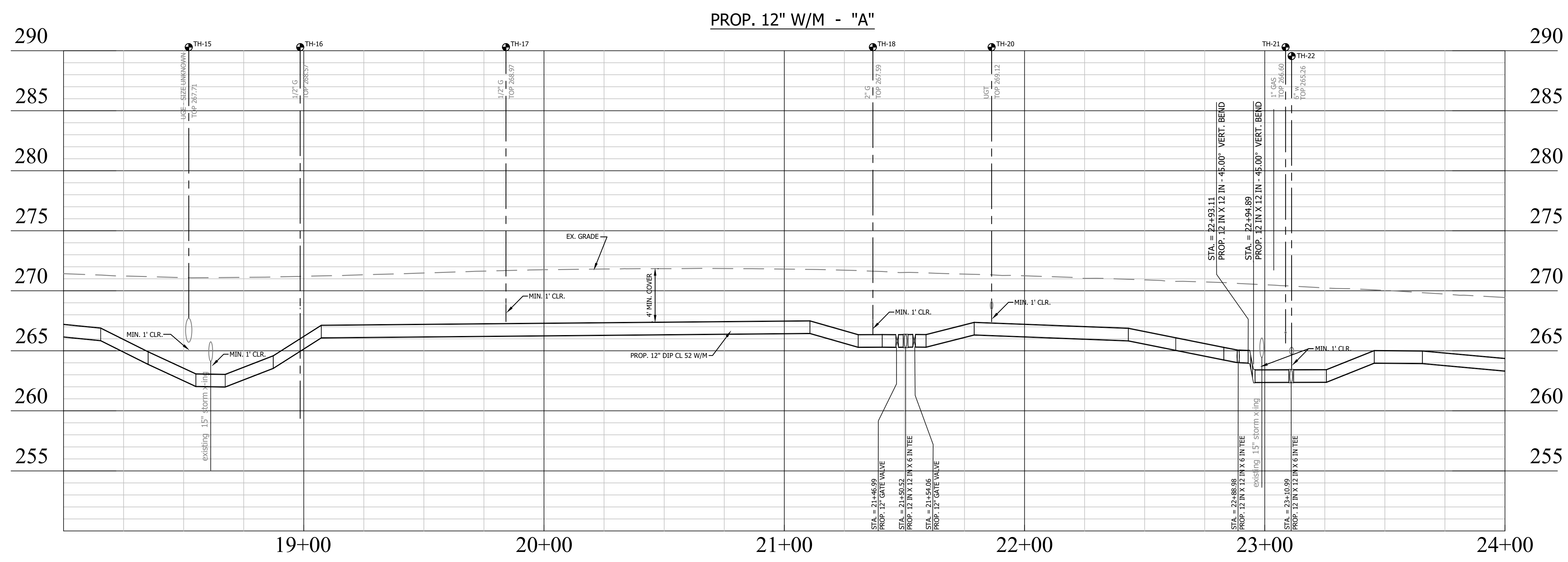
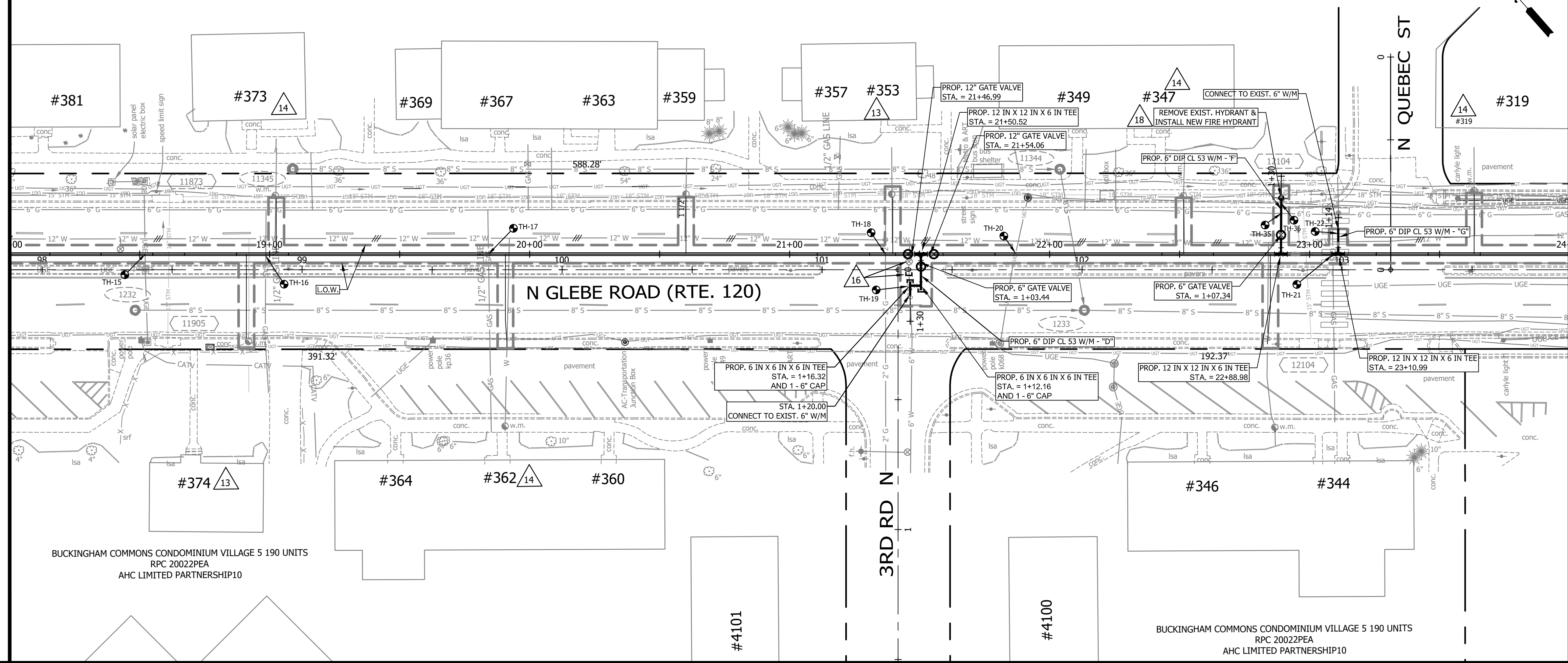
PLOTTED: AUGUST 4 2020



C051.2

MATCHLINE - SEE C051.2 - STATION 18+00

MATCHLINE - SEE C051.4 - STATION 24+00



WATERMAIN CONSTRUCTION NOTES:

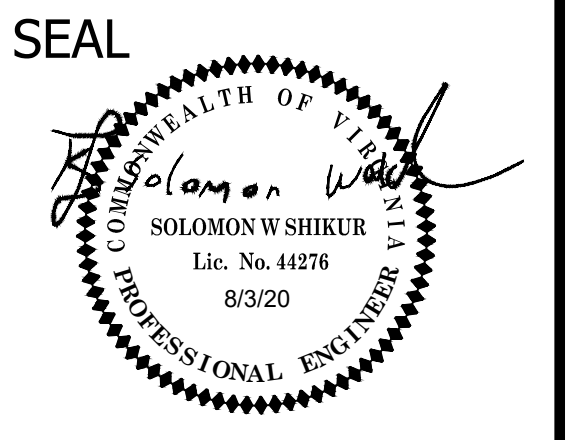
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- | Ex. Water Meter | New Water Meter to Be Installed | New Service Line to Be Installed | Remark |
|-----------------|---------------------------------|----------------------------------|--------|
| 5/8" | 3/4" | 1" | |
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APPROVALS DATE
 QUALITY CONTROL ENGINEER
 CONSTRUCTION MANAGEMENT SUPERVISOR
 WATER, SEWER, STREETS BUREAU CHIEF
 TRANSPORTATION DIRECTOR
 PROJECT MANAGER

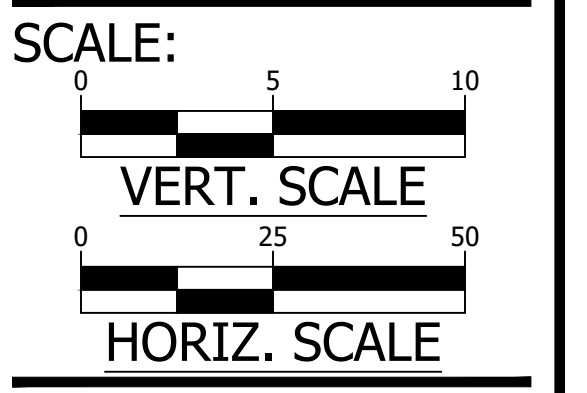
REVISIONS DATE

NO.	DESCRIPTION	DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 3

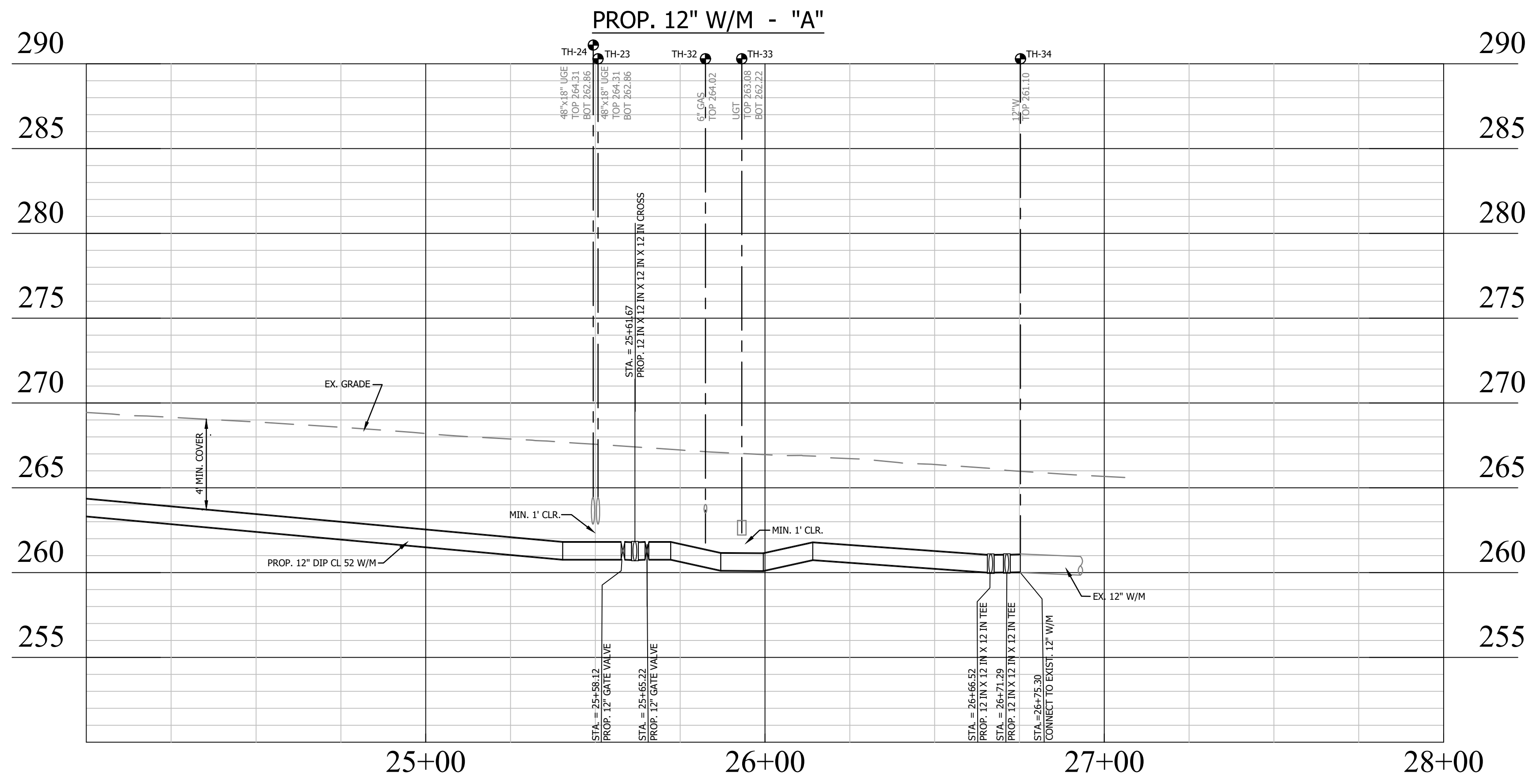
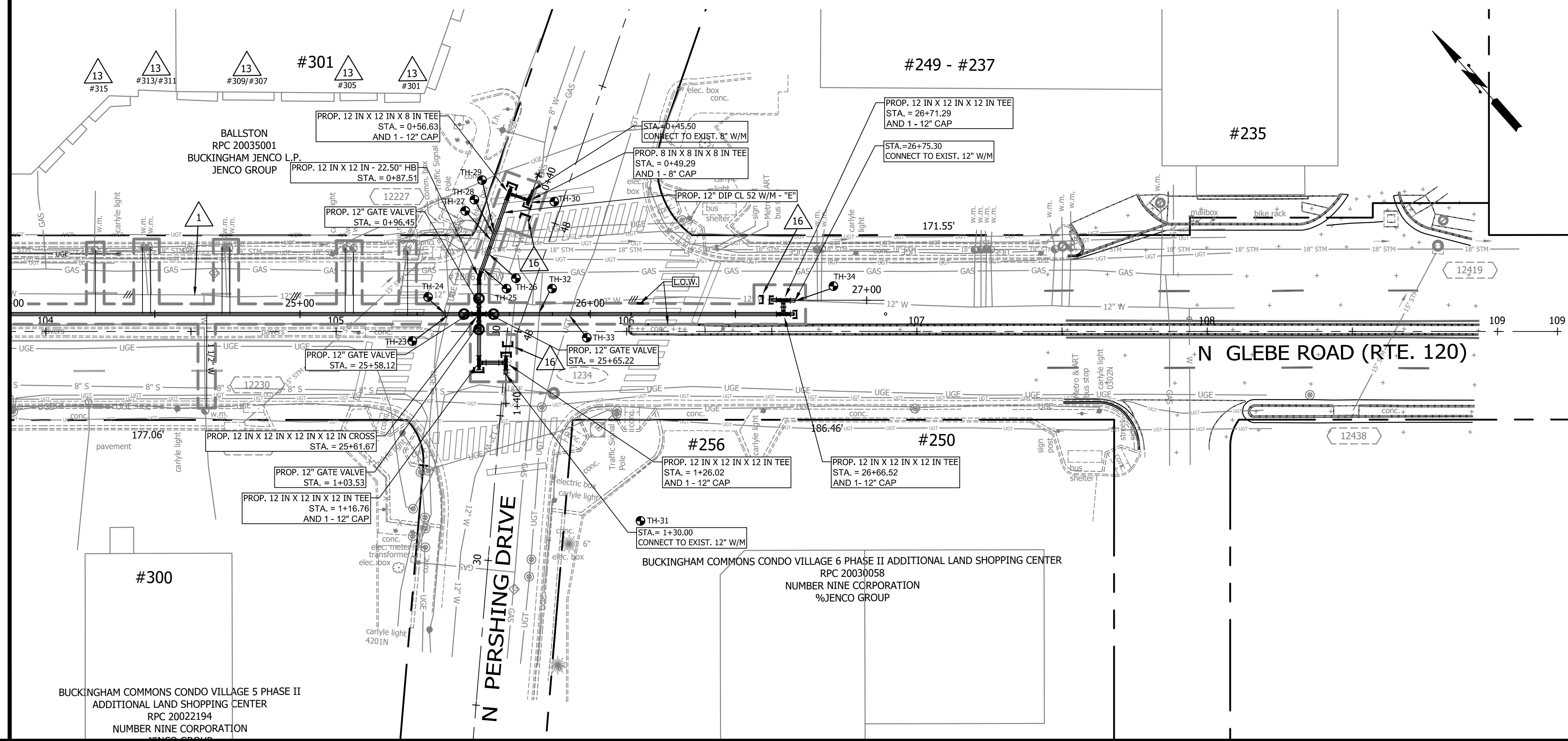
DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: AUGUST 4 2020



C051.3

MATCHLINE - SEE C051.3 - STATION 24+00



WATERMAIN CONSTRUCTION NOTES:

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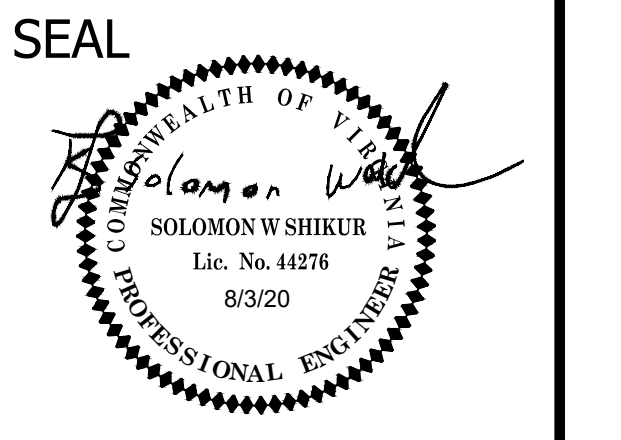
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17. IF THE WATERMAIN BY OTHERS PRECEDES THE WATERMAIN PROPOSED WITH THIS PLAN, THERE SHALL BE NO NEED FOR THIS CONNECTION.
18. EXISTING FIRE HYDRANT TO BE REMOVED AND DISPOSED. THE CONTRACTOR IS REQUIRED TO CAP HYDRANT LEAD CAP, INSTALL THRUST RESTRAINT BEHIND THE VALVE, ABANDON THE EXISTING VALVE IN PLACE AND REMOVE THE VALVE BOX AND STABILIZED THE VOID.



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 ARLINGTON, VA 22201
 PHONE: 703.228.3629
 FAX: 703.228.3606

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APPROVALS DATE

 QUALITY CONTROL ENGINEER

 CONSTRUCTION MANAGEMENT SUPERVISOR

 WATER, SEWER, STREETS BUREAU CHIEF

 TRANSPORTATION DIRECTOR

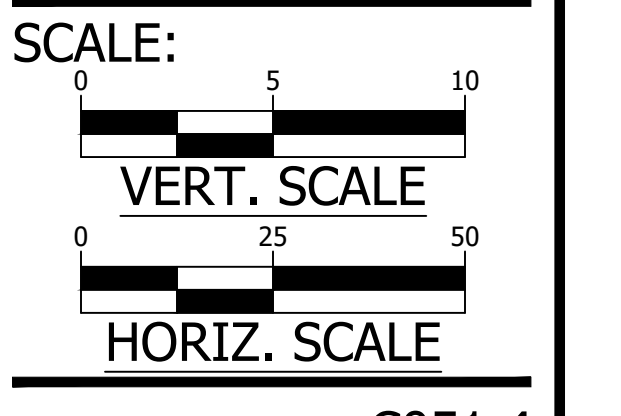
 PROJECT MANAGER

REVISIONS DATE

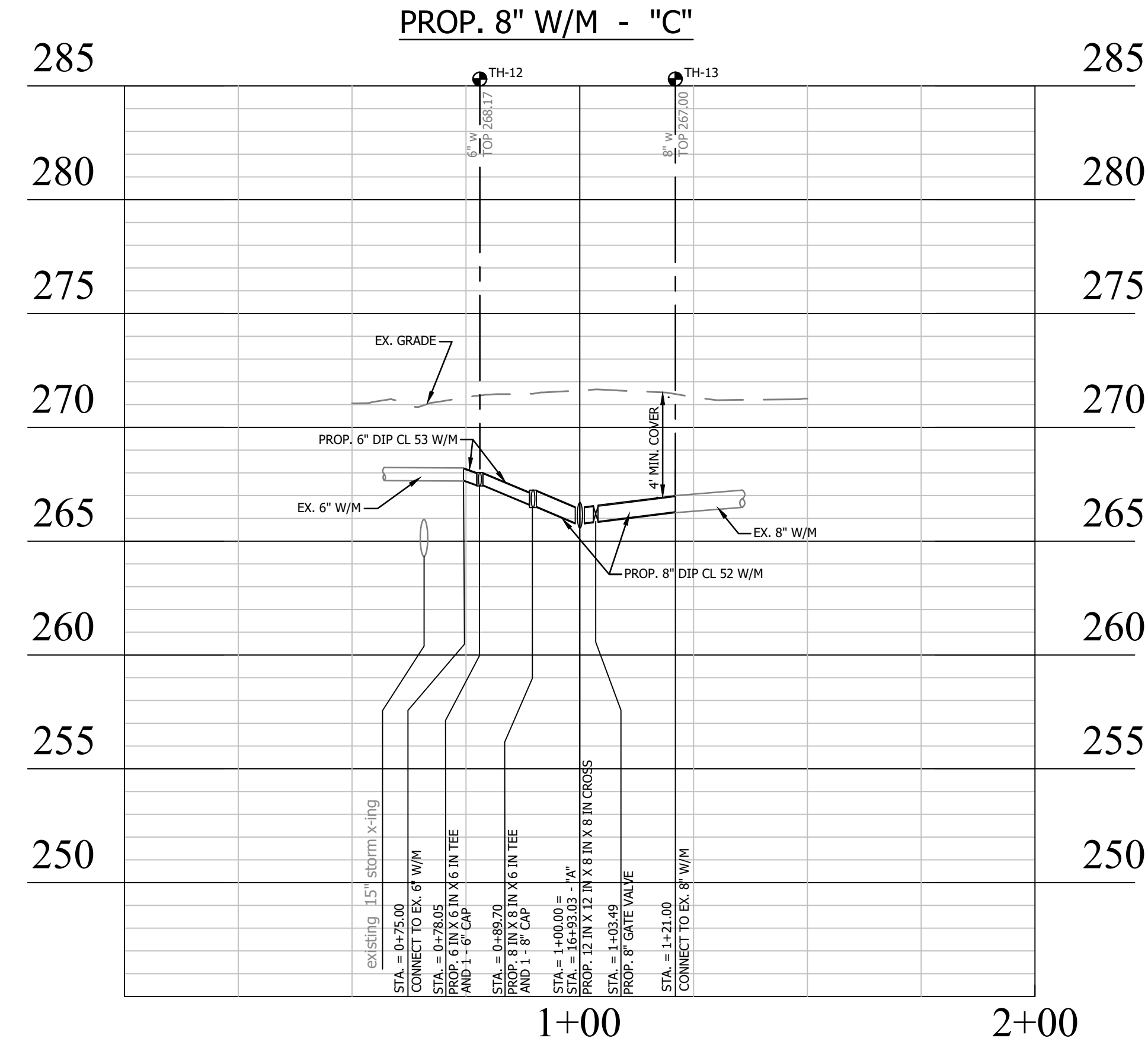
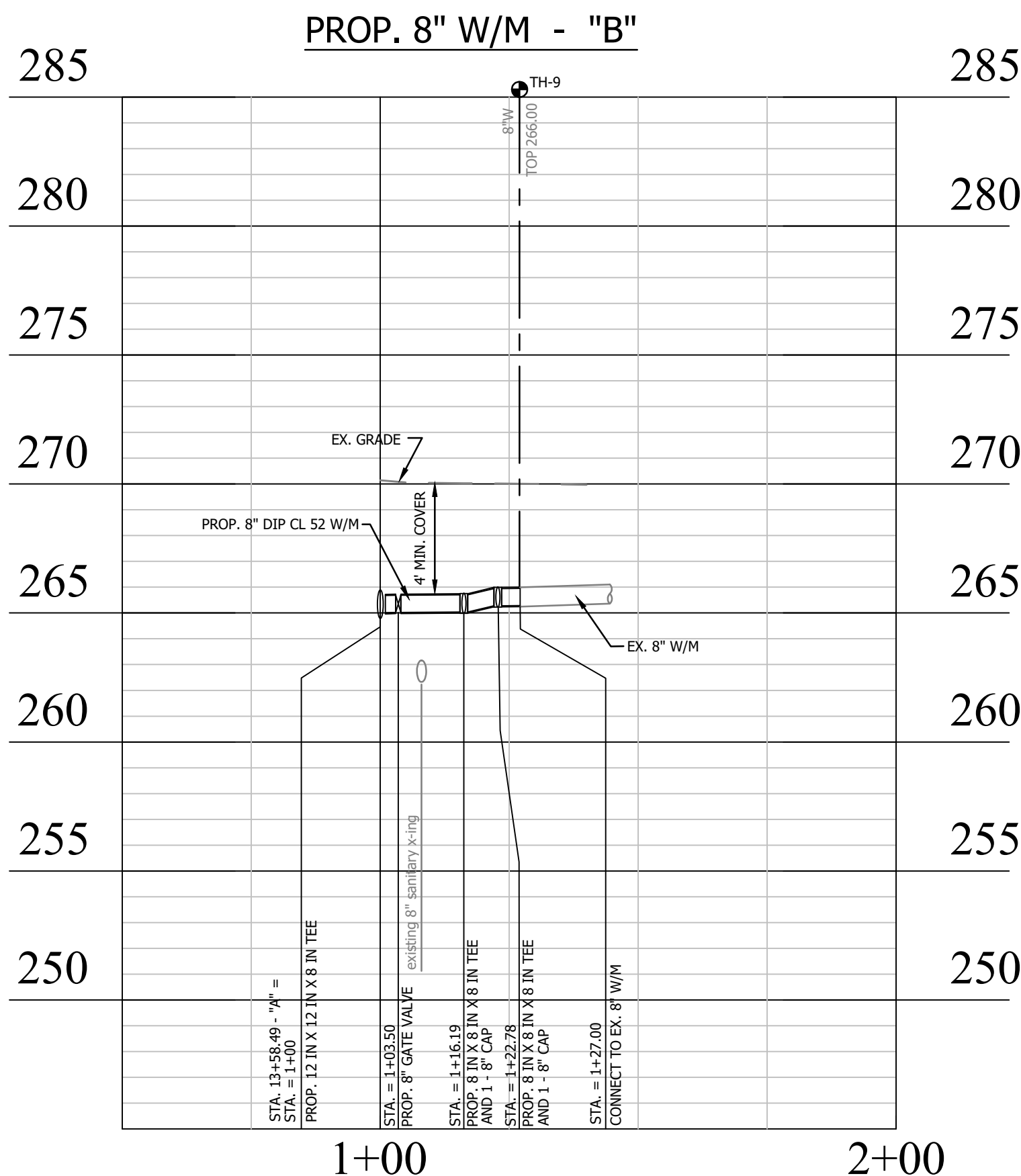
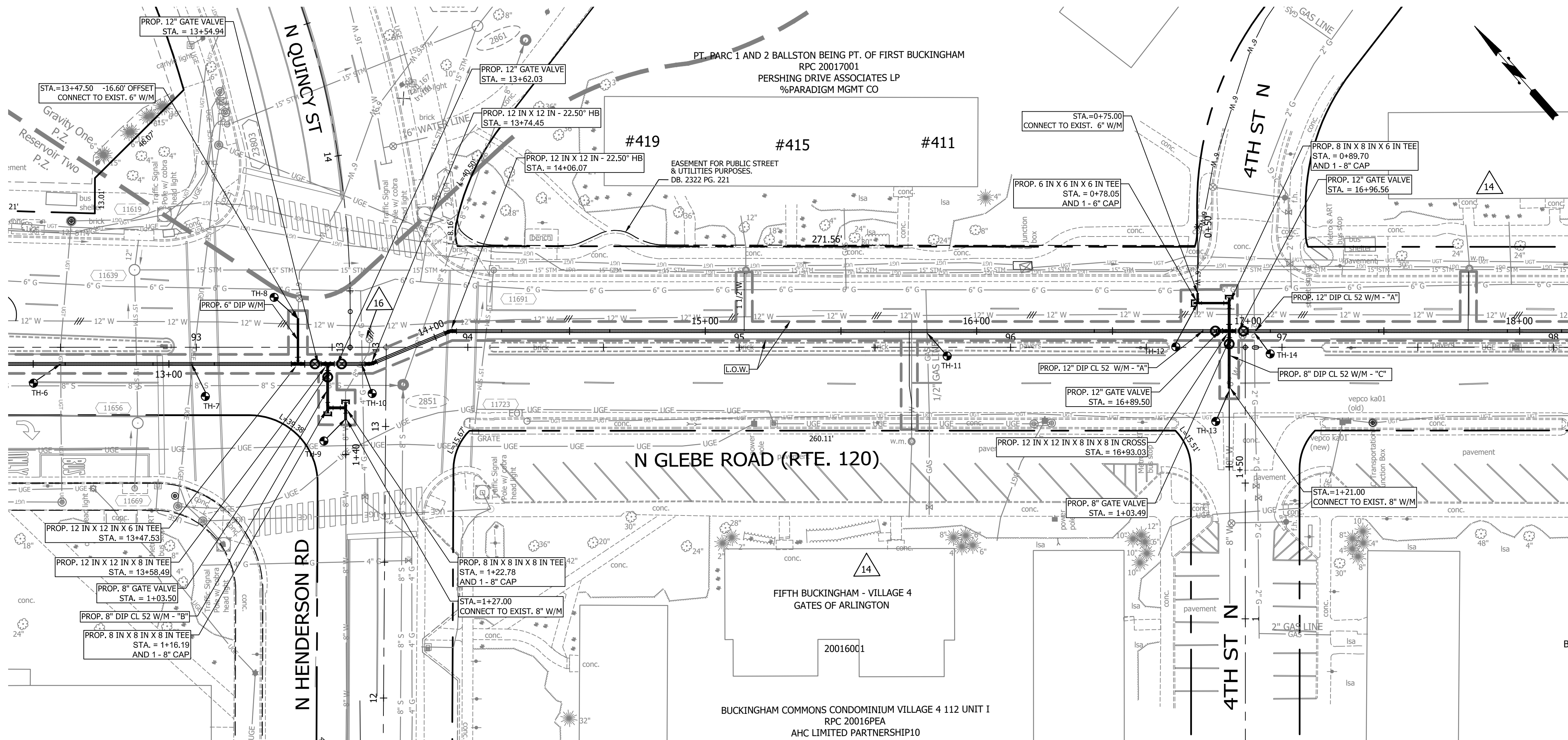
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 4

