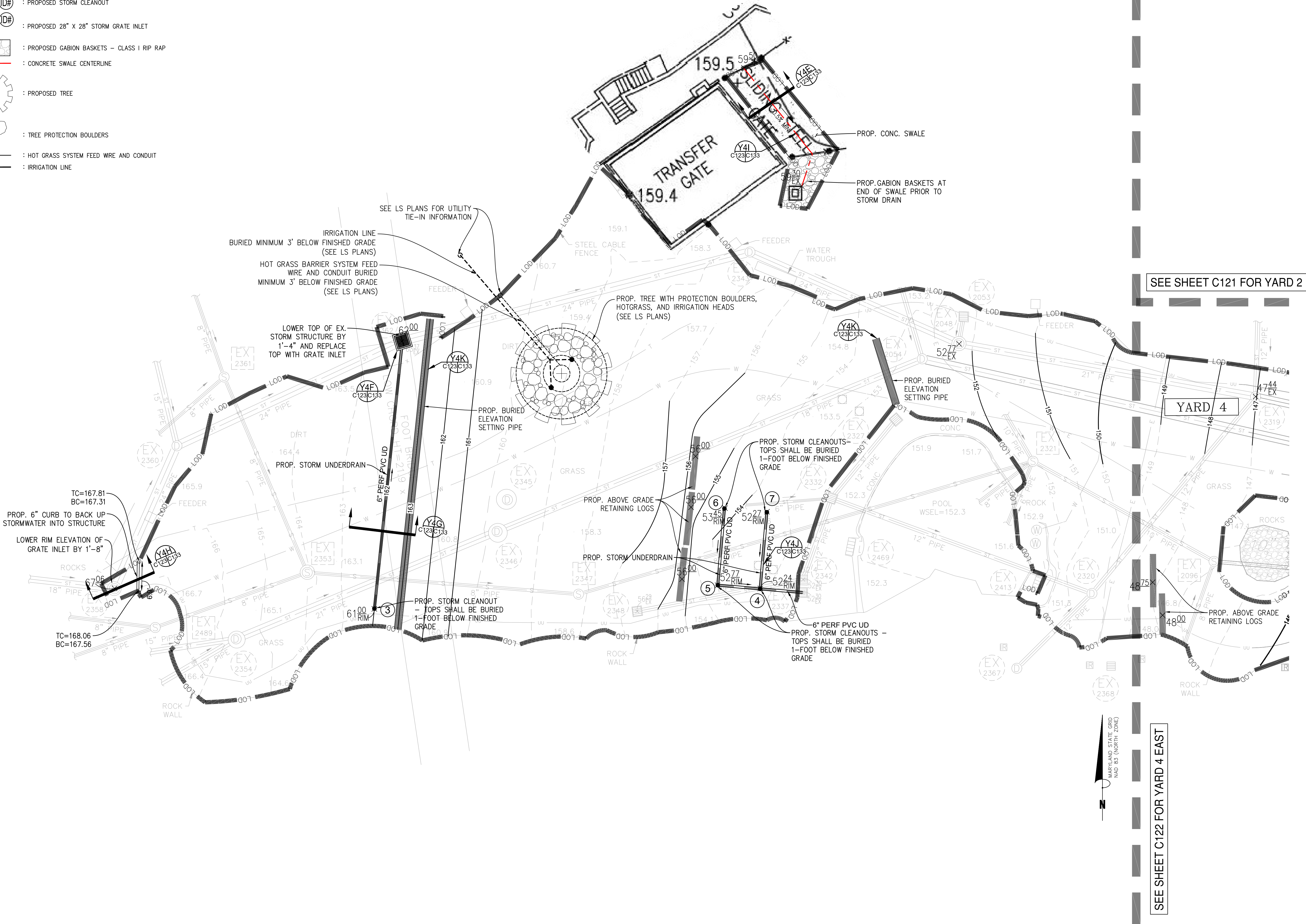


LEGEND:

- LOD : LOD - LIMITS OF DISTURBANCE
- WOODEN LOGS (UNTREATED CEDAR OR DEADFALL) - SEE NOTES
- BURIED 12" CONCRETE PIPE - SEE NOTES ON THIS SHEET
- PROPOSED SPOT ELEVATION
- H.V. SLOPE
- PROPOSED SLOPE MARKER
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STORM PIPE
- PROPOSED STORM CLEANOUT
- PROPOSED 28" X 28" STORM GRATE INLET
- PROPOSED GABION BASKETS - CLASS I RIP RAP
- CONCRETE SWALE CENTERLINE
- PROPOSED TREE
- TREE PROTECTION BOULDERS
- HOT GRASS SYSTEM FEED WIRE AND CONDUIT
- IRRIGATION LINE



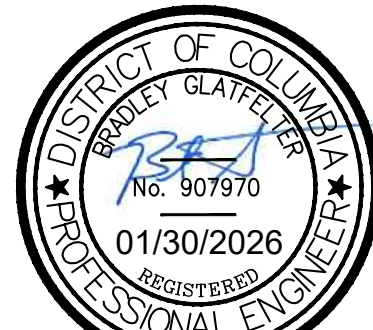
SITE PLAN NOTES

- BURIED ELEVATION SETTING PIPES SHALL BE 12" REINFORCED CONCRETE PIPE W/FLOWABLE FILL
- ABOVE-GRADE LOGS SHALL BE 16"-20" DEADFALL - SEE LS501 FOR DETAILS

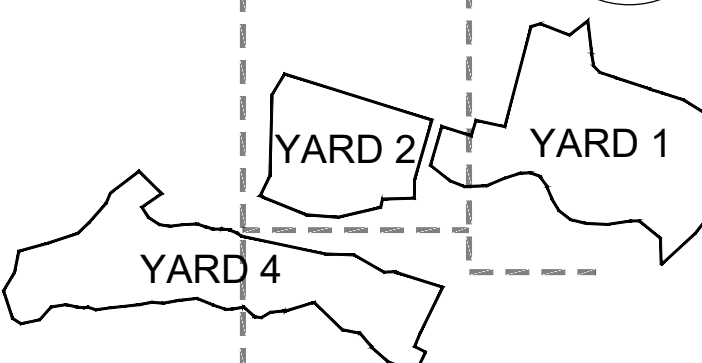
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Tel: 215-923-2020 Fax: 215-574-0952

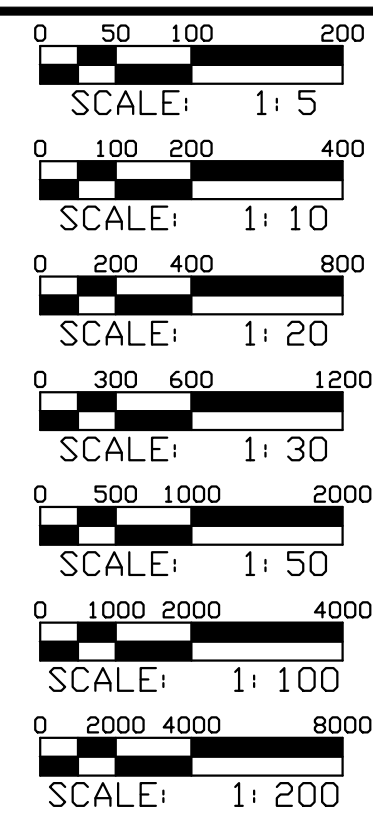
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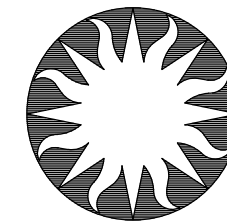
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DATE
01/30/2026

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FINAL SUBMISSION

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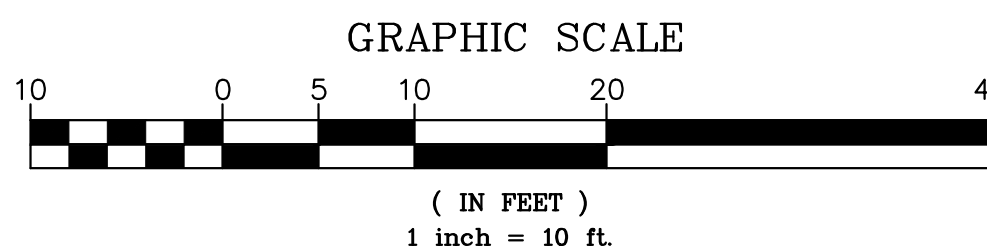
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600 Maryland Avenue S.W. Suite 5001
Washington, DC 20024

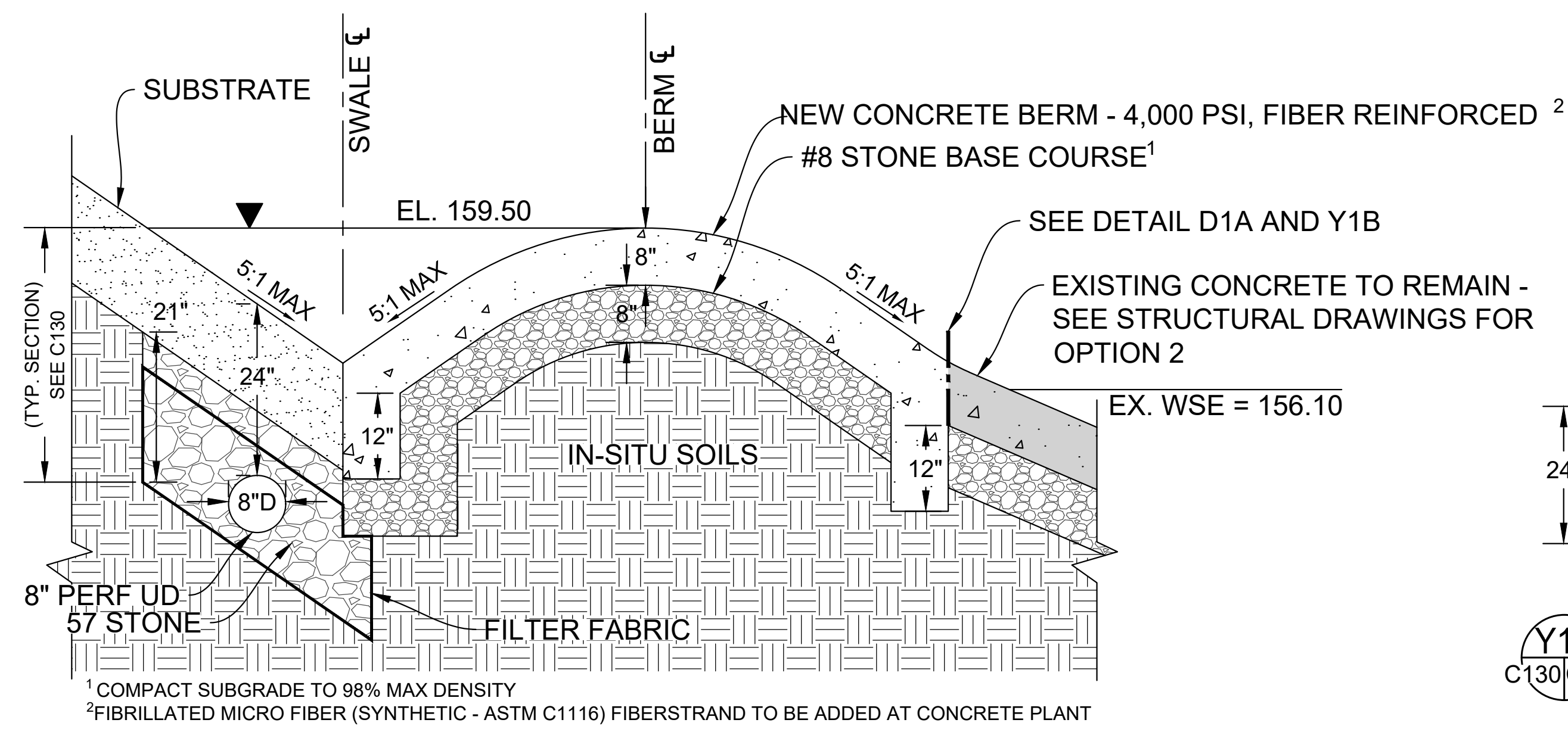
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NATIONAL ZOOLOGICAL PARK
3001 CONNECTICUT AVE NW
WASHINGTON, DC 20008

PROJECT TITLE
SF PROJECT NUMBER
AVE PROJECT NUMBER
MITIGATE STORMWATER AT
ELEPHANT YARDS
2233104
20230426

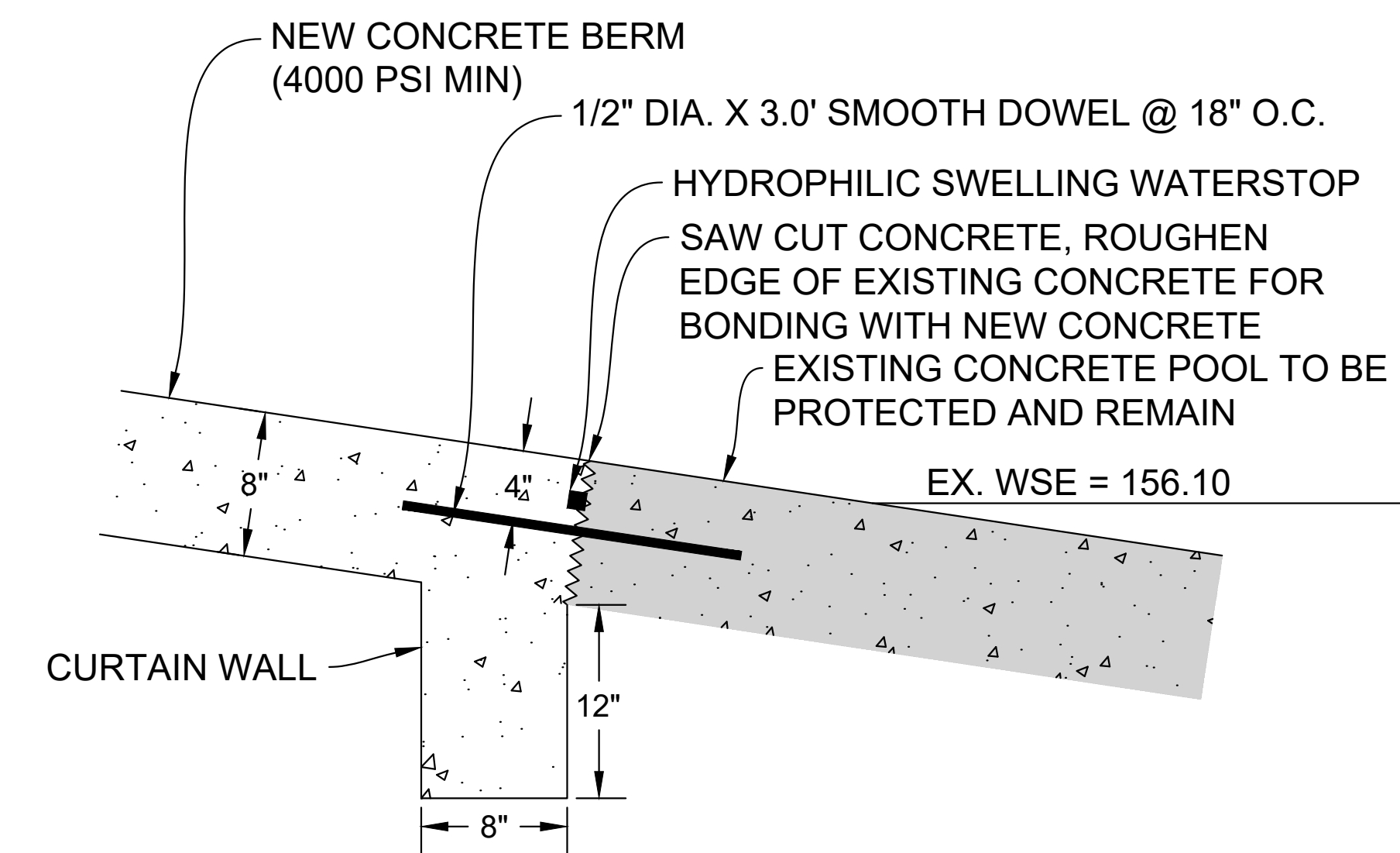
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DRAWING TYPE
WORKING STAFF
SITE & GRADING PLAN -
YARD 4 WEST
CIVIL
KJB JVM KJB
DESIGNED BY DRAWN BY CHECKED BY

