

# **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

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# OWNER DEPARTMENT OF **ENVIRONMENTAL SERVICES**

Transportation & Development Division Transportation Planning Bureau 2100 Clarendon Boulevard, Suite 900, Arlington, VA 22201 Phone: 703.228.3344 Fax: 703.228.7548 www.arlingtonva.us

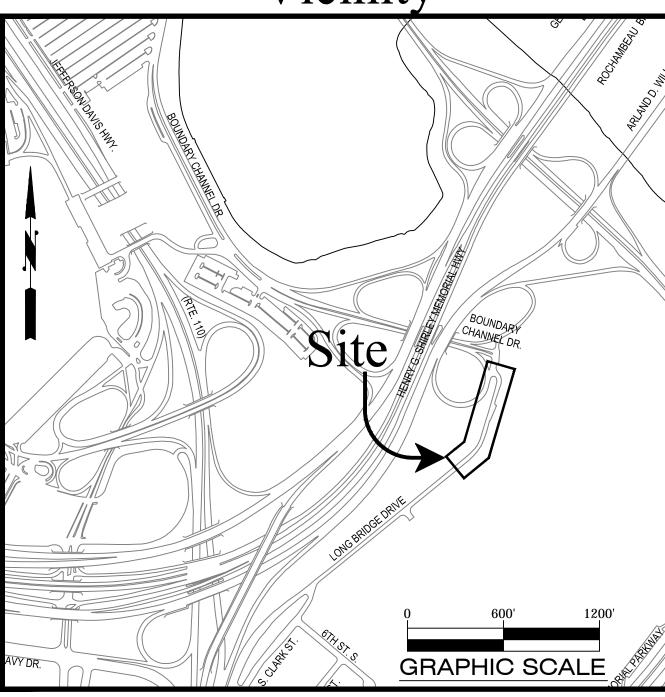
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CONTRACTOR

# TO BE DETERMINED

# Location Map Scale: 1"=600"

Vicinity





# General Notes:

LONG BRIDGE DRIVE

BOUNDARY CHANNEL DRIVE/I-395 INTERCHANGE

Construction Drawings For:

2. HORIZONTAL DATA ARE BASED ON THE VIRGINIA COORDINATE SYSTEM OF 1983 (VCS 83

Project Number: D46S

ROAD RE-ALIGNMENT

- 3. ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE LATEST ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE 2008 VIRGINIA DEPARTMENT OF TRANSPORTATION
- 4. ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS. LATEST

(VDOT) ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS.

- 5. 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 WILL BE EXPECTED TO LOCATE AND PROTECT THESE SERVICES DURING
- 6. 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.
- 7. 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 SUFFICIEN 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. 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.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
- 8. 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.
- 9. 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

# STORMWATER AND ENVIRONMENTAL PROTECTION

10. THE CONTRACTOR SHALL PROTECT EXISTING DRAINAGE FACILITIES (TO INCLUDE CURB AND GUTTER) AND WATERWAYS FROM ADVERSE IMPACTS PER SECTION 01500 OF THE ARLINGTON COUNTY STANDARDS & SPECIFICATIONS.

11. ANY WORK WITHIN A RESOURCE PROTECTION AREA (RPA) SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 61 OF THE COUNTY CODE (THE CHESAPEAKE BAY PRESERVATION

12. 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).

13. NO TREES SHALL BE REMOVED OR OTHERWISE AFFECTED UNLESS CLEARLY MARKED ON THE APPROVED PLAN.

15. CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL

- 16. THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PRE-MARKING MAY CONSIST OF TYPE D TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW 3 WORKING DAYS FOR THE INSPECTION AND APPROVAL OF THE PRE-MARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.
- 17. THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE ENGINEER AT LEAST 3 WORKING DAYS PRIOR TO THE DESIRED ONSET OF
- 18. THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESS 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 ENGINEER. TYPICALLY ANY RELOCATION OR CLOSURE OF A BUS STOP WILL REQUIRE AT LEAST TWO WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR.
- 19. 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

- 20. UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE ENGINEER AT LEAST 3 WORKING DAYS IN ADVANCE OF THE REQUIRED OPERATION.
- 21. 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 ENGINEER.
- 22. STORM OR SANITARY SEWERS AND APPURTENANCES TO BE ABANDONED SHALL BE EXCAVATED AND REMOVED, OR ABANDONED AS DETAILED IN THE COUNTY'S STANDARDS AND SPECIFICATIONS.

# **WORK WITHIN A VDOT RIGHT OF WAY**

23. WHEN REQUIRED FOR THE WORK, AN APPROVED VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) PERMIT WILL BE PROVIDED BY THE COUNTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO AND IMPLEMENTING ALL PERMIT REQUIREMENTS.

- 24. THE CONTRACTOR SHALL HAVE AT LEAST ONE EMPLOYEE ON-SITE CERTIFIED BY VDOT IN BASIC WORK ZONE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR THE PLACEMENT, MAINTENANCE AND REMOVAL OF WORK ZONE TRAFFIC COTROL DEVICES WITHIN THE PROJECT LIMITS IN COMPLIANCE WITH THE PERMIT REQUIREMENTS AND CONDITIONS, THE APPROVED PLANS, SPECIFICATIONS, THE VIRGINIA WORK AREA PROTECTION MANUAL AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- $25.\ \mathsf{THE}\ \mathsf{CONTRACTOR}\ \mathsf{SHALL}\ \mathsf{HAVE}\ \mathsf{AT}\ \mathsf{LEAST}\ \mathsf{ONE}\ \mathsf{EMPLOYEE}\ \mathsf{ON-SITE}\ \mathsf{WHO}\ \mathsf{HAS}\ \mathsf{COMPLETED}\ \mathsf{VDOT}$ EROSION AND SEDIMENT CONTROL CONTRACTOR CERTIFICATION TRAINING AND WILL BE RESPONSIBLE FOR INSURING COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS DURING ALL LAND DISTURBANCE ACTIVITIES.

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SIGHT DISTANCE

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MAINTENANCE OF TRAFFIC - PHASE II

MAINTENANCE OF TRAFFIC - PHASE III

COVER SHEET

SWM 15-2041

LDA15173

ADT:

2,900 - LONG BRIDGE DRIVE (FROM 14TH RD S TO DEAD END)

Street Classification:

MINOR ARTERIAL - LONG BRIDGE DRIVE

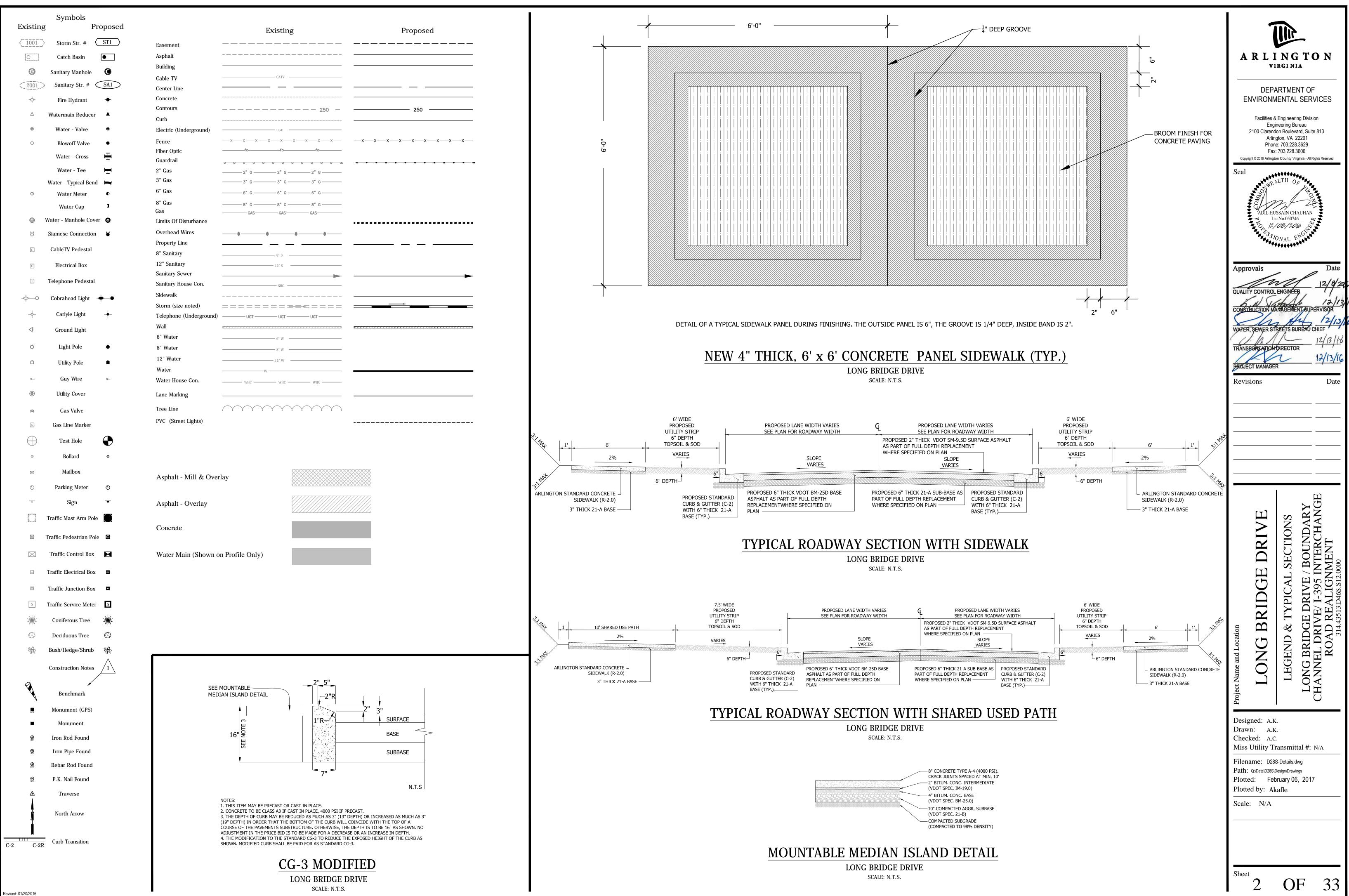
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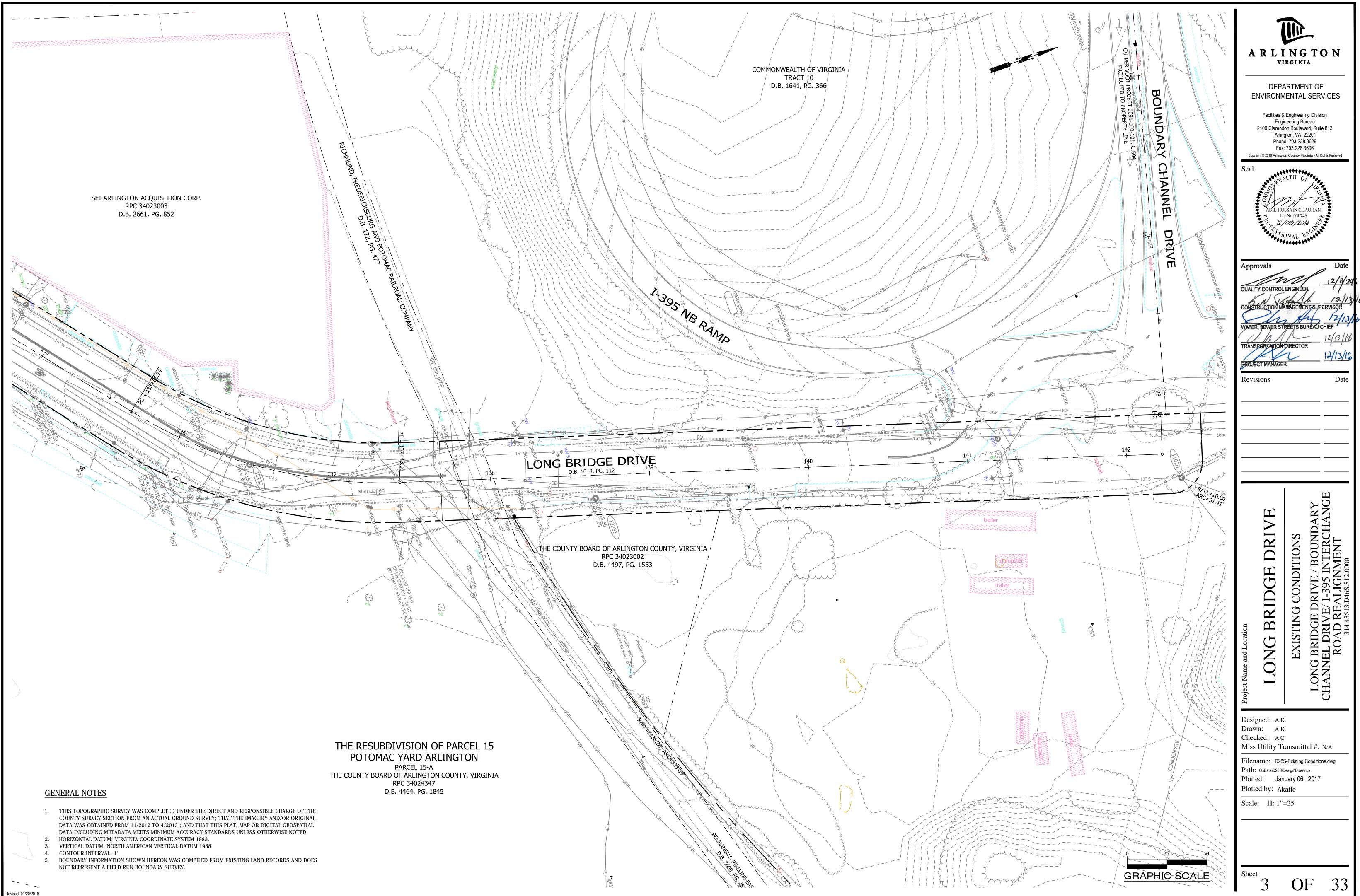
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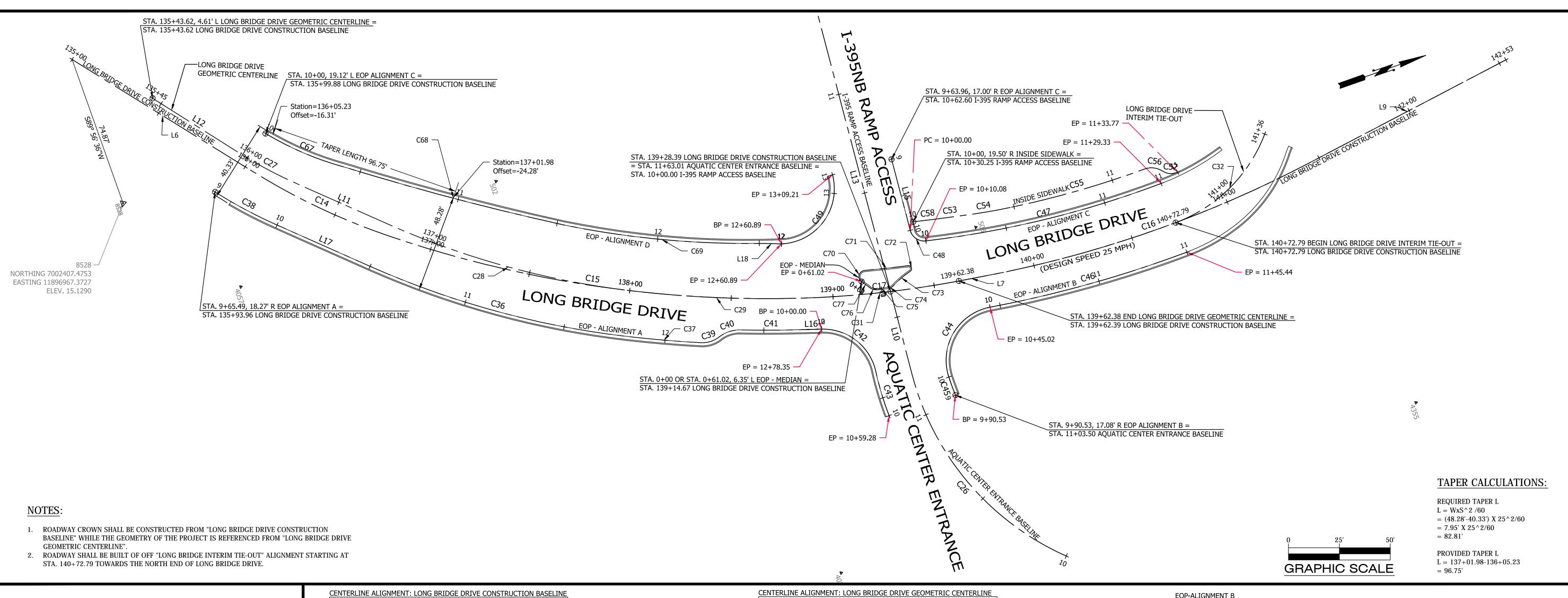
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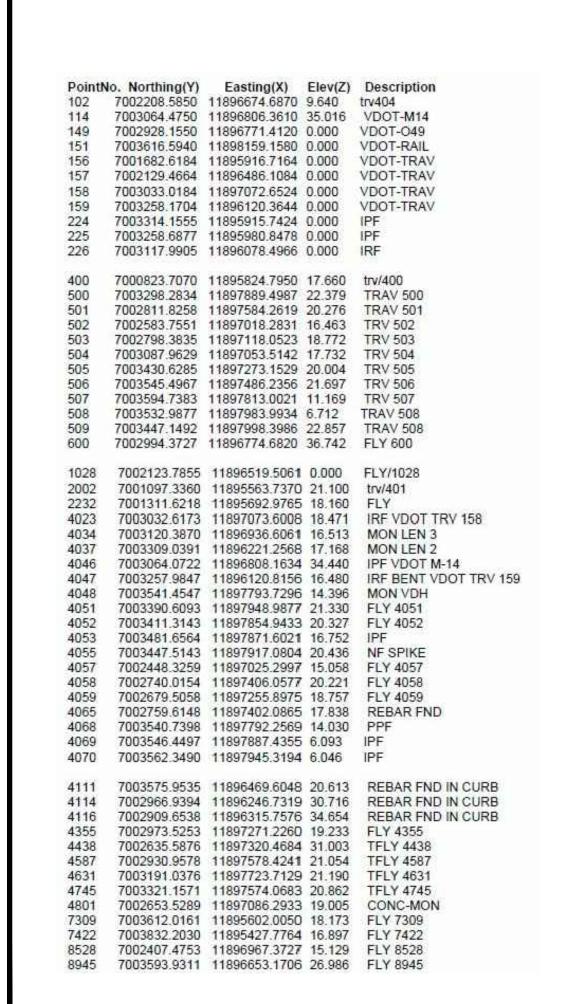
Scale: AS NOTED

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| Line #                      | Bearing   | g                            | Distance  | Start Station   | End Station                       |             |           |          |
|-----------------------------|---|------------------------------|---|---|-----------------------------------|-------------|-----------|----------|
| L6                          | N 51° 15' 5   | 3" E                         | 104.74'   | 135+00.00   | 136+04.74                         |             |           |          |
| L7                          | N 8° 44' 33   | 3" E                         | 12.61'  | 139+62.39   | 139+75.00                         |             |           |          |
| L9                          | N 8° 10' 22   | 2" W                         | 109.17'   | 141+44.46   | 142+53.62                         |             |           |          |
|                             |   |                              |   | Curve   | Table                             |             |           |          |
| Curve #                     | Radius  | Cho                          | ord Bearing   | Chord Length  | n Delta (Δ)                       | Arc Length  | PC        | PT       |
| C14                         | 325.00°   | N 4                          | 4° 47' 53" E  | 73.21'  | 12° 56' 01"                       | 73.36'      | 136+04.74 | 136+78.1 |
| C15                         | 575.00°   | N 2                          | 8° 04' 21" E  | 204.81'   | 20° 31' 03"                       | 205.91'     | 136+78.11 | 138+84.0 |
| C16                         | 574.00°   | N (                          | )° 17' 05" E  | 168.85'   | 16° 54' 55"                       | 169.46'     | 139+75.00 | 141+44.4 |
| C17                         | 495.04°   | N 1                          | 3° 16' 41" E  | 78.30'  | 9° 04' 17"                        | 78.38'      | 138+84.01 | 139+62.3 |
| Line #                      | Bearin  | g                            | Distance  | Start Station   | End Station                       |             |           |          |
| CENTERLI                    | NE ALIGNME  | NT: AC                       | QUATIC CENT   | ER ENTRANCE BA  | SELINE                            | ī           |           |          |
| L10                         | N 85° 03' 3   |                              | 41.82'  | 11+21.19  | 11+63.01                          | _           |           |          |
|                             |   |                              | 12102   | Curve 7   |                                   |             |           |          |
|                             |   |                              |   | Chord Length  |                                   | Arc Length  | PC        | PT       |
| Curvo #                     | . Dadius  | Cha                          | rd Roaring  |   |                                   | ALC LEHIULH | I PL I    |          |
| Curve #                     | _   |                              | ord Bearing   |   |                                   | _           |           |          |
| Curve #                     | Radius 134.65°  |                              | 9° 09' 14" W  | 117.14'   | 51° 34' 15"                       | 121.19'     | 10+00.00  | 11+21.19 |
| C26                         | 134.65°   | S 69                         | 9° 09' 14" W  |   |                                   | _           |           |          |
| C26                         | 134.65°   | S 69                         | 9° 09' 14" W  | 117.14'   |                                   | _           |           |          |
| C26                         | 134.65°   | S 69                         | 9° 09' 14" W<br>895 RAMP ACC                        | 117.14'   |                                   | _           |           |          |
| C26<br>CENTERLIN            | 134.65°   | S 69                         | 9° 09' 14" W<br>895 RAMP ACC<br>Line Tab            | 117.14' CESS BASELINE   | 51° 34' 15"                       | _           |           |          |
| C26  CENTERLIN  Line #  L13 | 134.65°  NE ALIGNMEN  Bearing  N 85° 15' 5              | S 69<br>NT: I-3<br>g<br>5" W | 9° 09' 14" W B95 RAMP ACC Line Tab Distance 241.25' | 117.14'  CESS BASELINE le  Start Station 10+00.00                   | 51° 34' 15"  End Station 12+41.25 | _           |           |          |
| C26  CENTERLIN  Line #  L13 | 134.65°  NE ALIGNMEN  Bearing  N 85° 15' 5              | S 69<br>NT: I-3<br>g<br>5" W | 9° 09' 14" W B95 RAMP ACC Line Tab Distance 241.25' | 117.14' CESS BASELINE le Start Station                              | 51° 34' 15"  End Station 12+41.25 | _           |           |          |
| C26  CENTERLIN  Line #  L13 | 134.65°  NE ALIGNMEN  Bearing  N 85° 15' 5  NE ALIGNMEN | S 69<br>NT: I-3<br>g<br>5" W | 9° 09' 14" W B95 RAMP ACC Line Tab Distance 241.25' | 117.14'  CESS BASELINE le  Start Station 10+00.00  DRIVE INTERIM TO | End Station 12+41.25  E-OUT Table | _           |           |          |

|           | Line #   |
|-----------|----------|
|           | L11      |
|           | L12      |
|           |          |
|           | Curve a  |
| PT        | C27      |
| 136+78.11 | C28      |
| 138+84.01 | C29      |
| 141+44.46 | C31      |
| 139+62.39 | EOP-ALIG |
|           | 1. "     |
|           | Line #   |
|           | L16      |
|           | L17      |
|           |          |
|           | Curve :  |
| PT        | C36      |
| 11+21.19  | C37      |
|           | C38      |
|           | C39      |
|           | C40      |
|           | C41      |
|           | C42      |
|           | C43      |
|           | INSIDE S |
| PT        |          |
| 141+36.32 | Curve :  |
|           | C53      |
|           | C54      |

| 020        | 111.50      | '1 5 | , 12 22 E     | 12 1.27            |     | 1, 20 30    | 12 11/ 1   | 130170173 | 130 101.31 |
|------------|-------------|------|---------------|--------------------|-----|-------------|------------|-----------|------------|
| C29        | 575.00°     | N 2  | 21° 55' 21" E | 82.40'             |     | 8° 13' 03"  | 82.47'     | 138+01.54 | 138+84.01  |
| C31        | 495.04°     | N 1  | .3° 16' 41" E | 78.30'             |     | 9° 04' 17"  | 78.38'     | 138+84.01 | 139+62.38  |
| OP-ALIGNI  | MENT A      |      |               |                    |     |             |            |           |            |
| Line Table |             |      |               |                    |     |             |            |           |            |
| Line #     | Bearing     | )    | Distance      | Start Station      | Е   | nd Station  |            |           |            |
| L16        | N 17° 48' 4 | 9" E | 9.91'         | 12+68.44           | 12  | 2+78.35     |            |           |            |
| L17        | N 43° 22' 5 | 0" E | 50.00'        | 10+00.00           | 10  | 0+50.00     |            |           |            |
|            |             |      |               | Curve <sup>-</sup> | Tal | ble         |            |           |            |
| Curve #    | Radius      | Cho  | ord Bearing   | Chord Lengtl       | h   | Delta (Δ)   | Arc Length | PC        | PT         |
| C36        | 434.46°     | N 3  | 34° 42' 21" E | 131.05'            |     | 17° 20' 58" | 131.55'    | 10+50.00  | 11+81.55   |
| C37        | 597.50°     | N 2  | 24° 18' 04" E | 36.08'             |     | 3° 27' 38"  | 36.09'     | 11+81.55  | 12+17.64   |
| C38        | 237.50°     | N 4  | 17° 32' 35" E | 34.48'             |     | 8° 19' 29"  | 34.51'     | 9+65.49   | 10+00.00   |
| C39        | 13.50°      | N:   | 2° 07' 50" E  | 9.43'              |     | 40° 52' 49" | 9.63'      | 12+17.64  | 12+27.27   |
| C40        | 16.50°      | N    | 1° 12' 14" E  | 11.02'             |     | 39° 01' 36" | 11.24'     | 12+27.27  | 12+38.51   |
| C41        | 590.50°     | N 1  | .9° 15' 55" E | 29.92'             |     | 2° 54' 13"  | 29.92'     | 12+38.51  | 12+68.44   |
| C42        | 26.50°      | N 5  | 57° 22' 56" E | 33.76'             |     | 79° 08' 14" | 36.60'     | 10+00.00  | 10+36.60   |
| C43        | 152.03°     | S 8  | 37° 19' 18" E | 22.65'             |     | 8° 32' 42"  | 22.67'     | 10+36.60  | 10+59.28   |
| NSIDE SID  | EWALK       |      |               |                    |     |             |            |           |            |
|            |             |      |               | Curve <sup>-</sup> | Tal | ble         |            |           |            |
| Curve #    | Radius      | Cho  | ord Bearing   | Chord Lengtl       | h   | Delta (Δ)   | Arc Length | PC        | PT         |
|            |             |      |               |                    |     |             | _          |           |            |

7.21'

26.33'

68.31'

8.94'

7.32'

14.93'

0° 50' 34"

4° 52' 05"

8° 12' 04"

53° 05' 33"

59° 11' 51"

1° 47' 37"

7.21'

26.34'

68.36'

9.27'

7.66'

14.94'

10+14.94 | 10+22.14

10+22.14 | 10+48.48

10+48.48 | 11+16.84

11+16.84 | 11+26.11

11+26.11 | 11+33.77

10+00.00 | 10+14.94

Line Table

| Distance | Start Station | End Station

31.21'

124.27'

Curve # | Radius | Chord Bearing | Chord Length | Delta (Δ) | Arc Length |

136+76.79

135+95.56

8° 19' 29"

