

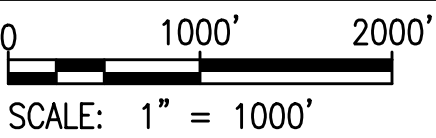


TOWN OF VIENNA  
DEPARTMENT OF PUBLIC WORKS

NUTLEY STREET  
CULVERT REPLACEMENT  
PROJECT



VICINITY MAP



CONSTRUCTION DRAWINGS

THE PLANS ARE UNFINISHED AND UNAPPROVED AND  
ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION  
OR THE ACQUISITION OF RIGHT OF WAY.

DESCRIPTION OF WORK

THIS PROJECT REPLACES THE EXISTING TRIPLE 36" CULVERTS UNDER NUTLEY STREET  
NEAR THE INTERSECTION WITH VIRGINIA CENTER BOULEVARD. THE PROJECT AIMS TO  
IMPROVE DRAINAGE AND MITIGATE FLOODING OF PROPERTIES UPSTREAM OF THE  
CULVERTS BETWEEN KINGSLEY ROAD AND MARSHALL ROAD.

SHEET INDEX

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REVISIONS

CLIENT INFORMATION  
TOWN OF VIENNA, VA  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



Whitman, Requardt & Associates, LLP  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

COVER SHEET

SCALE: 1" = 1,000'

DATE: 08/2024

SHEET: 1

DES: WRA

DRAWN: KML

CHECK: TLL



# GENERAL NOTES

(THESE GENERAL NOTES SHALL BE USED WHERE THEY ARE APPLICABLE TO THE PROJECT PLANS)

## CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE VDOT ROAD AND BRIDGE SPECIFICATIONS, 2020.
2. ALL CONSTRUCTION, INCLUDING ANY PROPOSED LANDSCAPING, SHALL CONFORM TO THE CURRENT EDITION OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM) AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION (V.D.O.T.) STANDARDS AND SPECIFICATIONS AND SHALL CONFORM TO THE CURRENT EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
2. ALL CONSTRUCTION WITHIN THE V.D.O.T. RIGHT-OF-WAY SHALL CONFORM TO THE PROVISIONS CONTAINED IN THE V.D.O.T. LAND USE PERMIT ISSUED FOR THIS LOCATION. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIARIZED WITH THE REQUIREMENTS OF THIS LAND USE PERMIT PRIOR TO THE START OF ANY CONSTRUCTION IN V.D.O.T. RIGHT-OF-WAY. THE SPECIAL PROVISIONS IN FORM MP-63 ARE A PART OF THE VDOT LAND USE PERMIT.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF TOWN OF VIENNA PUBLIC INFRASTRUCTURE MANUAL.
5. UNLESS MORE STRINGENT COMPACTION REQUIREMENTS ARE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS, THE BACKFILL OF EMBANKMENT MATERIAL, THE INSTALLATION OF TRENCH BACKFILL AND THE RESTORATION OF DISTURBED AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE V.D.O.T. ROAD AND BRIDGE SPECIFICATIONS. ALL COMPACTION SHALL BE AT ±2% OF THE OPTIMUM MOISTURE CONTENT.
6. ALL SUBGRADE, SUBBASE, BASE AND SHOULDER MATERIAL SHALL BE PLACED AND COMPACTED TO THE DENSITY SPECIFIED IN THE CURRENT EDITION OF THE V.D.O.T. ROAD AND BRIDGE SPECIFICATIONS. ALL COMPACTION SHALL BE AT ±2% OF THE OPTIMUM MOISTURE CONTENT.
7. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING THE V.D.O.T. RIGHT-OF-WAY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ALL STREETS, ALLAY DUST AND TO TAKE WHATEVER MEASURES NECESSARY TO ENSURE THE ROAD(S) ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
8. TEMPORARY OR PERMANENT PAVEMENT PATCHES ARE TO BE PLACED IN ALL ROADWAY CUTS WITH HOT MIX THE SAME DAY THE CUT IS MADE IN ACCORDANCE WITH V.D.O.T. REQUIREMENTS. SEE SPECIAL PROVISIONS FOR PAVEMENT OPEN CUTS, FORM LUP-OC NOVA FOR DETAILS.
9. THE TOP ELEVATION OF EXISTING MANHOLES SHALL BE ADJUSTED TO MEET THE FINAL PAVEMENT ELEVATION AT THE TIME OF FINAL PAVING OPERATIONS. ALL MANHOLES ARE TO BE PROTECTED FROM THE TRAVELING PUBLIC. NO MANHOLE IS TO BE RAISED ABOVE THE TOP ELEVATION OF THE ROADWAY WITHOUT THE APPROPRIATE TRANSITION.
10. CONTRACTOR IS TO ADJUST MANHOLE, VALVE, AND METER BOX COVERS BEFORE PLACING FINAL SURFACE PAVEMENT.
11. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING A BID FOR THE CONSTRUCTION OF THE PROJECT.
12. WHERE EXISTING NATURAL DRAINAGE DITCHES OR STREAM BANKS ARE DISTURBED DURING CONSTRUCTION, THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL ALIGNMENT, GRADE, AND INVERT.
13. PROPOSED TOP OF CURB GRADES SHALL BE FIELD ADJUSTED AS REQUIRED TO CONFORM TO THE INTENT OF THE TYPICAL SECTION. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE TO THE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF WATER ON THE ROADWAY. THE EXISTING PAVEMENT SHALL BE RECAPPED AND/OR REMOVED AND REPLACED AS REQUIRED TO ACCOMPLISH THIS REQUIREMENT. ALL CURB FORMS SHALL BE INSPECTED FOR HORIZONTAL AND VERTICAL ALIGNMENT BY THE OWNER OR THEIR AUTHORIZED REPRESENTATIVES PRIOR TO PLACING OF CONCRETE.
14. THE FOLLOWING PROVISIONS SHALL APPLY TO THE USE OF SHEETING AND SHORING:

(A) SHEETING AND SHORING OR OTHER APPROVED METHODS FOR TRENCH BRACING WILL BE REQUIRED ON THIS CONTRACT AS NEEDED TO MEET ALL SAFETY REQUIREMENTS.

(B) UNLESS OTHERWISE DIRECTED BY THE ENGINEER, SHEETING AND SHORING WILL BE REMOVED FROM ALL TRENCHES PRIOR TO BACKFILLING OPERATIONS.

(C) UNLESS SPECIFICALLY IDENTIFIED IN THE CONTRACT DOCUMENTS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR SHEETING AND SHORING.
15. THE CONTRACTOR SHALL RESTORE ALL DRIVEWAYS DISTURBED DURING CONSTRUCTION. RESTORATION SHALL CONSIST OF THE FOLLOWING:

\* GRAVEL DRIVEWAY – PROVIDE MINIMUM 6” COMPACTED 21A.

\* ASPHALT DRIVEWAY – PROVIDE 6” COMPACTED 21A WITH MINIMUM 2” SM-9.5A OVERLAY

\* CONCRETE DRIVEWAY – PROVIDE A NEAT SAWCUT CONNECTION, MINIMUM 4” COMPACTED 21A AND 5” CLASS A3 CONCRETE WITH WWF 6X6 – W2.9 X W2.9
16. WHERE A PROPOSED PIPE CROSSES OR PARALLELS A STREET, THE ASPHALT SHALL BE NEATLY SAWCUT TO FULL DEPTH. AFTER INSTALLATION OF THE PIPE, THE ROADWAY SHALL BE PATCHED IN ACCORDANCE WITH THE V.D.O.T. LAND USE PERMIT ISSUED FOR THE PROJECT.
17. THE PAVEMENT DESIGN IN THE CONSTRUCTION PLANS WAS PREPARED BASED ON AVAILABLE SUBSURFACE INFORMATION INCLUDING LABORATORY CALIFORNIA BEARING RATIO (C.B.R.) TESTS THAT WERE PERFORMED DURING THE DESIGN SUBSURFACE INVESTIGATION. WHEN THE CONTRACTOR REACHES THE SUBGRADE ELEVATION, ADDITIONAL CBR TEST LOCATIONS MAY BE DIRECTED BY THE ENGINEER FOR SELECTED LOCATIONS BASED ON ACTUAL FIELD CONDITIONS OBSERVED. THE CBR SAMPLES AND TESTS SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEERING FIRM UNDER CONTRACT WITH FAIRFAX COUNTY. THE RESULTS OF THE ENGINEER'S EVALUATION OF THE CBR LABORATORY TESTS SHALL BE OBTAINED IN WRITING PRIOR TO THE PLACEMENT OF ANY SUBBASE OR BASE MATERIAL IN THE AREA(S) UNDER CONSIDERATION. THE PROPOSED PAVEMENT DESIGN FOR THE AREA(S) UNDER CONSIDERATION WILL EITHER BE CONFIRMED OR ADJUSTED BY THE ENGINEER BASED ON THE RESULT OF THE C.B.R. TEST RESULTS. THE CONTRACTOR SHALL COOPERATE WITH ENGINEER BY MODIFYING CONSTRUCTION ACTIVITIES AND/OR SCHEDULING IN ORDER TO PERMIT THE ADDITIONAL CBR TESTING. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY MONETARY DAMAGES WHATSOEVER FOR ANY DELAYS RESULTING FROM THIS TESTING. THE CONTRACTOR'S SOLE RELIEF IS A TIME EXTENSION GRANTED IN ACCORDANCE WITH ARTICLE 8.3.
18. CONTRACTOR IS RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO EXISTING FEATURES, INCLUDING UTILITIES.
19. CONTRACTOR IS RESPONSIBLE FOR OBTAINING VDOT AND LAND DISTURBANCE PERMITS.
20. CONTRACTOR TO CONTACT TOWN OF VIENNA DEPARTMENT OF PUBLIC WORKS BEFORE CROSSING SANITARY OR WATER UTILITIES.

## UTILITIES NOTES

1. THE UTILITY INFORMATION SHOWN ON THESE PLANS IS TAKEN FROM INFORMATION PROVIDED BY AN UNDERGROUND UTILITY DESIGNATING AND LOCATING COMPANY AND IN SOME CASES, FROM INFORMATION RECEIVED FROM THE UTILITY COMPANIES. THE OWNER DOES NOT GUARANTEE THAT THE UTILITY INFORMATION SHOWN ON THE PLANS IS COMPLETE OR ACCURATE. THE CONTRACTOR MUST VERIFY THE UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
2. ALL EXISTING UNDERGROUND UTILITIES SHALL BE MARKED IN THE FIELD BY MISS UTILITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE FIELD MARKING OF UTILITIES WITH MISS UTILITY.
3. ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF THESE UTILITIES.
4. THE CONTRACTOR SHALL CONFORM TO THE PROVISIONS AS SPECIFIED IN THE CURRENT VIRGINIA ADMINISTRATIVE CODE (VAC) SECTION 20 VAC 5-309-140. EXCAVATOR'S RESPONSIBILITIES TO AVOID DAMAGE, DISLOCATING OR DISTURBANCE OF UTILITY LINES, AS FOLLOWS:

\*ANY PERSON EXCAVATING AROUND UNDERGROUND UTILITY LINES SHALL TAKE ALL REASONABLE STEPS TO PROTECT SUCH UTILITY LINES. THESE STEPS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

(A) THE EXCAVATOR SHALL PLAN THE EXCAVATION IN SUCH A MANNER TO AVOID DAMAGE TO, AND MINIMIZE INTERFERENCE WITH, UNDERGROUND UTILITY LINES IN AND NEAR THE CONSTRUCTION AREA.

(B) THE EXCAVATOR SHALL EXPOSE THE UNDERGROUND UTILITY LINE TO ITS EXTREMITIES BY HAND DIGGING WITHIN THE EXCAVATION AREA WHEN EXCAVATION IS EXPECTED TO COME WITHIN TWO FEET OF THE MARKED LOCATION OF THE UNDERGROUND UTILITY LINE.

(C) THE EXCAVATOR SHALL NOT UTILIZE MECHANIZED EQUIPMENT WITHIN TWO FEET OF THE EXTREMITIES OF ALL EXPOSED UTILITY LINES.

(D) THE EXCAVATOR SHALL MAINTAIN A REASONABLE CLEARANCE, TO INCLUDE THE WIDTH OF THE UTILITY LINE, IF KNOWN, PLUS 24 INCHES, BETWEEN THE MARKED OR STAKED LOCATION OF AN UNDERGROUND UTILITY LINE AND THE CUTTING EDGE OR POINT OF ANY MECHANIZED EQUIPMENT, CONSIDERING THE KNOWN LIMIT OF CONTROL OF THE CUTTING EDGE OR POINT TO AVOID DAMAGE TO THE UTILITY LINE.

(E) THE EXCAVATOR SHALL PROVIDE PROPER SUPPORT FOR UNDERGROUND UTILITY LINES DURING EXCAVATION ACTIVITIES. DURING BACKFILL OPERATIONS, THE EXCAVATOR SHALL USE THE SAME OR SIMILAR MATERIAL THAT WAS ORIGINALLY AROUND THE UTILITY LINE. ENSURE THERE IS PROPER COMPACTION AROUND THE UTILITY LINE, PROTECT ALL TRACER WIRES, AND PROTECT OR REPLACE WARNING TAPES.”
5. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED CONSTRUCTION, EXCAVATION OR BLASTING AT LEAST 2 WORKING DAYS, BUT NOT MORE THAN 10 WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION IN ACCORDANCE WITH CHAPTER 63 OF FAIRFAX COUNTY CODE. NAMES AND TELEPHONE NUMBERS OF THE OPERATORS OF UNDERGROUND UTILITY LINES IN FAIRFAX COUNTY APPEAR ON THIS SHEET. THESE NUMBERS WILL ALSO BE USED TO SERVE EMERGENCY CONDITION NOTICE AS REQUIRED BY CHAPTER 63 OF THE FAIRFAX COUNTY CODE.

## MISS UTILITY 1-800-552-7001 OR 811

### PRIMARY UTILITY COMPANIES

PRIMARY UTILITY COMPANIES	EMERGENCY
AMERICAN TELEPHONE & TELEGRAPH CO.	1-800-241-3624
COLUMBIA GAS OF VIRGINIA	1-800-543-8911 – (703) 631-5363 (METRO)
COLUMBIA GAS TRANSMISSION CORP.	1-800-835-7191 (24 HRS)
COLONIAL PIPELINE CO.	1-800-926-2728
COX COMMUNICATIONS	(703)-378-0882
DOMINION VIRGINIA POWER	1-866-366-4357
FAIRFAX COUNTY WATER AUTHORITY	(703) 289-6395 OR 289-6323
FAIRFAX CO. WASTEWATER COLLECTION DIVISION	(703) 323-1211
FAIRFAX CITY WATER SERVICE	(703) 385-7984 OR 385-7924
FAIRFAX COUNTY PUBLIC SAFETY	(703)-691-2131 OR 911
FALLS CHURCH PUBLIC UTILITIES / WATER	(703) 248-5044
MCI, WORLD	1-800-624-9675
WORLD COM. (METROPOLITAN FIBER SYSTEMS)	(703) 852-6700
NORTHERN VIRGINIA ELEC. CO-OP	(703) 335-0500
TRANSCO GAS PIPELINE CO.	1-800-440-8475 (24 HRS)
TOWN OF HERNDON PUBLIC WORKS	(703) 435-6860 STATION 185 (703) 435-6846
TOWN OF VIENNA WATER SERVICE	(703) 255-6381 AFTER 5:00 PM., (703) 255-6385
SPRINT (GLOBAL ONE)	1-800-521-0579 (24 HRS)
SMART TRAFFIC SIGNAL SYSTEM	(703)-383-2790
VERIZON	1-800-837-4966
WASHINGTON GAS	(703) 750-1000 (GAS LEAK (703) 750-4831)

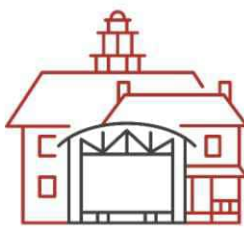
FIBER OPTIC COMPANIES	EMERGENCY
Abovenet Communications	1-888-636-2778
AT&T	1-888-634-1840 (PAGER)
Comcast Communications in Reston	(AFTER HOURS 703-841-7700)
Elontic Telecom/Cavalier Telephone Company	1-888-662-5700
Fiberlight, LCC	1-800-672-0181
Fibergate	703-822-9743
Verizon Business (Formerly MCI)	703-391-5782; (CELL-703-598-1721)
Quest Government Services	1-800-388-6460
Qwest Communications	610-613-0979
Sprint	1-800-521-0579
YIPES Communication, Inc	1-877-740-6600
Xspedius Communications	1-800-937-7473
XO Communications	1-866-295-9696

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REVISIONS	

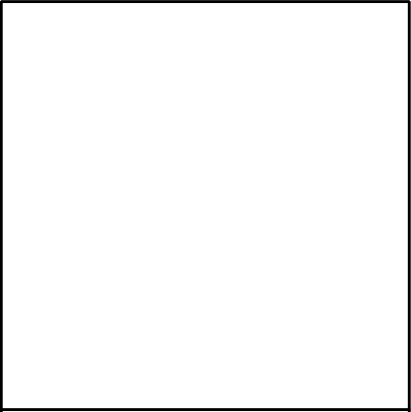
CLIENT INFORMATION

**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



TOWN OF  
**VIENNA**  
since 1890

**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**



Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



**Whitman, Requardt & Associates, LLP**  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

**GENERAL NOTES**

SCALE: N/A

DATE: 08/2024

SHEET: 2

DES: TLL

DRAWN: TLL

CHECK:



LEGEND

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EDGE OF PAVEMENT
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GUARD RAIL
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FENCELINE
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330

VEGETATION
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CONTOURS
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UNDERGROUND TELEPHONE
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OVERHEAD ELECTRIC
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SS

SANITARY LINE
- - - - -

SD

STORM LINE
- - - - -

W

WATER LINE
- - - - -

NG

NATURAL GAS LINE
- - - - -

DITCH
- ⚓

BENCHMARK
- ⊙

CONTROL POINT
- ⊕

CONTROL POINT - NAIL SET
- ⊕

CONCRETE MONUMENT
- ⊙

STORM - CURB INLET
- ⊙

STORM - MANHOLE
- ⊙

SANITARY - MANHOLE
- ⊕

POWER POLE
- ⚡

LIGHT POLE
- ⊙

JUNCTION BOX
- ↓

GUY WIRE
- ⊙

GUY POLE
- ⊙

TRAFFIC SIGNAL CONTROL BOX
- ⊙

TELEPHONE PEDESTAL
- ⊙

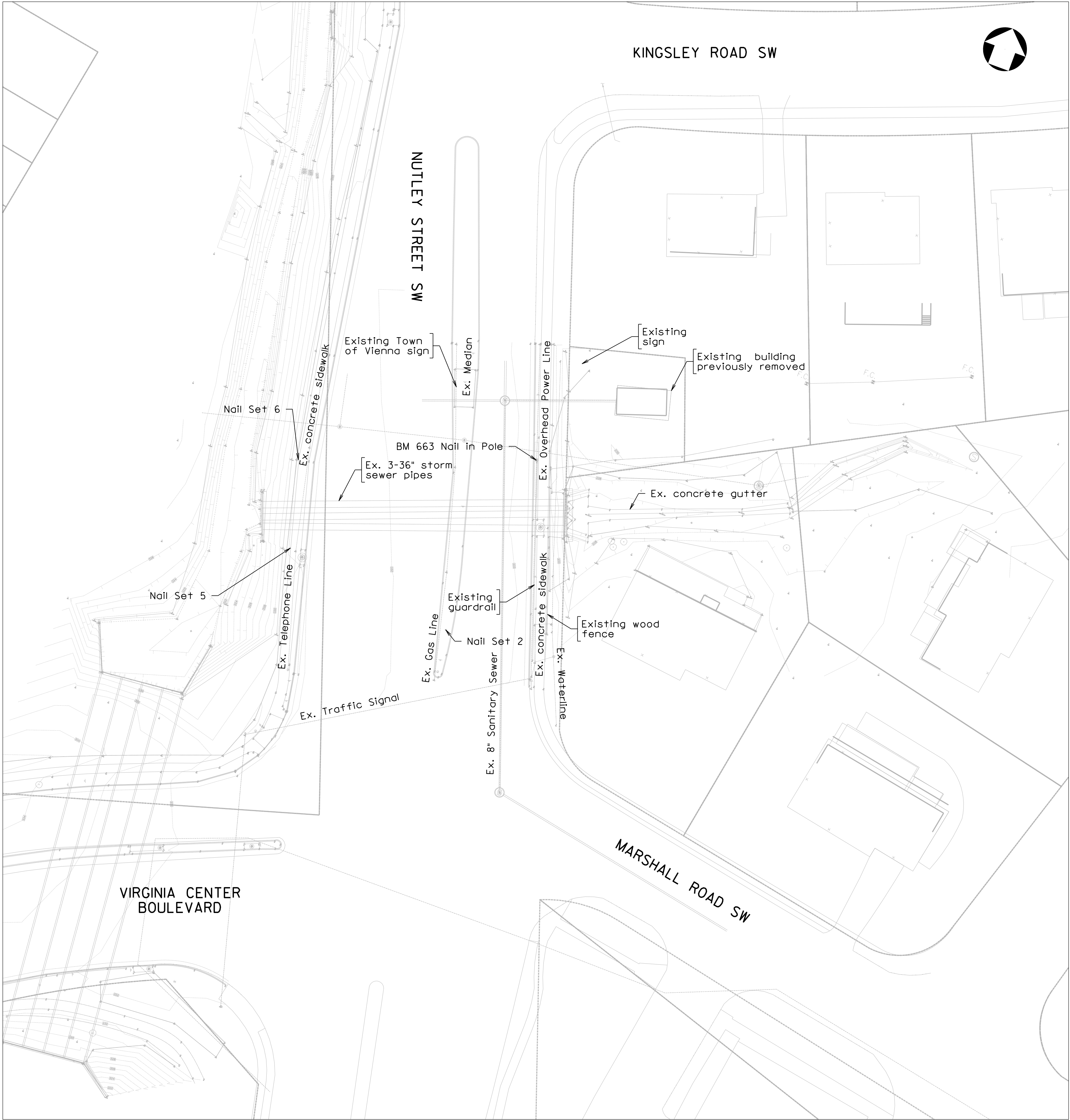
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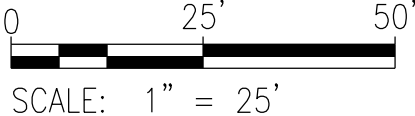
TEST HOLE

SURVEY BENCHMARKS			
LOCATION	STATION	OFFSET	ELEVATION
BM 663	1+35.91	24.82' RT.	332.60'
NAIL SET 2	1+77.15	52.62' LT.	332.82'
NAIL SET 5	2+48.10	15.26' LT.	331.07'
NAIL SET 6	2+44.39	25.17' RT.	331.28'

EXISTING CONDITIONS



NOTE: BOX CULVERT CONSTR. IS INDEPENDENT OF DRAINAGE PROFILE. DRAINAGE PROFILE BASELINE SHALL NOT BE USED FOR INSTALLATION OF BOX CULVERT.



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REVISIONS

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
STRUCTURAL ENGINEER



12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

EXISTING  
CONDITIONS

SCALE: 1" = 25'-0"

DATE: 08/2024

SHEET: 3

DES: KML

DRAWN: KML

CHECK: TAB



CULVERT PLAN

LEGEND

- ///

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EDGE OF PAVEMENT
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o