SHEET NO.
16 OF 39
C 1 23
DISCIPLINE TYPE SEQUENCE

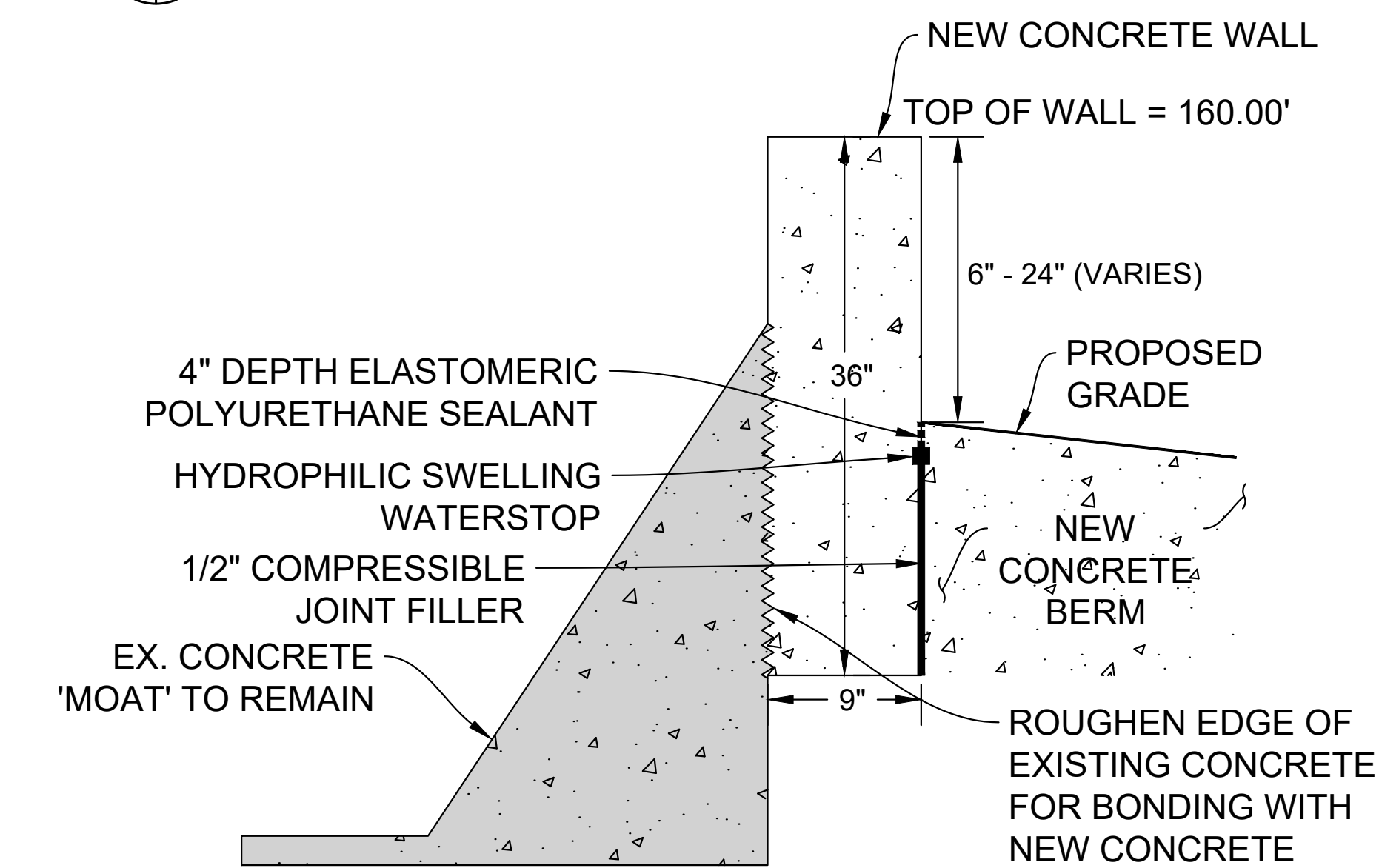




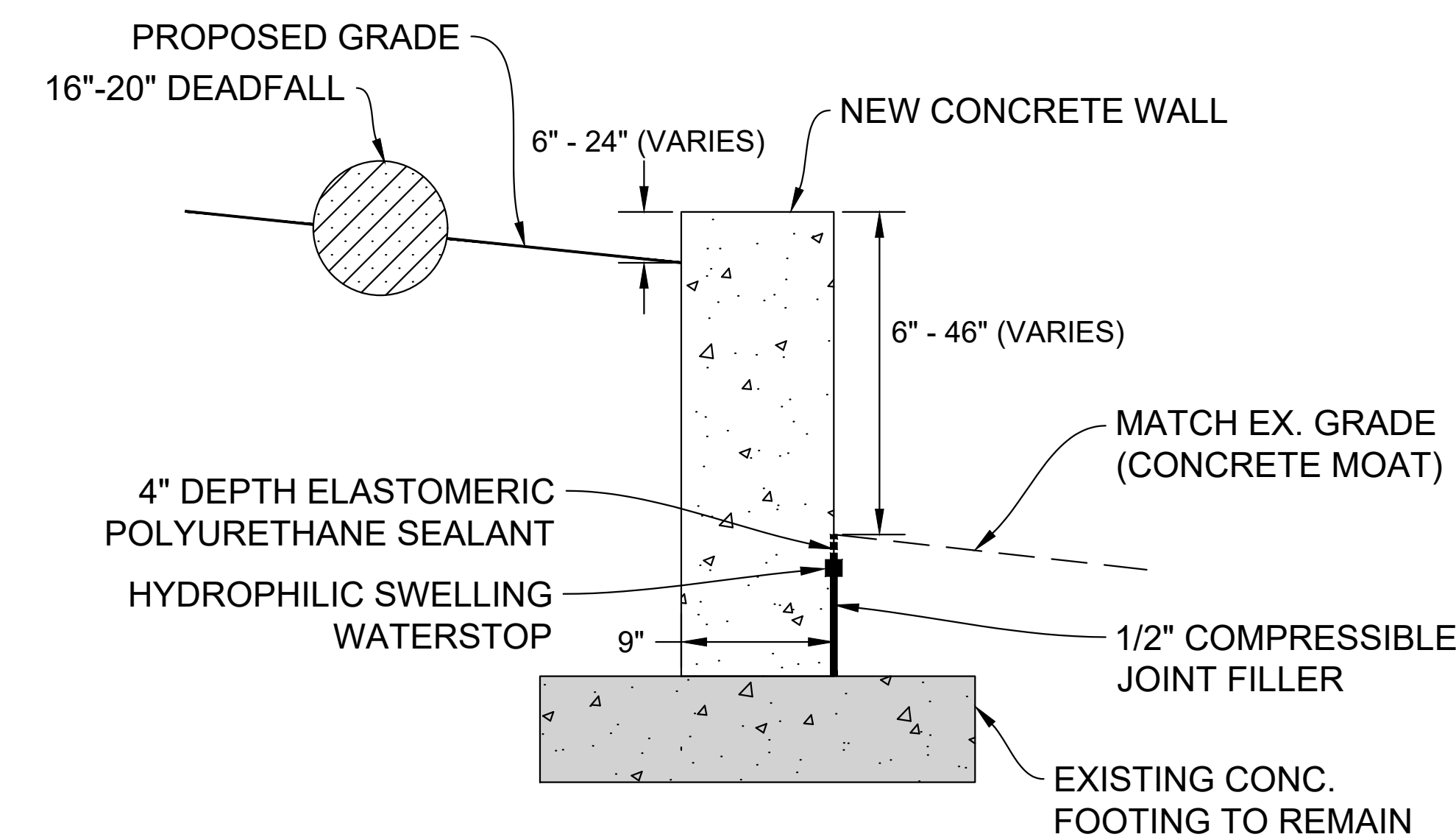
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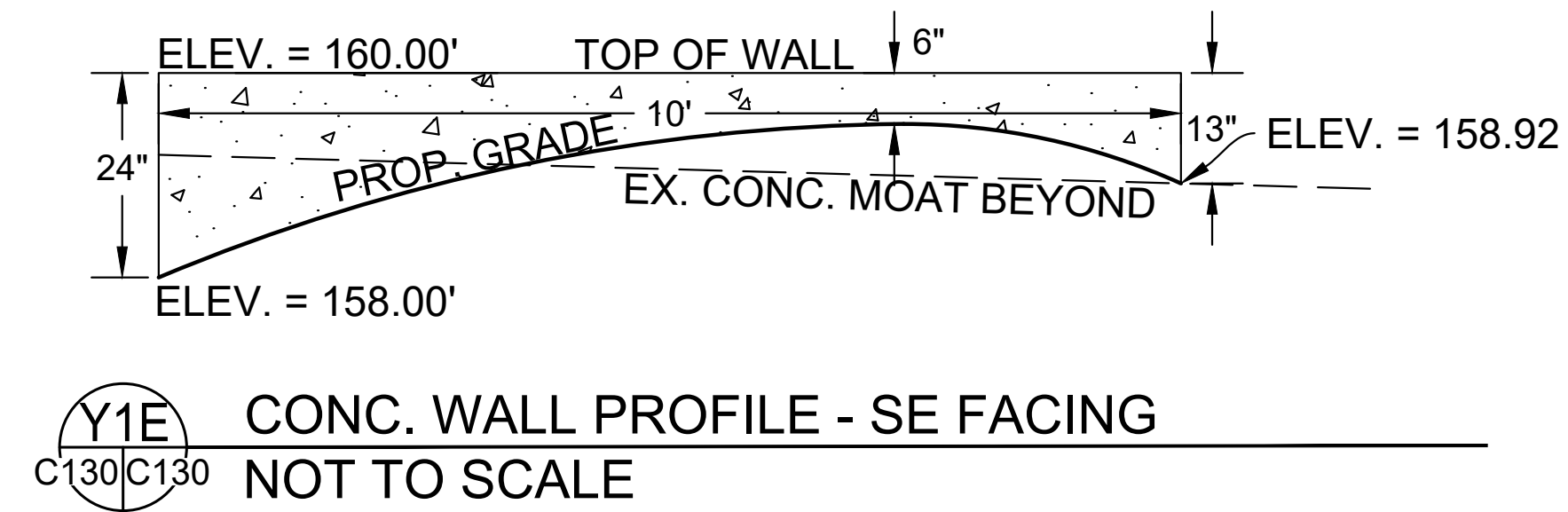
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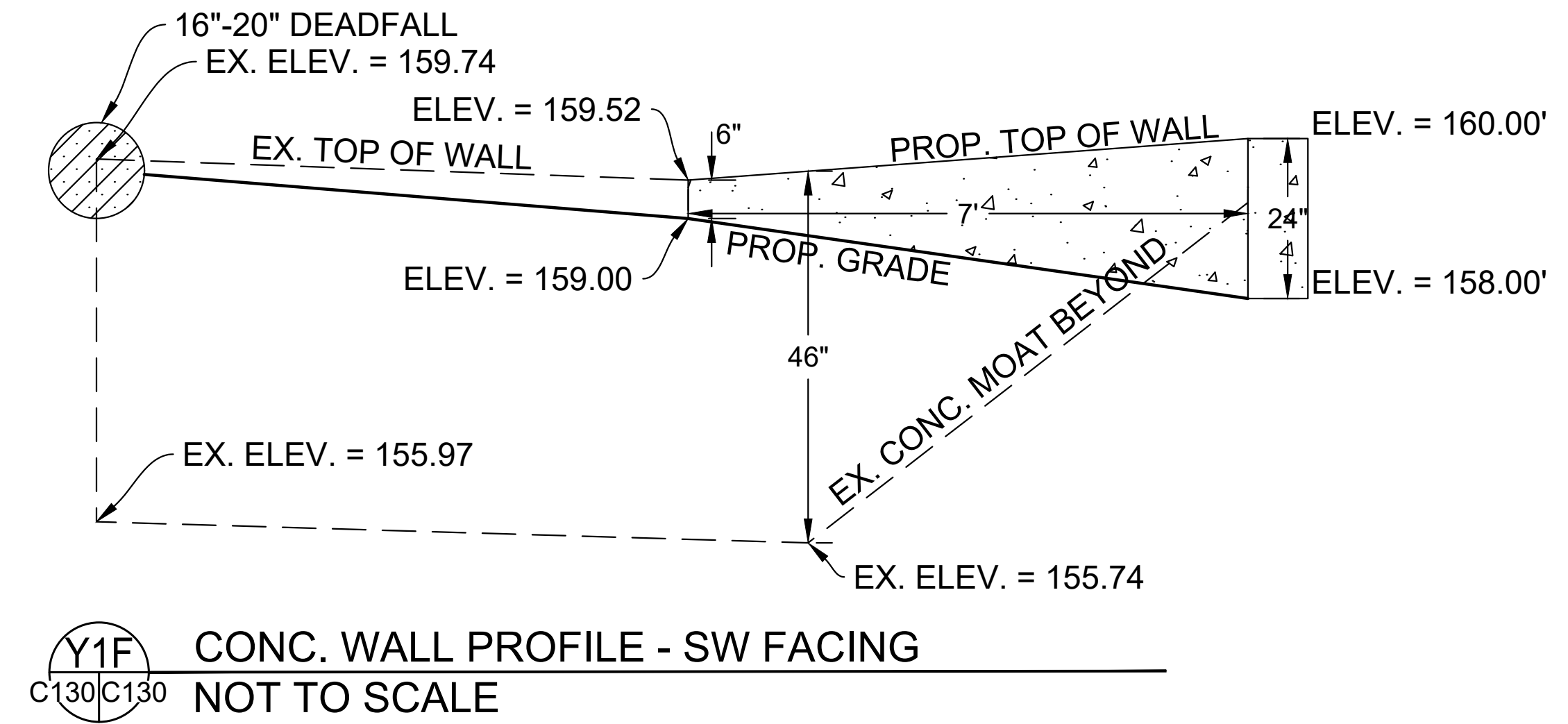
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C130/C130 NOT TO SCALE



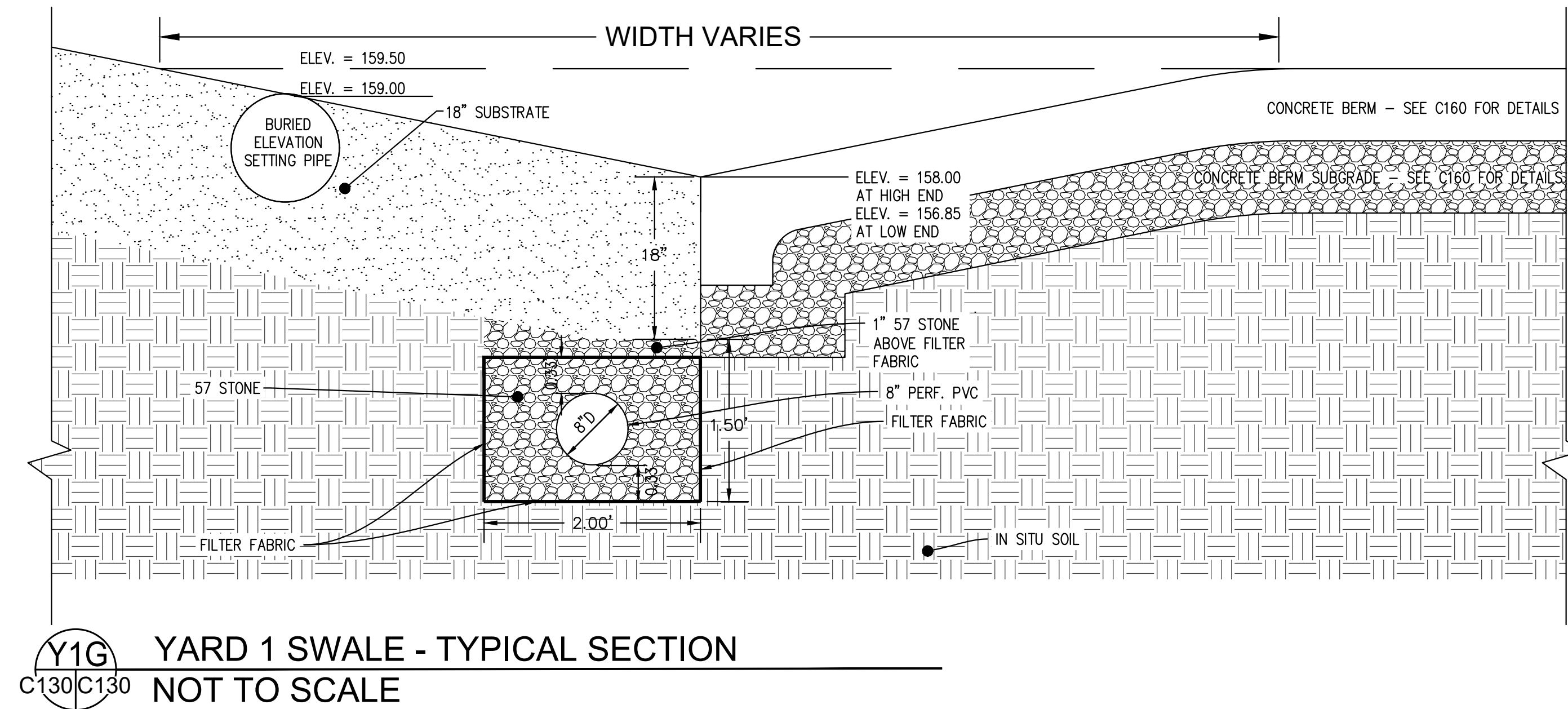
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C130/C130 NOT TO SCALE



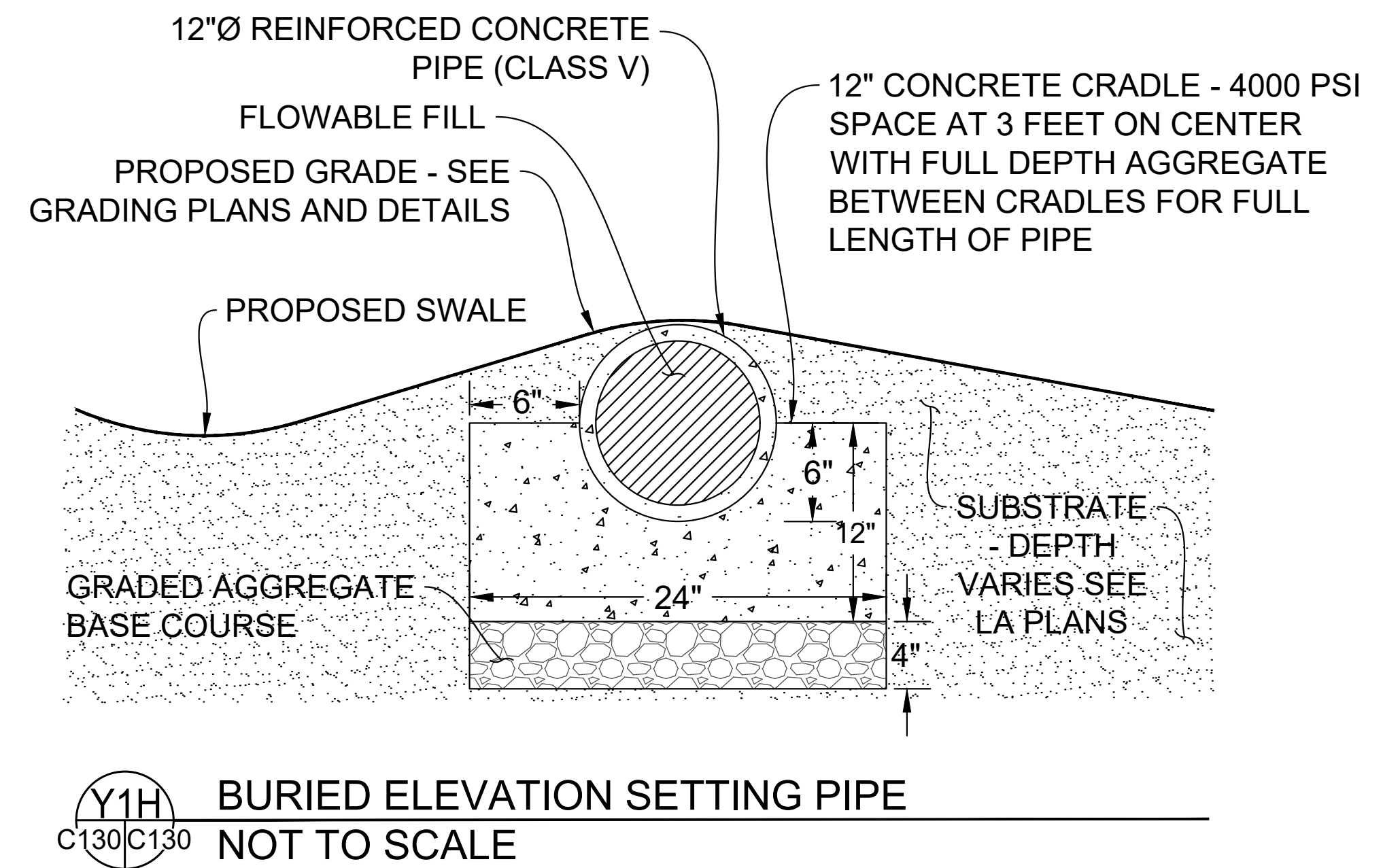
Y1E CONC. WALL PROFILE - SE FACING
C130/C130 NOT TO SCALE



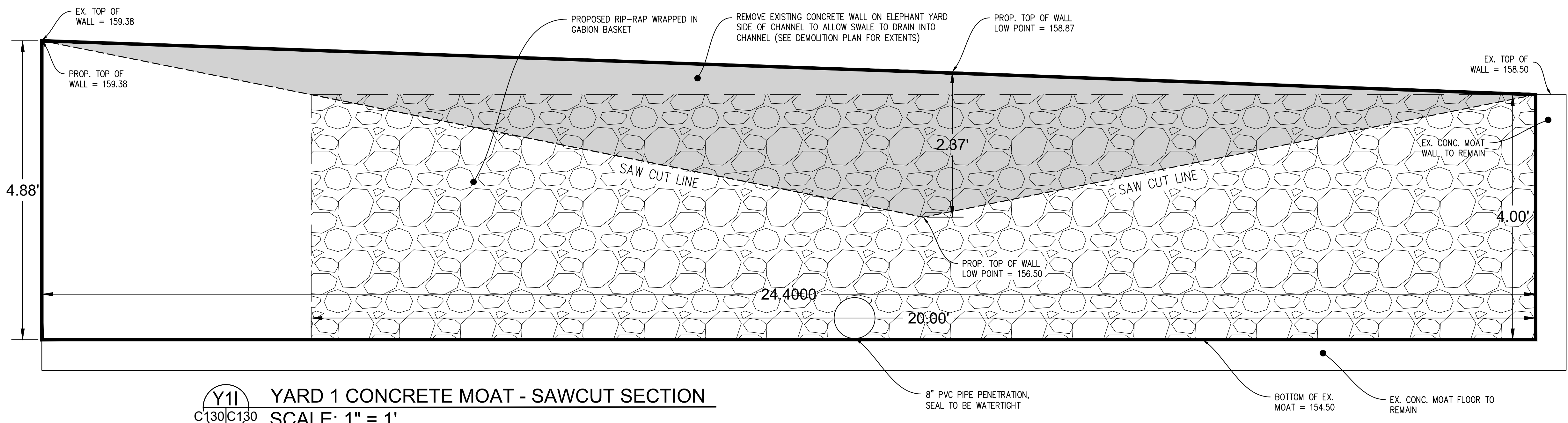
Y1F CONC. WALL PROFILE - SW FACING
C130/C130 NOT TO SCALE



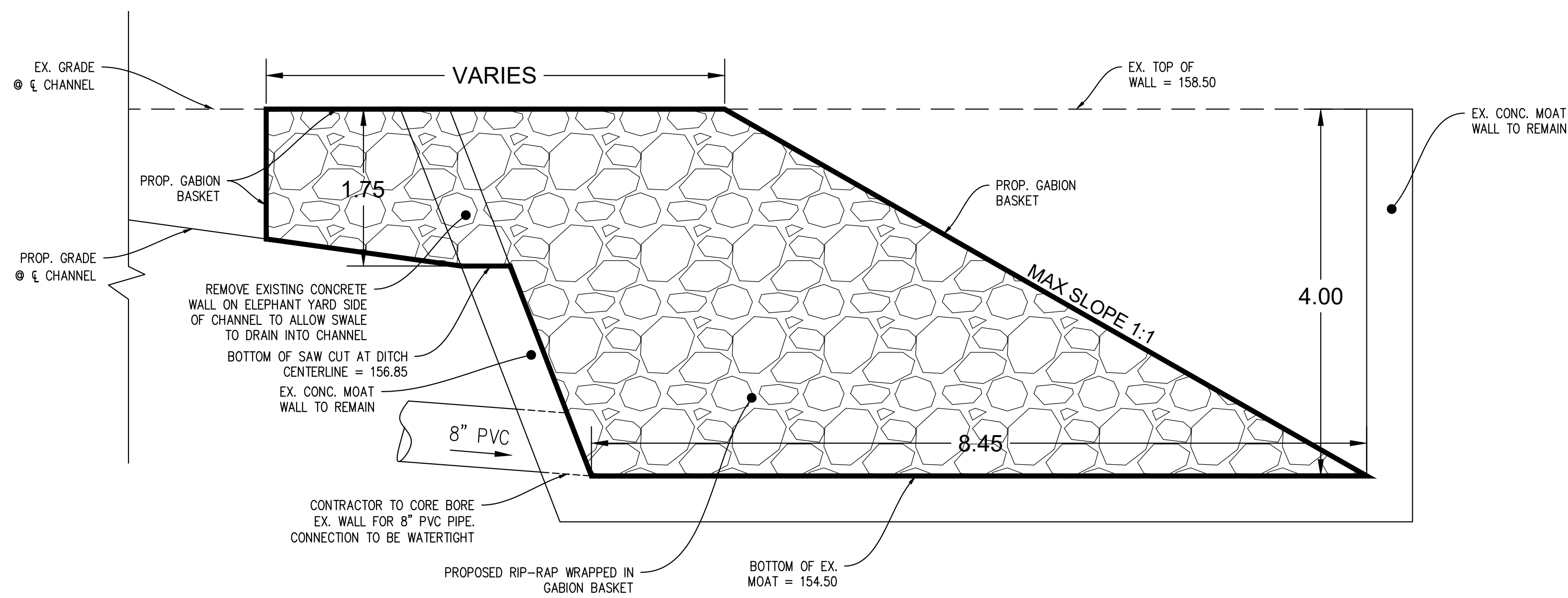
Y1G YARD 1 SWALE - TYPICAL SECTION
C130/C130 NOT TO SCALE



Y1H BURIED ELEVATION SETTING PIPE
C130/C130 NOT TO SCALE



Y1I YARD 1 CONCRETE MOAT - SAWCUT SECTION
C130/C130 SCALE: 1" = 1'

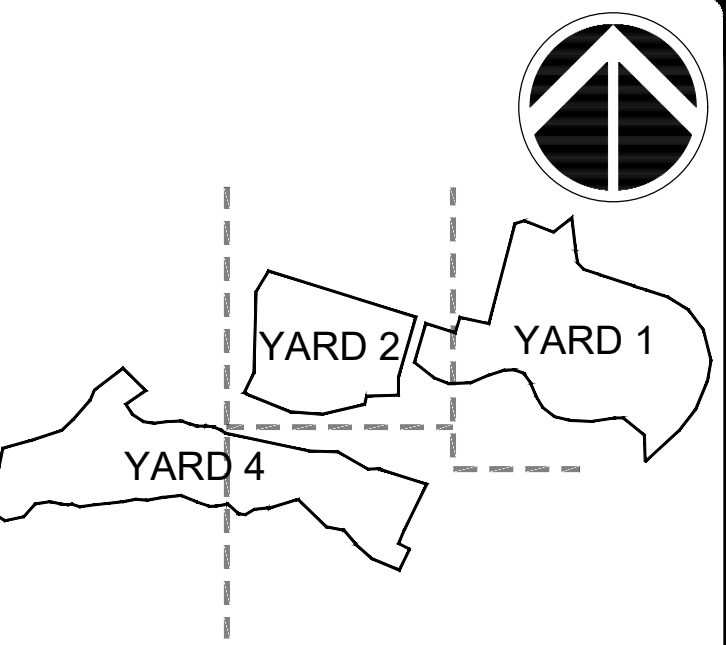


Y1J YARD 1 CONCRETE MOAT - TYPICAL SECTION
C130/C130 SCALE: 1" = 1'