31.24'

| 17° 20' 58" | 124.74' | 136+76.79 | 138+01.54

PC

135+95.56 | 136+26.80

Curve Table

Bearing

L11 N 43° 22' 50" E | 50.00' | 136+26.80

L12 N 51° 42' 19" E | 50.51' | 135+45.05

| 215.00° | N 47° 32' 35" E |

490.00° N 12° 01' 05" E

310.00° N 10° 00' 19" E

477.62° N 3° 28' 15" E

10.00° N 26° 17' 09" E

477.12° N 12° 29' 36" E

N 23° 14' 00" E

7.41°

C55

C56

C28 | 411.96° | N 34° 42' 22" E |

|            |              |      | 0             | 951                |            | ۲0'          | = 7.95' X<br>= 82.81' | 25^2/60     |          |
|------------|--------------|------|---------------|--------------------|------------|--------------|-----------------------|-------------|----------|
|            |              |      | 0             | 25'                |            | 50'          |                       | D TAPER L   |          |
|            |              |      | GRA           | APHIC SO           | <u>ک</u> ر | ALE          | L = 137 + 96.75'      | 01.98-136+0 | 05.23    |
| OP-ALIGNM  | MENT B       |      |               |                    |            |              |                       |             |          |
|            |              |      |               | Curve              | Ta         | ble          |                       |             |          |
| Curve #    | Radius       | Cho  | ord Bearing   | Chord Lengt        | h          | Delta (Δ)    | Arc Length            | PC          | PT       |
| C44        | 26.50°       | N 3  | 9° 55' 51" W  | 39.80'             |            | 97° 20' 47"  | 45.02'                | 10+00.00    | 10+45.02 |
| C45        | 154.08°      | S 8  | 9° 19' 40" W  | 9.47'              |            | 3° 31' 16"   | 9.47'                 | 9+90.53     | 10+00.00 |
| C46        | 589.50°      | N    | 3° 51' 41" E  | 100.32'            |            | 9° 45' 43"   | 100.44'               | 10+45.00    | 11+45.44 |
| OP-ALIGNN  | MENT C       |      |               |                    |            |              |                       |             |          |
|            |              |      | Line Tabl     | e                  |            |              |                       |             |          |
| Line #     | Bearing      | J    | Distance      | Start Station      | E          | ind Station  |                       |             |          |
| L15        | S 85° 15' 55 | 5" E | 36.04'        | 9+63.96            | 10         | 0+00.00      |                       |             |          |
|            |              |      |               | Curve              | Та         | ble          |                       |             |          |
| Curve #    | Radius       | Cho  | ord Bearing   | Chord Lengt        | h          | Delta (Δ)    | Arc Length            | PC          | PT       |
| C47        | 487.12°      | N.   | 5° 46' 16" E  | 118.96'            |            | 14° 01' 37"  | 119.25'               | 10+10.08    | 11+29.33 |
| C48        | 7.00°        | N 5  | 3° 28' 19" E  | 9.23'              |            | 82° 31' 15"  | 10.08'                | 10+00.00    | 10+10.08 |
| OP-ALIGNM  | TENT D       |      |               | 1                  |            |              |                       | '           |          |
|            |              |      | Line Tabl     | e                  |            |              |                       |             |          |
| Line #     | Bearing      | ]    | Distance      | Start Station      | E          | nd Station   |                       |             |          |
|            | N 20° 47' 02 | 2" E | 10.00'        | 12+50.89           |            | 2+60.89      |                       |             |          |
|            |              |      |               | Curve              | ∟<br>Ta    | able         |                       |             |          |
| Curve #    | Radius       | Ch   | ord Bearing   | 1                  |            |              | Arc Length            | PC          | PT       |
| C67        | 153.68°      | N    | 42° 26' 29" E | 41.91'             |            | 15° 40' 31"  | 42.04'                | 10+00.00    | 10+42.04 |
| C68        | 1355.83°     | N    | 34° 13' 59" E | 111.22'            |            | 4° 42' 05"   | 111.25'               | 10+42.04    | 11+53.30 |
| C69        | 447.29°      | N    | 24° 48' 29" E | 97.40'             |            | 12° 30' 02"  | 97.59'                | 11+53.30    | 12+50.89 |
| OP - MEDIA | AN           | -    |               |                    |            |              |                       |             | <u> </u> |
|            |              |      |               | Curve <sup>-</sup> | Гal        | ble          |                       |             |          |
| Curve #    | Radius       | Cho  | ord Bearing   | Chord Lengt        | h          | Delta (Δ)    | Arc Length            | PC          | PT       |
| C70        | 3.00°        | N 5  | 5° 33' 17" W  | 5.64'              |            | 139° 51' 44" | 7.32'                 | 0+00.00     | 0+07.32  |
| C71        | 571.50°      | N 1  | .3° 17' 51" E | 21.52'             |            | 2° 09' 28"   | 21.52'                | 0+07.32     | 0+28.85  |
| C72        | 1.50°        | N 8  | 88° 57' 23" E | 2.92'              |            | 153° 28' 31" | 4.02'                 | 0+28.85     | 0+32.86  |
| C73        | 46.15°       | S 2  | .0° 57' 57" E | 10.70'             |            | 13° 19' 11"  | 10.73'                | 0+32.86     | 0+43.59  |

5.00° | S 7° 07' 24" E

580.76° | S 13° 37' 50" W

5.00° S 35° 57' 12" W

C77 | 80.07° | S 56° 16' 10" W

C75

3.50'

5.09'

3.76'

4.91'

41° 00' 19"

0° 30' 09"

44° 08' 35"

3° 30' 39"

3.58'

5.09'

3.85'

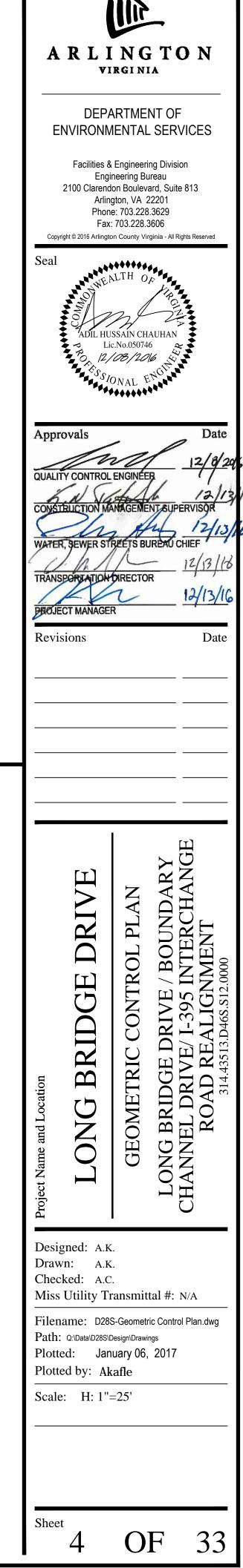
4.91'

0+43.59 0+47.17

0+47.17 0+52.26

0+52.26 0+56.11

0+56.11 0+61.02



# POLLUTION PREVENTION PLAN NOTES

ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 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 FIRE FIGHTING; 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 MS4 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.

# GENERAL EROSION & SEDIMENT CONTROL NOTES

- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE LATEST EDITIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND THE ARLINGTON COUNTY EROSION AND SEDIMENT CONTROL ORDINANCE.
- THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-SCONSTRUCTION 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 A FIRST STEP IN CLEARING.
- 4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLANS SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- 5. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN 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 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 CONTROL MEASURES NECESSARY TO PREVENT EROSION 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 DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- 8. DURING DENATURING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

# GENERAL LAND CONSERVATION NOTES

- 1. NO DISTURBED AREA WHICH IS NOT ACTIVELY BEING WORKED SHALL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS
- 2. ALL E&S CONTROL MEASURES APPROVED WITH HE PHASE I E&S CONTROL PLAN SHALL BE PLACED AS THE FIRST STEP IN GRADING.
- 3. ALL STORM AND SANITARY SEWER LINES NOT IN STREETS SHALL BE SEEDED AND MULCHED
- WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 500' (150M) SHALL BE OPEN AT ANY TIME ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES SHALL BE COMPACTED, SEEDED
- AND MULCHED WITHIN 5 DAYS AFTER BACKFILL
- 5. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS SHALL BE SEEDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER. STRAW OR HAY MULCH IS REQUIRED. ALL SOIL STOCKPILES SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER GRADING.
- 6. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY SEDIMENT TRAPS, MAINTAINED AND MODIFIED DURING CONSTRUCTION PROGRESS AS REQUIRED.
- 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 CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

# UTILITY INSTALLATION

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

- 1. NO MORE THAN 500 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. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- 6. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

# EROSION AND SEDIMENT CONTROL NARRATIVE

LONG BRIDGE DIVE ROADWAY REALIGNMENT PROJECT CONSISTS OF REMOVING, REPLACING AND/OR INSTALLING C&G, WATER MAIN, STORM & SANITARY SEWER PIPES & STRUCTURES, CONCRETE SIDEWALKS, MEDIANS, DRIVEWAY APRONS, ADA COMPLIANT HANDICAP RAMPS AND NEW STREET LIGHTS. THE LIMIT OF CONSTRUCTION IS WITHIN THE EXISTING ARLINGTON COUNTY'S ROW. A TOTAL OF 59,030 SQUARE FEET (1.35 ACRES) AREA WILL BE DISTURBED DURING

### **EXISTING SITE CONDITIONS**

THE HIGHEST POINT OF THE PROJECT AREA IS ON THE EAST SIDE OF LONG BRIDGE DRIVE. THE TOPOGRAPHY OF THE PROJECT IS MODERATELY STEEP AND DRAINS TOWARDS LONG BRIDGE DRIVE, MOST OF THE RUNOFFS ARE INTERCEPTED BY STORM SEWER STRUCTURES ALONG NORTH AND SOUTH END OF LONG BRIDGE DRIVE.

EAST - THE AREA TO THE EAST OF THE PROJECT CONSISTS OF EXISTING PARKING LOT & FUTURE AQUATIC CENTER'S LOT.

WEST - THE AREA TO THE WEST OF THE PROJECT CONSISTS OF COMMERCIAL BUILDING.

NORTH - BOUNDARY CHANNEL DRIVE IS LOCATED TOWARDS THE NORTH OF THE PROJECT.

SOUTH - LONG BRIDGE PARK IS LOCATED TOWARDS THE SOUTH OF THE PROJECT.

THE EXTENT OF OFFSITE CONSTRUCTION IS LIMITED TO CONNECTING TO EXISTING STREETS ADJACENT TO THIS PARCEL AND CONNECTING PROPOSED UTILITIES TO EXISTING UTILITIES.

THERE ARE NO STEEP SLOPES OR CRITICAL AREAS LOCATED IN THE AREAS TO BE DISTURBED.

### 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.

### STRUCTURAL PRACTICES

- 1. TEMPORARY CONSTRUCTION ENTRANCE 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-ENTRING THE LOCAL ROADWAYS.
- SILT FENCE 3.05

SILT FENCE WILL BE INSTALLED IN PHASE I & II OF E&S PLAN TO FILTER RUNOFF FROM DISTURBED AREAS. RUNOFF SHALL NOT BE DIRECTED PARALLEL TO THE INSTALLATION OF SILT FENCE.

- TEMPORARY DIVERSION DIKE 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.
- 4. STORM DRAIN INLET PROTECTION 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.
- 5. DEWATERING STRUCTURE 3.26
  - SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.

# VEGETATIVE PRACTICES

- 1. TOPSOILING (STOCKPILE) 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, TO THE OWNER COVERING THE OFF-SITE STOCKPILE AREA. THIS SUPPLEMENTAL PLANS WOULD HAVE TO THE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY OFF-SITE ACTIVITY COMMENCES.
- 2. TEMPORARY SEEDING 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.
- 3. EROSION CONTROL BLANKET 3.36 OR MULCH 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 FORM 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.
- 4. DUST CONTROL 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 EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD, AS SITE CONDITIONS WARRANT, IN ADDITION NO SEDIMENT TRAPS OR BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE INSPECTOR.

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH GRASS, MULCH OR SOD.

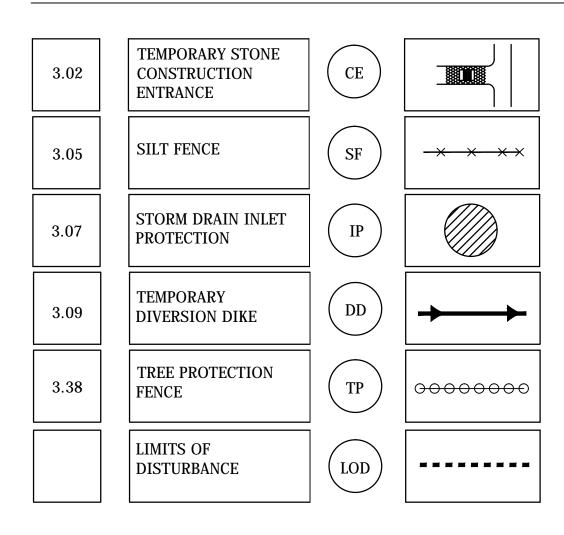
# STORMWATER RUNOFF CONSIDERATIONS

RUNOFF SHALL BE TREATED WITH SILT FENCE AND INLET PROTECTION PRIOR TO ENTERING MAJOR STORM SEWER SYSTEMS. PROPOSED STORM SEWER NETWORK HAVE BEEN DESIGNED TO ADEQUATELY CONVEY STORM WATER. SEE SHEET 9 FOR ADEQUATE OUTFALL NARRATIVE.

# LANDSCAPE / TREE PRESERVATION NOTES

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

# EROSION AND SEDIMENTATION CONTROL LEGEND



# **EROSION & SEDIMENT CONTROL PROJECT PHASING**

A. PHASE I:

- PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, AND COUNTY INSPECTOR.
- INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE IN THE LOCATION SHOWN ON THE E&SPHASE I PLAN. MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXISTING THE
- 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) AS PER THE PHASE I PLAN.
- SEED AND MULCH ALL EARTHEN CONTROLS.
- BEGIN UTILITY CONSTRUCTION. INSTALL STORM DRAINAGE SYSTEM AS SHOWN IN PHASE I TO DIRECT CLEAN WATER TO EXISTING STORM STRUCTURE (EX-9) & PROPOSED STORM STRUCTURE (12).
- 7. 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.
- 8. CLEAR THE SITE TO THE LIMITS AS SHOWN ON THE CONSTRUCTION PLANS.

# B. PHASE II:

- BEGIN UTILITY CONSTRUCTION, INSTALL THE STORM DRAINAGE SYSTEM AND BEGIN SITE
- 2. ONCE THE EAST SIDE OF SITE IS BOUGHT TO NEAR FINAL GRADE, AND STORM DRAINAGE CONSTRUCTION IS COMPLETE. SILT FENCE MAY BE REMOVED AND ONLY DIVERSION DIKES AND TREE PROTECTION WILL REMAIN AS SHOWN ON PHASE II OF THE E&S PLAN.
- COMMENCE CONSTRUCTION OF CURB & GUTTER, STREET, SIDEWALKS, AND OTHER IMPROVEMENTS THAT DO NOT CONFLICT WITH THE TEMPORARY CONSTRUCTION ENTRANCE AS SHOWN ON THE CONSTRUCTION PLAN.
- 4. INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.
- 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.

# MAINTENANCE

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED REGULARLY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR:

- THE SILT FENCE SHALL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
- DIVERSION DIKES SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND AT LEAST ONCE EVERY TWO WEEKS. SEDIMENT SHALL BE REMOVED FROM THE CHANNEL AND REPAIRS MADE AS NECESSARY.
- THE SEEDED AREA SHALL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.

# **NET CHANGE IN IMPERVIOUS:**

|                    | PERVIOUS      | IMPERVIOUS    |
|--------------------|---------------|---------------|
| PRE                | 37,465        | 21,565        |
| POST               | 22,570        | 36,460        |
| NET                | (-) 14,895 SF | (+) 14,895 SF |
| (+) INDICATES INCI | REASE IN AREA |               |
| (-) INDICATES DECR | REASE IN AREA |               |

FOR ALL DETAILS AND SPECIFICATIONS, SEE THE VIRGINIA EROSION &

SEDIMENT CONTROL HANDBOOK

OF

ARLINGTON

VIRGINIA

DEPARTMENT OF

**ENVIRONMENTAL SERVICES** 

Facilities & Engineering Division

Engineering Bureau

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Fax: 703.228.3606

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L HUSSAIN CHAUHAN

Lic.No.050746

12/08/2016

CONSTRUCTION MANAGEMENT SUPERVISOR

Date

Approvals

Revisions

DRI

\$

E&S

LON HAN

QUALITY CONTROL ENGINÉER

TRANSPORTATION DIRECTOR

THIS SHEET IS FOR EROSION AND SEDIMENTATION CONTROL USE ONLY

Designed: A.K.

Drawn: A.K.

Checked: A.C.

Miss Utility Transmittal #: N/A

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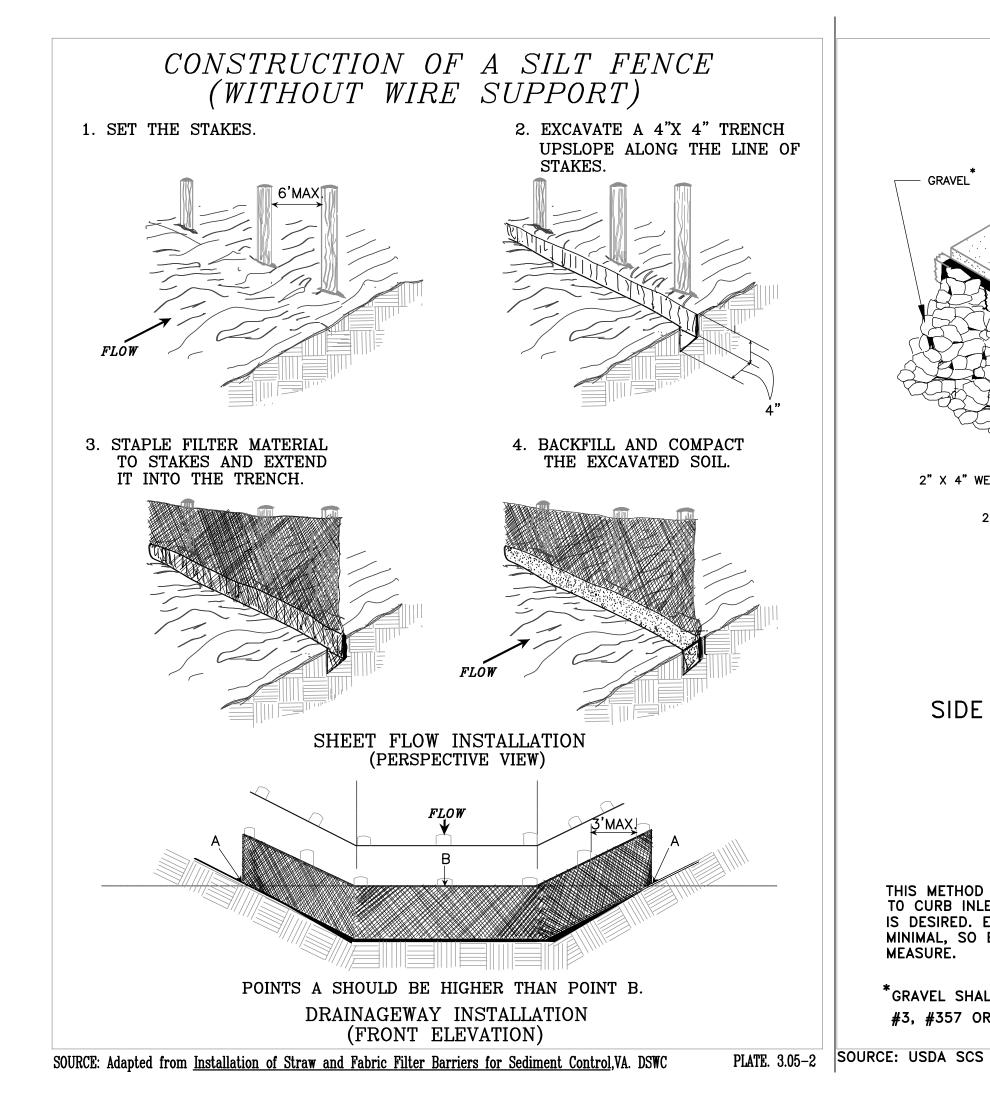
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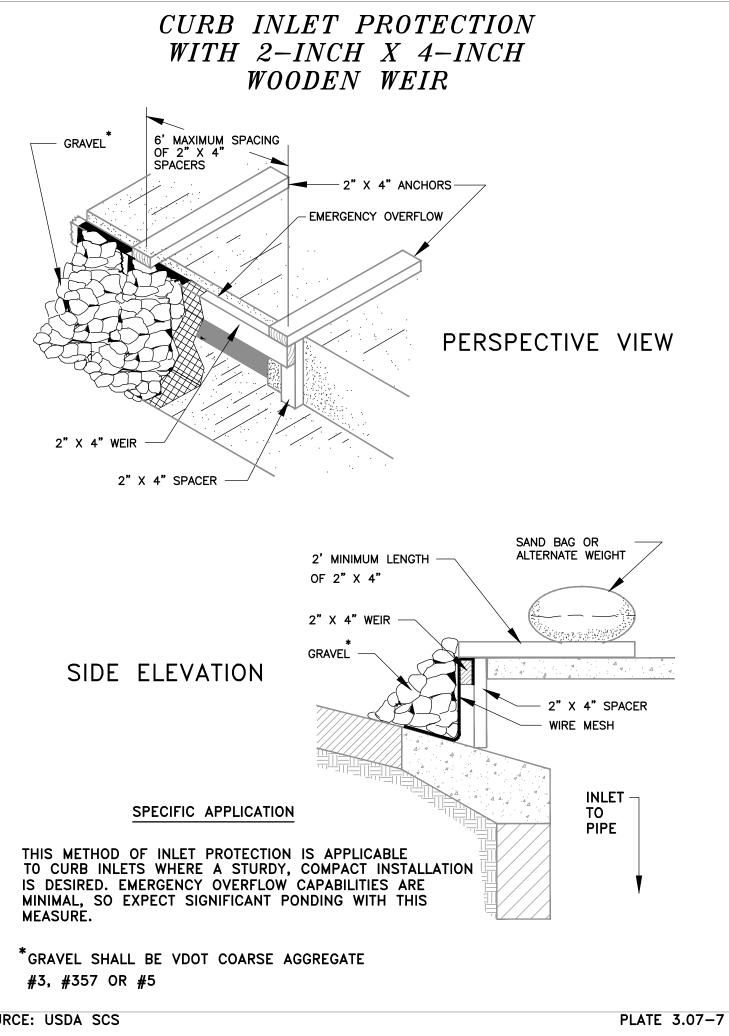
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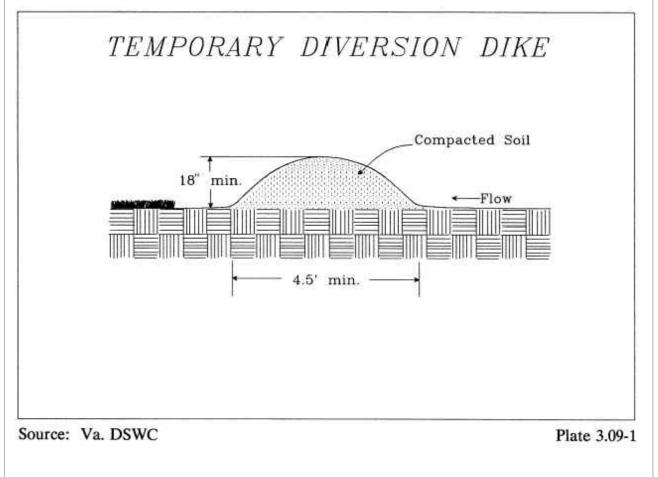
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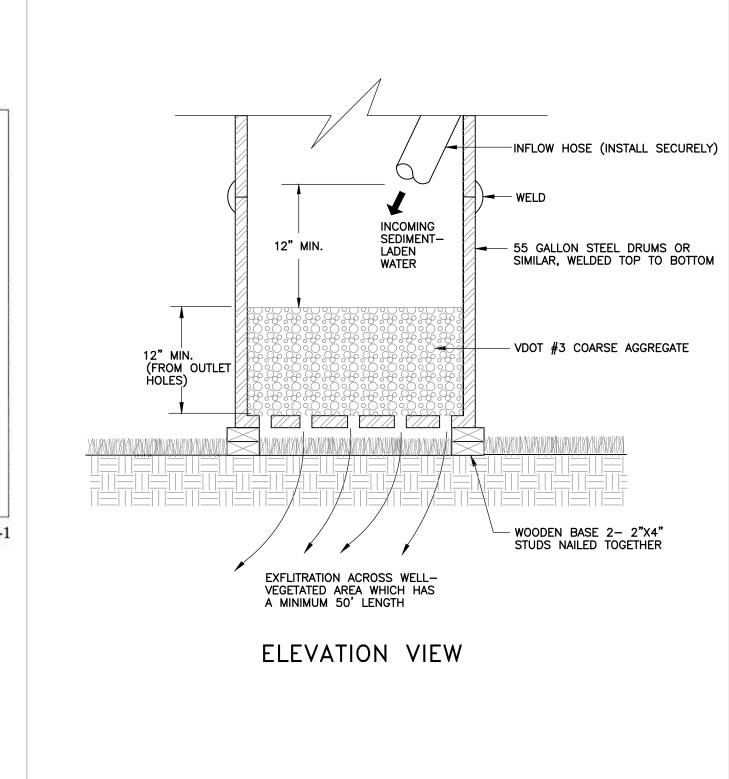
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LONG BRIDGE DRIVE



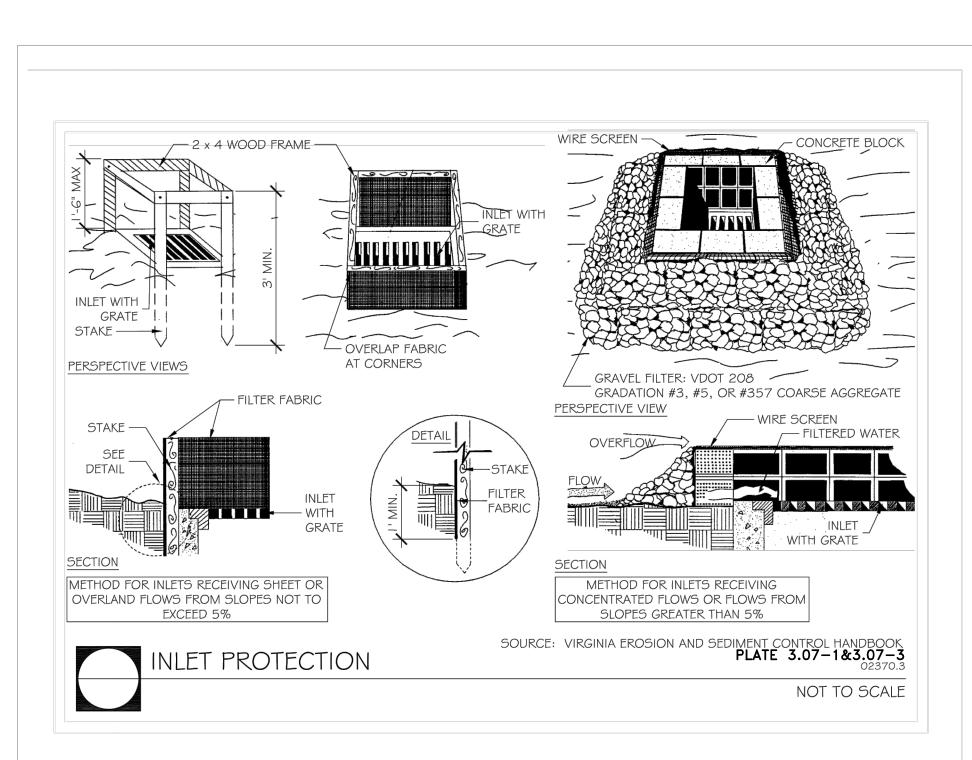


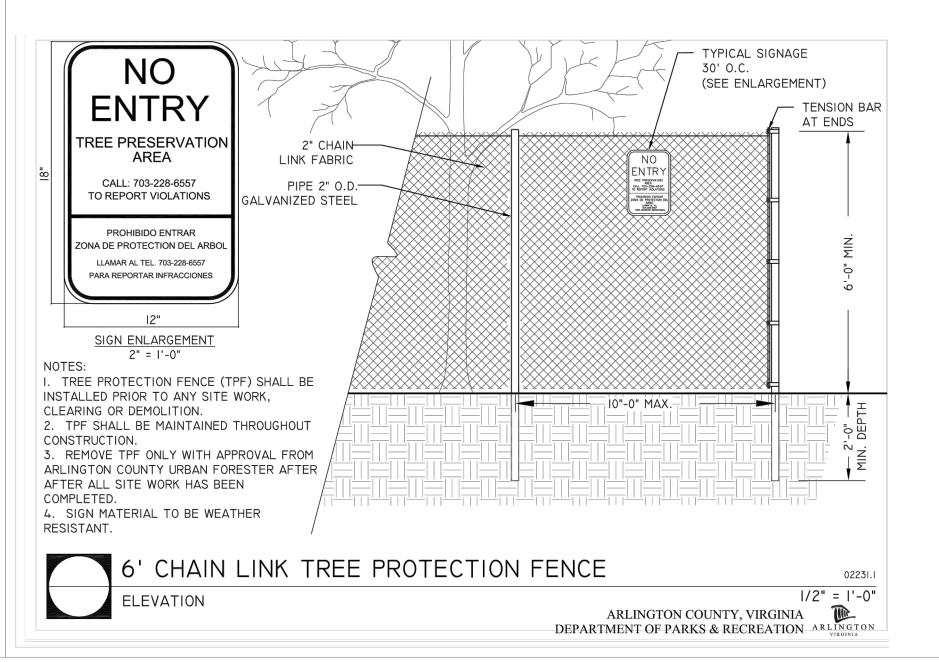


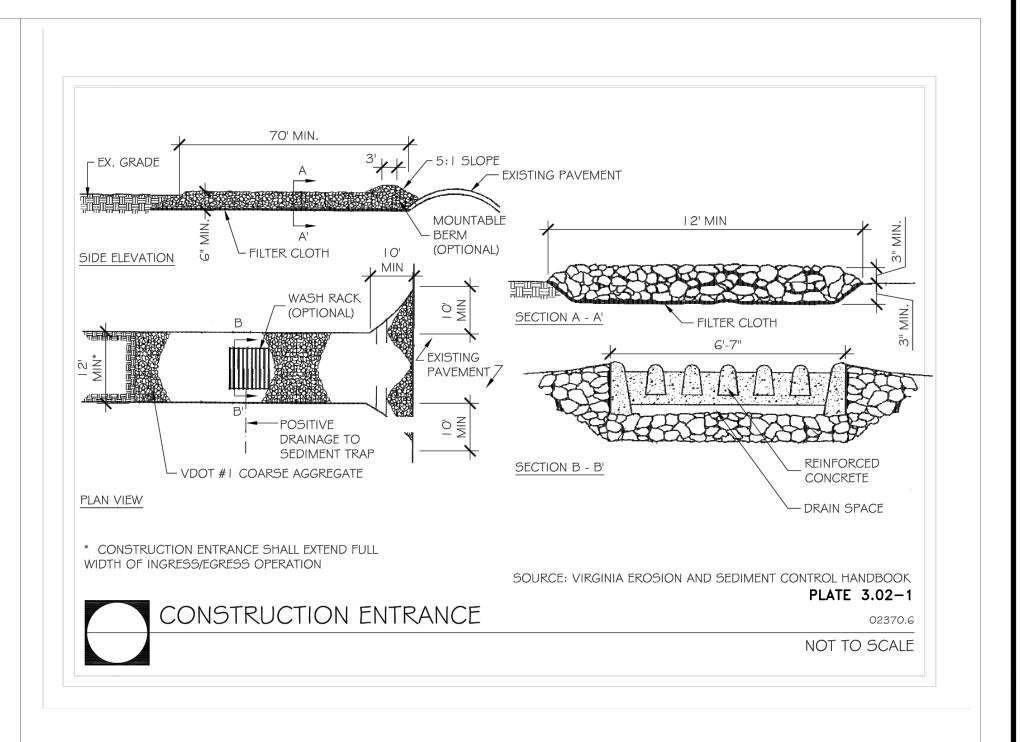


DEWATERING DEVICE

FILTER BOX







SOURCE: VA. DSWC

FOR ALL DETAILS AND SPECIFICATIONS, SEE THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK

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ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES

Facilities & Engineering Division
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Arlington, VA 22201
Phone: 703.228.3629
Fax: 703.228.3606

Seal

ADIL HUSSAIN CHAUHAN
Lic.No.050746

2000 AL ENGINEER SERVED

Lic.No.050746

Control of the control of the

Approvals

Date

12/8/29

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

12/13/16

TRANSPORTATION DIRECTOR

12/13/16

PROJECT MANAGER

Revisions

Date

IG BRIDGE DRIVE

AS NOTES & DETAILS

RIDGE DRIVE / BOUNDARY

L DRIVE/ I-395 INTERCHANGE

PLATE: 3.26-2

Designed: A.K.
Drawn: A.K.
Checked: A.C.