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: AUGUST 4 2020



C051.4



WATERMAIN CONSTRUCTION NOTES:

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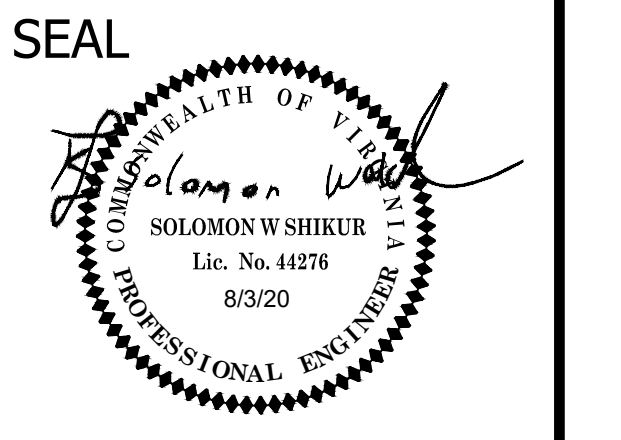
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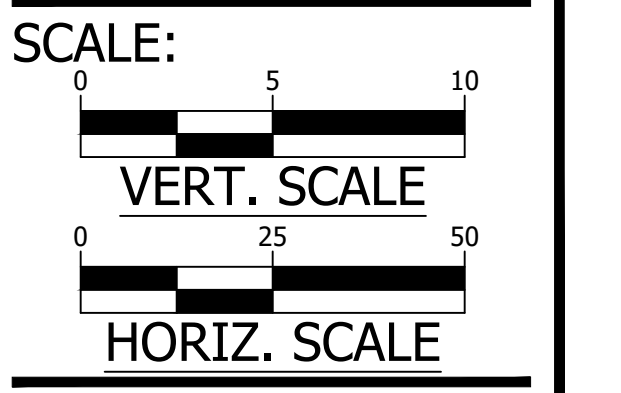
APPROVALS _____ DATE _____
 QUALITY CONTROL ENGINEER _____
 CONSTRUCTION MANAGEMENT SUPERVISOR _____
 WATER, SEWER, STREETS BUREAU CHIEF _____
 TRANSPORTATION DIRECTOR _____
 PROJECT MANAGER _____

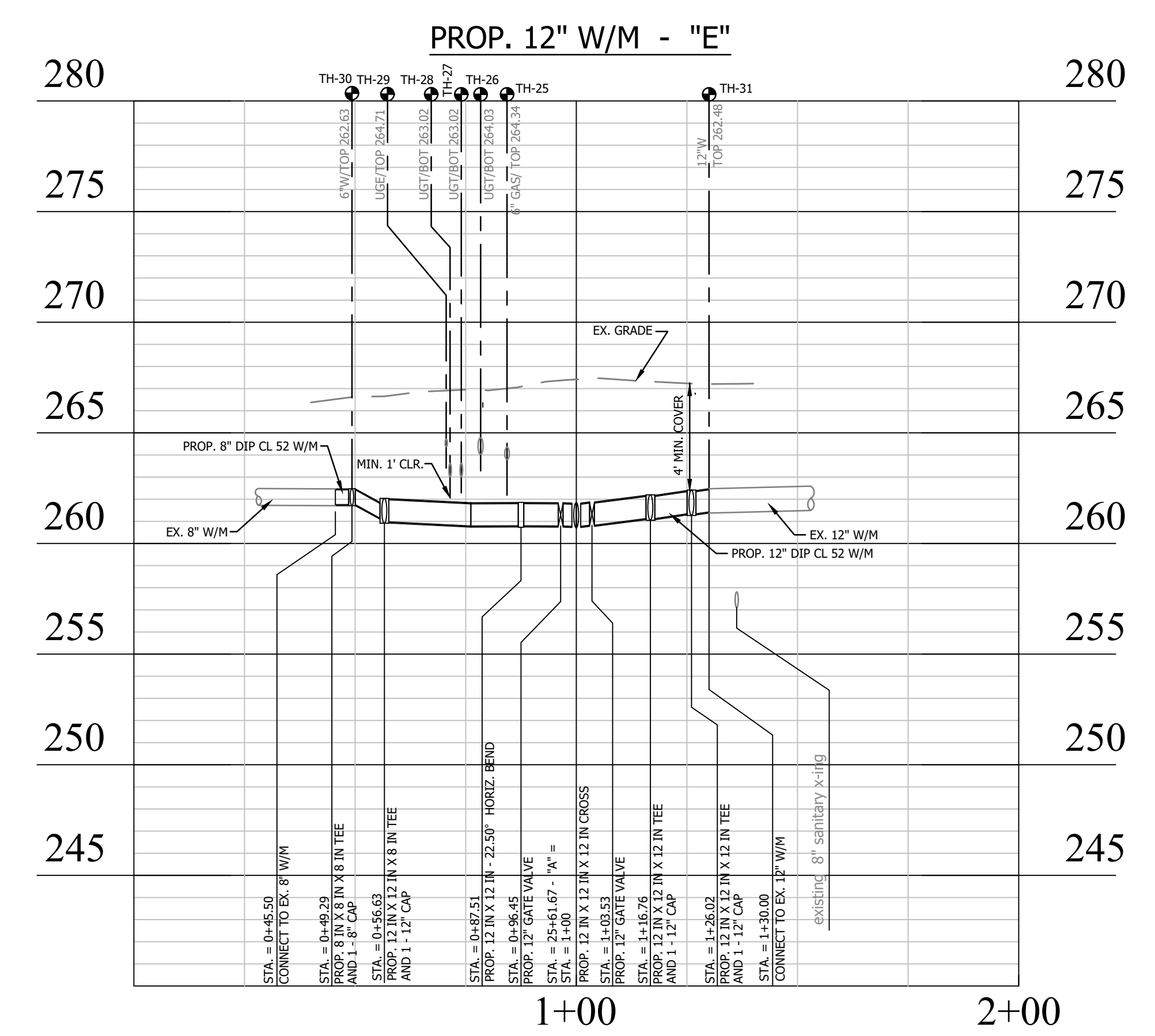
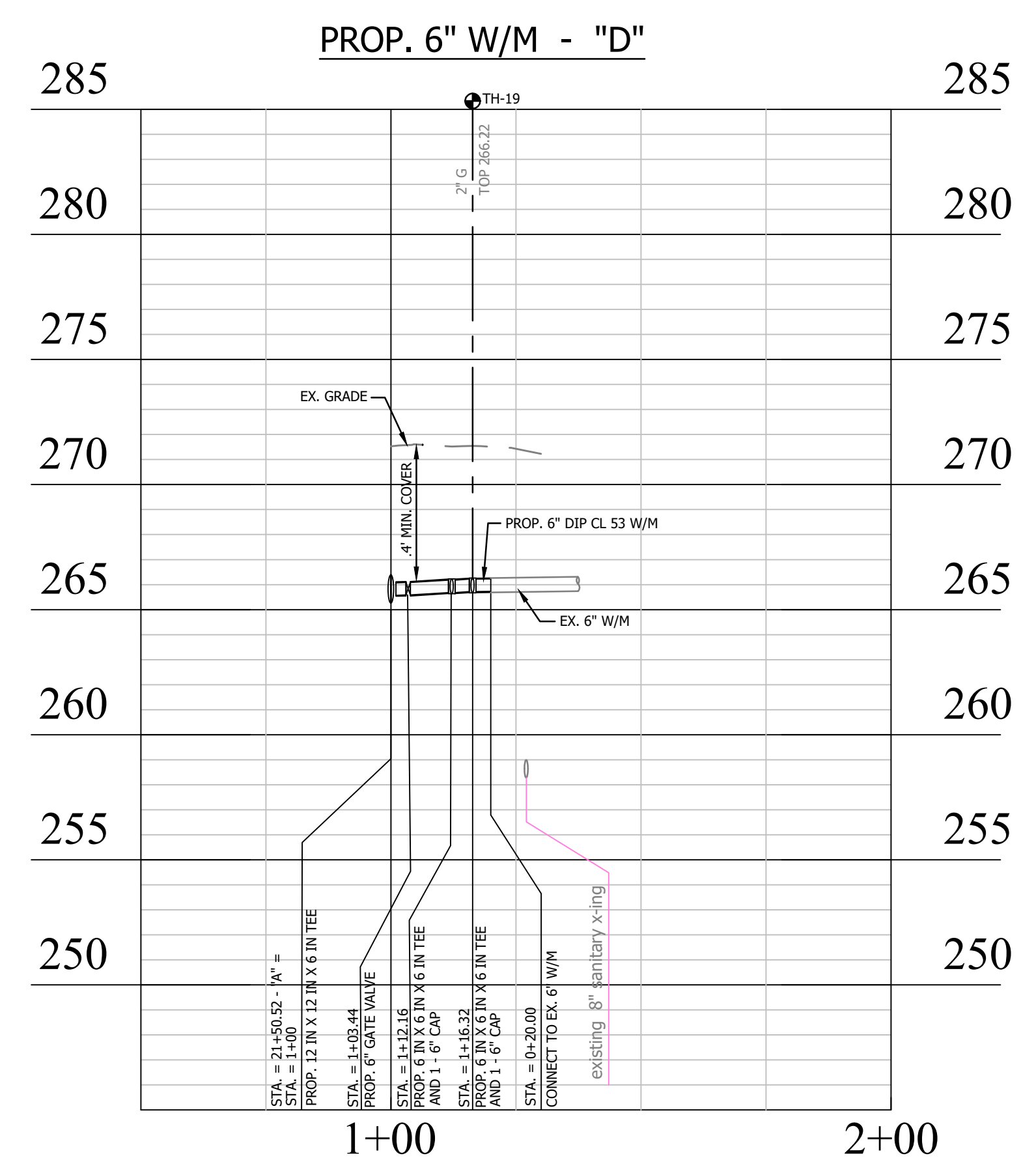
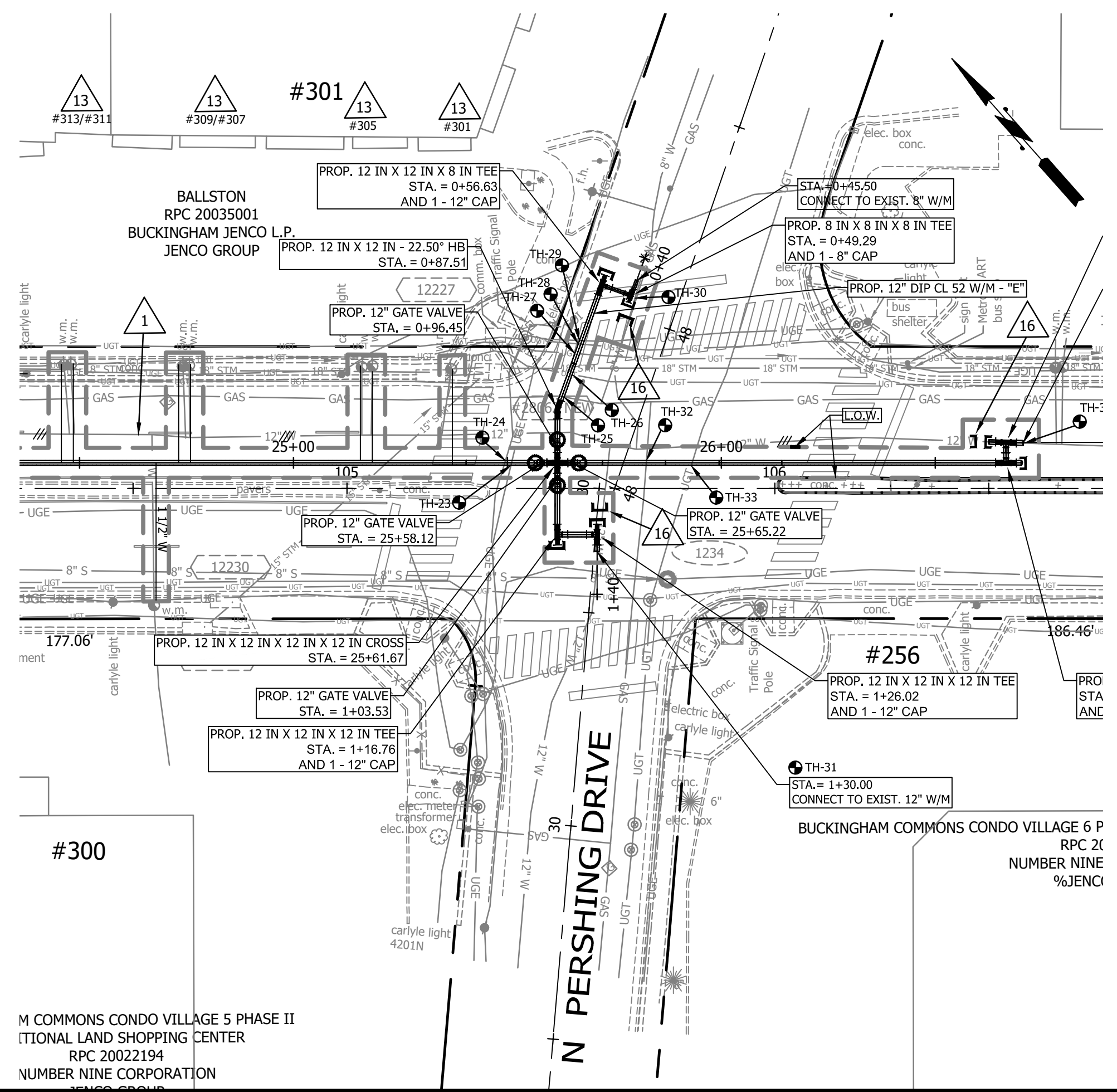
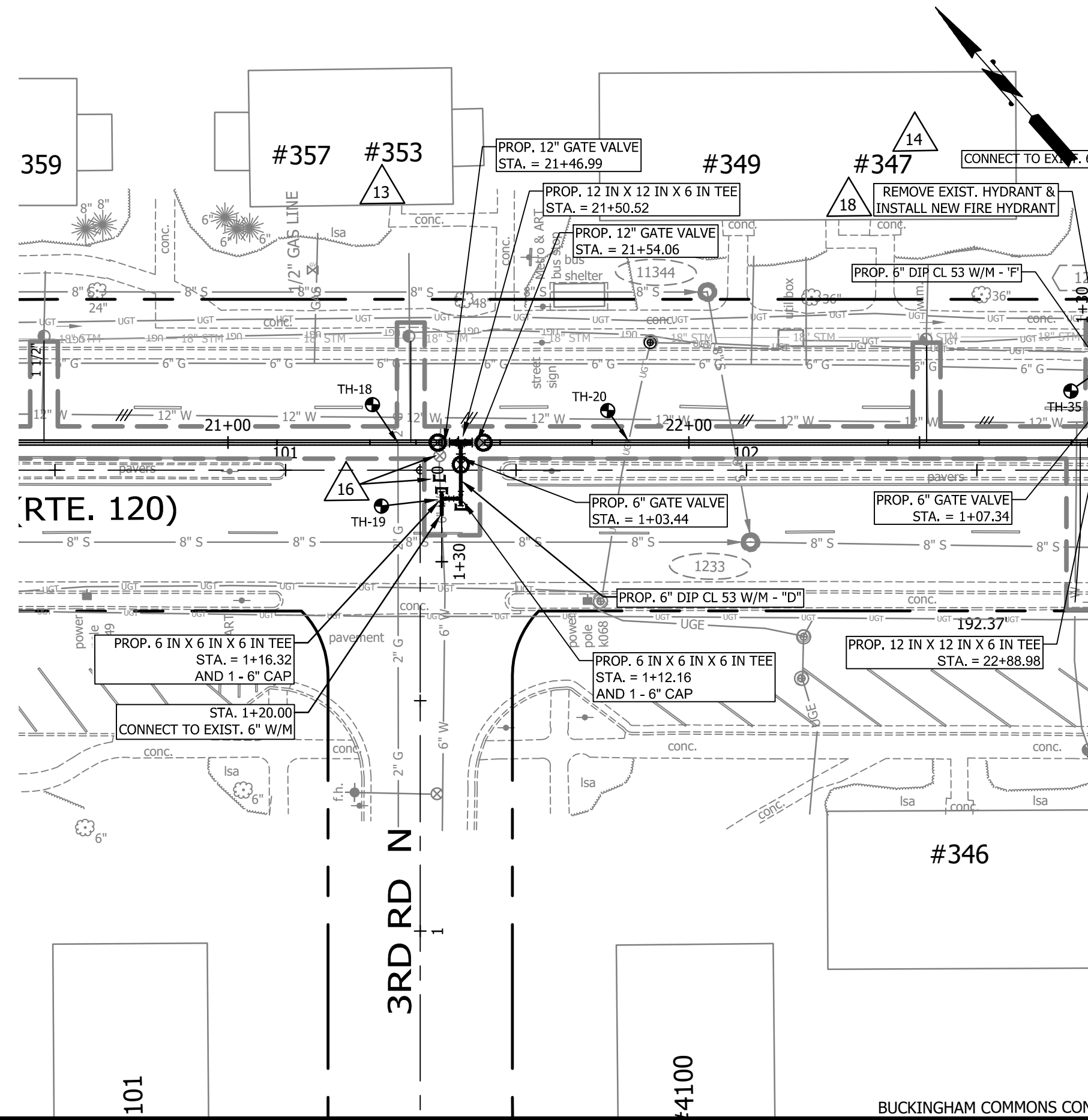
REVISIONS _____ DATE _____

N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 5

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: AUGUST 4 2020





WATERMAIN CONSTRUCTION NOTES:

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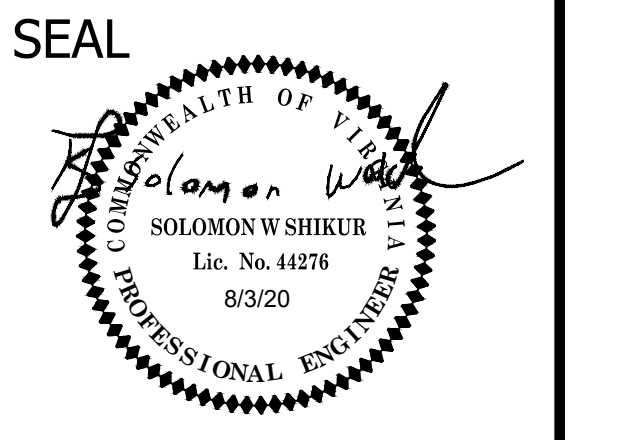
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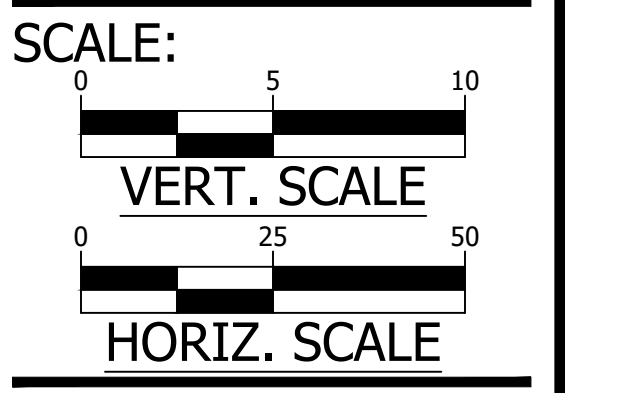
APPROVALS	DATE
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