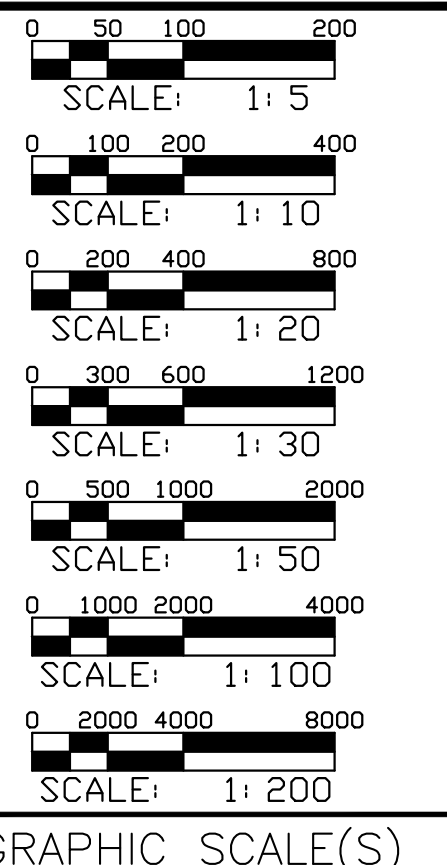
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Tel: 215-923-2020 Fax: 215-574-0952

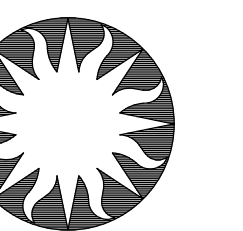
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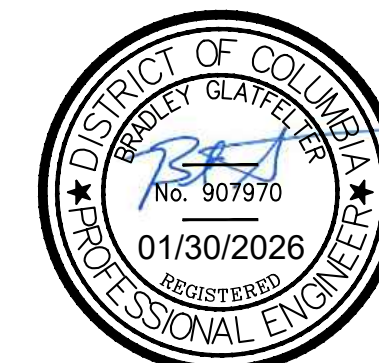
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REVISION 3	
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REVISION 6	
REVISION 7	



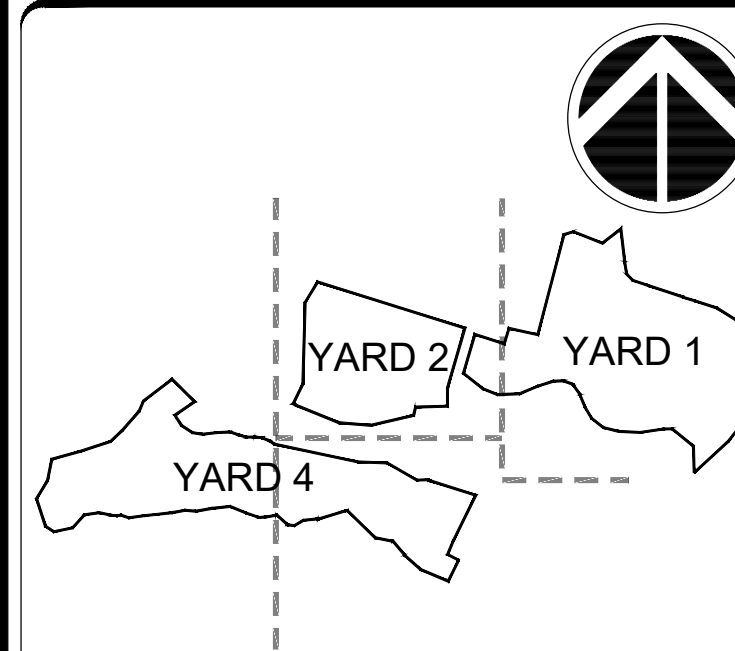
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600 Maryland Avenue S.W. Suite 5001
Washington, DC 20024

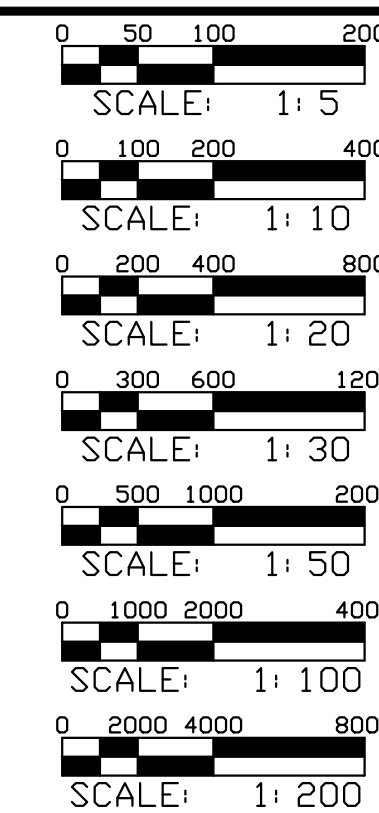
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SF PROJECT NUMBER	2233104
A/E PROJECT NUMBER	20230426
DRAWING TITLE	SITE DETAILS & SECTIONS - YARD 1
DRAWING TYPE	CIVIL
WORKING STAFF	DESIGNED BY: KJB DRAWN BY: JVM CHECKED BY: KJB
SHEET NO.	C 1 30
17 OF 39	DISCIPLINE TYPE SEQUENCE



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01/30/2026

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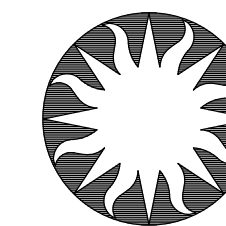
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REVISION 7

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BUILDING NAME

NATIONAL ZOOLOGICAL PARK

ADDRESS

3001 CONNECTICUT AVE NW
WASHINGTON, DC 20008

PROJECT TITLE

MITIGATE STORMWATER AT
ELEPHANT YARDS

SF PROJECT NUMBER

2233104

AVE PROJECT NUMBER

20230426

DRAWING TITLE

SITE DETAILS & SECTIONS -
YARD 2

DRAWING TYPE

CIVIL

WORKING STAFF

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JVM

KJB

DESIGNED BY

KJB

DRAWN BY

CHECKED BY

SHEET NO.

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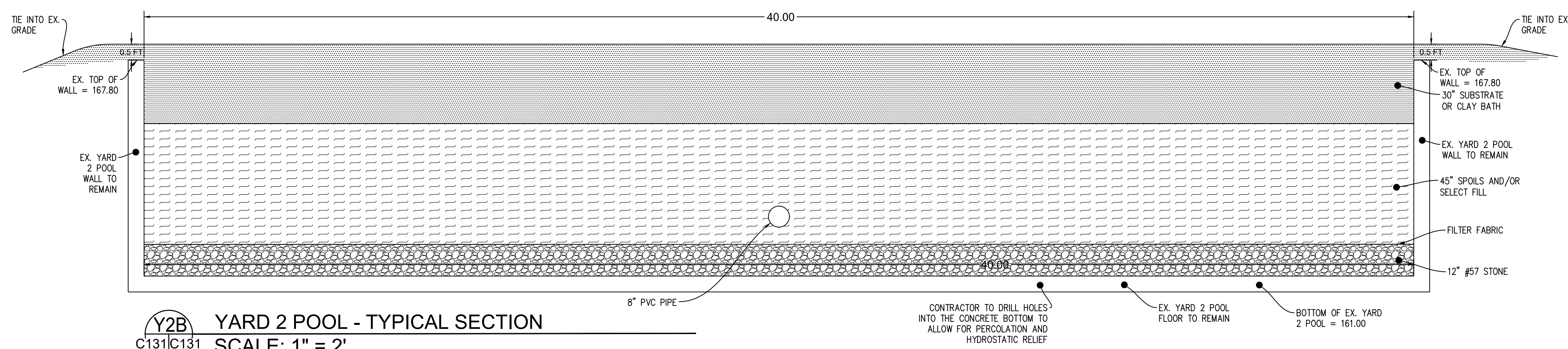
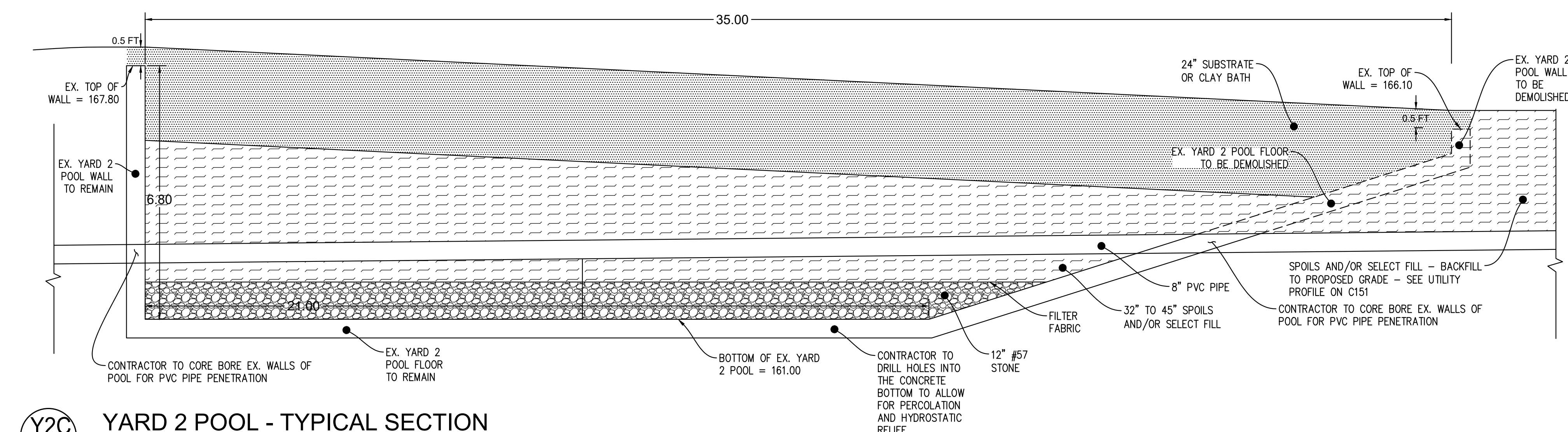
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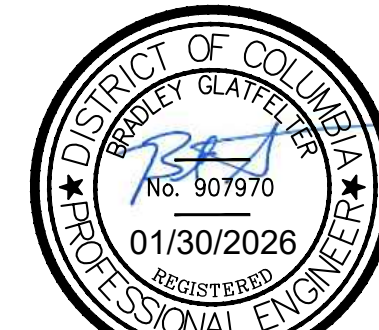
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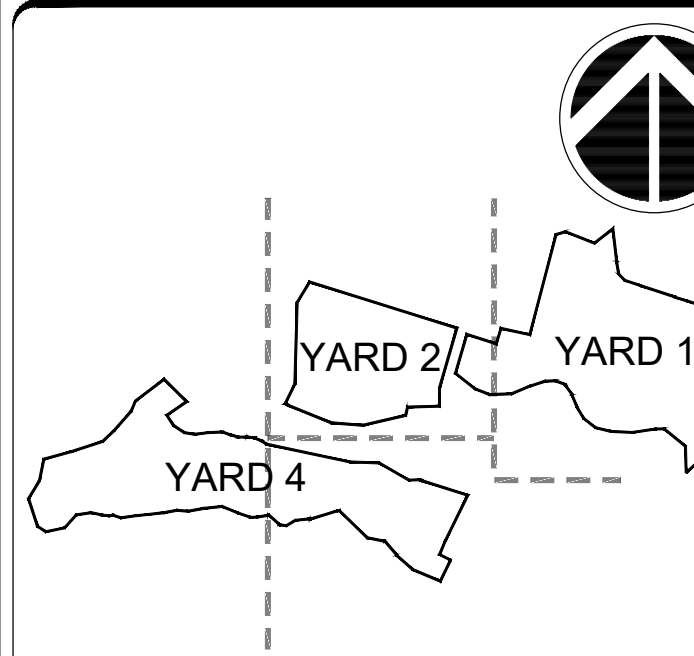
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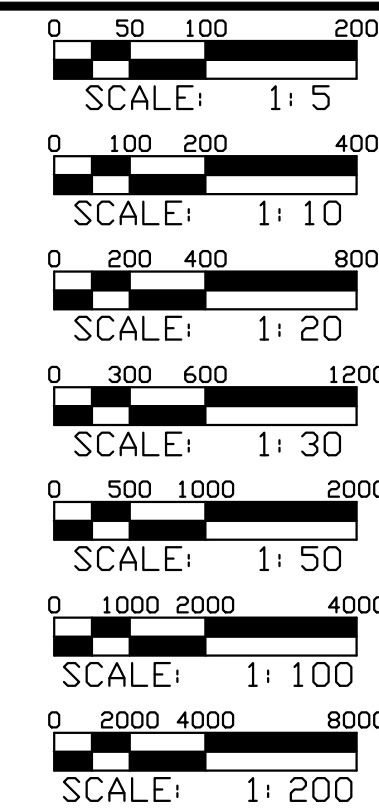
Y2B YARD 2 POOL - TYPICAL SECTION
C131 C131 SCALE: 1" = 2'Y2C YARD 2 POOL - TYPICAL SECTION
C131 C131 SCALE: 1" = 2'



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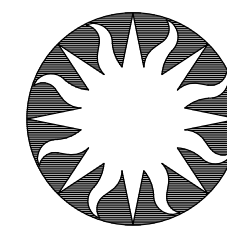


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GRAPHIC SCALE(S)

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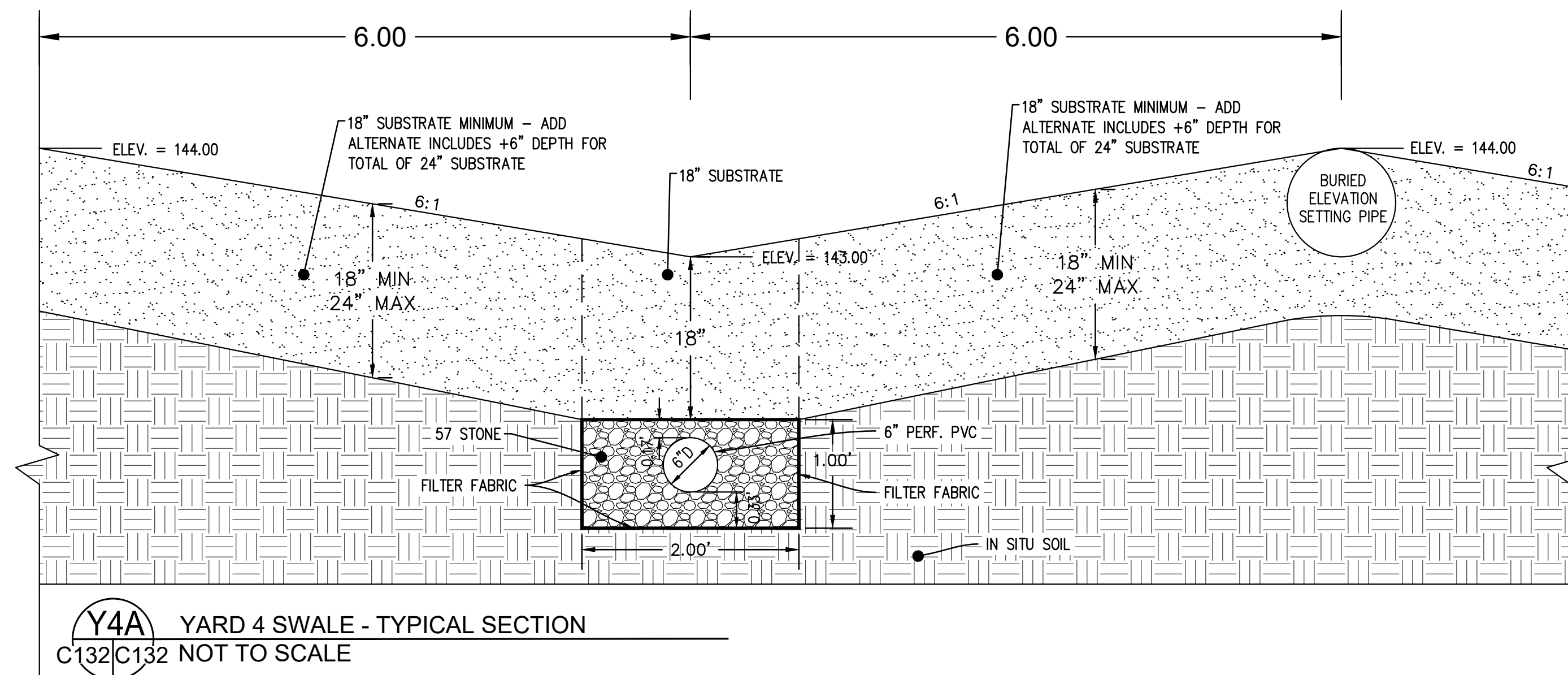
Smithsonian Facilities
600 Maryland Avenue S.W. Suite 5001
Washington, DC 20024

BUILDING NAME: NATIONAL ZOOLOGICAL PARK
ADDRESS: 3001 CONNECTICUT AVE NW
WASHINGTON, DC 20008

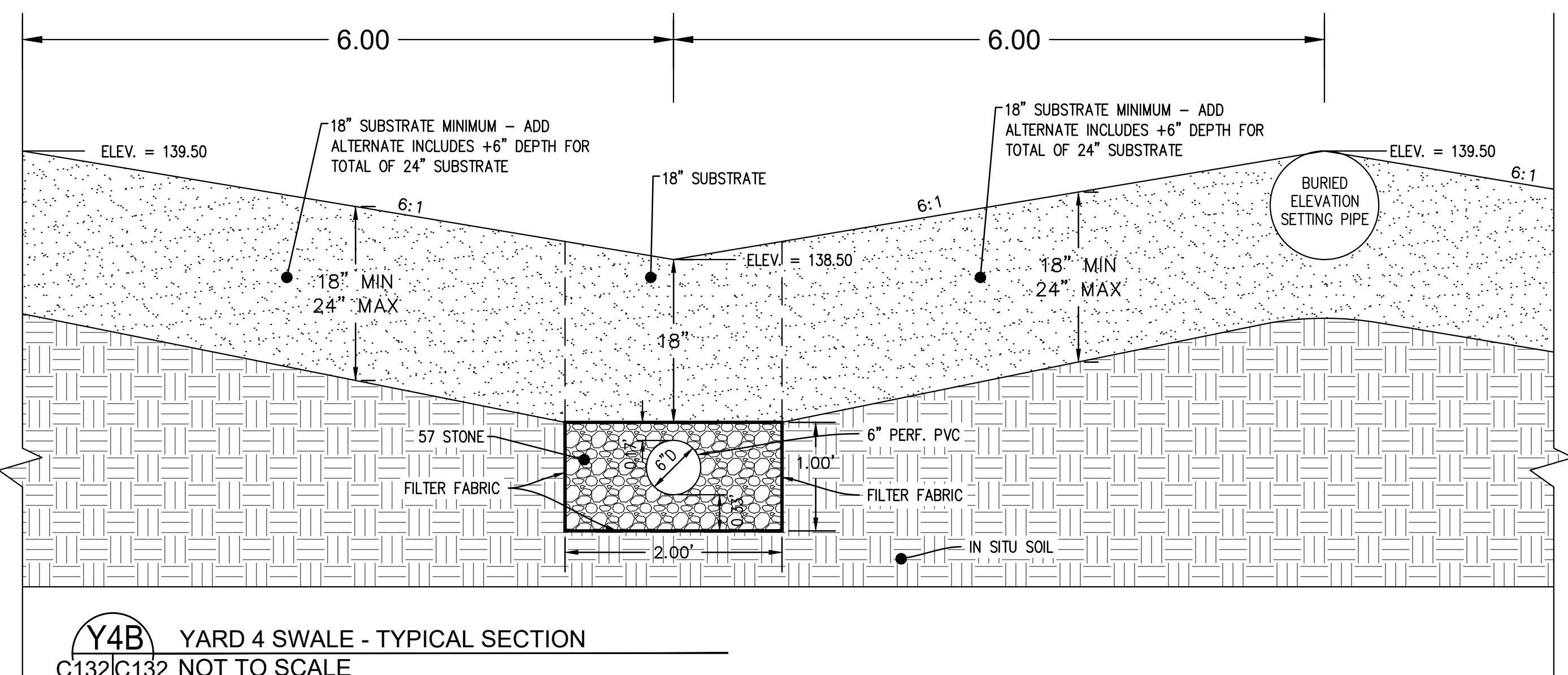
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AVE PROJECT NUMBER: 20230426

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DESIGNED BY: KJB, DRAWN BY: JVM, CHECKED BY: KJB