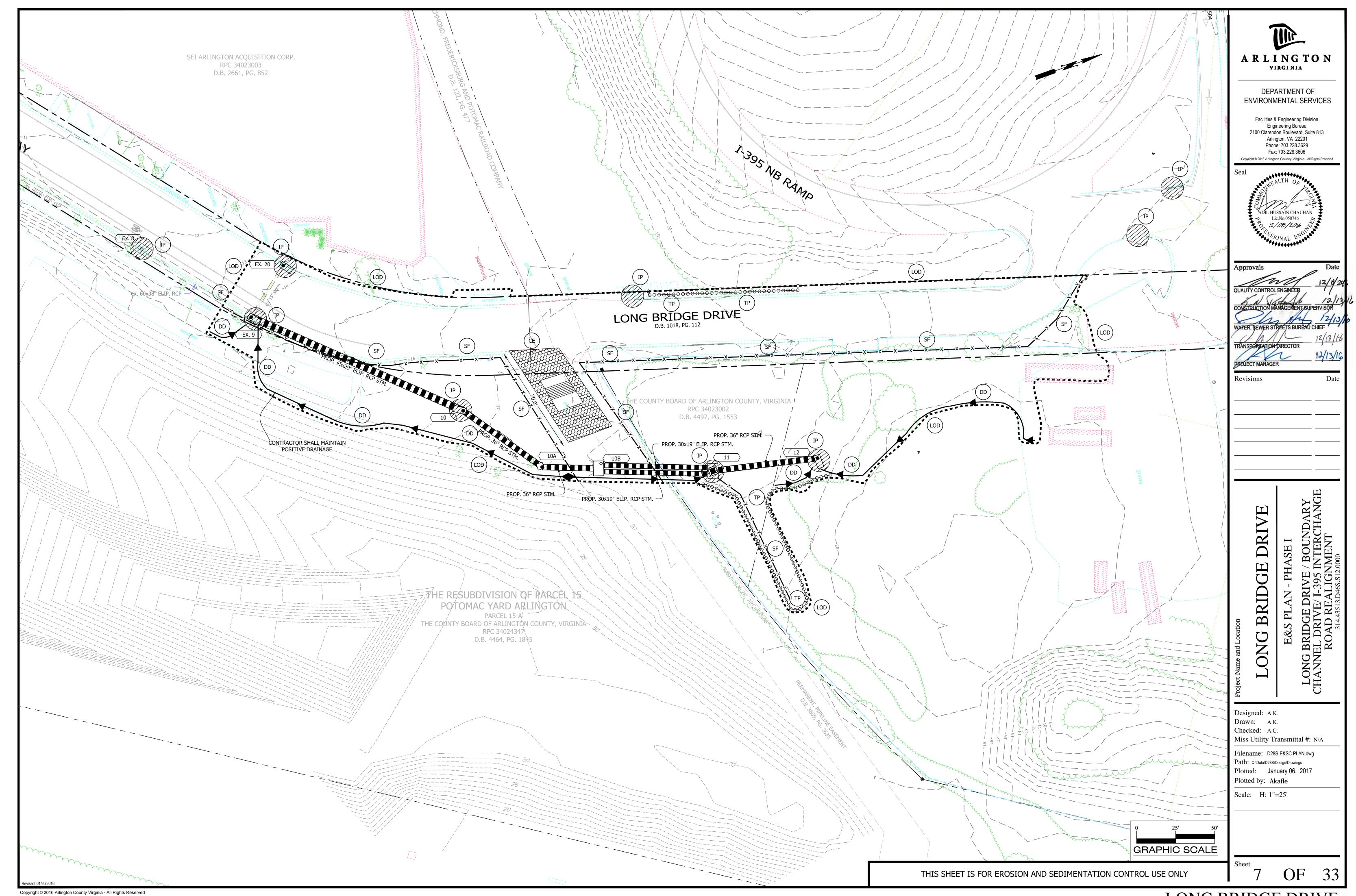
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Checked: A.C.
Miss Utility Transmittal #: N/A

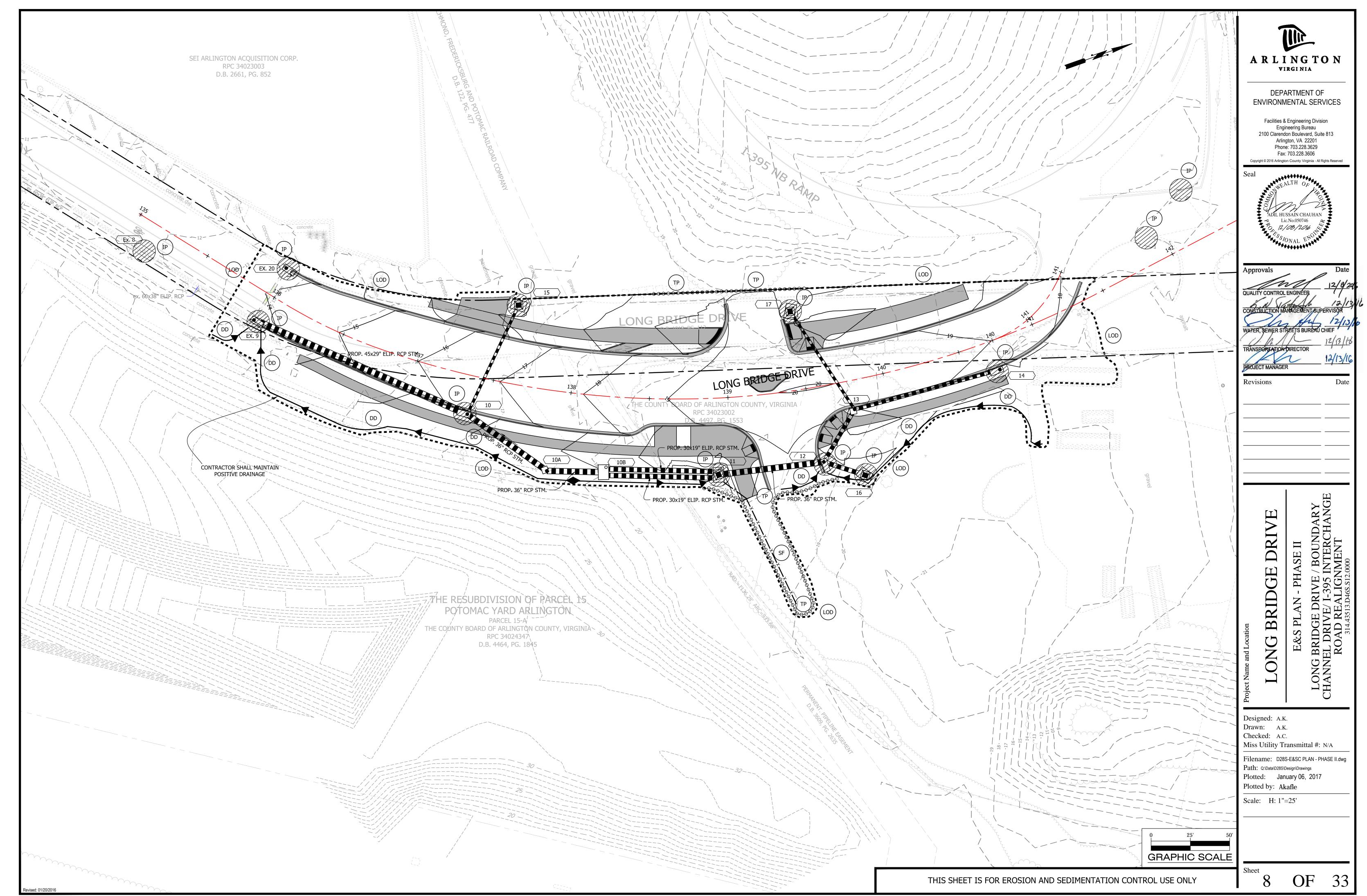
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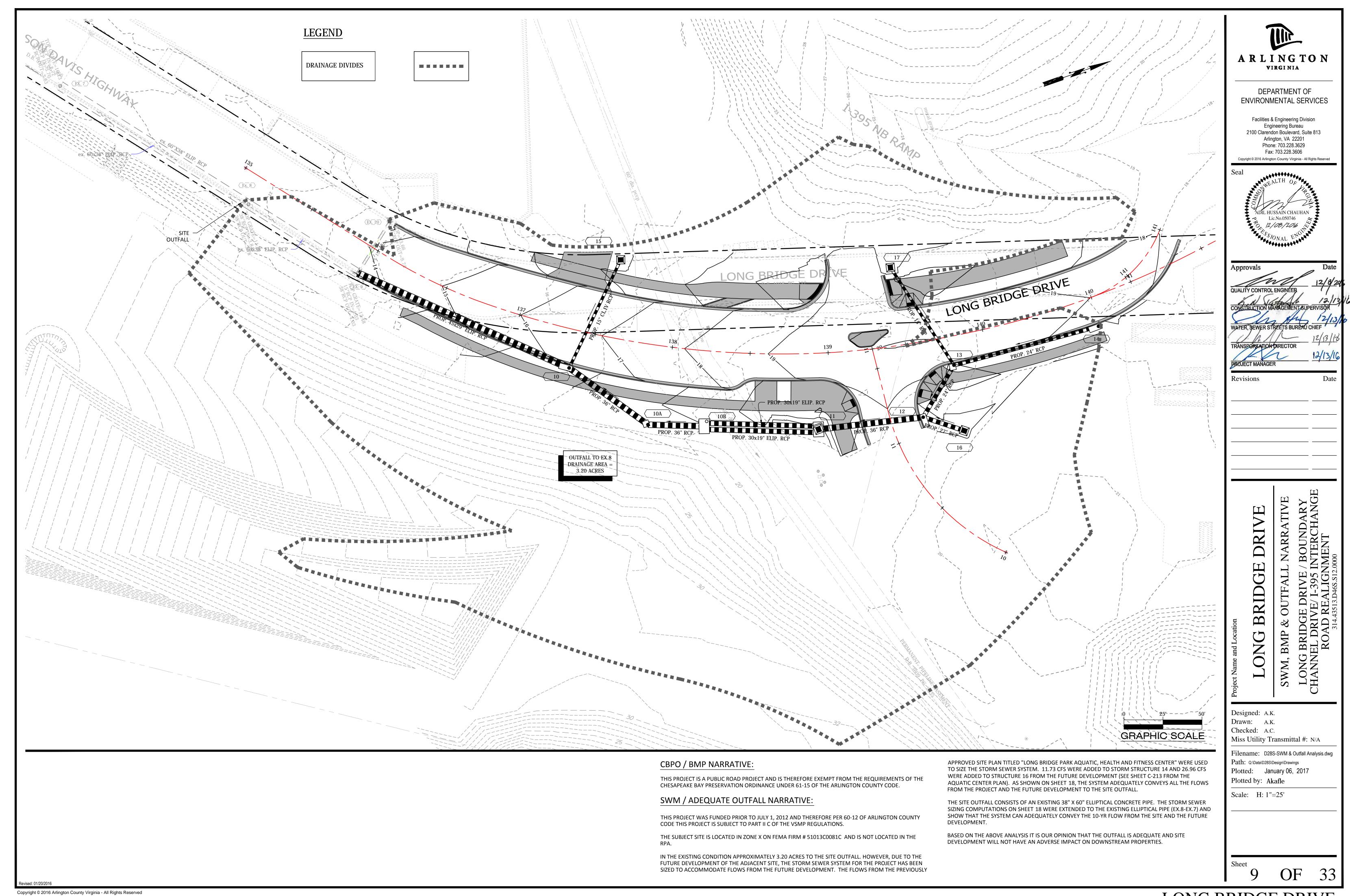
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Plotted by: Akafle

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Sheet 6 OF







#### STORMWATER POLLUTION PREVENTION PLAN D46S – LONG BRIDGE DRIVE

### STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

#### For Construction Activities At:

D46S - LONG BRIDGE DRIVE LONG BRIDGE DRIVE / BOUNDARY CHANNEL DRIVE / I-395 INTERCHANGE ROAD REALIGNMENT ARLINGTON, VA 22202

Latitude: 38.86833 N (decimal degrees)

Longitude: 77.04472 W (decimal degrees)

### **Construction Activity Operator:**

Insert Company/Organization Name Insert Address Insert City, State, Zip Code Insert Telephone Number Insert Email Address Insert 24-hour Emergency Contact

### **SWPPP Preparation Date:**

June 4, 2015

#### 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."

| erator Name: |  |
|--------------|--|
| Title:       |  |
| Signature:   |  |
| Date:        |  |

Arlington County – SWPPP 7/2014

#### STORMWATER POLLUTION PREVENTION PLAN D46S – LONG BRIDGE DRIVE

#### 1.0 SWPPP Documents Located Onsite & Available for Review

SWPPP Document Type Located Onsite & Available for Review? Registration Statement Notice of Coverage Letter Construction General Permit Pollution Prevention Plan Yes Erosion & Sediment Control Plan (or agreement in lieu of) Stormwater Management Plan

#### 2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharge Likely Present at Your Project Site? External buildings wash down Uncontaminated foundation or footing drains Yes Uncontaminated excavation dewatering Yes Landscape irrigation

### 3.0 Pollution Prevention Awareness

Others [describe]

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

#### 4.0 Erosion & Sediment Controls

| Select all that apply | Erosion & Sediment Control                      | Estimated<br>Installation<br>Date | Estimated<br>Removal<br>Date | Responsible<br>Party  |
|-----------------------|---|-----------------------------------|------------------------------|---|
| $\boxtimes$           | Construction Entrance<br>(Std. & Spec. 3.02)    | NA                                | NA                           |   |
|                       | Silt Fence<br>(Std. & Spec. 3.05)               | NA                                | NA                           |   |
|                       | Culvert Inlet Protection<br>(Std. & Spec. 3.08) | Insert Date                       | Insert Date                  |   |
|                       | Outlet Protection<br>(Std. & Spec. 3.18)        | Insert Date                       | NA                           |   |
|                       | Temporary Seeding<br>(Std. & Spec. 3.31)        | As required by 3.31               | NA                           | Construction Activity Operator (See Cover Page of this SWPPP) |
|                       | Permanent Seeding<br>(Std. & Spec. 3.32)        | NA                                | NA                           | Tage of this ever it is                                       |
|                       | Sodding<br>(Std. & Spec. 3.33)                  | NA                                | NA                           |   |
| $\boxtimes$           | Mulching<br>(Std. & Spec. 3.35)                 | NA                                | NA                           |   |
| $\boxtimes$           | Inlet Protection                                | NA                                | NA                           |   |

Arlington County – SWPPP 7/2014

× × Sediment  $\times \times \times$ Nutrients Heavy Metals pH (acids and bases)  $\times$ Pesticides & Herbicides Oil & Grease Bacteria & Viruses Trash, Debris, Solids Other Toxic Chemicals

#### STORMWATER POLLUTION PREVENTION PLAN D46S – LONG BRIDGE DRIVE

#### **Pollution Prevention Practices:**

- (1) Clearing, grading, excavating and un-stabilized areas Utilize erosion and sediment controls to prevent sediment laden or turbid runoff from leaving the construction site. Dispose of clearing debris at acceptable disposal sites. 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.
- (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
- (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
- 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.
- 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
- 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
- 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.
- 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 overfilling. 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<br>Installation<br>Date | Responsible<br>Party                             |
|-----------------------|---|-----------------------------------|--|
|                       | Post-development Stormwater Management Controls provided by a Larger Common Plan of Development or Sale | NA                                | Common Plan<br>Construction<br>Activity Operator |
|                       | Rooftop Disconnection   | Insert Date                       |  |
|                       | Sheetflow to Vegetated Filter (1 or 2)  | Insert Date                       | Construction                                     |
|                       | Grass Channel   | Insert Date                       | Activity Operator<br>(See Cover Page             |
|                       | Rainwater Harvesting  | Insert Date                       | of this SWPPP)                                   |
|                       | Permeable Pavement (1 or 2)   | Insert Date                       |  |
|                       |   |                                   |  |

Arlington County – SWPPP 07/2014

additional "walk throughs" on an as needed basis.

Arlington County - SWPPP 07/2014

# 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 Copyright © 2016 Arlington County Virginia - All Rights Reserved Seal ...... DIL HUSSAIN CHAUHAN Lic.No.050746 12/08/2016

| ONAL                        | •                |
|-----------------------------|------------------|
| Approvals                   | Date             |
| QUALITY CONTROL ENGINEER    | 12/8/2           |
| CONSTRUCTION MANAGEMENT SU  | PERVISOR         |
| WATER, SEWER STREETS BUREAU | 12/13/<br>ICHIEF |
| TRANSPORTATION DIRECTOR     | 12/13/10         |
| PROJECT MANAGER             | 12/13/10         |
| Revisions                   | Date             |

# STORMWATER POLLUTION PREVENTION PLAN

D46S – LONG BRIDGE DRIVE

| Select all that apply | Stormwater Management Control | Estimated<br>Installation<br>Date | Responsible<br>Party                 |
|-----------------------|-------------------------------|-----------------------------------|--------------------------------------|
|                       | Infiltration (1 or 2)         | Insert Date                       | Construction                         |
|                       | Bioretention (1 or 2)         | Insert Date                       | Activity Operator<br>(See Cover Page |
|                       | Others [describe]             | Insert Date                       | of this SWPPP)                       |

# 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 2<sup>nd</sup> Priority: Protect equipment and property 3<sup>rd</sup> 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
- 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 Blue Ridge Regional Office (Roanoke)   | 540-562-6700 |
|--|--------------|
| DEQ Blue Ridge Regional Office (Lynchburg) | 434-582-5120 |
| DEQ Northern Regional Office               | 703-583-3800 |
| DEQ Piedmont Regional Office               | 804-527-5020 |
| DEQ Southwest Regional Office              | 276-676-4800 |
| DEQ Tidewater Regional Office              | 757-518-2000 |
| DEQ Valley Regional Office                 | 540-574-7800 |
|  |              |

# Nights, Holidays & Weekends

VA Dept. of Emergency Management 804-674-2400 24 Hour Reporting Service

# Local Contacts

Local Fire Department Local Police Department

703-558-2222

703-228-3362

Arlington County - SWPPP 07/2014

#### STORMWATER POLLUTION PREVENTION PLAN D46S - LONG BRIDGE DRIVE

8.0 Inspections & Corrective Action Log (make additional copies as necessary)

# Qualified Inspector

Company/Organization: Insert Company/Organization Name Insert Name Insert Telephone Number Telephone Number: Qualifications: Insert Qualifications

# Inspection Schedule

Discharges to impaired waters, surface waters within a TMDL watershed, or exceptional waters:

# Once every 4 business days: or

Once every 5 business days and no later than 48 hours following a measurable storm event. If storm event occurs when there are more than 48 hours between business days, inspection must be conducted on the next business day.

# Inspection Date

**Insert Inspection Date** 

| Best Management<br>Practices (BMPs)                | In Compliance with SWPPP? | Corrective Action Needed; Responsible Party | Date Corrective<br>Action Taken |
|--|---------------------------|---|---------------------------------|
| Erosion & Sediment<br>Controls<br>(Section 4.0)    | ☐ Yes ☐ No                |   |                                 |
| Pollution Prevention<br>Practices<br>(Section 5.0) | ☐ Yes ☐ No                |   |                                 |
| Stormwater<br>Management Controls<br>(Section 6.0) | ☐ Yes ☐ No                |   |                                 |

# 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: | Inspector Name: |
|----------------|-----------------|
| Signature:     | Signature:      |
| Date:          | Date:           |

Arlington County – SWPPP 07/2014

#### STORMWATER POLLUTION PREVENTION PLAN D46S – LONG BRIDGE DRIVE

# 9.0 Grading & Stabilization Activities Log

| Date<br>Grading<br>Activity<br>Initiated | Description of the<br>Grading Activity<br>(including location) | Date<br>Grading<br>Activity<br>Ceased | Date<br>Stabilization<br>Measures<br>Initiated | Description of the<br>Stabilization Measure<br>(including location) |
|--|--|---------------------------------------|--|---|
|  |  |                                       |  |   |
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|  |  |                                       |  |   |

# 10.0 SWPPP Modification & Update Log

| Modification<br>Date | Description of the Modification / Update | Modification Prepared By (name & title) |
|----------------------|--|---|
|                      |  |   |
|                      |  |   |
|                      |  |   |
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Arlington County – SWPPP 07/2014

#### INSTRUCTIONS for COMPLETING the SINGE FAMILY RESIDENCE, COMMON PLAN of DEVELOPMENT or SALE STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

General
A Stormwater Pollution Prevention Plan (SWPPP) must be developed prior to obtaining locality (e.g., City, County, Town) authorization to commence land disturbance.

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 statues require the SWPPP to be signed as follows:

(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 dentify 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

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 schedule, 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

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.

ceased, the date stabilization measures were initiated, and a description of the stabilization measures including location

10 OF 33

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LONG BRIDGE DRIVE

DRIVE R  $\mathbf{M}$ Z

SWPPP

DRIVE E/ I-395 EALIGN

LON

Designed: A.K.

Drawn: A.K. Checked: A.C. Miss Utility Transmittal #: N/A

Filename: D28S-E&SC PLAN.dwg Path: Q:\Data\D28S\Design\Drawings Plotted: January 06, 2017

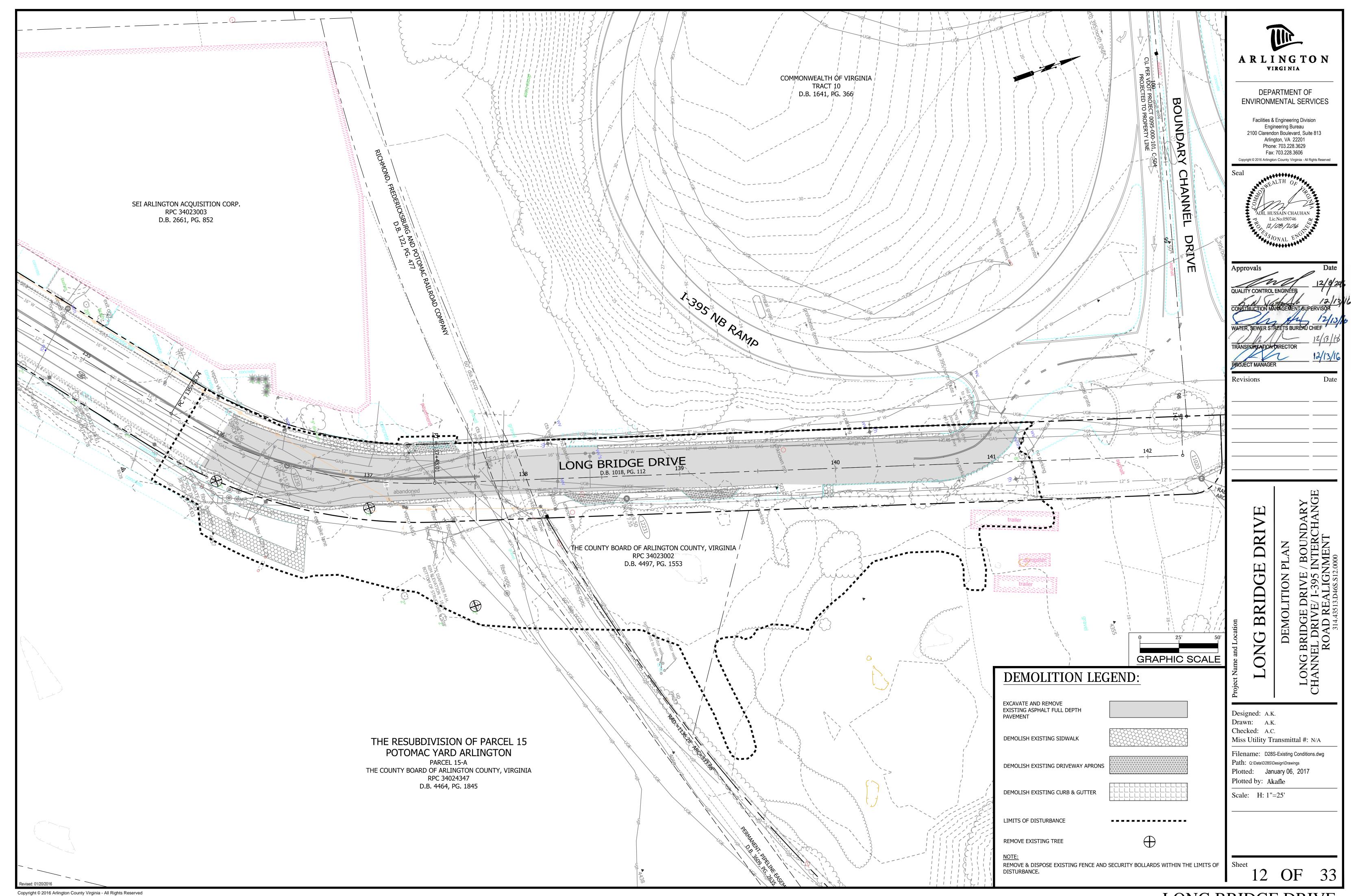
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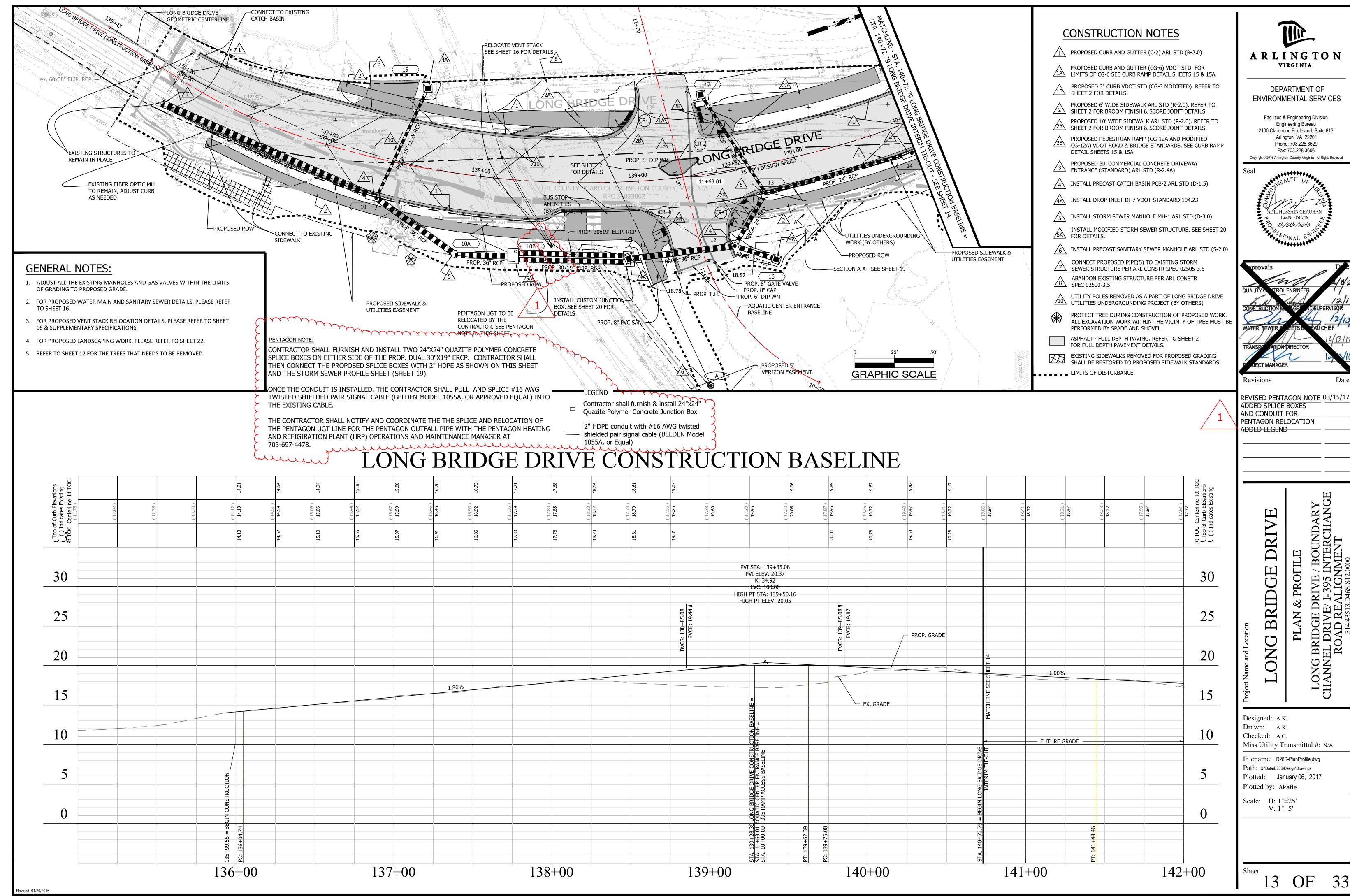
06/04/2015 Qianqian Li, P.E.
ESC Program Administrator
Department of Environmental Sevices
2100 Clarendon Boulevard, Suite 813 Arlington, Virginia 22201 Re: Erosion and Sediment Control Permit Application for: LONG BRIDGE DRIVE street address LONG BRIDGE DRIVE / BOUNDARY CHANNEL DRIVE / I-395 INTERCHANGE lot, block, section subdivision permit number I hereby certify that I accept the responsibilities of <u>Responsible Land Disturber</u> for the above referenced project. I understand that these responsibilities include: Reviewing the erosion and sedimentation (E&S) plan for the project.
 Walking the site prior to construction to identify critical areas.
 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.
 Regularily 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.
 Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
 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. for more than one year.