o

o

GUARD RAIL
- x

x

x

FENCELINE
- ~~~~~

330

VEGETATION
- T

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CONTOURS
- T

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UNDERGROUND TELEPHONE
- OHE

---

OVERHEAD ELECTRIC
- SS

---

SANITARY LINE
- SD

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STORM LINE
- W

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WATER LINE
- NG

---

NATURAL GAS LINE
- ---

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DITCH
- ⦿

BENCHMARK
- ⊙

CONTROL POINT
- ⊕

CONTROL POINT - NAIL SET
- ⊕

CONCRETE MONUMENT
- ⦿

STORM - CURB INLET
- ⦿

STORM - MANHOLE
- ⦿

SANITARY - MANHOLE
- ⦿

POWER POLE
- ⦿

LIGHT POLE
- ⦿

JUNCTION BOX
- ⦿

GUY WIRE
- ⦿

GUY POLE
- ⦿

TRAFFIC SIGNAL CONTROL BOX
- ⦿

TELEPHONE PEDESTAL
- ⦿

SIGN
- ⦿

TREE
- ⦿

TEST HOLE

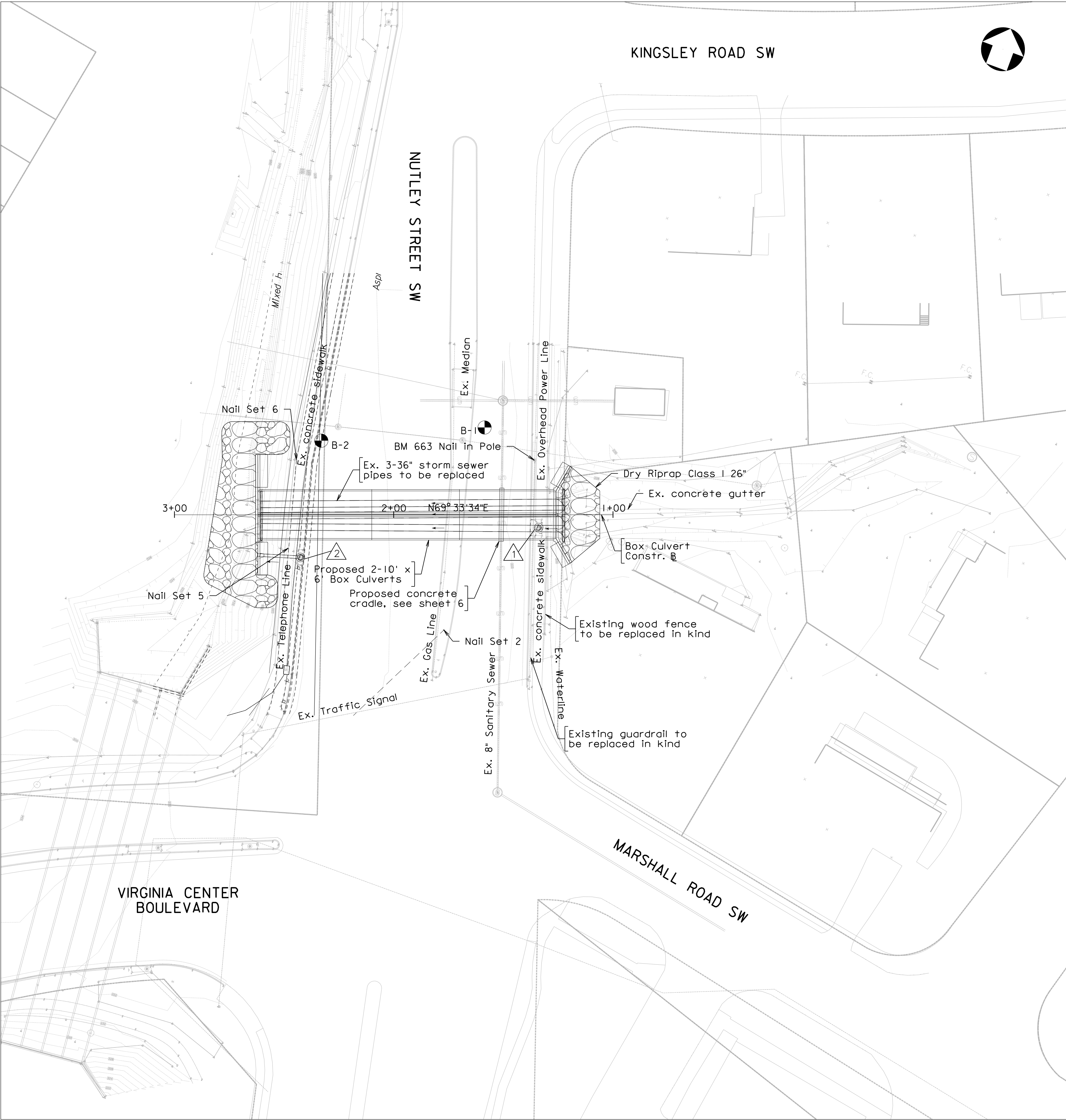
BORINDGS B-1 AND B-2 WERE OBTAINED IN 2014. THE LOCATIONS SHOWN ARE APPROXIMATE.

BOX CULVERT CONSTRUCTION BASELINE CONTROL POINTS		
STATION	NORTHING	EASTING
1+00.00	7007152.45	11833690.87
1+20.00	7007145.48	11833672.13
2+62.00	7007095.96	11833539.04
3+00.00	7007082.71	11833503.43

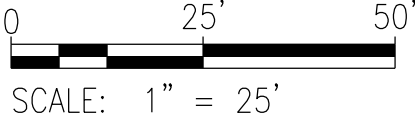
ACTIONS

1 DRAINAGE INLET 5-2 TO BE REPLACED WITH DI-3B, L=8'. PLACE NEW STRUCTURE OVER CONCRETE BOX CULVERT A AS SHOWN. DISCHARGE WATER THROUGH BOX CULVERT TOP SLAB. SEE DETAIL ON SHEET 7. COST FOR CONNECTION TO BOX CULVERT TO BE INCLUDED IN OTHER PERTINENT ITEMS.

2 DRAINAGE INLET 5-1 TO BE REPLACED. SEE SHEET 5 FOR DRAINAGE DESCRIPTION. REMOVE DOWNSTREAM ENDWALL AT OUTLET STORM DRAIN. REPLACE EXISTING 15" DIAMETER STORM DRAIN FROM 5-1 TO FACE OF WINGWALL.



NOTE: BOX CULVERT CONSTR. B IS INDEPENDENT OF DRAINAGE PROFILE B. DRAINAGE PROFILE BASELINE SHALL NOT BE USED FOR INSTALLATION OF BOX CULVERT.



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CULVERT  
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Whitman Requardt & Associates  
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STRUCTURAL ENGINEER



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12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

PLAN SHEET

SCALE: 1" = 25'-0"

DATE: 08/2024

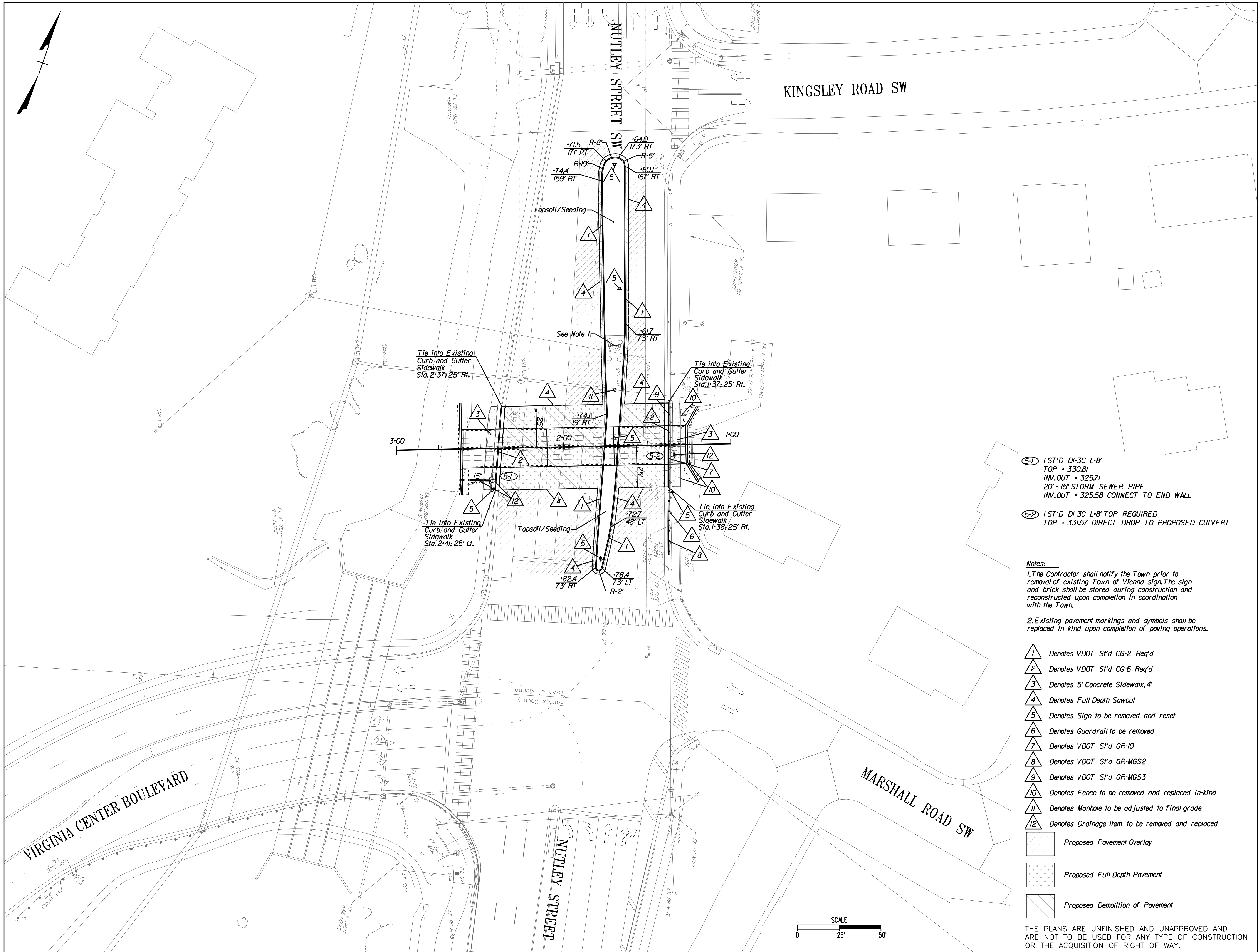
SHEET: 4

DES: KML

DRAWN: KML

CHECK: TAB






REVISIONS	

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Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



Whitman, Requardt & Associates, LLP

12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

PROPOSED CONDITIONS

SCALE: 1"=25'

DATE: 08/2024

SHEET: 5

DES: TLL

DRAWN: TLL

CHECK:




- 5-1 1 ST'D DI-3C L-8'  
TOP + 330.81  
INV.OUT + 325.71  
20' - 15' STORM SEWER PIPE  
INV.OUT + 325.58 CONNECT TO END WALL
- 5-2 1 ST'D DI-3C L-8' TOP REQUIRED  
TOP + 331.57 DIRECT DROP TO PROPOSED CULVERT

Notes:

1.The Contractor shall notify the Town prior to removal of existing Town of Vienna sign.The sign and brick shall be stored during construction and reconstructed upon completion in coordination with the Town.

2.Existing pavement markings and symbols shall be replaced in kind upon completion of paving operations.

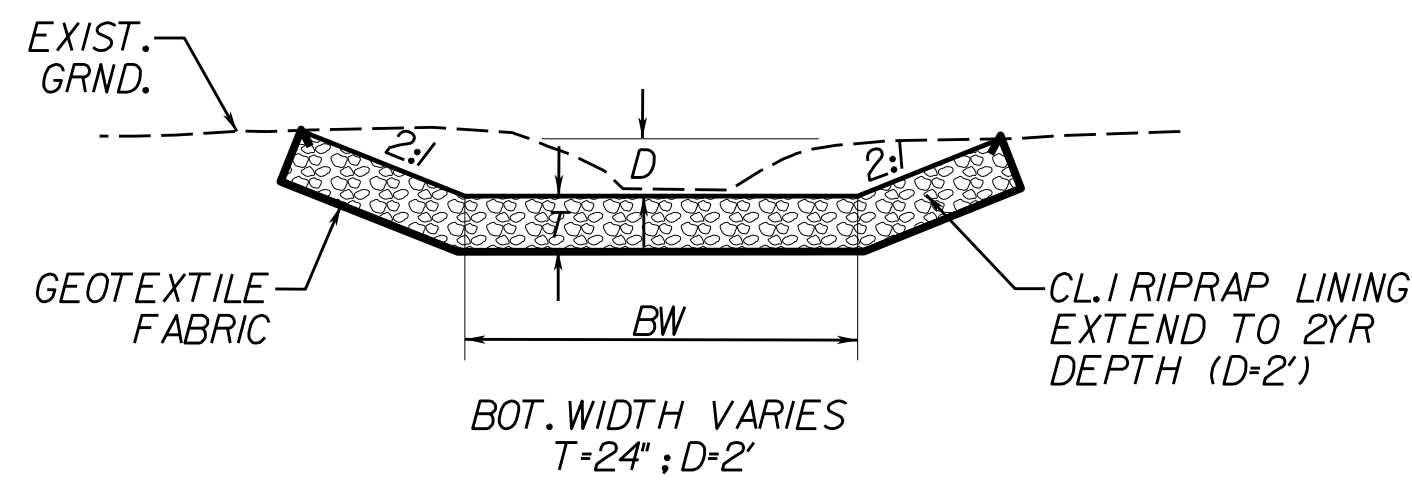
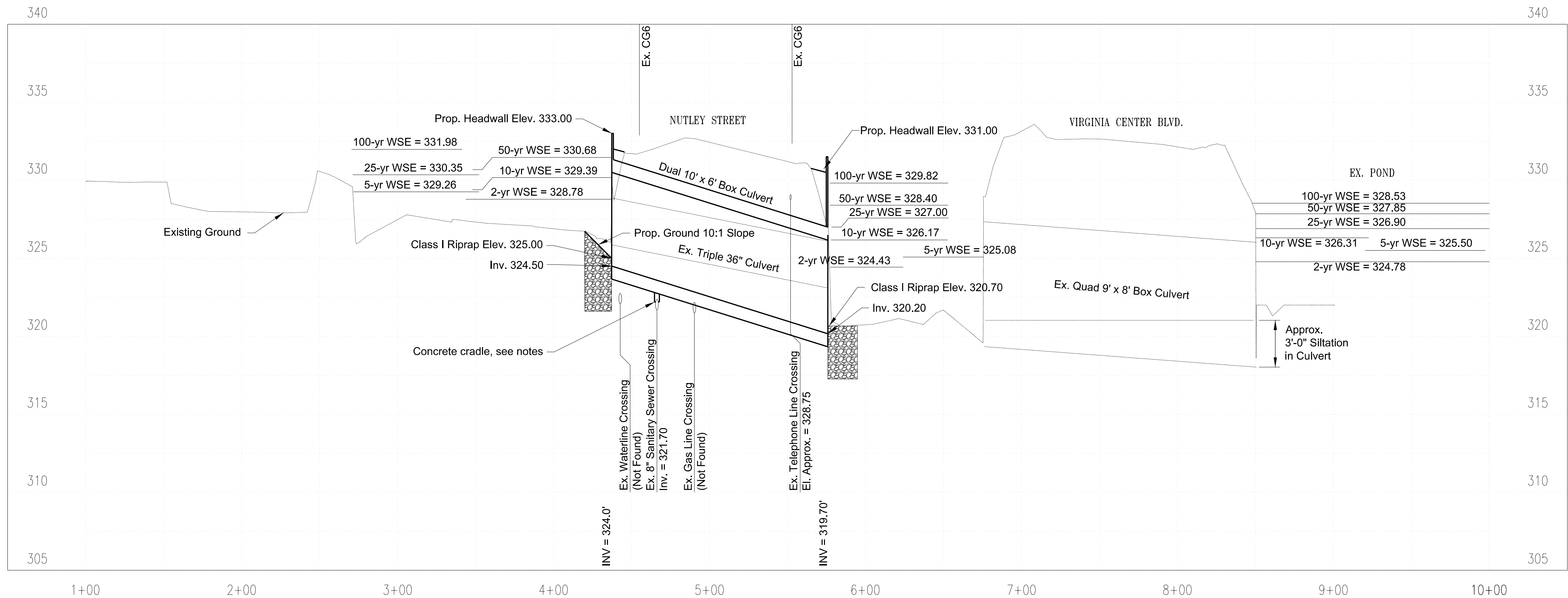
- 1 Denotes VDOT S't'd CG-2 Req'd
- 2 Denotes VDOT S't'd CG-6 Req'd
- 3 Denotes 5' Concrete Sidewalk, 4"
- 4 Denotes Full Depth Sawcut
- 5 Denotes Sign to be removed and reset
- 6 Denotes Guardrail to be removed
- 7 Denotes VDOT S't'd GR-10
- 8 Denotes VDOT S't'd GR-MGS2
- 9 Denotes VDOT S't'd GR-MGS3
- 10 Denotes Fence to be removed and replaced in-kind
- 11 Denotes Manhole to be adjusted to final grade
- 12 Denotes Drainage Item to be removed and replaced

-  Proposed Pavement Overlay
-  Proposed Full Depth Pavement
-  Proposed Demolition of Pavement

THE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



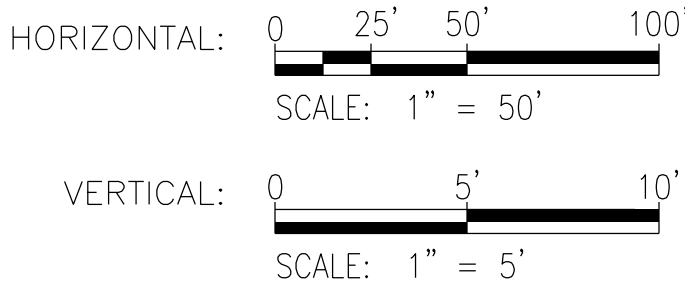
# CULVERT PROFILE



CULVERT INLET CHANNEL  
NOT TO SCALE

## NOTES:

- FOR FOUNDATION AND BACKFILL REQUIREMENTS, REFER TO NOTES ON SHEET 7 AND SECTION 302 OF THE VDOT SPECIFICATIONS.
- FOR PIPE INSPECTION REQUIREMENTS, SEE NOTES ON SHEET 7.
- BOX CULVERT CONSTR.  $\varnothing$  IS INDEPENDENT OF DRAINAGE PROFILE  $\varnothing$ . DRAINAGE PROFILE BASELINE SHALL NOT BE USED FOR INSTALLATION OF BOX CULVERT.
- PROVIDE A CONCRETE CRADLE AT EXISTING SANITARY SEWER IN ACCORDANCE WITH VDOT STANDARD UB-1. COST OF CONCRETE CRADLE SHALL BE INCLUDED IN THE COST OF THE PRECAST BOX CULVERT PAY ITEM.



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## REVISIONS

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



**TOWN OF VIENNA**  
since 1890

## NUTLEY STREET CULVERT REPLACEMENT PROJECT

Whitman Requardt & Associates  
Fairfax, Virginia  
STRUCTURAL ENGINEER



**Whitman, Requardt & Associates, LLP**  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

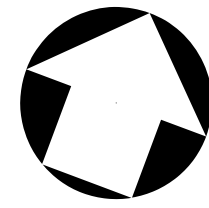
## CULVERT PROFILE

SCALE: AS SHOWN

DATE: 08/2024 SHEET: 6

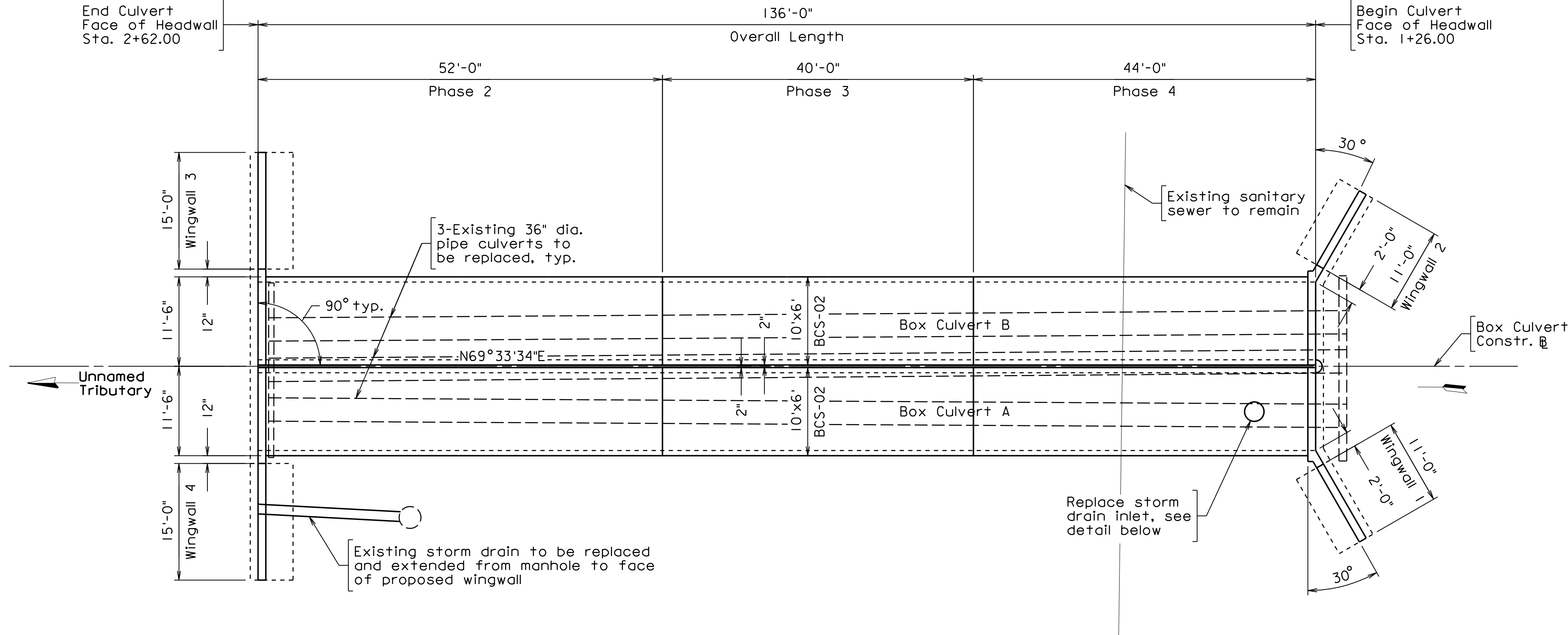
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End Culvert  
Face of Headwall  
Sta. 2+62.00

Begin Culvert  
Face of Headwall  
Sta. 1+26.00



BOX CULVERT PLAN

GENERAL NOTES:

Capacity: AASHTO HL-93

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2007.

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2016.

Design: AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017; and VDOT Modifications. Guide Specifications for Seismic Isolation Design, 4th Edition, 2014.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2016; including all current revisions.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

These special design details are to be used with the standard box culvert dimensions, details, and notes in the box culvert standard sheets.

Specific box culvert standards referenced are as follows:  
- Single 10 x 6 box culvert with 0 to 2 feet of cover - BCS-02

All concrete in proposed box culverts, including wingwalls and headwalls, shall be Class A4.

Contractor shall utilize precast concrete box culvert sections and precast concrete wingwalls. Penetrations shall be designed, detailed and fabricated where required in plans. Cost for precast wingwalls shall be incidental to the cost of the precast concrete box culvert pay item.

All reinforcing steel shall be Corrosion Resistant Reinforcing (CRR), which shall conform to Section 233 of the Specifications. All reinforcing steel shall be CRR Class I.

Construction joints shall be constructed, bonded and sealed in accordance with the specifications.

Box culvert construction shall be phased as shown in the sequence of construction details. See sheets 7 and 11 thru 13 for details.

Box culverts and wingwall footings shall be placed on 4 inches of VDOT No. 57 stone to facilitate an even subgrade and to avoid stress concentration on the structure. Refer to Section 302.03 of the VDOT Specifications for additional information regarding VDOT No. 57 stone. Nominal bearing resistance for the culvert and wingwalls shall be 3.0 ksf at service and strength limit states. Tolerable settlement shall be 1/2".

Contractor shall provide working drawings the box culverts and wingwalls. Working drawings shall be in accordance with VDOT Road and Bridge Specifications and shall be signed and sealed by a Professional Engineer holding a valid license to practice engineering in the Commonwealth of Virginia.

Notes:

Existing sidewalks, curb and gutter, pavement, and median shall be replaced in kind. Refer to Transportation Management Plan for more details.