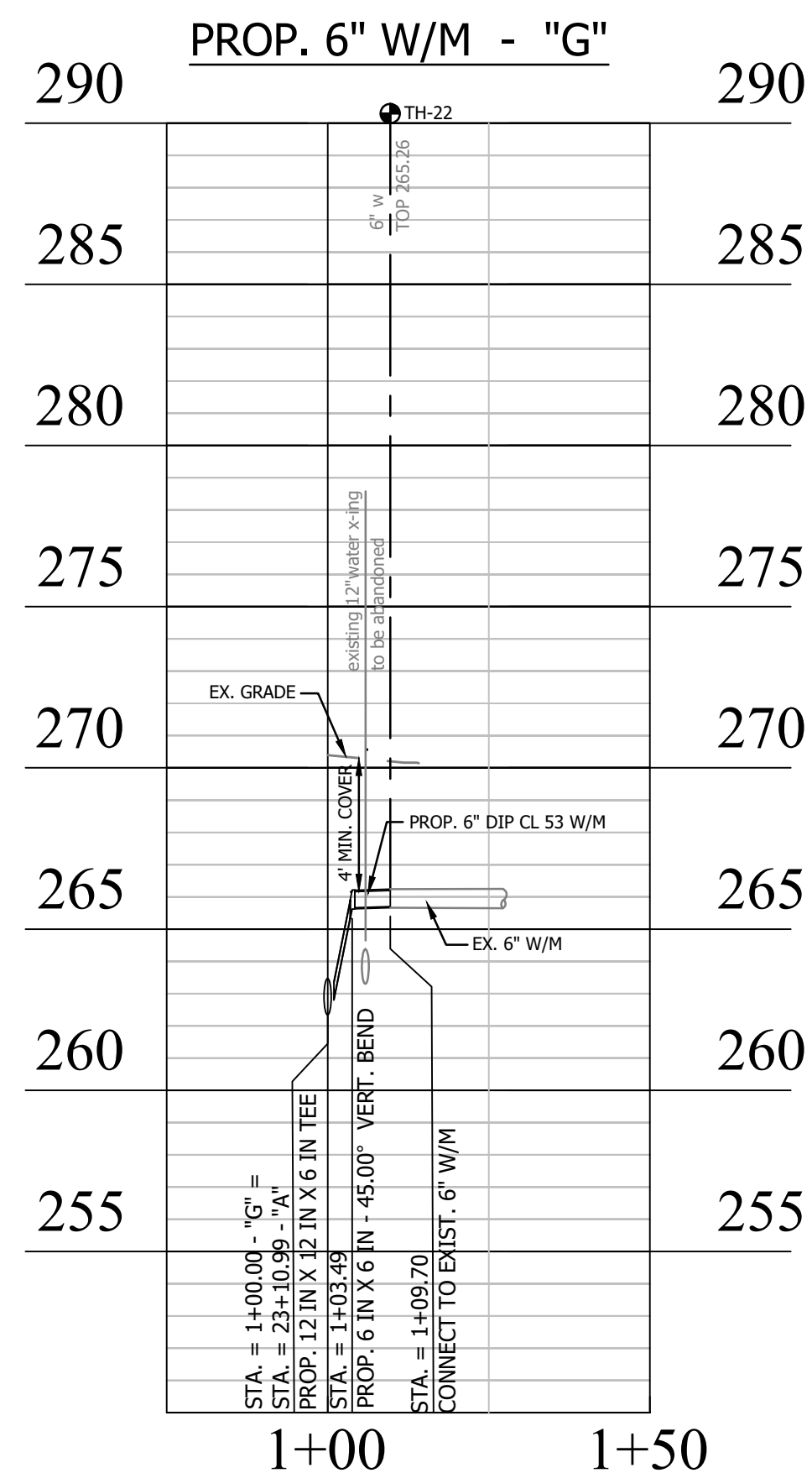
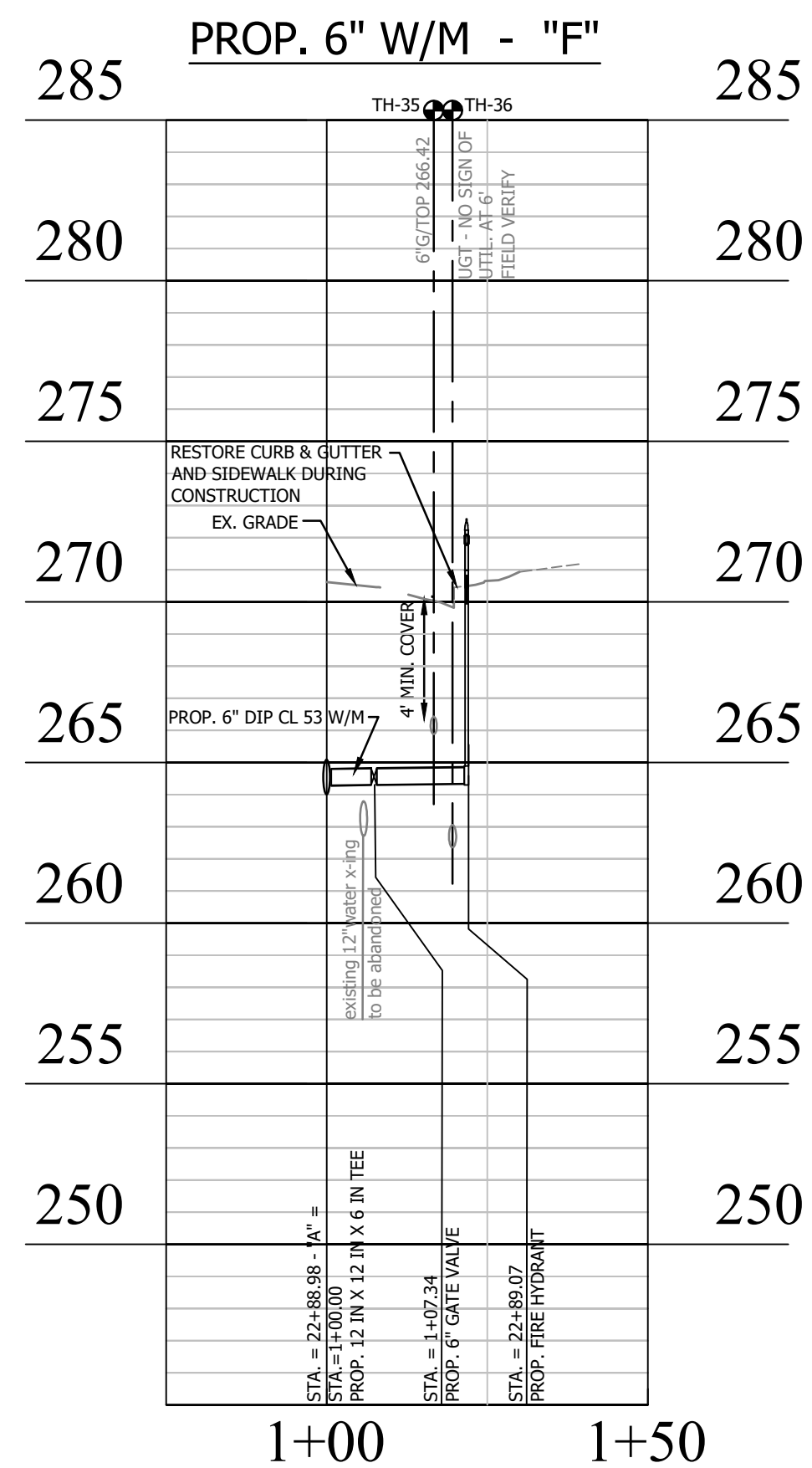
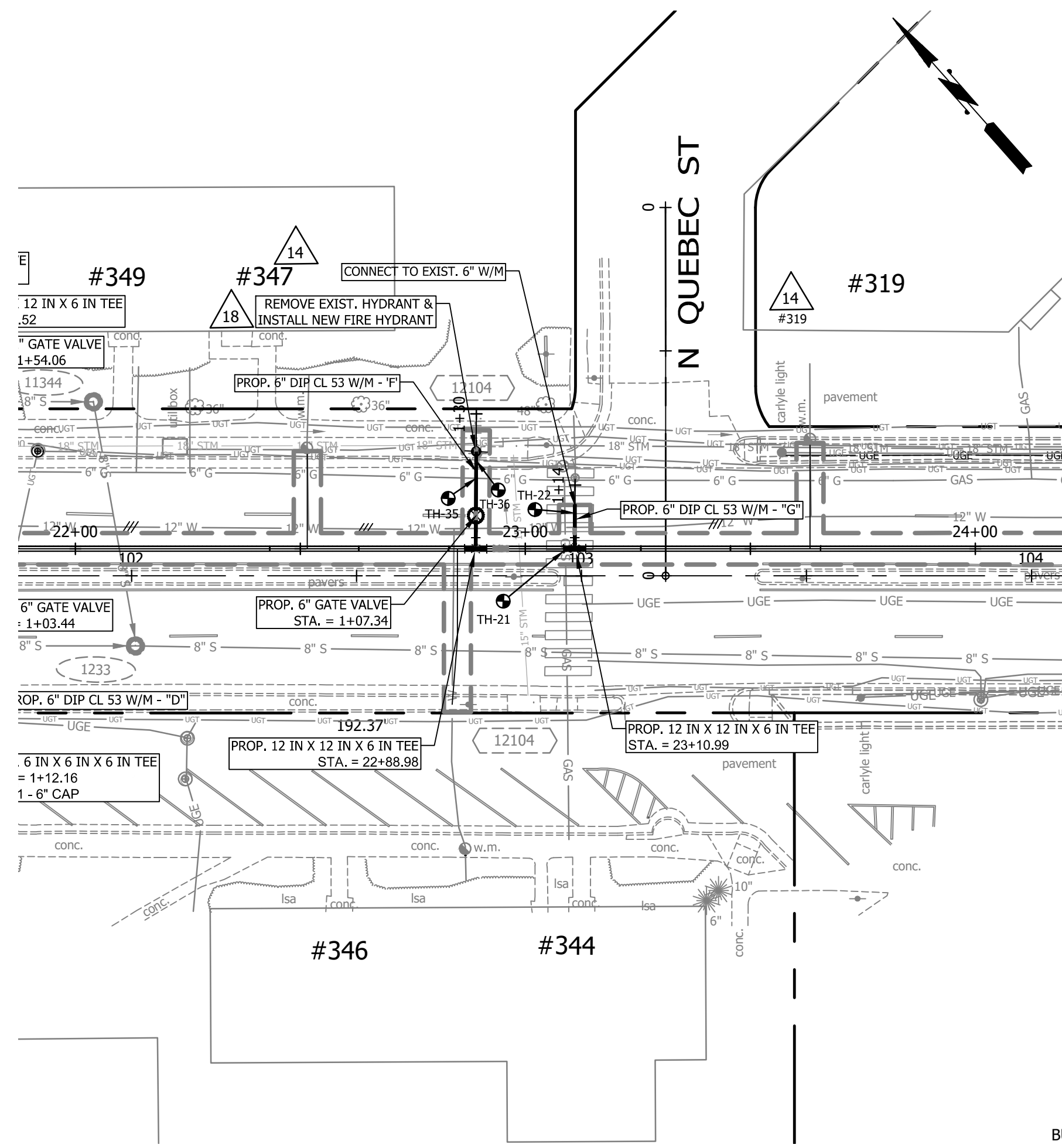
N. GLEBE ROAD WATERMAIN REPLACEMENT
 R014
 N. RANDOLPH ST. TO N. PERSHING DR.
 WATERMAIN PLAN AND PROFILE - 6

DESIGNED: JK/LD
 DRAWN: JK/LD
 CHECKED: SS

PLOTTED: AUGUST 4 2020



C051.6



WATERMAIN CONSTRUCTION NOTES:

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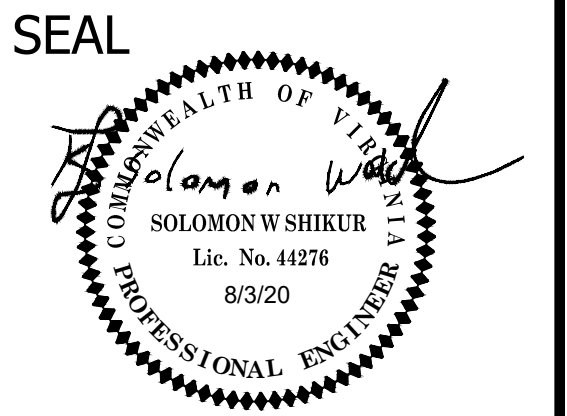
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APPROVALS DATE
QUALITY CONTROL ENGINEER
CONSTRUCTION MANAGEMENT SUPERVISOR
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TRANSPORTATION DIRECTOR
PROJECT MANAGER

REVISIONS DATE

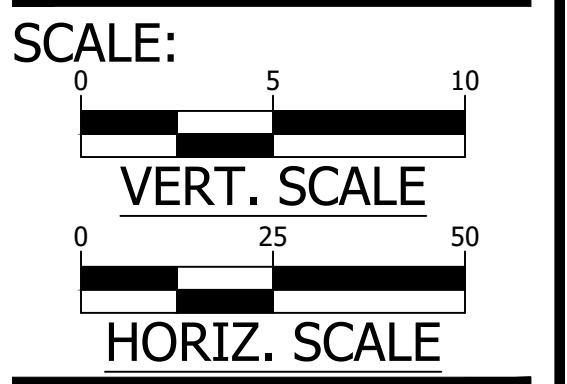
N. GLEBE ROAD WATERMAIN REPLACEMENT
R014

N. RANDOLPH ST. TO N. PERSHING DR.

WATERMAIN PLAN AND PROFILE - 7

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: AUGUST 4 2020



C051.7



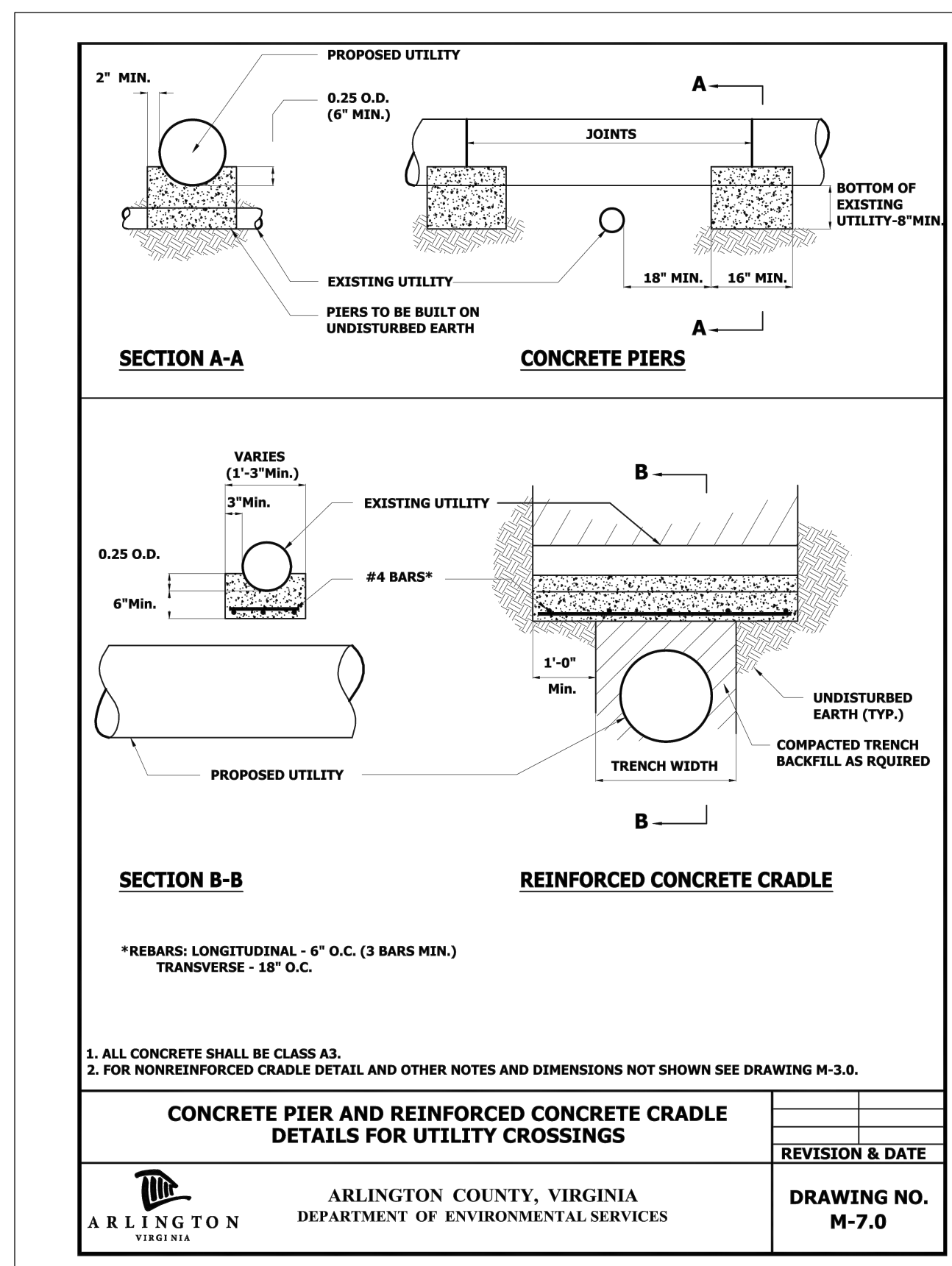
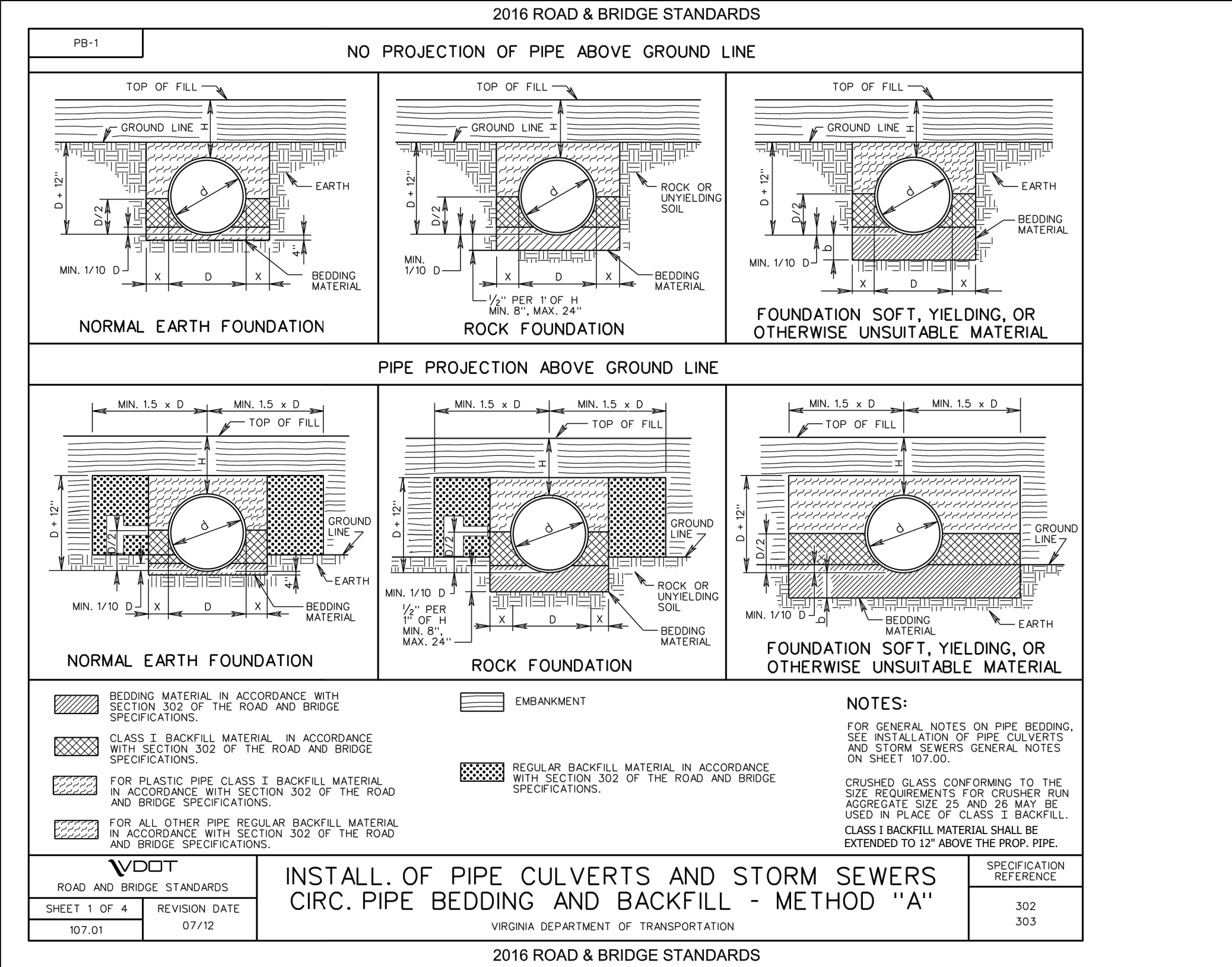
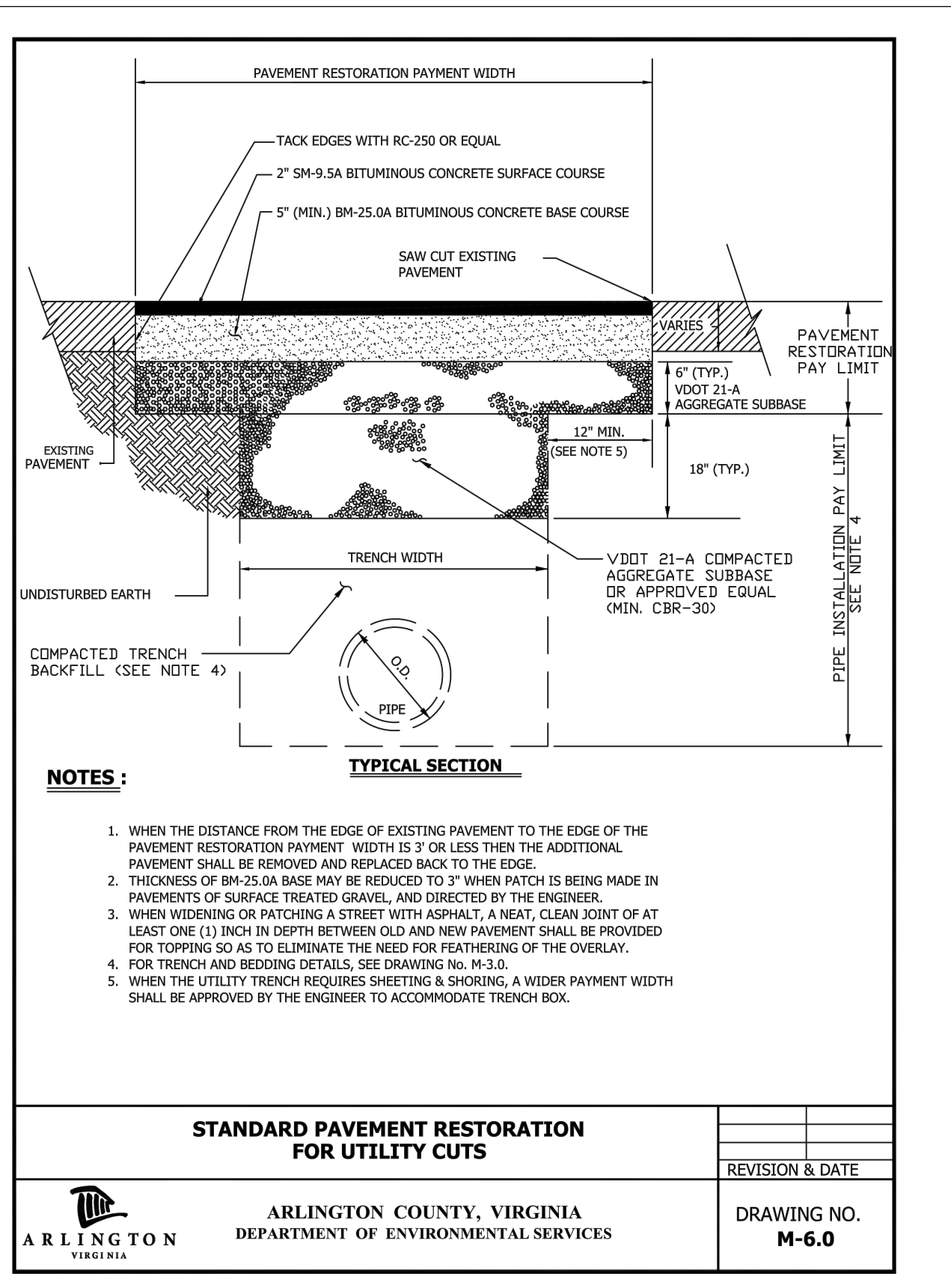
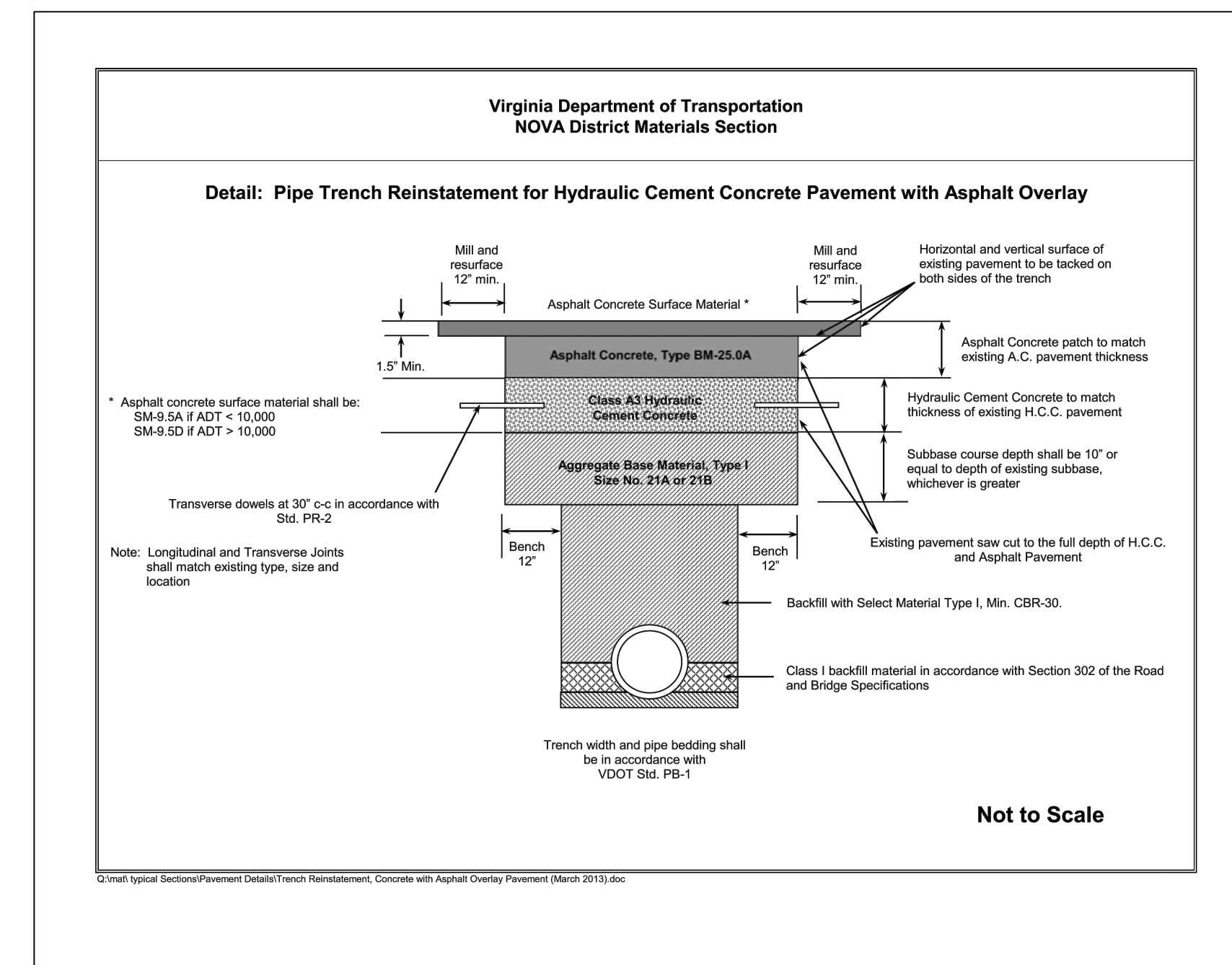
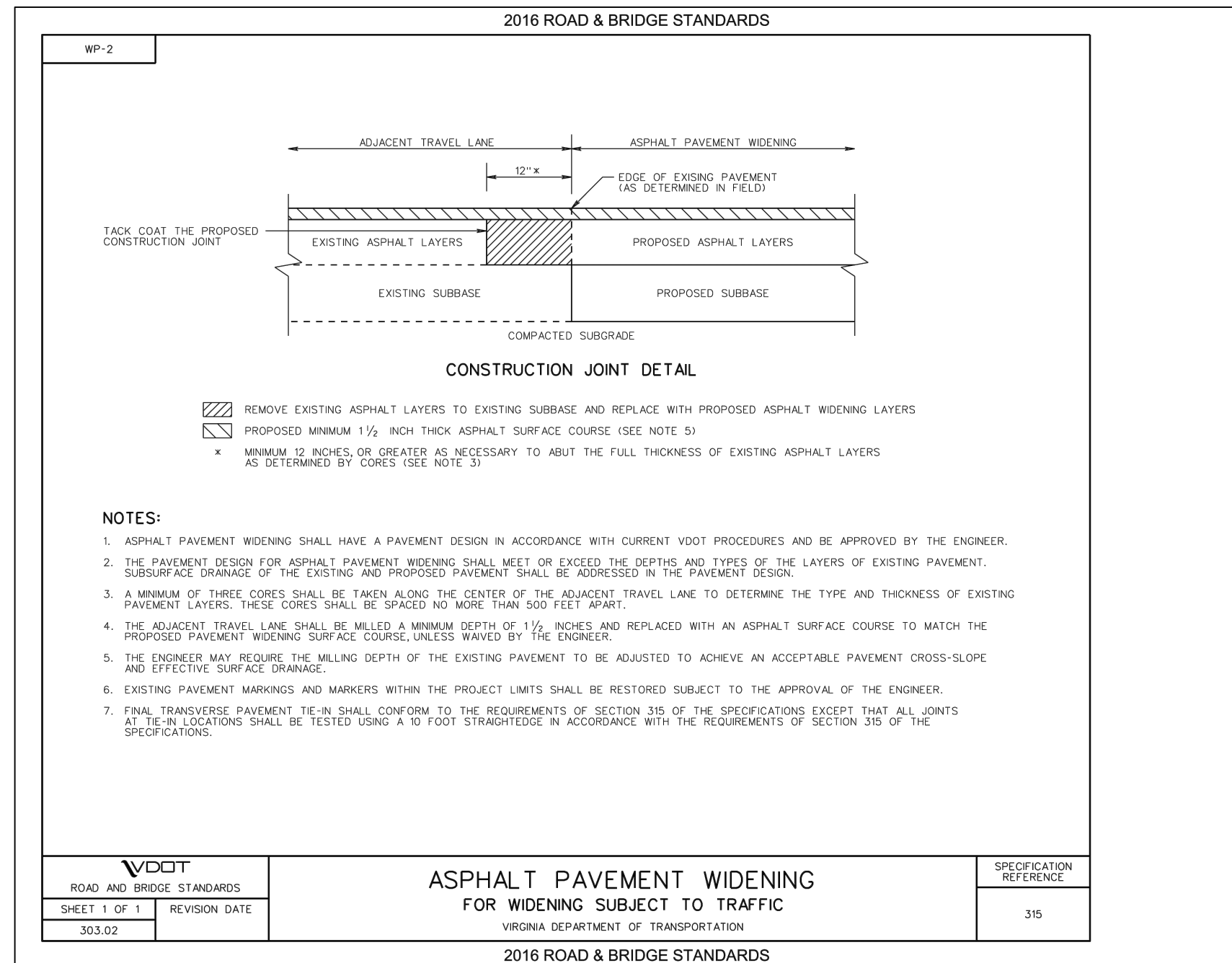
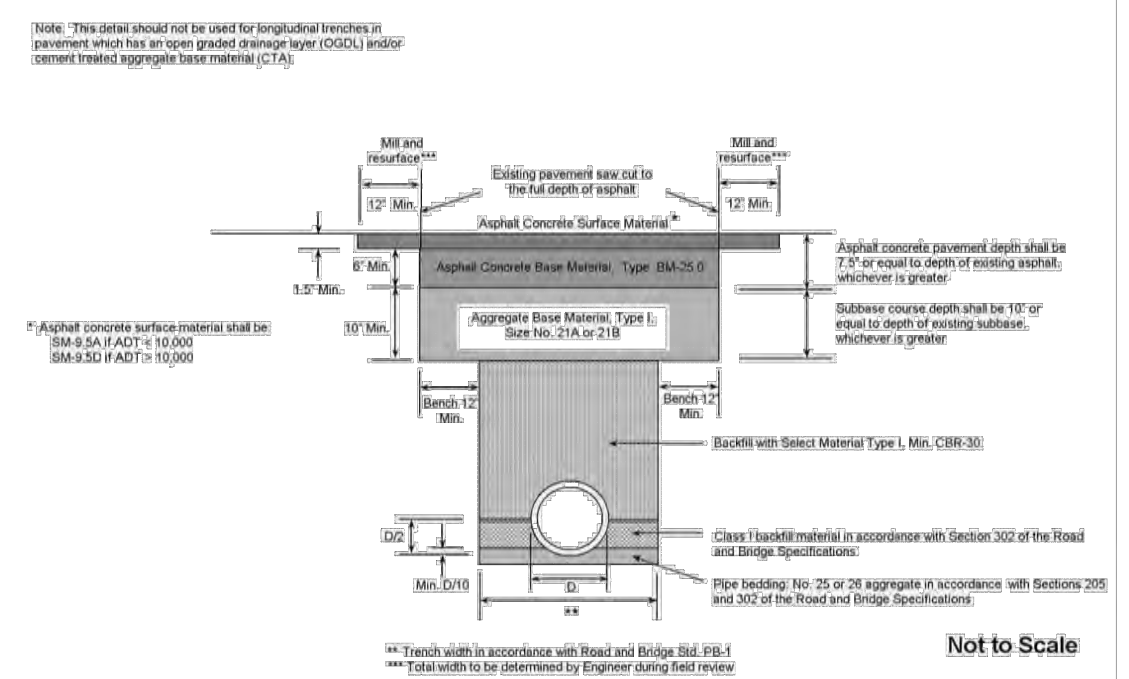
Virginia Department of Transportation NOVA Fairfax Permits 4975 Alliance Drive, Ste. 1N300 Fairfax, Virginia 22030