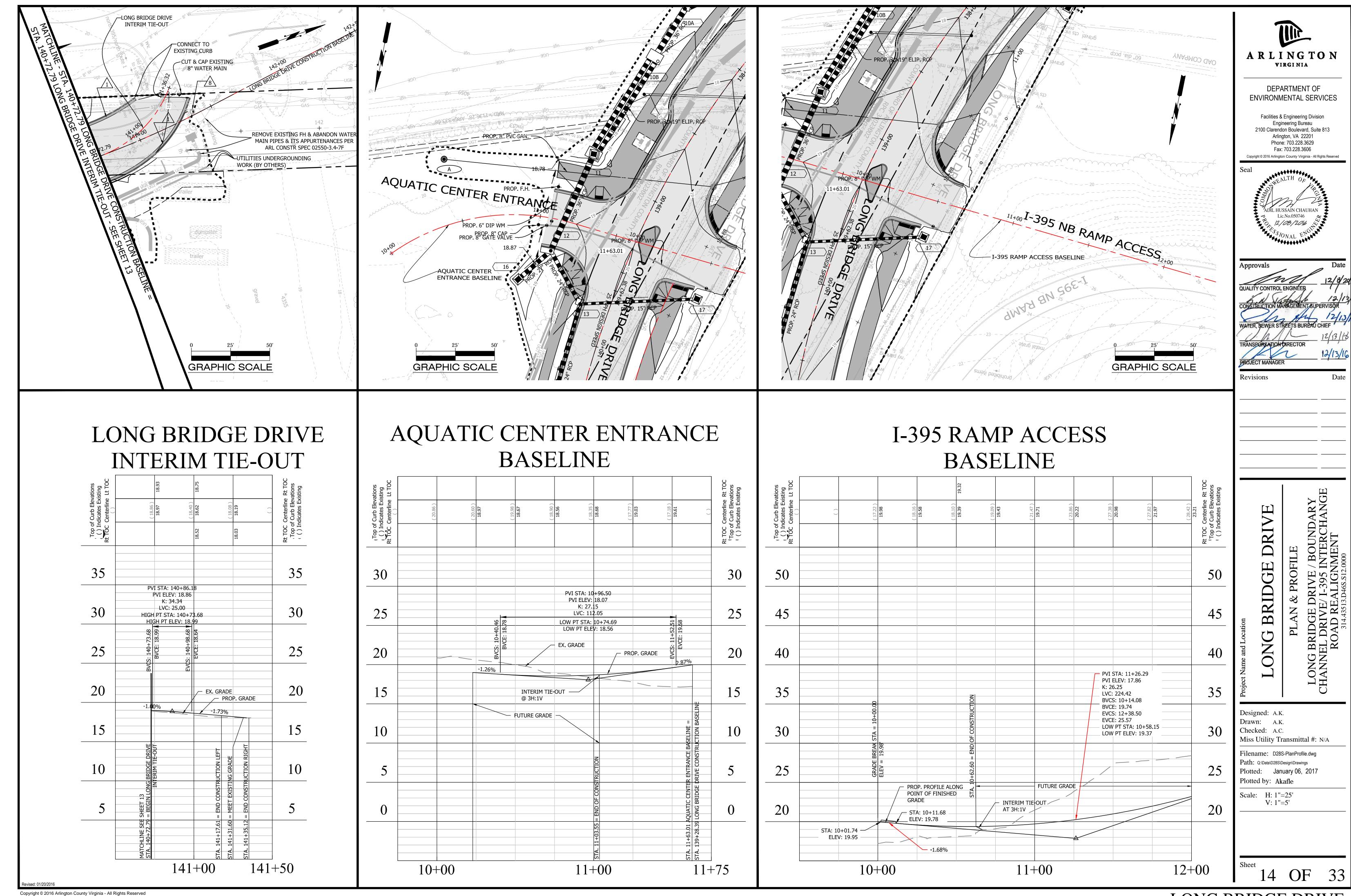
7. Calling (703) 228-0760 at least 80 hours before demolishing any structure. I may be reached at 703-228-3540 with questions about this plan or my execution of the duties of telephone number ADIL CHAUHAN VA PE 0402043208 professional registration (type and number)

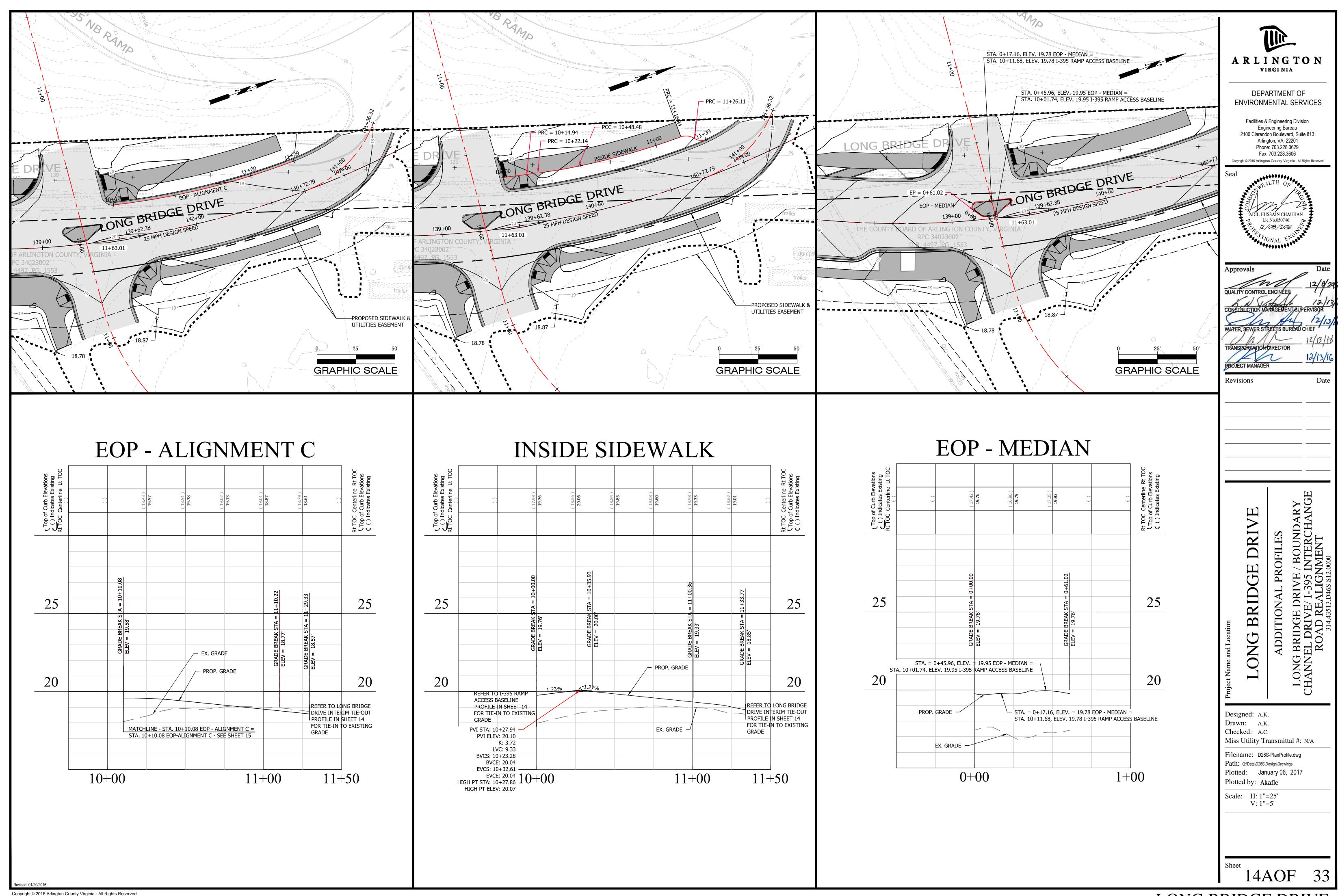
|           | L     | Registration Statement  |
|-----------|-------|---|
|           |       | General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10)  |
|           |       | (Please Type or Print All Information)  |
|           | 1.    | Construction Activity Operator: (General permit coverage will be issued to this operator. The Certification in Item #12 must be   |
|           |       | signed by the appropriate person associated with this operator.)  |
|           |       | Name: Adil Chauhan  |
|           |       | Contact: 703.228.3540   |
|           |       | Mailing Address: 2100 Clarendon Blvd., Suite 813  |
|           |       | City: Arlington State: VA Zip: 22201 Phone: 703.228.3540  |
|           |       | Email address (if available): achauhan@arlingtonva.us   |
|           | E 120 | Indicate if DEQ may transmit general permit correspondence electronically: Yes  No  |
|           | 2.    | Existing General Permit Registration Number (for renewals only): N/A  |
|           | 3.    | Name and Location of the Construction Activity:   |
|           |       | Name: Long Bridge Drive Road Realignment  |
|           | _     | Address (if available): Long Bridge Drive / Boundary Channel Drive / I-395 Interchange  |
|           |       | City: Arlington State: VA Zip: 22202  |
|           |       | County (if not located within a City): Almigran County  |
|           |       | Latitude (decimal degrees): 38.86833 N Longitude (decimal degrees): 77.04472 W  |
|           |       | Name and Location of all Off-site Support Activities to be covered under the general permit:  |
| _         |       | Name: N/A   |
|           |       | Address (if available): N/A State: N/A Zip: N/A   |
|           |       | Oity  |
|           |       | County (if not located within a City): N/A  |
|           |       | Latitude (decimal degrees): N/A Longitude (decimal degrees): N/A  |
|           | 4.    | Status of the Construction Activity (check only one): Federal State Public Private  |
| m 🛄 "     | 5.    | Nature of the Construction Activity (e.g., commercial, industrial, residential, agricultural, oil and gas, etc.):  Arlington County's Roadway Realignment Project - Residential / Commercial  |
|           | 0     |   |
|           |       | Name of the Receiving Water(s) and Hydrologic Unit Code (HUC) - Link to HUC6 Map  Name: Potomac River Name:   |
|           |       | Name: Potomac River Name: Name: HUC: HUC:   |
| G.        | 7     | If the discharge is through a Municipal Separate Storm Sewer System (MS4), the name of the MS4 operator:  |
|           |       | Arlington County  |
| å₽.       | 8.    | Estimated Project Start and Completion Date:  |
|           | J.    | Start Date (mm/dd/yyyy): 01/28/2016 Completion Date (mm/dd/yyyy): 10/02/2016  |
|           | 9.    | Total Land Area of Development (to the nearest one-hundredth acre): 1.35 Acres  |
| R         | ٠.    | Estimated Area to be Disturbed (to the nearest one-hundredth acre): 1.35 Acres  |
| ة طِلطّ ه | 10    | Is the area to be disturbed part of a larger common plan of development or sale? Yes No   |
|           |       | A stormwater pollution prevention plan (SWPPP) must be prepared in accordance with the requirements of the General  |
|           | • 1.  | VPDES Permit for Discharges of Stormwater from Construction Activities prior to submitting this Registration Statement.   |
|           |       | By signing this Registration Statement the operator is certifying that the SWPPP has been prepared.   |
|           | 12.   | Certification: "I certify under penalty of law that I have read and understand this Registration Statement 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   |
| ao 🔲 🛚    |       | 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."  |
|           | D.    | Printed Name: Adil Chauhan Title: Design Engineer Team Supervisor   |
| a         |       | Signature: Date: 06/04/2015   |
|           |       | (Please sign in INK. This Certification must be signed by the appropriate person associated with the operator identified in   |
|           |       | Item #1.)   |
| П         |       |   |
|           |       |   |
|           |       | Page 4 of 4   |
|           | 01/   | 2014 Page 1 of 1  |

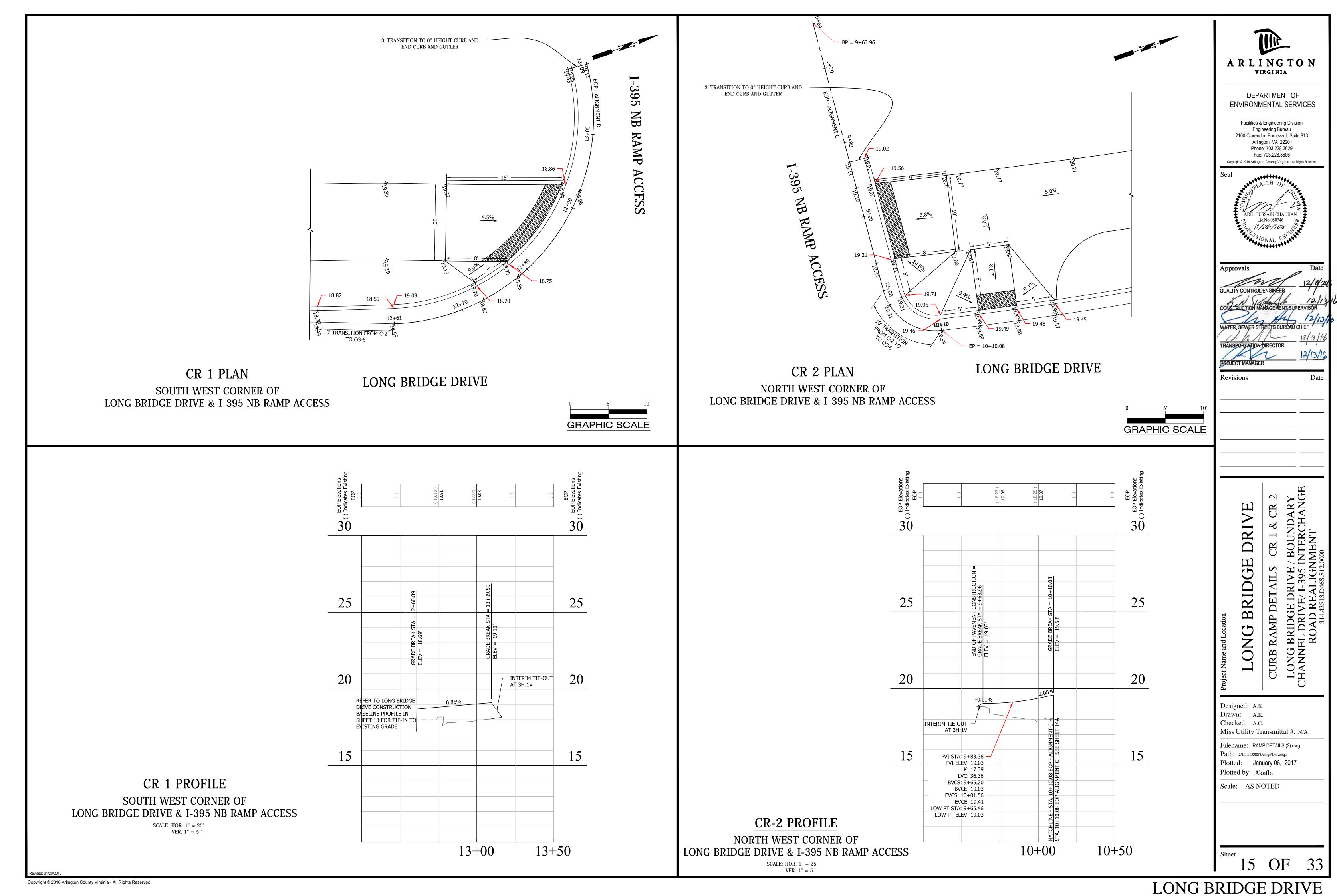
| Ε                              | DEPA<br>NVIRONM<br>Facilities &<br>Engi<br>2100 Clarend<br>Arlin<br>Phon<br>Fax<br>right © 2016 Arlingto | ARTME IENTAL Engineering Buon Boulevogton, VA 2e: 703.228.3                                   | ng Divisureau ard, Sui 22201 3.3629 3606 rginia - All | F SVICE sion te 813              | ES  |
|--------------------------------|--|---|---|----------------------------------|---|
| Appı                           | Po Li  | 08/2010<br>08/2010<br>008/2010<br>000<br>000<br>000<br>000<br>000<br>000<br>000<br>000<br>000 | Addiana   |                                  | Date  |
| 2                              | 1. h./   | MAGEME  | NT SUI  | _/                               | 12/13/16                                    |
| PROJE                          | CT MANAGE<br>sions   | 2   |   | 12/                              | /13/16<br>Date                              |
|                                |  |   |   |                                  |   |
| Project Name and Location      | LONG BRIDGE DRIVE  | RLD FORM & REGISTRATION STATEMENT   | LONG BRIDGE DRIVE / BOUNDARY                          | CHANNEL DRIVE/ I-395 INTERCHANGE | ROAD REALIGNMENT<br>314.43513.D46S.S12.0000 |
| Chec<br>Miss<br>Filer<br>Path: | eked: A.C<br>Utility Tr<br>name: D288<br>: Q:\Data\D288\D<br>ed: Jan<br>ed by: Ak                        | ansmit  | LAN.dw  | g                                |   |
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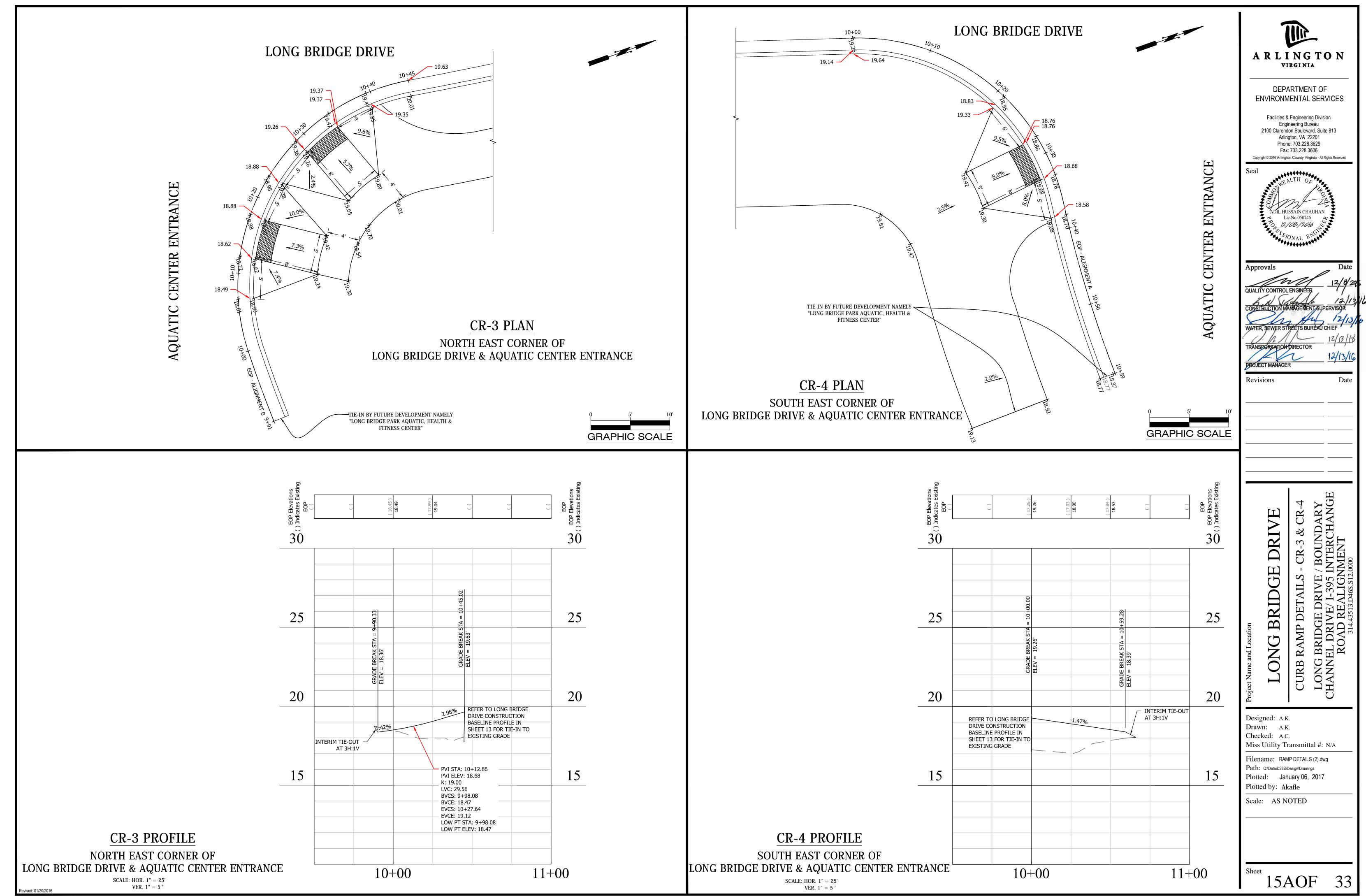


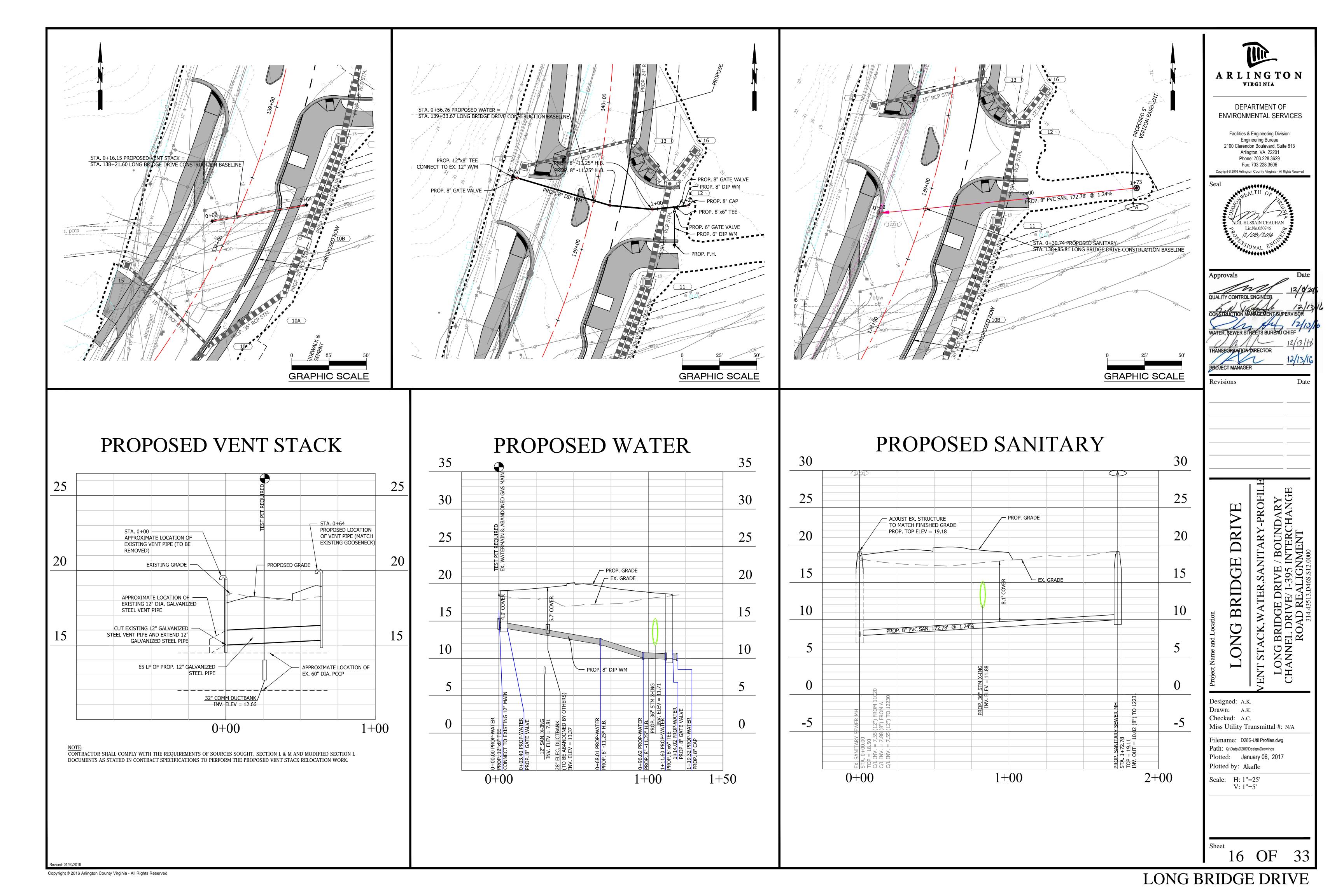


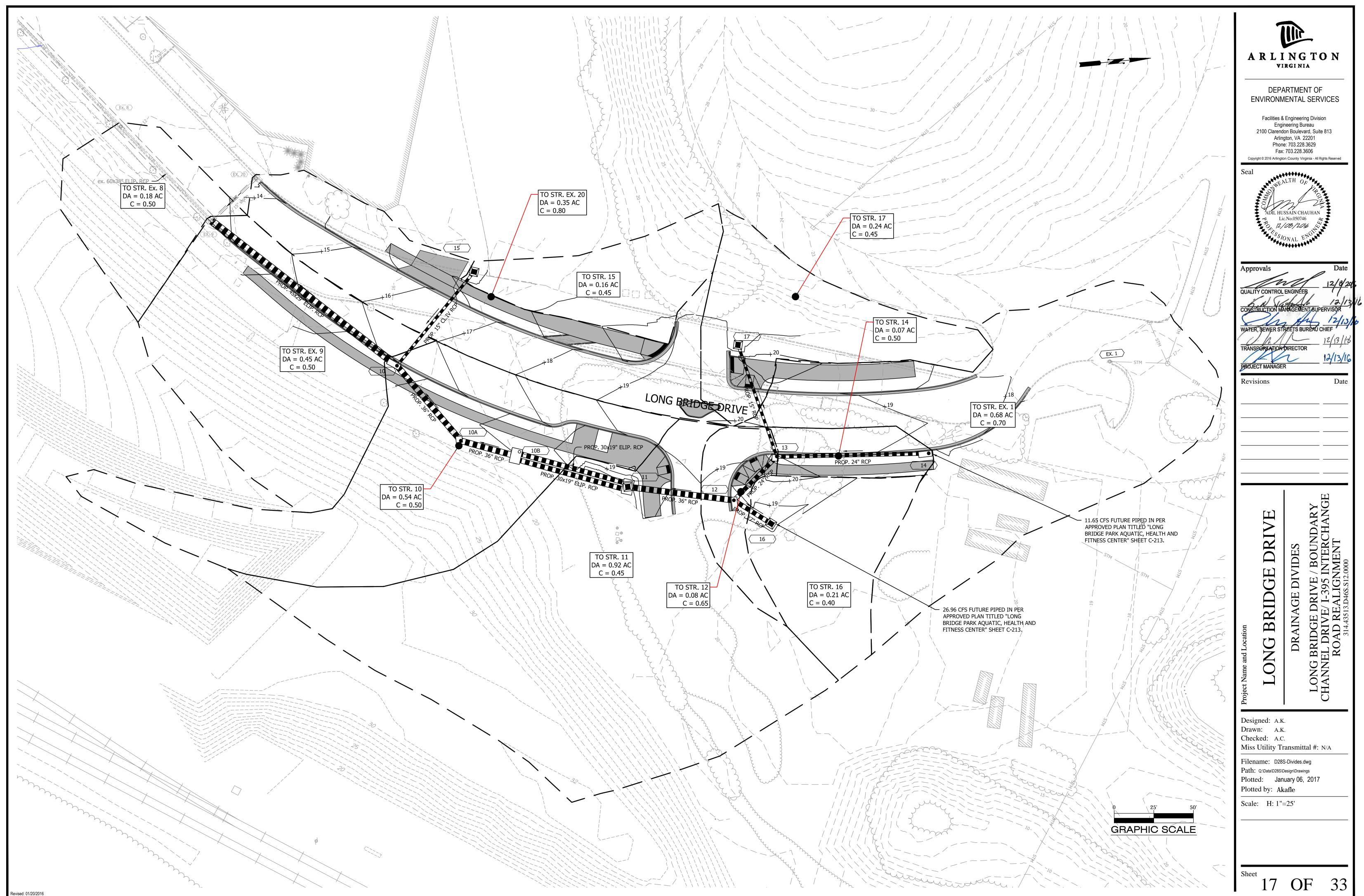












# Inlet Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2012 by Autodesk, Inc.

Thursday, Nov 13 2014

# Ex.1

| Grate Inlet        |         | Calculations        |         |
|--------------------|---------|---------------------|---------|
| Location           | = Sag   | Compute by:         | Known Q |
| Curb Length (ft)   | = -0-   | Q (cfs)             | = 2.10  |
| Throat Height (in) | = -0-   |                     |         |
| Grate Area (sqft)  | = 4.00  | Highlighted         |         |
| Grate Width (ft)   | = 2.00  | Q Total (cfs)       | = 2.10  |
| Grate Length (ft)  | = 2.00  | Q Capt (cfs)        | = 2.10  |
|                    |         | Q Bypass (cfs)      | = -0-   |
| Gutter             |         | Depth at Inlet (in) | = 3.82  |
| Slope, Sw (ft/ft)  | = 0.080 | Efficiency (%)      | = 100   |
| Slope, Sx (ft/ft)  | = 0.020 | Gutter Spread (ft)  | = 11.43 |
| Local Depr (in)    | = -0-   | Gutter Vel (ft/s)   | = 4.23  |
| Gutter Width (ft)  | = 1.50  | Bypass Spread (ft)  | = -0-   |
| Gutter Slope (%)   | = -0-   | Bypass Depth (in)   | = -0-   |
| Gutter n-value     | = -0-   |                     |         |