All wingwalls shall be designed for live load surcharge in accordance with AASHTO LRFD.

Box Culvert construction phases are based on maintenance of traffic and erosion and sediment control phases. There is no culvert construction in Phases 1 and 5.

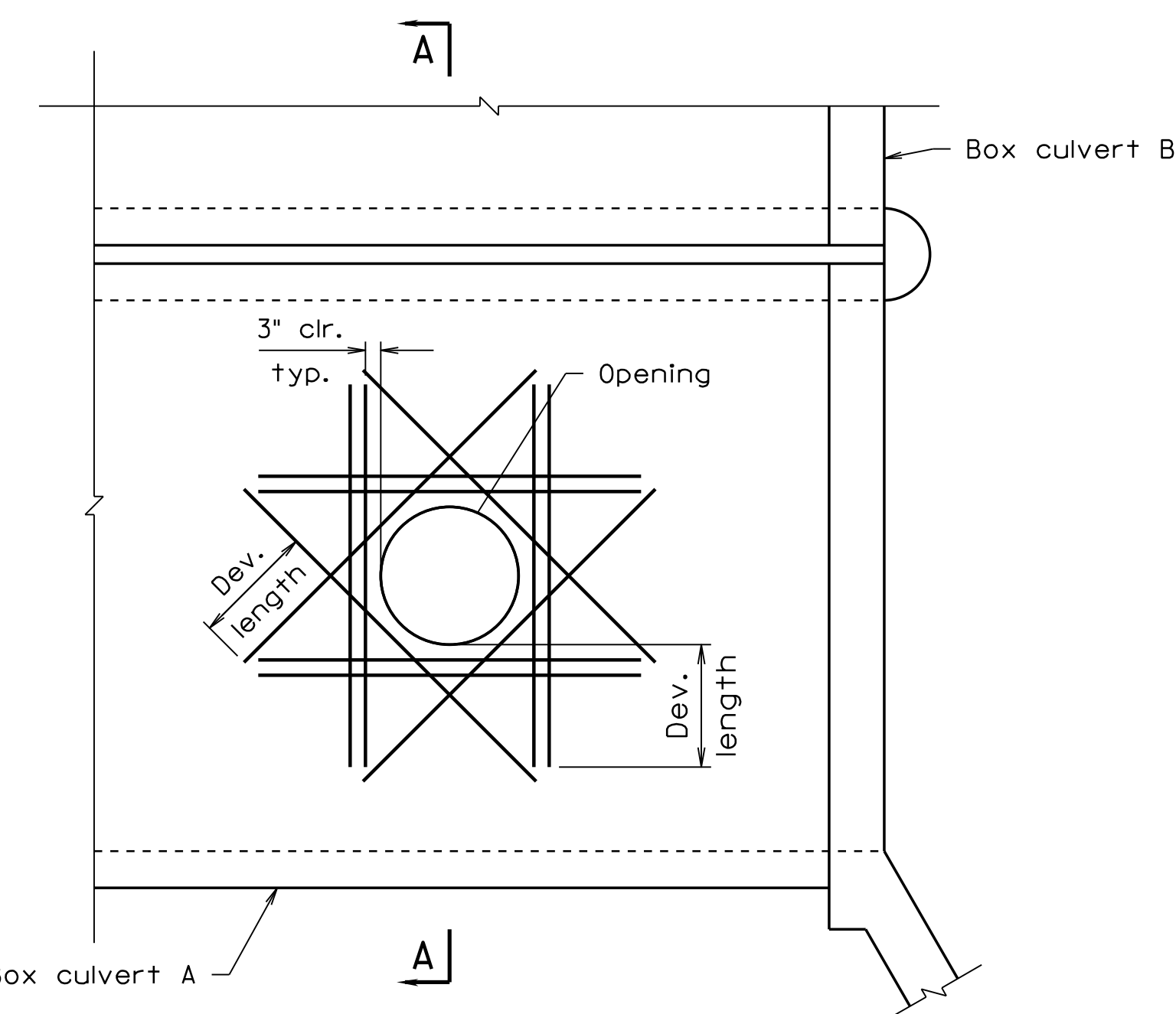
For sequence of construction and maintenance of stream flow, refer to Erosion and Sediment Control plans, sheets 11 thru 13.

Headwalls are to be constructed following completion of both culverts in Phases 2 and 4. For headwall details, see sheet 9.

Handrails shall be provided on culvert headwalls and wingwalls in accordance with VDOT Standard HR-1. The upstream headwall and wingwalls 1 and 2 shall have an HR-1 Type II Pedestrian Railing. The downstream headwall and wingwalls 3 and 4 shall have an HR-1 Type III Bicycle Railing. Handrails shall be powder coated in accordance with the Special Provision for Powder Coating for Steel Rails.

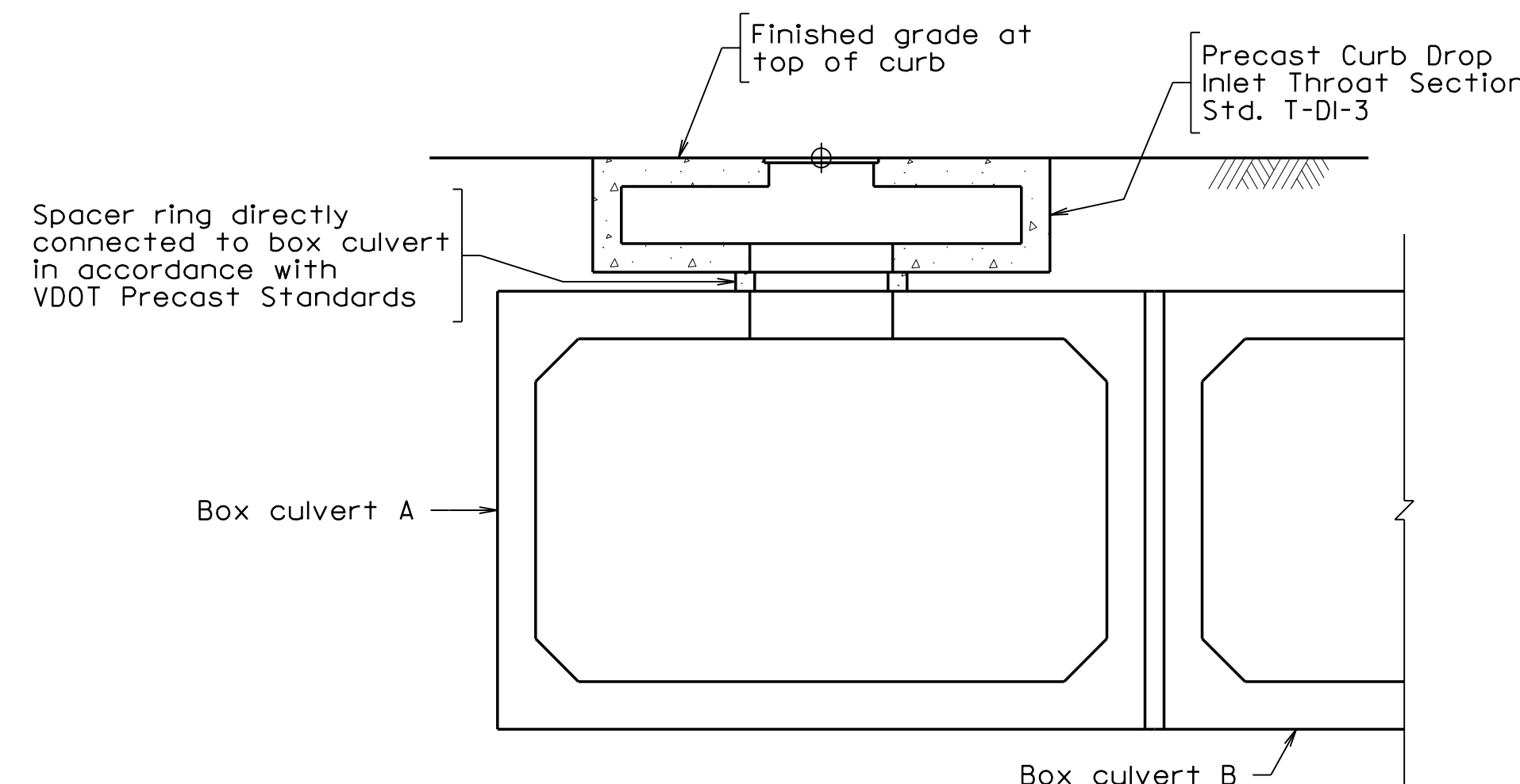
Post construction pipe installation inspection for proposed culvert is required. The post construction pipe installation inspection shall be performed in accordance with Section 501.03 of the VDOT Specifications.

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PENETRATION DETAIL

Not to scale



SECTION A-A

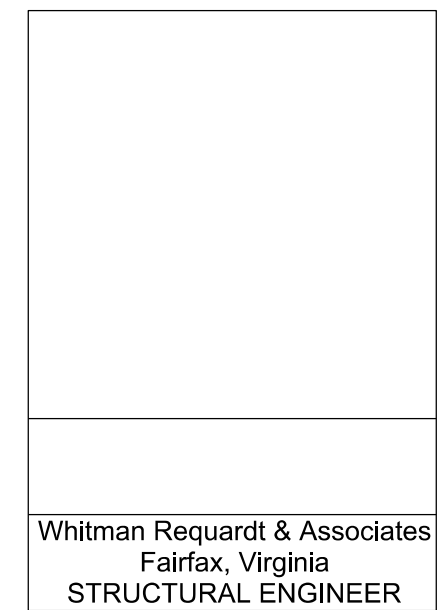
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REVISIONS	

CLIENT INFORMATION  
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NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT



Whitman, Requardt & Associates, LLP  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

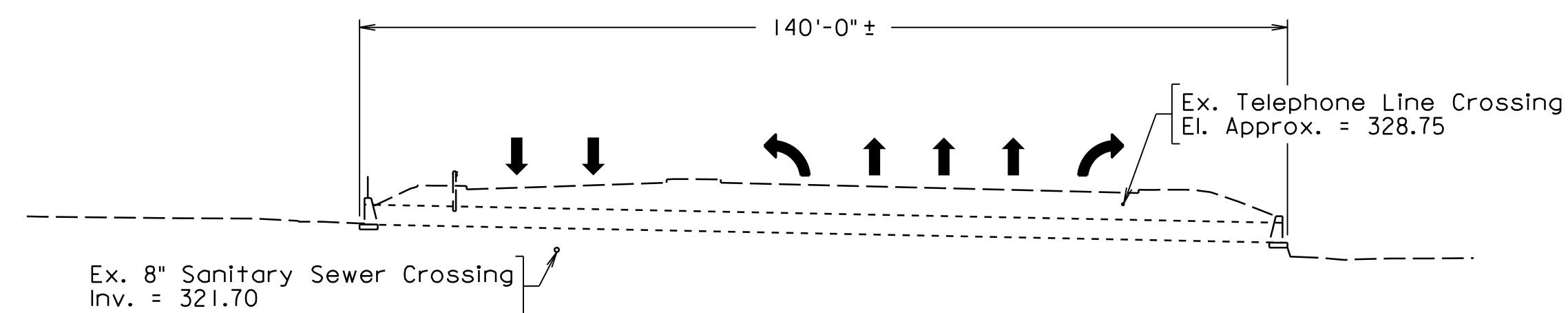
CULVERT PLAN AND  
GENERAL NOTES

SCALE: 1" = 10'-0"

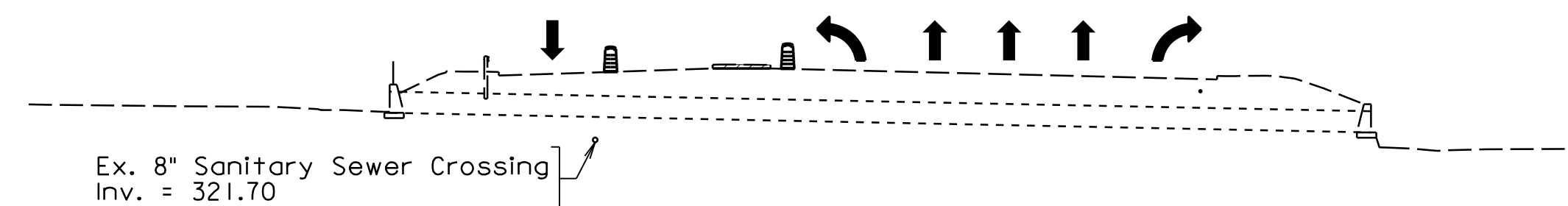
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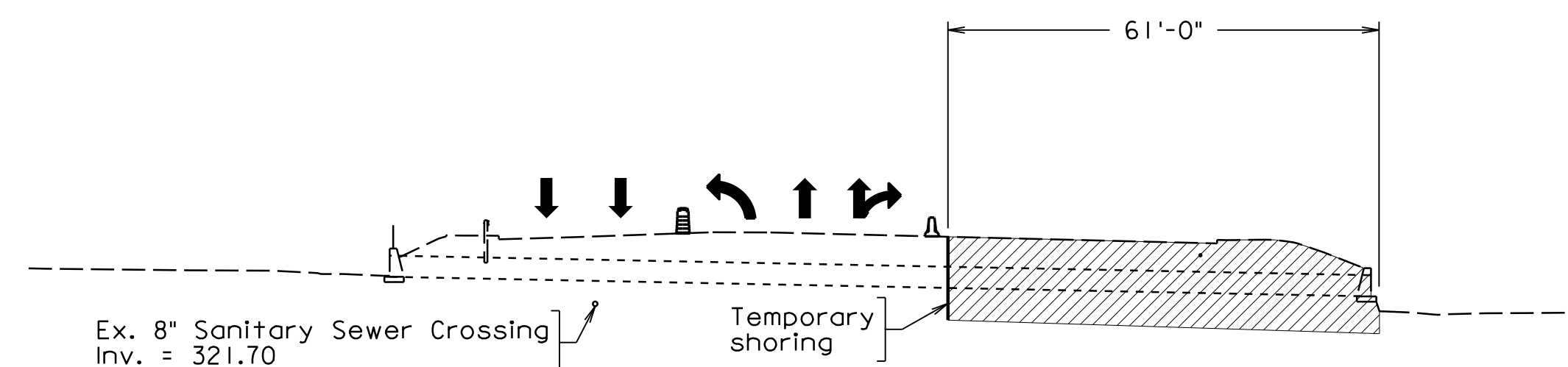




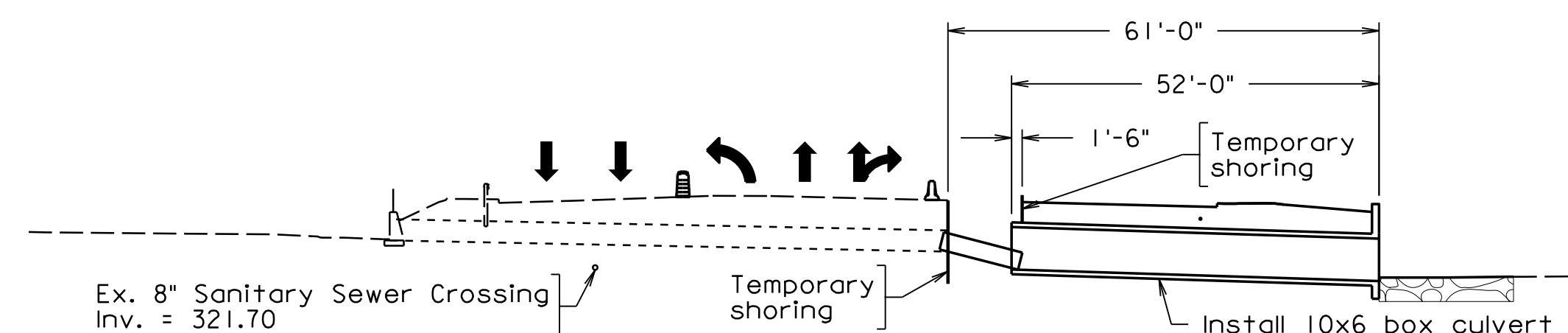
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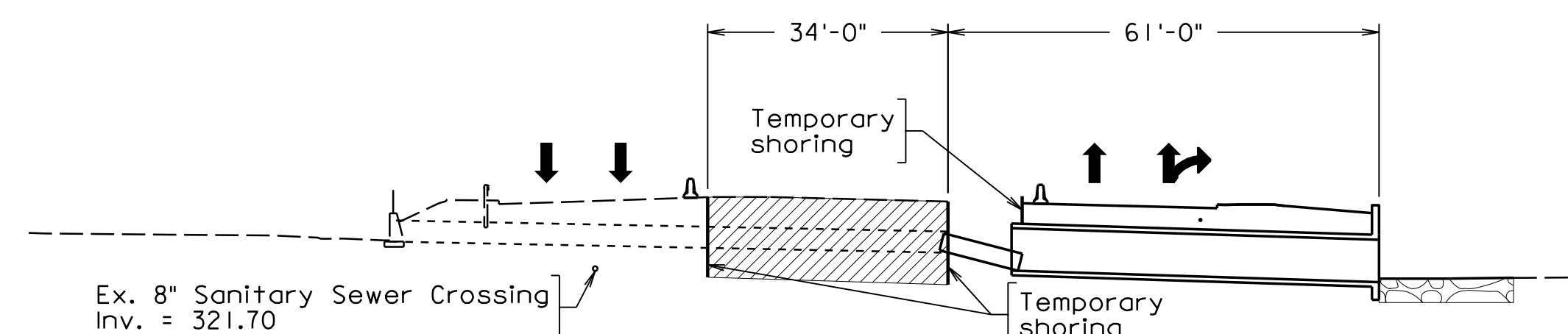
PHASE 1 - MEDIAN DEMOLITION



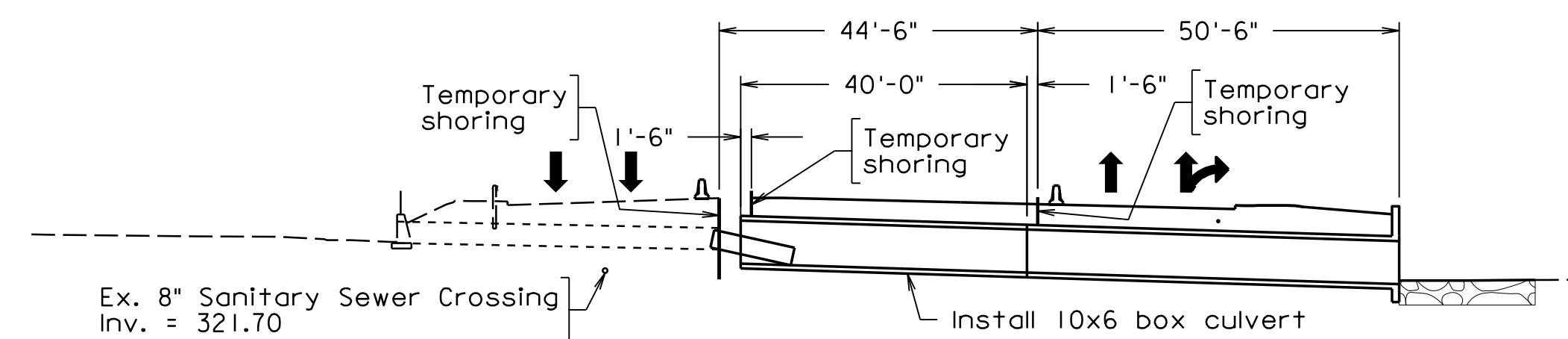
PHASE 2 - DEMOLITION



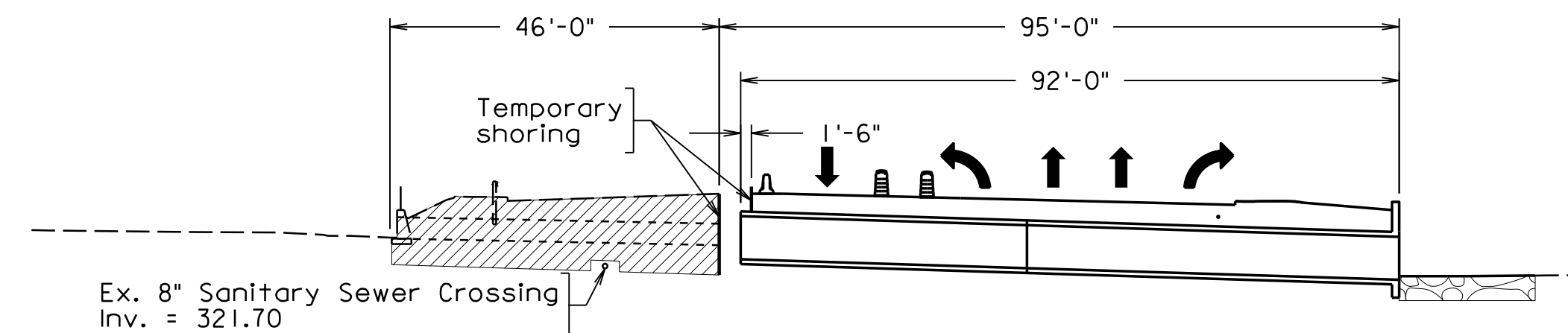
PHASE 2 - RECONSTRUCTION



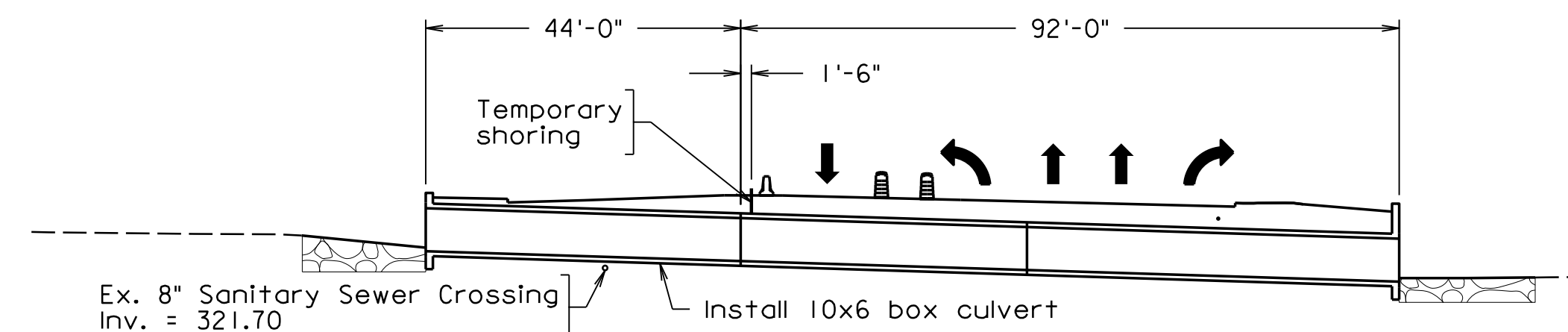
PHASE 3 - DEMOLITION



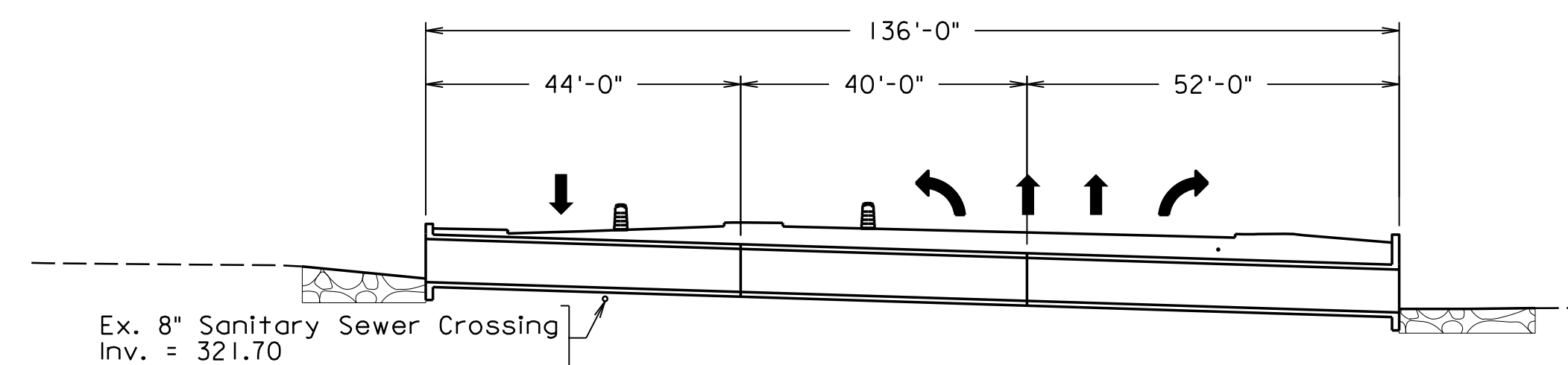
PHASE 3 - RECONSTRUCTION



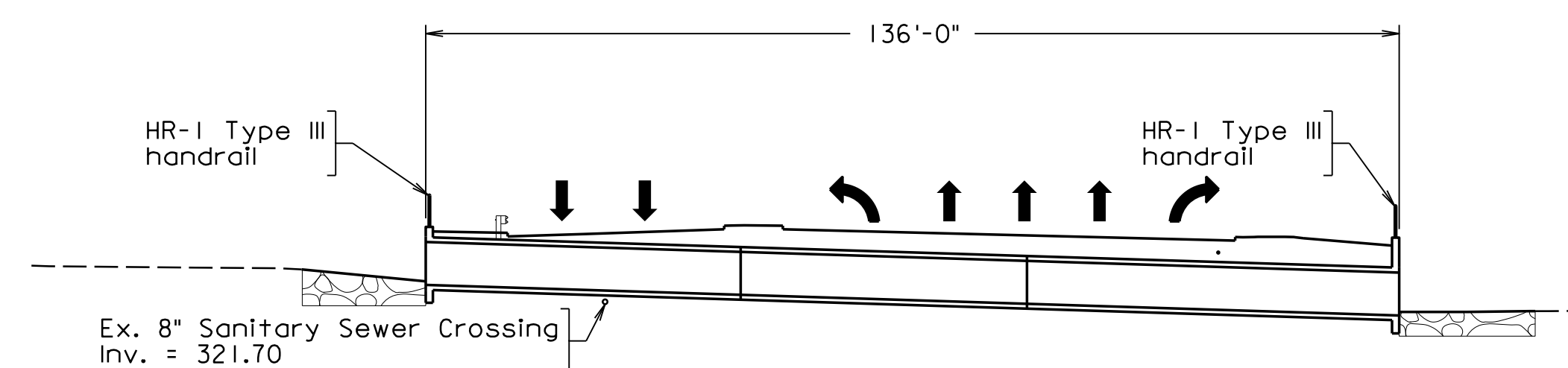
PHASE 4 - DEMOLITION



PHASE 4 - RECONSTRUCTION



PHASE 5 - MEDIAN RECONSTRUCTION



FINAL CONDITION

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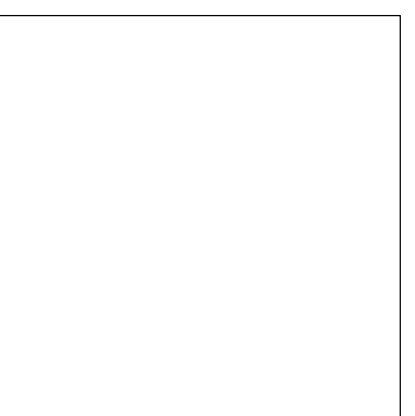
REVISIONS	

CLIENT INFORMATION  
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**TOWN OF VIENNA**  
since 1890

**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**



Whitman Requardt & Associates  
Fairfax, Virginia  
STRUCTURAL ENGINEER

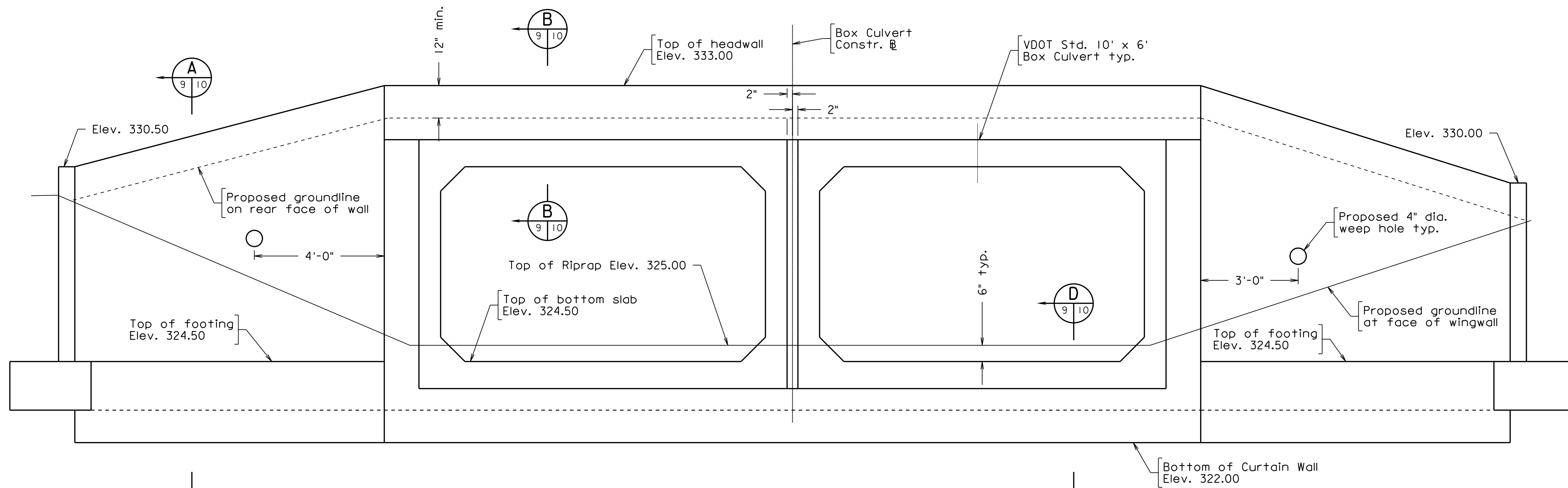


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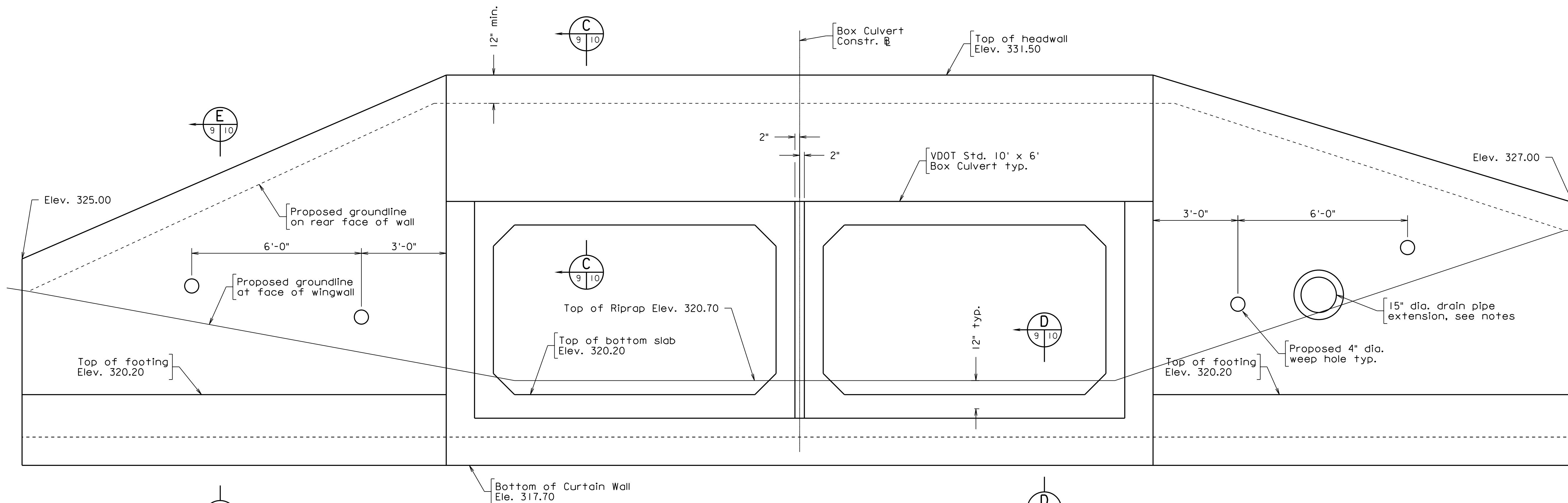
**CULVERT SEQUENCE  
OF CONSTRUCTION**

SCALE: AS SHOWN		
DATE: 08/2024	SHEET: 8	
DES: KML	DRAWN: KML	CHECK: TAB





UPSTREAM ELEVATION  
Handrail not shown for clarity.



DOWNSTREAM ELEVATION  
Handrail not shown for clarity.

Notes:

Box culverts shall meet the dimensions of VDOT Single 10 x 6 Box Culvert with 0 to 2 feet of fill, Standard BCS-02. A 4" gap shall be provided between the box culverts. Refer to Section 302.03 of the Specifications.

The wingwall geometry, lengths and elevations, shall be provided as shown in order to accommodate grading and roadway requirements.

Existing 15" diameter drain pipe to be extended to face of wall. Contractor to determine invert elevation based on existing pipe elevation.

See sheet 10 for drainage details.

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CLIENT INFORMATION  
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**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
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**CULVERT ENDWALL  
ELEVATIONS**

SCALE: 1/2" = 1'-0"

DATE: 08/2024

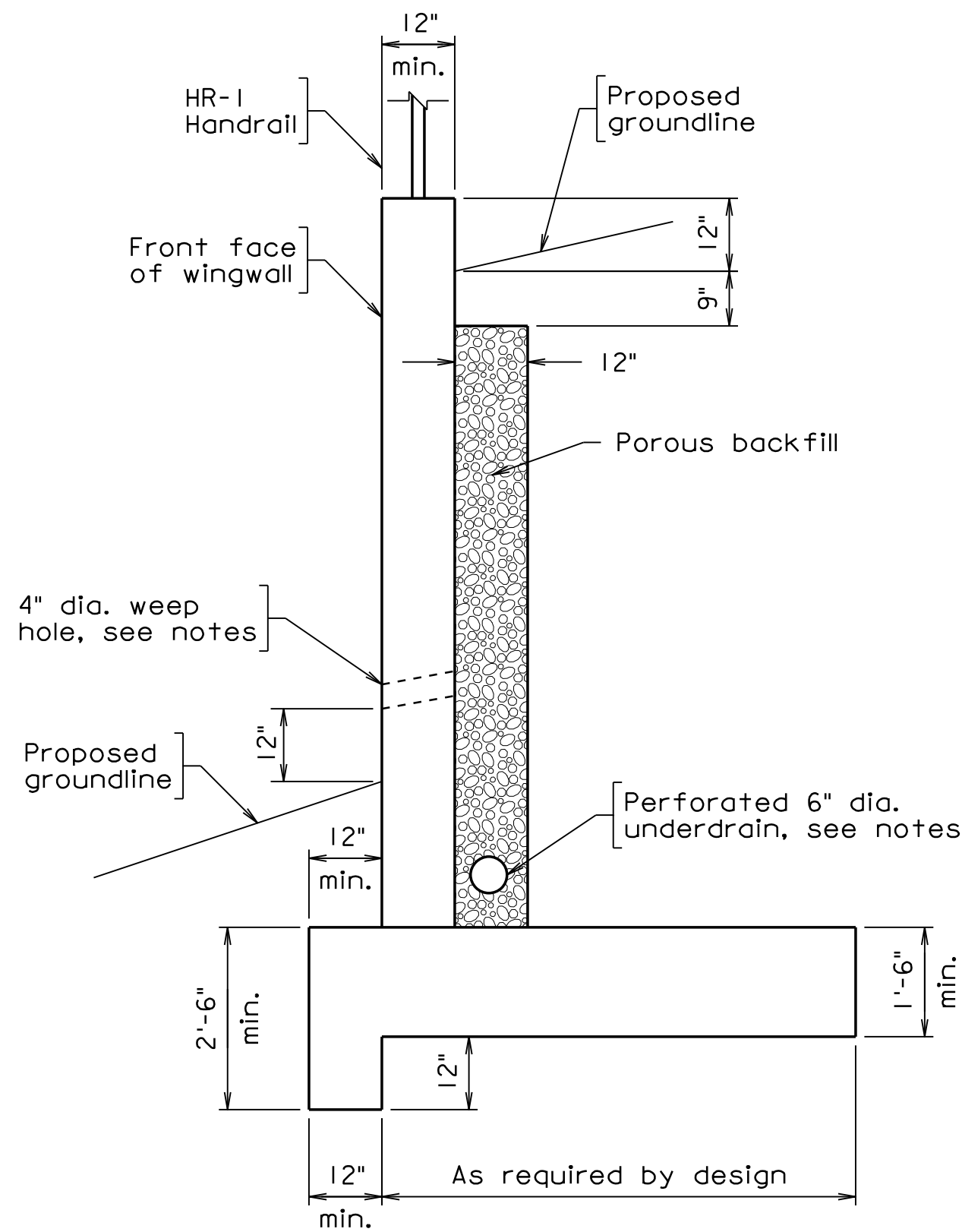
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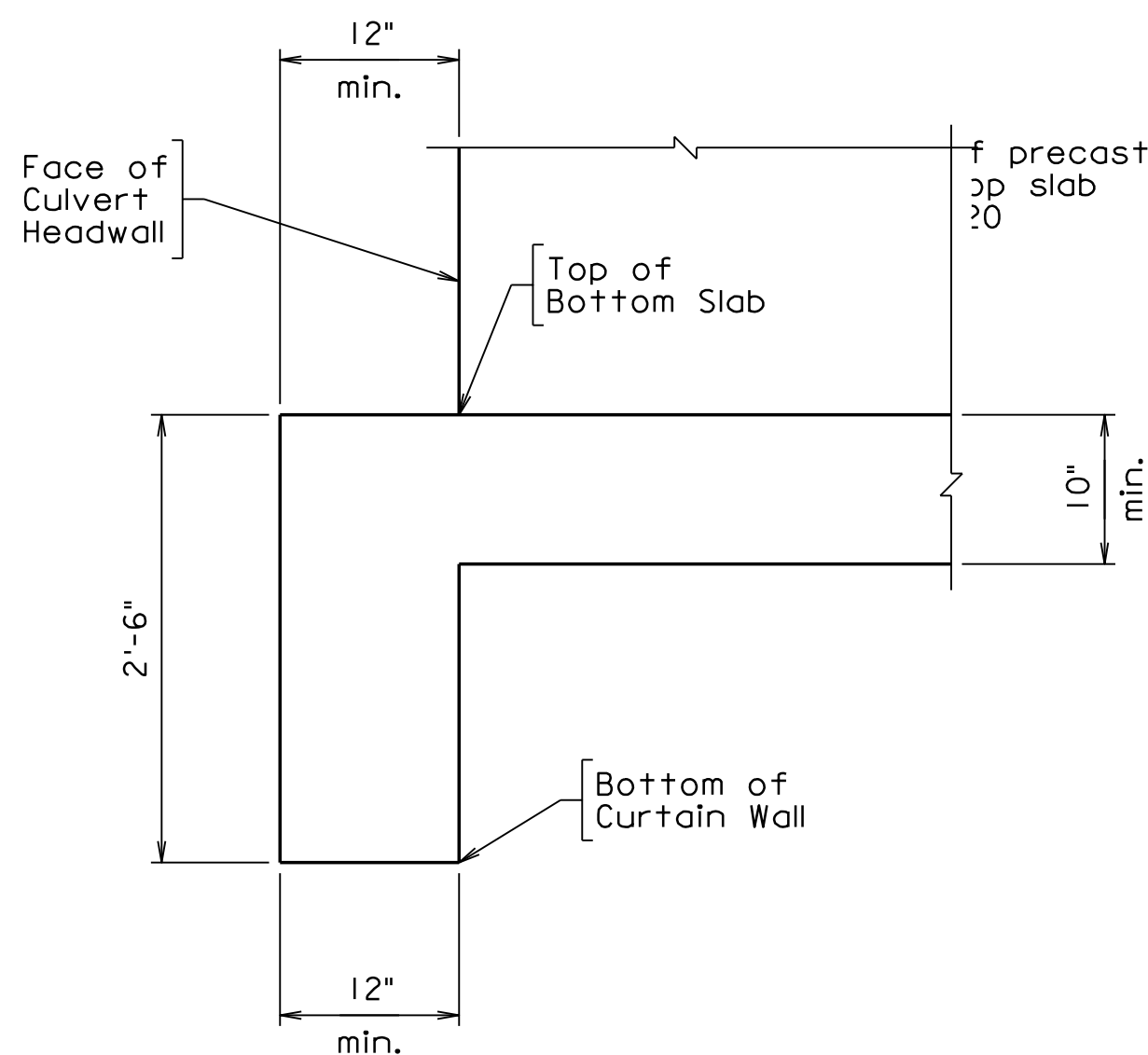
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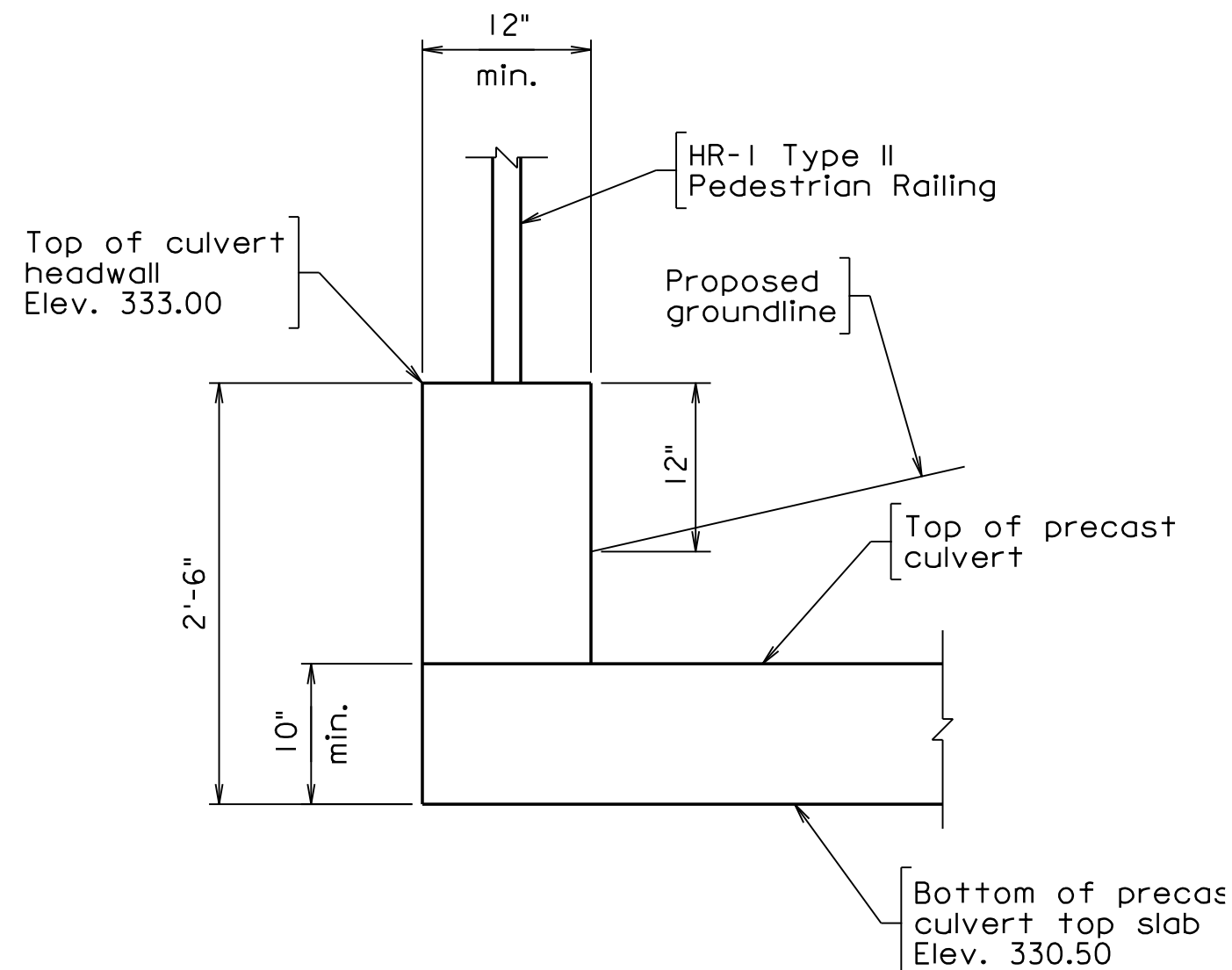




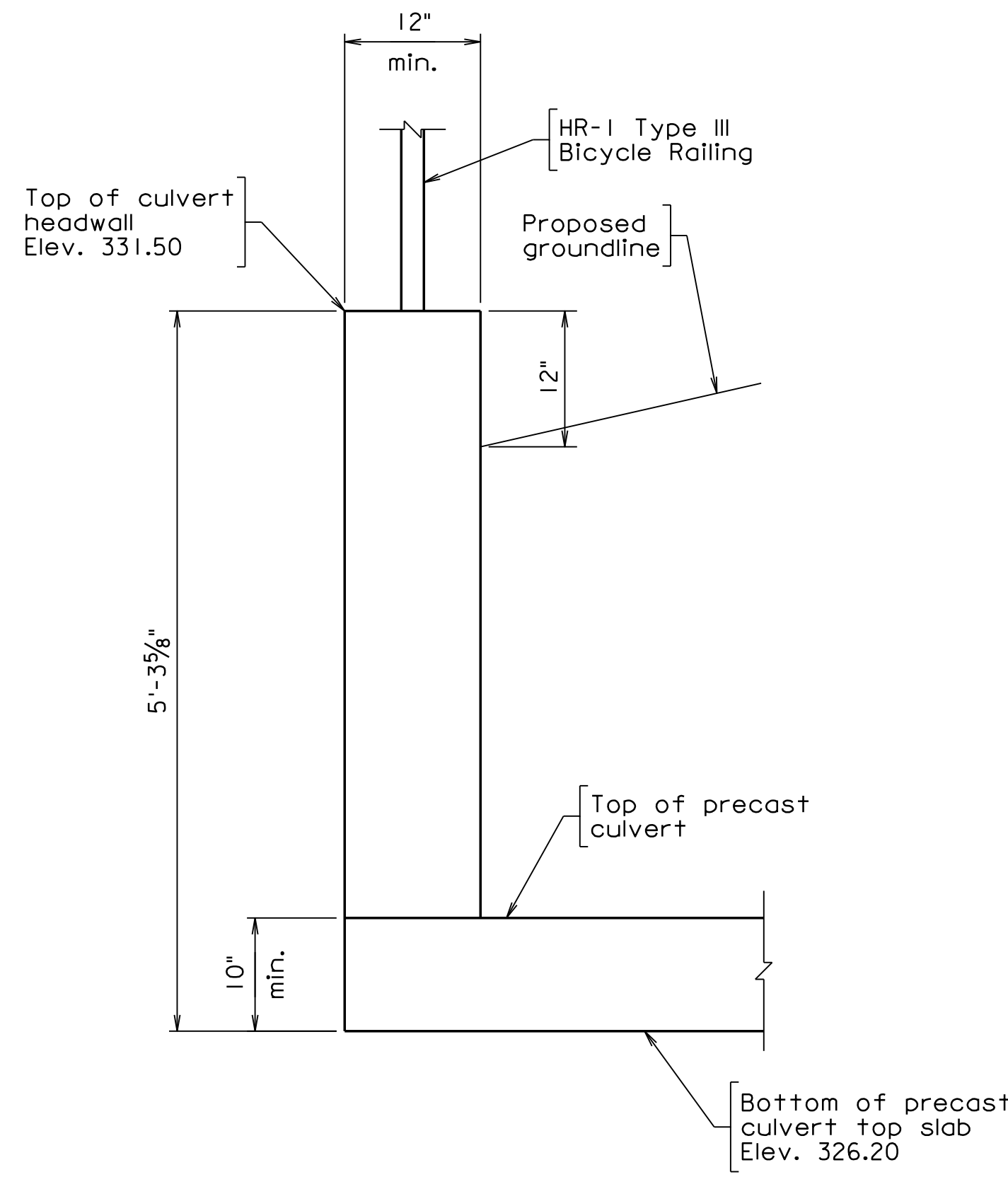
SECTION A E  
Scale: 1/2" = 1'-0"



SECTION D  
Scale: 1" = 1'-0"



SECTION B  
Scale: 1" = 1'-0"



SECTION C  
Scale: 1" = 1'-0"

Notes:

Wingwalls shall be precast concrete. See notes on sheet 7.

Headwalls may be cast-in-place concrete and shall be structurally connected to the top of the precast concrete box culvert.

Wingwall and headwall geometry, lengths, and elevations shall be provided as shown in order to accommodate grading and roadway requirements.

Handrails shall be provided on culvert headwalls and wingwalls in accordance with VDOT Standard HR-1. The upstream headwall and wingwalls 1 and 2 shall have an HR-1 Type II Pedestrian Railing. The downstream headwall and wingwalls 3 and 4 shall have an HR-1 Type III Bicycle Railing. Handrails shall be powder coated in accordance with the Special Provision for Powder Coating for Steel Rails.

Weep holes shall be formed with non-rigid tubing and covered on rear face of wall at drain end with 4-mesh screen.

Perforated 6" dia. underdrain shall be placed as low as possible and shall extend to surface of fill.

Handrail Connection Notes:

See VDOT HR-1 Standard for all structural steel properties and pedestrian railing details.

All handrails shall be powder coated in accordance with the Special Provisions.

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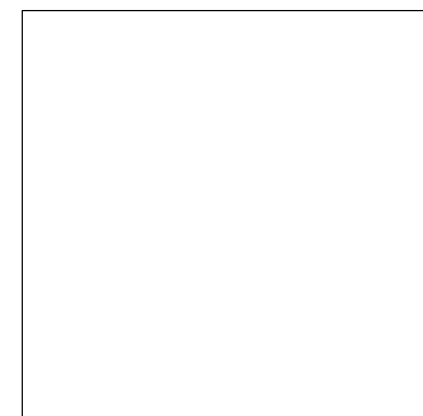
REVISIONS	

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
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**TOWN OF VIENNA**  
since 1890

**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**



Whitman Requardt & Associates  
Fairfax, Virginia  
STRUCTURAL ENGINEER



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**CULVERT DETAILS**

SCALE: AS SHOWN		
DATE: 08/2024	SHEET: 10	
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[illegible]

# SOIL BORING LOG

Client Whitman, Reardon & Associates, LLP. Boring # B-2  
 Project Name Nutley Street Culvert Borings. Job # WR&A W.O.#  
 Location Nutley Street --- Vienna Virginia 22180

Date                      Driller Dane Loomis Hammer Type Safety, 140 LBS. Boring Method HSA  
 Surf. Elev.        Ft. Inspector Jessie Cunningham Sampler Type SPT Borehole Diameter 8" In.  
 Date Started 05/20/2014 Date Completed 05/20/2014 Rig Type Mobil-B57 Rock Core Size NA

SOIL DEPTH Feet	SOIL DESCRIPTION Color, Moisture, Density, Size, Lithology	ELEV	SOIL SYMBOL	SAMPLER DEPTH Feet	SAMPLE					BORING & SAMPLING NOTES
					No.	Type	Blows/6"	Rec.	PID (ppm)	
0.00										
0.91	7" Asphalt, overtop of 4" crush run and gravel base, <b>PAVEMENT.</b>									
	Gray, dry, medium dense to loose, silty sand, with a little gravel, <b>FILL.</b>				1	SPT	12-10-15	10"		1) No water encountered during drilling and SPT, test.
					2	SPT	5-5-5	8"		
5.0				5						
	Gray to brown, damp, loose, silt with trace of sand, <b>POSSIBLE FILL.</b>				3	SPT	4-3-5	12"		
8.0										
	Gray and brown, dry, medium dense, <b>SILTY SAND, WITH A LITTLE GRAVEL.</b>				4	SPT	3-6-6	13"		
				10						
					5	SPT	8-10-12	6"		
13.0										
	Gray to brown, dry, very dense, <b>SILT AND ROCK FRAGMENTS</b>				6	SPT	5 1/2"	2"		
				15						
					7	SPT	5 1/3"	3"		
18.75										