NOTE: Pavement restoration is a minimum 10' each side of the trench width for roads up to 5,000 ADT
NOTE: Pavement restoration is a minimum 25' each side of the trench width for roads above 5,000 ADT

ADT (Average Daily Traffic)

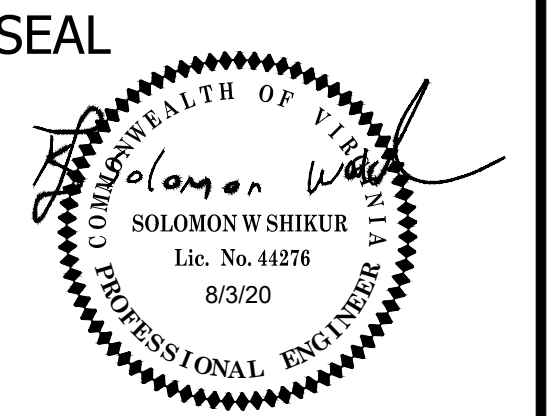
Virginia Department of Transportation NOVA District Materials Section

Detail: Pipe Bedding, Backfill and Asphalt Concrete Pavement Reinstatement



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606

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APPROVALS DATE
QUALITY CONTROL ENGINEER
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WATER, SEWER, STREETS BUREAU CHIEF
TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

N. GLEBE ROAD WATERMAIN REPLACEMENT R014 N. RANDOLPH ST. TO N. PERSHING DR. WATERMAIN NOTES & DETAILS - 1

DESIGNED: JK/LD
DRAWN: JK/LD
CHECKED: SS

PLOTTED: AUGUST 4 2020

SCALE:

AS SHOWN

POLYETHYLENE ENCASEMENT

INSTALLATION INSTRUCTIONS:

TAPING OVER POLYETHYLENE ENCASEMENT ALLOWS DIRECT TAPS TO BE MADE THROUGH THE TAPE AND POLYETHYLENE ENCASEMENT. ELIMINATES POTENTIAL REPAIRS TO EXPOSED AREA.

TIE STRAPS ALLOW EASY, QUICK, SECURE TIE DOWN OF POLYETHYLENE ENCASEMENT BEHIND THE BELL CONTOUR AND ON OVERLAPS AGAINST THE PIPE SURFACE.

FIGURE 1. REMOVE ALL LUMPS OF CLAY, MUD, CINDERS, ETC. WHICH MAY HAVE ACCUMULATED ON THE SURFACE OF THE PIPE. A POLYETHYLENE TUBE SHOULD BE CUT SO THAT IT IS APPROXIMATELY TWO FEET LONGER THAN THE PIPE SECTION. SLIP THE TUBE ONTO THE PIPE. ALLOW APPROXIMATELY ONE FOOT OF THE TUBE TO OVERHANG EACH END OF THE PIPE.

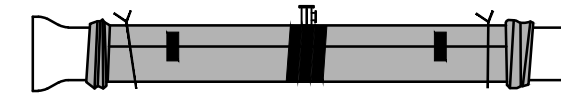


FIGURE 2. PUSH BACK THE OVERHANGING TUBE ENDS UNTIL THEY CLEAR THE PIPE ENDS.

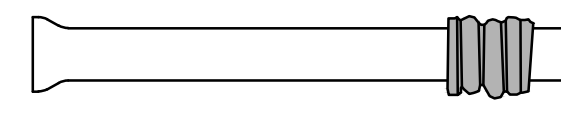


FIGURE 3. TAKE UP THE SLACK IN THE TUBE TO MAKE A SNUG BUT NOT TIGHT FIT. FOLD EXCESS BACK OVER THE TOP OF THE PIPE.

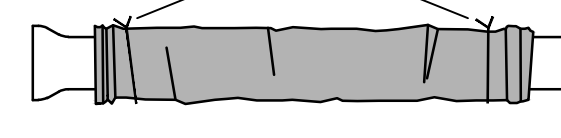


FIGURE 4. SECURE THE FOLD WITH POLYETHYLENE COMPATIBLE ADHESIVE TAPE AT SEVERAL LOCATIONS ALONG THE PIPE BARREL.

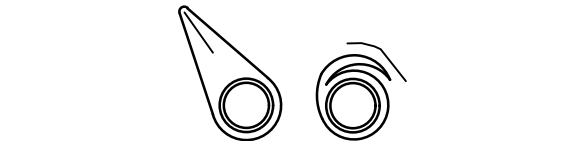


FIGURE 5. DIG A SHALLOW BELL-HOLE IN THE TRENCH BOTTOM AT THE JOINT LOCATION.

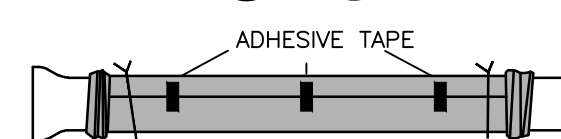


FIGURE 6. PLACE THE PIPE INTO THE TRENCH.

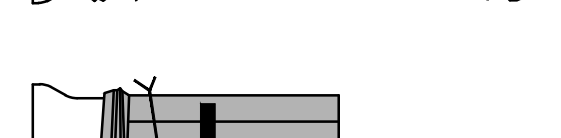


FIGURE 7. ASSEMBLE THE JOINT.

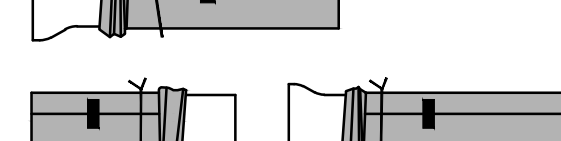


FIGURE 8. PULL THE POLYETHYLENE TUBE END OF THE PREVIOUSLY INSTALLED PIPE OVER THE NEW PIPE AND SECURE WITH THE TIE STRAP FROM THE PRECEDING PIPE BELL.

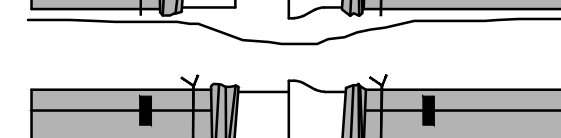


FIGURE 9. OVERLAP THE SECURED TUBE END OF THE NEW PIPE SECTION. SECURE THE NEW TUBE END IN PLACE WITH THE SPIGOT END TIE STRAP.

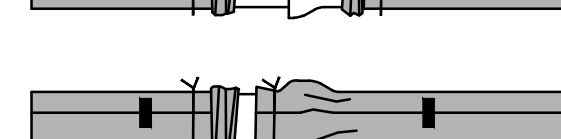


FIGURE 10. REPAIR ALL RIPS, TEARS, OR OTHER TUBE DAMAGE WITH SUITABLE ADHESIVE TAPE. EXPERIENCE HAS SHOWN THAT VERY SMALL PIN POINT SIZED PUNCTURES NEED NOT BE REPAIRED.

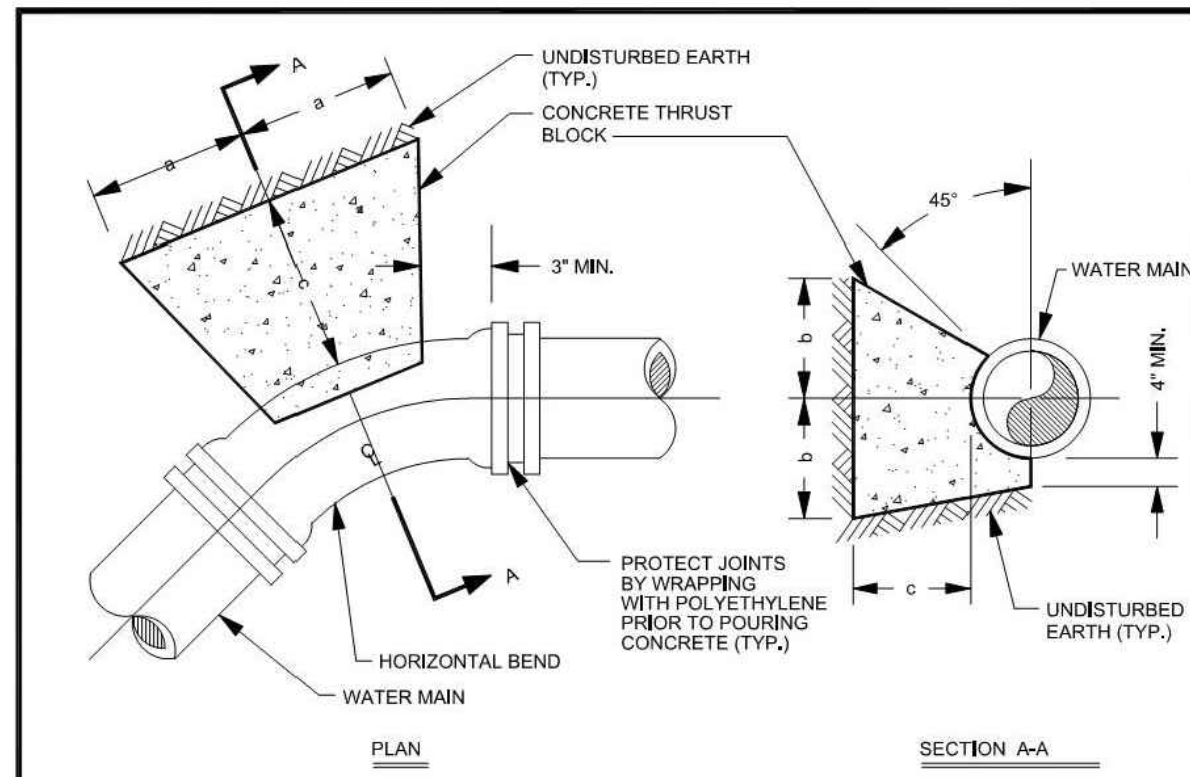
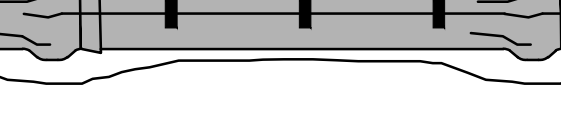
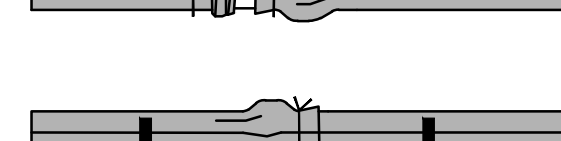


Table with columns for PIPE DIA., HORIZONTAL BEND (11 1/4", 22 1/2", 45", 90"), and MIN. C. Dimensions are provided for various pipe diameters (6" to 16").

- NOTES: 1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF... 2. BLOCKING SHOWN IS FOR A MAXIMUM STATIC PRESSURE OF 120 PSI PLUS WATER HAMMER ALLOWANCE OF 120 PSI... 3. FORM THE NON-BEARING SIDES OF THRUST BLOCKS BY USING PROPER FORMWORK... 4. SPECIAL BLOCKING DESIGN SHALL BE REQUIRED FOR CONDITIONS AND SIZES OTHER THAN THOSE INDICATED ON THIS SHEET.

CONCRETE THRUST BLOCKS FOR HORIZONTAL BENDS

Project information for Arlington County, Virginia, Department of Environmental Services, Drawing No. W-2.0.

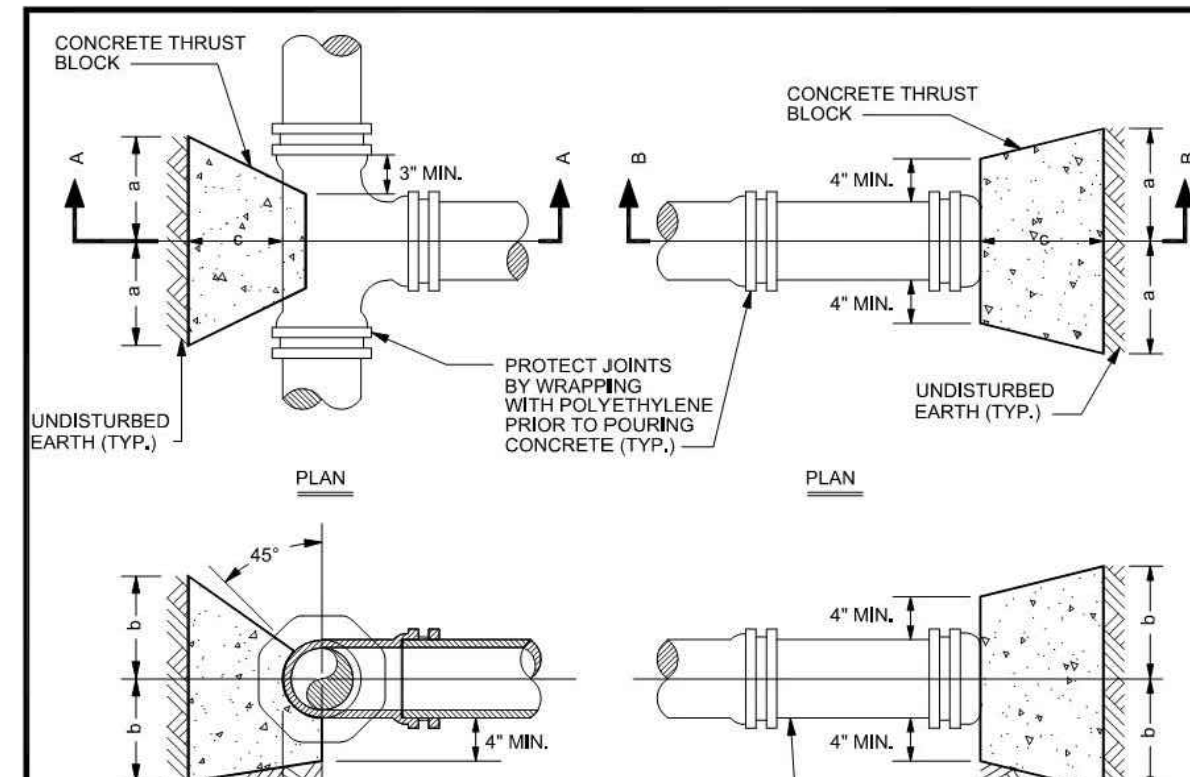
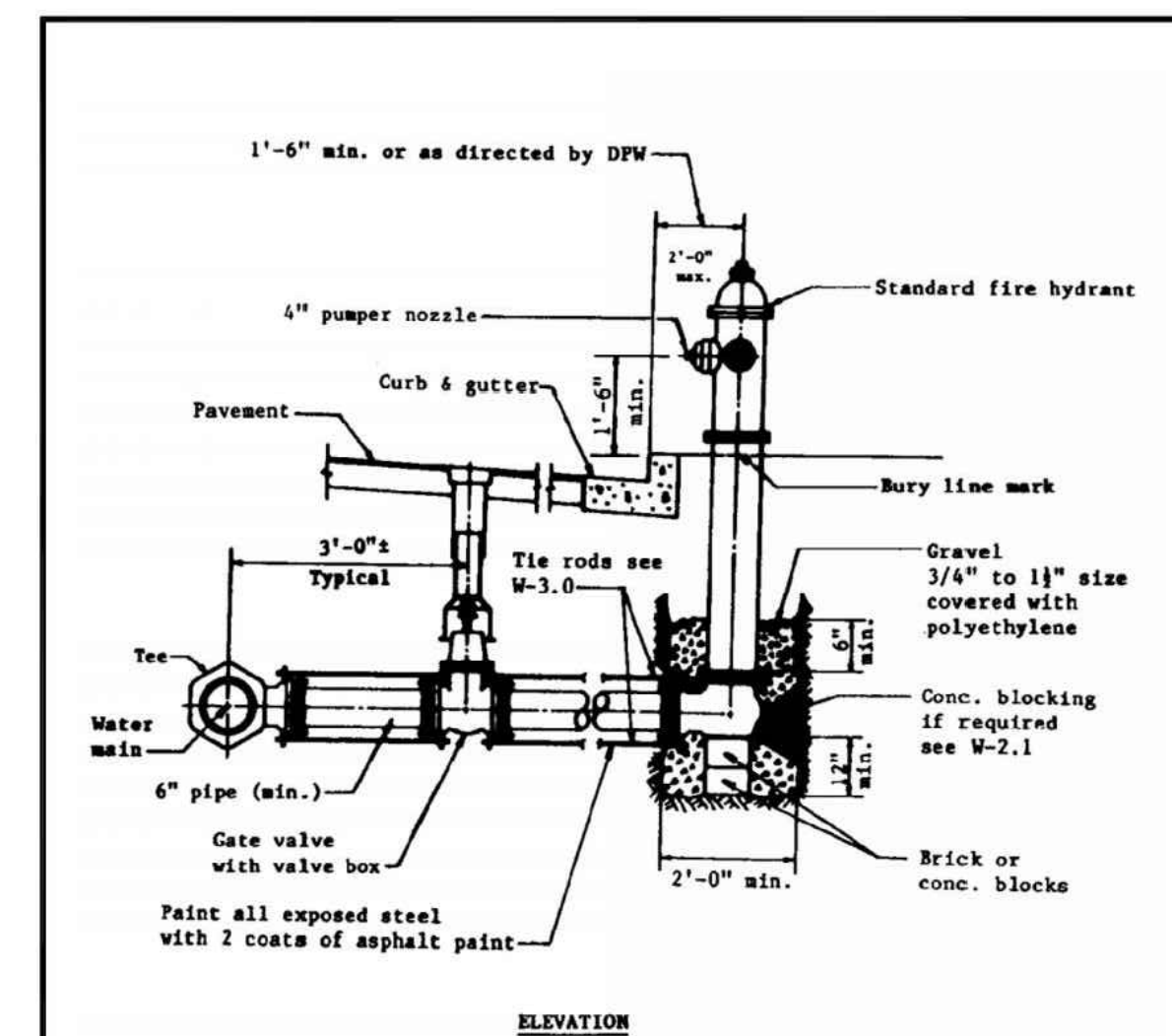


Table with columns for PIPE DIAMETER, MIN. C, TEES, and CAPS. Dimensions are provided for various pipe diameters (6" to 16").