|            |          |                   |                       |             |              | Storm         | sew o    | er Des   | sign Coi  | mputat    | ions    |        |         |          |          |              |                     |
|------------|----------|-------------------|-----------------------|-------------|--------------|---------------|----------|----------|-----------|-----------|---------|--------|---------|----------|----------|--------------|---------------------|
| From Point | To Point | Area Drain<br>"A" | Runoff<br>Coefficient | (           | CA           | Inlet<br>Time | Rainfall | Runoff Q | Invert El | evations  | Length  | Slope  | Dia     | Capacity | Velocity | Flow<br>Time | Remarks             |
|            |          | Acres             | С                     | Incremental | Accumulative | Min           | In/Hr    | CFS      | Upper End | Lower End | Ft      | %      | In      | CFS      | FPS      | Min          |                     |
| Ex.8       | Ex.7     | 0.18              | 0.50                  | 0.09        | 1.63         | 5.0           | 6.79     | 49.68    | 3.78      | 3.70      | 142.510 | 0.06%  | 38 x 60 | 32.99    | 5.02     | 0.59         |                     |
| Ex.9       | Ex.8     | 0.45              | 0.50                  | 0.23        | 1.54         | 5.0           | 6.79     | 49.07    | 4.03      | 3.84      | 82.686  | 0.23%  | 38 x 60 | 66.74    | 5.64     | 0.35         |                     |
| 10         | Ex.9     | 0.54              | 0.50                  | 0.27        | 1.04         | 5.0           | 6.79     | 45.64    | 4.77      | 4.03      | 148.423 | 0.50%  | 36      | 47.09    | 6.70     | 0.38         |                     |
| 10A        | 10       | 0.00              | 0.00                  | 0.00        | 0.69         | 0.0           | 6.79     | 43.32    | 7.95      | 7.16      | 62.199  | 1.27%  | 36      | 75.16    | 11.00    | 0.17         |                     |
| 10B        | 10A      | 0.00              | 0.00                  | 0.00        | 0.69         | 0.0           | 6.79     | 43.32    | 8.23      | 8.05      | 36.038  | 0.50%  | 36      | 47.13    | 6.53     | 0.10         |                     |
| 11         | 10B      | 0.92              | 0.45                  | 0.41        | 0.69         | 5.0           | 6.79     | 43.32    | 11.66     | 10.99     | 66.563  | 1.01%  | 19 x 30 | 24.34    | 11.00    | 0.16         | DOUBLE BARREL       |
| 12         | 11       | 0.08              | 0.65                  | 0.05        | 0.28         | 5.0           | 6.79     | 40.50    | 12.13     | 11.79     | 67.515  | 0.50%  | 36      | 47.33    | 5.73     | 0.20         |                     |
| 13         | 12       | 0.00              | 0.00                  | 0.00        | 0.14         | 0.0           | 6.79     | 12.62    | 12.42     | 12.23     | 38.718  | 0.49%  | 24      | 15.84    | 4.02     | 0.16         |                     |
| 14         | 13       | 0.07              | 0.50                  | 0.04        | 0.04         | 5.0           | 6.79     | 11.89    | 13.00     | 12.52     | 95.887  | 0.50%  | 24      | 16.00    | 3.78     | 0.42         | (+)11.65 CFS FUTURE |
| 16         | 12       | 0.21              | 0.40                  | 0.08        | 0.08         | 5.0           | 6.79     | 27.53    | 14.40     | 12.88     | 27.649  | 5.50%  | 27      | 72.60    | 6.93     | 0.07         | (+)26.96 CFS FUTURE |
| 15         | 10       | 0.16              | 0.45                  | 0.07        | 0.07         | 5.0           | 6.79     | 0.49     | 5.15      | 4.77      | 76.746  | 0.50%  | 15      | 4.54     | 0.40     | 3.21         |                     |
| Ex.20      | Ex.9     | 0.35              | 0.80                  | 0.28        | 0.28         | 5.0           | 6.79     | 1.90     | 9.74      | 4.03      | 38.896  | 14.68% | 15      | 24.74    | 1.55     | 0.42         |                     |
| 17         | 13       | 0.24              | 0.45                  | 0.11        | 0.11         | 5.0           | 6.79     | 0.73     | 14.65     | 13.50     | 76.470  | 1.50%  | 15      | 7.92     | 0.60     | 2.13         |                     |

|        |      |                |         |                             |      |      |          |       |                   |          |                              |                             |            |        | Sto  | rm In         | let Co | omp  | utations                    | s Shee | et                     |            |         |            |                 |       |                        |                   |              |                         |                   |                |                         |          |                            |
|--------|------|----------------|---------|-----------------------------|------|------|----------|-------|-------------------|----------|------------------------------|-----------------------------|------------|--------|------|---------------|--------|------|-----------------------------|--------|------------------------|------------|---------|------------|-----------------|-------|------------------------|-------------------|--------------|-------------------------|-------------------|----------------|-------------------------|----------|----------------------------|
|        | I    | ınlet          |         |                             |      |      | Flov     | ,     |                   |          |                              | Curb Inlet                  |            |        |      |               |        |      |                             |        | Grate Inlets Yard Inle |            |         | ard Inlet  | llets Operation |       | Operation              |                   |              |                         |                   |                |                         |          |                            |
| Number | Туре | Length<br>(Ft) | Station | Drainage<br>Area<br>(Acres) | С    | CA   | I (In/Hı | Q Ind | Q Carryover (CFS) | QT (CFS) | S Gutter<br>Slope<br>(Ft/Ft) | Sx<br>Crossslope<br>(Ft/Ft) | T (Spread) | W (Ft) | W/T  | Sw<br>(Ft/Ft) | Sw/Sx  | ЕО   | Local<br>Depression<br>(in) | a (in) | S'w                    | Se (ft/ft) | n Value | LT<br>(Ft) | L/LT            | d(FT) | T Spread @<br>Sag (Ft) | Perimeter<br>(Ft) | Area<br>(SF) | H Flow<br>Depth<br>(ft) | Q/L h Th<br>Heigh | roat<br>t (Ft) | H Flow<br>Depth<br>(Ft) | H/h E(%) | Q;<br>Intercepted<br>(CFS) |
| Ex.8   | CB-2 | 8.50           |         | 0.18                        | 0.50 | 0.09 | 4.00     | 0.36  | 0.00              | 0.36     | 0.010                        | 0.020                       | 3.33       | 1.50   | 0.45 | 0.083         | 4.15   | 0.92 | 3.0                         | 4.13   | 0.23                   | 0.23       | 0.015   | 2.93       | 2.90            | 0.41  |                        |                   |              |                         |                   |                |                         | 100%     | 0.36                       |
| Ex.9   | CB-2 | 8.50           |         | 0.45                        | 0.50 | 0.23 | 4.00     | 0.90  | 0.00              | 0.90     | 0.010                        | 0.020                       | 5.83       | 1.50   | 0.26 | 0.083         | 4.15   | 0.70 | 3.0                         | 4.13   | 0.23                   | 0.18       | 0.015   | 4.99       | 1.70            | 0.46  |                        |                   |              |                         |                   |                |                         | 100%     | 0.90                       |
| 10     | CB-2 | 8.50           |         | 0.54                        | 0.50 | 0.27 | 4.00     | 1.08  | 0.00              | 1.08     | 0.010                        | 0.020                       | 6.38       | 1.50   | 0.24 | 0.083         | 4.15   | 0.66 | 3.0                         | 4.13   | 0.23                   | 0.17       | 0.015   | 5.58       | 1.52            | 0.47  |                        |                   |              |                         |                   |                |                         | 100%     | 1.08                       |
| 10A    | MH-1 |                |         |                             |      |      |          |       |                   |          |                              |                             |            |        |      |               |        |      |                             |        |                        |            |         |            |                 |       |                        |                   |              |                         |                   |                |                         |          |                            |
| 10B    | MH-1 |                |         |                             |      |      |          |       |                   |          |                              |                             |            |        |      |               |        |      |                             |        |                        |            |         |            |                 |       |                        |                   |              |                         |                   |                |                         |          |                            |
| 11     | DI-7 |                |         | 0.92                        | 0.45 | 0.41 | 4.00     | 1.66  | 0.00              | 1.66     |                              |                             |            |        |      |               |        |      |                             |        |                        |            |         |            |                 |       |                        | 6.50              | 6.00         | 0.12                    |                   |                |                         | 100%     | 1.66                       |
| 12     | CB-2 | 8.50           |         | 0.08                        | 0.65 | 0.05 | 4.00     | 0.21  | 0.00              | 0.21     | 0.010                        | 0.020                       | 1.98       | 1.50   | 0.76 | 0.083         | 4.15   | 1.00 | 3.0                         | 4.13   | 0.23                   | 0.25       | 0.015   | 2.24       | 3.79            | 0.38  |                        |                   |              |                         |                   |                |                         | 100%     | 0.21                       |
| 13     | MH-1 |                |         |                             |      |      |          |       |                   |          |                              |                             |            |        |      |               |        |      |                             |        |                        |            |         |            |                 |       |                        |                   |              |                         |                   |                |                         |          |                            |
| 14     | CB-2 | 8.50           |         | 0.07                        | 0.50 | 0.04 | 4.00     | 0.14  | 0.00              | 0.14     | 0.010                        | 0.020                       | 1.40       | 1.50   | 1.07 | 0.083         | 4.15   | 1.00 | 3.0                         | 4.13   | 0.23                   | 0.25       | 0.015   | 1.89       | 4.51            | 0.37  |                        |                   |              |                         |                   |                |                         | 100%     | 0.14                       |
| 16     | DI-7 |                |         | 0.21                        | 0.40 | 0.08 | 4.00     | 0.34  | 0.00              | 0.34     |                              |                             |            |        |      |               |        |      |                             |        |                        |            |         |            |                 |       |                        | 6.50              | 6.00         | 0.04                    |                   |                |                         | 100%     | 0.34                       |
| 15     | DI-7 |                |         | 0.16                        | 0.45 | 0.07 | 4.00     | 0.29  | 0.00              | 0.29     |                              |                             |            |        |      |               |        |      |                             |        |                        |            |         |            |                 |       |                        | 6.50              | 6.00         | 0.04                    |                   |                |                         | 100%     | 0.29                       |
| Ex.20  | CB-2 | 8.50           |         | 0.35                        | 0.80 | 0.28 | 4.00     | 1.12  | 0.00              | 1.12     | 0.010                        | 0.020                       | 6.48       | 1.50   | 0.23 | 0.083         | 4.15   | 0.65 | 3.0                         | 4.13   | 0.23                   | 0.17       | 0.015   | 5.70       | 1.49            | 0.47  |                        |                   |              |                         |                   |                |                         | 100%     | 1.12                       |
| 17     | DI-7 |                |         | 0.24                        | 0.45 | 0.11 | 4.00     | 0.43  | 0.00              | 0.43     |                              |                             |            |        |      |               |        |      |                             |        |                        |            |         |            |                 |       |                        | 6.50              | 6.00         | 0.05                    |                   |                |                         | 100%     | 0.43                       |

|                    |                       |                                    |         |             |         |         | Hyd     | lraulio      | Gra        | ade L | ine Co    | ompu   | ıtatior        | ns      |                |               |         |                |                |              |                       |                   |
|--------------------|-----------------------|------------------------------------|---------|-------------|---------|---------|---------|--------------|------------|-------|-----------|--------|----------------|---------|----------------|---------------|---------|----------------|----------------|--------------|-----------------------|-------------------|
|                    |                       |                                    |         |             |         |         |         | ***          |            |       |           | Γ      | Junctio        | n Loss  | A .1           | III D. I      |         | 1.011          | 0.5.11.        |              | Inlet Water           |                   |
| Inlet<br>Structure | Upstream<br>Structure | Outlet Water<br>Surface Elev. (Ft) | Do (In) | Qo<br>(CFS) | Lo (Ft) | Sfo (%) | Hf (Ft) | Vo<br>(Ft/S) | Ho<br>(Ft) | Qi    | Vi (Ft/s) | QiVi   | Vi2/2g<br>(Ft) | Hi (Ft) | Angle<br>(deg) | H Del<br>(Ft) | Ht (Ft) | 1.3 Ht<br>(Ft) | 0.5 Ht<br>(Ft) | Final H (Ft) | Surface Elev.<br>(Ft) | Rim Elev.<br>(Ft) |
| Ex.7               |                       |                                    |         |             |         |         |         |              |            |       |           |        |                |         |                |               |         |                |                |              | 6.23                  |                   |
| Ex.8               |                       | 6.90                               | 38 x 60 | 45.13       | 142.510 | 0.10%   | 0.14    | 4.56         | 0.08       |       |           |        |                | 0.17    |                | 0.00          | 0.25    | 0.00           | 0.13           | 0.27         | 7.17                  | 7.67              |
|                    | Ex.9                  |                                    | 38 x 60 |             |         |         |         |              |            | 44.77 | 5.58      | 249.82 | 0.48           | 0.17    | 0.06           | 0.00          | 0.00    |                |                |              |                       |                   |
| Ex.9               |                       | 7.17                               | 38 x 60 | 44.77       | 82.686  | 0.10%   | 0.08    | 5.58         | 0.12       |       |           |        |                | 0.23    |                | 0.07          | 0.42    | 0.00           | 0.21           | 0.29         | 7.46                  | 13.49             |
|                    | 10                    |                                    | 36      |             |         |         |         |              |            | 42.75 | 6.52      | 278.73 | 0.66           | 0.23    | 8.10           | 0.07          | 0.11    |                |                |              |                       |                   |
|                    | Ex.20                 |                                    | 15      |             |         |         |         |              |            | 1.12  | 0.91      | 1.02   | 0.01           | 0.00    | 90.05          | 0.01          | 0.70    |                |                |              |                       |                   |
| 10                 |                       | 7.46                               | 36      | 42.75       | 148.423 | 0.41%   | 0.61    | 6.52         | 0.17       |       |           |        |                | 0.64    |                | 0.28          | 1.09    | 0.00           | 0.54           | 1.15         | 8.61                  | 16.65             |
|                    | 10A                   |                                    | 36      |             |         |         |         |              |            | 41.38 | 10.88     | 450.21 | 1.84           | 0.64    | 11.63          | 0.28          | 0.15    |                |                |              |                       |                   |
|                    | 15                    |                                    | 15      |             |         |         |         |              |            | 0.29  | 0.23      | 0.07   | 0.00           | 0.00    | 88.62          | 0.00          | 0.69    |                |                |              |                       |                   |
| 10A                |                       | 9.56                               | 36      | 41.38       | 62.199  | 0.38%   | 0.24    | 10.88        | 0.46       |       |           |        |                | 0.22    |                | 0.24          | 0.92    | 0.00           | 0.46           | 0.70         | 10.81                 | 17.80             |
|                    | 10B                   |                                    | 36      |             |         |         |         |              |            | 41.38 | 6.38      | 264.00 | 0.63           | 0.22    | 34.18          | 0.24          | 0.38    |                |                |              |                       |                   |
| 10B                |                       | 10.81                              | 36      | 41.38       | 36.038  | 0.38%   | 0.14    | 6.38         | 0.16       |       |           |        |                | 0.60    |                | 0.07          | 0.83    | 0.00           | 0.41           | 0.55         | 11.36                 | 18.04             |
|                    | 11                    |                                    | 19 x 30 |             |         |         |         |              |            | 41.38 | 10.51     | 434.90 | 1.72           | 0.60    | 2.94           | 0.07          | 0.04    |                |                |              |                       |                   |
| 11                 |                       | 12.59                              | 19 x 30 | 41.38       | 66.563  | 3.35%   | 2.23    | 10.51        | 0.43       |       |           |        |                | 0.17    |                | 0.06          | 0.66    | 0.00           | 0.33           | 2.56         | 15.15                 | 17.80             |
|                    | 12                    |                                    | 36      |             |         |         |         |              |            | 39.73 | 5.62      | 223.28 | 0.49           | 0.17    | 9.88           | 0.06          | 0.13    |                |                |              |                       |                   |
| 12                 |                       | 15.15                              | 36      | 39.73       | 67.515  | 0.35%   | 0.24    | 5.62         | 0.12       |       |           |        |                | 0.26    |                | 0.22          | 0.60    | 0.00           | 0.30           | 0.54         | 15.69                 | 18.83             |
|                    | 13                    |                                    | 24      |             |         |         |         |              |            | 12.22 | 3.89      | 47.54  | 0.23           | 0.08    | 52.76          | 0.12          | 0.52    |                |                |              |                       |                   |
|                    | 16                    |                                    | 27      |             |         |         |         |              |            | 27.30 | 6.87      | 187.55 | 0.73           | 0.26    | 24.87          | 0.22          | 0.30    |                |                |              |                       |                   |
| 13                 |                       | 15.69                              | 24      | 12.22       | 38.718  | 0.29%   | 0.11    | 3.89         | 0.06       |       |           |        |                | 0.08    |                | 0.10          | 0.24    | 0.00           | 0.12           | 0.23         | 15.92                 | 20.01             |
|                    | 14                    |                                    | 24      |             |         |         |         |              |            | 11.79 | 3.75      | 44.21  | 0.22           | 0.08    | 44.34          | 0.10          | 0.46    |                |                |              |                       |                   |
|                    | 17                    |                                    | 15      |             |         |         |         |              |            | 0.43  | 0.35      | 0.15   | 0.00           | 0.00    | 58.99          | 0.00          | 0.56    |                |                |              |                       |                   |
| 14                 |                       | 15.92                              | 24      | 11.79       | 95.887  | 0.27%   | 0.26    | 3.75         | 0.07       |       |           |        |                |         |                |               | 0.07    | 0.00           | 0.03           | 0.29         | 16.21                 | 19.09             |
| Ex.20              |                       | 7.46                               | 15      | 1.12        | 38.896  | 0.03%   | 0.01    | 0.91         | 0.00       |       |           |        |                |         |                |               | 0.00    | 0.01           | 0.00           | 0.01         | 10.74                 | 13.66             |
| 15                 |                       | 8.61                               | 15      | 0.29        | 76.746  | 0.00%   | 0.00    | 0.23         | 0.00       |       |           |        |                |         |                |               | 0.00    | 0.00           | 0.00           | 0.00         | 8.61                  | 16.64             |
| 16                 |                       | 15.69                              | 27      | 27.30       | 27.649  | 0.78%   | 0.21    | 6.87         | 0.22       |       |           |        |                |         |                |               | 0.22    | 0.00           | 0.11           | 0.32         | 16.31                 | 18.50             |
| 17                 |                       | 15.92                              | 15      | 0.43        | 76.470  | 0.00%   | 0.00    | 0.35         | 0.00       |       |           |        |                |         |                |               | 0.00    | 0.00           | 0.00           | 0.00         | 15.92                 | 20.01             |

# STORM NARRATIVE:

THE PROPOSED STORM SEWER SYSTEM HAS BEEN SIZED TO ACCOMMODATE FLOWS FROM THE SITE AND FUTURE DEVELOPMENT (LONG BRIDGE PARK AQUATIC HEALTH AND FITNESS CENTER).

THE PROPOSED STORM SEWER PIPES ARE SIZED ADEQUATELY TO CONVEY 10 YEAR FLOW FROM THE SITE AND FUTURE DEVELOPMENT. THE INLETS ARE SIZED ADEQUATELY FOR FLOW INTENSITY OF 4 IN/HR.

11.7 CFS WERE ADDED TO STORM SEWER STRUCTURE 14 AND 26.96 CFS WERE ADDED TO STORM SEWER STRUCTURE 16 FROM THE FUTURE DEVELOPMENT (FOR FLOW INFORMATION REFER SHEET C-213 FROM AQUATIC CENTER PLAN).

THE SITE OUTFALL ANALYSIS WAS PERFORMED ON TWO OUTFALL STRUCTURES (EX. 8 & EX. 7) BEYOND THE PROJECT LIMITS OF DISTURBANCE. THE SITE OUTFALL CONSISTS OF 38" X 60" ELLIPTICAL PIPE . THE STORM SEWER SIZING COMPUTATIONS WERE EXTENDED TO THE EXISTING ELLIPTICAL PIPE AND SHOWS THAT THE SYSTEM CAN ADEQUATELY CONVEY THE 10-YR FLOW FROM THE SITE AND THE FUTURE DEVELOPMENT.

THE INLET REPORT ATTACHED FOR THE EXISTING STRUCTURE 1 (EX. 1) SHOWS THE GUTTER SPREAD OF 11.43' IN ITS EXISTING CONDITIONS. FUTURE DEVELOPMENT NAMELY "BOUNDARY CHANNEL DRIVE/I-395 INTERCHANGE PROJECT" WILL BE CONDUCTING DETAIL STORM ANALYSIS OF THE EXISTING STORM SEWER SYSTEM ALONG THE BOUNDARY CHANNEL DRIVE/ I-395 INTERCHANGE CORRIDOR.



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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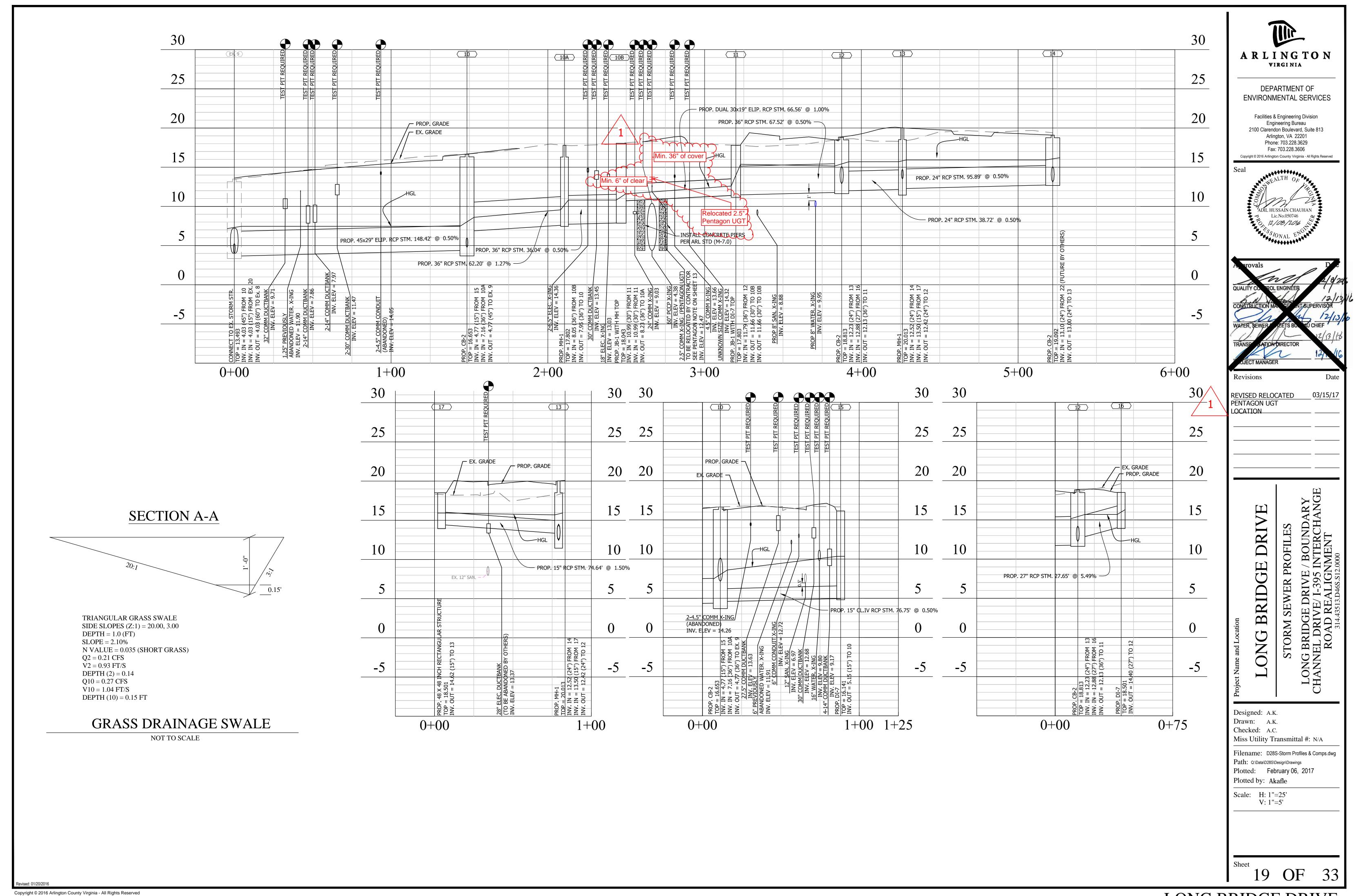
Revisions

STORM SEWER COMPUTATIONS

Designed: A.K. Drawn: A.K. Checked: A.C. Miss Utility Transmittal #: N/A

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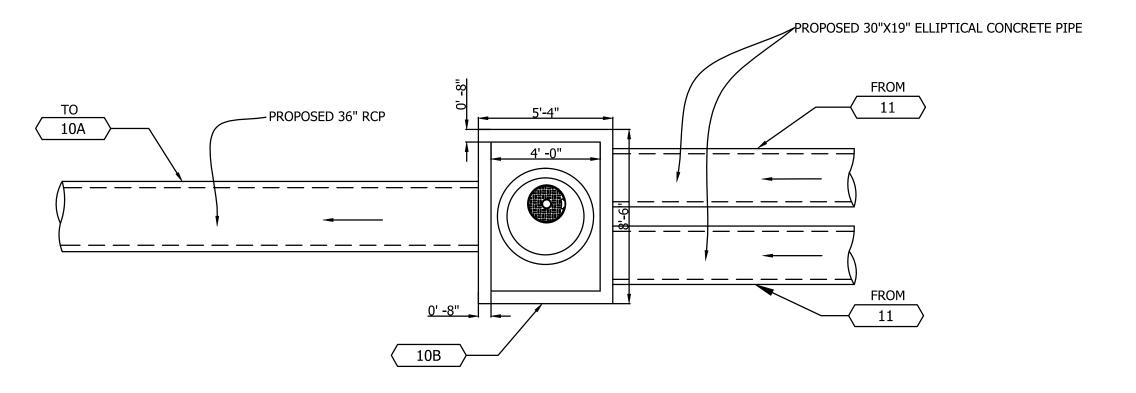
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LONG BRIDGE DRIVE

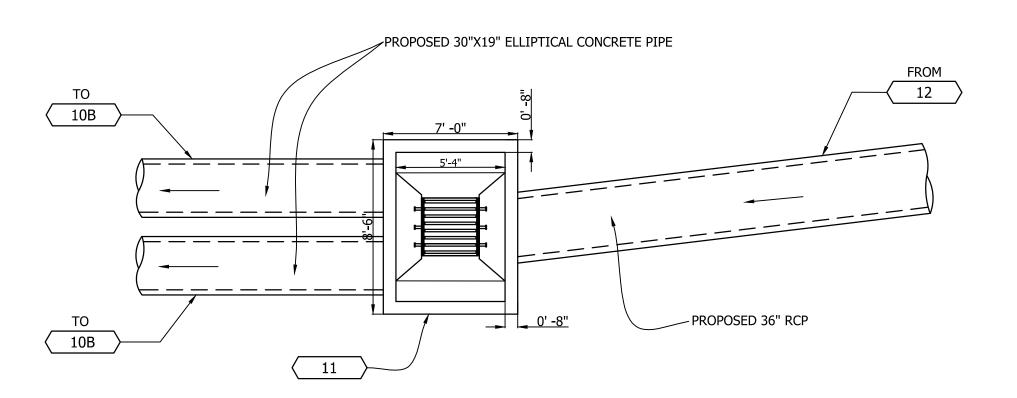
# GENERAL NOTES:

- 1. THE PLAN VIEW OF MODIFIED STRUCTURES ARE FOR REFERENCE PURPOSES ONLY NOT FOR CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE SHOP DRAWING FOR COUNTY ENGINEER'S REVIEW BEFORE CONSTRUCTION.
- 2. THE CONTRACTOR SHALL FIELD VERIFY REQUIRED DIMENSIONS PRIOR TO ORDER/FABRICATION.
- 3. MODIFIED STRUCTURE DETAILS SHALL BE PER VDOT ROAD & BRIDGE STANDARD PLAN FOR JB-1 & DI-7.
- 4. PLEASE REFER TO SHEET 19 FOR HEIGHT OF COVER FROM THE TOP OF THE PIPE TO FINISHED GRADE AND INVERT ELEVATIONS.
- 5. PLEASE REFER ARLINGTON COUNTY'S CONSTRUCTION SPECIFICATION SECTION 02500-PART 3.2.C FOR RCP'S CLASS REQUIREMENTS.