	Bottom of test boring 18.75 feet.			20						
				25						
				30						

BORING METHOD		SAMPLER TYPE		GROUNDWATER DEPTH		<b>Geomatrix Drilling Inc.</b> <b>410-242-9220</b> <b>Baltimore MD</b>	
HSA - HOLLOW STEM AUGERS		SPT - STANDARD PENETRATION TEST SPLIT SPOON		AT COMPLETION <u>14.18</u> FT.			
HA/TR-HAND AUGER & TRIPPOD		ST - SHELBY TUBE		AFTER <u>      </u> HRS. <u>      </u> FT.			
DC - DRIVING CASING		AS - AUGER SAMPLE		AFTER 24 HRS. <u>N/A</u> FT.			
MD - MUD DRILLING		RC - ROCK CORE		CAVED AT <u>18.0</u> FT.			
AR - AIR ROTARY/AIR HAMMER							

SPT - Standard Penetration Test; Driving 2 Inch OD Sampler 1.0 foot with 140 pound Hammer Falling 30 inches; Blow Count Recorded at 6 inch Intervals  
 PID - Photoionization Detector (parts per million)

The boring logs are made available to bidders in order that they may have access to subsurface data identical to that which is possessed by the Town, and are not intended as a substitute for personal investigation, interpretation and judgment by the bidders.

REVISIONS		



NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT

Whitman Requardt & Associates  
Fairfax, Virginia  
STRUCTURAL ENGINEER



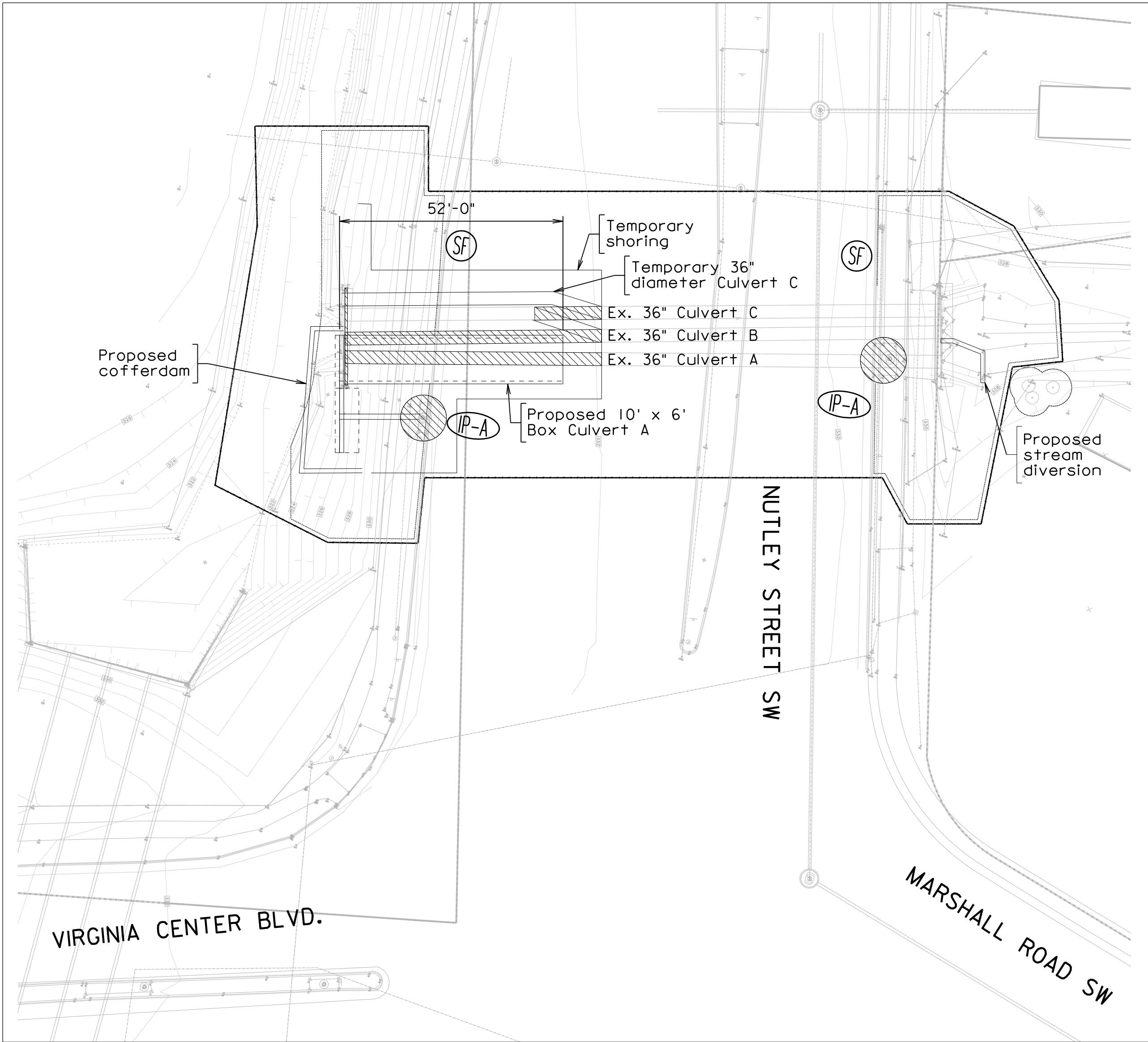
# ENGINEERING GEOLOGY

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EROSION AND SEDIMENT CONTROL PLAN  
STAGE SEQUENCE OF CONSTRUCTION FOR CULVERTS

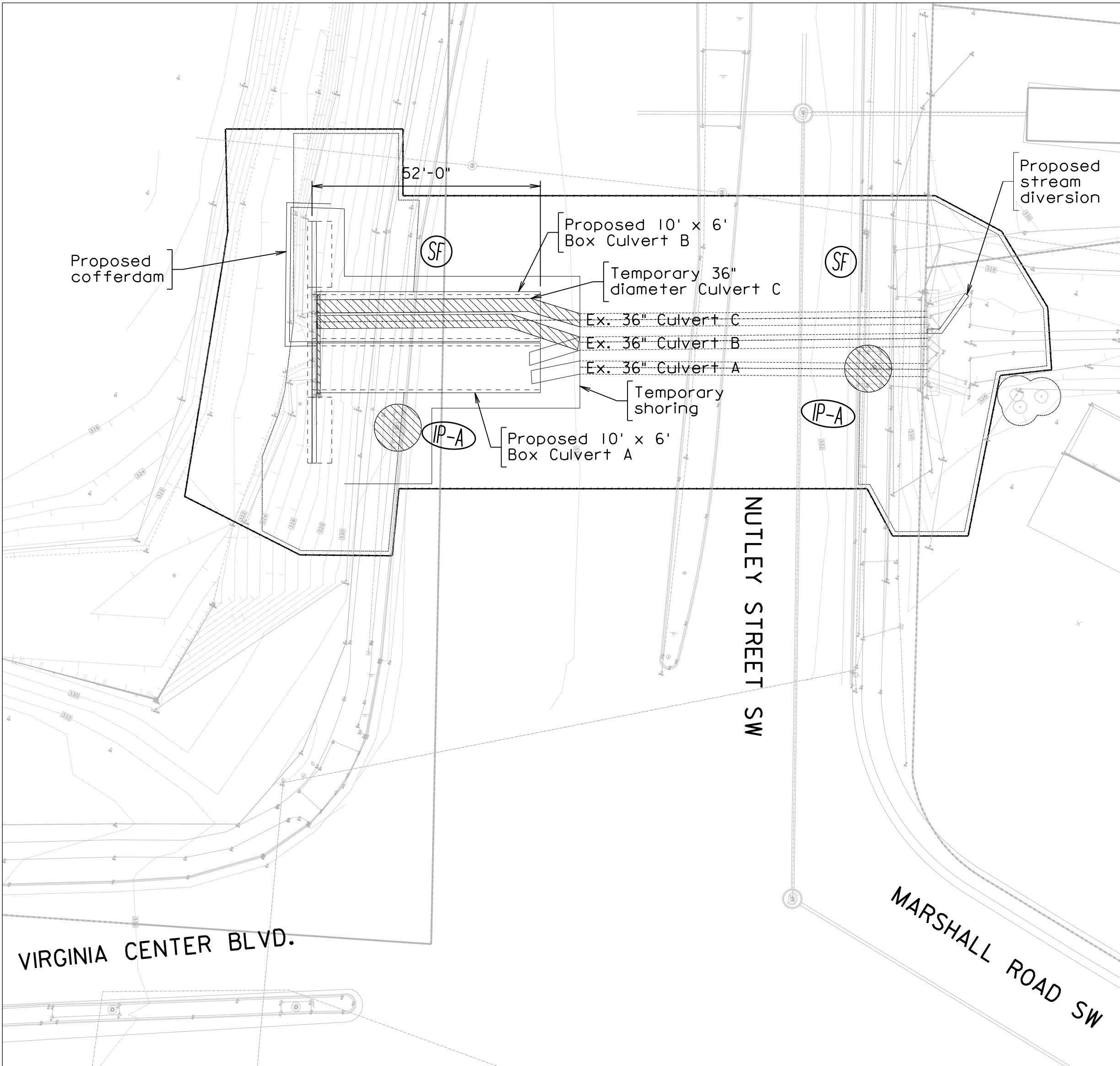
PHASE 2A



Staged Sequence of Construction - Phase 2A

1. Place cofferdam at the downstream end of existing 36" Culverts A and B as shown. Realign existing 36" Culvert C and make a temporary connection between existing 36" Culverts B and C as shown.
2. Place temporary stream diversion upstream of existing 36" Culvert A as shown. Stormwater will flow through existing 36" Culverts B and C during construction of downstream portion of the proposed 10' x 6' Box Culvert A.
3. Remove downstream portion of the existing 36" Culverts A and B.
4. Construct the downstream portion of the proposed 10' x 6' Box Culvert A. Replace existing drainage pipe.
5. Make a temporary connection between the downstream end of the existing 36" Culverts A and B and the upstream end of the proposed 10' x 6' Box Culvert A.
6. Remove the upstream stream diversion at existing 36" Culvert A and the downstream cofferdam at existing Culverts A and B.

PHASE 2B



Staged Sequence of Construction - Phase 2B

1. Place cofferdam at the downstream end of existing 36" Culvert C and the temporary realigned Culvert C as shown.
2. Place temporary stream diversion upstream of existing 36" Culvert C. Stormwater will flow through the remaining portion of existing 36" Culverts A and B and the downstream portion of proposed 10' x 6' Box Culvert A during construction of downstream portion of the proposed 10' x 6' Box Culvert B.
2. Remove downstream portion of the existing 36" Culvert C and the temporary realigned Culvert C.
3. Construct the downstream portion of the proposed 10' x 6' Box Culvert B.

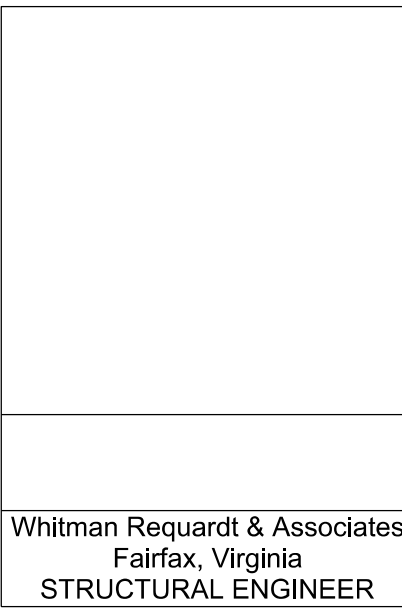
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VIENNA, VA, 22180



NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT



SEQUENCE OF  
CONSTRUCTION  
PHASE 2

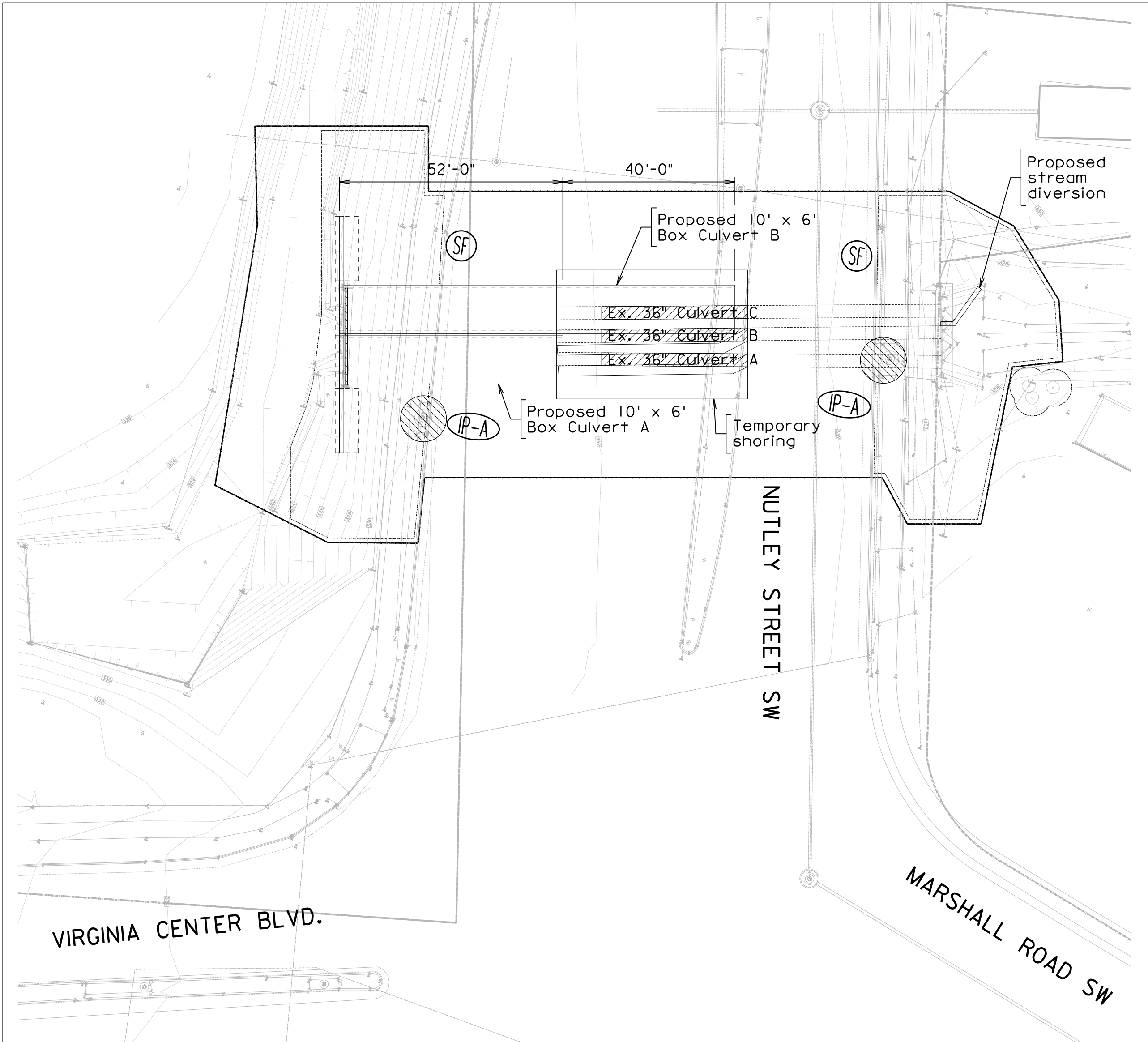
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DATE: 08/2024	SHEET: 12	
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# EROSION AND SEDIMENT CONTROL PLAN

## STAGE SEQUENCE OF CONSTRUCTION FOR CULVERTS

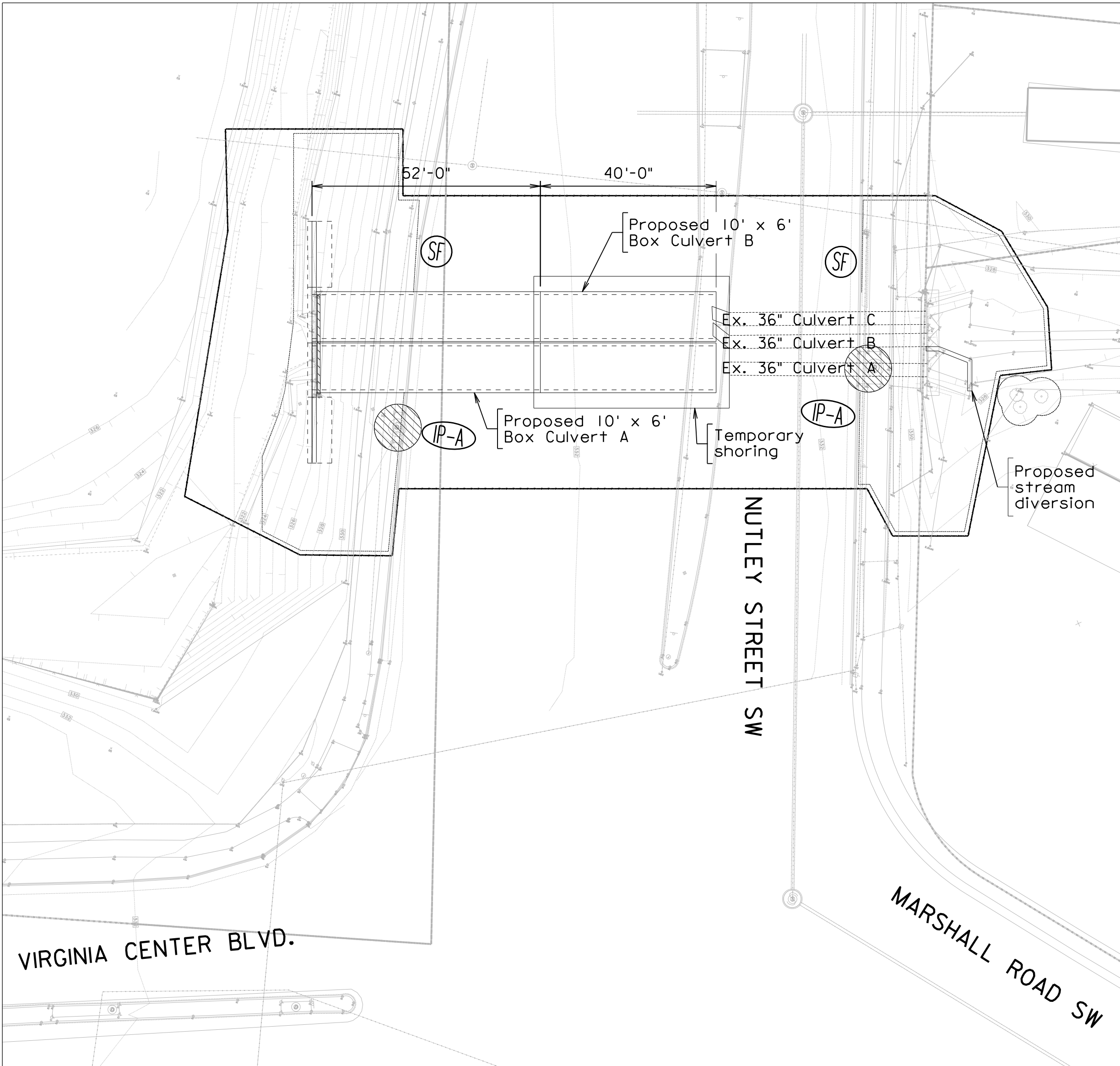
PHASE 3A



Staged Sequence of Construction - Phase 3A

1. Remove the next downstream portion of the existing 36" Culverts A, B and C.
2. Make a temporary connection between the upstream portion of existing 36" Culverts A and B and the downstream portion of the proposed 10' x 6' Box Culvert A.
3. Construct the next upstream portion of the proposed 10' x 6' Box Culvert B.
4. Make a temporary connection between the downstream end of the existing 36" Culverts B and C and the upstream end of the proposed 10' x 6' Box Culvert B.
5. Remove the temporary stream diversion at existing 36" Culvert C.

PHASE 3B



Staged Sequence of Construction - Phase 3B


1. Place temporary stream diversion upstream of existing 36" Culvert A as shown. Stormwater will flow through the remaining portion of existing 36" Culverts B and C and the downstream portion of proposed 10' x 6' Box Culvert B.
2. Construct the next upstream portion of the proposed 10' x 6' Box Culvert A.

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REVISIONS	

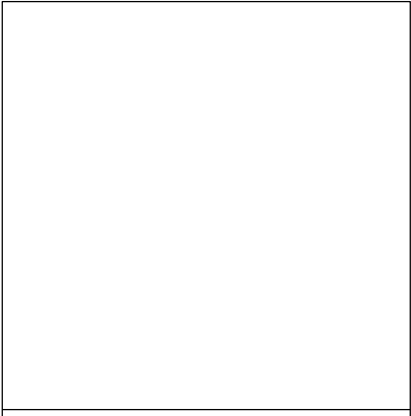
CLIENT INFORMATION

TOWN OF VIENNA, VA  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



TOWN OF  
VIENNA  
since 1890

NUTLEY STREET  
CULVERT  
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Whitman Requardt & Associates  
Fairfax, Virginia  
STRUCTURAL ENGINEER



Whitman, Requardt & Associates, LLP  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

SEQUENCE OF  
CONSTRUCTION  
PHASE 3

SCALE: 1" = 20'-0"

DATE: 08/2024    SHEET: 13

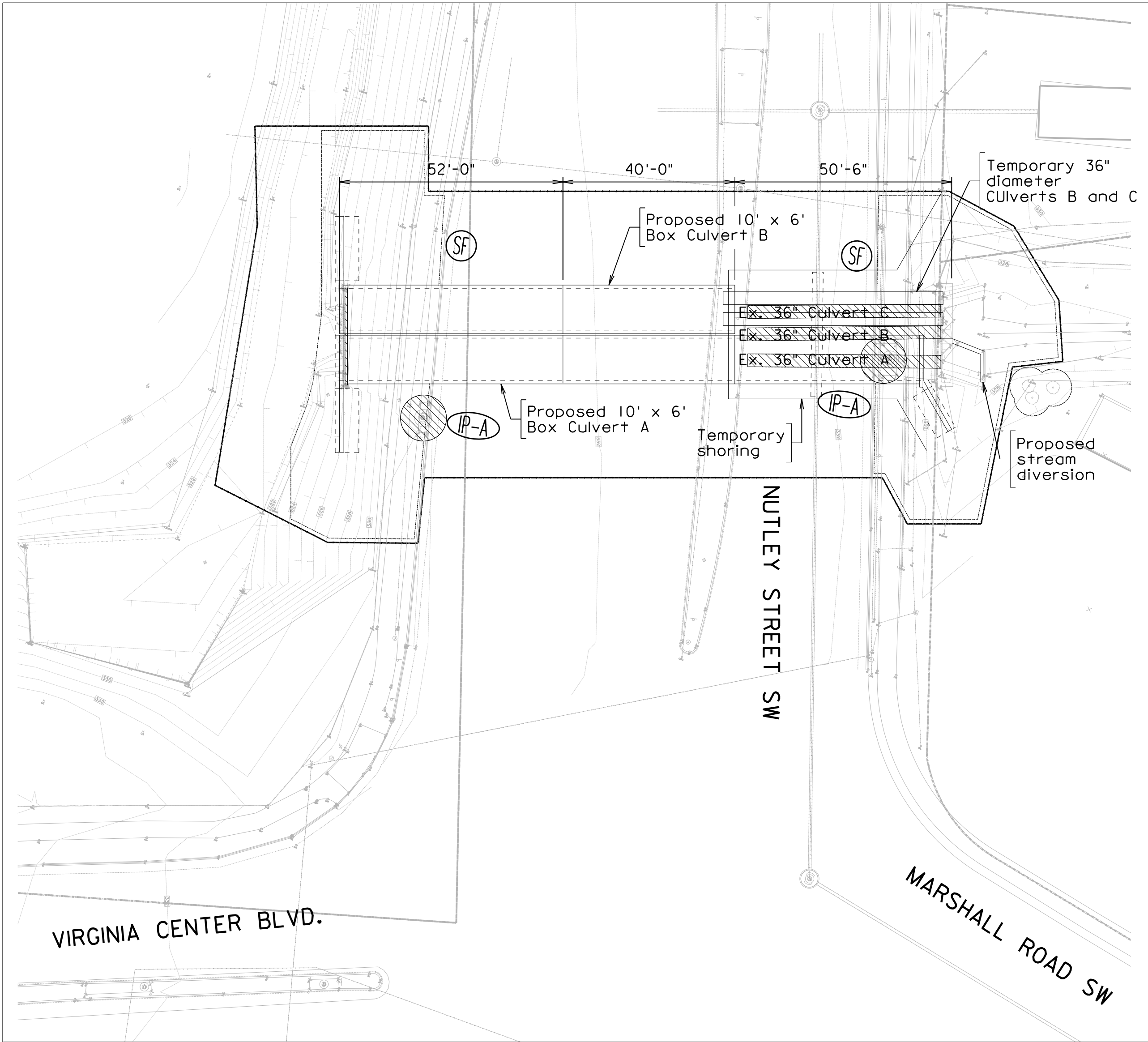
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# EROSION AND SEDIMENT CONTROL PLAN

## STAGE SEQUENCE OF CONSTRUCTION FOR CULVERTS

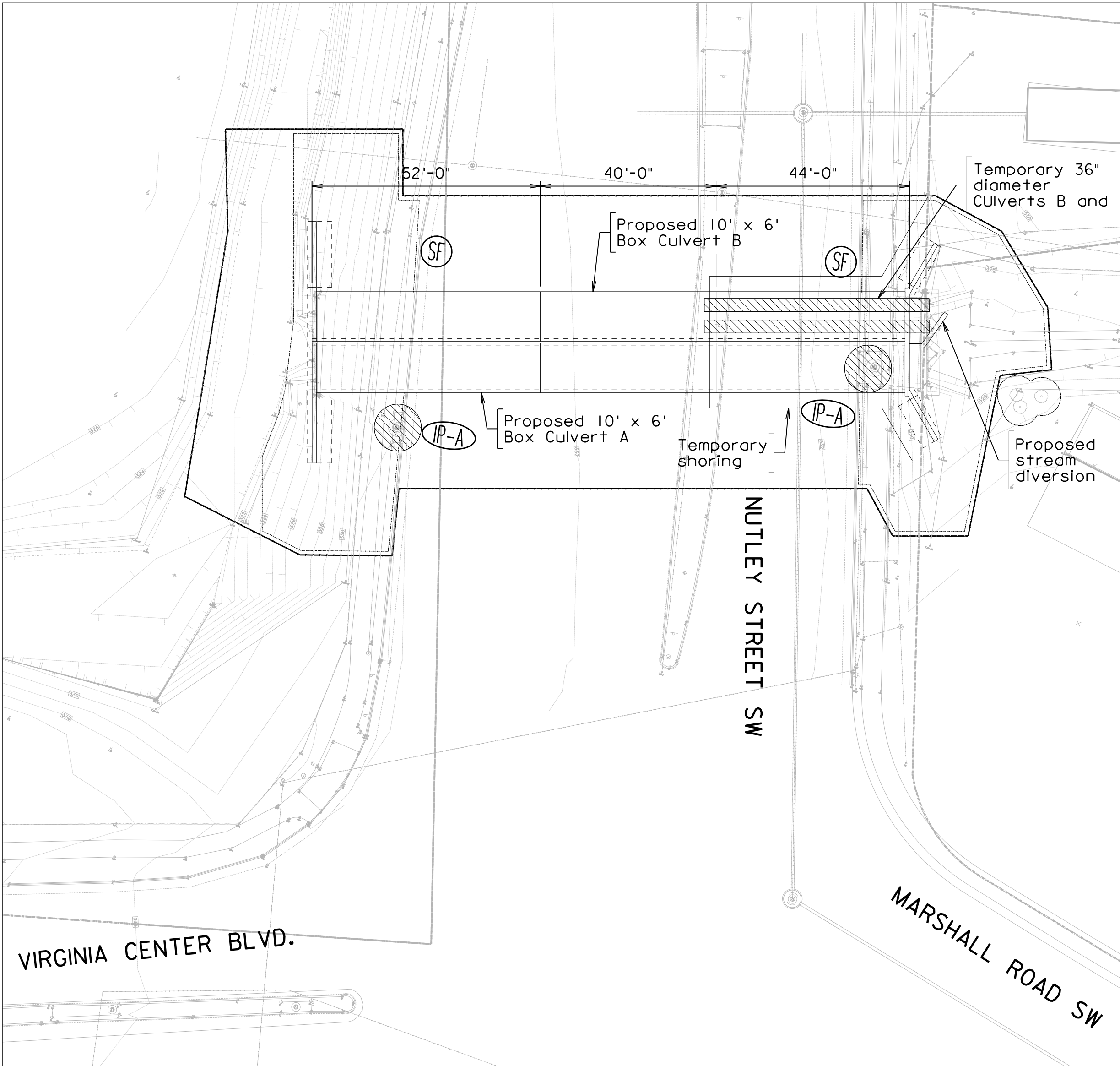
PHASE 4A



Staged Sequence of Construction - Phase 4A

1. Remove the remaining portion of the existing 36" Culverts A, B and C.
2. Install two (2) temporary 36" diameter Culverts B and C as shown. Stormwater will flow through these temporary Culverts B and C and hte downstream portion of the proposed 10' x 6' Box Culvert B.
3. Construct the next upstream portion of the proposed 10' x 6' Box Culvert A.
4. Install curb inlet which connects to the proposed 10' x 6' Box Culvert A.
5. Remove the temporary stream diversion at existing 36" Culvert A.

PHASE 4B



Staged Sequence of Construction - Phase 4B

1. Place temporary stream diversion upstream of temporary Culverts B and C as shown. Stormwater will flow through the proposed 10' x 6' Box Culvert A.
2. Remove the temporary Culverts B and C.
3. Construct the upstream portion of the proposed 10' x 6' Box Culvert B.
4. Remove the temporary stream diversion upstream of existing 36" Culvert C.

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### NUTLEY STREET CULVERT REPLACEMENT PROJECT

Whitman Requardt & Associates  
Fairfax, Virginia  
STRUCTURAL ENGINEER



### SEQUENCE OF CONSTRUCTION PHASE 4

SCALE: 1" = 20'-0"		
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EROSION AND SEDIMENT CONTROL

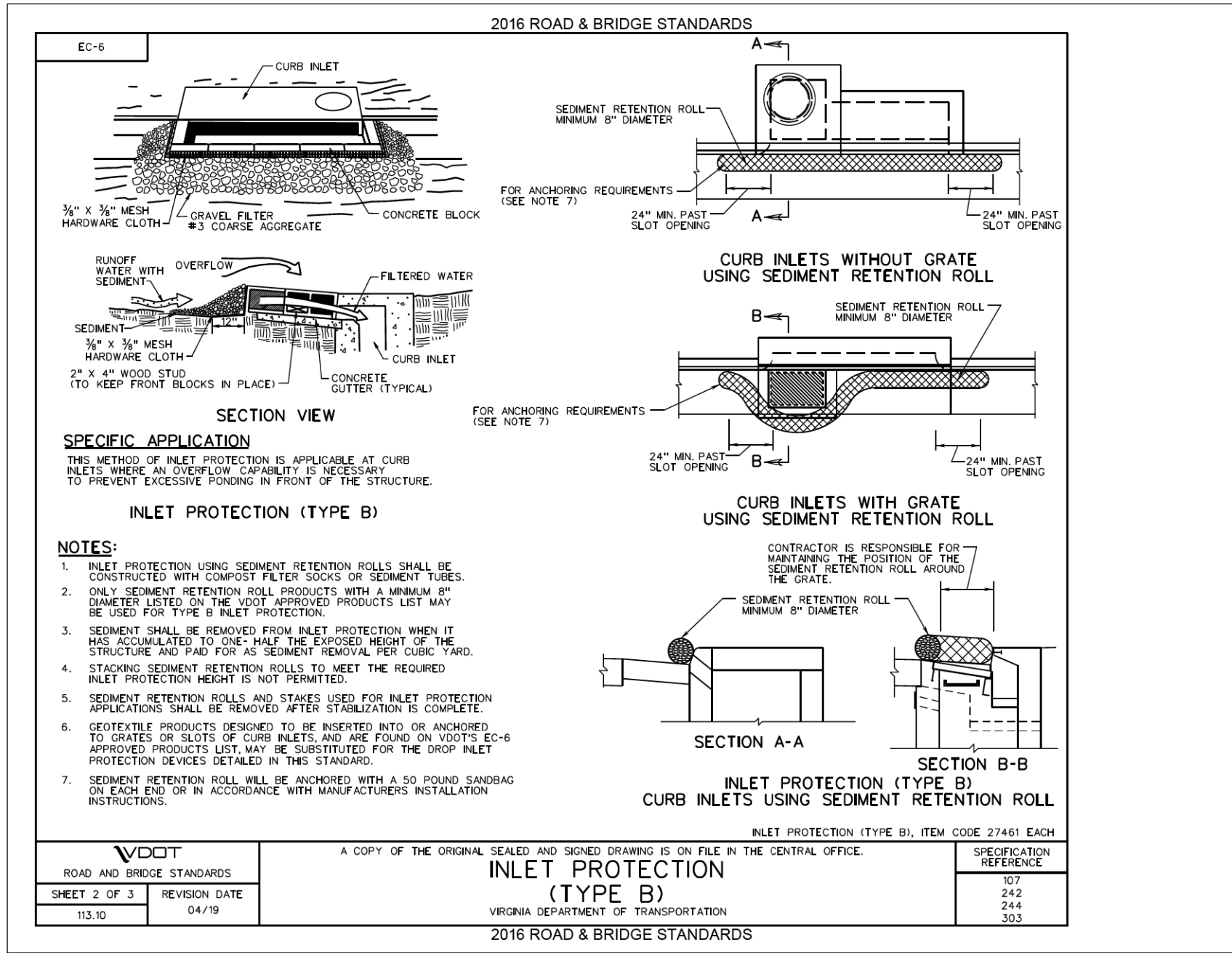
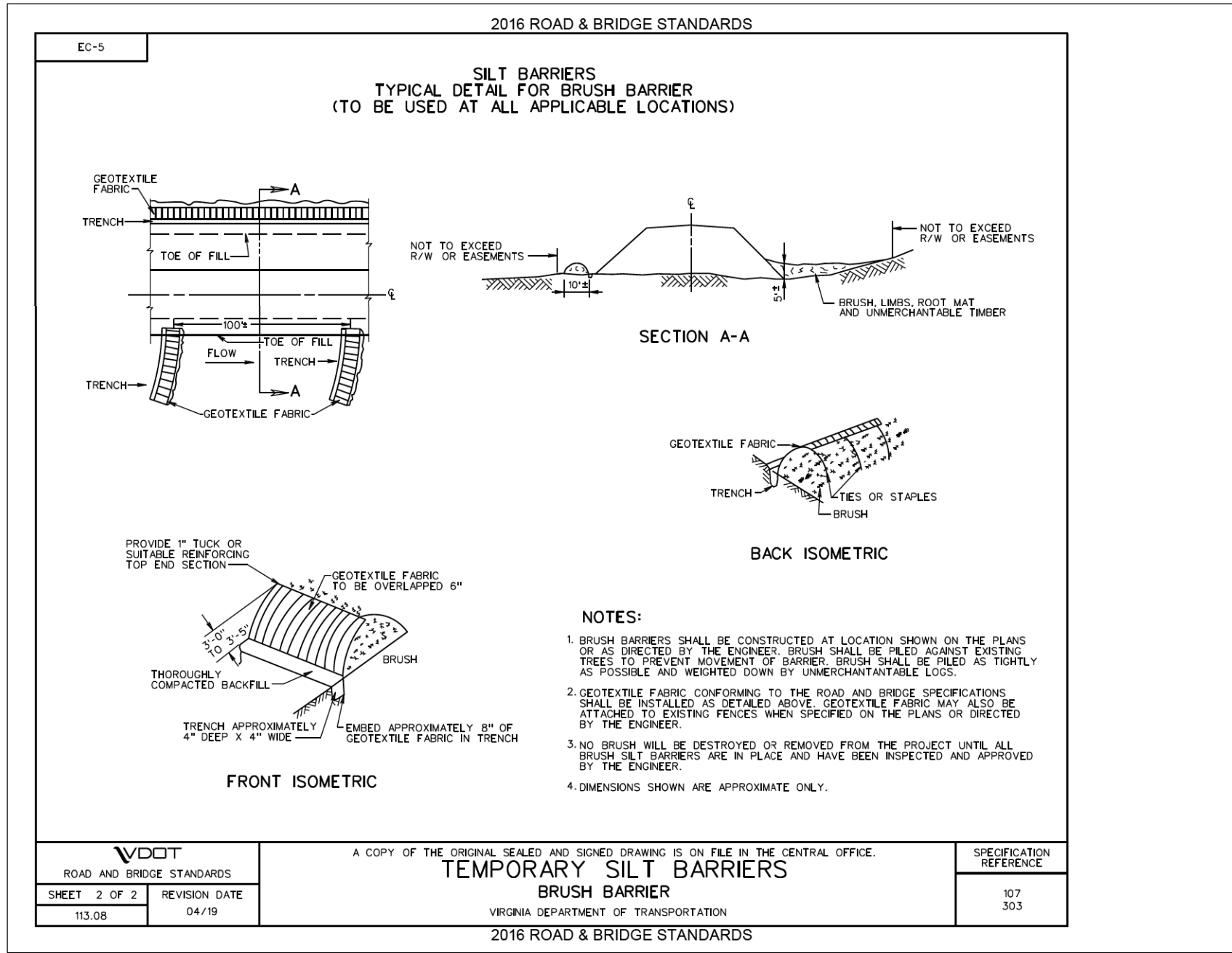
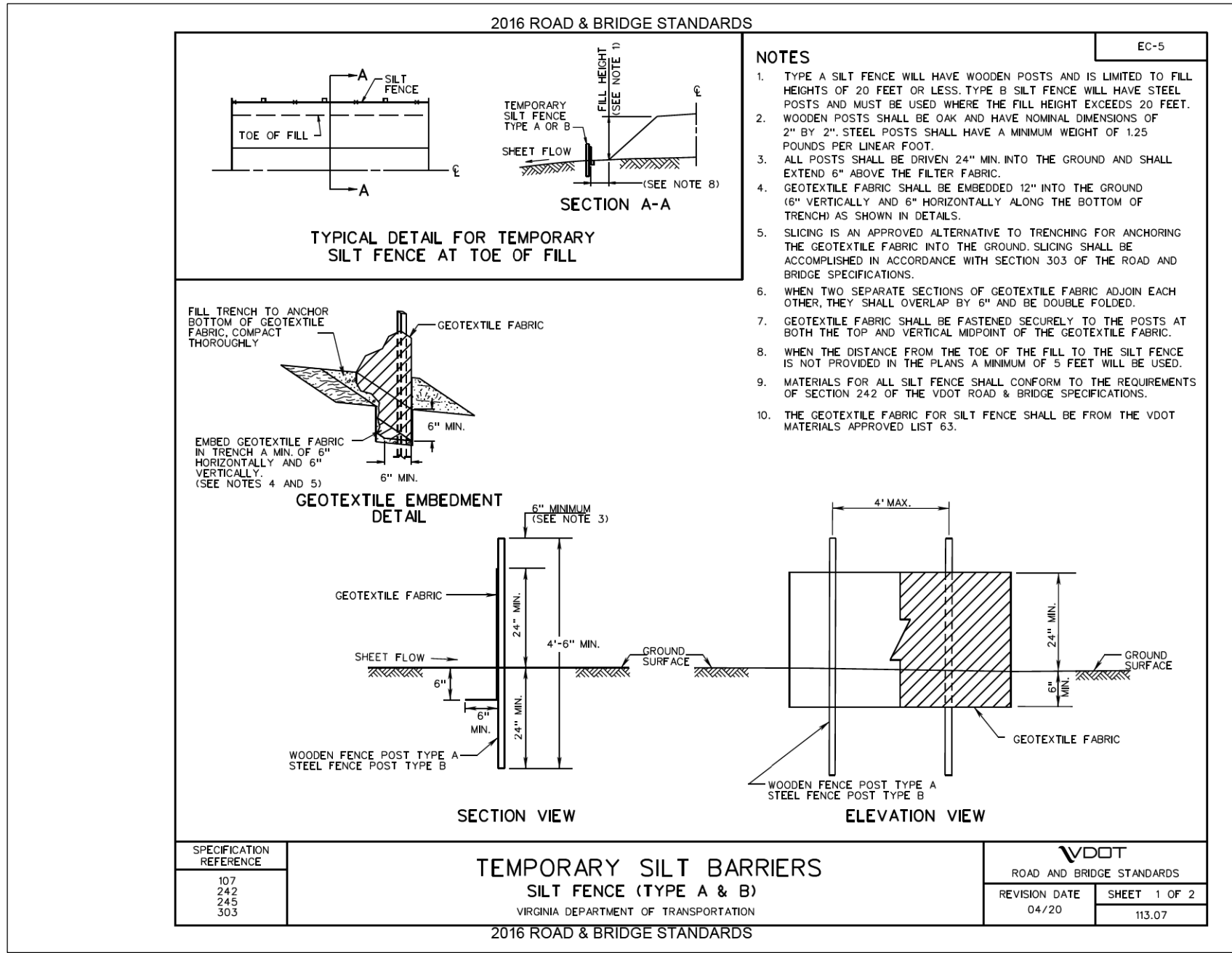
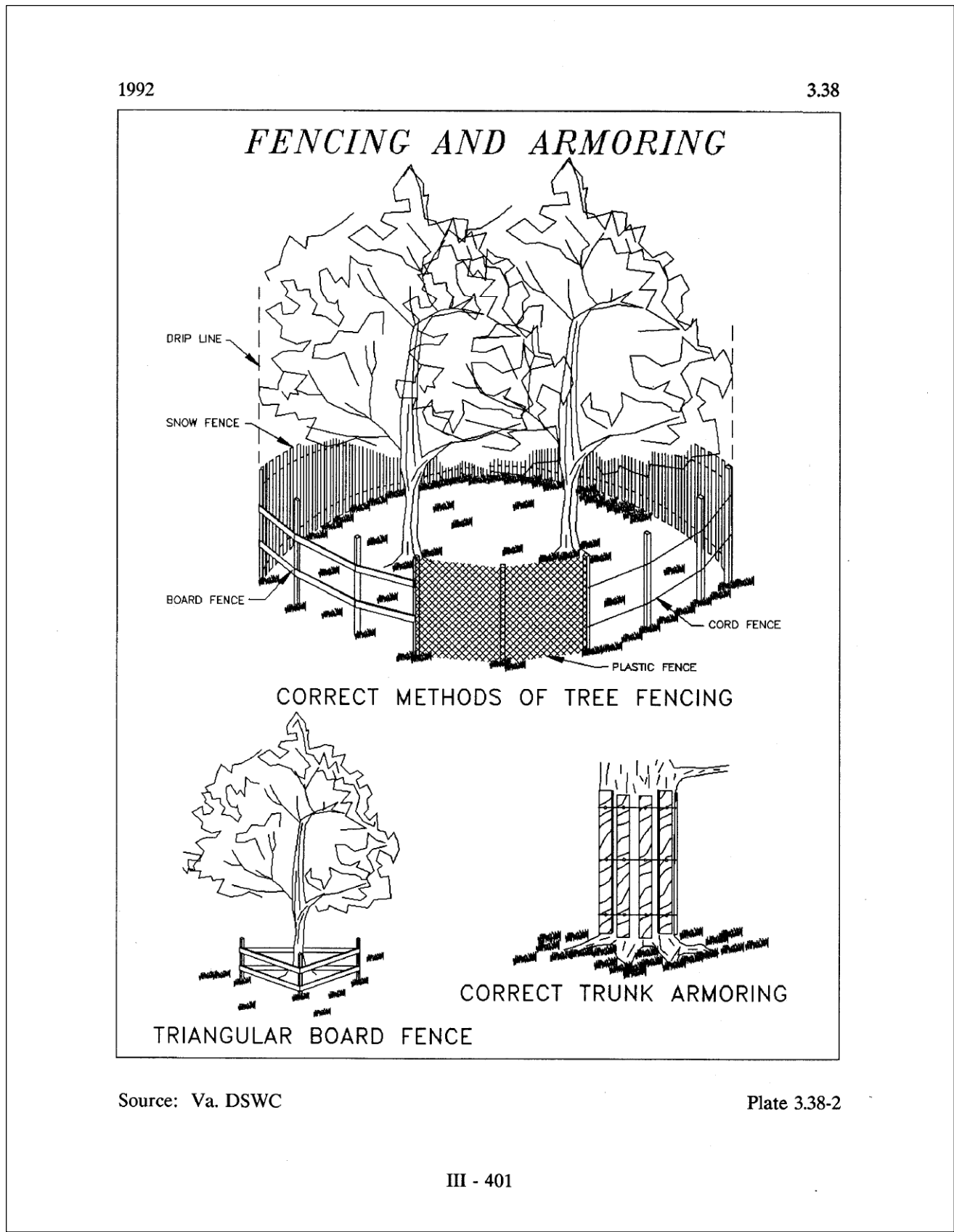
I. EROSION CONTROL NARRATIVE

PRIOR TO ANY LAND DISTURBING OPERATIONS, THE EROSION CONTROLS, AS SPECIFIED BY THE ENGINEERING PLANS, SHALL BE INSTALLED. ALL MECHANICAL AND VEGETATIVE PRACTICES SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS CONTAINED IN THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. SLOPE AREAS THAT CANNOT BE ADEQUATELY STABILIZED BY SEEDING, SHALL BE SODDED AND STAKED, AS DISTURBED AREAS, NOT TO BE CONSTRUCTED UPON, ARE FINAL GRADED, THEY SHALL BE PREPARED, LIME AND FERTILIZER APPLIED, SEEDED AND MULCHED. FOR THE AREAS OUTSIDE THE V.D.O.T. RIGHT-OF-WAY, THE SEED SHALL CONSIST OF A MIXTURE OF KENTUCKY 31 TALL FESCUE AND KENBLUE IN ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES SPECIFICATIONS OR COUNTY APPROVED ALTERNATE SEED FOR AREAS LOCATED WITHIN THE V.D.O.T. RIGHT-OF-WAY, THE SEED MIXTURE SHALL BE IN CONFORMANCE WITH CURRENT V.D.O.T. REQUIREMENTS. SEDIMENT CONTROLS AND MECHANICAL DEVICES SHALL BE REMOVED FROM CONTRIBUTING AREAS AS THEY BECOME STABILIZED. THIS RESTORATION WORK WILL BE PERFORMED WITHIN 7 DAYS AFTER FINAL GRADING. ALL TEMPORARY SEDIMENT CONTROLS AND MECHANICAL DEVICES SHALL BE REMOVED FROM CONTRIBUTING AREAS AS THEY BECOME STABILIZED. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.