- NOTES: 1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF... 2. BLOCKING SHOWN IS FOR A MAXIMUM STATIC PRESSURE OF 120 PSI PLUS WATER HAMMER ALLOWANCE OF 120 PSI... 3. FORM THE NON-BEARING SIDES OF THRUST BLOCKS BY USING PROPER FORMWORK... 4. THE BLOCKS FOR THE TEES SHALL BE SIZED ACCORDING TO THE DIAMETER OF THE BRANCH MAIN.

CONCRETE THRUST BLOCKS FOR TEES AND CAPS

Project information for Arlington County, Virginia, Department of Environmental Services, Drawing No. W-2.1.



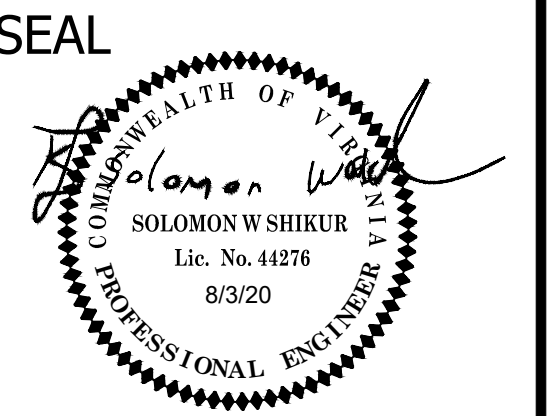
- NOTES: 1. All valves and fire hydrants shall be strapped to main unless directed otherwise. 2. Provide vertical offsets or bends as required to set hydrants at proper grade. 3. Maximum bury depth of fire hydrant is 6' unless approved otherwise.

FIRE HYDRANT SETTING

Project information for Arlington County, Virginia, Department of Environmental Services, Drawing No. W-7.0.

DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606

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APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

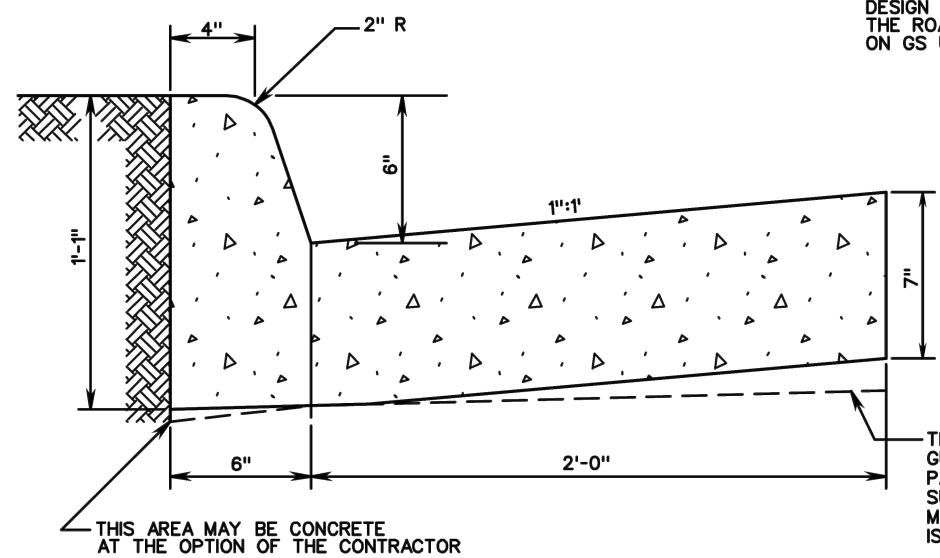
REVISIONS DATE

2016 ROAD & BRIDGE STANDARDS

CG-6

NOTES:

- 1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE. 2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST. 3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 200 FEET OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS RADIAL COMBINATION CURB & GUTTER. 4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB & GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT. 5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON CG URBAN STANDARDS.



THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES PROVIDED A MINIMUM DEPTH OF 7" IS MAINTAINED.

THIS AREA MAY BE CONCRETE AT THE OPTION OF THE CONTRACTOR

Specification reference: 105 502. Title: COMBINATION 6" CURB AND GUTTER. Virginia Department of Transportation, 2016 Road & Bridge Standards, Sheet 1 of 1, Revision Date 2010.03.

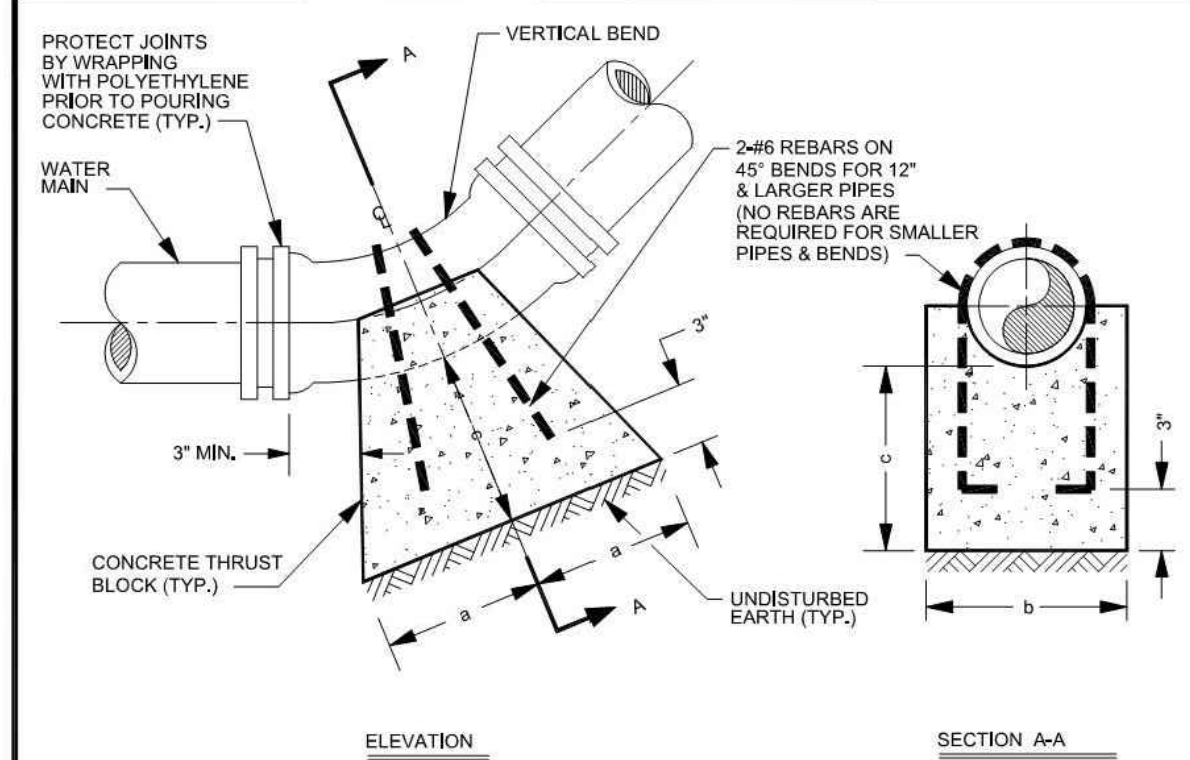


Table with columns for PIPE DIA., LOWER VERTICAL BEND (11 1/4", 22 1/2", 45"), and MIN. C. Dimensions are provided for various pipe diameters (6" to 16").

- NOTES: 1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF... 2. BLOCKING SHOWN IS FOR A MAXIMUM STATIC PRESSURE OF 120 PSI PLUS WATER HAMMER ALLOWANCE OF 120 PSI... 3. FORM THE NON-BEARING SIDES OF THRUST BLOCKS BY USING PROPER FORMWORK... 4. PAINT ALL EXPOSED STEEL WITH TWO COATS OF ASPHALT PAINT.

CONCRETE THRUST BLOCKS FOR LOWER VERTICAL BENDS

Project information for Arlington County, Virginia, Department of Environmental Services, Drawing No. W-2.2.

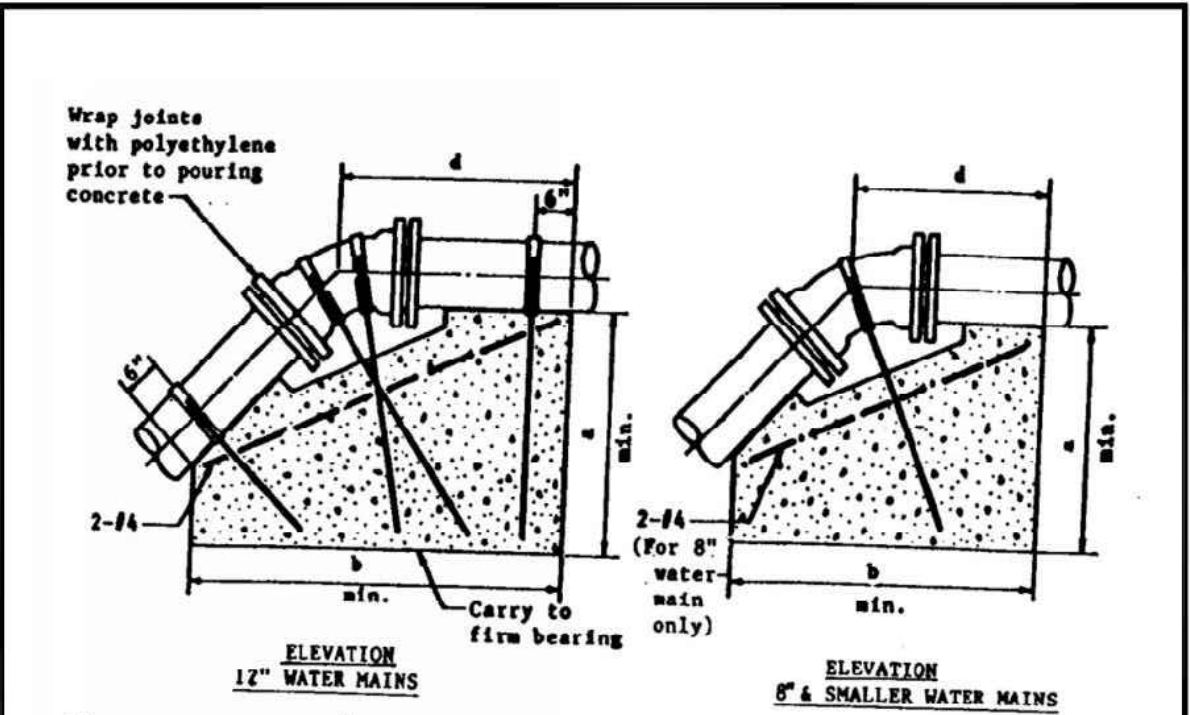


Table with columns for BEND (11 1/4", 22 1/2", 45") and MIN. C. Dimensions are provided for various pipe diameters (6" to 16").

- NOTES: 1. Blocking shown is for maximum static pressure of 120 psi plus water hammer allowance of 120 psi. Special blocking shall be designed for sizes and conditions other than those indicated. 2. Paint all exposed steel with 2 coats of asphalt paint. 3. Form sides of thrust blocks.

CONCRETE THRUST BLOCKS UPPER VERTICAL BENDS

Project information for Arlington County, Virginia, Department of Environmental Services, Drawing No. W-2.3.

N. GLEBE ROAD WATERMAIN REPLACEMENT R014 N. RANDOLPH ST. TO N. PERSHING DR. WATERMAIN NOTES & DETAILS - 2

DESIGNED: JK/LD DRAWN: JK/LD CHECKED: SS

PLOTTED: AUGUST 4 2020

SCALE:

AS SHOWN

EXHIBIT G

ARLINGTON COUNTY DES ENGINEERING
SPECIAL CONDITIONS

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PROJECT SUMMARY

The Contractor shall replace the existing 12" water main along N Glebe Road between N Randolph Street and N Pershing Street with a new 12" water main. The main scope of work includes the installation of approximately 2041 linear feet of 12" water main, approximately 87 linear feet of 8" water main and 90 linear feet of 6" watermain with various appurtenances. The work also includes several water main connections to existing services or existing fire hydrants, 26 each of water service re-taps, restoration of disturbed or damaged surfaces during construction and full depth pavement restoration of the excavated areas.

The Contractor shall provide all resources to successfully perform the terms of this contract in accordance with project plans, and in compliance with Arlington County and VDOT Standards and Specifications. The Contractor shall perform the work complete, in place, tested, and ready for continuous service.

All work within the VDOT Right-Of-Way shall be performed in accordance with the VDOT Standards and Specifications, unless otherwise noted. All work within the County Right-Of-Way shall be in accordance with the Arlington County Standards and Specifications, unless otherwise noted.

SUPPLEMENTS TO THE GENERAL CONDITIONS

These Conditions modify the Arlington County Construction General Conditions. All provisions that are not modified or deleted by these Supplemental Conditions shall remain in full force and effect.

The address system used in these Supplemental Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

ARTICLE B – DRAWINGS, SPECIFICATIONS AND RELATED DATA

SC-B.10 TESTS

Add the following new language to Paragraph B.10:

All materials testing shall be in compliance with the Arlington County Materials Testing Specification Reference. This document specifies the method and frequency of testing for Arlington County projects. A copy of this document is included in the bid documents. This shall be incidental to the work and no separate payment will be made.

The Contractor shall engage the services of a geotechnical company, acceptable to both the County and VDOT, to conduct all materials testing per the County and VDOT Specifications.

If it is observed that samples for testing are being improperly taken or that samples are being taken from an area that is not fully representative of all project conditions, then Contractor shall take and test additional samples at the County Project Officer's request from areas designated by the County Project Officer and at the Contractor's expense.

In addition, the Contractor shall provide the County with unfettered site access as needed for VDOT/County personnel or VDOT/County consultants to enter the site, inspect, and perform any additional testing for any and all materials (including soil, concrete, asphalt, etc.).

Compaction results must meet VDOT Specifications and be certified by a Geotechnical Engineer licensed in Virginia. This work shall be at no cost to the County.

ARTICLE C – COUNTY, COUNTY PROJECT OFFICER, AND CONTRACTOR RELATIONS

SC-C.1 STATUS OF COUNTY PROJECT OFFICER OR DESIGNEE

Add the following new language to Paragraph C.1:

The County Project Officer will coordinate and consult with the VDOT Field Inspector as appropriate when working within the VDOT Right-Of-Way.

SC-C.4 INSPECTION OF WORK

Add the following new language to Paragraph C.4:

Contractor shall notify the Project Officer at least 3 working days prior to disturbing any existing, or installing any new, traffic signs, signals, or other traffic control devices. The Contractor shall allow 3 working days for the inspection and approval of the premarkings prior to placing the permanent markings.

SC-C.9 CONTRACTOR MANAGEMENT PERSONNEL

Add the following new language to Paragraph C.9:

Site Supervisor:

The Contractor shall have a qualified and experienced site supervisor who can clearly communicate technical matters on-site at all times when construction activity is occurring or when the site is not in a secure state. The Site Supervisor must have at least (5) years of experience in overseeing projects of similar type and size. Safety Project Officer:

The Contractor shall have at least one (1) employee certified by VDOT in Basic Work Zone Traffic Control on-site at all times that work is occurring and be responsible for the following:

- Placement, maintenance, and removal of work zone traffic control devices,
- Compliance with permit requirements and conditions, approved plans and specifications, the Virginia Work Area Protection Manual, and the Manual of Uniform Traffic Control Devices.

The flagger shall be certified in accordance with the VDOT Flagger Certification Program, the American Traffic Safety Services Association Flagger Certification Program or any other VDOT approved flagger program. The flagger shall have his/her certification card with them at all times while performing flagging activities.

The Contractor shall have at least one (1) employee certified in OSHA 10 on-site at all times that work is occurring. The employee shall have served as a Project Safety Officer on at least three (3) prior projects. If the contractor has multiple employees with these

requirements, the Contractor shall clearly identify which employee shall serve as the Project Safety Officer.

Environmental Project Officer:

The Contractor shall have at least one (1) employee that has successfully completed the VDOT Erosion & Sediment Control Contractor Certification training. The Contractor employee shall be on-site during all land disturbance activities. The Contractor shall be responsible for ensuring compliance with all applicable local, State, and Federal erosion and sediment control regulations and permits during land disturbance activities.

If the Contractor proposes to deviate from the approved Erosion and Sediment Control Plan, it shall be the Contractor's responsibility to coordinate and obtain approval from the County Project Officer prior to implementing any changes.

SC-C.13 PROTECTION OF WORK AND PROPERTY

Add the following new language to Subparagraph C.13.c:

The Contractor shall be responsible for all damages caused by their construction activities. The Contractor shall perform or provide repairs, replacements, and restoration to all property that has been damaged resulting from construction operations performed by the Contractor, and shall meet the following requirements:

1. Restore all areas to conditions that existed prior to construction. Remove and Replace damaged items with items equal to or better than the damaged items.

ARTICLE E – LEGAL RESPONSIBILITY AND PUBLIC SAFETY

SC-E.1 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

Add the following new language at the end of E.1:

When construction activity reaches in proximity to existing utilities, the trench(es) shall be opened a sufficient distance ahead of the work or test pits shall be made to verify the exact location and inverts of the utility to allow for possible changes in the line or grade as directed by the Project Officer. This shall be incidental to the work and no separate payment shall be made.

SC-E.2 PUBLIC CONVENIENCE

Add the following new language to Paragraph E.2:

The Contractor shall set up controls at the beginning of each work day and take down controls at the end of each work day for the duration of the project. At all times the

Contractor shall maintain safe two-way vehicular traffic, and safe accessible pedestrian traffic in conformance with County and VDOT standards.

At all times the Contractor shall use the personnel and traffic control signs and devices necessary to comply with the Virginia Work Area Protection Manual and Part VI of the "National Manual on Uniform Traffic Control Devices." The Contractor has sole responsibility for ensuring that its operations are conducted in a safe manner and notwithstanding any other provision to the contrary, shall fully indemnify Arlington County, its officers, agents and employees for any damage or injury related to traffic operations which is caused by negligent or otherwise improper or deficient performance under the Contract or nonperformance of the terms of the Contract. All personnel, signs, barricades and any other items necessary for the maintenance of traffic and safety shall be provided by the Contractor.

When conditions warrant due to traffic volumes, patterns, or special events, the County may suspend or otherwise direct the Contractor's activities to protect the public and or the County's transportation network.

When the project includes a VDOT and/or County approved MOT Plan (or Plans), the Contractor shall strictly abide by this plan. If the Contractor proposes to deviate from the approved MOT Plan for a County road, it shall be the Contractor's responsibility to coordinate and obtain approval from the County Project Officer prior to implementing any changes. If the Contractor proposes to deviate from the approved MOT Plan for a VDOT road, it shall be the Contractor's responsibility to coordinate and obtain approval directly from VDOT prior to implementing any changes.

Prior to any lane closures within the VDOT Right-of-Way, the County Project Officer and VDOT Field Inspector must be notified in advance of such lane closure in accordance with VDOT requirements.

The Contractor shall not be entitled to any additional payment for changes to MOT which are the result of the Contractor's work schedule or resource allocation, weather delays, or other factors not controlled by the County.

Failure of the Contractor to correct any MOT deficiency immediately upon notification may result in the project being shut down until the deficiency is corrected, and a reduction from the amount of payment due in the amount of \$1,000.00 per violation. Repeated violations of this provision may result in contract termination.

The Contractor shall install project information signs (size - 36"x48") at least two (2) different locations for each site. Signs will be supplied by the County. Sign posts and incidentals necessary for a complete installation of the signs shall be furnished by the Contractor. Signs shall be installed at least two (2) weeks prior to the start of the construction. The Contractor shall coordinate the location of the signs with the Project

Officer. After the project has been completed the Contractor shall remove and return the signs to the County Project Officer. The cost for this work shall be considered incidental to other items within the Contract and no separate payment will be made.

At the close of each work day, the area of work shall be confined to the smallest area possible, but in no event larger than the area designated in the Construction Documents, so that the maximum use of the street and sidewalk shall be restored and the hazard to traffic reduced to the minimum.

The Contractor shall preserve all bus stops, including maintaining adequate accessibility through and adjacent to the construction for buses and their passengers. The Contractor shall not close, relocate, or otherwise modify a bus stop without prior request of the Project Officer. Any relocation or closure of a bus stop will require at least four weeks advance notice for coordination with the county's bus stop coordinator.

SC-E.10 SITE CLEAN-UP AND WASTE DISPOSAL

Add the following new language to Paragraph E.10:

The County's Earth Products Recycling Yard (located at 4300 29th Street South, Arlington, VA) shall **not** be used on an as-needed basis for unspecified quantities of waste (due in part to the limited size of the Yard). Although atypical, the Yard **may** be considered, on a case-by-case basis, for disposal of specific types/quantities of waste from County construction projects. In such cases disposal arrangements must be approved by the County Project Officer, be made in advance, depend on available space and the type/quantity of waste, and comply with certain requirements (for example, concrete shall be broken into pieces no longer than 24" in any dimension, contain less than 20% soil content, and be free of rebar).

SC-E.11 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Delete Paragraph 2.

ARTICLE F— PROGRESS AND COMPLETION OF THE WORK

SC-F.2 TIME FOR COMPLETION

Delete Paragraph F.2 and replace with the following language:

It is hereby understood and mutually agreed by and between the Contractor and the County that the Commencement Date, the rate of progress, and the Time for Completion of the Work to be done hereunder are essential conditions of the Contract. The Contractor agrees that the Work shall be started promptly upon receipt of a written Notice to Proceed in accordance with the accepted schedule. Additional time shall not be allowed for holidays or weather delays except as allowed in the contract.

ARTICLE G– MEASUREMENT AND PAYMENT

SC-G.1 PAYMENTS TO CONTRACTOR

Add the following new language to Section G.1:

Payments will be based on actual quantities and site measurements of the approved work taken in the field by the County Project Officer using the Contract Unit Prices. Any Work that is not shown on the approved plans that has not been previously authorized in writing by the Project Officer shall be at the Contractor’s expense, and at no cost to the County.

SPECIAL CONDITIONS

These Special Conditions include any project-specific requirements in addition to the General Condition, Supplementary Specifications, and the County Standards Referenced herein.