# STRUCTURE 10B DETAIL

MODIFIED JUNCTION BOX (JB-1) WITH TYPE A TOWER AND MANHOLE TOP SCALE: N.T.S



# STRUCTURE 11 DETAIL

MODIFIED JUNCTION BOX (JB-1) WITH TYPE A TOWER AND DI-7 TOP

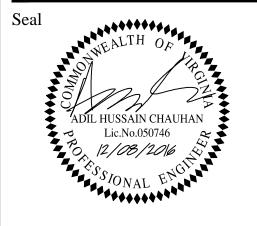
SCALE: N.T.S



DEPARTMENT OF ENVIRONMENTAL SERVICES

Facilities & Engineering Division Engineering Bureau 2100 Clarendon Boulevard, Suite 813 Arlington, VA 22201 Phone: 703.228.3629

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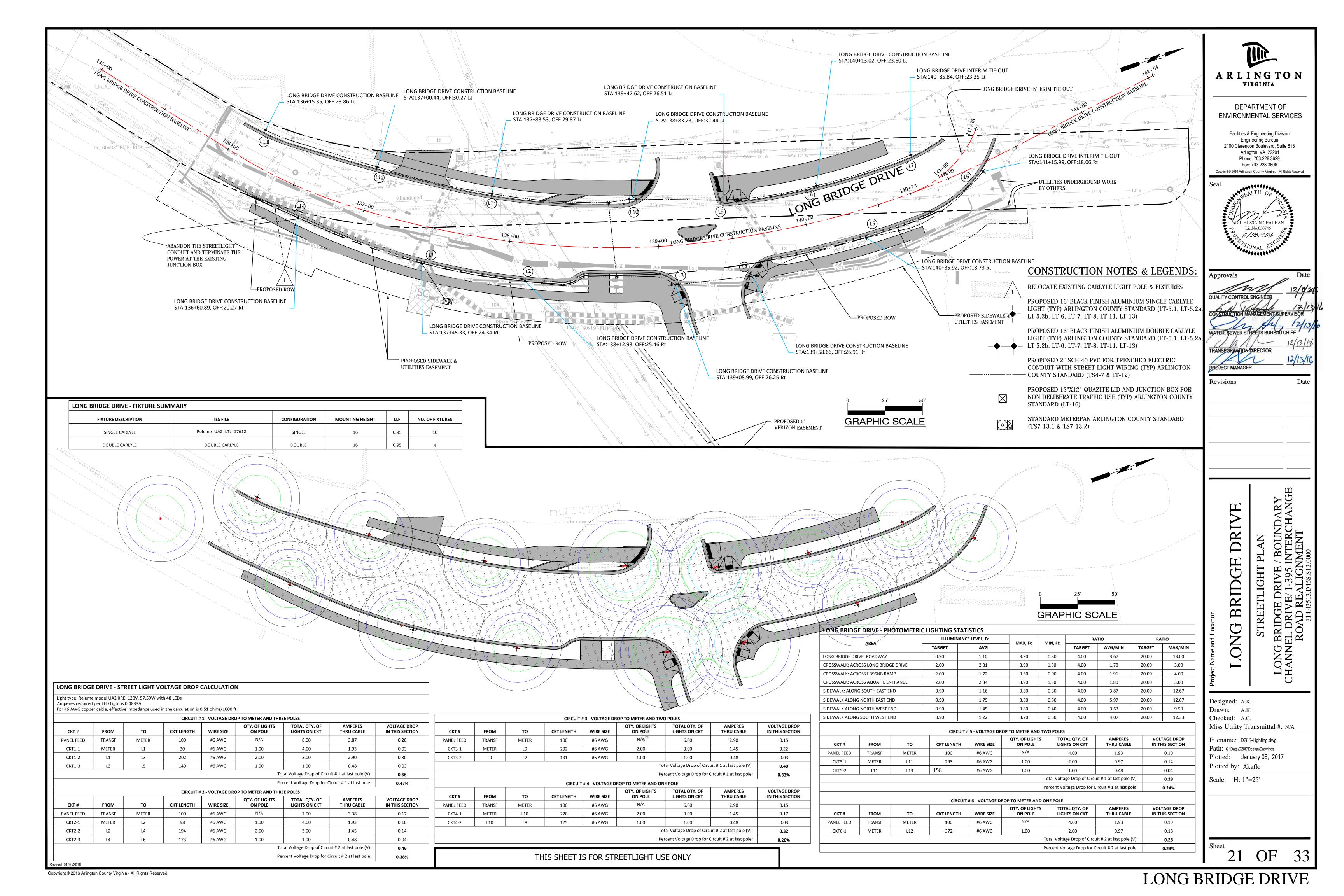


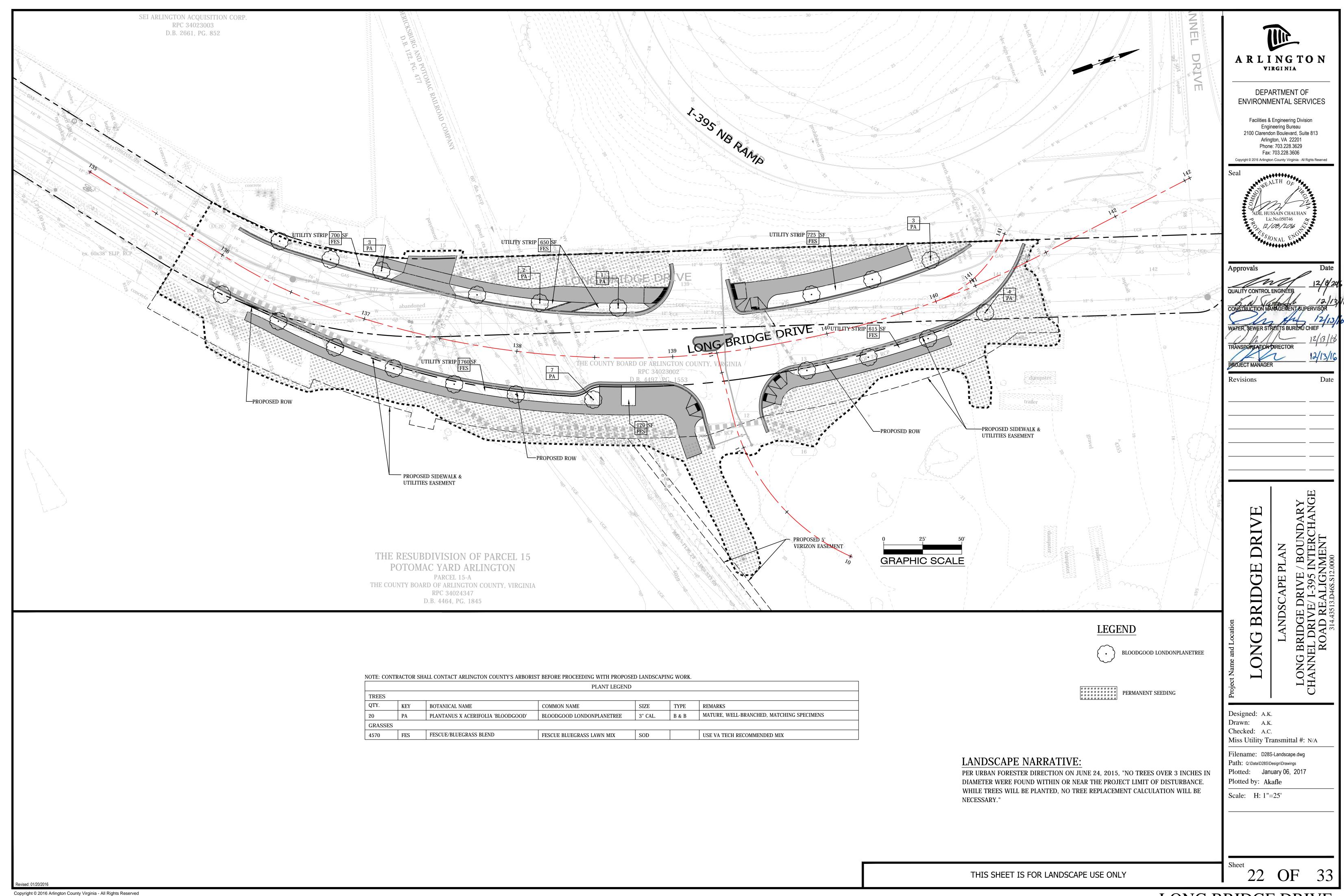
Revisions

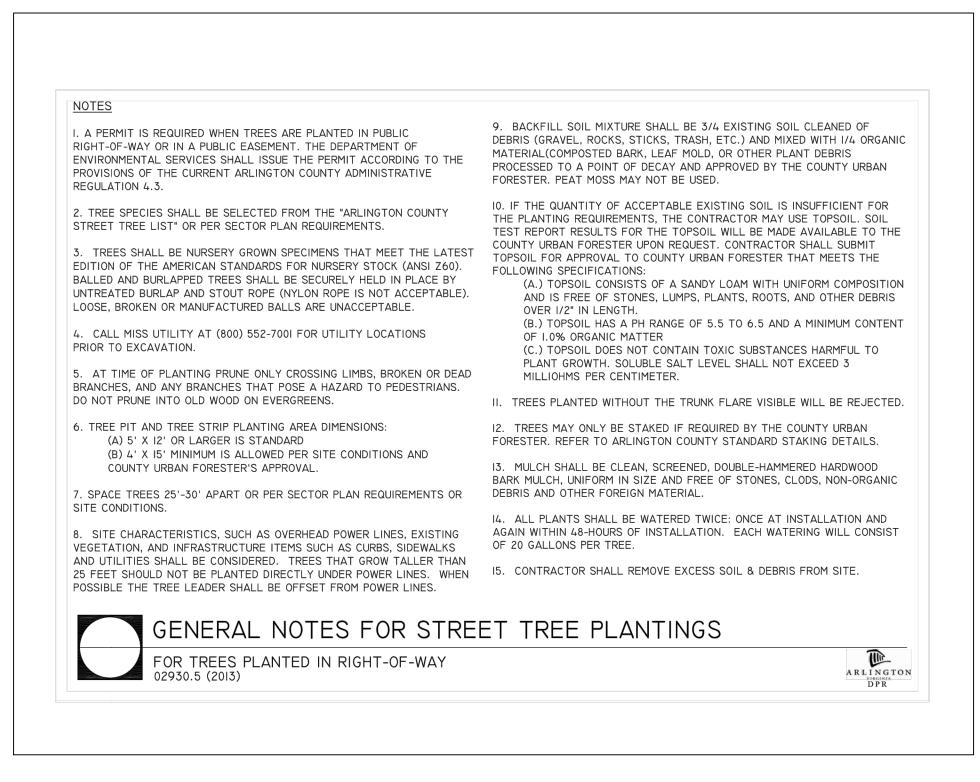
Designed: A.K. Drawn: A.K. Checked: A.C. Miss Utility Transmittal #: N/A

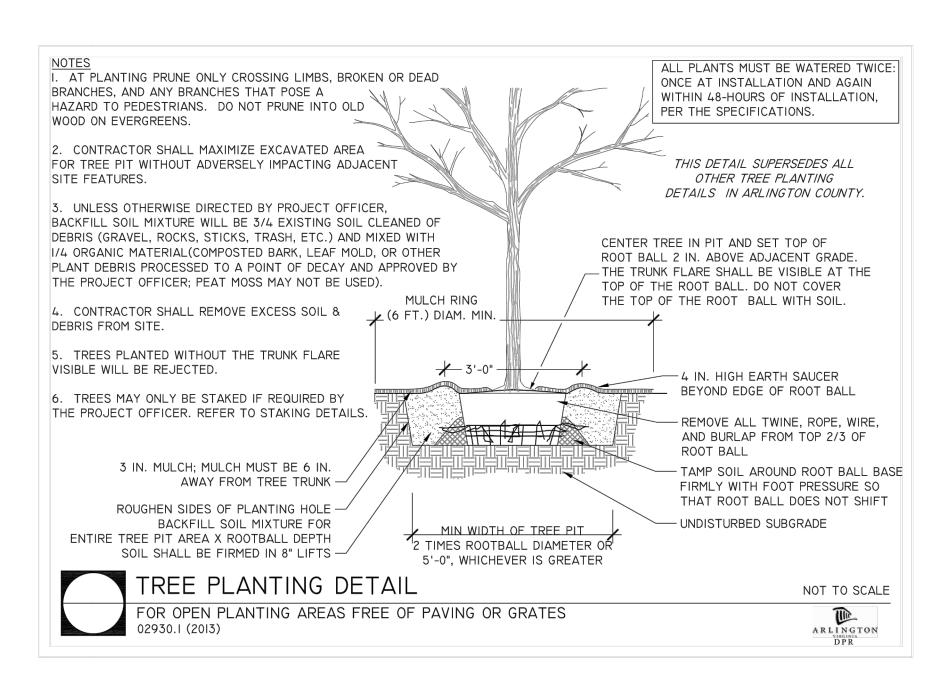
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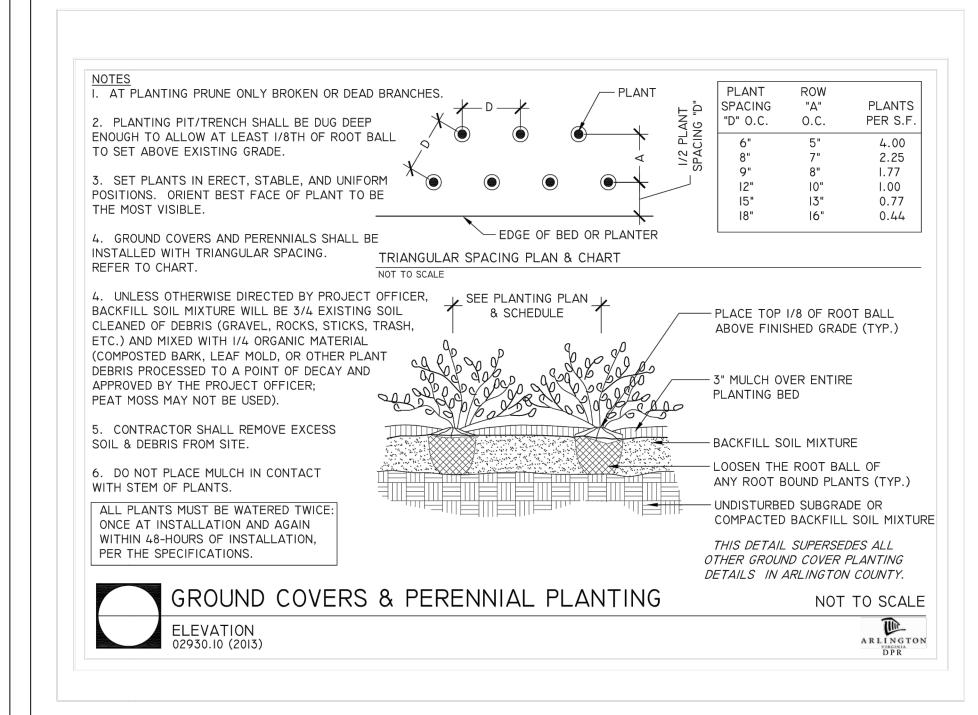
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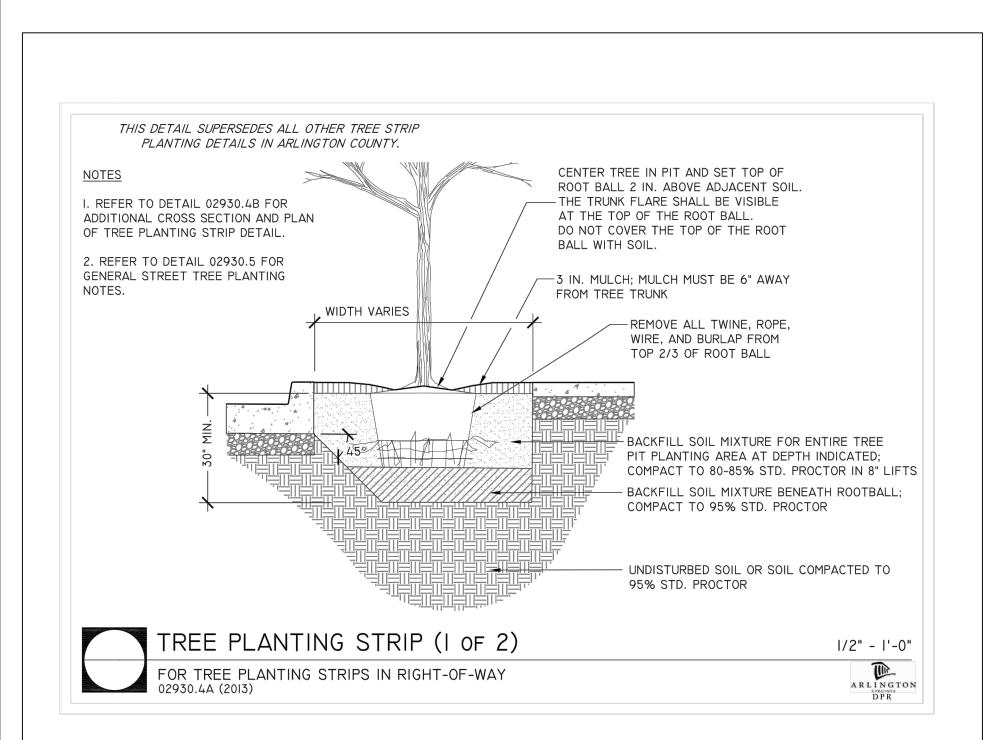


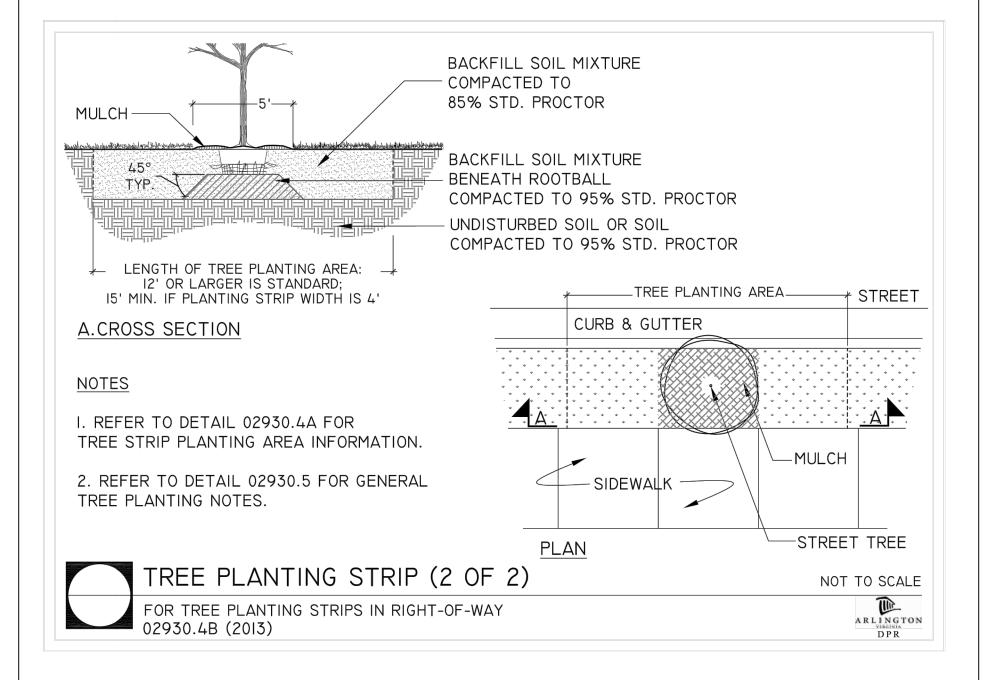


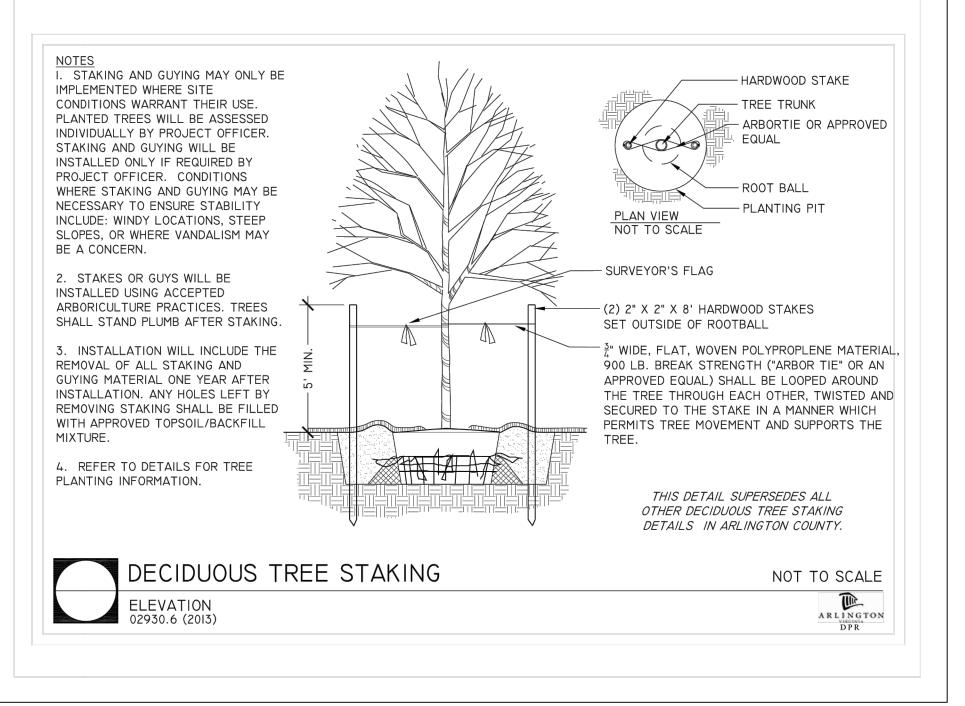














THIS SHEET IS FOR LANDSCAPE USE ONLY

OF

Drawn: A.K.

Checked: A.C.