II. EROSION, SEDIMENTATION, AND LAND CONSERVATION NOTES

- MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT FEDERAL, 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 OR ANY ORDINANCE ENACTED BY THE COUNTY OF FAIRFAX.
- ALL AREAS, ON OR OFF-SITE, WHICH 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 INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 2:1 AND GREATER SHALL BE SODDED AND STAKED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE ENGINEER.
- ANY DISTURBED AREA NOT PAVED, PERMANENTLY SEEDED, SODDED, OR BUILT UPON BY 1 NOVEMBER OR DISTURBED AFTER THAT DATE, IS TO BE SEEDED WITHIN 14 DAYS WITH OATS, ABRUZZI RYE OR APPROVED EQUIVALENT, AND MULCHED WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS PER ACRE. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
- NO AREA SHALL BE DENUDED AND NOT BE DISTURBED FOR A PERIOD LONGER THAN 14 DAYS IN ACCORDANCE WITH THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
- TEMPORARY DIVERSIONS, SEEDED AND MULCHED OR STAKED STRAW BALE DIVERSIONS AND OTHER CONTROL MEASURES NECESSARY, ARE TO BE PLACED AS INDICATED ON THE DRAWINGS PRIOR TO OR AS THE FIRST STEP IN EXCAVATION.
- WHEN IN ACCORDANCE WITH STATE AND FEDERAL JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL IS TO BE PLACED IN STREAMS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 14 DAYS IS TO BE SEEDED FOR TEMPORARY VEGETATION AND MULCHED. WHERE SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT IS TO BE BACK-SLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE MUST OUTLET IN A STABILIZED AREA OR A SEDIMENT BASIN.
- WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
- DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY SILT TRAPS, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
- ALL DISTURBED AREAS ARE TO BE SEEDED AND MULCHED OR SODDED WITHIN 5 DAYS AFTER BACKFILL OF THE APPLICABLE TRENCH SECTION, IN ACCORDANCE WITH THE PROVISIONS CONTAINED IN THE PROJECT SPECIFICATIONS RELATING TO SEEDING AND SODDING. SPEED IS THE ESSENTIAL LAND CONSERVATION ELEMENT FOR A LINEAR PROJECT.
- FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
- ALL EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED WITHIN 30 DAYS AFTER THE PROJECT IS STABILIZED. (MS-18).
- AN EROSION AND SEDIMENT CONTROL CONTRACTOR CERTIFICATION (E.S.C.C.C.) IS REQUIRED FOR ALL LAND DISTURBING ACTIVITIES.
- THE CONTRACTOR SHALL PROPERLY INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS FOR THE LIFE OF THE PROJECT; AND ROUTINELY CHECK CONTROL DEVICES BEFORE, DURING AND AFTER STORM EVENTS.

EROSION & SEDIMENT CONTROL LEGEND			
KEY	SYMBOL	DESCRIPTION	No.
(SF)	—x—x—x—x—	SILT FENCE	3.05
(IP)		STORM DRAIN INLET PROTECTION	3.07
(TP)	—TP—TP—	TREE PROTECTION	3.38
(LOD)	—LOD—LOD—	LIMITS OF DISTURBANCE	
DETAILS PROVIDED BY FAIRFAX COUNTY			
ALL DETAILS SHALL BE IN ACCORDANCE WITH FAIRFAX COUNTY CODE CHAPTER 104, THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL, AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK			



THE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

REVISIONS	

CLIENT INFORMATION

**TOWN OF VIENNA, VA**

127 CENTER STREET SOUTH  
VIENNA, VA, 22180

**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
HYDRAULIC ENGINEER

**WRA**

Whitman, Requardt & Associates, LLP  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

**EROSION & SEDIMENT  
CONTROL NOTES &  
DETAILS**

SCALE: N/A

DATE: 08/2024	SHEET: 15
DES: WRA	DRAWN: WRA
CHECK: WRA	



PROJECT DESCRIPTION

THIS TASK CONSISTS OF THE DESIGN AND CONSTRUCTION OF THE REPLACEMENT OF THE 140 FOOT LONG TRIPLE 36 INCH CULVERT UNDER NUTLEY STREET (ROUTE 243) BETWEEN KINGLEY ROAD SW AND VIRGINIA CENTER BOULEVARD AND MARSHALL ROAD SW. THE REPLACEMENT OF THE TRIPLE 36 INCH CULVERT WILL BE ACCOMPLISHED UTILIZING MULTIPHASED OPEN CUTS ACROSS NUTLEY STREET BEGINNING ON THE DOWNSTREAM (WEST) END.

THE FOLLOWING ROADWAYS ARE WITHIN THE PROJECT LIMITS AND WILL FACILITATE TRAVELERS PRIMARILY INCLUDING COMMUTERS, RESIDENTS, AND LOCAL COMMERCIAL TRAFFIC.

ROADWAY	FUNCTIONAL CLASSIFICATION	POSTED SPEED
ROUTE 243 – NUTLEY STREET	URBAN MINOR ARTERIAL	35 MPH
VIRGINIA CENTER BOULEVARD	URBAN MAJOR COLLECTOR	30 MPH
MARSHALL ROAD SW	URBAN LOCAL	25 MPH
KINGSLEY ROAD SW	URBAN LOCAL	25 MPH

LIMITATIONS OF OPERATIONS

THE CONTRACTOR SHOULD MAKE EVERY EFFORT TO MAINTAIN THE EXISTING TRAVEL LANES OPEN TO TRAFFIC AT ALL TIMES. LANE CLOSURES FOR CONSTRUCTION SHALL BE PERMITTED AS DESCRIBED BELOW.

THE CONTRACTOR SHALL CONDUCT THE WORK IN ACCORDANCE WITH THE VDOT 2020 ROAD AND BRIDGE SPECIFICATIONS SECTION 108.

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 9:00PM to 5:00AM	9:00AM to 2:00 PM	10:00PM to 9:00AM	9:00PM to 9:00AM	10:00PM 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 before 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 before 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.

ACCESS TO AND FROM ALL ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER FOR ANY PLANNED CLOSURE SCENARIO NOT ANTICIPATED BY THIS TRANSPORTATION MANAGEMENT PLAN.

PUBLIC COMMUNICATIONS PLAN

THE CONTRACTOR SHALL SUBMIT A REQUEST FOR ALL LANE CLOSURES TO VDOT 10 DAYS IN ADVANCE OF THE CLOSURE. THE ENGINEER WILL COMMUNICATE WITH THE VDOT NORTHERN VIRGINIA PUBLIC AFFAIRS SECTION, FAIRFAX COUNTY SUPERVISORS, FEDERAL AGENCIES AND SCHOOLS IN CLOSE PROXIMITY, RADIO AND TELEVISION, EMERGENCY SERVICES, VDOT, AND IN THE LANE CLOSURE ADVISORY MANAGEMENT SYSTEM (LCAMS), AS DETERMINED APPROPRIATE.

THE CONTRACTOR SHALL CONTACT THE VDOT TOC 15–45 MINUTES PRIOR TO EXECUTING ALL LANE AND/OR SHOULDER CLOSURES AND CONTACT TOC AFTER THE WORK HAS BEEN COMPLETED AND LANE AND/OR SHOULDER CLOSURES HAVE BEEN REMOVED.

CONTRACTOR SHALL PROVIDE ADDITIONAL FLAGGERS TO AID ACCESS OUT OF DRIVEWAYS WITHIN WORKZONE WHERE NECESSARY.

GENERAL NOTES

1. THE TMP FOR THIS PROJECT IS CATEGORIZED AS TYPE A, CATEGORY II.
2. UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLAN AND EXECUTE THE WORK IN ACCORDANCE WITH THE WORK AREA PROTECTION MANUAL REVISION 2.1 AND THIS TRANSPORTATION MANAGEMENT PLAN.



**Commonwealth of Virginia**  
**Virginia Department of Transportation**  
VERIFICATION OF COMPLETION OF VDOT ADVANCED WORK ZONE TRAFFIC CONTROL TRAINING AND FLAGGER CERTIFICATION

This is to verify that Tyler L. Long 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.

Expiration Date: 6/30/2025

Verification Number: 061821204

  
State Traffic Engineer

GENERAL NOTES cont.

3. THE TRANSPORTATION MANAGEMENT PLAN (TMP) IS NOT INTENDED TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF THIS PROJECT, BUT ONLY TO SHOW A GENERAL HANDLING OF EXISTING TRAFFIC. IF THE CONTRACTOR DEVIATES FROM THE APPROVED TMP/MOT PLAN, THEY ARE REQUIRED TO SUBMIT A NEW TMP/MOT PLAN FOR REVIEW AND APPROVAL.
4. THE CONTRACTOR SHALL LAYOUT THE TEMPORARY TRAFFIC CONTROL PRIOR TO INSTALLATION TO ENSURE THE EXISTING CONDITIONS ALLOW FOR THE MAINTENANCE OF TRAFFIC AS INTENDED.