1. CONSTRUCTION STANDARDS

All work shall conform to project plans and specifications along with the current edition of following County and VDOT construction standards and specifications:

- **The Arlington County Department of Environmental Services (DES) Bike Parking Standards**, a copy of which may be downloaded at no charge from the internet at: <https://info.arlingtontransportationpartners.com/arlington-county-bike-parking-standards>
- **The Arlington County Department of Environmental Services (DES) Construction Standards and Specifications**, a copy of which may be downloaded at no charge from the internet at: <http://topics.arlingtonva.us/building/construction-standards-specifications/>
- **The Arlington County Department of Environmental Services (DES) Traffic Signal Specifications**, a copy of which may be downloaded at no charge from the internet at: <https://transportation.arlingtonva.us/traffic-signal-specification-updates/>
- **The Arlington County Department of Environmental Services (DES) Streetlight Specifications**, a copy of which may be downloaded at no charge from the internet at: <https://transportation.arlingtonva.us/streets/street-lights/lighting-standards-specifications-updates/>
- **The Arlington County Department of Environmental Services (DES) Pavement Marking Specifications**, a copy of which may be downloaded at no charge from the internet at: [Design Standards & Guidelines – Official Website of Arlington County Virginia Government \(arlingtonva.us\) marketing-standards-rev-2.0-3.30.2020.pdf \(arlingtonva.us\)](https://www.arlingtonva.us/design-standards-guidelines-official-website-of-arlington-county-virginia-government/marketing-standards-rev-2.0-3.30.2020.pdf)
- **The Arlington County Department of Parks and Recreation (DPR) Specifications**, a copy of which may be downloaded at no charge from the internet at:

<https://www.arlingtonva.us/Government/Departments/Parks-Recreation/About/Design-Standards>

- **The Virginia Department of Transportation (VDOT) Road and Bridge Standards and Specifications**, a copy of which may be downloaded at no charge from the internet at: <http://www.virginiadot.org/business/const/spec-default.asp>
- **The Virginia Work Area Protection Manual (WAPM)**, a copy of which may be downloaded at no charge from the internet at: <https://www.virginiadot.org/business/trafficeng-WZS.asp>
- **Manual on Uniform Traffic Control Devices(MUTCD)**, a copy of which may be downloaded at no charge from the internet at: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf_index.htm
- **The Arlington County Department of Environmental Services (DES) Dechlorination and Disposal Procedures**, a copy of which may be downloaded at no charge from the internet at: <https://www.arlingtonva.us/Government/Programs/Water-Utilities/Discharging-Chlorinated-Water>
- **The Supplementary Specifications listed within the Contract.**

In case of a discrepancy, the following order of priority will apply, with the highest governing item appearing first and the least governing item appearing last:

The Contract Bid Items

Special Conditions

Contract Drawings

Supplemental Specifications

Arlington County Construction Standards and Specifications

External Agency Specifications

2. PERMITS

Permits required for the project include, but are not limited to:

- **County Land Disturbing Activities (LDA) permit**
- **County Public Right-Of-Way (PROW) permit**
- **County Transportation Right-Of-Way (TROW) permits**
- **County Water Meter and Fire Hydrant permits**
- **VDOT Land Use permit (Obtained and included as an Exhibit)**
- **VDOT Open Cut permit**

All fees for County permits will be waived by Arlington County, and fees for non-County permits will be paid by Arlington County.

The County will obtain the County LDA permit, the County RPA permit, VDOT Land Use permit, VDOT Open Cut permit, VSMP Permit and then NVRPA permits prior to the start of work. The Contractor shall transfer the County LDA permit, VDOT Land Use Permit, VDOT

Open Cut permit and the VSMP Permit in the Contractors name as the permittee and/or responsible party prior to the start of Work. The Contractor shall complete and sign the VDOT forms and submit to the County Project Officer for submission to VDOT two weeks prior to the start of Work within VDOT ROW.

The Contractor shall provide a Responsible Land Disturber (RLD) that meets all the required qualifications of the permits. The Contractor shall complete and sign the RLD certificate and submit to the County Project Officer prior to the start of Work.

The Contractor shall obtain the County PROW permit, the County TROW permits and the County Water Meter and Fire Hydrant permits. The Contractor is responsible for investigating and satisfying all permit requirements for the above-mentioned permits.

3. SPECIAL CONTRACTOR/SUBCONTRACTOR QUALIFICATIONS

The Contractor shall have three (3) continuous years construction contract experience conducting public works infrastructure and street improvement projects in an urban environment. The experience shall be work of similar size and scope, construction, reconstruction, and maintenance.

The Contractor obtained project experience shall consist of the following:

- **State and County streets**
- **Curbs and gutters**
- **Sidewalks and walkways**
- **Driveway aprons**
- **Storm sewer pipes and inlets**
- **Wet Utilities**
- **Pavement markings and signage**
- **Electrical conduits**
- **Traffic signals and Street lighting**
- **Streetscapes and related site work**

4. STAKEOUT AND CUT-SHEETS

The Contractor shall be responsible for laying out the work and shall retain a professional land surveyor licensed in the Commonwealth of Virginia to provide all necessary construction layouts and establish all control lines, grades, and elevation during construction. The Contractor shall submit a copy of all cut-sheets for review, per the Arlington County Specifications. All cut-sheets for layout and construction shall be provided as submittals at least seven (7) calendar days prior to construction of the work included on that cut-sheet. The cost of all necessary surveying services shall be considered incidental to the work and no separate payment shall be made.

5. SCHEDULE, DURATION, AND PHASING REQUIREMENTS

The Contractor shall provide a schedule for all work listed on plans including any additional work not specifically mentioned on plans but was agreed upon with the County prior to work commencing. The schedule shall account for steel plate use restrictions of "VDOT Special Provisions for Pavement Open Cuts".

Work Duration per task order shall be calculated in accordance with Supplements to the General Condition "SC-F.2 TIME FOR COMPLETION". The Time for completion shall be used as the basis for the project schedule.

Contractor shall make sure that the submittals/shop drawings are reviewed and accepted and materials ordered and delivered on site as no additional time will be granted for this.

6. WORK HOURS

The Contractor shall comply with **normal daytime working hours** as defined in the County Noise Control Ordinance unless otherwise defined by the project plans and specifications, or approved by the Project Officer.

The Contractor shall comply with **restricted working hours** of 9:00 am to 3:00 pm when working in Arlington County arterial streets unless otherwise indicated on the Maintenance of Traffic Plans for each project.

The Contractor shall comply with **restricted working hours** as defined by VDOT and as noted on the approved VDOT permit when working within the VDOT Right-Of-Way. For restricted work hours in VDOT ROW, see attached "Lane Closure Guidelines in NOVA District". The Contractor is responsible for satisfying all VDOT Permit requirements found at: <http://www.virginiadot.org/business/fairfax-permits-main.asp>.

In addition, the County reserves the right to restrict working days and hours to accommodate special site conditions as required.

7. GENERAL SITE SECURITY AND CONTROLS

The Contractor is responsible for securing its work area for safety and security. The Contractor shall confine its construction and presence to the Limits of Work, unless otherwise approved by the County Project Officer.

The Contractor shall provide, erect, and maintain barricades, fences, and/or signage as required to protect the general public, workers, and adjoining properties at no additional cost to the County. Before leaving the site at the end of each day, the Contractor shall replace any and all sections of the security fence or barricade moved or removed during work hours.

The Contractor shall maintain clear vehicular access to existing driveways and entrances at all times unless such access is otherwise addressed on County-approved project plans,

precluding concrete pouring and curing of such access points, unless otherwise directed by the County Project Officer.

Homeowners shall be notified by the Contractor a minimum of fourteen (14) calendar days in advance of any driveway closure, and driveways can only be closed for a maximum of five (5) calendar days.

The Contractor shall monitor parking of construction personnel's private vehicles and ensure that the public has unobstructed access to and through parking areas.

8. SPECIAL TRAFFIC MAINTENANCE CONSIDERATIONS

The maintenance of Traffic for the work in this contract shall be carried out in accordance with Maintenance of Traffic Plan C121.1 - 7 and C122.1 -3. Any deviation from the Maintenance of Traffic Plan shall be coordinated with VDOT.

9. TRAFFIC SIGNALS AND STREETLIGHTS

Materials and construction of the communications conduit, streetlights, and traffic signals shall abide by the latest versions of the 'Arlington County Traffic Signal Specifications and Standards' and 'Arlington County Lighting Specifications and Standards. All materials for these areas shall be approved by Arlington County Transportation Engineering and Operations Bureau. The County Project Officer will facilitate the material specification submissions for review by the Transportation Engineering and Operations Bureau.

The Contractor shall abide by VDOT's requirement to submit signal foundation details for review. These details include, but are not limited to soil tests to verify the detail design, along with any other supporting information required by VDOT in their submission package. Details shall be created for each signal pole foundation and shall be for both three feet and four feet diameter foundations. The County will assist only in the submission of these details to VDOT, if requested. The Contractor is responsible for satisfying all VDOT requirements. The Contractor shall incorporate all costs for this in relevant items and no payment will be made by the County. The submission shall be submitted with enough time for VDOT to adequately review it. The Contractor cannot claim any time delay or any additional compensation due to such delay.

Prior to removal of the existing signal equipment and materials, the Contractor shall meet with the Project Officer to verify which equipment will be returned to the County, when and where the returned equipment will be delivered, and which equipment will be disposed. All costs associated with this shall be incidental to other items in the Contract.

Installation of electrical service for temporary services such as signals, streetlights, signal cabinets, construction trailers, or for equipment use are incidental to the contract.

Intercepting existing streetlight conduits and splicing into existing cables are incidental to the contract.

References to a CCTV camera shall mean to both furnish and install the CCTV camera, unless specifically excluded.

As part of the luminaire installation, Contractor shall install house-side shields in each fixture. These shields will be provided by the County. If requested, the County will demonstrate how to install the shields. The Contractor shall contact the Streetlights Operations Team Manager at (703) 228-6531 to obtain the shields prior to ordering any streetlight materials to ensure they will be available at the time of construction, and to request a demonstration on how to install the shields. Failure to do so will be at the Contractor's expense for time if construction is stopped because the shields are not available. The installation of the shields is considered incidental to the contract and no additional payments shall be made for this work.

10. OTHER SPECIAL PROVISIONS

- A. The contractor to coordinate with affected property owners / residents before shut-downs of the water main. If shut-down is not an option, the contractor to provide temporary water service to affected residents from nearest fire hydrant. This work is considered as an incidental. No additional payment will be made for this work.
- B. Abandoning or removal of existing water mains (all sizes/all locations) shall be considered incidental. No separate payment will be made.
- C. The proposed 12 inch watermain goes under an existing Underground Electric and underground Telephone line on several location through out the proposed length. Contractor shall seek and follow directions from Dominion and comcast to work around the utilities safely. Any hand digging or other methods used to pass the watermain underneath the utilities shall be incidental to the watermain work and there shall not be separate payment for that.

SUPPLEMENTS TO THE DES CONSTRUCTION STANDARDS AND SPECIFICATIONS

SECTION 01500 – TEMPORARY EROSION AND SEDIMENT CONTROL

PART 3 - EXECUTION

PARAGRAPH 3.1 Installation and Maintenance of Erosion and Sediment Controls

Delete

3.1.E The Contractor shall conduct dewatering operations in a manner to prevent sediment or other pollutants from discharging to the County's storm drain system, which includes the curb and gutter, or any surface water. Dewatering operations shall not create any erosion or flooding. Dewatering discharges that contain chemicals, hydrocarbons, or sewage shall not be discharged to the storm drain system. Any discharge from dewatering operations shall be properly filtered prior to being

discharged. A dewatering plan with sufficient detail to ensure the proposed dewatering shall comply with applicable regulations must be included as part of the erosion and sediment control plan.

Add

3.1.E The Contractor shall conduct dewatering operations in a manner to prevent sediment or other pollutants from discharging to the County's storm drain system, which includes the curb and gutter, or any surface water. Dewatering operations shall not create any erosion or flooding. Dewatering discharges that contain chemicals, hydrocarbons, or sewage shall not be discharged to the storm drain system. Any discharge from dewatering operations shall be properly filtered prior to being discharged. A dewatering plan with sufficient detail to ensure the proposed dewatering shall comply with applicable regulations shall be prepared by the Contractor.

SECTION 02200 – EARTHWORK

PART 3 - EXECUTION

PARAGRAPH 3.5 Dewatering

Delete

3.5.C The Contractor shall conduct dewatering operations in a manner to prevent sediment or other pollutants from discharging to the County's storm drain system, which includes the curb and gutter, or any surface water. Dewatering operations shall not create any erosion or flooding. Dewatering discharges that contain chemicals, hydrocarbons, or sewage shall not be discharged to the storm drain system. A dewatering plan with sufficient detail to ensure the proposed dewatering shall comply with applicable regulations must be included as part of the erosion and sediment control plan.

Add

3.5.C The Contractor shall conduct dewatering operations in a manner to prevent sediment or other pollutants from discharging to the County's storm drain system, which includes the curb and gutter, or any surface water. Dewatering operations shall not create any erosion or flooding. Dewatering discharges that contain chemicals, hydrocarbons, or sewage shall not be discharged to the storm drain system. Any discharge from dewatering operations shall be properly filtered prior to being discharged. A dewatering plan with sufficient detail to ensure the proposed dewatering shall comply with applicable regulations shall be prepared by the Contractor.

SECTION 02500 – GRAVITY SEWERS AND APPURTENANCES

PART 4 – MEASUREMENT AND PAYMENT

PARAGRAPH 4.1 Sewer

Delete

4.1.A Sewer pipe for the various materials, classes, and sizes shown on the plans shall be measured in linear feet along the center line of the pipe and shall be measured from inside wall of structure to inside wall of structures. Payment shall include the furnishing of all pipe and fittings, all necessary tests, excavation, removal and disposal of existing pipes, removal and disposal of unsuitable or surplus material, placement of bedding and backfill as shown in Standard M-3.0, restoration of roadways as shown in Standard M-6.1, all other restoration, and all other work required to providing a complete sewer installation in compliance with the Construction Documents.

Add

4.1.A Sewer pipe for the various materials, classes, and sizes shown on the plans shall be measured in linear feet along the center line of the pipe and shall be measured from inside wall of structure to inside wall of structures. Payment shall include the furnishing of all pipe and fittings, all necessary tests, excavation, abandonment and/or removal and disposal of existing pipes, removal and disposal of unsuitable or surplus material, placement of bedding and backfill as shown in Standard M-3.0, restoration of roadways as shown in Standard M-6.1, all other restoration, and all other work required to providing a complete sewer installation in compliance with the Construction Documents.

SECTION 02600 - BITUMINOUS ROADWAY PAVEMENTS

PART 4 – MEASUREMENT AND PAYMENT

Delete

4.2 Subbase shall be measured to the width and depths shown on the approved plans as verified in the field by the Project Officer or his designee. Payment shall be in cubic yards of material.

Add

4.2 Subbase shall be measured to the width and depths shown on the approved plans as verified in the field by the Project Officer or his designee. Payment shall be in cubic yards of material and shall include demolition, excavation, and the necessary preparation of the sub grade surface.

SECTION 02900 - PAVEMENT MARKINGS

PART 3 - EXECUTION

PARAGRAPH 3.2 Provision for Temporary Markings

Add

B. All Type D pavement markings shall conform to the latest VDOT requirements.

PART 4 - MEASUREMENT AND PAYMENT

PARAGRAPH 4.4 Removal/Eradication of Existing Pavement Markings

Delete

A. Payment for pavement line markings (type, class, width) removal and/or eradication shall be paid by actual work performed as listed in the contract and shall include all labor,

materials, tools, equipment, transportation, supplies, and incidentals required to remove and/or eradicate the line markings as specified.

Add

A. Payment for pavement line markings (type, class, width) removal and/or eradication shall be incidental to the work and no separate payment shall be made.

Add

PARAGRAPH 4.5 Pavement Message Marking

A. Measurement of pavement message markings (type, class, size) shall be in units of each furnished and installed.

B. Payment for pavement message markings (type, class, size) shall be in units of each and shall include all labor, materials, tools, equipment, transportation, supplies, and incidentals required to furnish and install the message markings as specified.

SECTION 329100 - PLANTING PREPARATION

PART 4 - MEASUREMENT AND PAYMENT

Add

4.10 The measurement of CONTINUOUS SOIL PANEL to be paid for shall be per CUBIC YARD of the amended soil in accordance with the plans, specifications and to the satisfaction of the Project Officer.

4.11 The unit price for CONTINUOUS SOIL PANEL shall include the cost of furnishing all labor, materials, equipment and incidental expenses, including but not limited to imported topsoil, vapor barrier, 4" UD-4 underdrain (per VDOT specification), bedding material per Continuous Soil Panel and Tree Pit Drainage Details, and connection to storm sewer system.

SUPPLEMENTS TO THE 2020 LIGHTING SPECIFICATIONS

Modify the listed sections as follows:

SECTION 14050 – LIGHTING CONDUCTORS

PART 4 MEASUREMENT AND PAYMENT

Delete

- (a) Furnish Conductor shall be measured and paid for on a linear foot basis.
- (b) Install Conductor will be measured and paid for on a linear foot basis. Several conductors pulled into a single conduit at the shall be measured by the length of the pull rather than the total length of the conductors installed. Cost for pulling conductors shall

include all connectors, splice enclosures, or other appurtenances required for making the electrical connections.

1. The cost of installing or replacing pull rope shall be incidental to the cost of pulling conductor.

Add

(a) Furnishing and installing all conductor(s) and/or cable(s) for streetlights is included in a single price paid per linear foot measured by the length of conduit installed. The Unit Price shall include the cost of all conductors, fittings, connections, slack, securing terminals and other incidentals necessary for the Work as detailed in the County Lighting Specifications.

1. The size, number and/or required slack length of the conductor(s) and/or cable(s) will not be assessed independently for payment.

2. The cost of installing or replacing pull rope shall be incidental to the cost of the conductor(s).

(b) THIS LINE INTENTIONALLY LEFT BLANK

EXHIBIT H

Arlington County, VA Materials Testing Specification Reference (September 2020)

MATERIAL AND TEST (REF. - VDOT TEST METHODS MANUAL)	VDOT ROAD AND BRIDGE SPECIFICATION 2002 (Or Latest Version)	MINIMUM RATE OF SAMPLING (REF. - VDOT MANUAL OF INSTRUCTIONS)	LOCATION OF SAMPLING	REMARKS
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SOILS AND AGGREGATES				
1. Embankments				
(a) Density, Any Method	303.04(h)	One (1) test per 2500 yd ³ or less plus: (a) for fills less than 500 ft. length one (1) test on every other 6-in. layer bottom to top of fill starting with the second lift; (b) for fills from 500-2000 ft. length, two (2) tests per 6-in. layer within top five (5) ft. of fill; (c) for fills greater than 2000 ft length, break into equal segments not to exceed 2000 ft. and use same frequency for each section as for fills 500 to 2000 ft. in length.	Roadway	When tests are not run due to gravel, muck, rock, etc. give station and depth on report in lieu of test, with reason. For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2.
2. Finished Sub-grade (Both Cut and Fill Sections)				
(a) Density, Any Method	305.03	One (1) test per 2000 continuous linear ft. of roadway and one test minimum per intersection per construction location	Roadway (24 ft.)	For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2.

Arlington County, VA Materials Testing Specification Reference (September 2020)

MATERIAL AND TEST (REF. - VDOT TEST METHODS MANUAL)	VDOT ROAD AND BRIDGE SPECIFICATION 2002 (Or Latest Version)	MINIMUM RATE OF SAMPLING (REF. - VDOT MANUAL OF INSTRUCTIONS)	LOCATION OF SAMPLING	REMARKS
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(b) Density, Any Method	305.03	One (1) test per continuous section/block/or intersection	Curb, Comb. Curb and Gutter	For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2.
(c) Density, Any Method	305.03	One (1) test per continuous section/block/or intersection	Sidewalk	For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2.
3. Central Mix Aggregate (Treated or Untreated) Base, Subbase, and Select Material				
(a) Density, Any Method	305.03, 308.03, & 309.05,	One (1) test per 1/2 mile or less per continuous lane application width per layer. If testing by nuclear method, each test shall consist of average of five (5) readings.	Roadway. Location of five (5) nuclear readings at randomly selected sites.	For nuclear tests, use Backscatter, Control Strip Method, VTM-10. With nuclear method, set up roller pattern and control strip for each layer or lift placed. See Notes 1 and 2.
(b) Density, Any Method	305.03, 308.03, & 309.05,	One (1) test per continuous section/block/or intersection	Curb, Comb. Curb and Gutter	For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2.
(c) Density, Any Method	305.03, 308.03, & 309.05,	One (1) test per continuous section/block/or intersection	Sidewalk	For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2.

Arlington County, VA Materials Testing Specification Reference (September 2020)

MATERIAL AND TEST (REF. - VDOT TEST METHODS MANUAL)	VDOT ROAD AND BRIDGE SPECIFICATION 2002 (Or Latest Version)	MINIMUM RATE OF SAMPLING (REF. - VDOT MANUAL OF INSTRUCTIONS)	LOCATION OF SAMPLING	REMARKS
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4. Backfill for Pipes and Box Culverts	302.03, 303.04(g), 401.03(i)	Minimum one test per lift on alternating sides of pipe for each 300 feet of pipe or portion thereof. Test pattern is to begin after first 4" compacted layer above the structures bedding and continue to 1' above top of pipe or box culvert structure. For rate of testing greater than 1' above top of pipe refer to contract documents and Rate of Sampling for embankments.	Alternating sides of structure	For nuclear test, use Direct Transmission Methods, VTM-10. See Notes 1 and 2. Backfill lifts shall be compacted in horizontal layers not more than 6 inches in thickness, loose measurement. (Or as Specified by the Contract Documents)
5. Backfill for Drop Inlets	302.03, 303.04(g)	Minimum one test every other lift around the perimeter beginning after the first 4" compacted layer above the bedding and continue to top of the structure. Stagger tests to ensure consistent compaction effort has been achieved.	Perimeter of structure	To include drop inlets, junction boxes, etc. For nuclear test, use Direct Transmission Methods, VTM-10. See Notes 1 and 2. Backfill lifts shall be compacted in horizontal layers not more than 6 inches in thickness, loose measurement. (Or as Specified by the Contract Documents)
6. Backfill for Manholes	302.03, 303.04(g)		Perimeter of structure	For nuclear test, use Direct Transmission Methods, VTM-10. See Notes 1 and 2. Backfill lifts shall be compacted in horizontal layers not more than 6 inches in thickness, loose measurement. (Or as Specified by the Contract Documents)

Arlington County, VA Materials Testing Specification Reference (September 2020)

MATERIAL AND TEST (REF. - VDOT TEST METHODS MANUAL)	VDOT ROAD AND BRIDGE SPECIFICATION 2002 (Or Latest Version)	MINIMUM RATE OF SAMPLING (REF. - VDOT MANUAL OF INSTRUCTIONS)	LOCATION OF SAMPLING	REMARKS
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HYDRAULIC CEMENT CONCRETE				
1. Sidewalk, Curb, Comb. Curb and Gutter				
(a) Temperature Measurements	217	One test per batch (truck), and when making compressive specimens.	At job site, and prior to placing concrete in forms.	If test on any batch fails, recheck batch immediately before rejecting. Enter results of tests in project records.
(b) Air Content	217	One test per batch (truck), and when making compressive specimens	At job site, and prior to placing concrete in forms	Any of 3 approved methods may be used for this test. However, with any test method used, with readings indicating concrete to be outside of specification must be confirmed first with test by Pressure Method before rejection of concrete. Enter results in project records.
(c) Consistency (Slump Test).	217	One test per batch (truck), and when making compressive specimens.	At job site, and prior to placing concrete in forms.	If test on any batch fails, recheck batch immediately before rejecting. Enter results in project records.

Arlington County, VA Materials Testing Specification Reference (September 2020)

MATERIAL AND TEST (REF. - VDOT TEST METHODS MANUAL)	VDOT ROAD AND BRIDGE SPECIFICATION 2002 (Or Latest Version)	MINIMUM RATE OF SAMPLING (REF. - VDOT MANUAL OF INSTRUCTIONS)	LOCATION OF SAMPLING	REMARKS
(d) Compressive Strength...	217	<p>For <u>miscellaneous concrete</u>, one set of 3 cylinders shall be made for each 250 cubic yards, with a minimum of one set of 3 per day. Any one set to be made from same batch.</p> <p>For <u>structural concrete</u>, one set of 3 cylinders shall be made for each 100 cubic yards of concrete placed, with a minimum of 2 sets of 3 cylinders each per structure per class of concrete. Any one set to be made from same batch.</p>	At job site.	<p><u>Molding and Curing</u> Molds shall be placed on a rigid horizontal surface free from vibration and other disturbances during the first 24 hours, all test specimens shall be stored under conditions that maintain the temperature immediately adjacent to the specimens in the range of 60°F to 80°F, and prevent loss of moisture.</p> <p><u>Testing</u> Except when high-early strength concrete is specified, compressive strength testing will be performed at 28 days.</p>

Arlington County, VA Materials Testing Specification Reference (September 2020)

MATERIAL AND TEST (REF. - VDOT TEST METHODS MANUAL)	VDOT ROAD AND BRIDGE SPECIFICATION 2002 (Or Latest Version)	MINIMUM RATE OF SAMPLING (REF. - VDOT MANUAL OF INSTRUCTIONS)	LOCATION OF SAMPLING	REMARKS
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ASPHALT PAVEMENT				
(a) In-Place Pavement Density by Nuclear Method (Roller Pattern)/ (Control Strip) (Asphalt Pavement)	Roads and Bridges Section 315.05 VTM-76 AASHTO T-166	Establish Roller pattern and Control Strip according to VTM-76. Ten (10) stratified random sample to establish target density. Verify minimum density achieved with cores per VTM-76. QC technician shall be certified and pass State proficiency	Field	Contractor/Asphalt Producer shall provide Certified Asphalt Paving Technician for density testing
(b) In-place Pavement Density by Nuclear Method and/or VDOT cores Test Section) (Asphalt Pavement)	Roads and Bridges Section 315.05 VTM-76 AASHTO T-166	Test Section- Lot Size: 5000 ft. per Lane width. Ten (10) stratified random samples per lot for nuclear gauge and/or five(5) stratified random plug/cores per lot QC technician shall be certified and pass State proficiency	Field	Contractor/Asphalt Producer shall provide Certified Asphalt Paving Technician for density testing
(c) Temperature Measurements	Roads and Bridges 211.08	One temperature measurement initially on first and fifth loads, each type mix each production day, and thereafter minimum of one per hour of production time for each mix type, by Producer's Certified Asphalt	QC - Processing or mixing plant from back of truck QA – Field	The Contractor should take and record temperature measurements of the asphalt concrete at the beginning of paving operations and thereafter at a rate of not less than one measurement every hour. The

Arlington County, VA Materials Testing Specification Reference (September 2020)

MATERIAL AND TEST (REF. - VDOT TEST METHODS MANUAL)	VDOT ROAD AND BRIDGE SPECIFICATION 2002 (Or Latest Version)	MINIMUM RATE OF SAMPLING (REF. - VDOT MANUAL OF INSTRUCTIONS)	LOCATION OF SAMPLING	REMARKS
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		Concrete Technician. If any test outside of tolerance, minimum of 3 additional tests made in different points of the load, and 4 tests averaged and average used as temperature of load or batch.		Project Officer may increase the frequency of temperature measurements at any time. The temperature should be checked using an appropriate heat-sensing device (i.e. probe thermometer, infrared thermometer, etc.).
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Note 1. Density tests are reported on Forms TL-53, TL-54, TL-55, TL-124, TL-125 (Sand Cone Method), and TL-125A (One-Point Proctor Method).