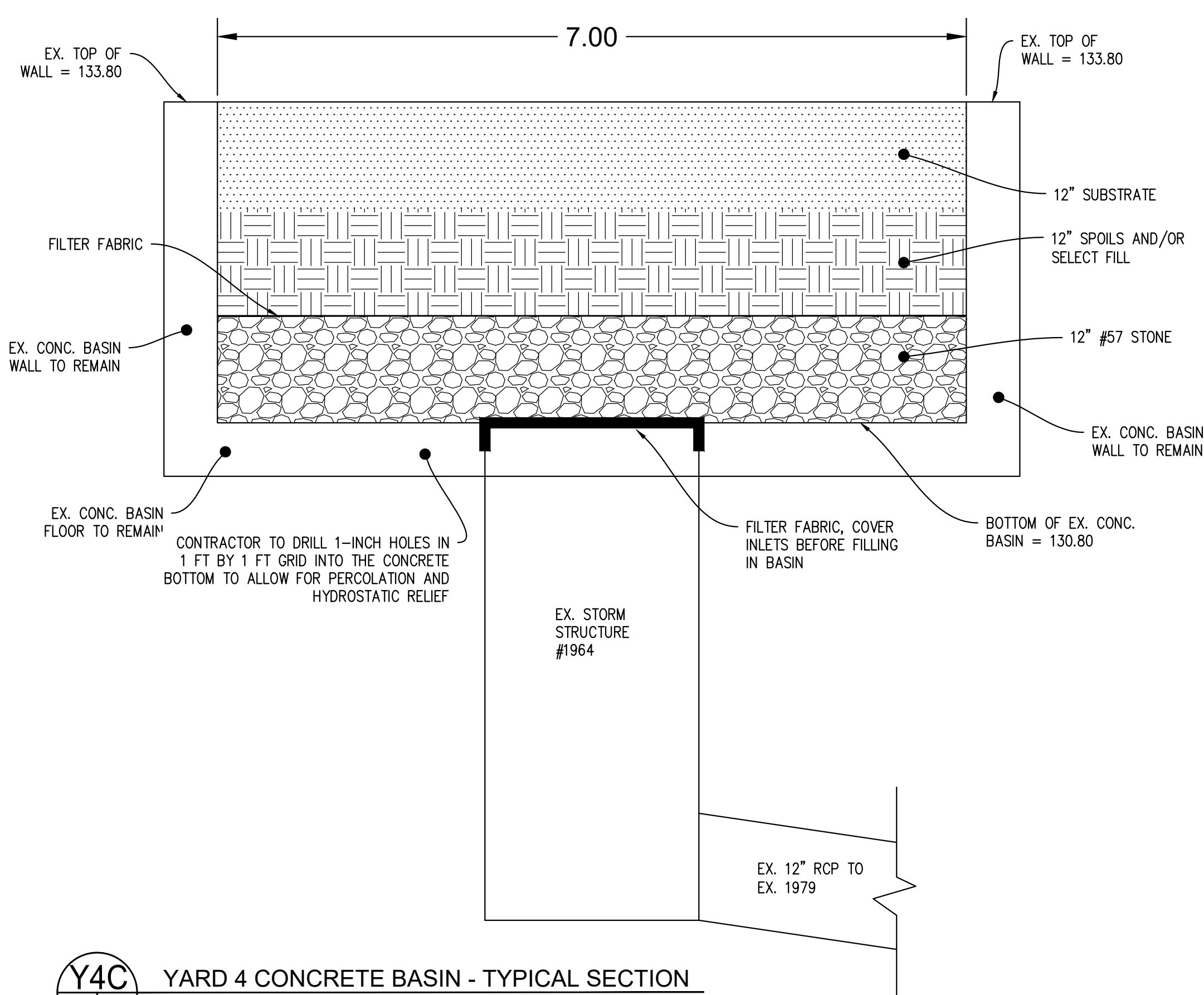
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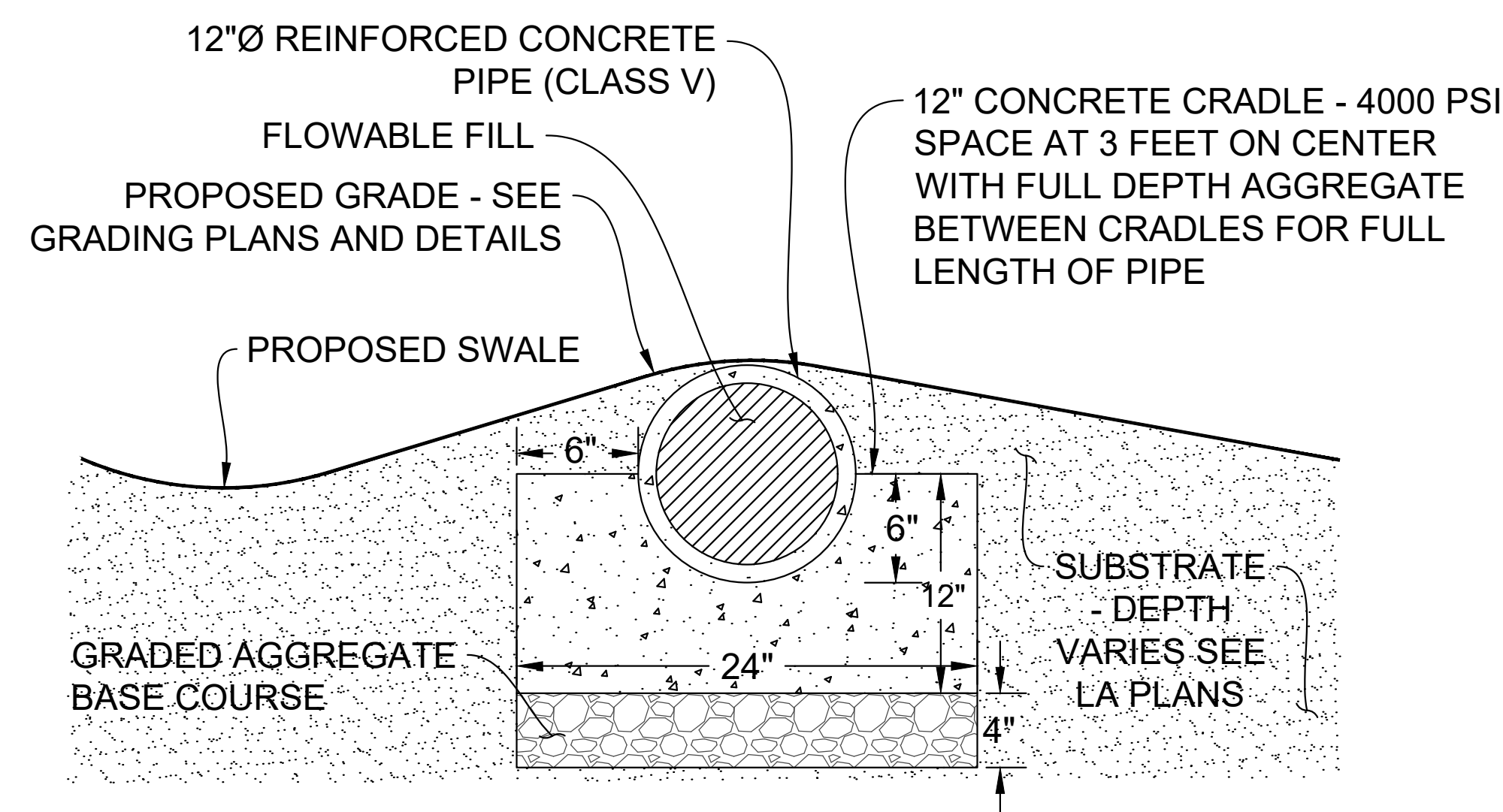
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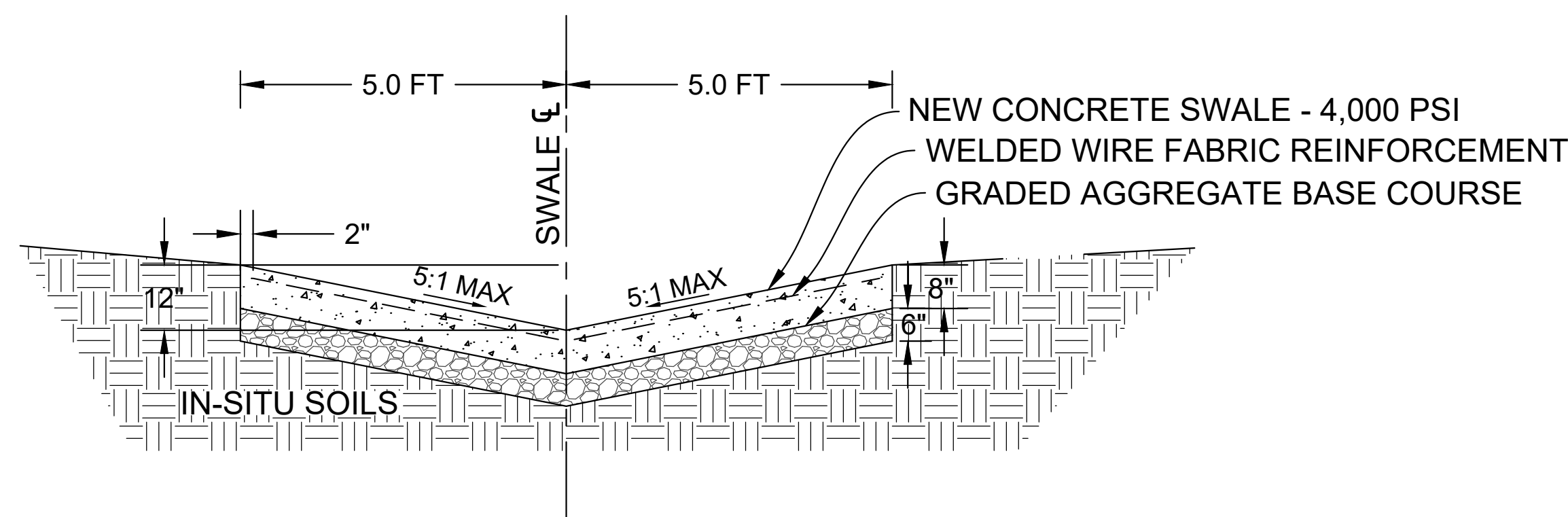
Y4B YARD 4 SWALE - TYPICAL SECTION
C132C132 NOT TO SCALE



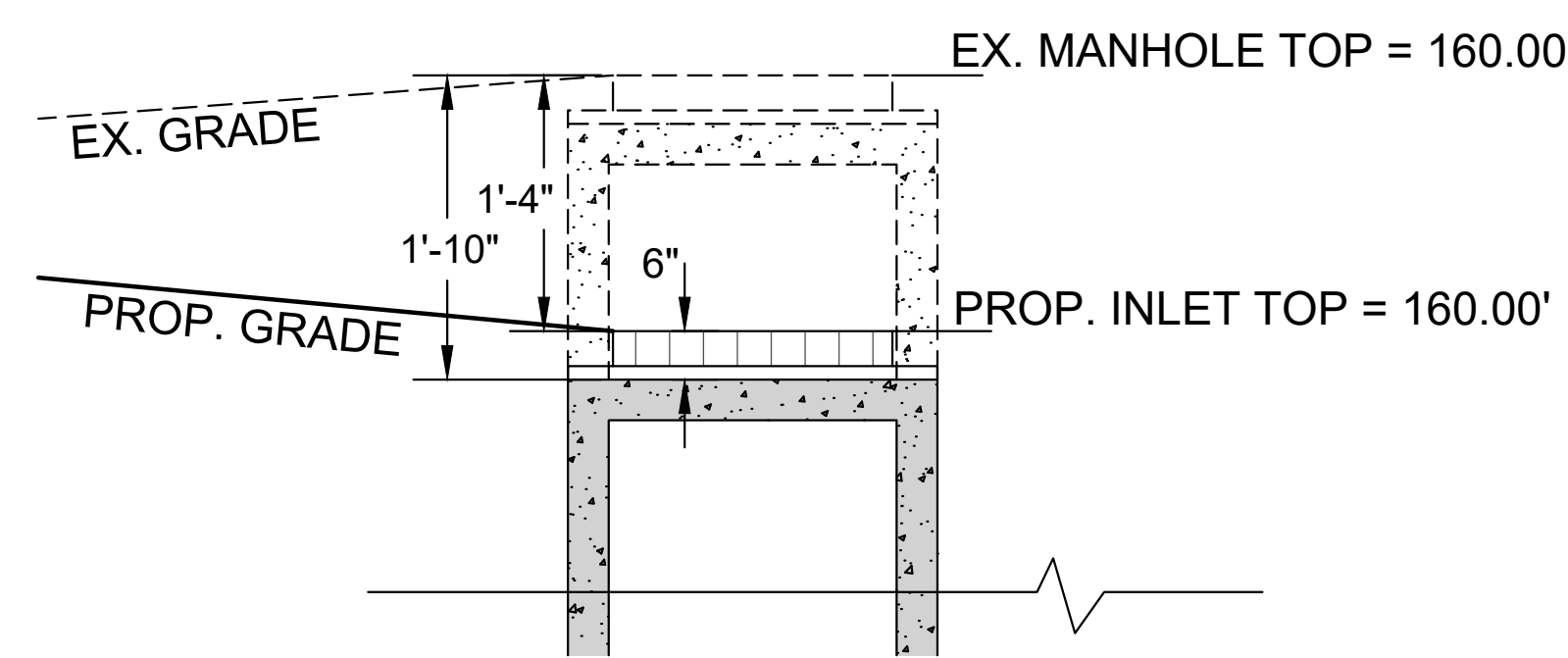
Y4C YARD 4 CONCRETE BASIN - TYPICAL SECTION
C132C132 SCALE: 1" = 1'



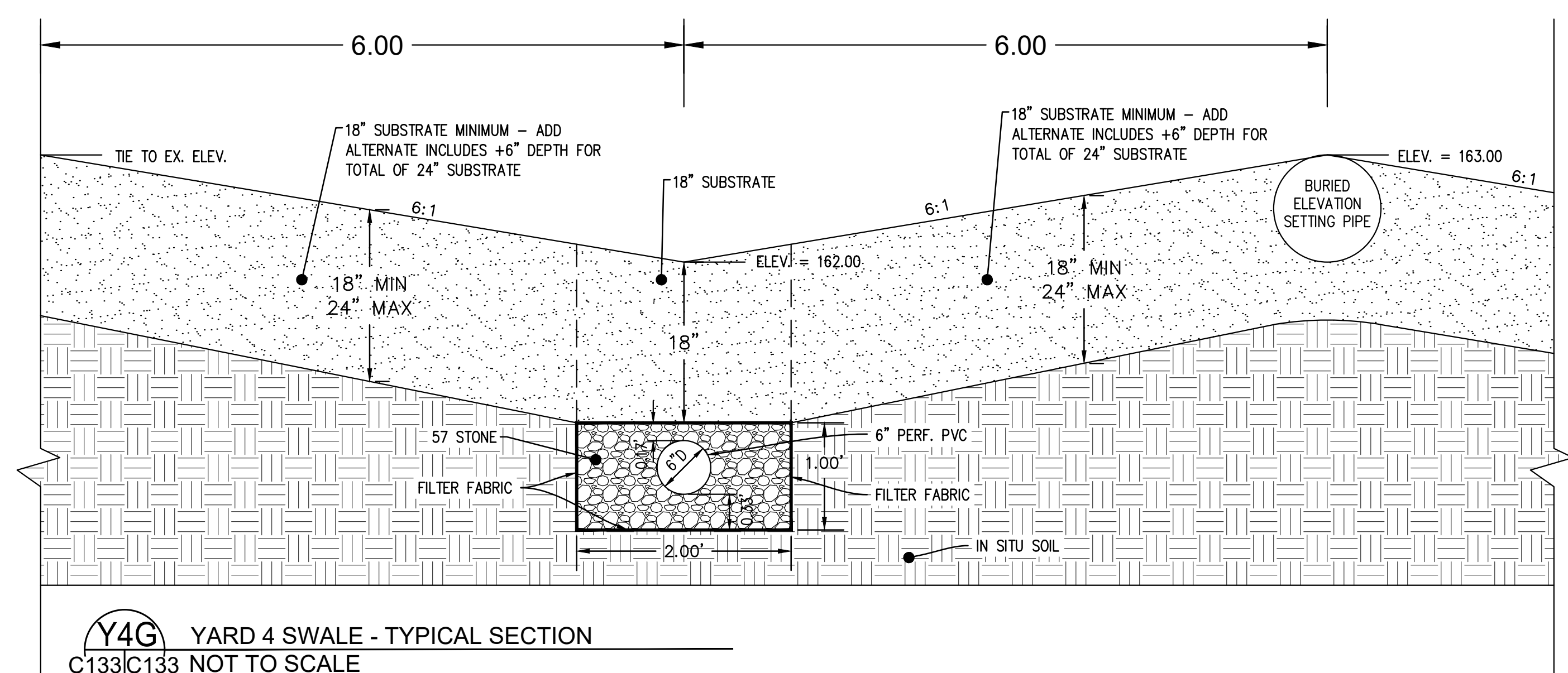
Y4D BURIED ELEVATION SETTING PIPE
C132C132 NOT TO SCALE



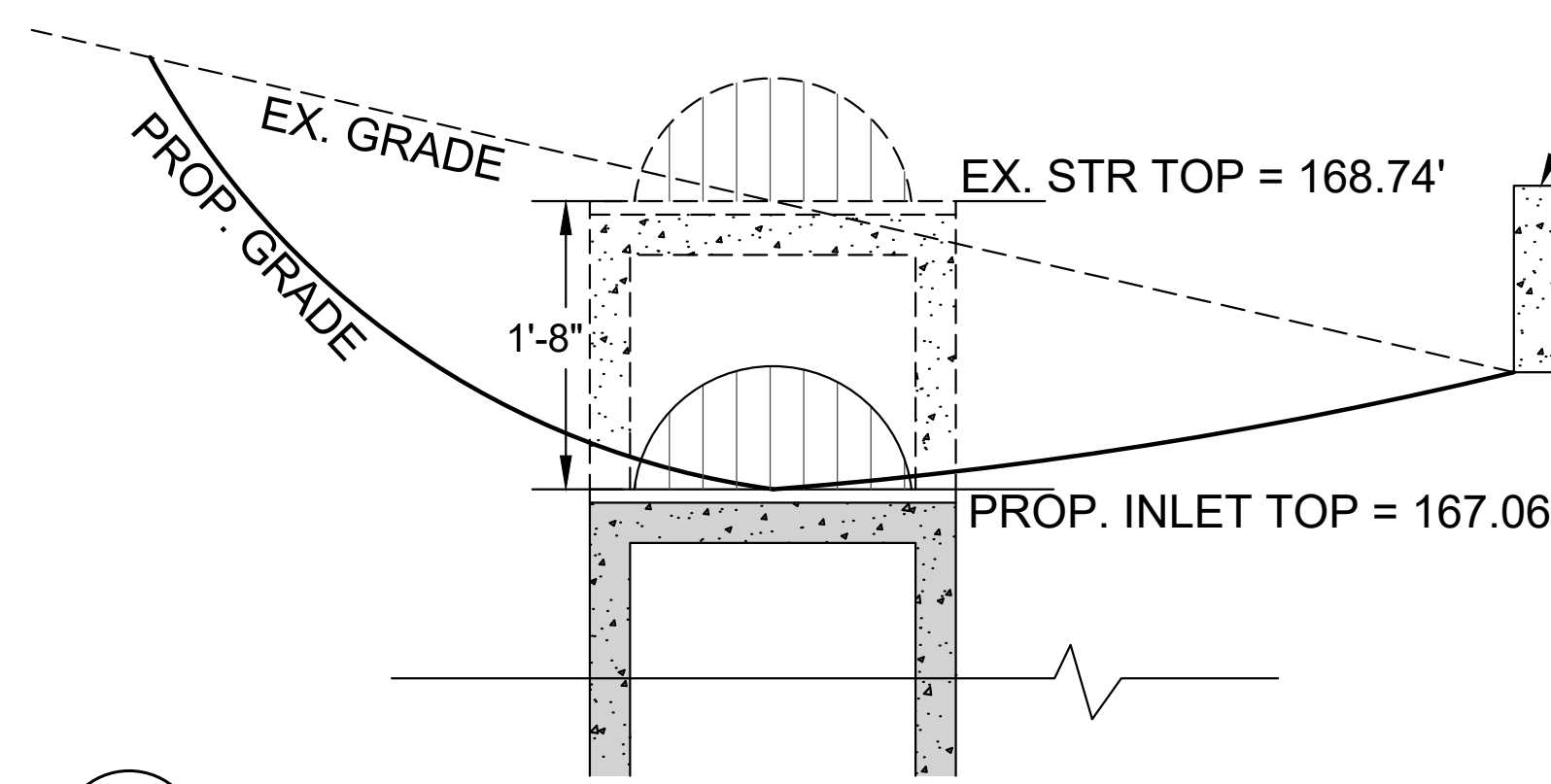
Y4E CONC. SWALE TYPICAL SECTION
C133C133 NOT TO SCALE



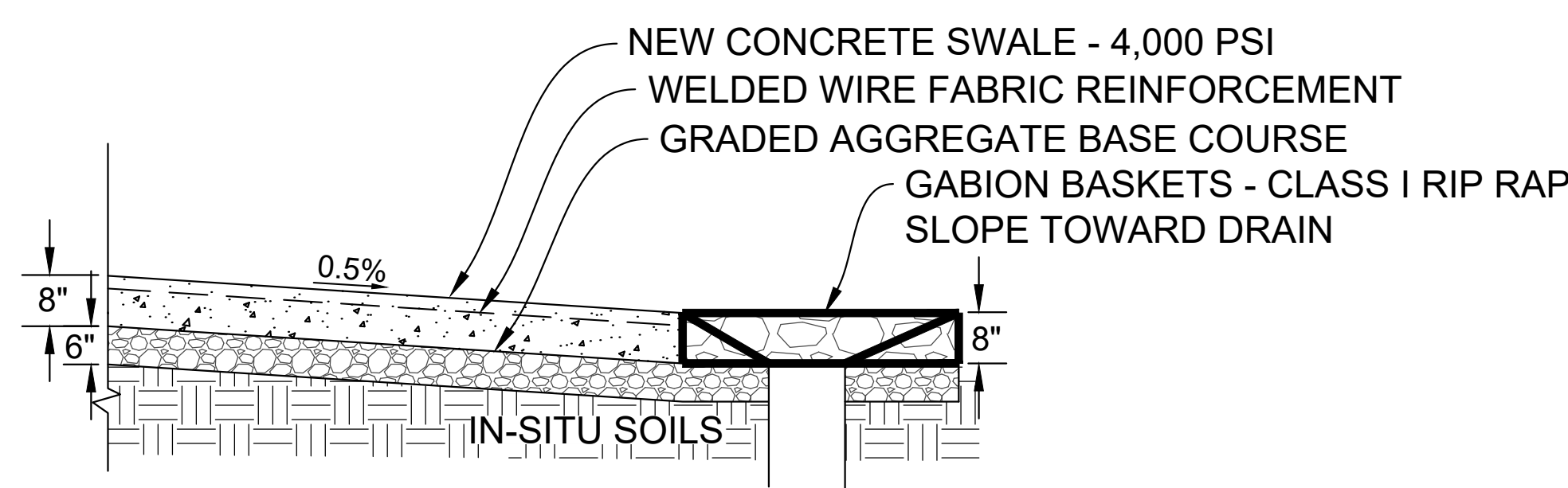
Y4F STORM MANHOLE CONVERSION TO INLET
C133C133 NOT TO SCALE