Miss Utility Transmittal #: N/A

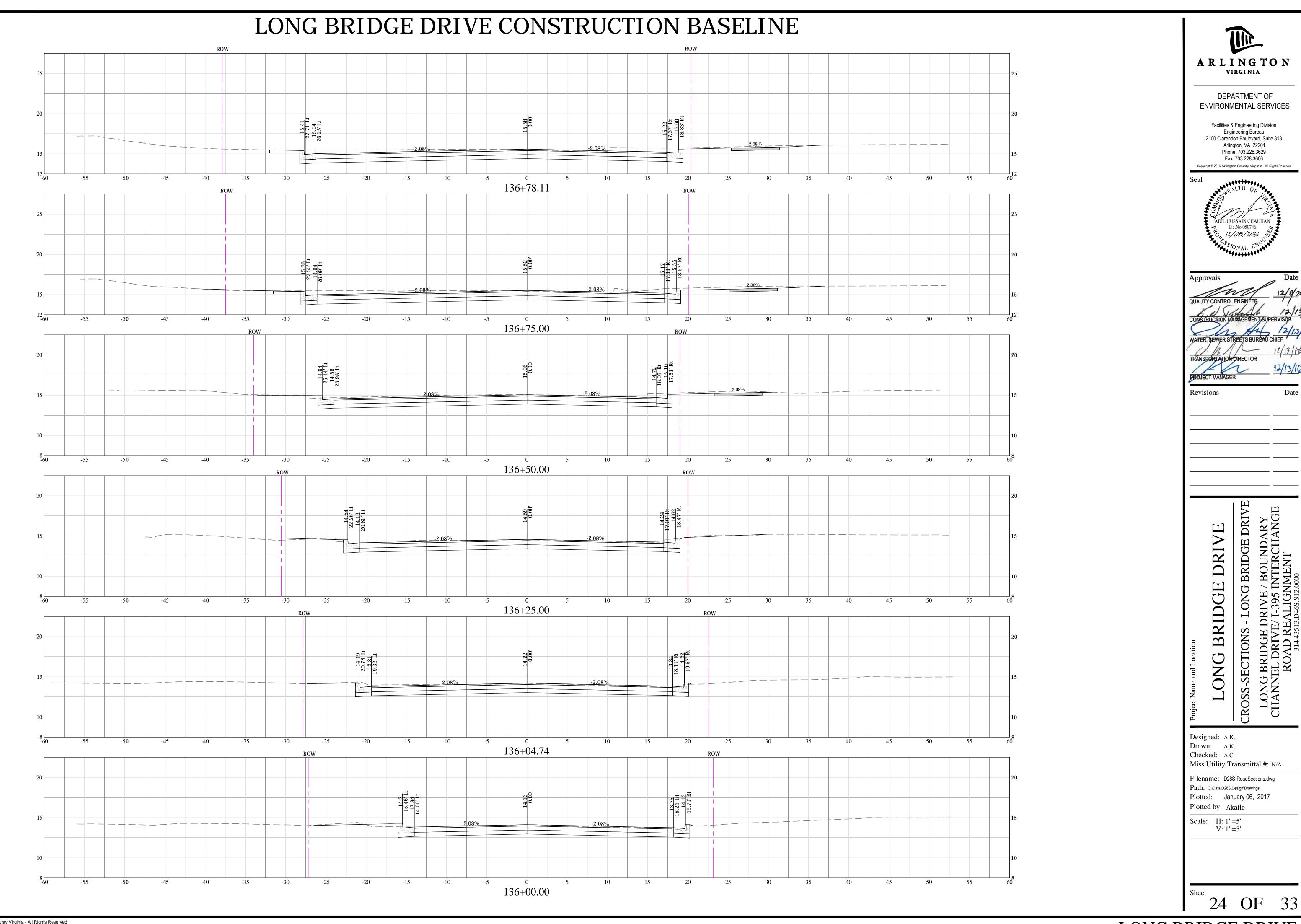
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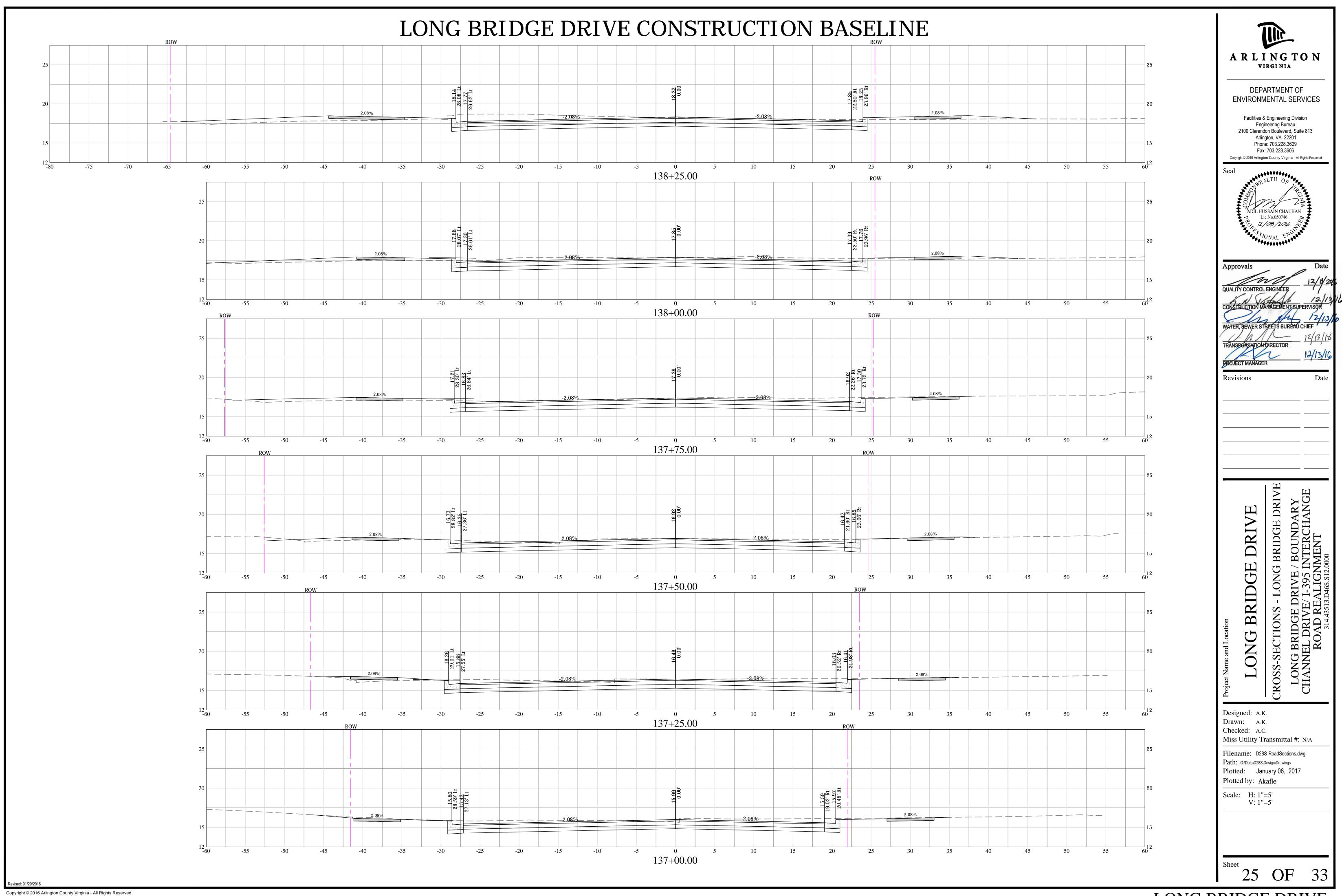
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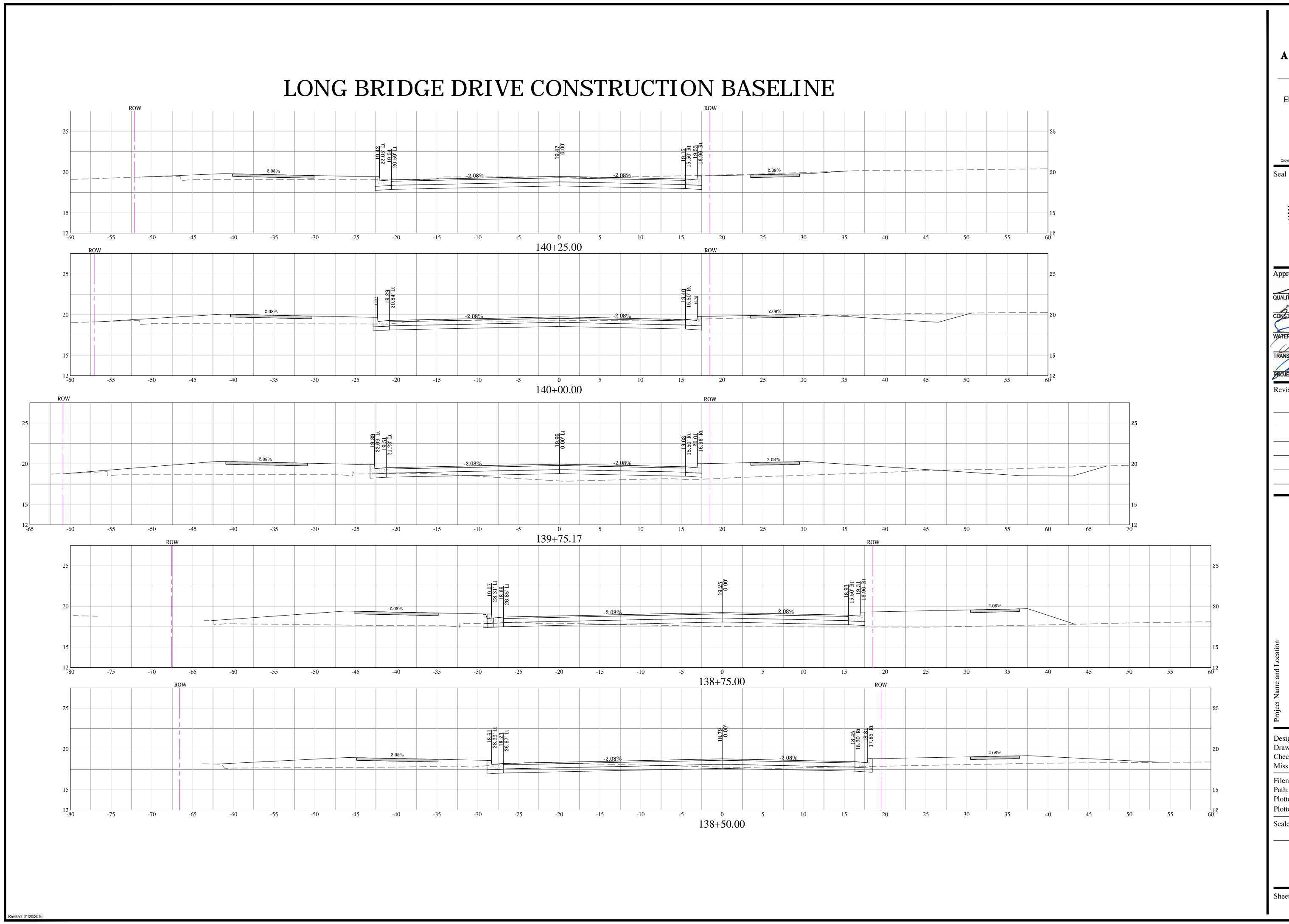
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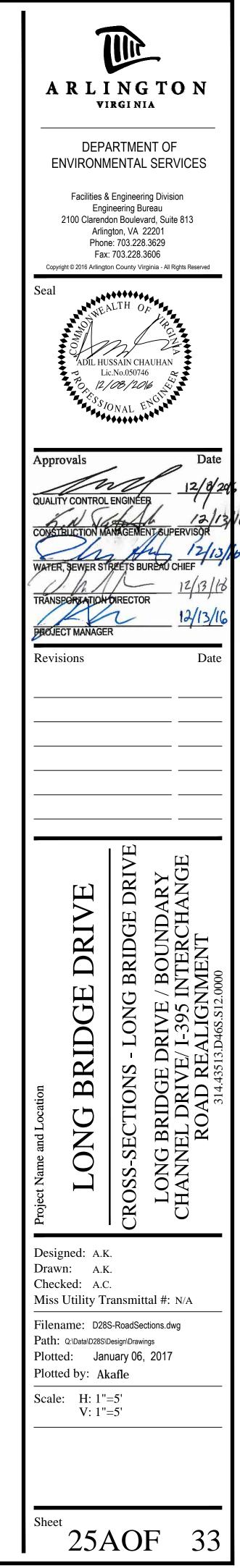
Plotted by: Akafle

Scale: AS NOTED

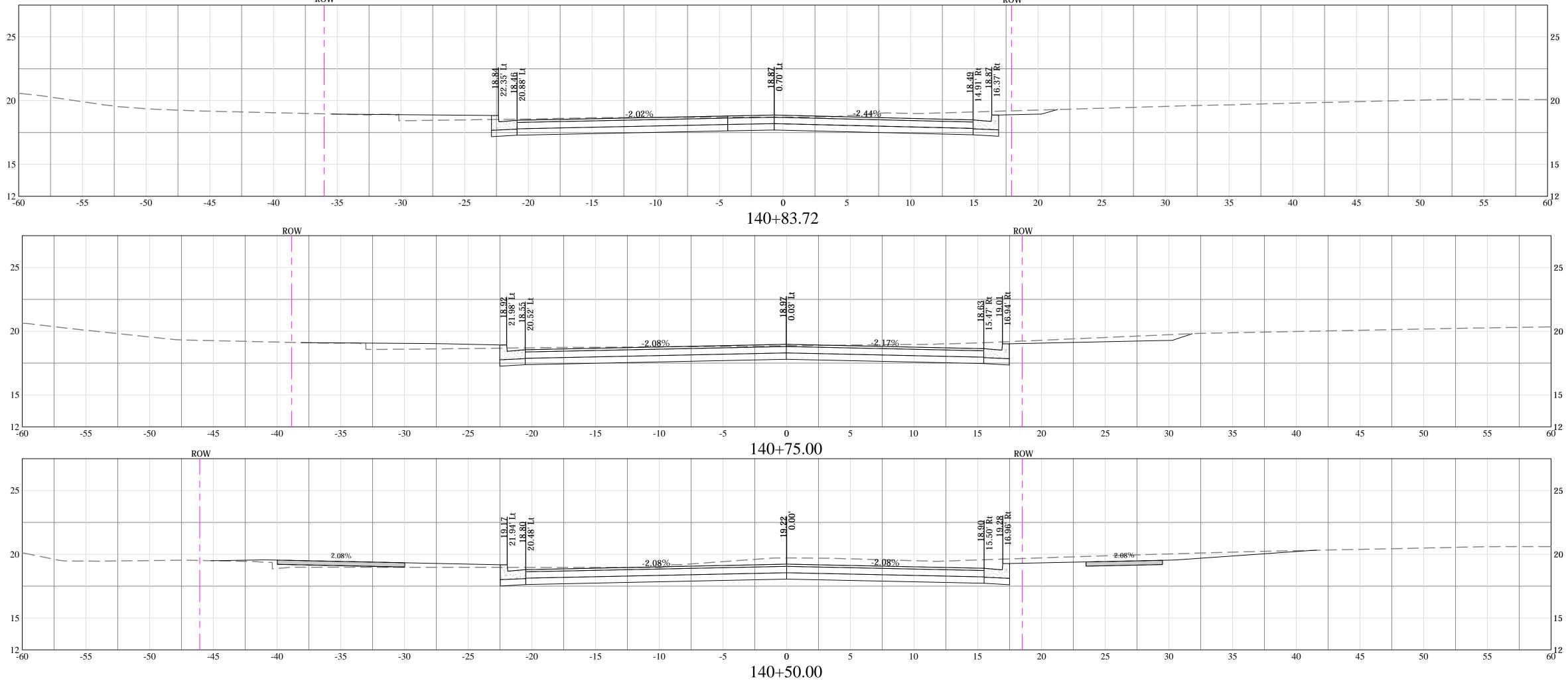




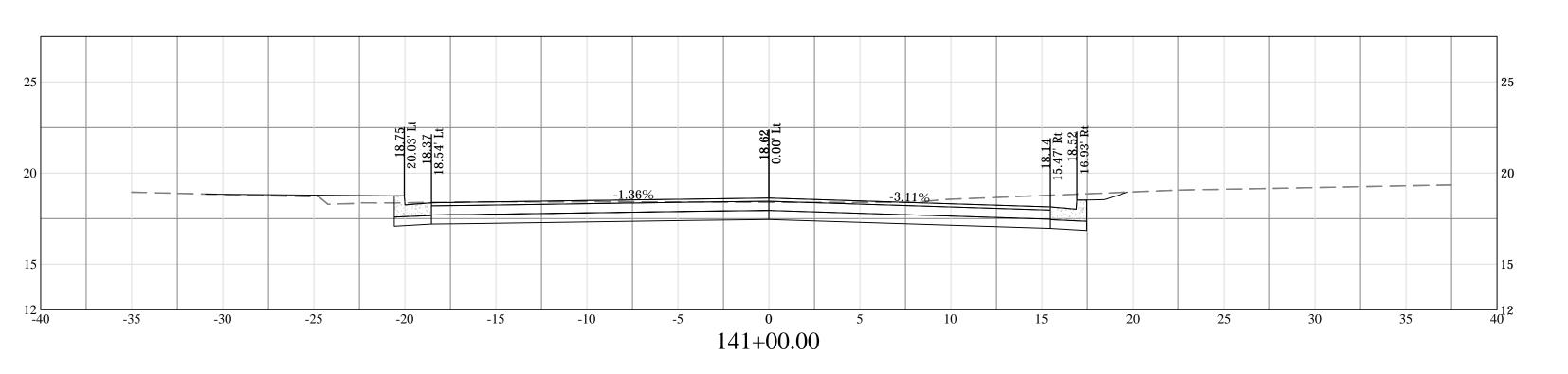


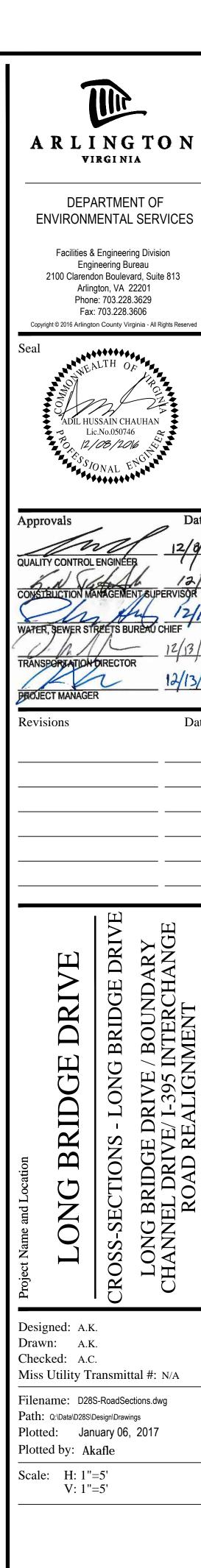


# LONG BRIDGE DRIVE CONSTRUCTION BASELINE



# LONG BRIDGE DRIVE INTERIM TIE-OUT

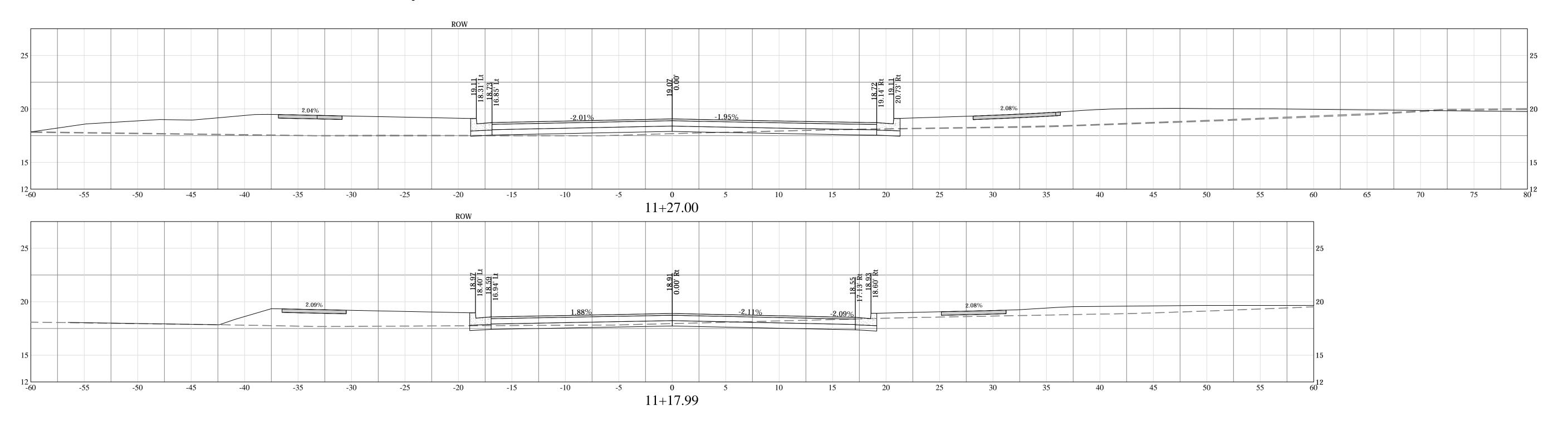




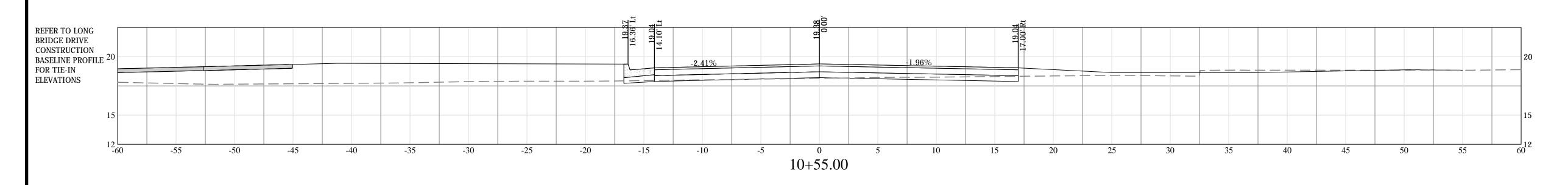
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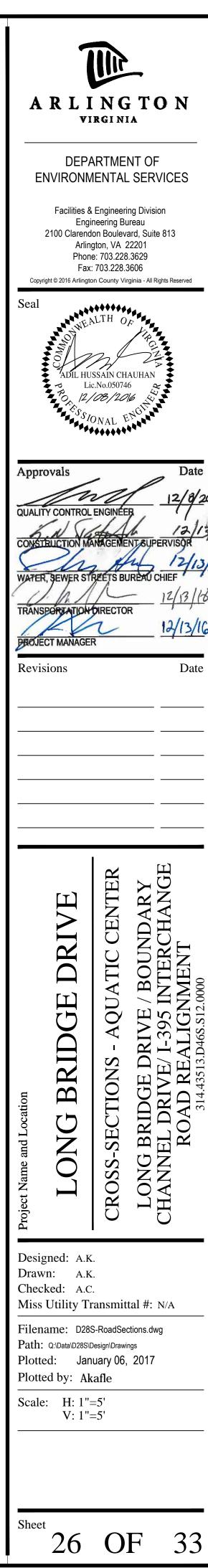
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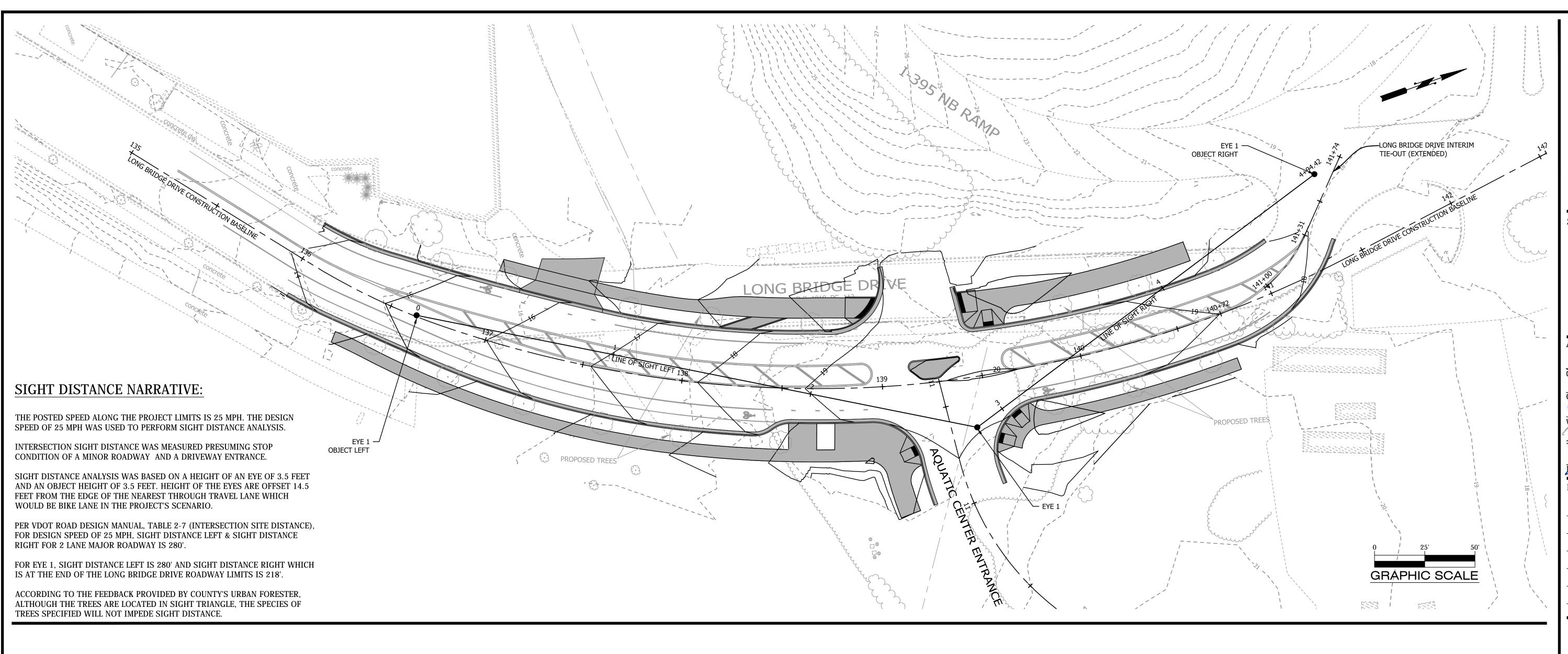
# AQUATIC CENTER ENTRANCE BASELINE