Note 2. If there is a breakdown in the nuclear testing equipment, then density testing shall continue using other approved methods.

EXHIBIT I



TEST HOLE FORM



44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-14
--	---------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 1 of
------------------------	------------------	------------------------

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: 3"	Material: Paper Wrapped Steel	Good Condition: YES
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Utility Type: Gas Line	Utility Owner: Washington Gas
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 4" C = 12"
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Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
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Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 270.42'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>2.25'</u> Elevation: <u>268.17'</u>
	Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u>

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	Northing: 7005459.2020 Easting: 11878695.3980
	COMMENTS/NOTES

TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-14
--	---------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 2 of
------------------------	------------------	------------------------

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: (4 visible) 2 1/2"	Material: P.E.	Good Condition: YES
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Utility Type: Fiber Optic Conduits	Utility Owner: JUC
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 4" C = 12"
---	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 270.44'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>3.80'</u> Elevation: <u>266.64'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
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Facing: Northeast	Utility Width/Spacing: 8"
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PLAN VIEW

COORDINATES

	<p>Northing: 7005454.1720 Easting: 11878702.2990</p> <p style="text-align: center;"><u>COMMENTS/NOTES</u></p>
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TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-19
City: Arlington	State: VA	Test Hole: 3 of

General Location: N. Glebe and N. Randolph

UTILITY INFORMATION

Utility Size: Clear Hole	Material:	Good Condition: YES
Utility Type: None		Utility Owner:

ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
Utility Type: None		Utility Owner:

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 5" C = 6"
Ground Condition: Brown Soil	

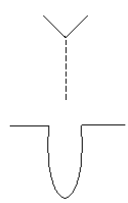
FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
BM Check:	
2nd Elevation:	2nd Benchmark Description:
Elevation Datum:	

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 270.47'
Offset/Direction: Nail is set C/L of the Hole.	

PROFILE VIEW

	Top of utility field measurement: <u>6.00'</u>	Elevation: <u>264.47'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: None	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	Northing: 7005440.1000	Easting: 11878718.7000
	COMMENTS/NOTES	
Crew notes that they could not produce a signal on the utility in question on plan. Client was informed of findings and requested a 6' clearance hole to be dug in location indicated on plans.		

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Oscar Johnson	Date: 2020-05-19
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City: Arlington	State: VA	Test Hole: 4 of
------------------------	------------------	------------------------

General Location: N. Glene

UTILITY INFORMATION

Utility Size: 6 1/2"	Material: Epoxy Coated Steel	Good Condition: YES
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Utility Type: Gas Line	Utility Owner:
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 5" C = 6"
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Ground Condition: Brown soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 270.86'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>2.73'</u> Elevation: <u>268.13'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
---	--

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

Northing: 7005330.6160	Easting: 11878839.8020
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COMMENTS/NOTES

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TEST HOLE FORM

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Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-15
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City: Arlington	State: VA	Test Hole: 5 of
------------------------	------------------	------------------------

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: 4"	Material: PVC	Good Condition: YES
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Utility Type: Electric Conduit	Utility Owner: Dominion
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 2" C = 10"
---	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
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Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 270.66'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>1.93'</u>	Elevation: <u>268.73'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

PLAN VIEW	COORDINATES
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	Northing: 7005285.5000	Easting: 11878889.7180
	COMMENTS/NOTES	

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-15
City: Arlington	State: VA	Test Hole: 6 of

General Location: Glebe Rd.

UTILITY INFORMATION

Utility Size: Clear Hole	Material:	Good Condition: YES
Utility Type: None		Utility Owner:

ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
Utility Type: None		Utility Owner:

SITE CONDITIONS

Field Condition: Asphalt	Pavement thickness: 12"
Ground Condition: Brown Soil	

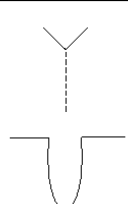
FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
BM Check:	
2nd Elevation:	2nd Benchmark Description:
Elevation Datum:	

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 270.04'
Offset/Direction: Nail is set C/L of the Hole.	

PROFILE VIEW

	Top of utility field measurement: <u>6.00'</u>	Elevation: <u>264.04'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: None	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	Northing: 7005178.4280	Easting: 11879013.7860
	COMMENTS/NOTES	
<p>Crew tried to expose the UGT but encountered refusal, instrument was put inside test hole to get depth and location of utility but reading was showing in location of test hole and depth reading was showing around 7' while inside test hole. Crew cleared to 6.00' with no evidence of utility found.</p>		

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-15
--	---------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 7 of
------------------------	------------------	------------------------

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: (10 visible) 2"	Material: Steel	Good Condition: YES
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Utility Type: Electric Conduits	Utility Owner: Arlington
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ADDITIONAL UTILITY INFORMATION

Utility Size: (1 visible) 4"	Material: Steel	See Test Hole No.:
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Utility Type: Electric Conduit	Utility Owner: V-DOT
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SITE CONDITIONS

Field Condition: Asphalt	Pavement thickness: A = 12"
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Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
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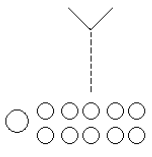
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 269.97'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>1.79'</u>	Elevation: <u>268.18'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: Northeast	Utility Width/Spacing: 30"
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PLAN VIEW

COORDINATES

	Northing: 7005146.0460	Easting: 11879049.2290
	COMMENTS/NOTES	



TEST HOLE FORM



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Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Chris Lugiano	Date: 2020-05-26
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City: Arlington	State: VA	Test Hole: 8 of
------------------------	------------------	------------------------

General Location: N Glebe / N Quincy

UTILITY INFORMATION

Utility Size: 6 3/4"	Material: Ductile Iron	Good Condition: YES
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Utility Type: Water Line	Utility Owner: Arlington County
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt / Concrete	Pavement thickness: A = 2" / C = 9"
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Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
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Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 269.90'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>4.34'</u>	Elevation: <u>265.56'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

Plan View	COORDINATES
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Northing: 7005137.9140	Easting: 11879093.4030
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COMMENTS/NOTES



TEST HOLE FORM



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Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Chris Lugiano	Date: 2020-05-26
--	-----------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 9 of
------------------------	------------------	------------------------

General Location: N Glebe / N Quincy

UTILITY INFORMATION

Utility Size: 8 3/4"	Material: Ductile Iron	Good Condition: YES
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Utility Type: Water Line	Utility Owner: Arlington County
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt / Concrete	Pavement thickness: A = 4" / C = 10"
--	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------

Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 269.98'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>3.98'</u>	Elevation: <u>266.00'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

Plan View	COORDINATES
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	Northing: 7005094.8090	Easting: 11879090.6510
	COMMENTS/NOTES	

TEST HOLE FORM

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Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Chris Lugiano	Date: 2020-05-26
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City: Arlington	State: VA	Test Hole: 10 of
------------------------	------------------	-------------------------

General Location: N Glebe / N Quincy

UTILITY INFORMATION

Utility Size: 4"	Material: Epoxy Coated Steel	Good Condition: YES
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Utility Type: Gas Line	Utility Owner: Washington Gas
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt / Concrete	Pavement thickness: A = 3" / C = 9 1/2"
--	--

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
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Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 270.14'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>2.89'</u> Elevation: <u>267.25'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
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Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW	COORDINATES
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	<p>Northing: 7005107.0250 Easting: 11879099.6040</p>
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	<p>COMMENTS/NOTES</p>
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TEST HOLE FORM

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Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-18
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City: Arlington	State: VA	Test Hole: 11 of
------------------------	------------------	-------------------------

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: 1"	Material: Paper Wrapped Steel	Good Condition: YES
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Utility Type: Gas Line	Utility Owner: Washington Gas
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 2" C = 12"
---	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 271.09'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>2.61'</u>	Elevation: <u>268.48'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

Northing: 7004978.1170	Easting: 11879262.8960
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	COMMENTS/NOTES

TEST HOLE FORM

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Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-14
City: Arlington	State: VA	Test Hole: 12 of

General Location: Glebe Rd.

UTILITY INFORMATION

Utility Size: 6 1/2"	Material: Cast Iron	Good Condition: YES
Utility Type: Water Line		Utility Owner: Arlington

ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
Utility Type: None		Utility Owner:

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 2" C = 12"
Ground Condition: Brown Soil	


FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
BM Check:	
2nd Elevation:	2nd Benchmark Description:
Elevation Datum:	

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 271.42'
Offset/Direction: Nail is set C/L of the Utility.	

PROFILE VIEW

	Top of utility field measurement: <u>3.25'</u> Elevation: <u>268.17'</u>
	Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u>

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	Northing: 7004917.7490 Easting: 11879343.1080
	COMMENTS/NOTES

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Chris Lugiano	Date: 2020-05-26
--	-----------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 13 of
------------------------	------------------	-------------------------

General Location: N Glebe / 4th St

UTILITY INFORMATION

Utility Size: 8 3/4"	Material: Ductile Iron	Good Condition: YES
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Utility Type: Water Line	Utility Owner: Arlington County
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Asphalt / Concrete	Pavement thickness: A = 3" / C = 10"
--	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
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Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 271.43'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>4.43'</u> Elevation: <u>267.00'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
---	--

Facing: East	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	<p>Northing: 7004887.4530 Easting: 11879330.7500</p> <p style="text-align: center;"><u>COMMENTS/NOTES</u></p>
--	---

TEST HOLE FORM

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Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-13
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City: Arlington	State: VA	Test Hole: 14 of
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General Location: N. Glebe

UTILITY INFORMATION

Utility Size: 2 1/2"	Material: Paper Wrapped Steel	Good Condition: YES
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Utility Type: Gas Line	Utility Owner: Washington Gas
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 2" C = 12"
---	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 271.61'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>3.65'</u> Elevation: <u>267.96'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
---	--

Facing: Northeast	Utility Width/Spacing:
--------------------------	-------------------------------

PLAN VIEW

COORDINATES

	<p>Northing: 7004897.3980 Easting: 11879352.9560</p> <p style="text-align: center;"><u>COMMENTS/NOTES</u></p>
--	---



TEST HOLE FORM



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Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-13
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City: Arlington	State: VA	Test Hole: 15 of
------------------------	------------------	-------------------------

General Location: Glebe Rd.

UTILITY INFORMATION

Utility Size: Unknown Size	Material: Concrete	Good Condition: YES
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Utility Type: Electric Ductbank	Utility Owner:
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 2" C = 12"
---	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------

Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 271.10'
---------------------------	---------------------------

Offset/Direction:

PROFILE VIEW

	Top of utility field measurement: <u>3.39'</u> Elevation: <u>267.71'</u>
	Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u>

Facing: East	Utility Width/Spacing:
---------------------	-------------------------------

PLAN VIEW

COORDINATES

	Northing: 7004798.8280 Easting: 11879464.9610 COMMENTS/NOTES
--	--

TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-13
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City: Arlington	State: VA	Test Hole: 16 of
------------------------	------------------	-------------------------

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: 1/2"	Material: Paper Wrapped Steel	Good Condition: YES
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Utility Type: Gas Line	Utility Owner: Washington Gas
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 2" C = 12"
---	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
-----------------------	-----------------------------------

BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 271.09'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>2.52'</u> Elevation: <u>268.57'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
---	--

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW COORDINATES

	Northing: 7004763.1720	Easting: 11879506.8300
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	COMMENTS/NOTES
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TEST HOLE FORM



44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-13
--	---------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 17 of
------------------------	------------------	-------------------------

General Location: Glebe Rd.

UTILITY INFORMATION

Utility Size: 1"	Material: Paper Wrapped Steel	Good Condition: YES
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Utility Type: Water Line	Utility Owner: Washington Gas
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 2" C = 12"
---	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
-----------------------	-----------------------------------

BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------

Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 271.63'
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Offset/Direction: Nail is set C/L of the Utility.
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PROFILE VIEW

	Top of utility field measurement: <u>2.66'</u> Elevation: <u>268.97'</u> Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u>
--	---

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	Northing: 7004711.8870 Easting: 11879564.8670 COMMENTS/NOTES
--	--



TEST HOLE FORM



44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-12
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City: Arlington	State: VA	Test Hole: 18 of
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General Location: N. Glebe

UTILITY INFORMATION

Utility Size: 2"	Material: Paper Wrapped Steel	Good Condition: YES
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Utility Type: Gas Line	Utility Owner: Washington Gas
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 2" C = 10"
---	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
-----------------------	-----------------------------------

BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------

Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 271.42'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>3.83'</u>	Elevation: <u>267.59'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

PLAN VIEW	COORDINATES
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	Northing: 7004611.1540	Easting: 11879676.1750
	COMMENTS/NOTES	

TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-12
--	---------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 19 of
------------------------	------------------	-------------------------

General Location: Glebe Rd.

UTILITY INFORMATION

Utility Size: 6 1/2"	Material: Cast Iron	Good Condition: YES
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Utility Type: Water Line	Utility Owner: Arlington
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 2" C = 10"
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Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
-----------------------	-----------------------------------

BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 271.37'
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Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>5.15'</u> Elevation: <u>266.22'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
---	--

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	<p>Northing: 7004595.6130 Easting: 11879676.9830</p> <p style="text-align: center;"><u>COMMENTS/NOTES</u></p>
--	---

TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-12
--	---------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 20 of
------------------------	------------------	-------------------------

General Location: Glebe Rd.

UTILITY INFORMATION

Utility Size: (2) 2 1/2"	Material: P.E.	Good Condition: YES
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Utility Type: Fiber Optic Conduits	Utility Owner: Arlington
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt	Pavement thickness: A = 5"
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Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 271.16'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>2.04'</u> Elevation: <u>269.12'</u>
	Bottom of utility field measurement: <u>None</u> Elevation:

Facing: Northeast	Utility Width/Spacing: 5"
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PLAN VIEW

COORDINATES

Northing: 7004576.0950	Easting: 11879714.1950
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COMMENTS/NOTES

--	--



TEST HOLE FORM



44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-12
--	---------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 21 of
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General Location: Glebe Rd.

UTILITY INFORMATION

Utility Size: 1"	Material: Paper Wrapped Steel	Good Condition: YES
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Utility Type: Water Line	Utility Owner: Washington Gas
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 3" C = 8"
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Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------

Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 270.23'
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Offset/Direction: Nail is set C/L of the Utility.
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PROFILE VIEW

	Top of utility field measurement: <u>3.63'</u> Elevation: <u>266.60'</u> Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u>
--	---

Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	Northing: 7004498.0240 Easting: 11879805.1720 COMMENTS/NOTES
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TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Mike Cooper	Date: 2020-05-12
--	---------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 22 of
------------------------	------------------	-------------------------

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: 6 1/2"	Material: Cast Iron	Good Condition: YES
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Utility Type: Water Line	Utility Owner: Arlington
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 14"
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Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 270.21'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>4.95'</u> Elevation: <u>265.26'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
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Facing: Northeast	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	<p>Northing: 7004499.7940 Easting: 11879812.2720</p> <p style="text-align: center;"><u>COMMENTS/NOTES</u></p>
--	---

TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Oscar Johnson	Date: 2020-05-19
--	-----------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 23/24 of
------------------------	------------------	----------------------------

General Location: N. Glene

UTILITY INFORMATION

Utility Size: 48"	Material: Concrete	Good Condition: YES
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Utility Type: Electric Ductbank	Utility Owner:
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 5" C = 7"
---	--

Ground Condition: Brown soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
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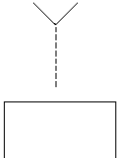
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 267.43'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>3.12'</u>	Elevation: <u>264.31'</u>
	Bottom of utility field measurement: <u>4.57'</u>	Elevation: <u>262.86'</u>

Facing: East	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	Northing: 7004339.2620	Easting: 11879986.8320
	COMMENTS/NOTES	

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Oscar Johnson	Date: 2020-05-19
--	-----------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 25 of
------------------------	------------------	-------------------------

General Location: N. Glene

UTILITY INFORMATION

Utility Size: 6 1/2"	Material: Epoxy Coated Steel	Good Condition: YES
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Utility Type: Gas Line	Utility Owner:
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 1" C = 6"
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Ground Condition: Brown soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
-----------------------	-----------------------------------

BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 266.99'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>2.65'</u> Elevation: <u>264.34'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
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Facing: West	Utility Width/Spacing:
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PLAN VIEW **COORDINATES**

	Northing: 7004339.8690	Easting: 11880005.4820
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	COMMENTS/NOTES
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TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Cody Brown	Date: 2020-05-08
City: Arlington	State: VA	Test Hole: 26 of

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: 1/2"	Material: Steel	Good Condition: YES
Utility Type: Unknown Function Conduit		Utility Owner:

ADDITIONAL UTILITY INFORMATION

Utility Size: (4 visible) 2 1/2"	Material: P.E.	See Test Hole No.:
Utility Type: Fiber Optic Conduits		Utility Owner: Arlington

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 3" C = 4"
Ground Condition: Brown Soil	

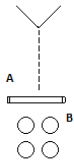
FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
BM Check:	
2nd Elevation:	2nd Benchmark Description:
Elevation Datum:	

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 266.91'
Offset/Direction: Nail is set C/L of the Utility.	

PROFILE VIEW

	Top of utility field measurement: <u>2.13'</u> Elevation: <u>264.78'</u>
	Bottom of utility field measurement: <u>2.88'</u> Elevation: <u>264.03'</u>

Facing: Northwest	Utility Width/Spacing: 5"
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PLAN VIEW

COORDINATES

	Northing: 7004342.1510 Easting: 11880010.1450
	COMMENTS/NOTES

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Cody Brown	Date: 2020-05-08
City: Arlington	State: VA	Test Hole: 27/28 of

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: (9 visible) 2"	Material: P.E.	Good Condition: YES
Utility Type: Fiber Optic Conduits		Utility Owner: Fiberlight/ MCI

ADDITIONAL UTILITY INFORMATION

Utility Size: Unknown	Material: RCP	See Test Hole No.:
Utility Type: Storm Line		Utility Owner: Arlington

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 4" C = 7"
Ground Condition: Brown Soil	

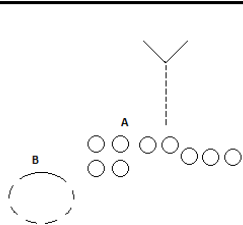
FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
BM Check:	
2nd Elevation:	2nd Benchmark Description:
Elevation Datum:	

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 266.83
Offset/Direction: Nail is set C/L of the Utility.	

PROFILE VIEW

	Top of utility field measurement: <u>A = 3.21'</u> Elevation: <u>263.62'</u>
	Bottom of utility field measurement: <u>B = 3.81'</u> Elevation: <u>263.02'</u>

Facing: Northwest	Utility Width/Spacing: 14"
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PLAN VIEW

COORDINATES

	Northing: 7004344.2090 Easting: 11880013.1370
	COMMENTS/NOTES Centerline of storm is directly under the western most edge of conduits.



TEST HOLE FORM



44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Cody Brown	Date: 2020-05-08
--	--------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 29 of
------------------------	------------------	-------------------------

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: (1) 3 1/2"	Material: Steel	Good Condition: YES
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Utility Type: Electric Conduit	Utility Owner: V-DOT
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ADDITIONAL UTILITY INFORMATION

Utility Size: (1) 2 1/2"	Material: Steel	See Test Hole No.:
---------------------------------	------------------------	---------------------------

Utility Type: Electric Conduit	Utility Owner: V-DOT
---------------------------------------	-----------------------------

SITE CONDITIONS

Field Condition: Asphalt	Pavement thickness: A = 5"
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Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 266.83'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>2.12'</u>	Elevation: <u>264.71'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: Northwest	Utility Width/Spacing: 8"
--------------------------	----------------------------------

PLAN VIEW

COORDINATES

	Northing: 7004346.7580	Easting: 11880017.2580
	COMMENTS/NOTES	

TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Oscar Johnson	Date: 2020-05-19
--	-----------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 30 of
------------------------	------------------	-------------------------

General Location: N. Glene

UTILITY INFORMATION

Utility Size: 8 1/2"	Material: Cast Iron	Good Condition: YES
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Utility Type: Water Line	Utility Owner:
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
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SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 5" C = 6"
---	--

Ground Condition: Brown soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 266.72'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>4.09'</u>	Elevation: <u>262.63'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: Northeast	Utility Width/Spacing:
--------------------------	-------------------------------

PLAN VIEW

COORDINATES

	Northing: 7004345.7430	Easting: 11880039.1460
	COMMENTS/NOTES	



TEST HOLE FORM



44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Chris Lugiano	Date: 2020-05-27
City: Arlington	State: VA	Test Hole: 31 of

General Location: N Glebe / N Pershing

UTILITY INFORMATION

Utility Size: 12 3/4"	Material: Ductile Iron	Good Condition: YES
Utility Type: Water Line		Utility Owner: Arlington County

ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
Utility Type: None		Utility Owner:

SITE CONDITIONS

Field Condition: Asphalt / Concrete	Pavement thickness: A = 5" / C = 6"
Ground Condition: Brown Soil	

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
BM Check:	
2nd Elevation:	2nd Benchmark Description:
Elevation Datum:	

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 267.13'
Offset/Direction: Nail is set C/L of the Utility.	

PROFILE VIEW

	Top of utility field measurement: <u>4.65'</u> Elevation: <u>262.48'</u>
	Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u>

Facing: Northeast	Utility Width/Spacing:
--------------------------	-------------------------------

PLAN VIEW

COORDINATES

	Northing: 7004312.5020 Easting: 11879992.6250
	COMMENTS/NOTES

TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Chris Lugiano	Date: 2020-05-27
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City: Arlington	State: VA	Test Hole: 32 of
------------------------	------------------	-------------------------

General Location: N Glebe / N Pershing

UTILITY INFORMATION

Utility Size: 6"	Material: Epoxy Coated Steel	Good Condition: YES
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Utility Type: Gas Line	Utility Owner: Washington Gas
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Asphalt / Concrete	Pavement thickness: A = 3" / C = 9"
--	--

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 267.04'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>3.02'</u> Elevation: <u>264.02'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
---	--

Facing: Northeast	Utility Width/Spacing:
--------------------------	-------------------------------

PLAN VIEW

COORDINATES

	<p>Northing: 7004314.1030 Easting: 11880011.1050</p> <p style="text-align: center;"><u>COMMENTS/NOTES</u></p>
--	---

TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Chris Lugiano	Date: 2020-05-27
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City: Arlington	State: VA	Test Hole: 33 of
------------------------	------------------	-------------------------

General Location: N Glebe / N Pershing

UTILITY INFORMATION

Utility Size: 21"	Material: Rough Pour Concrete	Good Condition: YES
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Utility Type: Communication Ductbank	Utility Owner: VZN
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Asphalt / Concrete	Pavement thickness: A = 4" / C = 7"
--	--

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
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BM Check:

2nd Elevation:	2nd Benchmark Description:
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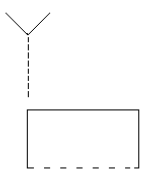
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 266.94'
---------------------------	---------------------------

Offset/Direction: Nail is set of North Edge.