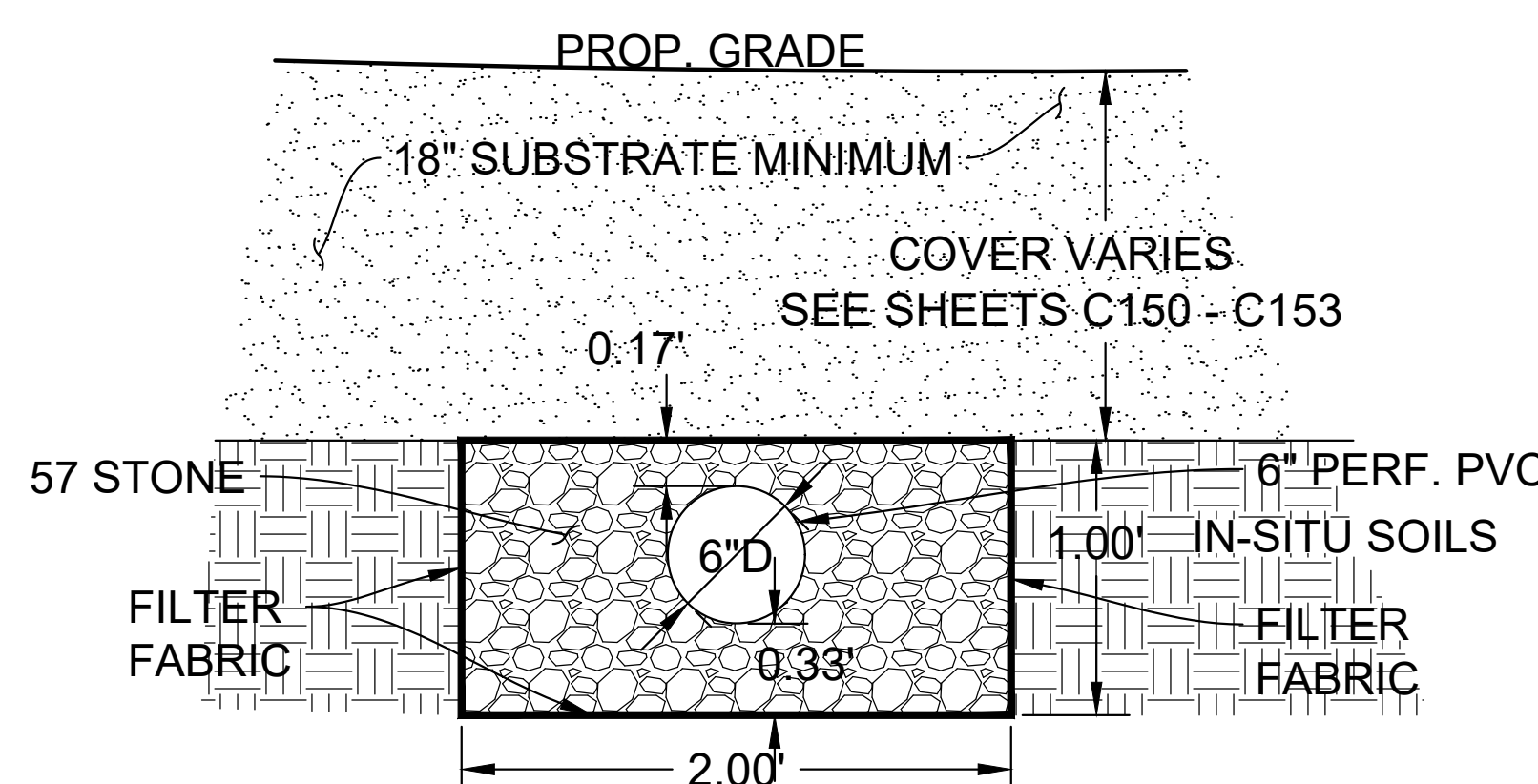
Y4G YARD 4 SWALE - TYPICAL SECTION
C133C133 NOT TO SCALE



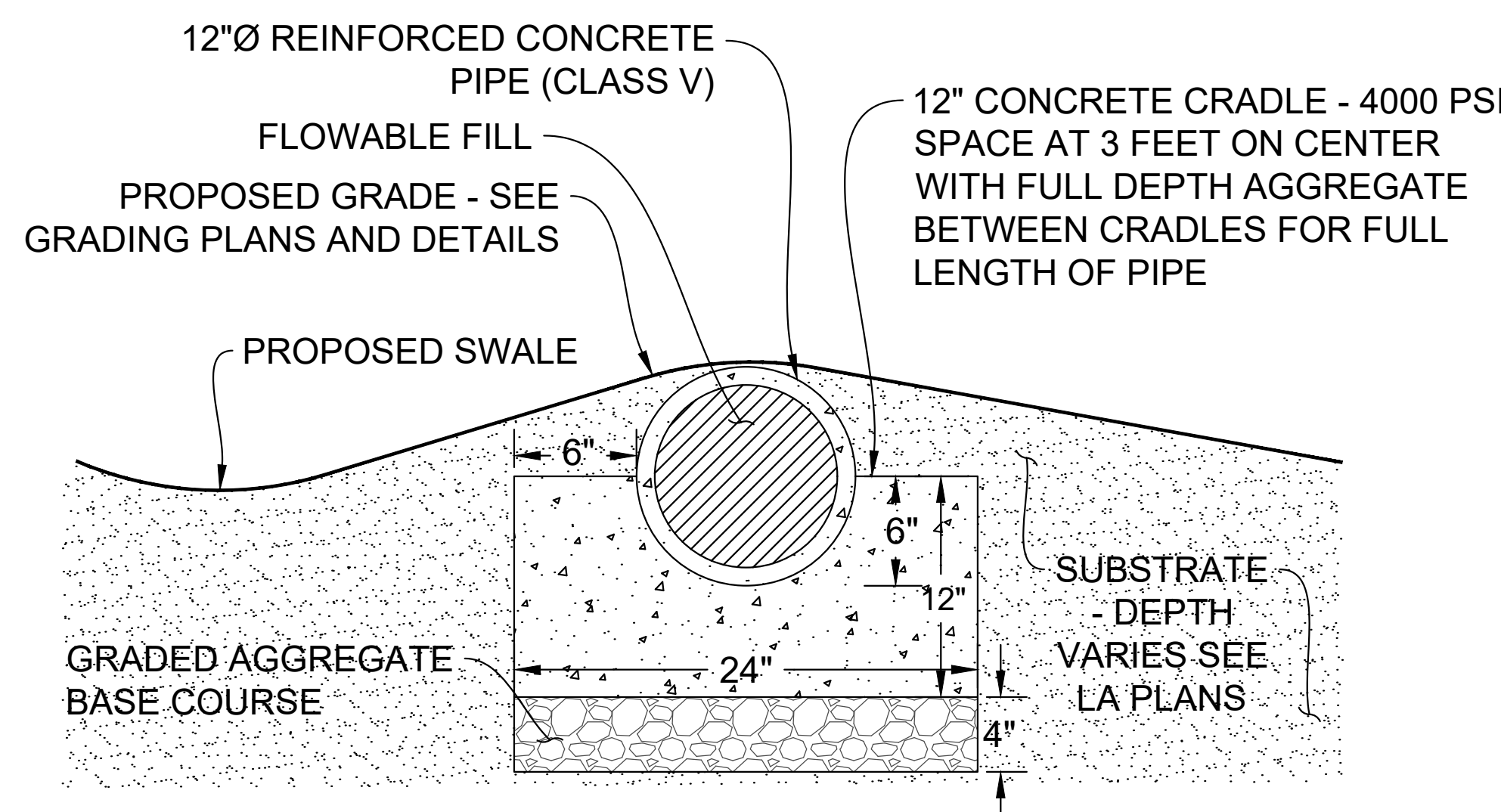
Y4H LOWER STORM GRATE INLET
C133C133 NOT TO SCALE



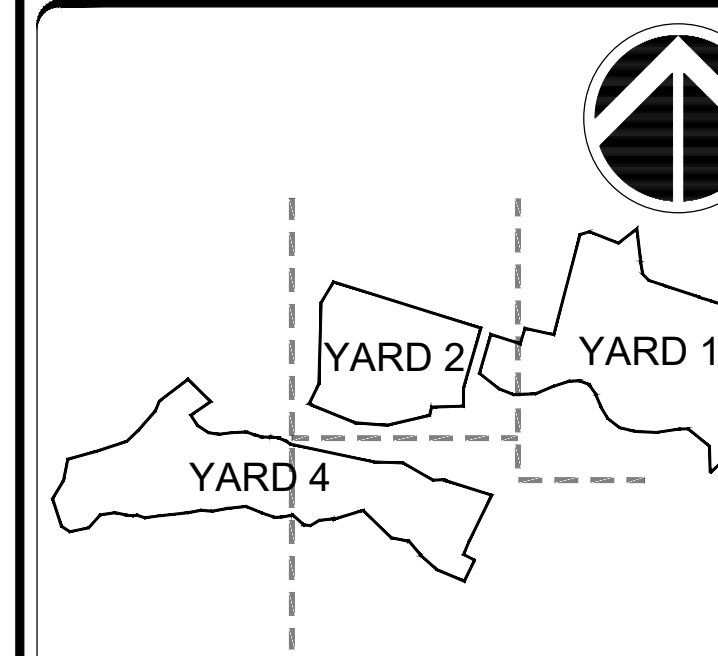
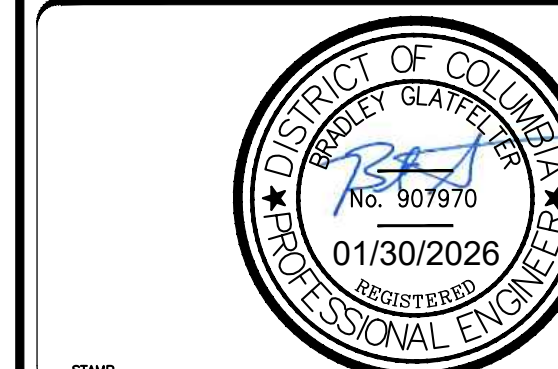
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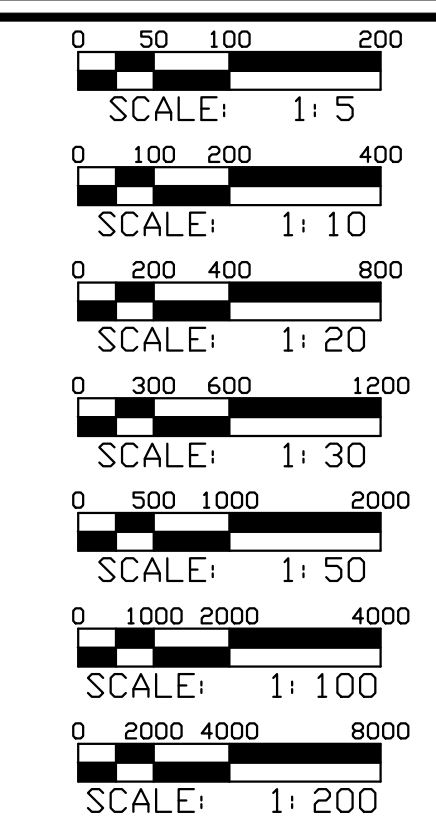
Y4J STORM UNDERDRAIN SECTION DETAIL
C133C133 NOT TO SCALE



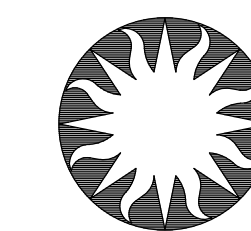
Y4K BURIED ELEVATION SETTING PIPE
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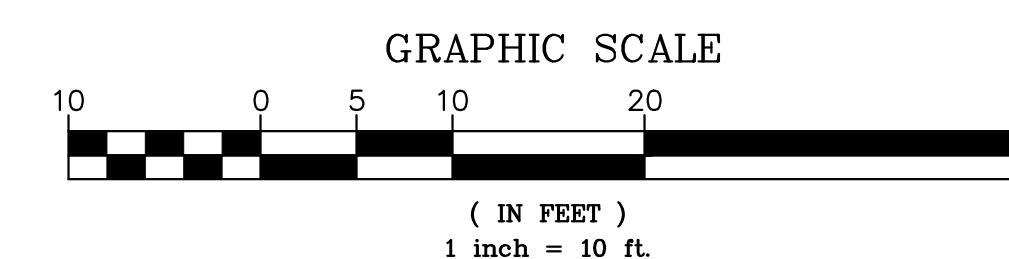
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600 Maryland Avenue S.W. Suite 5001
Washington, DC 20024

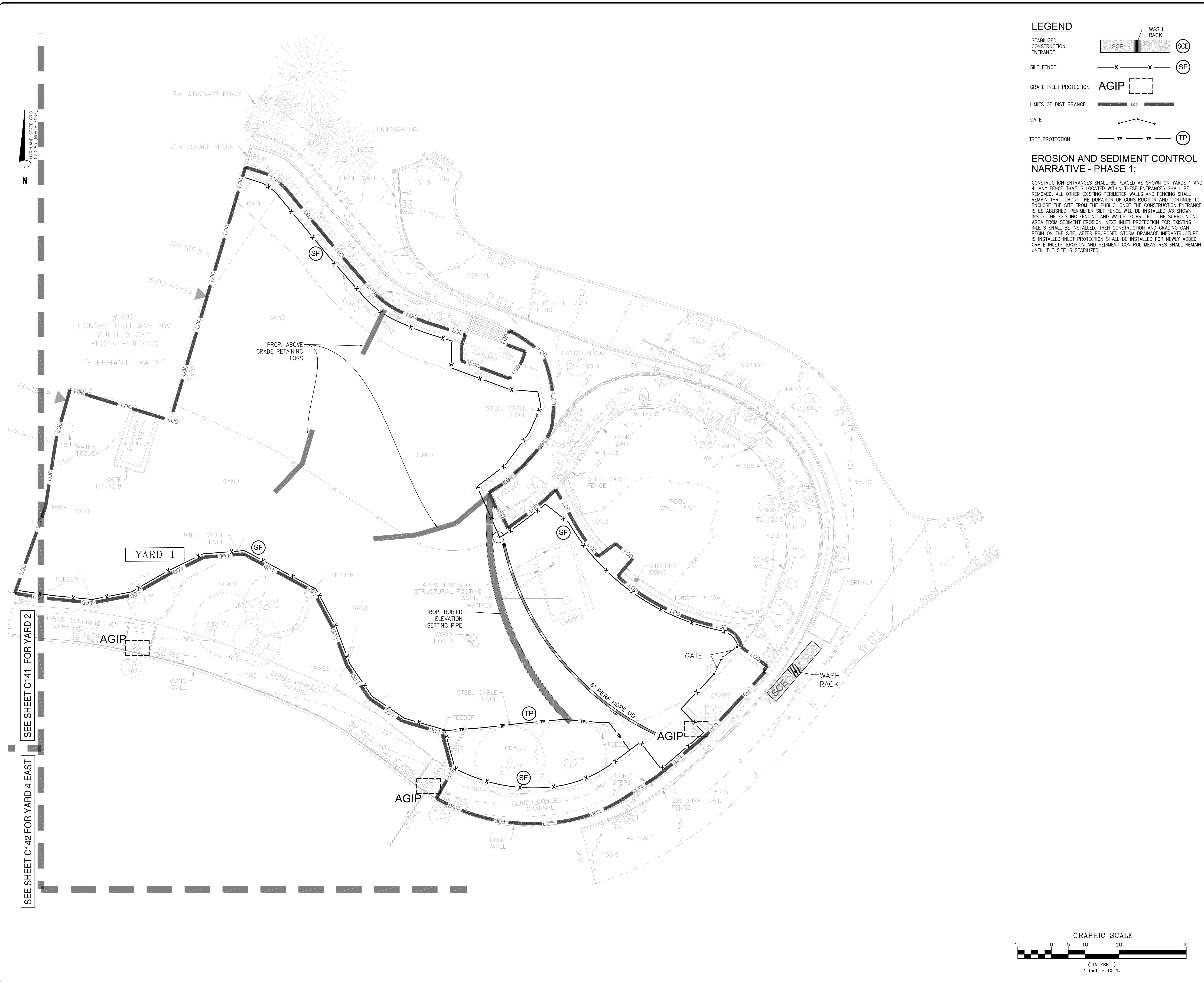
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ADDRESS: 3001 CONNECTICUT AVE NW
WASHINGTON, DC 20008

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ELEPHANT YARDS
SF PROJECT NUMBER: 2233104
AVE PROJECT NUMBER: 20230426

DRAWING TITLE: SITE DETAILS & SECTIONS -
YARD 4 WEST
DRAWING TYPE: CIVIL
WORKING STAFF: KJB JVM KJB
DESIGNED BY: KJB DRAWN BY: JVM CHECKED BY: KJB

SHEET NO. C 1 33
20 OF 39 DISCIPLINE TYPE SEQUENCE





LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- GRATE INLET PROTECTION
- LIMITS OF DISTURBANCE
- GATE
- TREE PROTECTION

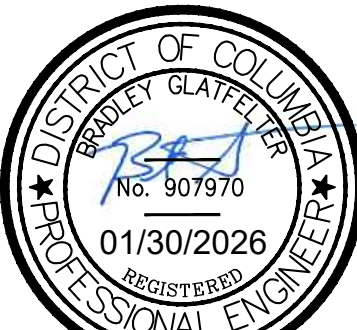
EROSION AND SEDIMENT CONTROL NARRATIVE - PHASE 1:

CONSTRUCTION ENTRANCES SHALL BE PLACED AS SHOWN ON YARDS 1 AND 4. ANY FENCE THAT IS LOCATED WITHIN THESE ENTRANCES SHALL BE REMOVED. ALL OTHER EXISTING PERIMETER WALLS AND FENCING SHALL REMAIN THROUGHOUT THE DURATION OF CONSTRUCTION AND CONTINUE TO ENCLOSE THE SITE FROM THE PUBLIC. ONCE THE CONSTRUCTION ENTRANCE IS ESTABLISHED, PERIMETER SILT FENCE WILL BE INSTALLED AS SHOWN INSIDE THE EXISTING FENCING AND WALLS TO PROTECT THE SURROUNDING AREA FROM SEDIMENT EROSION. NEXT INLET PROTECTION FOR EXISTING INLETS SHALL BE INSTALLED. THEN CONSTRUCTION AND GRADING CAN BEGIN ON THE SITE. AFTER PROPOSED STORM DRAINAGE INFRASTRUCTURE IS INSTALLED INLET PROTECTION SHALL BE INSTALLED FOR NEWLY ADDED GRATE INLETS. EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN UNTIL THE SITE IS STABILIZED.

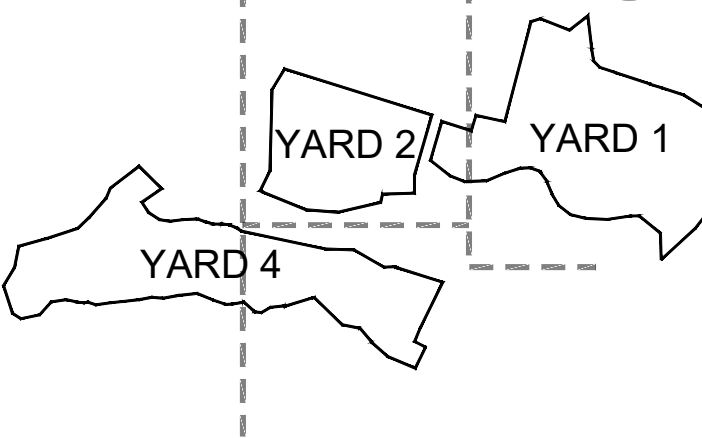
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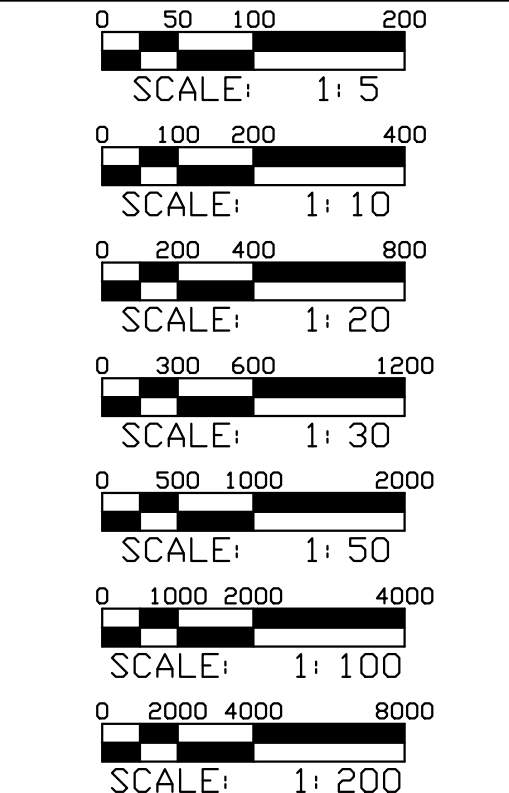
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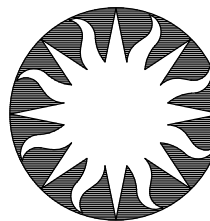
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Washington, DC 20024

BUILDING NAME
NATIONAL ZOOLOGICAL PARK

PROJECT TITLE
MITIGATE STORMWATER AT ELEPHANT YARDS

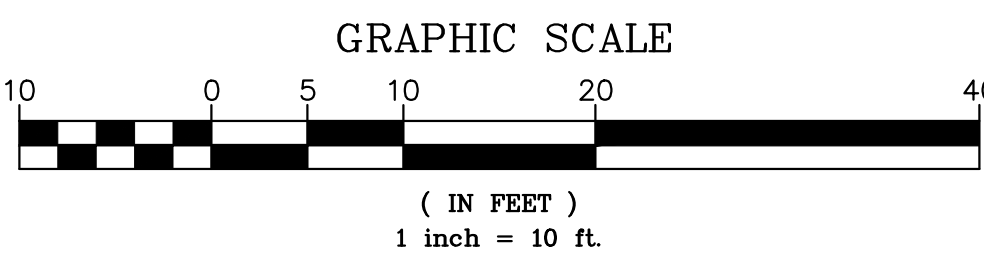
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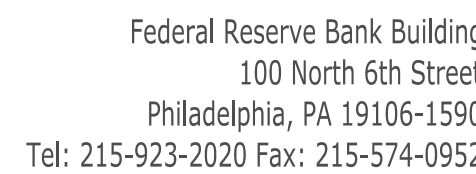
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21 OF 39

DISCIPLINE
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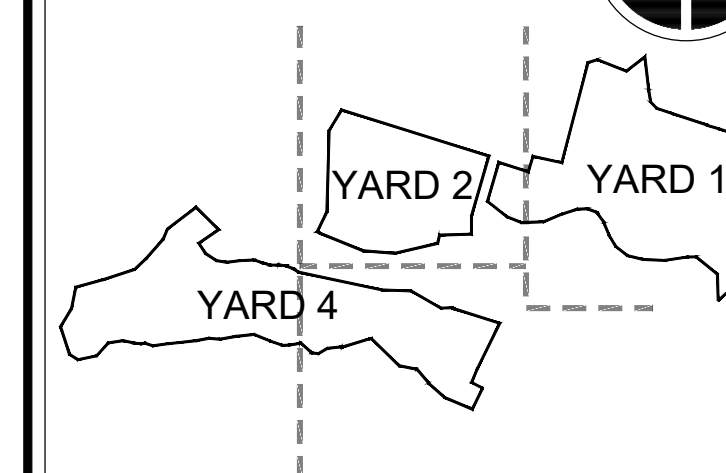
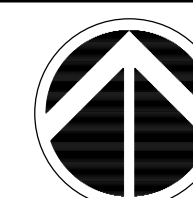
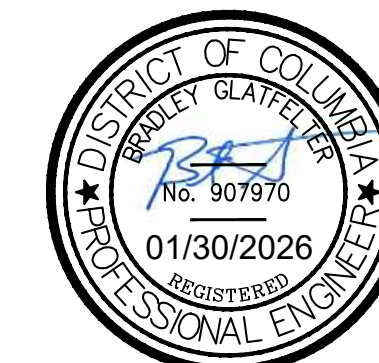
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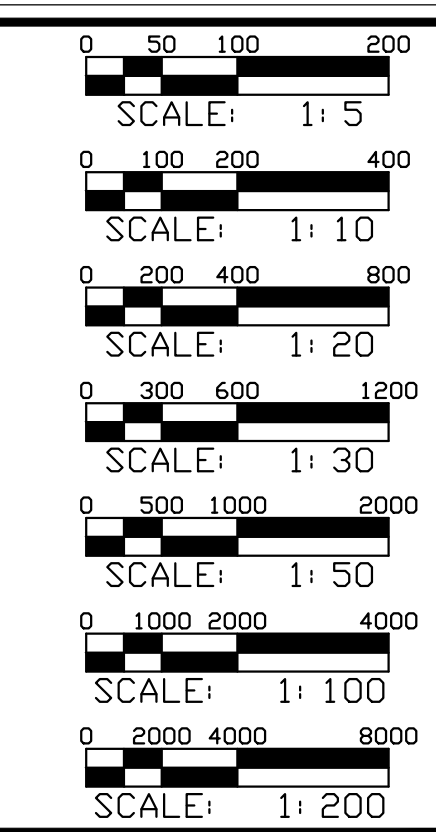