5. THE TMP/MOT, DURING CONSTRUCTION, SHALL BE IN ACCORDANCE WITH THE VDOT ROAD AND BRIDGE SPECIFICATIONS DATED 2020, THE VIRGINIA WORK AREA PROTECTION MANUAL DATED JULY 2011 PER REVISION 2.1 NOVEMBER 2020, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION, AND THE 2011 VIRGINIA SUPPLEMENT TO THE MUTCD.
6. FOR DETAILS OF PERMANENT CONSTRUCTION, REFER TO THE CONSTRUCTION PLANS.
7. THE CONTRACTOR SHOULD REFER TO THE VIRGINIA WORK AREA PROTECTION MANUAL, SPECIFICALLY, BUT NOT LIMITED TO, THE FOLLOWING STANDARDS:

TTC–1.1 – WORK BEYOND THE SHOULDER OPERATION

TTC–4.2 – STATIONARY OPERATION ON A SHOULDER

TTC–5.2 – SHOULDER OPERATION WITH MINOR ENCROACHMENT

TTC–16.2 – OUTSIDE LANE CLOSURE ON A FOUR–LANE ROADWAY

TTC–17.2 – INSIDE LANE CLOSURE ON A FOUR–LANE ROADWAY

TTC–20.2 – LANE CLOSURE OPERATION WITH TEMPORARY TRAFFIC BARRIER

TTC–26.2 – LANE CLOSURE OPERATION – NEAR SIDE OF AN INTERSECTION

TTC–27.2 – LANE CLOSURE OPERATION – FAR SIDE OF AN INTERSECTION

TTC–28.2 – LANE CLOSURE OPERATION IN AN INTERSECTION

TTC–29.2 – TURN LANE CLOSURE OPERATION

TTC–36.2 – CROSSWALK CLOSURE AND PEDESTRIAN DETOUR OPERATION

TTC–53.0 – SIGNING FOR PROJECT LIMITS

TTC–55.1 – ERADICATION OF PAVEMENT MARKINGS IN A WORK ZONE

TTC–57.2 – END OF DAY SIGNING FOR PARTIAL PAVING OPERATIONS ON A MULTI–LANE ROADWAY

TTC–58.1 – END OF DAY SIGNING FOR FULL PAVING OPERATIONS ON A MULTI–LANE ROADWAY

8. A MINIMUM OF ONE TRAFFIC LANE SHALL BE OPEN TO TRAFFIC AT ALL TIMES.
9. PAVEMENT MARKINGS AND PAVEMENT MARKING SYMBOLS (ARROWS) IN CONFLICT WITH THE LANE CONFIGURATIONS DURING CONSTRUCTION SHALL BE COVERED WITH NON–REFLECTIVE REMOVABLE BLACK TAPE, AND RESTRIPEd AS NECESSARY.
10. CONTRACTOR SHALL MAINTAIN SAFE PASSAGE FOR PEDESTRIANS AND BICYCLISTS DURING CONSTRUCTION WHERE EXISTING FACILITIES ARE PRESENT.
11. THE CONTRACTOR SHALL MAINTAIN ALL SIGNAGE WITHIN THE LIMITS OF CONSTRUCTION, SHOWN OR OTHERWISE, UNLESS DIRECTED BY THE ENGINEER. IF REMOVAL IS ALLOWED, CONTRACTOR SHALL STORE THE SIGNS PER VDOT STANDARDS, AND IF DIRECTED, REPLACE THEM AT THE COMPLETION OF THE PROJECT.
12. CONTRACTOR IS TO ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. ADDITIONAL TEMPORARY MEASURES MAY BE NEEDED TO FACILITATE PROPER POSITIVE DRAINAGE.
13. THE CONTRACTOR SHALL SCHEDULE ALL PHASES OF CONSTRUCTION IN SUCH MANNER THAT WATER, SEWER, CABLE, POWER, AND ANY OVERHANGING UTILITY AND ANY UNDERGROUND UTILITY SERVICES WILL NOT BE INTERRUPTED. THE COST OF ANY TEMPORARY CONNECTION, IN PART OR WHOLE, SHALL BE INCIDENTAL TO THE UTILITY RELOCATION/CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE HIS UTILITY ADJUSTMENTS/RELOCATION ACTIVITIES WITH THE OWNER OF THE UTILITY.
14. DISPOSAL SITE AND STAGING AREA LOCATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO WORK SHALL BE PERFORMED UNTIL SUCH SITES HAVE BEEN ACCEPTED BY THE TOWN.
15. TEMPORARY LANE WIDTHS SHALL NOT BE LESS THAN 10 FEET.
16. ACCESS TO BUS STOPS AND REASONABLE SAFE TRAVEL ACROSS INTERSECTIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE CONSIDERED DURING CONSTRUCTION PER THE 2009 MUTCD AND THE VIRGINIA WORK AREA PROTECTION MANUAL REVISION 2.1.
17. EQUIPMENT AND/OR MATERIALS SHALL NOT BE STORED WITHIN THE ESTABLISHED CLEAR ZONE OF EITHER THE TRAVEL LANES, AND/OR THE DEFLECTION ZONE OF PHYSICAL BARRIERS USED DURING CONSTRUCTION.
18. AT THE CONCLUSION OF EACH WORKDAY, ALL AREAS EXCAVATED BELOW THE EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE, SHALL BE BACKFILLED WITH APPROVED MATERIAL TO FORM AN APPROXIMATE 6:1 WEDGE AGAINST THE EXISTING PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC.
19. ALL TRAFFIC CONTROL DEVICES AND SIGNS NECESSARY FOR MAINTENANCE OF TRAFFIC ARE TO BE INSTALLED, MAINTAINED AND REMOVED BY THE CONTRACTOR.
20. STATE OR LOCAL POLICE MAY BE REQUIRED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT. WHEN STATE POLICE PRESENCE IS REQUIRED FOR A LANE CLOSURE OPERATION, THE ENGINEER SHALL CONTACT THE VIRGINIA STATE POLICE DIVISION SEVEN HEADQUARTERS, 4977 ALLIANCE DRIVE, FAIRFAX, VIRGINIA, 22030. TELEPHONE 703–803–2660 TO REQUEST STATE POLICE SUPPORT AND GIVE THE STATE POLICE A MINIMUM OF 5 DAYS ADVANCE NOTICE. THE ENGINEER SHALL NOTIFY THE STATE OR LOCAL POLICE OF ANY CANCELLATION AT LEAST 24 HOURS IN ADVANCE TO AVOID ADDITIONAL CHARGES. THE COST OF STATE OR LCCAL POLICE SUPPORT SHALL BE INCLUDED IN THE COST OF PROJECT MOBILIZATION.
21. IF ROADWAY SHOULDER DOES NOT PROVIDE ADEQUATE SPACE, PROVIDE TEMPORARY CONSTRUCTION SIGNS ON WOOD POSTS IN ACCORDANCE WITH VDOT STD WSP–1.
22. ALL PAVEMENT MARKINGS ERADICATED FOR MAINTENANCE OF TRAFFIC SHALL BE REPLACED IN KIND.

SEQUENCE OF CONSTRUCTION

ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY.

THE CONTRACTOR SHALL FOLLOW THE VIRGINIA WORK AREA PROTECTION MANUAL (WAPM) REVISION 2.1 TO PROTECT WORK ZONES ESTABLISHED FOR THE CONSTRUCTION OF CULVERT. INSTALLATION OF SIGNING FOR PROJECT LIMITS SHALL BE IN ACCORDANCE WITH FIGURE TTC–53.0 OF THE VIRGINIA WAPM. CONSTRUCTION MAY NOT BE SIMULTANEOUSLY PERFORMED ON BOTH SIDES OF TRAFFIC. CONTRACTOR SHALL MAINTAIN SAFE PASSAGE FOR PEDESTRIANS AND BICYCLISTS DURING CONSTRUCTION WHERE EXISTING FACILITIES ARE PRESENT IN ACCORDANCE WITH FIGURE TTC–35.1.

THE CONSTRUCTION SEQUENCE SHALL BE TO CONSTRUCT THE CULVERT BEGINNING ON THE DOWNSTREAM END UTILIZING FLOW BYPASS AND THE EXISTING PIPES TO MAINTAIN FLOW.

SEE TRANSPORTATION MANAGEMENT PLAN PHASING SHEETS FOR GENERAL DESCRIPTION OF WORK DURING EACH PHASE.

UPON COMPLETION OF PHASE 5 AND THE RECONSTRUCTION OF THE MEDIAN ALONG NUTLEY STREET, THE CONTRACTOR SHALL PERFORM FINAL PAVING OPERATIONS AND PAVEMENT MARKING.

TEMPORARY SIGNALIZATION

CONSTRUCTION OF THE CULVERT WILL REQUIRE LANE SHIFTS APPROACHING THE INTERSECTION OF NUTLEY STREET, VIRGINIA CENTER BOULEVARD, AND MARSHALL ROAD SW. TEMPORARY SIGNALIZATION WILL BE REQUIRED. IT IS ANTICIPATED THE CONSTRUCTION PHASING WILL REQUIRE THE ADJUSTMENT OF THE EXISTING SIGNAL HEADS TO ENSURE LANES APPROACHING THE INTERSECTION ARE IN LINE WITH THE APPROPRIATE SIGNAL HEADS.

ALL TEMPORARY TRAFFIC SIGNAL WORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDNACE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE CURRENT EDITION OF THE VIRGINIA SUPPLEMENT TO THE MUTCD, THE CURRENT EDITION OF THE VDOT ROAD AND BRIDGE STANDARDS, THE CURRENT EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS, AND SPECIAL PROVISIONS.

UTILITIES SHOWN ON THE PLANS ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL UTILITIES WITH THE PROJECT LIMITS ARE IDENTIFIED AND LOCATED BEFORE BEGINNING WORK. THE CONTRACTOR SHALL CONTACT "MISS UTILITY OF VIRGINIA" 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT THEIR OWN EXPENSE, EXISTING UTILITIES, PAVEMENT, CONCRETE ITEMS, ETC. THAT ARE DAMAGED OR DISTURBED DURING CONSTRUCTION.

THE CONTRACTOR SHALL SUBMIT TEMPORARY SIGNALIZATION PLANS TO THE TOWN AND THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

THE CONTRACTOR SHALL RELOCATE TRAFFIC SIGNAL HEADS AND APPURTENANCES (SPAN WIRES, SIGNS, DETECTORS, ETC.) AND REVISE SIGNAL PHASING AND TIMES AS MANY TIMES AS DEEMED NECESSARY DURING CONSTRUCTION TO MAINTAIN AND PROTECT TRAFFIC AS SHOWN ON THE PLANS OR PROPOSED BY THE CONTRACTOR AND APPROVED BY THE TOWN AND ENGINEER. THE COST TO PERFORM THIS WORK IS INCIDENTAL TO THE TEMPORARY SIGNALIZATION PAY ITEM IN THIS CONTRACT.

TRAFFIC SIGNAL HEADS NOT IN USE AND TRAFFIC SIGNAL SIGNS NOT APPLICABLE TO THE CURRENT TRAFFIC PATTERN SHALL BE COVERED IN ACCORDANCE WITH VDOT SPECIFICATION SECTION 703.03(C). THE CONTRACTOR SHALL INSTALL AND MAINTAIN THE COVERS ON THE DEVICES UNTIL SUCH DEVICES ARE REMOVED OR RESTORED TO OPERATION.