PROFILE VIEW

	Top of utility field measurement: <u>3.86'</u>	Elevation: <u>263.08'</u>
	Bottom of utility field measurement: <u>4.72'</u>	Elevation: <u>262.22'</u>

Facing: East	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

Northing: 7004307.3340	Easting: 11880019.2590
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COMMENTS/NOTES

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TEST HOLE FORM

44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Chris Lugiano	Date: 2020-05-29
--	-----------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 34 of
------------------------	------------------	-------------------------

General Location: N. Glebe and Pershing

UTILITY INFORMATION

Utility Size: 12 3/4"	Material: Ductile Iron	Good Condition: YES
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Utility Type: Water Line	Utility Owner: Arlington
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 3" C = 12"
---	---

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
-----------------------	-----------------------------------

BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------


Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 266.00'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	<p>Top of utility field measurement: <u>4.90'</u> Elevation: <u>261.10'</u></p> <p>Bottom of utility field measurement: <u>None</u> Elevation: <u>None</u></p>
---	--

Facing: Northwest	Utility Width/Spacing:
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PLAN VIEW

COORDINATES

	<p>Northing: 7004258.4030 Easting: 11880079.1940</p> <p style="text-align: center;">COMMENTS/NOTES</p>
--	--



TEST HOLE FORM



44200 WAXPOOL RD, SUITE 127 ASHBURN, VA 20147 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Cody Brown	Date: 2020-05-11
--	--------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 35 of
------------------------	------------------	-------------------------

General Location: N. Glebe

UTILITY INFORMATION

Utility Size: 6 1/2"	Material: Epoxy Coated Steel	Good Condition: YES
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Utility Type: Gas Line	Utility Owner: Washington Gas
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
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Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Asphalt/ Concrete	Pavement thickness: A = 3" C = 6"
---	--

Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
-----------------------	-----------------------------------

BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------

Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail	Elevation: 270.09'
---------------------------	---------------------------

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

	Top of utility field measurement: <u>3.67'</u>	Elevation: <u>266.42'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: Northwest	Utility Width/Spacing:
--------------------------	-------------------------------

PLAN VIEW

COORDINATES

	Northing: 7004521.3750	Easting: 11879799.1520
	COMMENTS/NOTES	

Project: M-0618-0201-RO14 (N. Glebe Water Line Replacement)	Prepared By: Chris Lugiano	Date: 2020-05-11
--	-----------------------------------	-------------------------

City: Arlington	State: VA	Test Hole: 36 of
------------------------	------------------	-------------------------

General Location: N. Glebe and Quebec

UTILITY INFORMATION

Utility Size: Clear Hole	Material:	Good Condition: YES
---------------------------------	------------------	----------------------------

Utility Type: None	Utility Owner:
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ADDITIONAL UTILITY INFORMATION

Utility Size:	Material:	See Test Hole No.:
----------------------	------------------	---------------------------

Utility Type: None	Utility Owner:
---------------------------	-----------------------

SITE CONDITIONS

Field Condition: Grass Area	Pavement thickness: N/A
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Ground Condition: Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation:	1st Benchmark Description:
-----------------------	-----------------------------------

BM Check:

2nd Elevation:	2nd Benchmark Description:
-----------------------	-----------------------------------

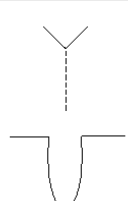
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Chiseled "X"	Elevation: 269.88'
-------------------------------	---------------------------

Offset/Direction: Chiseled "X" is set C/L of the Hole.

PROFILE VIEW

	Top of utility field measurement: <u>6.00'</u>	Elevation: <u>263.88'</u>
	Bottom of utility field measurement: <u>None</u>	Elevation: <u>None</u>

Facing: None	Utility Width/Spacing:
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PLAN VIEW	COORDINATES
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	<p>Northing: 7004524.8740 Easting: 11879803.4400</p> <p style="text-align: center;">COMMENTS/NOTES</p> <p>Crew was unable to locate the utility in test hole. Client was notified of findings and requested to clear 6.00'</p>
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EXHIBIT J

Commonwealth Of Virginia

Department Of Transportation

Land Use Permit



Permit No 947-143688

Status APPROVED

This permit only grants permission to use whatever rights the Commonwealth Transportation Board and the Department of Transportation have in the right of way and no more, and it is the obligation of the permittee to secure any other releases or permission that may be needed in order to perform the work.

Table with columns: Effective Date (May 14, 2021), Expiration Date (Oct 31, 2023), Reinstatement Date. Rows include Permittee Information, Your Job# (Arlington R014), Agent, Contact, and Surety & Account Receivable Information.

AUTHORIZATION: In compliance with your application, permission is hereby given insofar as the Commonwealth Transportation Board has the right, power, and authority under sections 33.2 - 210;33.2 - 240;33.2 - 241 of the Code of Virginia as amended, to grant by Special Agreement and/or by Land Use Permit for you to perform the work and or activity(s) described below:

Location table with columns: County/City/Town (Arlington County), Highway Route(s) (120 - N. Glebe Road), From Route Number (NIS), From Route Name (N Randolph Street), To Route Number (NIS), To Route Name (N Pershing Drive).

Work Description: Furnish & install approx. 2,050LF of 12" water main, 900LF of 8" watermain, and 10LF of 6" water main, along with valves, vaults, fire hydrants, connections to existing water mains, other related appurtenances to complete the water main installation, reinstallation of approx. 420LF of curb and gutter, 160SY of sidewalk and 6,722SY of pavement restorations and all other related incidental work.

Payment Reference table with columns: Payment Reference (60799584), Payment Date (5/5/2021), Payment Type (Credit Card), Payment Amount (\$885.00).

Applicant has compiled with VA Code Section 56-265.15 Affidavit is attached.

TERMS:Applicable as stated in the VDOT Land Use Permit Regulations (current edition) and/or as per approved plans, and/or regulatory instructions, including but not limited to the LUP-SPG and/or agreement(s) attached hereto.

COMMONWEALTH TRANSPORTATION BOARD

- C Call before you dig
A Allow the required time for marking
R Respect and protect the marks/flags
E Excavate carefully

By: Robert Burton May 14, 2021



Call Miss Utility 811

[] When checkbox is marked, by approving this permit, the issuing official certifies that the entrance was designed in accordance with Appendix F of the Road Design Manual

FINAL INSPECTION & SURETY REQUIREMENTS: Upon completion of the work or activity(s) authorized under this Land Use Permit, the permittee shall contact the following office in writing or by electronic communication to request final inspection and release of the surety obligation for this permit.

NOVA District - Fairfax Permits
4975 Alliance Drive Suite 1N
Fairfax, VA VA 22030

EXHIBIT L



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION


4975 Alliance Drive
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

September 29, 2016

MEMORANDUM

TO: NOVA District Staff

FROM: Hari Sripathi, P.E.
Regional Operations Director 

SUBJECT: Lane Closures in Nova District

As a follow up to the Lane Closures in Nova District memorandum dated April 27, 2012, enclosed are the updated guidelines for lane closures.

These updated guidelines will be effective immediately. All existing and previously approved projects are encouraged to review their respective contract documents and make adjustments if possible.

ATTACHMENT - VDOT Lane Closure Guidelines

Lane Closure Guidelines

-For Northern Virginia-



**Virginia Department of Transportation
Northern Region Operations**

September 21, 2016

Instruction

The purpose of this memorandum is to present guidelines for lane closure hours for construction, maintenance, permits, and special events in Northern Virginia.

The first version of the lane closure guidelines was issued in April 2012. In the past four years, there have been completed and on-going roadway construction projects in the NoVA District, such as I-495 and I-95 express lanes and the I-66 spot improvements. As these guidelines are applied and implemented, modifications and updates to these guidelines have become necessary. Same as the previous version, the modifications were made based on traffic volume; roadway characteristics; comments from staff; and considering the public tolerance for the lane closure during certain time periods of the day.

It should be noted that these guidelines must be used as a starting point for discussion at the project level. On large scale projects with robust community outreach and a Traffic Management Plan, these hours could be extended. If project staff would like to modify these hours for interstate or major arterials, they must work with NRO Traffic Operations staff for recommendations and obtain final approval from their functional Assistant District Administrator (ADA).

Please review the existing contracts and discuss the deviations from these hours with your functional ADA.

Restriction of Operations:

In addition to the allowable lane closure hours specified in the tables, the restrictions listed below shall be followed.

1. Peak Hours Lane Closures

Any lane reductions (temporary or permanent) during the peak periods (Monday to Friday, 6:00AM to 9:00AM and 3:30PM to 6:30PM) on roads with an AADT above or equal to 10,000 vehicles requires consultation with the Regional Operations Director (ROD) and Public Affairs Manager.

2. Complete Roadway Closures

If there are complete road closures on any road for construction or maintenance work, the ROD and Public Affairs Manager must be consulted.

Complete Roadway Closures shall be limited to 20 to 30 minutes intermittent stoppage for some specific work activities.

If the closure duration is above 30 minutes, it shall be approved separately with full Maintenance of Traffic and Traffic Management Plans.

3. Construction in Residential Subdivisions

Road work within residential subdivisions and/or cul-de-sac streets should be conducted during daytime hours to avoid night time noise issues.

4. Express Lanes (I-95 & I-495)

All I-95 and I-495 Express Lane closures shall be coordinated with the Express Lanes Operations Center at least 5 business days in advance using their Authorization to Work form (available from the Express Lanes Operations Center at (571) 419-6046. Complete road closures on the I-95 Express Lanes and I-495 Express Lanes will be limited to 30 minutes or less

5. Holiday

In addition to the Sunday or Holiday work limitations, mobile, short duration, short-term stationary or intermediate-term stationary temporary traffic control zone lane closures on mainline lanes, shoulders or ramps shall not be performed during the following Holiday time periods without the written permission of the Engineer. Additionally, long-term stationary temporary traffic control zones shall not be initially put in place, adjusted, or removed during the following Holiday time periods without the written permission of the Engineer (VDOT 2016 Standard Specifications, updated 7/2016):

- **January 1:** From Noon on the preceding day until Noon on the following day, except as indicated below.
- **Martin Luther King, Jr. Day and Lee Jackson Day*:** From Noon on the preceding Thursday to Noon on the following Tuesday.
- **Presidents Day*:** As indicated below.
- **Easter*:** As indicated below.
- **Memorial Day:** As indicated below.
- **July 4:** From Noon on the preceding day until Noon on the following day, except as indicated below.
- **Labor Day:** As indicated below.
- **Columbus Day*:** As indicated below.
- **Veterans Day*:** From Noon on the preceding day until Noon on the following day, except as indicated below.
- **Thanksgiving Day:** From Noon on the Wednesday preceding Thanksgiving Day until Noon on the Monday following Thanksgiving Day.
- **Christmas Day:** From Noon on the preceding day until Noon on the following day, except as indicated below.

If the Holiday occurs on a Friday or Saturday: From Noon on the preceding Thursday to Noon on the following Monday.

If the Holiday occurs on a Sunday or Monday: From Noon on the preceding Friday to Noon on the following Tuesday.

***Note:**

For low volume roadways (minor arterial), lane closures will not be allowed during the holidays; however, there will be no restriction to the preceding day and the following day.

INTERSTATE 395 & INTERSTATE 95					
WEEKDAY		Northbound			
		Single-Lane Closures or Shoulder	Two-Lane Closures	Multiple-Lane Closures	Complete Road Closure
Segment 1	14th St. Bridge to Springfield Interchange	10:00AM to 3:00PM	10:00PM to 5:00AM	11:00PM to 5:00AM	12:00AM to 4:00AM
		9:00PM to 5:00AM			
Segment 2	Springfield Interchange to Rt.123	9:30AM to 3:30PM	10:00PM to 5:00AM	11:00PM to 5:00AM	12:00AM to 4:00AM
		9:00PM to 5:00AM			
Segment 3	Rt.123 to Prince William / Stafford County line	9:30AM to 3:30PM	10:00PM to 4:30AM	11:00PM to 4:00AM	12:00AM to 4:00AM
		9:00PM to 5:00AM			
Segment 4	Prince William / Stafford County line to Rt.3 Exit 130	9:30AM to 3:30PM	10:00PM to 4:30AM	n/a	12:00AM to 4:00AM
		9:00PM to 4:30AM			
Segment 5	Rt.3 Exit 130 to Caroline / Hanover County line	9:00AM to 3:30PM	10:00PM to 4:30AM	n/a	12:00AM to 4:00AM
		9:00PM to 5:30AM			
All lanes open at 12:00 noon on Friday					
WEEKDAY		Southbound			
		Single-Lane Closures or Shoulder	Two-Lane Closures	Multiple-Lane Closures	Complete Road Closure
Segment 1	14th St. Bridge to Springfield Interchange	10:00AM to 2:30PM	10:00PM to 5:00AM	11:00PM to 5:00AM	12:00AM to 4:00AM
		9:30PM to 5:00AM			
Segment 2	Springfield Interchange to Rt.123	9:00AM to 2:00PM	10:00PM to 5:00AM	11:00PM to 5:00AM	12:00AM to 4:00AM
		9:30PM to 5:00AM			
Segment 3	Rt.123 to Prince William / Stafford County line	9:00AM to 2:00PM	10:00PM to 5:00AM	11:00PM to 5:00AM	12:00AM to 4:00AM
		9:30PM to 6:00AM			
Segment 4	Prince William / Stafford County line to Rt.3 Exit 130	9:00AM to 2:00PM	10:00PM to 5:30AM	n/a	12:00AM to 4:00AM
		9:30PM to 6:00AM			
Segment 5	Rt.3 Exit 130 to Caroline / Hanover County line	9:00AM to 3:00PM	10:00PM to 5:30AM	n/a	12:00AM to 4:00AM
		9:30PM to 6:00AM			
All lanes open at 11:00am on Friday					

INTERSTATE 395 & INTERSTATE 95			
WEEKEND	Northbound/Southbound*		
	Single-Lane Closures or Shoulder	Multiple-Lane Closures	Complete Road Closure
Friday to Saturday	10:00PM to 7:00AM	11:00PM to 6:00AM	12:00AM to 5:00AM
Saturday to Sunday	10:00PM to 7:00AM	11:00PM to 6:00AM	12:00AM to 5:00AM
Sunday to Monday	10:00PM to 5:00AM	11:00PM to 4:00AM	12:00AM to 4:00AM

* For special operations, depending on time of year, additional hours may be allowed with proper ADA/ROD approval.

	REVERSIBLE LANES (HOV & EXPRESS LANES)*	
	Single-Lane Closures or Shoulder	Complete Road Closure**
WEEKDAY	9:30PM (Sunday to Thursday) to 4:00AM (Monday to Friday)	11:00PM to 4:00AM
WEEKEND	11:00PM (Friday to Saturday) to 9:00AM (Saturday to Sunday)	11:00PM to 4:00AM

* Direction of traffic control for all lane closures in reversible lanes will need to be adjusted as necessary to face direction of traffic.
 ** Complete Road Closure on Express Lanes limited to 30 minutes or less.

INTERSTATE 495 (BELTWAY)					
WEEKDAY		Inner Loop			
		Single-Lane Closures or Shoulder	Two-Lane Closures	Multiple-Lane Closures	Complete Road Closure
Segment 1	A. L. Bridge to Springfield Interchange	10:00AM to 3:00PM	10:00PM to 5:00AM	11:00PM to 5:00AM	12:00AM to 5:00AM
		9:30PM to 5:00AM			
Segment 2	Springfield Interchange to W.W. Bridge	10:00AM to 3:00PM	10:00PM to 5:00AM	11:00PM to 5:00AM	12:00AM to 5:00AM
		9:30PM to 5:00AM			
All lanes open at 12:00 noon on Friday					
WEEKDAY		Outer Loop			
		Single-Lane Closures or Shoulder	Two-Lane Closures	Multiple-Lane Closures	Complete Road Closure
Segment 1	A. L. Bridge to Springfield Interchange	9:30AM to 2:30PM	10:00PM to 5:00AM	11:00PM to 5:00AM	12:00AM to 5:00AM
		9:30PM to 5:00AM			
Segment 2	Springfield Interchange to W.W. Bridge	10:00AM to 3:00PM	10:00PM to 5:00AM	11:00PM to 5:00AM	12:00AM to 5:00AM
		9:30PM to 5:00AM			
All lanes open at 12:00 noon on Friday					
WEEKEND		Inner/Outer Loop			Complete Road Closure
		Single-Lane Closures or Shoulder	Multiple-Lane Closures		
Friday to Saturday		10:00PM to 8:00AM	11:00PM to 7:00AM		12:00AM to 5:00AM
Saturday to Sunday		10:00PM to 9:00AM	11:00PM to 8:00AM		12:00AM to 5:00AM
Sunday to Monday		9:30PM to 5:00AM	11:00PM to 5:00AM		12:00AM to 5:00AM
EXPRESS LANES					
		Single-Lane Closures or Shoulder	Complete Road Closure**		
WEEKDAY	9:30PM (Sunday to Thursday) to 4:00AM (Monday to Friday)		11:00PM to 4:00AM		
WEEKEND	11:00PM (Friday to Saturday) to 9:00AM (Saturday to Sunday)		11:00PM to 4:00AM		
** Complete Road Closure on Express Lanes limited to 30 minutes or less.					

INTERSTATE 66					
WEEKDAY		Eastbound			
		Single-Lane Closures or Shoulder	Two-Lane Closures	Multiple-Lane Closures	Complete Road Closure
Segment 1	Prince William County line to Route 286	10:00AM to 3:30PM	9:00PM to 5:00AM	10:00PM to 5:00AM	12:00AM to 4:00AM
		8:00PM to 5:00AM			
Segment 2	Route 286 to Beltway	11:00AM to 3:30PM	10:00PM to 5:00AM**	11:00PM to 5:00AM**	12:00AM to 4:00AM
		9:00PM to 5:00AM			
Segment 3	Beltway to TR Bridge (Inside Beltway)	9:30PM to 5:00AM	n/a	n/a	12:00AM to 4:00AM
All lanes open at 12:00 noon on Friday					
WEEKDAY		Westbound			
		Single-Lane Closures or Shoulder	Two-Lane Closures	Multiple-Lane Closures	Complete Road Closure
Segment 1	Prince William County line to Route 286	9:00AM to 2:30PM	9:30PM to 6:00AM	10:30PM to 5:00AM	12:00AM to 4:00AM
		9:00PM to 6:00AM			
Segment 2	Route 286 to Beltway	9:00AM to 2:00PM*	10:00PM to 5:00AM**	11:00PM to 5:00AM**	12:00AM to 4:00AM
		9:30PM to 5:00AM			
Segment 3	Beltway to TR Bridge (Inside Beltway)	9:30AM to 2:00PM*	10:00PM to 5:00AM**	n/a	12:00AM to 4:00AM
		10:00PM to 5:00AM			
All lanes open at 12:00 noon on Friday					
* Only be considered for three lane segment.					
** Consider opening shoulder lane, where Applicable.					

WEEKEND		Eastbound/Westbound		
Outside Beltway		Single-Lane Closures or Shoulder	Multiple-Lane Closures	Complete Road Closure
Friday to Saturday		9:00PM to 9:00AM	10:00PM to 6:00AM	12:00AM to 5:00AM
Saturday to Sunday		9:00PM to 9:00AM	10:00PM to 6:00AM	12:00AM to 5:00AM
Sunday to Monday		8:00PM to 5:00AM	9:00PM to 5:00AM	12:00AM to 4:00AM
Inside Beltway		Single-Lane Closures or Shoulder	Multiple-Lane Closures	Complete Road Closure
Friday to Saturday		10:00PM to 6:00AM	n/a	12:00AM to 5:00AM
Saturday to Sunday		10:00PM to 6:00AM	n/a	12:00AM to 5:00AM
Sunday to Monday		9:30PM to 5:00AM	n/a	12:00AM to 4:00AM

ROUTE 267 CONNECTOR				
WEEKDAY	Eastbound		Westbound	
	Single-Lane Closures or Shoulder	Complete Road Closure	Single-Lane Closures or Shoulder	Complete Road Closure
Monday to Friday	11:00AM to 3:00PM	12:00AM to 4:00AM	9:30AM to 3:00PM	12:00AM to 4:00AM
	9:30PM to 5:00AM		9:00PM to 5:00AM	
All lanes open at 12:00 noon on Friday				

WEEKEND	Eastbound/Westbound	
	Single-Lane Closures or Shoulder	Complete Road Closure
Friday to Saturday	10:00PM to 8:00AM	12:00AM to 5:00AM
Saturday to Sunday	11:00PM to 8:00AM	12:00AM to 5:00AM
Sunday to Monday	9:00PM to 5:00AM	12:00AM to 4:00AM

Single-Lane Closures* or Shoulder					
ARTERIAL	WEEKDAY		WEEKEND		
	Monday to Thursday	Friday	Friday to Saturday	Saturday to Sunday	Sunday to Monday
Major Arterials**	9:30AM to 3:00PM	9:30AM to 2:00 PM	10:00PM to 9:00AM	10:00PM to 8:00AM	10:00PM to 5:00AM
	10:00PM to 5:00AM				
All Other Roadways	9:00AM to 3:30PM	9:00AM to 2:00 PM	10:00PM to 9:00AM	9:00PM to 9:00AM	10:00PM to 5:00AM
	9:00PM to 5:00AM				

Multiple-Lane Closures					
ARTERIAL	WEEKDAY		WEEKEND		
	Monday to Thursday	Friday	Friday to Saturday	Saturday to Sunday	Sunday to Monday
Major Arterials**	10:00PM to 5:00AM	Not allowed until 11:00PM	11:00PM to 5:00AM	11:00PM to 6:00AM	11:00PM to 5:00AM
All Other Roadways	9:00PM to 5:00AM	Not allowed until 10:00PM	10:00PM to 6:00AM	10:00PM to 6:00AM	10:00PM to 5:00AM

*Single-lane closures only permitted for multiple-lane roadways.

**Major Arterials defined as Primary Roads, high volume Secondary Roads, and all other routes that connect directly to Interstates.

EXHIBIT M

State & Federal Roads in Arlington County, VA

State Routes

- Interstate 66: Custis Memorial Parkway
- Interstate 395: Henry G. Shirley Memorial Highway
- U.S. Route 1: Jefferson Davis Highway
- State Route 27: Washington Boulevard (Memorial Bridge to U.S. Route 50)
- U.S. Route 29: Lee Highway
- U.S. Route 50: Arlington Boulevard
- State Route 110: Jefferson Davis Highway (Rosslyn to Crystal City)
- State Route 120: Glebe Road
- State Route 123: Chain Bridge Road
- State Route 124: Spout Run Parkway (Lee Highway to Lorcom Lane)
- State Route 233: Airport Viaduct
- State Route 237: Washington Boulevard (North Glebe Road to Lee Highway)
- State Route 237: Fairfax Drive (Kirkwood Road to North Glebe Road)
- State Route 237: 10th Street North (U.S. Route 50 to Kirkwood Road)
- State Route 309: Old Dominion Drive

Federal Routes

- Arlington Hall Street
- Boundary Channel Drive
- George Washington Memorial Parkway
- Fort Myer streets, including Arlington National Cemetery
- Marshall Drive (North Meade Street to U.S. Route 110)
- Memorial Avenue
- Pentagon Street
- Spout Run Parkway (Lorcom Lane to George Washington Memorial Parkway)

EXHIBIT N

DEPARTMENT OF ENVIRONMENTAL SERVICES

Revised: 1/4/2022



Engineering Bureau

2100 Clarendon Boulevard, Suite 813, Arlington, VA 22201

TEL 703.228.3669 FAX 703.228.3606 www.arlingtonva.us

CONSTRUCTION CHANGE ORDER BUDGET SUMMARY

Please use this form to track change order cost throughout the construction phase

Contractor:	Contractor
Project Name:	Project Name
Project No:	XX###
Prepared by:	Project Engineer

Date: x/x/202x

Contract #:	XX-XXX-X-ITB
Purchase Order #:	XXXX

Account Number to Increase PO:	Fund	Natural Acc.	Cost Center	Project	Source of Fund	Task
		123	123456	12345	0000	0000

TOTAL CONTRACT AUTHORIZATION
(PO and Contingency)

ORIGINAL PURCHASE ORDER AMOUNT:
(Contract without Contingency)

CONTRACT CONTINGENCY AMOUNT:

TOTAL CHANGE ORDERS INCREASE:

Change #	Amount	Description	Date
CO # 1	\$ 1.00		
CO # 2	\$ 1.00		
CO # 3	\$ 1.00		
CO # 4	\$ 1.00		
CO # 5	\$ 1.00		
CO # 6			
CO # 7			
CO # 8			
CO # 9			
CO # 10			
CO # 11			

AUTHORIZED CONTINGENCY BALANCE:

EXHIBIT O

ARLINGTON COUNTY, VA REQUEST FOR INFORMATION FORM

PROJECT: _____

RFI NUMBER: _____
PROJECT NO.: _____

FOR CONTRACTOR ROUTING:

Contractor: _____
Work Category: _____

Transmittal No.: _____
Date: _____

TO (County Project Officer)
 (Consultant)
 (Other)

Action Faxed to _____ Emailed Mailed Pages ____
 Action Faxed to _____ Emailed Mailed Pages ____
 Action Faxed to _____ Emailed Pages ____

REGARDING: _____

SPEC. SECTION: _____ DWG. NO.: _____

EXPLANATION OF ISSUE: (Provide complete description of request with sketches or photos if necessary, and present status of work)

RECOMMENDATION / SUGGESTED SOLUTION:

RESPONSE PRIORITY: EARLIEST CONVENIENCE RUSH (WORK IN PROGRESS)

REASON FOR REQUEST: Existing Condition Non-conformance Clarification / Interpretation Agency Generated Other

CONTRACTOR

: _____
BY: _____ DATE: _____ Dist: _____

ARCHITECT'S/ENGINEER'S ROUTING: (for A/E use only)

To: _____ Date: _____ Return to: _____ Date _____

TO: (contractor) Faxed to _____ Emailed Mailed Hand delivered

RESPONSE:

- The above is considered a change. The following document will be used for processing: _____
- The above is consistent with the intent of and reasonably inferable from Contract Documents, or makes minor changes in the Work without change in Contract Sum or Contract Time. If Contractor does not agree, submit written notice within twenty (20) days substantiating claim in accordance with Contract Documents for approval.
- This RFI is returned without response for the following reason: Incomplete or lack of detailed information. Related to "means & methods".
 Lack of adequate Coordination Drawings. Is a "Substitution Request".
 Response required by others.

FROM: _____

BY: _____ DATE: _____ Dist: _____ File