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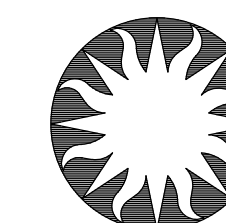


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Institution

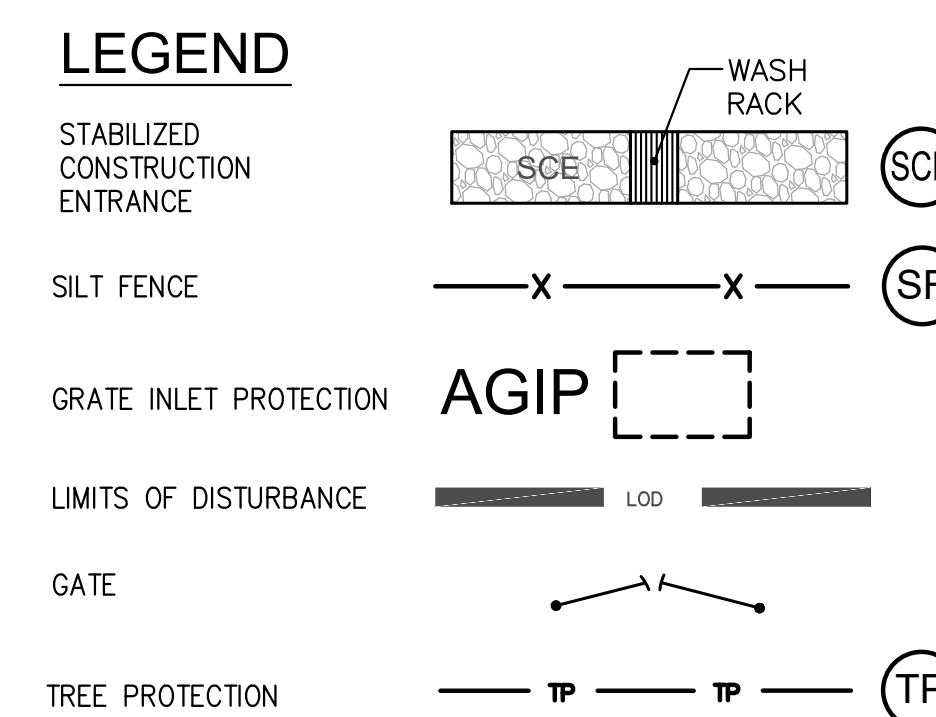
Smithsonian Facilities
600 Maryland Avenue S.W. Suite 5001
Washington, DC 20024

BUILDING NAME	NATIONAL ZOOLOGICAL PARK
ADDRESS	3001 CONNECTICUT AVE NW WASHINGTON, DC 20008

PROJECT TITLE	MITIGATE STORMWATER AT ELEPHANT YARDS
SF PROJECT NUMBER	2233104
A/E PROJECT NUMBER	20230426

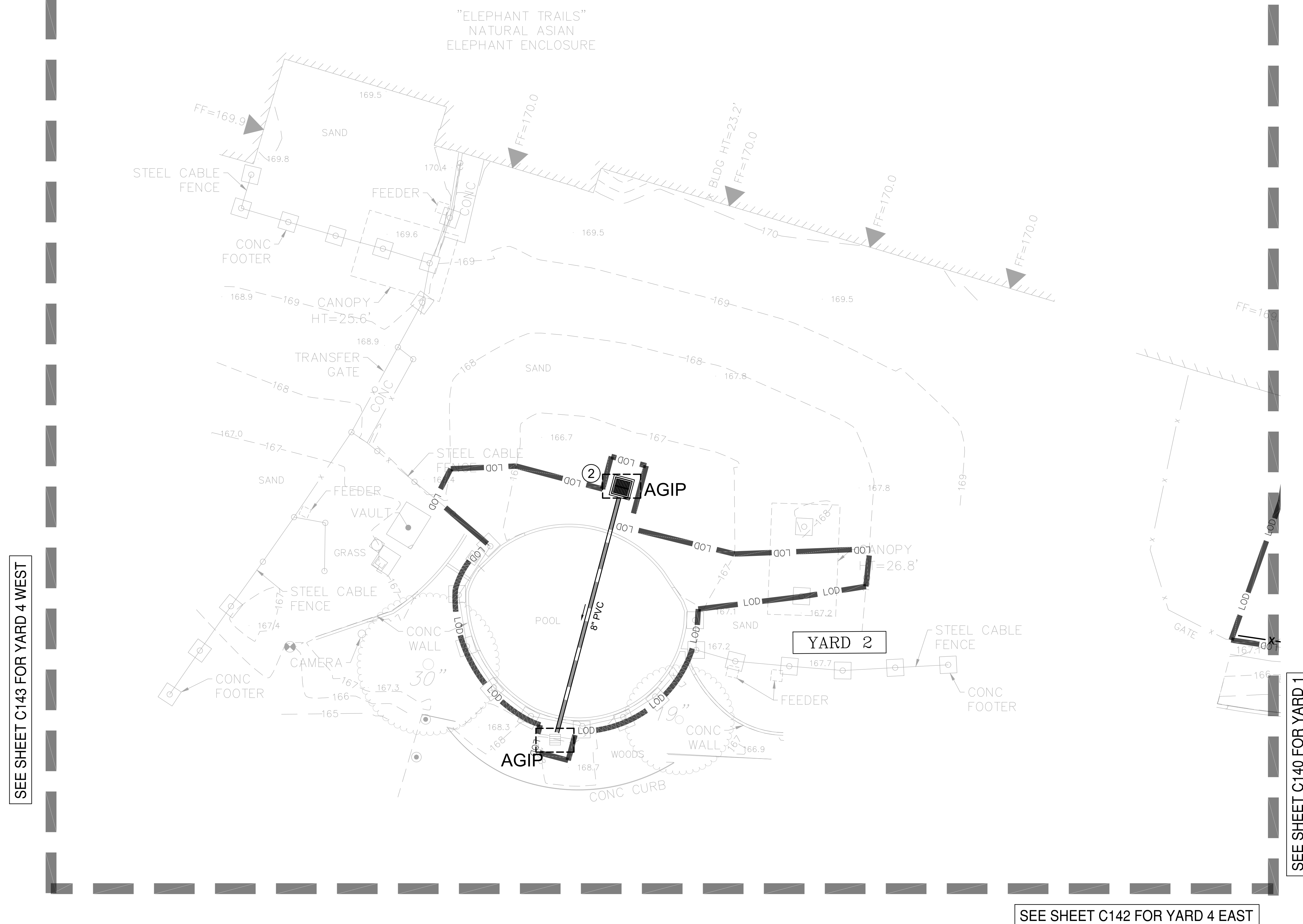
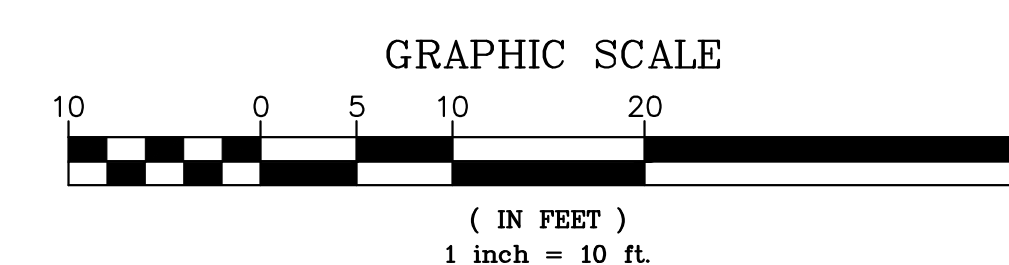
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DRAWING TYPE	CIVIL		
WORKING STAFF	KJB	JVM	KJB
	DESIGNED BY	DRAWN BY	CHECKED BY

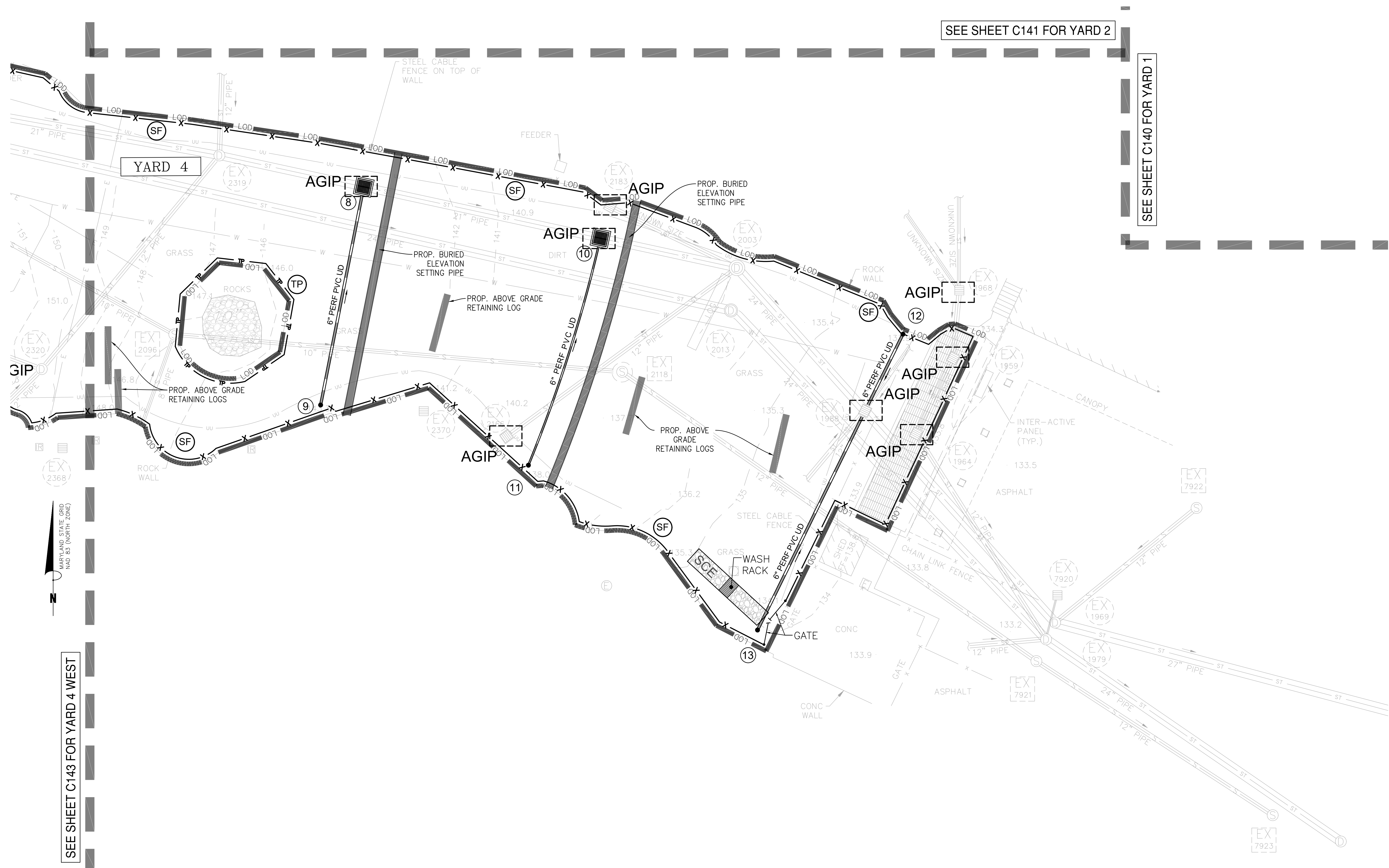
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	DISCIPLINE	TYPE	SOURCE



**EROSION AND SEDIMENT CONTROL
NARRATIVE - PHASE 1:**

CONSTRUCTION ENTRANCES SHALL BE PLACED AS SHOWN ON YARDS 1 AND 4. ANY FENCE THAT IS LOCATED WITHIN THESE ENTRANCES SHALL BE REMOVED. THE OTHER EXISTING PERMETER SILT FENCE SHALL REMAIN THROUGHOUT THE DURATION OF CONSTRUCTION AND CONTINUE TO ENCLOSE THE SITE FROM THE PUBLIC. ONCE THE CONSTRUCTION ENTRANCE IS ESTABLISHED, PERMETER SILT FENCE WILL BE INSTALLED AS SHOWN INSIDE THE EXISTING FENCE AND WALLS TO PROTECT THE SURROUNDING AREA FROM SEDIMENT EROSION. NEXT INLET PROTECTION FOR EXISTING INLETS SHALL BE INSTALLED. THEN CONSTRUCTION AND GRADING CAN BE STARTED. SEDIMENT CONTROL STORM DRAINAGE INFRASTRUCTURE IS INSTALLED INLET PROTECTION SHALL BE INSTALLED FOR NEWLY ADDED GRATE INLETS. EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN UNTIL THE SITE IS STABILIZED.





LEGEND

- STABILIZED CONSTRUCTION ENTRANCE: SCE, WASH RACK, SCE
- SILT FENCE: X, X, SF
- GRATE INLET PROTECTION: AGIP
- LIMITS OF DISTURBANCE: LOD
- GATE: GATE
- TREE PROTECTION: TP, TP, TP

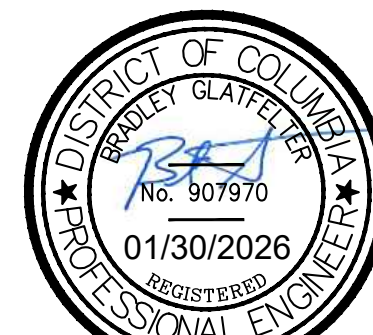
EROSION AND SEDIMENT CONTROL NARRATIVE - PHASE 1:

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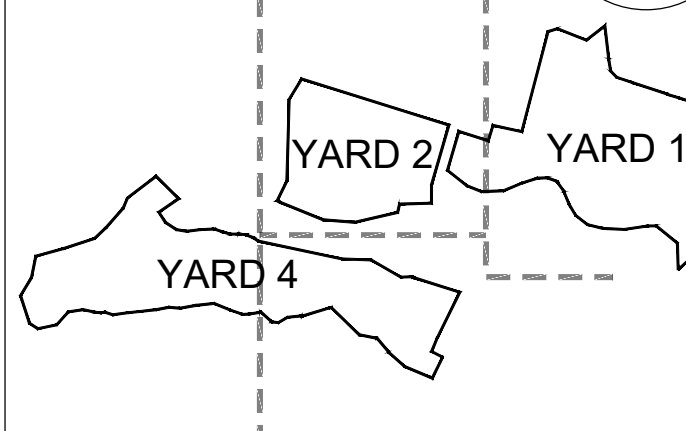
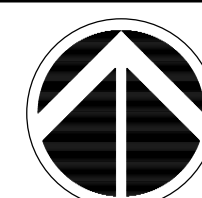
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100 North 6th Street
Philadelphia, PA 19106-1590
Tel: 215-923-2020 Fax: 215-574-0952

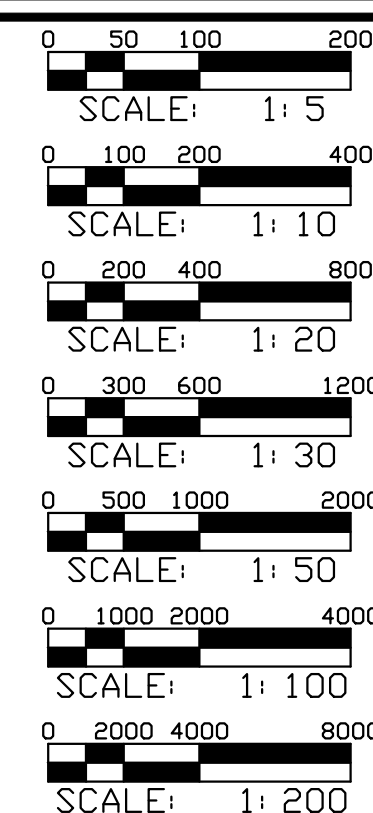
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KEY PLAN & SECTION

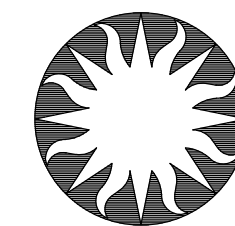


GRAPHIC SCALE(S)

DATE: 01/30/2026

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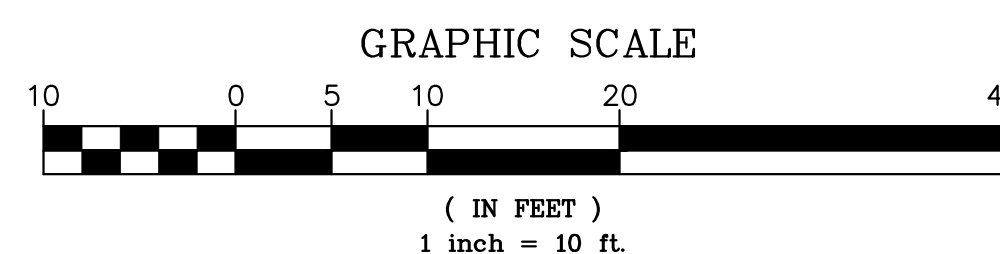
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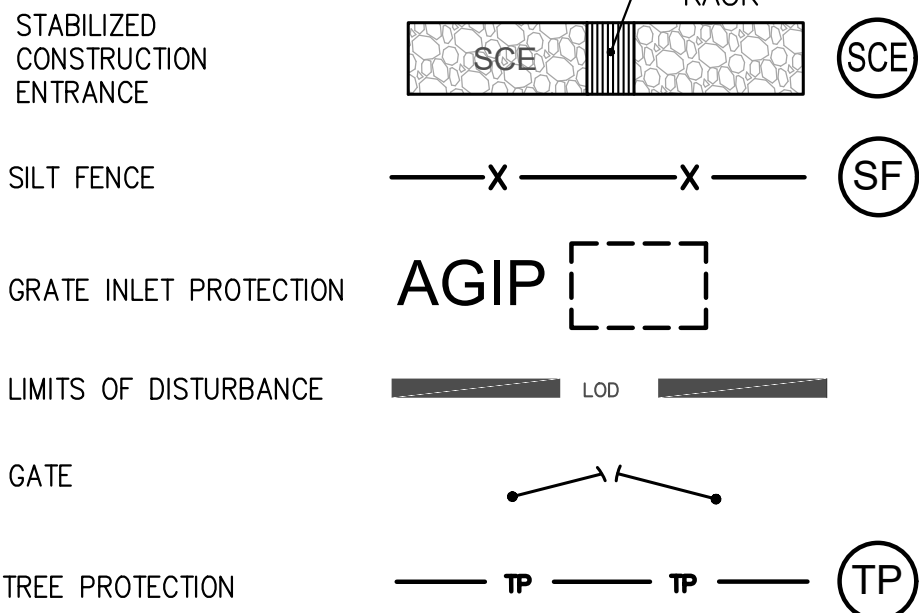
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SF PROJECT NUMBER: 2233104
AVE PROJECT NUMBER: 20230426

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLAN - YARD 4 EAST
DRAWING TYPE: CIVIL
WORKING STAFF: DESIGNED BY: KJB, DRAWN BY: JVM, CHECKED BY: KJB

SHEET NO.: C 1 42
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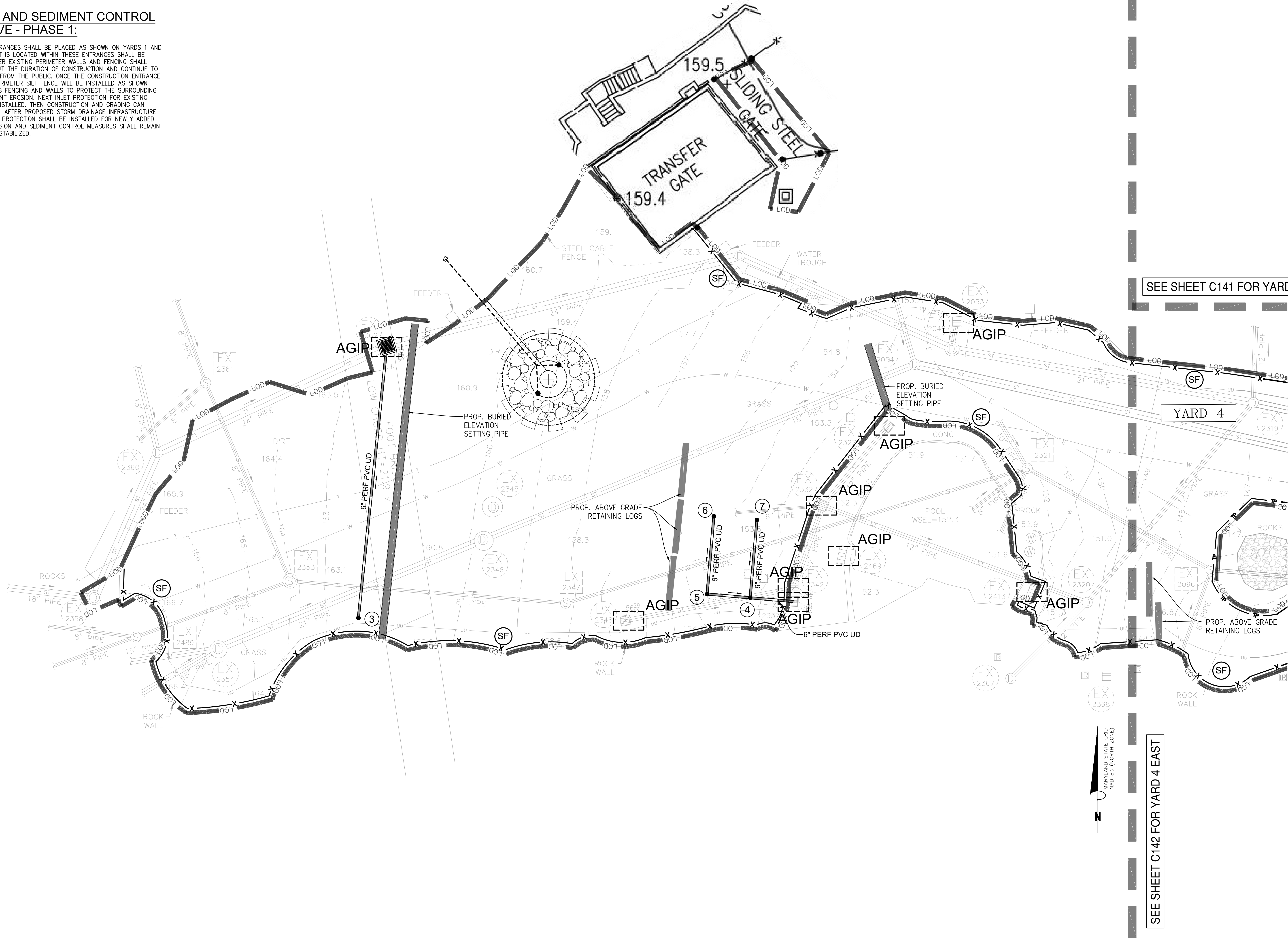