THROUGHOUT THE DURATION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE DETECTION ON THE EXISTING, TEMPORARY, AND/OR NEW ROADWAY ALIGNMENT FOR ALL INTERSECTION APPROACHES. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, RELOCATE AND REVISE THE NECESSARY EQUIPMENT TO PROVIDE VEHICLE DETECTION DURING EACH PHASE OF CONSTRUCTION. DURING CONSTRUCTION, IF A DETECTOR BECOMES NONOPERATIONAL, THE ASSOCIATED PHASE SHALL BE PUT ON MAX RECALL AND THE CONTRACTOR SHALL PROVIDE DETECTION WITHIN 24 HOURS. THE TYPE OF DETECTION USED SHALL BE AT THE CONTRACTOR'S DISCRETION. IF VIDEO DETECTION IS USED, CONTRACTOR SHALL CONFIRM VIDEO DETECTION CAN OPERATION SUFFICIENTLY OVER THE REQUIRED CABLE LENGTH. ALL DETECTION ZONES SHALL BE COORDINATED AND APPROVED BY THE TOWN AND THE ENGINEER. THE COST TO PROVIDE AND MAINTAIN VEHICLE DETECTION THROUGHOUT THE DURATION OF CONSTRUCTION IS INCIDENTAL TO THE TEMPORARY SIGNALIZATION PAY ITEM IN THIS CONTRACT.

THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING TRAFFIC SIGNAL TIMING DATA NEEDED FOR TEMPORARY SIGNALIZATION DURING EACH STAGE OF CONSTRUCTION.


THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SIGNAL CABLE SLACK TO ACCOMMODATE ALL SIGNAL HEAD RELOCATIONS DURING CONSTRUCTION.

THE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

REVISIONS	

CLIENT INFORMATION


**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



TOWN OF  
**VIENNA**  
*since 1890*

**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



**Whitman, Requardt & Associates, LLP**  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

**TRANSPORTATION  
MANAGEMENT PLAN  
NOTES**

SCALE: N/A

DATE: 08/2024

SHEET: 16

DES: TLL

DRAWN: TLL

CHECK:



NOTES:

- 1.) PROJECT LIMITS SIGNING SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VA WAPM.
- 2.) LANE CLOSURE OPERATION – FAR SIDE OF AN INTERSECTION SHALL BE IN ACCORDANCE WITH FIGURE TTC-27.2 OF THE VA WAPM.
- 3.) TURN LANE CLOSURE OPERATION SHALL BE IN ACCORDANCE WITH FIGURE TTC-29.2 OF THE VA WAPM.
- 4.) STATIONARY OPERATION ON A SHOULDER SHALL BE IN ACCORDANCE WITH FIGURE TTC-4.2 OF THE VA WAPM.
- 5.) PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.

POSTED SPEED LIMITS

NUTLEY STREET (RTE. 243) = 35 MPH  
VIRGINIA CENTER BOULEVARD (RTE. 6154) = 30 MPH  
MARSHALL ROAD = 25 MPH  
KINGSLEY ROAD = 25 MPH

TEMPORARY PAVEMENT SECTION

SURFACE – 1.5" ASPHALT CONCRETE TYPE SM-9.5D  
ESTIMATED @ 175 LBS/SY

INTERMEDIATE – 2" ASPHALT CONCRETE TYPE IM-19.0A  
ESTIMATED @ 240 LBS/SY

BASE – 4" ASPHALT CONCRETE TYPE BM-25.0A

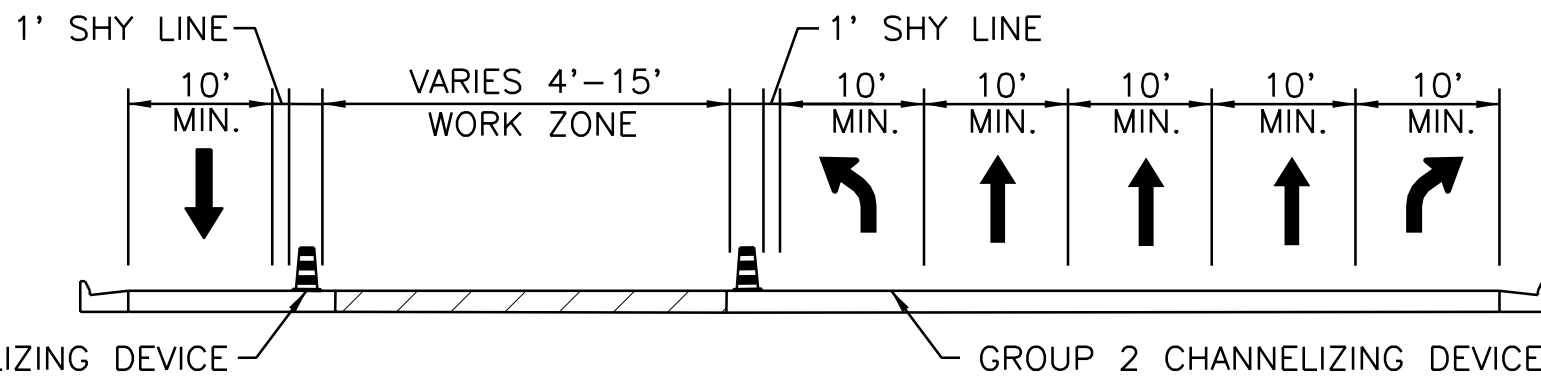
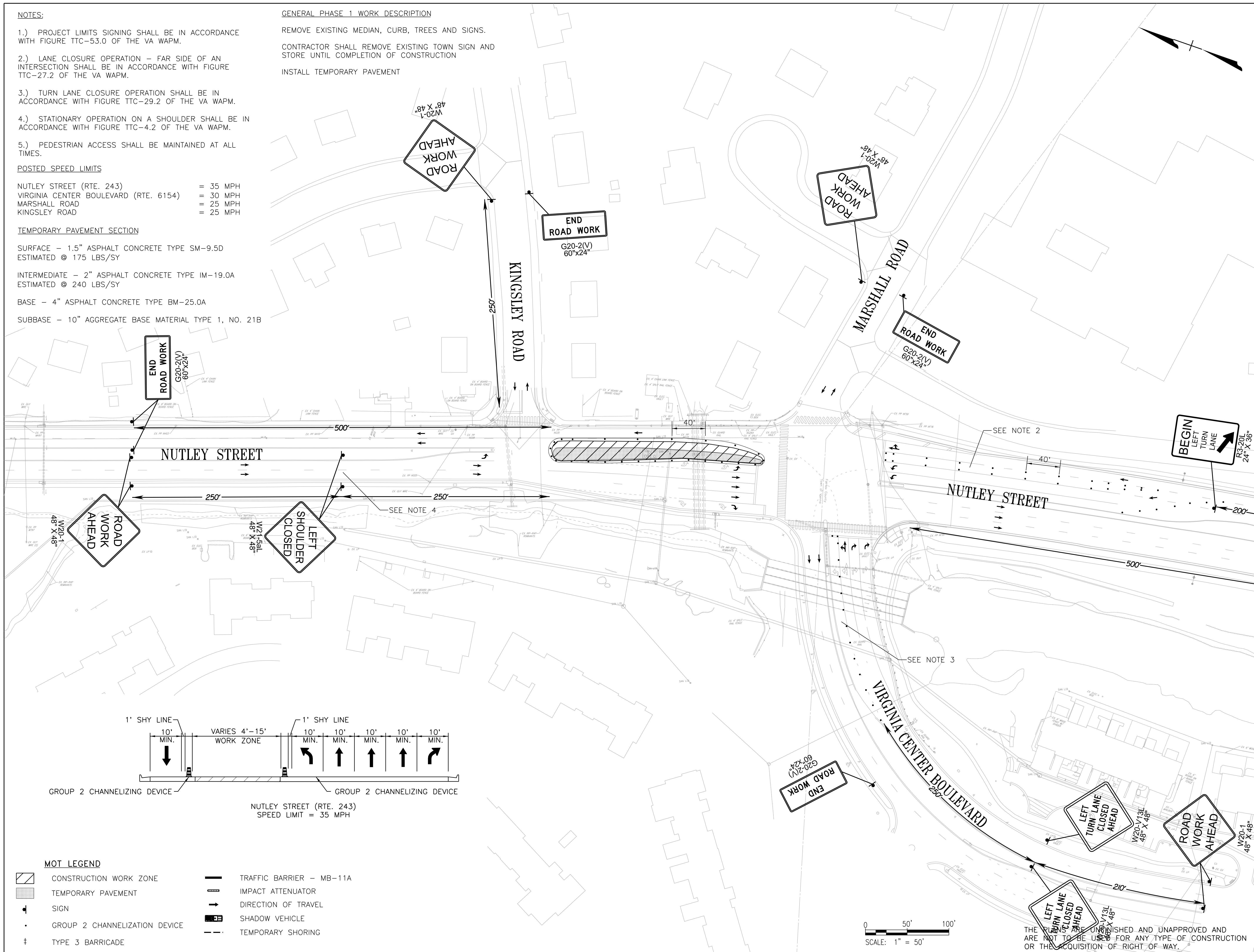
SUBBASE – 10" AGGREGATE BASE MATERIAL TYPE 1, NO. 21B

GENERAL PHASE 1 WORK DESCRIPTION

REMOVE EXISTING MEDIAN, CURB, TREES AND SIGNS.

CONTRACTOR SHALL REMOVE EXISTING TOWN SIGN AND STORE UNTIL COMPLETION OF CONSTRUCTION

INSTALL TEMPORARY PAVEMENT



NUTLEY STREET (RTE. 243)  
SPEED LIMIT = 35 MPH

MOT LEGEND

- |  |                               |  |                          |
|--|-------------------------------|--|--------------------------|
|  | CONSTRUCTION WORK ZONE        |  | TRAFFIC BARRIER – MB-11A |
|  | TEMPORARY PAVEMENT            |  | IMPACT ATTENUATOR        |
|  | SIGN                          |  | DIRECTION OF TRAVEL      |
|  | GROUP 2 CHANNELIZATION DEVICE |  | SHADOW VEHICLE           |
|  | TYPE 3 BARRICADE              |  | TEMPORARY SHORING        |

REVISIONS	

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



Whitman, Requardt & Associates, LLP  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

**TRANSPORTATION  
MANAGEMENT PLAN  
PHASE 1**

SCALE: 1"=50'

DATE: 08/2024

SHEET: 17

DES: TLL

DRAWN: TLL

CHECK:

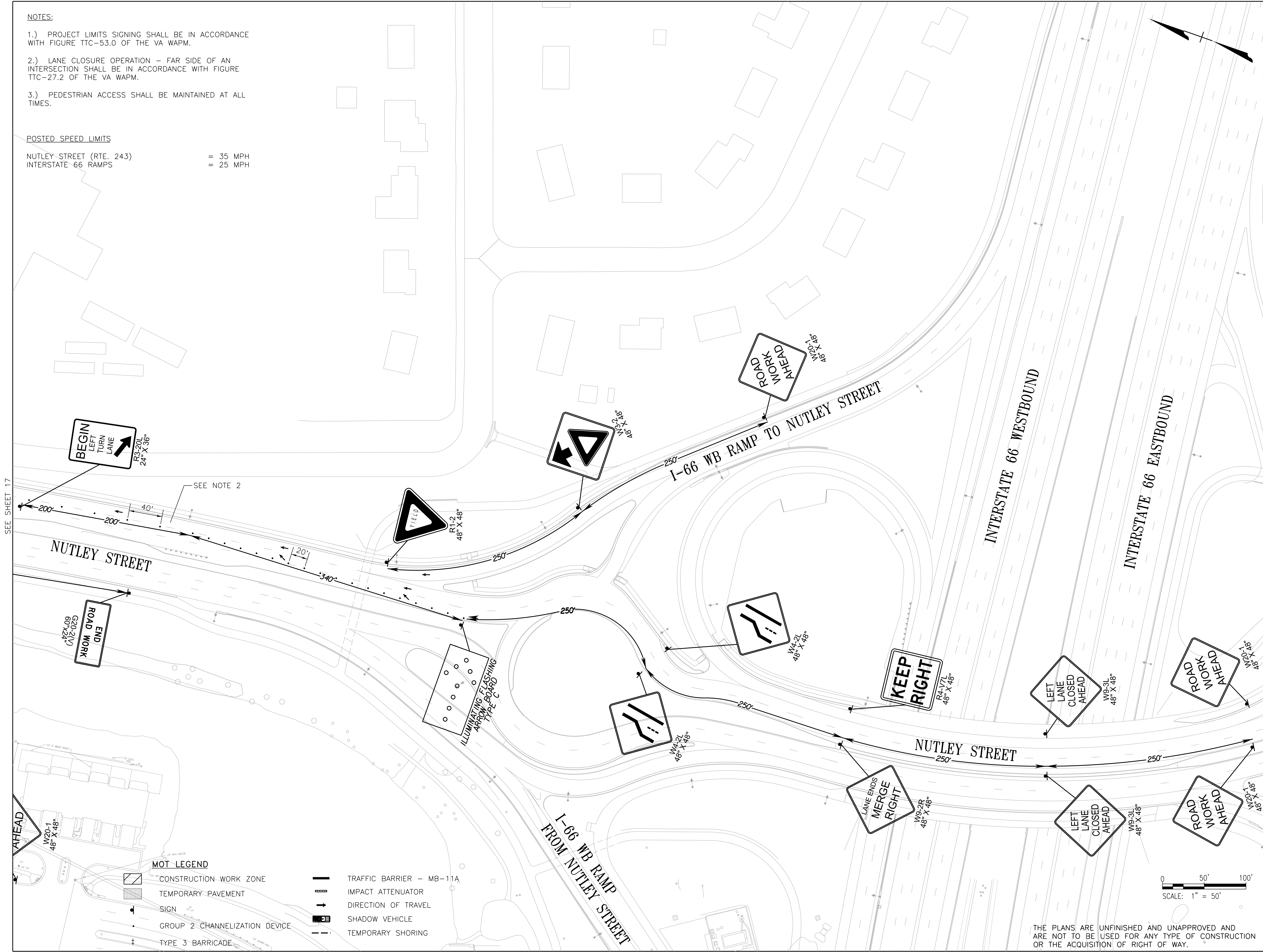


NOTES:

- 1.) PROJECT LIMITS SIGNING SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VA WAPM.
- 2.) LANE CLOSURE OPERATION – FAR SIDE OF AN INTERSECTION SHALL BE IN ACCORDANCE WITH FIGURE TTC-27.2 OF THE VA WAPM.
- 3.) PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.

POSTED SPEED LIMITS

NUTLEY STREET (RTE. 243) = 35 MPH  
INTERSTATE 66 RAMP = 25 MPH



REVISIONS

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



**TOWN OF VIENNA**  
since 1890

**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



**Whitman, Requardt & Associates, LLP**  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

**TRANSPORTATION  
MANAGEMENT PLAN  
PHASE 1**

SCALE: 1"=50'

DATE: 08/2024 SHEET: 18  
DES: TLL DRAWN: TLL CHECK:

THE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



NOTES:

- 1.) PROJECT LIMITS SIGNING SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VA WAPM.
- 2.) LANE CLOSURE OPERATION – NEAR SIDE OF AN INTERSECTION SHALL BE IN ACCORDANCE WITH FIGURE TTC-26.2 OF THE VA WAPM.
- 3.) PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.
- 4.) SIDEWALK CLOSURE SHALL BE IN ACCORDNACE WITH FIGURE TTC-35.1 OF THE VA WAPM.

POSTED SPEED LIMITS

NUTLEY STREET (RTE. 243) = 35 MPH  
VIRGINIA CENTER BOULEVARD (RTE. 6154) = 30 MPH  
MARSHALL ROAD = 25 MPH  
KINGSLEY ROAD = 25 MPH

MEADOW LANE SW

TAPAWINGO ROAD SW

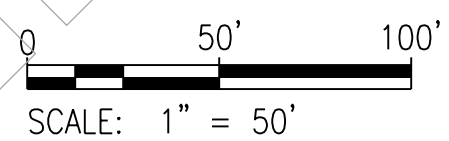
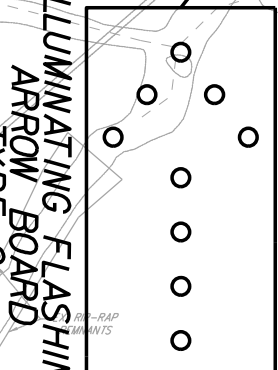
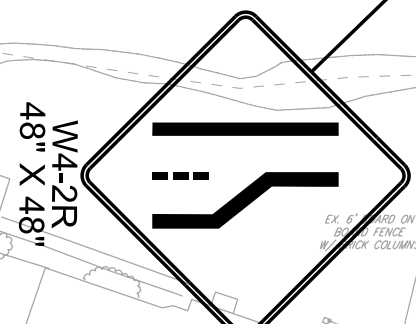
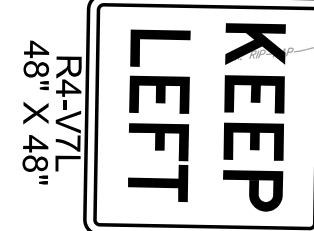
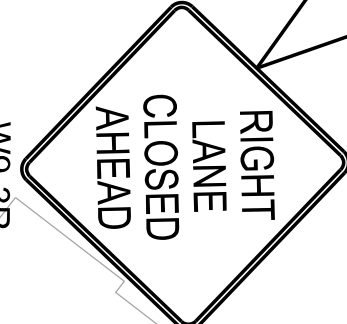
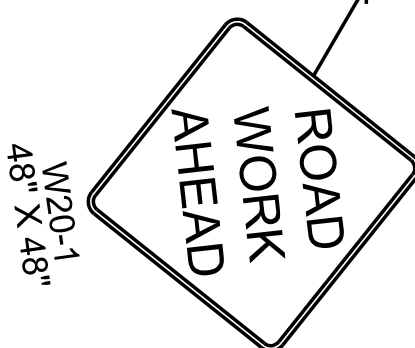
NUTLEY STREET SW

PRINCETON TERRACE SW

MOOREFIELD ROAD SW

MOT LEGEND

- CONSTRUCTION WORK ZONE
- TEMPORARY PAVEMENT
- SIGN
- GROUP 2 CHANNELIZATION DEVICE
- TYPE 3 BARRICADE
- TRAFFIC BARRIER – MB-11A
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL
- SHADOW VEHICLE
- TEMPORARY SHORING



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REVISIONS

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



**TOWN OF VIENNA**  
since 1890

**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



**Whitman, Requardt & Associates, LLP**  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

**TRANSPORTATION  
MANAGEMENT PLAN  
PHASE 2**

SCALE: 1"=50'

DATE: 08/2024

SHEET: 19

DES: TLL

DRAWN: TLL

CHECK:



NOTES:

- PROJECT LIMITS SIGNING SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VA WAPM.
  - LANE CLOSURE OPERATION — NEAR SIDE OF AN INTERSECTION SHALL BE IN ACCORDANCE WITH FIGURE TTC-26.2 OF THE VA WAPM.
  - PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.
  - SIDEWALK CLOSURE SHALL BE IN ACCORDNACE WITH FIGURE TTC-35.1 OF THE VA WAPM.
- POSTED SPEED LIMITS

NUTLEY STREET (RTE. 243) = 35 MPH  
VIRGINIA CENTER BOULEVARD (RTE. 6154) = 30 MPH  
MARSHALL ROAD = 25 MPH  
KINGSLEY ROAD = 25 MPH

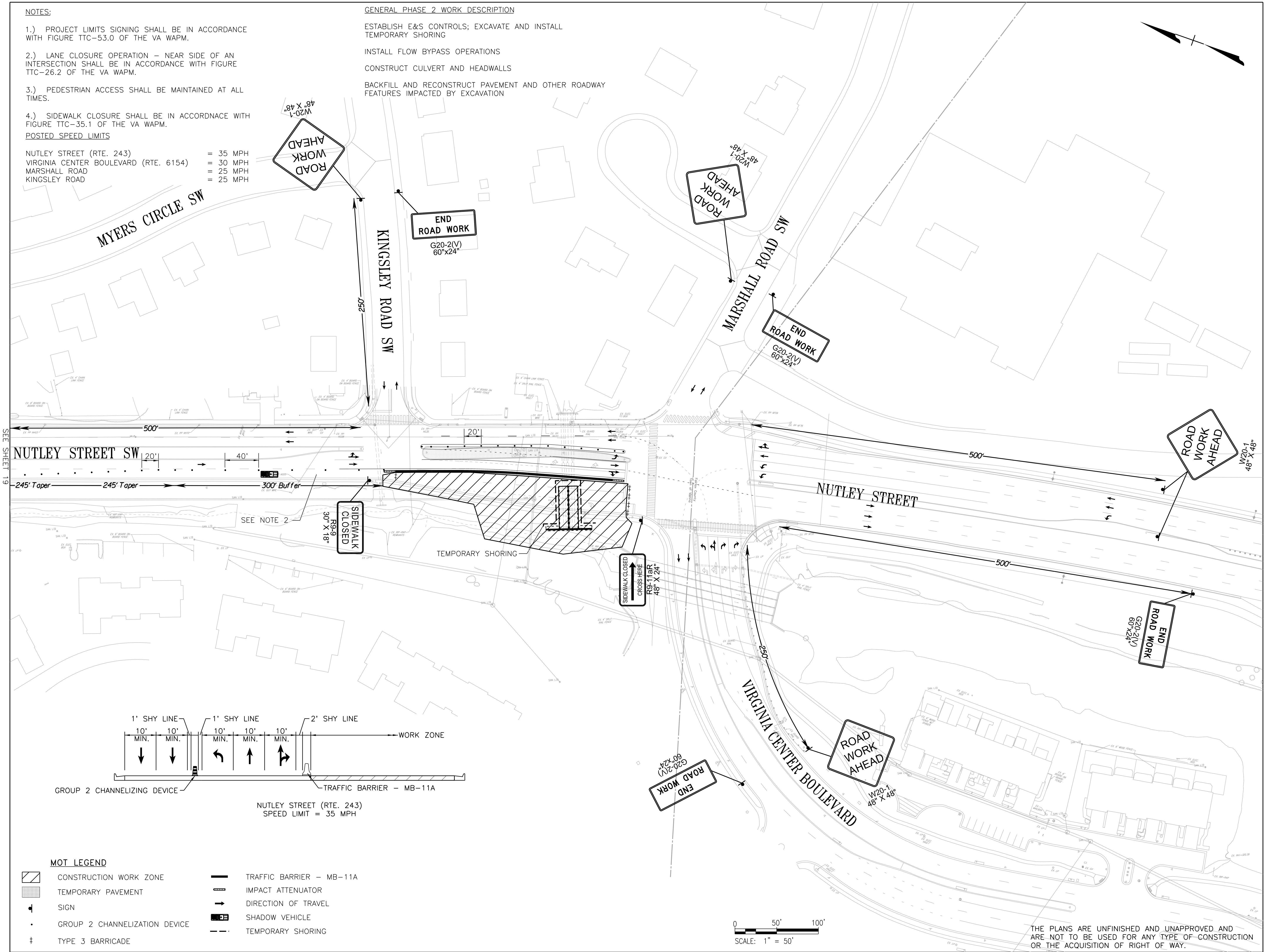
GENERAL PHASE 2 WORK DESCRIPTION

ESTABLISH E&S CONTROLS; EXCAVATE AND INSTALL TEMPORARY SHORING

INSTALL FLOW BYPASS OPERATIONS

CONSTRUCT CULVERT AND HEADWALLS

BACKFILL AND RECONSTRUCT PAVEMENT AND OTHER ROADWAY FEATURES IMPACTED BY EXCAVATION



MOT LEGEND

- |  |                               |  |                          |
|--|-------------------------------|--|--------------------------|
|  | CONSTRUCTION WORK ZONE        |  | TRAFFIC BARRIER — MB-11A |
|  | TEMPORARY PAVEMENT            |  | IMPACT ATTENUATOR        |
|  | SIGN                          |  | DIRECTION OF TRAVEL      |
|  | GROUP 2 CHANNELIZATION DEVICE |  | SHADOW VEHICLE           |
|  | TYPE 3 BARRICADE              |  | TEMPORARY SHORING        |

0 50' 100'  
SCALE: 1" = 50'

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REVISIONS