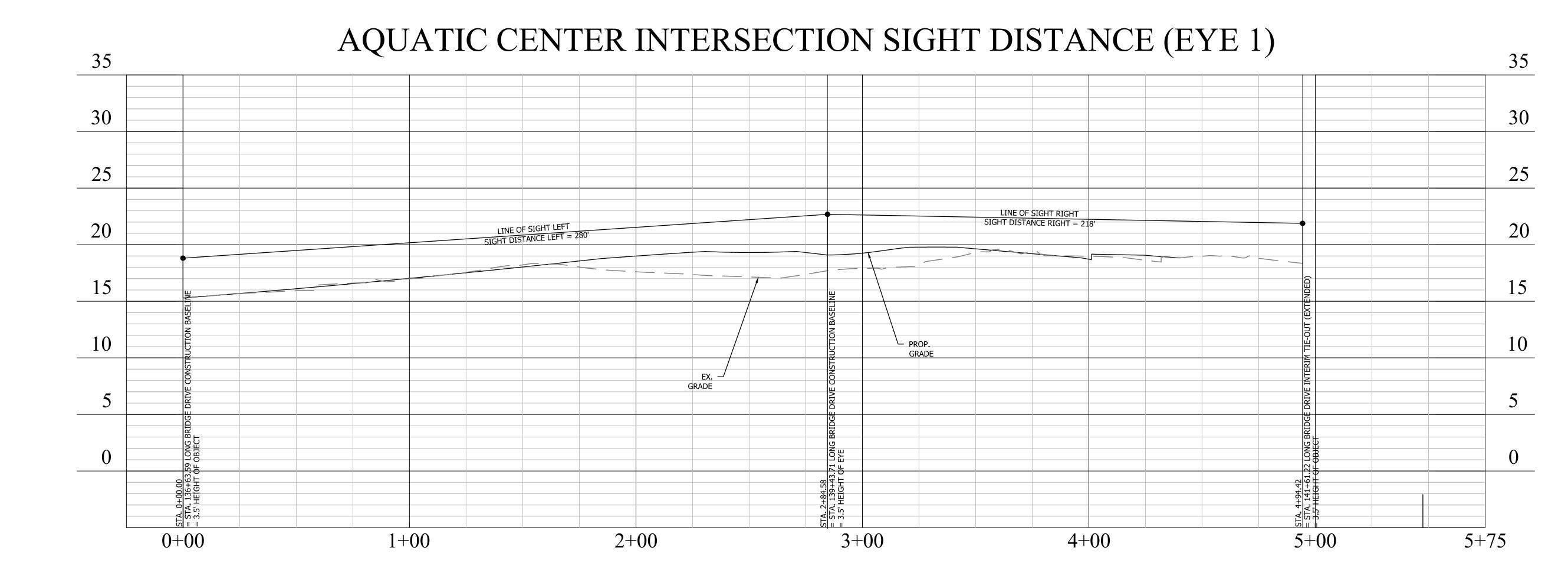


# I-395 RAMP ACCESS BASELINE







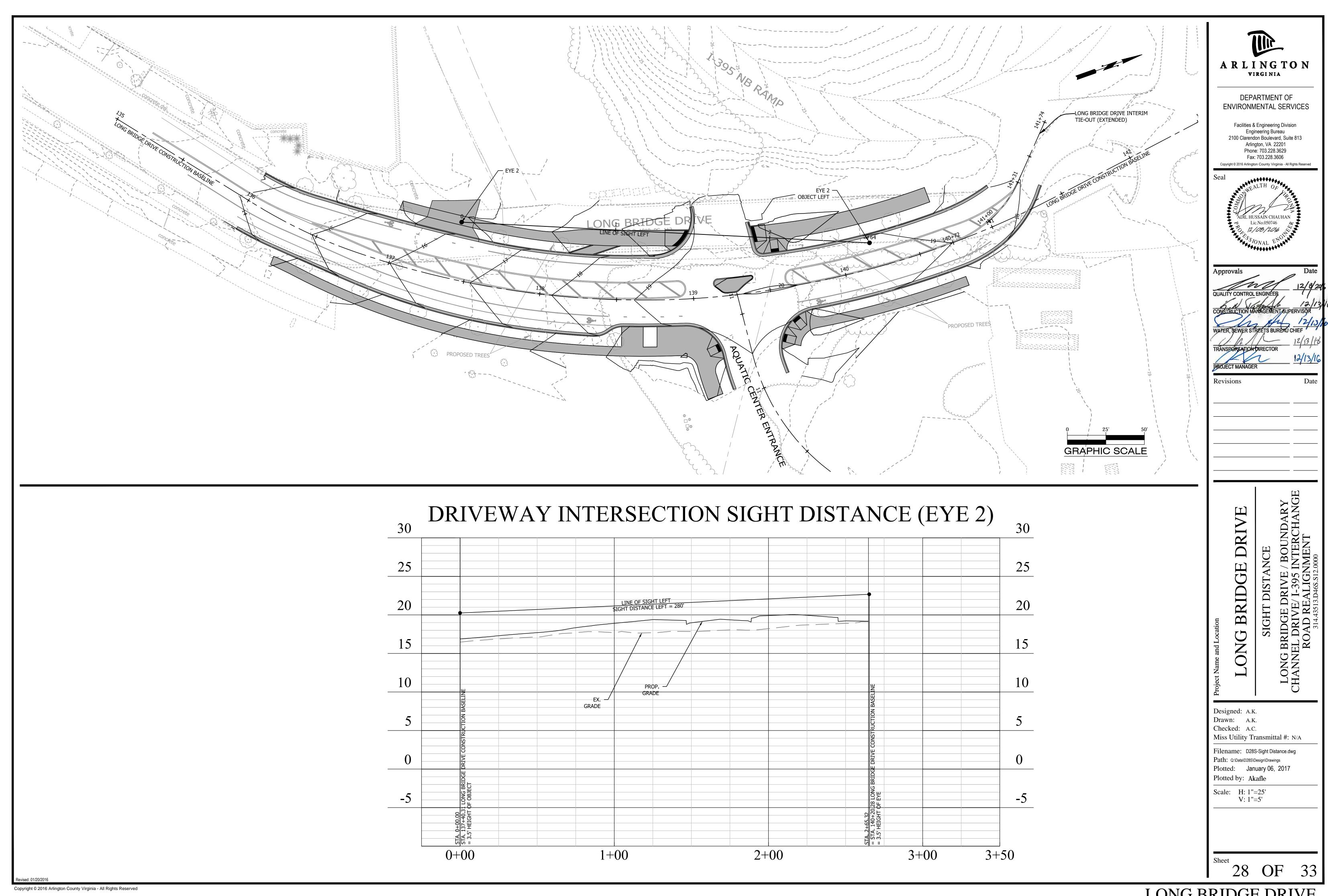


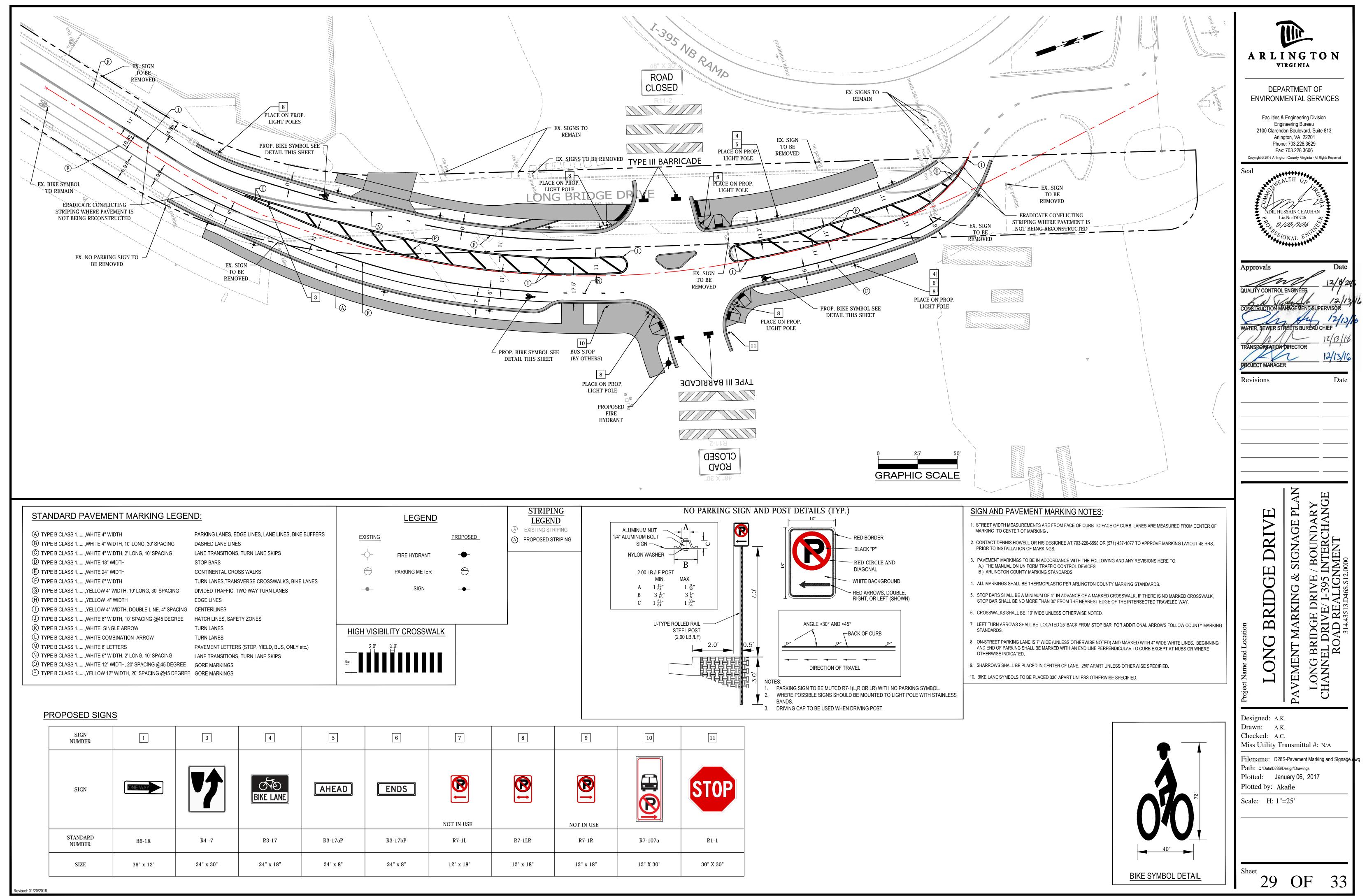
Designed: A.K. Drawn: A.K. Checked: A.C. Miss Utility Transmittal #: N/A Filename: D28S-Sight Distance.dwg Plotted: January 06, 2017 Plotted by: Akafle Scale: H: 1"=25' V: 1"=5' OF LONG BRIDGE DRIVE

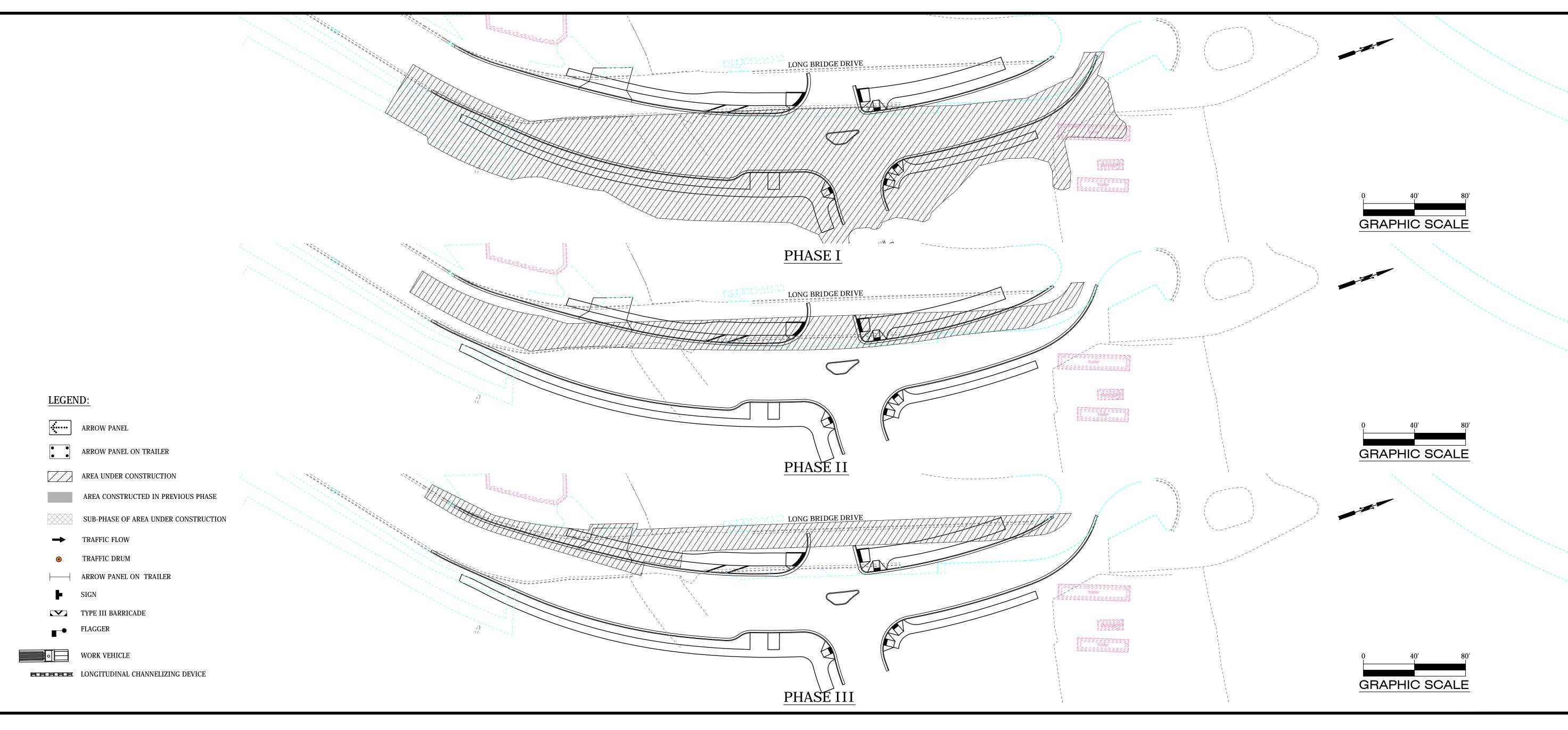
ARLINGTON

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







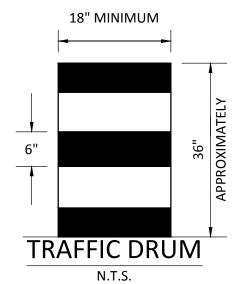
# WORK HOURS:

- 1. IN ARLINGTON RIGHT-OF-WAY 9 AM TO 4 PM (MON.-FRI.)
- 2. IN VDOT RIGHT-OF-WAY 9:30 AM TO 3 PM (MON.-THUR.) AND 9:30 AM TO 2 PM (FRI.)
- 3. ALL LANES SHALL BE FULLY OPEN TO TRAFFIC OUTSIDE THE ABOVE HOURS UNLESS SPECIFIED OTHERWISE IN THE MAINTENANCE OF TRAFFIC PLANS.

# FIRE DEPARTMENT NOTES:

- 1. 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.

  2. 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 CODES. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODES.
- 3. 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.



# MOT NOTES:

- 1. PARKING SHALL BE RESTRICTED BY THE COUNTY AS PART OF THE RIGHT-OF-WAY PERMIT. CONTACT DES-PERMITTING SECTION (703-228-4798) AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF WORK.
- 2. THE CONTRACTOR SHALL COORDINATE WITH ARLINGTON COUNTY TRANSIT BUREAU (703-228-3049) AT LEAST 2 WEEKS PRIOR TO COMMENCEMENT OF WORK FOR APPROVAL, IF TRANSIT IS AFFECTED.
- 3. ALL SIGNS AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION.
- 4. UNLESS OTHERWISE SHOWN ON THE MAINTENANCE OF TRAFFIC PLAN, THE TYPES AND DISTANCES BETWEEN CONSTRUCTION SIGNS ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD) AND ALL REVISIONS THERETO, THE VIRGINIA SUPPLEMENT TO THE MUTCD AND ALL REVISIONS THERETO, AND THE VIRGINIA WORK AREA PROTECTION MANUAL, 2011 (VA WAPM) AND ALL REVISIONS THERETO.
- NO WORK SHALL BEGIN UNTIL THE TEMPORARY CONTROL DEVICES ARE PLACED PER THIS MAINTENANCE OF TRAFFIC PLAN.
   NO LANE CLOSURES ON ARTERIAL STREETS WILL BE PERMITTED ON HOLIDAYS AS NOTED IN THE VIRGINIA DEPARTMENT OF
- TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.

  7. ALL FLAGGERS FOR WORK ZONES UNDER CONSTRUCTION SHALL USE APPROPRIATE DEVICES TO COMMUNICATE AND
- COORDINATE THEIR OPERATION TO ENSURE SAFE TRAVEL FOR VEHICLES THROUGH THE WORK ZONE.
- 8. CONTRACTOR SHALL BAG ALL EXISTING SIGNS THAT CONFLICT WITH PROPOSED MOT SIGNAGE. CONTRACTOR SHALL REMOVE BAGS AS APPROPRIATE.
- 9. CONTRACTOR IS RESPONSIBLE FOR PLANNING WORK WITHIN EACH PHASE TO COMPLETE THE WORK EFFICIENTLY AND EFFECTIVELY.
- 10. TRAFFIC CONTROL DEVICES, TEMPORARY PAVEMENT MARKINGS AND TEMPORARY ASPHALT CONCRETE, WHERE REQUIRED, SHALL BE INSTALLED FOR ALL PHASES. CONTRACTOR SHALL REMOVE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH TEMPORARY PAVEMENT MARKINGS.
- 11. THE CONTRACTOR SHALL FURNISH, INSTALL AND OPERATE TWO (2) VARIABLE MESSAGE BOARDS DURING CONSTRUCTION.
  12. PORTABLE VARIABLE MESSAGE SIGNS WITH CLOSURE INFORMATION MUST BE INSTALLED AHEAD OF WORK AREA 3 WEEKS
- 13. ALL TRAFFIC CONTROL DEVICES MUST BE INSTALLED IN STRICT COMPLIANCE WITH VA WORK PROTECTION MANUAL (2011).
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE WALKWAYS FOR PEDESTRIANS WITHIN OR AROUND THE CONSTRUCTION AREA.
- 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ACTIVITIES WITH ADJACENT ALLEY/DRIVEWAY ENTRANCES TO PROVIDE ADEQUATE EGRESS/INGRESS AT ALL TIMES. OWNERS OF PROPERTIES WHERE DRIVEWAYS ARE AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK IN THE APPLICABLE WORK ZONE. THE NOTIFICATIONS SHALL INCLUDE DETAILED DIRECTIONS ON THE EXIT PROCEDURES FROM DRIVEWAYS IN WORK ZONES.
- 16. DIRECTIONAL ARROWS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS ARE FOR INFORMATION ONLY AND ARE NOT TO BE PLACED AS PAVEMENT MARKINGS.
- 17. 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.

  18. CONTRACTOR TO CONTACT ARLINGTON COUNTY DEPT. OF TRANSPORTATION PRIOR TO INSTALLATION OF PERMANENT
- 19. ONE LANE CLOSURE IN EACH DIRECTION OF TRAVEL WILL BE PERMITTED FOR FINAL PAVEMENT OVERLAY.
- 20. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN THE FLOW OF TRAFFIC ON ANY INTERSECTION WITHIN THE
- WORK AREA.
  21. CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY PUBLIC SCHOOLS TWO WEEKS PRIOR TO STARTING CONSTRUCTION.



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

ADIL HUSSAIN CHAUHAN
Lic.No.050746

Approvals

| 12/8/2
| QUALITY CONTROL ENGINEER

| CONSTRUCTION MANAGEMENT SUPERVISOR

| WATER, SEWER STREETS BUREAU CHIEF

| TRANSPORTATION DIRECTOR

| 12/13/1
| DROJECT MANAGER

| Revisions Date

ONG BRIDGE DRIVE

OTES & CONSTRUCTION PHASING

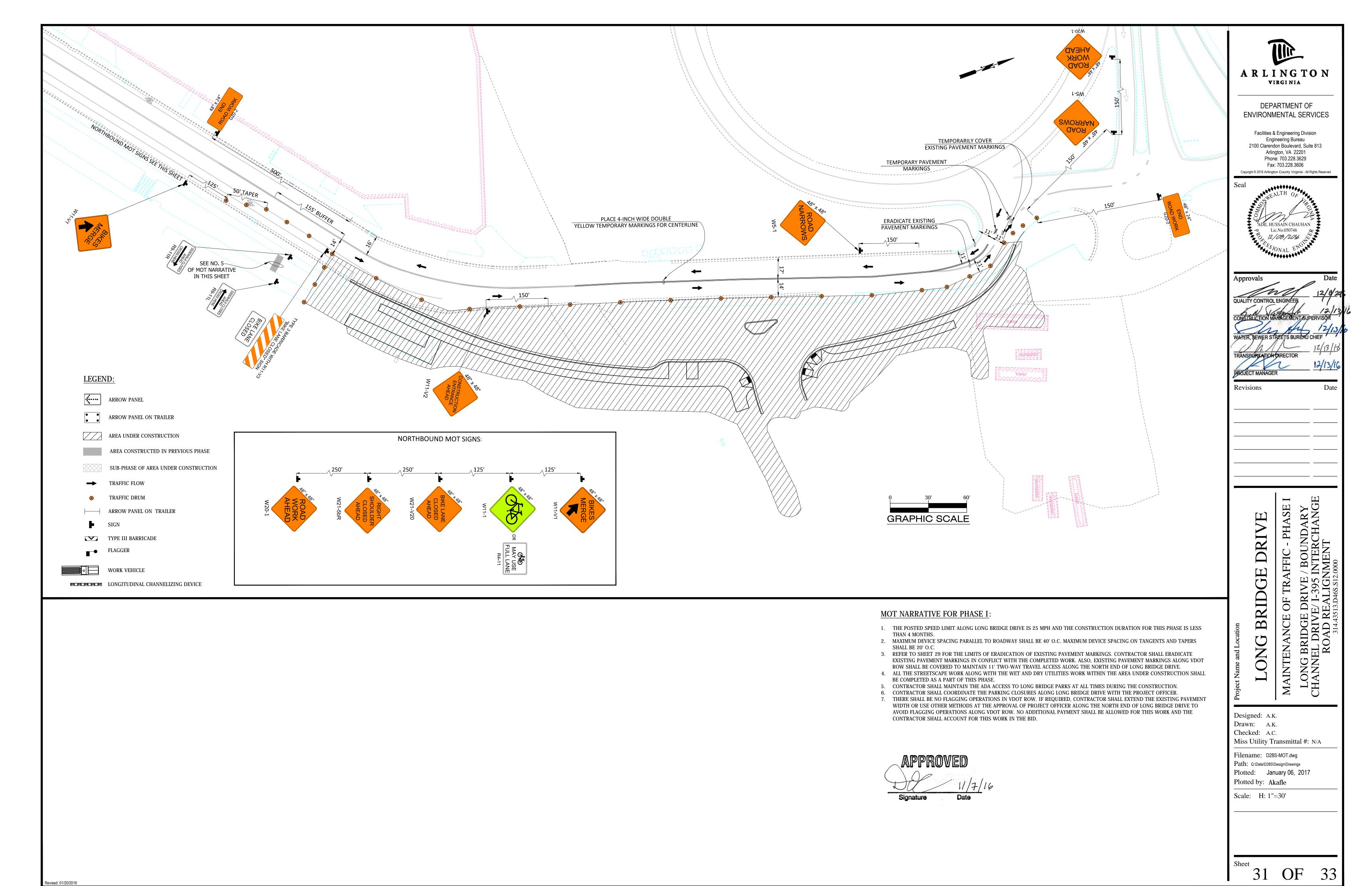
AG BRIDGE DRIVE / BOUNDARY

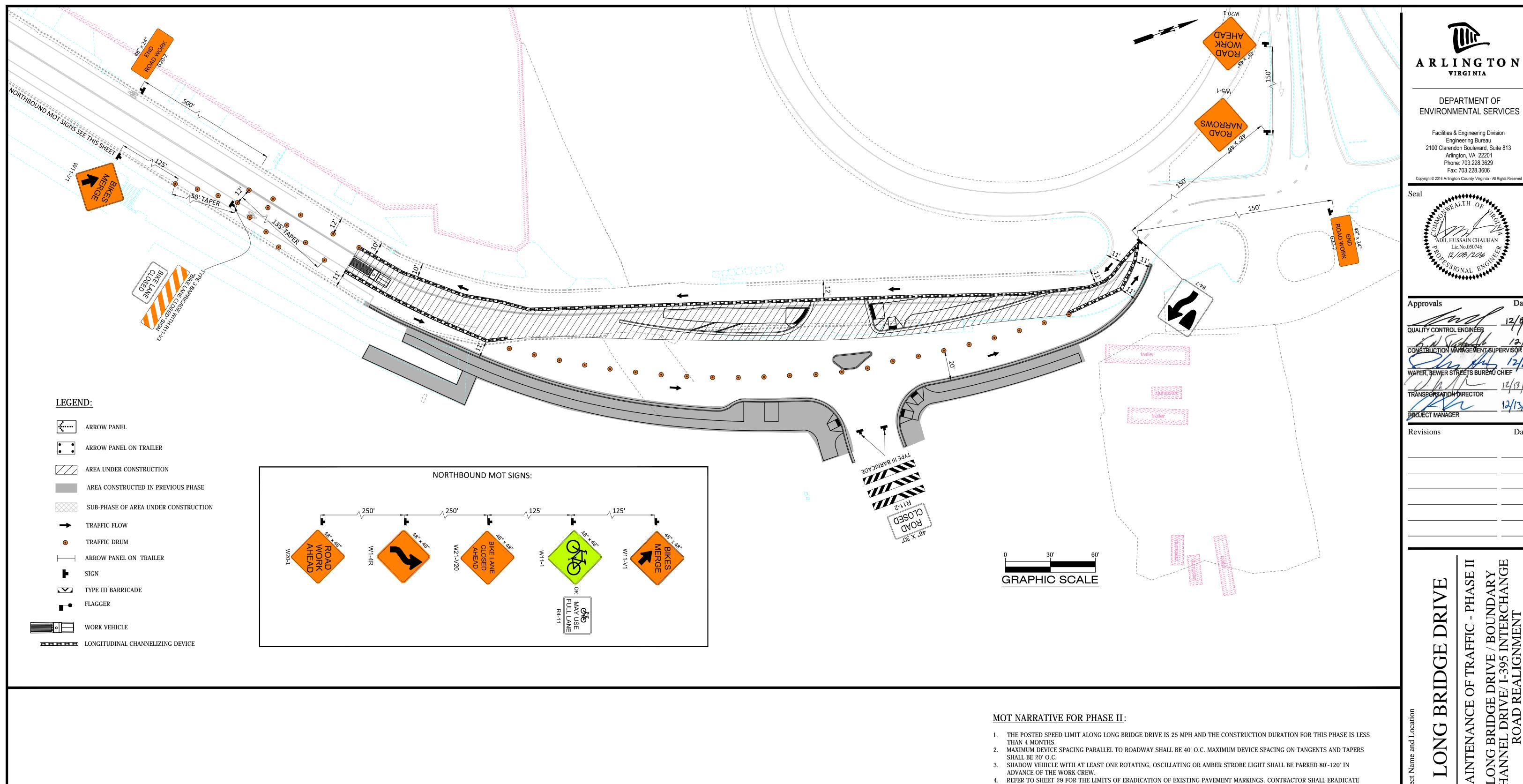
NEL DRIVE / 1-395 INTERCHANGE

Designed: A.K.
Drawn: A.K.
Checked: A.C.
Miss Utility Transmittal #: N/A

Filename: D28S-MOT-PHASING.dwg
Path: Q:\Data\D28S\Design\Drawings
Plotted: January 06, 2017
Plotted by: Akafle

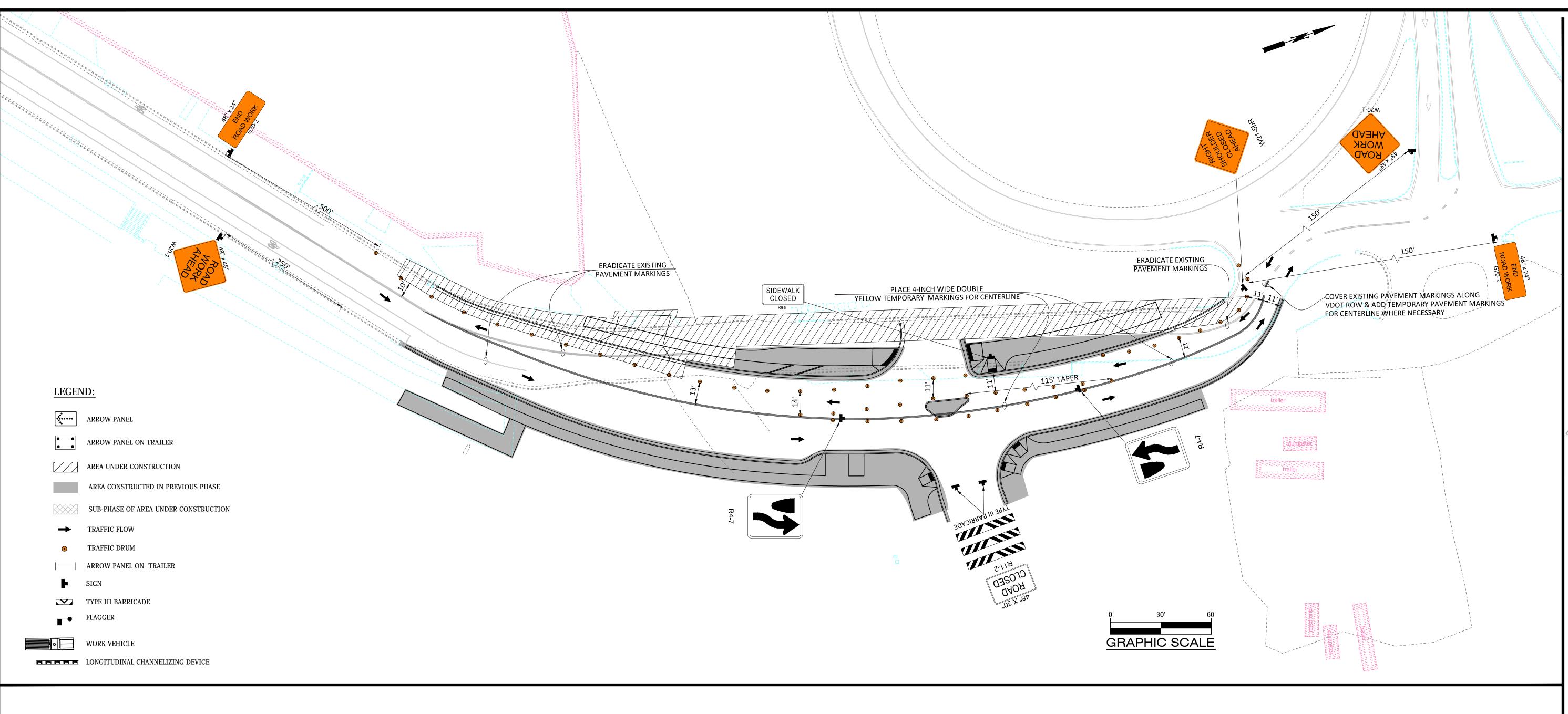
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- EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE COMPLETED WORK.
- 5. ALL THE STREETSCAPE WORK ALONG WITH THE WET AND DRY UTILITIES WORK WITHIN THE AREA UNDER CONSTRUCTION SHALL BE COMPLETED AS A PART OF THIS PHASE.
- 6. CONTRACTOR SHALL COORDINATE THE PARKING CLOSURES ALONG LONG BRIDGE DRIVE WITH THE PROJECT OFFICER.
- THERE SHALL BE NO FLAGGING OPERATIONS IN VDOT ROW. IF REQUIRED, CONTRACTOR SHALL EXTEND THE EXISTING PAVEMENT WIDTH OR USE OTHER METHODS AT THE APPROVAL OF PROJECT OFFICER ALONG THE NORTH END OF LONG BRIDGE DRIVE TO AVOID FLAGGING OPERATIONS ALONG VDOT ROW. NO ADDITIONAL PAYMENT SHALL BE ALLOWED FOR THIS WORK AND THE CONTRACTOR SHALL ACCOUNT FOR THIS WORK IN THE BID.

Designed: A.K. Drawn: A.K. Checked: A.C. Miss Utility Transmittal #: N/A Filename: D28S-MOT-PHASE II.dwg Path: Q:\Data\D28S\Design\Drawings Plotted: January 06, 2017 Plotted by: Akafle Scale: H: 1"=30'



# MOT NARRATIVE FOR PHASE III:

- 1. THE POSTED SPEED LIMIT ALONG LONG BRIDGE DRIVE IS 25 MPH AND THE CONSTRUCTION DURATION FOR THIS PHASE IS LESS
- 2. MAXIMUM DEVICE SPACING PARALLEL TO ROADWAY SHALL BE 40' O.C. MAXIMUM DEVICE SPACING ON TANGENTS AND TAPERS SHALL BE 20' O.C.
- VEHICULAR ACCESS FOR THE FACILITY IS MAINTAINED AT ALL TIMES.

  4. REFER TO SHEET 29 FOR THE LIMITS OF ERADICATION OF EXISTING PAVEMENT MARKINGS. CONTRACTOR SHALL ERADICATE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE COMPLETED WORK. IF NEEDED, EXISTING PAVEMENT MARKINGS ALONG VDOT ROW SHALL BE COVERED TO MAINTAIN ATLEAST 10' TWO-WAY TRAVEL ACCESS ALONG THE NORTH END OF LONG BRIDGE

3. CONSTRUCTION FOR THE WORK ON AND AROUND THE SELF STORAGE FACILITY ENTRANCE SHALL BE SEQUENCED SUCH THAT

- 5. ALL THE STREETSCAPE WORK ALONG WITH THE WET AND DRY UTILITIES WORK WITHIN THE AREA UNDER CONSTRUCTION SHALL
- BE COMPLETED AS A PART OF THIS PHASE.

  6. THERE SHALL BE NO FLAGGING OPERATIONS IN VDOT ROW. IF REQUIRED, CONTRACTOR SHALL EXTEND THE EXISTING PAVEMENT WIDTH OR USE OTHER METHODS AT THE APPROVAL OF PROJECT OFFICER ALONG THE NORTH END OF LONG BRIDGE DRIVE TO AVOID FLAGGING OPERATIONS ALONG VDOT ROW. NO ADDITIONAL PAYMENT SHALL BE ALLOWED FOR THIS WORK AND THE CONTRACTOR SHALL ACCOUNT FOR THIS WORK IN THE BID.

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| _=== |                           | Fax:  | 703.228.3<br>n County Vir      | 3606<br>ginia - All Rights Reserved  |          |
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