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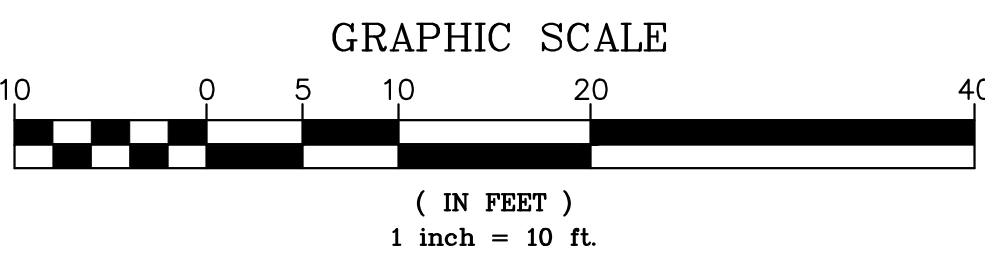
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SEE SHEET C141 FOR YARD 2

YARD 4

SEE SHEET C142 FOR YARD 4 EAST



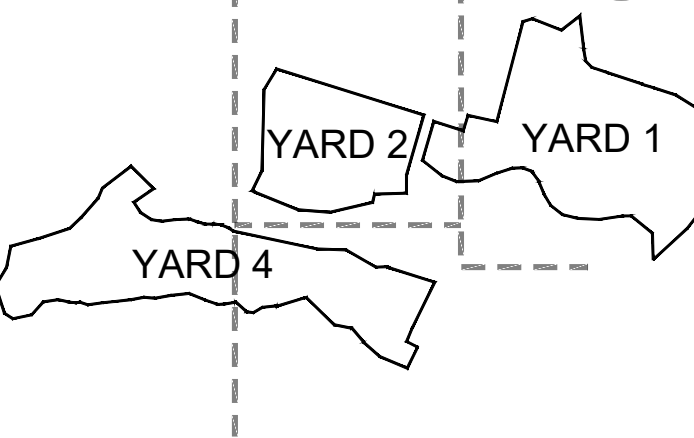
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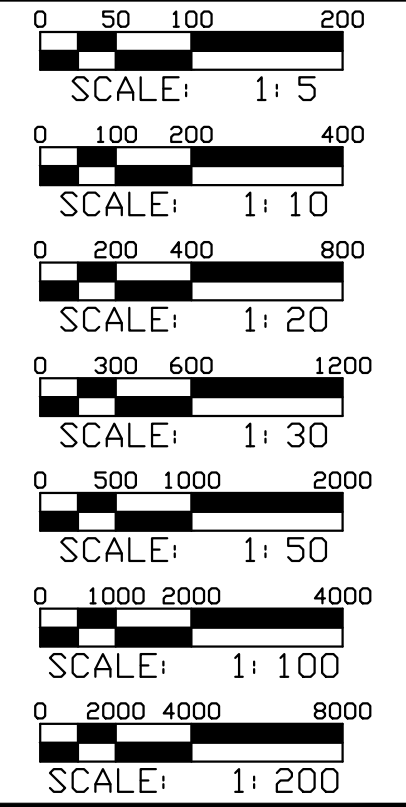
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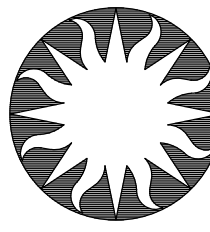


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DRAWING TYPE: CIVIL
WORKING STAFF: KJB JVM KJB
DESIGNED BY: KJB
DRAWN BY: JVB
CHECKED BY: KJB

SHEET NO. 24 OF 39
DISCIPLINE: C
TYPE: 1
SEQUENCE: 43

DOEE SOIL EROSION AND SEDIMENT CONTROL PLAN GENERAL NOTES

1. FOLLOWING INITIAL LAND DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR INTERIM STABILIZATION MUST BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS FOR THE SURFACES OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND SLOPES GREATER THAN THREE (3) HORIZONTAL TO ONE (1) VERTICAL (3:1); AND FOURTEEN (14) DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. THESE REQUIREMENTS DO NOT APPLY TO AREAS SHOWN ON THE PLAN THAT ARE USED FOR MATERIAL STORAGE OTHER THAN STOCKPILING, OR FOR THOSE AREAS ON THE PLAN WHERE ACTUAL CONSTRUCTION ACTIVITIES ARE BEING PERFORMED. MAINTENANCE SHALL BE PERFORMED AS NECESSARY SO THAT STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE DISTRICT OF COLUMBIA STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (ESC). [21 DCMR § 542.9 (C)]
2. ESC MEASURES SHALL BE IN PLACE BEFORE AND DURING LAND DISTURBANCE. [21 DCMR § 543.6]
3. CONTACT DOEE INSPECTION (202) 535-2977 TO SCHEDULE A PRECONSTRUCTION MEETING AT LEAST THREE (3) BUSINESS DAYS BEFORE THE COMMENCEMENT OF A LAND-DISTURBING ACTIVITY. [21 DCMR § 503.7 (A)]
4. A COPY OF THE APPROVED PLAN SET WILL BE MAINTAINED AT THE CONSTRUCTION SITE FROM THE DATE THAT CONSTRUCTION ACTIVITIES BEGIN TO THE DATE OF FINAL STABILIZATION AND WILL BE AVAILABLE FOR DOEE INSPECTORS. [21 DCMR § 542.15]
5. ESC MEASURES SHALL BE IN PLACE TO STABILIZE AN EXPOSED AREA AS SOON AS PRACTICABLE AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED BUT NO LATER THAN FOURTEEN (14) DAYS FOLLOWING CESSATION, EXCEPT THAT TEMPORARY OR PERMANENT STABILIZATION SHALL BE IN PLACE AT THE END OF EACH DAY OF UNDERGROUND UTILITY WORK THAT IS NOT CONTAINED WITHIN A LARGER DEVELOPMENT SITE. [21 DCMR § 543.7]
6. STOCKPILED MATERIAL BEING ACTIVELY USED DURING A PHASE OF CONSTRUCTION SHALL BE PROTECTED AGAINST EROSION BY ESTABLISHING AND MAINTAINING PERIMETER CONTROLS AROUND THE STOCKPILE. [21 DCMR § 543.16 (A)]
7. STOCKPILED MATERIAL NOT BEING ACTIVELY USED OR ADDED TO SHALL BE STABILIZED WITH MULCH, TEMPORARY VEGETATION, HYDRO SEED OR PLASTIC WITHIN FIFTEEN (15) CALENDAR DAYS AFTER ITS LAST USE OR ADDITION. [21 DCMR § 543.16 (B)]
8. FILL MATERIAL MUST BE FREE OF CONTAMINATION LEVELS OF ANY POLLUTANT THAT IS, OR MAY BE CONSIDERED TO REPRESENT, A POSSIBLE HEALTH HAZARD TO THE PUBLIC OR MAY BE DETRIMENTAL TO SURFACE OR GROUND WATER QUALITY, OR WHICH MAY CAUSE DAMAGE TO PROPERTY OR THE DRAINAGE SYSTEM. ALL FILL MATERIAL MUST BE FREE OF HAZARDOUS MATERIALS AND COMPLY WITH ALL APPLICABLE DISTRICT AND FEDERAL REGULATIONS.
9. PROTECT BEST MANAGEMENT PRACTICES FROM SEDIMENTATION AND OTHER DAMAGE DURING CONSTRUCTION FOR PROPER POST CONSTRUCTION OPERATION. [21 DCMR § 543.5]
10. REQUEST A DOEE INSPECTOR'S APPROVAL AFTER THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. [21 DCMR § 542.12 (A)]
11. REQUEST A DOEE INSPECTOR'S APPROVAL AFTER FINAL STABILIZATION OF THE SITE AND BEFORE THE REMOVAL OF EROSION AND SEDIMENT CONTROLS. [21 DCMR § 542.12 (B)]
12. FINAL STABILIZATION MEANS THAT ALL LAND-DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND EITHER OF THE FOLLOWING TWO CRITERIA HAVE BEEN MET: (1) A UNIFORM (FOR EXAMPLE, EVENLY DISTRIBUTED, WITHOUT LARGE BARE AREAS) PERENNIAL VEGETATIVE COVER WITH A DENSITY OF SEVENTY PERCENT (70%) OF THE NATIVE BACKGROUND VEGETATIVE COVER FOR THE AREA HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, OR (2) EQUIVALENT PERMANENT STABILIZATION MEASURES HAVE BEEN EMPLOYED (SUCH AS THE USE OF RIPRAP, GABIONS, OR GEOTEXTILES). [21 DCMR § 542.12 (B.1, B.2)]
13. FOLLOW THE REQUIREMENTS OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND MAINTAIN A LEGIBLE COPY OF THIS SWPPP ON SITE. [21 DCMR § 543.10 (B)]
14. POST A SIGN THAT NOTIFIES THE PUBLIC TO CONTACT DOEE IN THE EVENT OF EROSION OR OTHER POLLUTION. THE SIGN WILL BE PLACED AT EACH ENTRANCE TO THE SITE OR AS DIRECTED BY THE DOEE INSPECTOR. EACH SIGN WILL BE NO LESS THAN 18 X 24 INCHES IN SIZE AND MADE OF MATERIALS THAT WILL WITHSTAND WEATHER FOR THE DURATION OF THE PROJECT. LETTERING WILL BE AT LEAST 1 INCH IN HEIGHT AND EASILY READABLE BY THE PUBLIC FROM A DISTANCE OF TWELVE FEET (12 FT). THE SIGN MUST DIRECT THE PUBLIC, IN SUBSTANTIALLY THE FOLLOWING FORM: "TO REPORT EROSION, RUNOFF, OR STORMWATER POLLUTION" AND WILL PROVIDE THE CONSTRUCTION SITE ADDRESS, DOEE'S TELEPHONE NUMBER (202-535-2977), DOEE'S E-MAIL ADDRESS (EB.SCHEDULING@DC.GOV), AND THE 311 MOBILE APP HEADING ("CONSTRUCTION-EROSION RUNOFF"). [21 DCMR § 543.22]

CONSTRUCTION SPECIFICATIONS FOR DUST CONTROL

1. THE CONTRACTOR MUST CONDUCT OPERATIONS AND MAINTAIN THE PROJECT SITE SO AS TO MINIMIZE THE CREATION AND DISPERSION OF DUST. USE DUST CONTROL THROUGHOUT THE WORK AT THE SITE.
2. THE CONTRACTOR MUST PROVIDE CLEAN WATER, FREE FROM SALT, SOIL, AND OTHER DELETERIOUS MATERIAL TO BE USED FOR ON-SITE DUST CONTROL.
3. THE CONTRACTOR SHALL SUPPLY WATER-SPRAYING EQUIPMENT CAPABLE OF ACCESSING ALL WORK AREA.
4. THE CONTRACTOR SHALL IMPLEMENT STRICT DUST CONTROL MEASURES DURING ACTIVE CONSTRUCTION PERIODS ON-SITE. THESE CONTROL MEASURES SHALL GENERALLY CONSIST OF WATER APPLICATIONS THAT SHALL BE APPLIED A MINIMUM OF ONCE PER DAY DURING DRY WEATHER OR MORE OFTEN AS REQUIRE TO PREVENT DUST EMISSIONS.
5. FOR WATER APPLICATION TO UNDISTURBED SOIL SURFACES, THE CONTRACTOR SHALL:
 - 5.a. APPLY WATER WITH EQUIPMENT CONSISTING OF TANK, SPRAY BAR, AND PUMP WITH DISCHARGE PRESSURE GAUGE.
 - 5.b. ARRANGE SPRAY BAR HEIGHT, NOZZLE SPACING, AND SPRAY PATTERN TO PROVIDE COMPLETE COVERAGE OF GROUND WITH WATER.
 - 5.c. DISPERSE WATER THROUGH NOZZLES ON SPRAY BAR AT 20 PSI (137.8 KPA) MINIMUM. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
6. FOR WATER APPLICATION TO SOIL SURFACES DURING DEMOLITION AND/OR EXCAVATION, THE CONTRACTOR SHALL:
 - 6.a. APPLY WATER WITH EQUIPMENT CONSISTING OF A TANK, PUMP WITH DISCHARGE GUAGE, HOSES, AND MIST NOZZLES.
 - 6.b. LOCATE TANK AND SPRAYING EQUIPMENT SO THAT THE ENTIRE EXCAVATION AREA CAN BE MISTED WITHOUT INTERFERING WITH DEMOLITION AND/OR EXCAVATION EQUIPMENT OR OPERATIONS. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
 - 6.c. APPLY WATER SPRAY IN A MANNER TO PREVENT MOVEMENT OF SPRAY BEYOND THE SITE BOUNDARIES.

CONSTRUCTION SEQUENCE NOTES

1. SEDIMENT TRAPS OR BASINS AND OTHER EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED NO LATER THAN THE FIRST PHASE OF LAND GRADING.
2. SEDIMENT TRAPS OR BASINS AND OTHER EROSION AND SEDIMENT CONTROLS SHALL BE, INSTALLED AS SOON AS NEW SITE-RELATED RUNOFF IS DETECTED AND EMPLOYED AT ALL TIMES TO PROTECT INLETS OR STORM SEWERS BELOW SILT-PRODUCING AREAS.
3. IMMEDIATELY AFTER DEBRIS BASINS, DIVERSION, WATERWAYS AND RELATED STRUCTURES ARE BUILT SEED AND MULCH, OR INSTALL SOD & STABILIZATION BLANKET.
4. NO LATER THAN THE FIRST DAY OF CONSTRUCTION INSTALL SITE ACCESS MEASURES TO MINIMIZE OFF-SITE VEHICLE TRACKING OF SEDIMENTS. EACH CONSTRUCTION ENTRANCE MUST BE STABILIZED AND INCLUDE EACH ADDITIONAL MEASURE REQUIRED TO KEEP SEDIMENT FROM BEING CARRIED, ONTO PUBLIC STREETS BU CONSTRUCTION VEHICLES, AND WASHED INTO A STORM DRAIN OR WATERWAYS.
5. REMOVE OFF-SITE ACCUMULATIONS OF SEDIMENT DAILY DURING CONSTRUCTION AND IMMEDIATELY AT THE REQUEST OF A DOEE INSPECTOR.
6. PERFORM ROUTINE MAINTENANCE TO PREVENT ANY NEW DESTABILIZED AREAS.

NOTES FOR UNDERGROUND UTILITY WORK

1. WHEN CONDUCTING UNDERGROUND UTILITY WORK DO NOT OPEN MORE THAN FIVE HUNDRED LINEAR FEET (500 FT) OF TRENCH AT ANY ONE TIME.
2. FILTER WATER PUMPED OUT OF TRENCH EXCAVATIONS PRIOR TO DISCHARGING TO THE STORM SEWER SYSTEM.
3. PLACE EXCAVATED MATERIAL FOR UTILITY WORK ON THE UPHILL SIDE OF TRENCH.
4. INSTALL INTERIM OR PERMANENT STABILIZATION IMMEDIATELY AFTER A UTILITY TRENCH IS REFILLED.
5. USE MULCH AND MATTING ON EXCAVATED MATERIAL TO MINIMIZE THEIR EROSION WHEN NATURE OR ARTIFICIAL GRASS FILTER STRIPS ARE INSTALLED TO RECEIVE STORMWATER RUNOFF FROM THE EXCAVATED MATERIALS.

TEMPORARY EROSION AND SEDIMENT CONTROL SPECIFICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.2 SUMMARY

- A. SECTION INCLUDES REQUIREMENTS FOR TEMPORARY EROSION AND SILTATION MEASURES.

1.3 APPLICABLE SPECIFICATIONS

- A. DOEE CONSTRUCTION STANDARDS AND SPECIFICATIONS
- B. DOEE EROSION AND SEDIMENT CONTROL MANUAL
- C. DOEE EROSION AND SEDIMENT CONTROL DETAILS

1.4 INFORMATION SUBMITTALS

- A. EROSION AND SEDIMENTATION CONTROL PLAN: PRIOR TO THE START OF THE WORK THE CONTRACTOR SHALL PREPARE AND SUBMIT A PLAN FOR APPLYING TEMPORARY AND PERMANENT EROSION AND SILTATION CONTROL MEASURES. THE PLAN SHALL INCLUDE, BUT IS NOT LIMITED TO, THE OPERATIONS OF CLEARING AND GRUBBING, STRIPPING OF TOPSOIL, GRADING, STABILIZING CLEARED AREAS, DEWATERING, AND THE CONSTRUCTION OF STRUCTURES AT WATERCOURSES. CONSTRUCTION WORK SHALL NOT COMMENCE UNTIL THE SCHEDULE OF WORK AND THE METHODS OF OPERATIONS HAVE BEEN REVIEWED AND APPROVED BY THE ENGINEER.

- B. TEMPORARY MEASURES SHALL BE COORDINATED WITH THE CONSTRUCTION OF PERMANENT DRAINAGE FACILITIES AND OTHER CONTRACT WORK TO THE EXTENT PRACTICABLE TO ASSURE ECONOMICAL, EFFECTIVE, AND CONTINUOUS EROSION AND SEDIMENT CONTROL, AND TO PREVENT ANY DAMAGE, CLOGGING, OR OTHER NEGATIVE IMPACTS UPON THE WORK OR OTHER PROPERTY.

1.5 PROJECT CONDITIONS

- A. RETAIN THIS ARTICLE TO IMPOSE RESPONSIBILITY FOR MAINTENANCE AND PROTECTION OF PERMANENT SERVICES AND FACILITIES USED TO PROVIDE TEMPORARY SERVICE AND FACILITY. UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AN EROSION AND SEDIMENT CONTROL PERMIT FROM THE DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT (DOEE) AND COMPLYING WITH ANY OTHER APPLICABLE STATE, FEDERAL, AND LOCAL PERMITS WHICH ARE REQUIRED FOR CONSTRUCTION.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. MATERIALS SHALL BE IN ACCORDANCE WITH DOEE STANDARDS AND SPECIFICATIONS WITH THE APPROVAL OF THE ENGINEER.

PART 3 - EXECUTION

3.1 INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL

- A. NO GRADING OPERATIONS WILL BE ALLOWED UNTIL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED PLAN.
- B. CONTROL MEASURES SHALL BE PERIODICALLY CLEANED OF SILT AND MAINTAINED. IMMEDIATELY AFTER EVERY RAINSTORM, ALL CONTROL MEASURES SHALL BE INSPECTED AND ANY DEFICIENCIES CORRECTED BY THE CONTRACTOR.
- C. DOEE RESERVES THE RIGHT TO ORDER THE PERFORMANCE OF OTHER TEMPORARY MEASURES NOT SPECIFICALLY DESCRIBED HEREIN TO CORRECT AN EROSION OR SILTATION CONDITION. ANY DOEE CHANGES IN THIS REGARD CONSTITUTE A CHANGE ORDER TO THE PROJECT.
- D. TEMPORARY CONTROL MEASURES MAY BE REMOVED WHEN THE AREA HAS BEEN STABILIZED.

3.2 EXTENT OF GRADING OPERATIONS

- A. THE CONTRACTOR SHALL LIMIT THE SURFACE AREA OF EARTH MATERIAL EXPOSED BY GRUBBING, STRIPPING OF TOPSOIL AND EXCAVATION TO THAT WHICH IS NECESSARY TO PERFORM THE NEXT OPERATION WITHIN A GIVEN AREA.
- B. UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER, THE GRUBBING OF ROOT MAT AND STUMPS SHALL BE CONFINED TO THE AREA OVER WHICH EXCAVATION IS TO BE ACTIVELY PROSECUTED WITHIN 30 DAYS FOLLOWING THE GRUBBING OPERATIONS.
- C. THE STRIPPING OF TOPSOIL SHALL BE CONFINED TO THE AREA OVER WHICH EXCAVATION IS TO BE ACTIVELY PROSECUTED WITHIN 7 DAYS FOLLOWING THE STRIPPING OPERATIONS; AND EXCAVATION AND EMBANKMENT CONSTRUCTION SHALL BE CONFINED TO THE MINIMUM AREA NECESSARY TO ACCOMMODATE THE CONTRACTOR'S EQUIPMENT AND WORK FORCE ENGAGED IN THE EARTH MOVING WORK.

- D. NO DISTURBED AREA, IS TO REMAIN DENUDED LONGER THAN 7 DAYS WITHOUT TEMPORARY SEEDING OR OTHERWISE STABILIZING THE AREA.