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



**VIENNA**  
since 1890

**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



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12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

**TRANSPORTATION  
MANAGEMENT PLAN  
PHASE 2**

SCALE: 1"=50'

DATE: 08/2024 SHEET: 20

DES: TLL DRAWN: TLL CHECK:



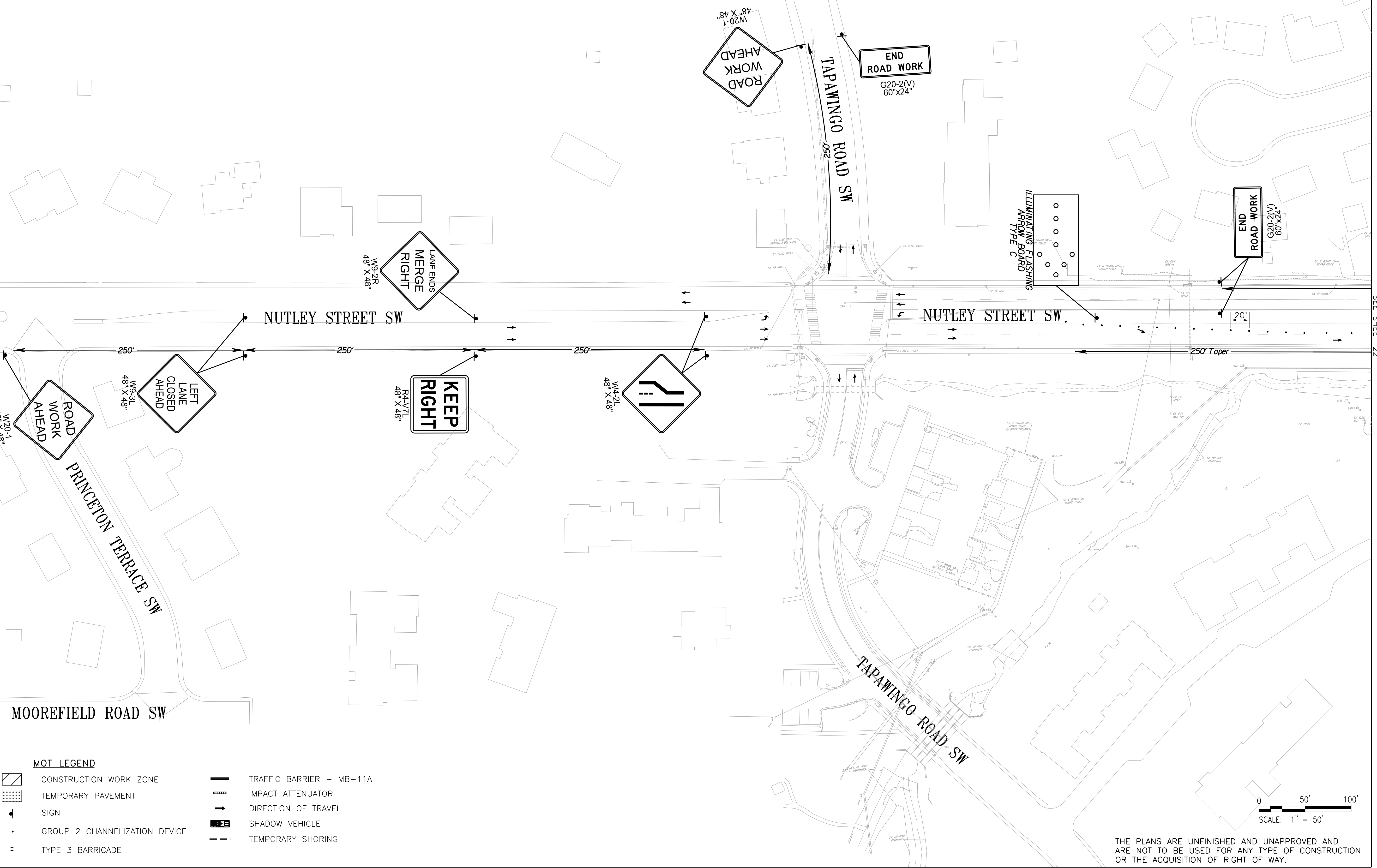
NOTES:

- 1.) PROJECT LIMITS SIGNING SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VA WAPM.
- 2.) LANE CLOSURE OPERATION – NEAR SIDE OF AN INTERSECTION SHALL BE IN ACCORDANCE WITH FIGURE TTC-26.2 OF THE VA WAPM.
- 3.) PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.

POSTED SPEED LIMITS

NUTLEY STREET (RTE. 243)	= 35 MPH
VIRGINIA CENTER BOULEVARD (RTE. 6154)	= 30 MPH
MARSHALL ROAD	= 25 MPH
KINGSLEY ROAD	= 25 MPH

MEADOW LANE SW



MOT LEGEND

	CONSTRUCTION WORK ZONE		TRAFFIC BARRIER – MB-11A
	TEMPORARY PAVEMENT		IMPACT ATTENUATOR
	SIGN		DIRECTION OF TRAVEL
	GROUP 2 CHANNELIZATION DEVICE		SHADOW VEHICLE
	TYPE 3 BARRICADE		TEMPORARY SHORING

REVISIONS	

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



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12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

TRANSPORTATION  
MANAGEMENT PLAN  
PHASE 3

SCALE: 1"=50'

DATE: 08/2024

SHEET: 21

DES: TLL

DRAWN: TLL

CHECK:

THE PLANS ARE UNFINISHED AND UNAPPROVED AND  
ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION  
OR THE ACQUISITION OF RIGHT OF WAY.



NOTES:

- PROJECT LIMITS SIGNING SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VA WAPM.
- LANE CLOSURE OPERATION – NEAR SIDE OF AN INTERSECTION SHALL BE IN ACCORDANCE WITH FIGURE TTC-26.2 OF THE VA WAPM.
- PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.
- FOR TEMPORARY PAVEMENT SECTION SEE SHEET 17.

POSTED SPEED LIMITS

NUTLEY STREET (RTE. 243) = 35 MPH  
VIRGINIA CENTER BOULEVARD (RTE. 6154) = 30 MPH  
MARSHALL ROAD = 25 MPH  
KINGSLEY ROAD = 25 MPH

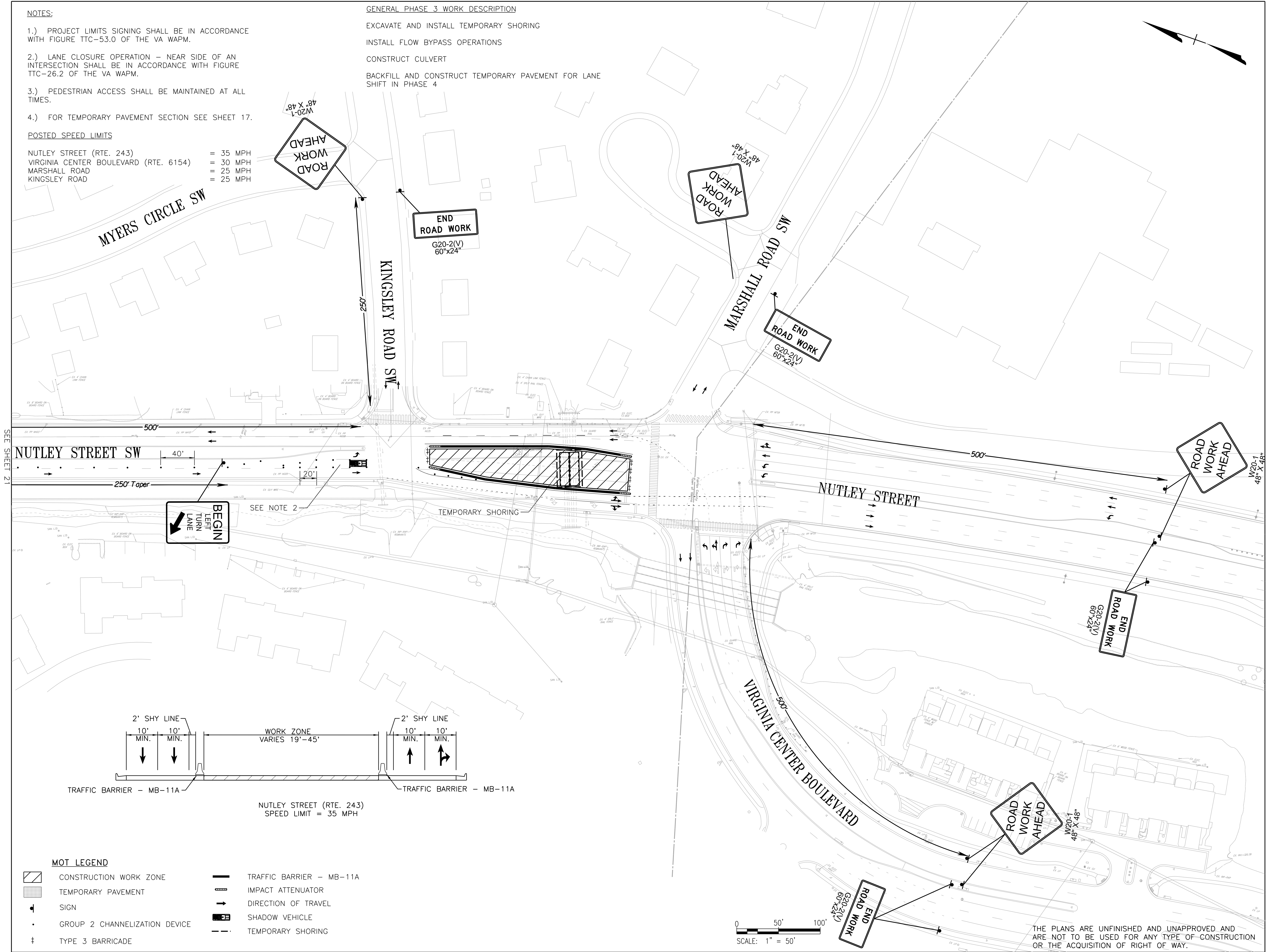
GENERAL PHASE 3 WORK DESCRIPTION

EXCAVATE AND INSTALL TEMPORARY SHORING

INSTALL FLOW BYPASS OPERATIONS

CONSTRUCT CULVERT

BACKFILL AND CONSTRUCT TEMPORARY PAVEMENT FOR LANE SHIFT IN PHASE 4



REVISIONS

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
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VIENNA, VA, 22180



**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



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**TRANSPORTATION  
MANAGEMENT PLAN  
PHASE 3**

SCALE: 1"=50'

DATE: 08/2024

SHEET: 22

DES: TLL

DRAWN: TLL

CHECK:



NOTES:

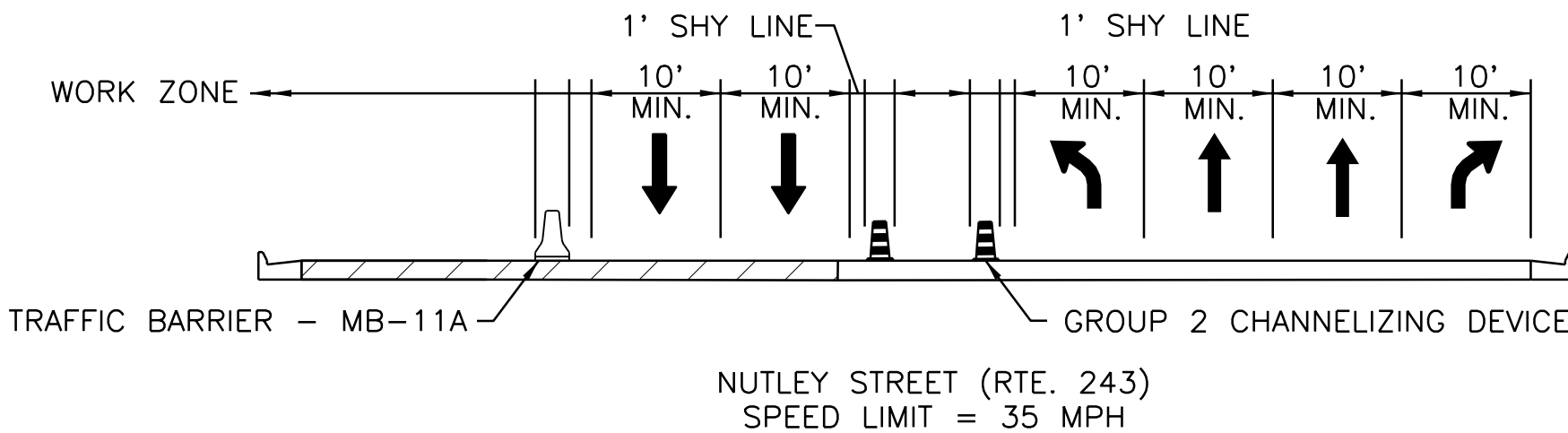
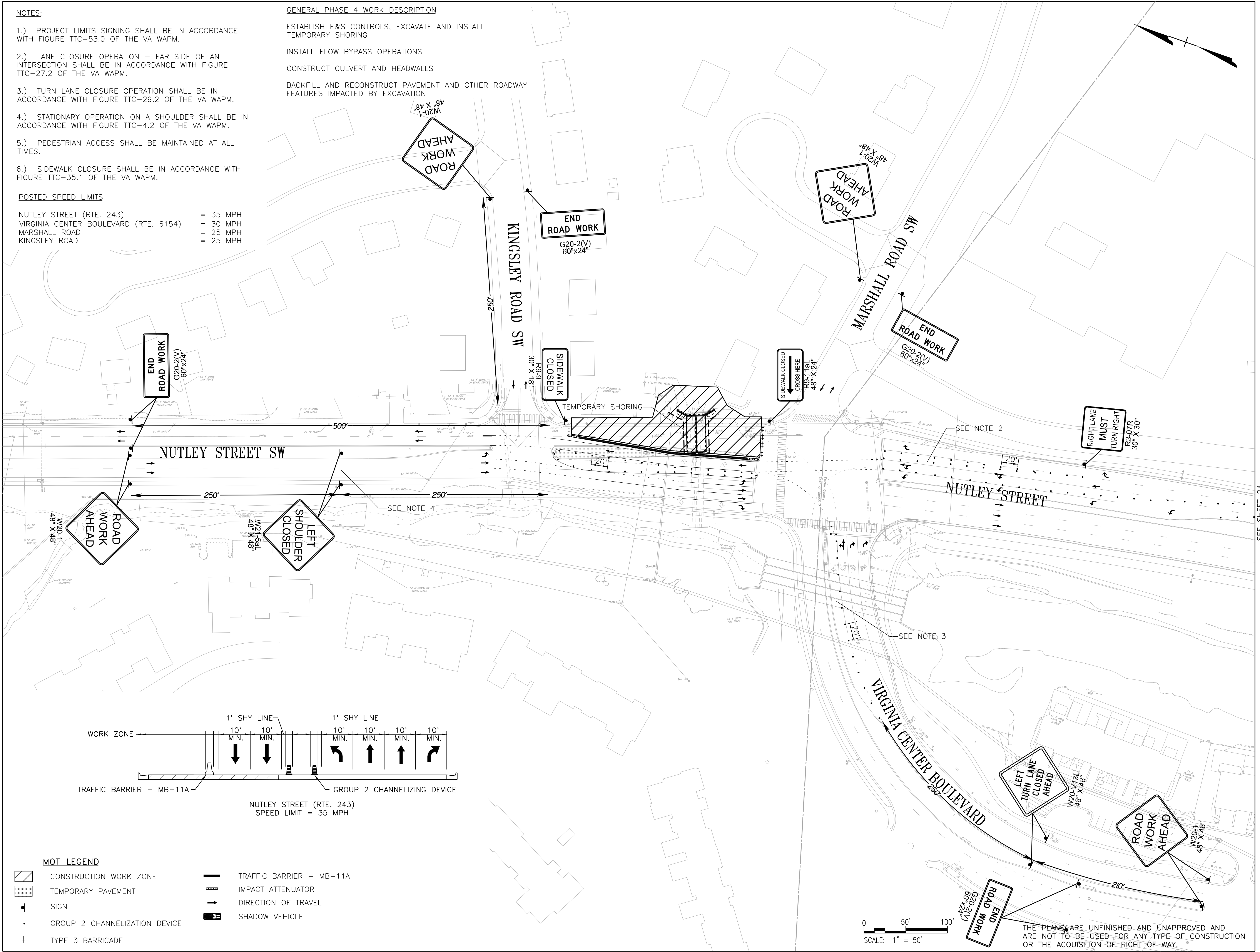
- 1.) PROJECT LIMITS SIGNING SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VA WAPM.
- 2.) LANE CLOSURE OPERATION – FAR SIDE OF AN INTERSECTION SHALL BE IN ACCORDANCE WITH FIGURE TTC-27.2 OF THE VA WAPM.
- 3.) TURN LANE CLOSURE OPERATION SHALL BE IN ACCORDANCE WITH FIGURE TTC-29.2 OF THE VA WAPM.
- 4.) STATIONARY OPERATION ON A SHOULDER SHALL BE IN ACCORDANCE WITH FIGURE TTC-4.2 OF THE VA WAPM.
- 5.) PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.
- 6.) SIDEWALK CLOSURE SHALL BE IN ACCORDANCE WITH FIGURE TTC-35.1 OF THE VA WAPM.

POSTED SPEED LIMITS

NUTLEY STREET (RTE. 243) = 35 MPH  
VIRGINIA CENTER BOULEVARD (RTE. 6154) = 30 MPH  
MARSHALL ROAD = 25 MPH  
KINGSLEY ROAD = 25 MPH

GENERAL PHASE 4 WORK DESCRIPTION

- ESTABLISH E&S CONTROLS; EXCAVATE AND INSTALL TEMPORARY SHORING
- INSTALL FLOW BYPASS OPERATIONS
- CONSTRUCT CULVERT AND HEADWALLS
- BACKFILL AND RECONSTRUCT PAVEMENT AND OTHER ROADWAY FEATURES IMPACTED BY EXCAVATION



MOT LEGEND

- CONSTRUCTION WORK ZONE
- TEMPORARY PAVEMENT
- SIGN
- GROUP 2 CHANNELIZATION DEVICE
- TYPE 3 BARRICADE
- TRAFFIC BARRIER – MB-11A
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL
- SHADOW VEHICLE

REVISIONS

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



**TOWN OF VIENNA**  
since 1890

**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



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12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

**TRANSPORTATION  
MANAGEMENT PLAN  
PHASE 4**

SCALE: 1"=50'

DATE: 08/2024

SHEET: 23

DES: TLL

DRAWN: TLL

CHECK:

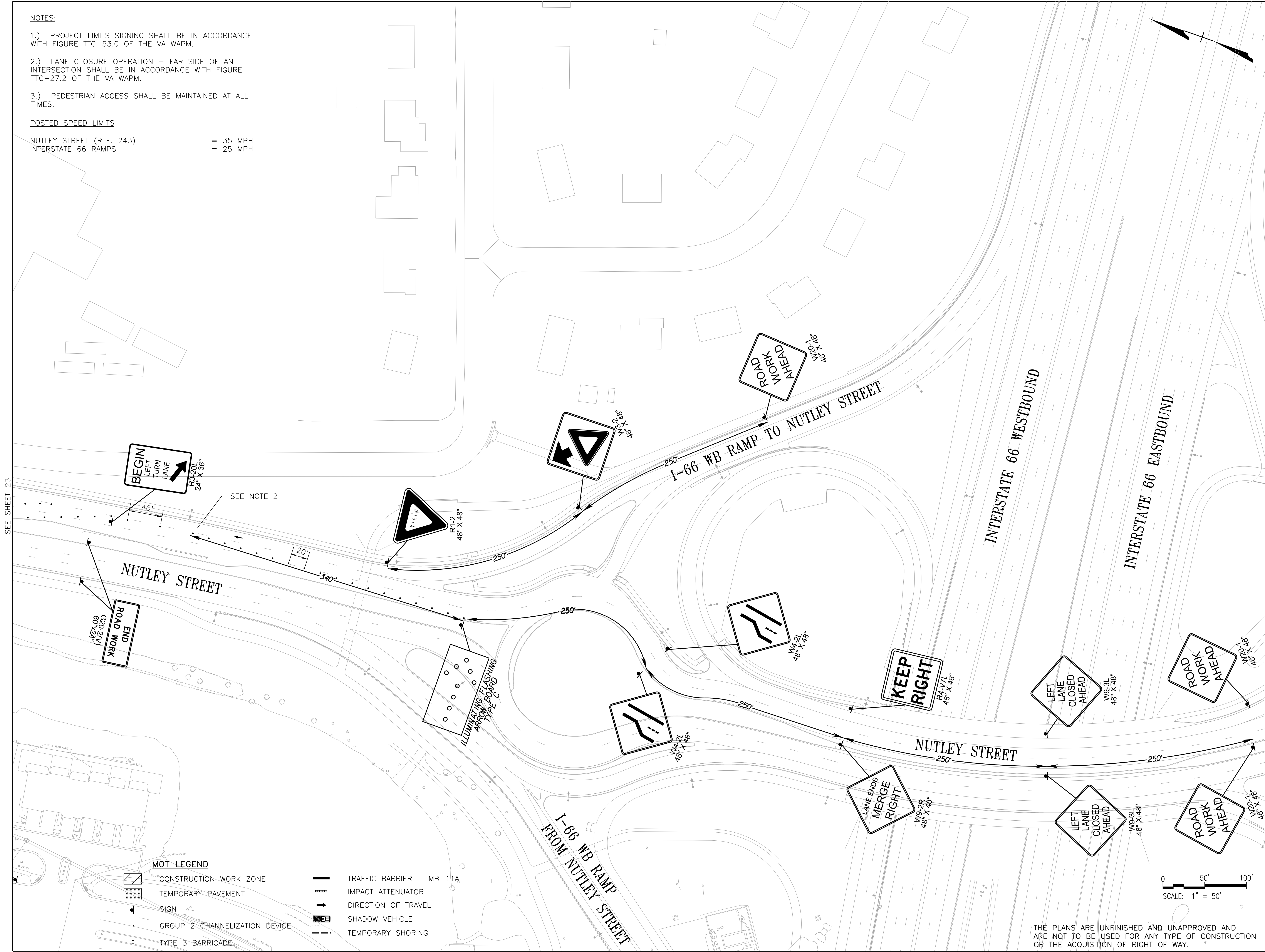


NOTES:

- 1.) PROJECT LIMITS SIGNING SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VA WAPM.
- 2.) LANE CLOSURE OPERATION - FAR SIDE OF AN INTERSECTION SHALL BE IN ACCORDANCE WITH FIGURE TTC-27.2 OF THE VA WAPM.
- 3.) PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.

POSTED SPEED LIMITS

NUTLEY STREET (RTE. 243) = 35 MPH  
INTERSTATE 66 RAMPS = 25 MPH



REVISIONS

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



Whitman, Requardt & Associates, LLP  
12700 Fair Lakes Circle, Suite 300, Fairfax, Virginia 22033

**TRANSPORTATION  
MANAGEMENT PLAN  
PHASE 4**

SCALE: 1"=50'

DATE: 08/2024

SHEET: 24

DES: TLL

DRAWN: TLL

CHECK:



NOTES:

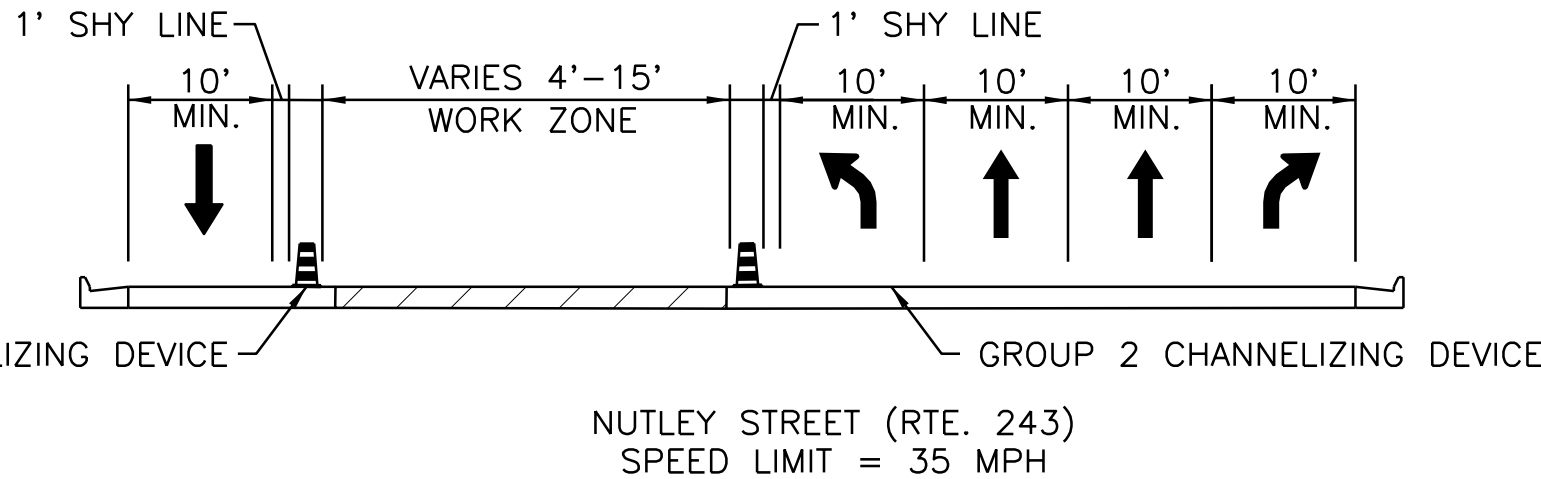
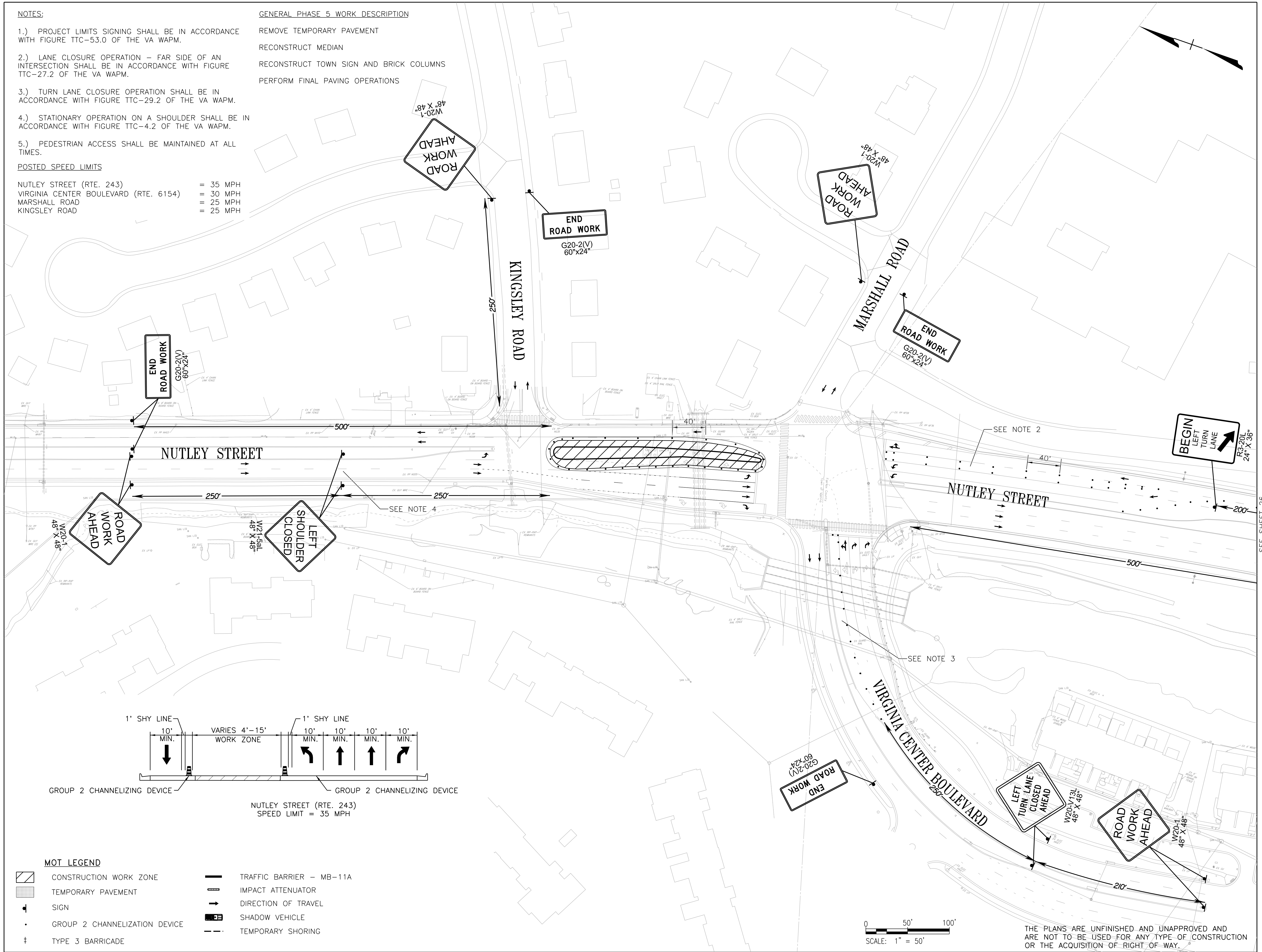
- 1.) PROJECT LIMITS SIGNING SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VA WAPM.
- 2.) LANE CLOSURE OPERATION – FAR SIDE OF AN INTERSECTION SHALL BE IN ACCORDANCE WITH FIGURE TTC-27.2 OF THE VA WAPM.
- 3.) TURN LANE CLOSURE OPERATION SHALL BE IN ACCORDANCE WITH FIGURE TTC-29.2 OF THE VA WAPM.
- 4.) STATIONARY OPERATION ON A SHOULDER SHALL BE IN ACCORDANCE WITH FIGURE TTC-4.2 OF THE VA WAPM.
- 5.) PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.

POSTED SPEED LIMITS

NUTLEY STREET (RTE. 243) = 35 MPH  
VIRGINIA CENTER BOULEVARD (RTE. 6154) = 30 MPH  
MARSHALL ROAD = 25 MPH  
KINGSLEY ROAD = 25 MPH

GENERAL PHASE 5 WORK DESCRIPTION

- REMOVE TEMPORARY PAVEMENT
- RECONSTRUCT MEDIAN
- RECONSTRUCT TOWN SIGN AND BRICK COLUMNS
- PERFORM FINAL PAVING OPERATIONS



MOT LEGEND

- CONSTRUCTION WORK ZONE
- TEMPORARY PAVEMENT
- SIGN
- GROUP 2 CHANNELIZATION DEVICE
- TYPE 3 BARRICADE
- TRAFFIC BARRIER – MB-11A
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL
- SHADOW VEHICLE
- TEMPORARY SHORING

REVISIONS	

CLIENT INFORMATION  
**TOWN OF VIENNA, VA**  
127 CENTER STREET SOUTH  
VIENNA, VA, 22180



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CULVERT  
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ROADWAY ENGINEER



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**TRANSPORTATION  
MANAGEMENT PLAN  
PHASE 5**

SCALE: 1"=50'		
DATE: 08/2024	SHEET: 25	
DES: TLL	DRAWN: TLL	CHECK:

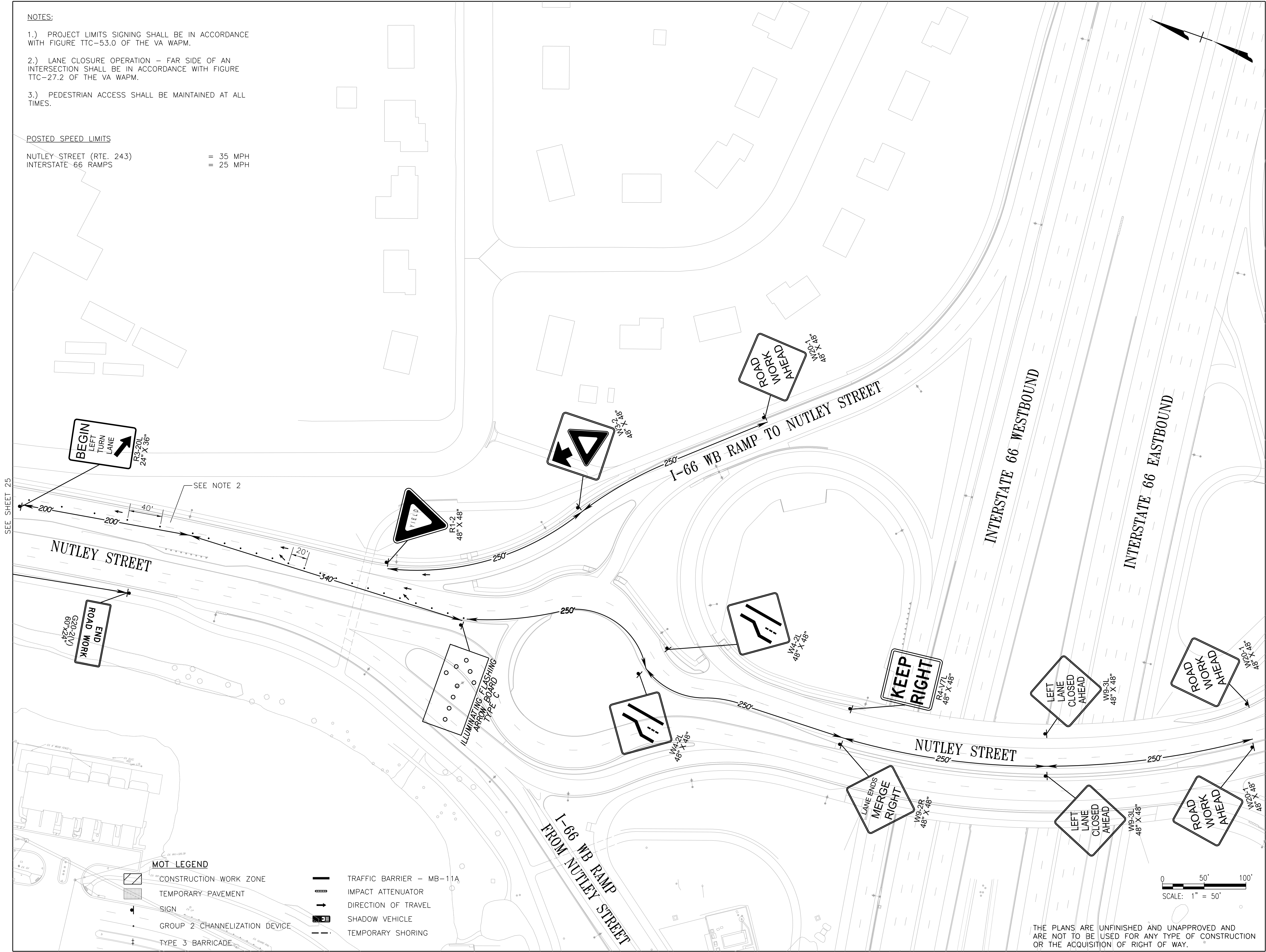


NOTES:

- 1.) PROJECT LIMITS SIGNING SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VA WAPM.
- 2.) LANE CLOSURE OPERATION – FAR SIDE OF AN INTERSECTION SHALL BE IN ACCORDANCE WITH FIGURE TTC-27.2 OF THE VA WAPM.
- 3.) PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.

POSTED SPEED LIMITS

NUTLEY STREET (RTE. 243) = 35 MPH  
INTERSTATE 66 RAMP = 25 MPH



REVISIONS

CLIENT INFORMATION  
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VIENNA, VA, 22180



**TOWN OF VIENNA**  
since 1890

**NUTLEY STREET  
CULVERT  
REPLACEMENT  
PROJECT**

Whitman Requardt & Associates  
Fairfax, Virginia  
ROADWAY ENGINEER



**Whitman, Requardt & Associates, LLP**  
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**TRANSPORTATION  
MANAGEMENT PLAN  
PHASE 5**

SCALE: 1"=50'

DATE: 08/2024 SHEET: 26

DES: TLL DRAWN: TLL CHECK:

THE PLANS ARE UNFINISHED AND UNAPPROVED AND  
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OR THE ACQUISITION OF RIGHT OF WAY.