3.3 DEWATERING AND DISCHARGES

- E. ALL DEWATERING OPERATIONS SHALL BE CONDUCTED IN A MANNER THAT PREVENTS OR MINIMIZES THE AMOUNT OF SEDIMENT OR OTHER POLLUTANTS WHICH DISCHARGE TO THE STORM SEWER SYSTEM, WHICH INCLUDES CURB AND GUTTER, OR ANY OPEN WATERCOURSE. ANY DISCHARGE FROM DEWATERING OPERATIONS SHALL BE PROPERLY FILTERED PRIOR TO BEING DISCHARGED. DEWATERING ACTIVITIES SHALL NOT CREATE ANY EROSION NOR FLOODING. A DEWATERING PLAN MUST BE INCLUDED AS PART OF THE EROSION AND SEDIMENT CONTROL PLAN WITH SUFFICIENT DETAIL TO ENSURE THAT THE PROPOSED DEWATERING WILL MEET ALL APPLICABLE REQUIREMENTS

- F. ALL NON-STORMWATER DISCHARGES TO THE DC WATER'S STORM SEWER SYSTEM, WHICH INCLUDES CURB AND GUTTER, OR ANY OPEN WATERCOURSE MUST COMPLY REGULATIONS. CONTAMINANTS, INCLUDING BUT NOT LIMITED TO, VOLATILE ORGANIC COMPOUNDS, PETROLEUM PRODUCTS, METALS, PCBs/PESTICIDES, SHALL NOT BE DISCHARGED TO THE DC WATERS STORM SEWER SYSTEM WITHOUT APPROVAL FROM DC WATER.

- G. CONTRACTORS SHALL NOT DUMP OR DISPOSE OF ANYTHING IN A STORM DRAIN, STREET, STREAM, OR RIPARIAN AREA THAT COULD CAUSE ADVERSE CONDITIONS. CONTRACTORS SHALL EMPLOY GOOD HOUSEKEEPING AND POLLUTION PREVENTION MEASURES AT WORK SITES AT ALL TIMES. WORK AREAS, INCLUDING STAGING OR STOCKPILE AREAS, SHALL BE KEPT CLEAN AND FREE OF TRASH AND DEBRIS TO THE MAXIMUM EXTENT POSSIBLE. CONSTRUCTION MATERIALS SHALL BE PROPERLY STORED AND SECURED. STOCKPILED MATERIALS SHALL BE KEPT COVERED AND PERIMETER CONTROLS SHALL BE EMPLOYED TO MINIMIZE EXPOSURE TO WIND, PRECIPITATION, AND RUNOFF. EQUIPMENT AND VEHICLE WASHING SHALL NOT BE PERMITTED ONSITE WITHOUT PROPER CONTROLS AND FACILITIES TO COLLECT ALL SEDIMENT AND/OR POLLUTANTS. SPILL KITS AND APPROPRIATE TOOLS FOR CLEANUP SHALL BE KEPT ON-SITE AT ALL TIMES. SPILLS SHALL BE CLEANED IMMEDIATELY USING ABSORBENT MATERIALS OR OTHER APPROPRIATE MEASURES WHICH WILL PREVENT ANY POLLUTANTS FROM ENTERING A STORM DRAIN OR OPEN WATERCOURSE.

END OF SECTION

STORMWATER MANAGEMENT COMPLIANCE NOTE

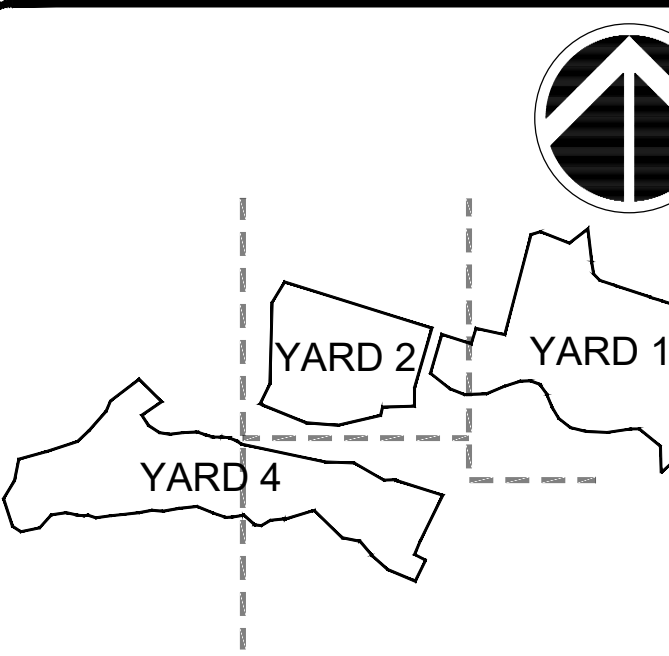
THE PROJECT IS A SITE IMPROVEMENT/REHABILITATION WITH GREATER THAN 5,000 SF OF LAND DISTURBANCE. THE PROJECT DOES NOT HAVE ANY PRE-PROJECT NATURAL LAND COVER AND DOES NOT INCLUDE ANY POST-PROJECT IMPERVIOUS LAND COVER. IT HAS NO BUILDING RENOVATION OR ADDITION.

GIVEN THIS, NO POST CONSTRUCTION STORMWATER MANAGEMENT IS REQUIRED PER DOEE STORMWATER MANAGEMENT GUIDEBOOK - CHAPTER 2 - MINIMUM CONTROL REQUIREMENTS - FIGURE 2.3.

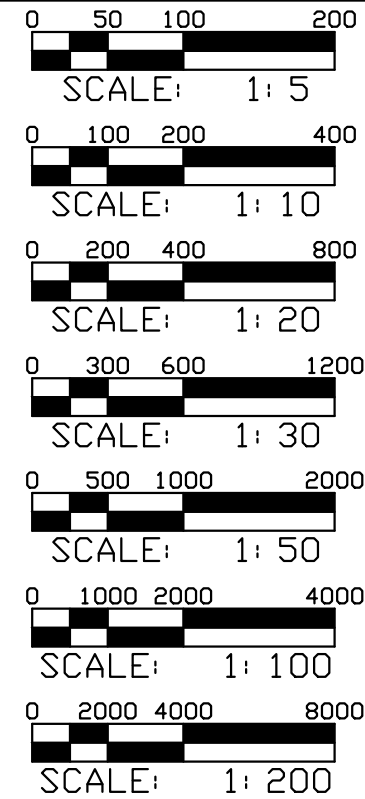
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COLE

Federal Reserve Bank Building
100 North 6th Street
Philadelphia, PA 19106-1590
Tel: 215-923-2020 Fax: 215-574-0952

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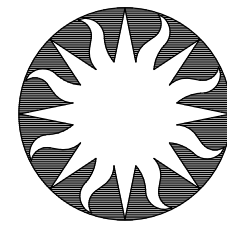


KEY PLAN & SECTION



GRAPHIC SCALE(S)

DATE 01/30/2026	REVISION FINAL SUBMISSION
REVISION	REVISION
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REVISION 3	
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REVISION 6	
REVISION 7	



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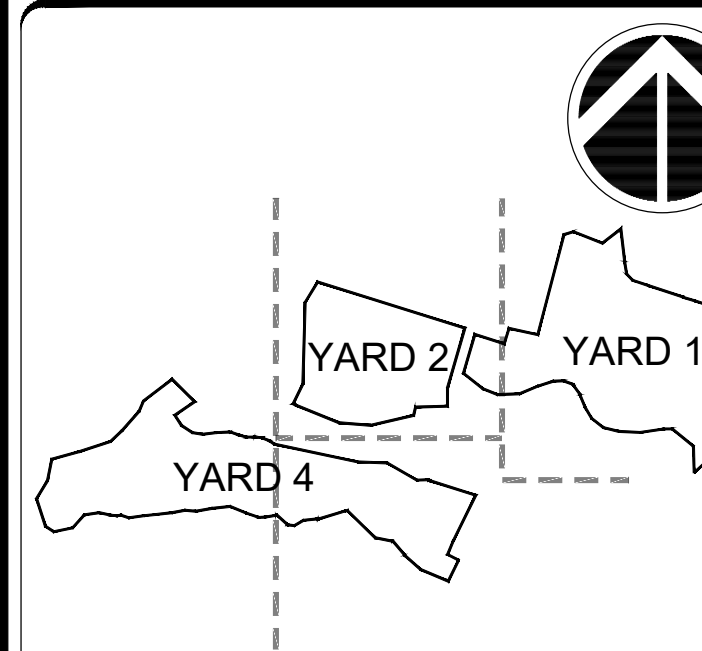
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Washington, DC 20024

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ADDRESS
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WASHINGTON, DC 20008

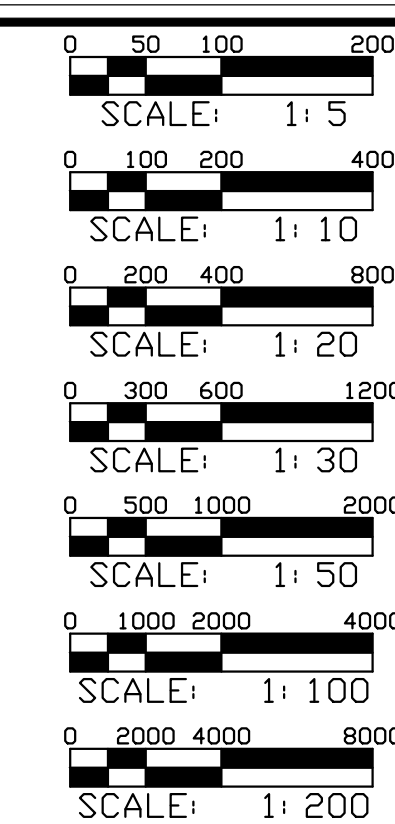
PROJECT TITLE
SF PROJECT NUMBER
AVE PROJECT NUMBER
MITIGATE STORMWATER AT
ELEPHANT YARDS
2233104
20230426

DRAWING TITLE
DRAWING TYPE
WORKING STAFF
EROSION AND SEDIMENT
CONTROL NOTES
CIVIL
KJB JVM KJB
DESIGNED BY DRAWN BY CHECKED BY

SHEET NO.
25 OF 39
C 1 44
DISCIPLINE TYPE SEQUENCE

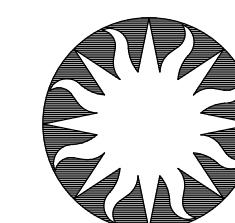


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GRAPHIC SCALE(S)

DATE 01/30/2026	SUBMISSION FINAL SUBMISSION
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REVISION 3	
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REVISION 7	

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Washington, DC 20024

BUILDING NAME	NATIONAL ZOOLOGICAL PARK
ADDRESS	3001 CONNECTICUT AVE NW WASHINGTON, DC 20008

PROJECT TITLE	MITIGATE STORMWATER AT ELEPHANT YARDS
SF PROJECT NUMBER	2233104
A/E PROJECT NUMBER	20230426

DRAWING TITLE	EROSION AND SEDIMENT CONTROL DETAILS		
	CIVIL		
	KJB	JVM	KJB
DRAWING TYPE	DESIGNED BY	DRAWN BY	CHECKED BY
WORKING STAFF			

SHEET NO. 26 OF 39	C	1	45
	DISCIPLINE	TYPE	SIGNATURE



1. PLACE THE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE A MINIMUM LENGTH OF 50 FEET (+30 FEET FOR SINGLE-FAMILY RESIDENCE LOT) AND A MINIMUM WIDTH OF 10 FEET. FLARE THE SCE AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE MAINTAINING POSITIVE DRAINAGE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. PROVIDE PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN THE SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAR SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR DISPERSED ALONG ROADWAY BY VACUUMING, SCOPING, AND/OR SWEEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

					STABILIZED CONSTRUCTION ENTRANCE		 DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT
							DWG. NO 201-I

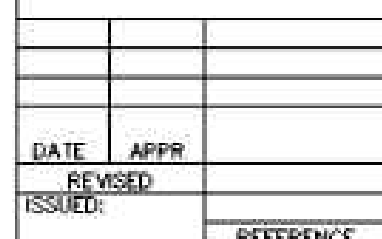
SOURCE: 2011 MARYLAND STANDARDS & SPECIFICATIONS



1. FENCE POSTS MUST BE A MINIMUM 3/8 IN. LONG DRIVEN 16 IN. MINIMUM INTO THE GROUND. WOOD POSTS MUST BE OF SOUND QUALITY HARDWOOD WITH 1-1/2 IN. MINIMUM WIDTH WHEN SQUARE CUT, OR 1-3/4 IN. MINIMUM DIAMETER WHEN ROUND. STEEL POSTS MUST BE STANDARD T OR U SECTION WEIGHING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
2. FASTEN GEOTEXTILE SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION. GEOTEXTILE MUST MEET THE FOLLOWING REQUIREMENTS (GEOTEXTILE CLASS F2):
- | PROPERTY | VALUE | TEST METHOD |
|----------------------|--|-------------|
| TENSILE STRENGTH | 50 LBS/IN (MIN.) | ASTM D-4595 |
| TENSILE MODULUS | 20 LBS/IN (MIN.) | ASTM D-4595 |
| FLOW RATE | 0.3 GAL/Y ² / MINUTE (MAX.) | ASTM D-5141 |
| FILTERING EFFICIENCY | 75% (MIN.) | ASTM D-5141 |
3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, OVERLAP, FOLD, AND STAPLE THEM TO PREVENT SEDIMENT BYPASS.
4. REMOVE ALL DEBRIS, LITTER OR RAINFALL EVENT, AT LEAST DAILY DURING SUMMER RAINFALL EVENTS, AND MAINTAIN WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION EXCEEDS 30% OF THE FABRIC HEIGHT.

[illegible]

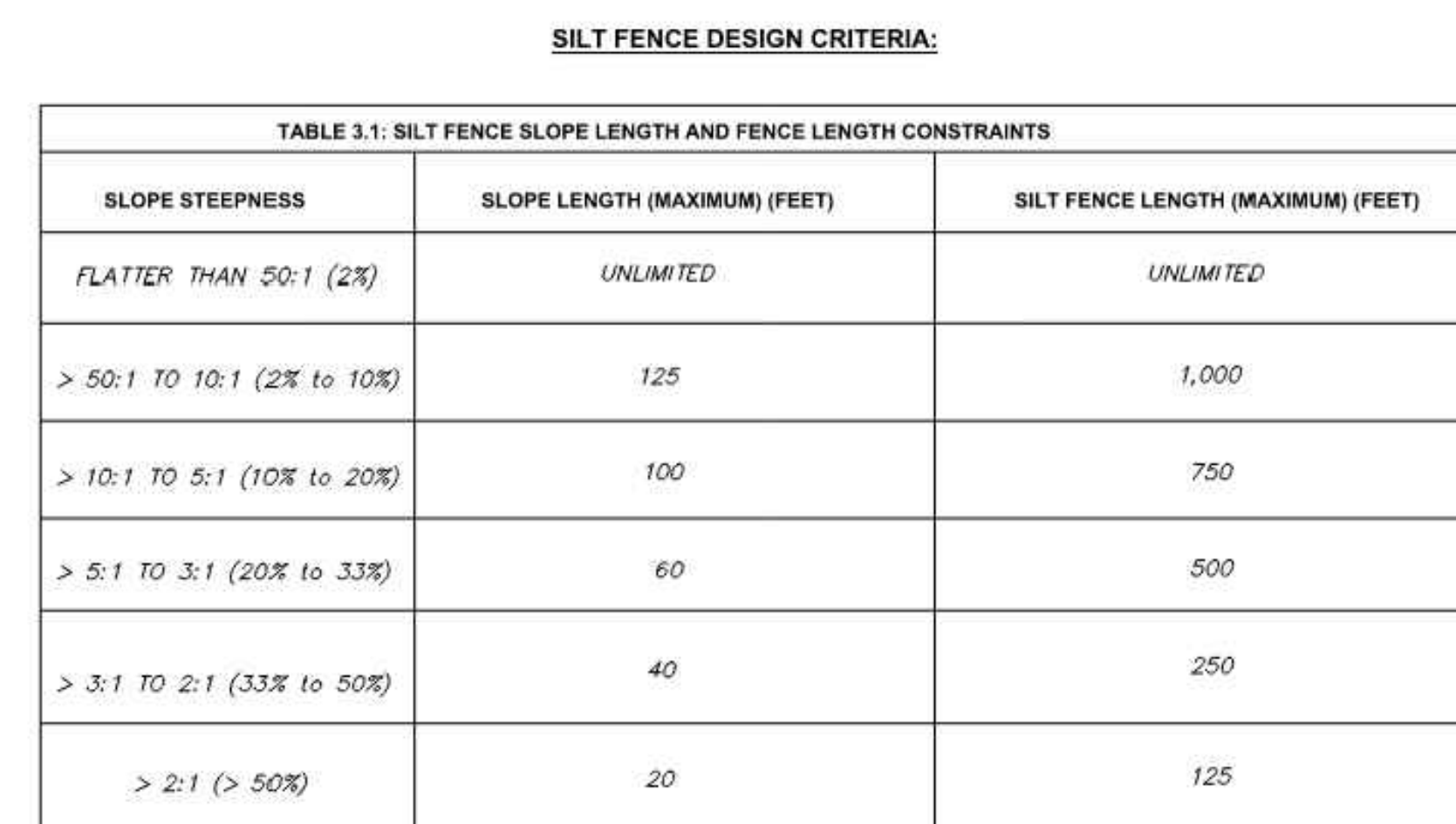
SOURCE: 2011 MARYLAND STANDARDS & SPECIFICATIONS



TREE PROTECTION

REVISED	
ISSUED:	REFERENCE

SOURCE: URBAN TREE FOUNDATION 2015



SILT FENCE-2

			SILT FENCE-2	 DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT
DATE	APPR.			DWG. NO. 301.2
REVISED				
ISSUED:		REFERENCE		

SOURCE: 2011 MARYLAND STANDARDS & SPECIFICATION



1. MATING MATERIAL MUST BE DOUBLE SIDED GEOCOMPOSITE, GEOMET CORE WITH NON-WOVEN COVERING (SUCH AS TENSAR ROADRAIN RD7 OR APPROVED EQUIVALENT).
2. INSTALL ROOT PROTECTION MATING BY A CERTIFIED ARBORIST.
3. TO BE USED FOR DESIGNATED TEMPORARY CONSTRUCTION ACCESS AND STOCKPILE AREAS.
4. PLACE MATING ON 6 IN. WOOD CHIP MULCH UNLESS OTHERWISE DIRECTED.
5. FOR HEAVY TRAFFIC AREAS, COVER MATING WITH STEEL PLATES.

DATE	APPR	
REVISED		
ISSUED:		

TREE ROOT PROTECTION WITH SILT FENCE

ISSUED:	RECEIVED:
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SOURCE: URBAN TREE FOUNDATION, 2001.

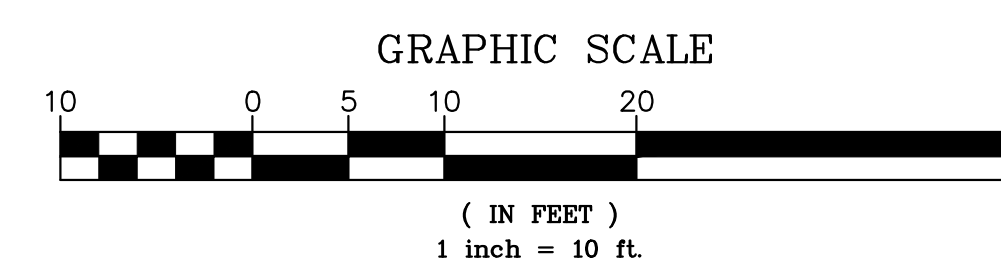
AT GRADE INLET PROTECTION
STORM DRAIN INLET PROTECTION

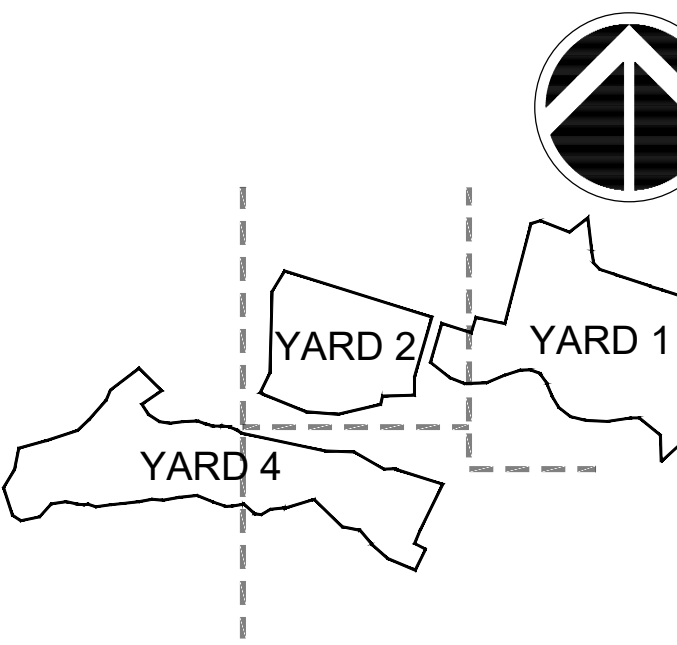
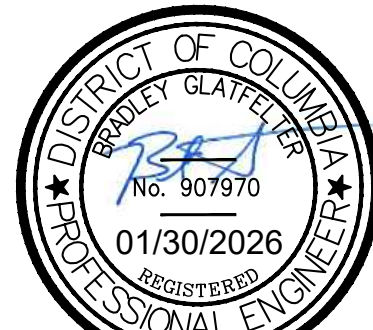
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SOURCE: 2011 MARYLAND STANDARDS AND SPECIFICATION

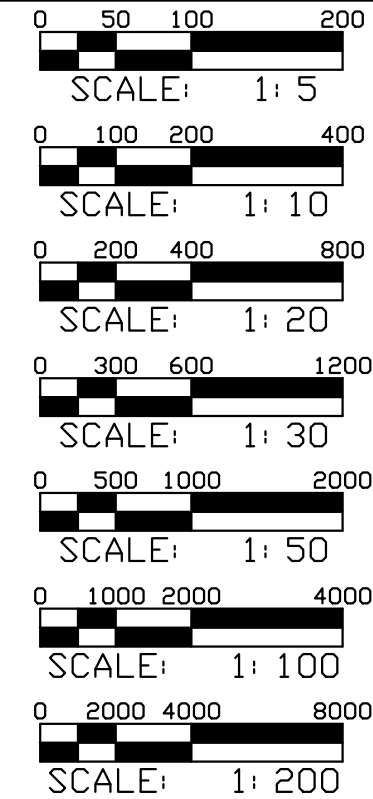
TREE PROTECTION FENCING NOTES

THE FENCING MUST BE 6-FOOT TALL CHAIN LINK OR 4-FOOT WOODEN SNOW FENCING CONSTRUCTED ON ALL SIDES OF THE TREE PROTECTION ZONE. THE FENCING WILL BE INSTALLED PRIOR TO AND MAINTAINED THROUGH CONSTRUCTION AND WILL ONLY BE REMOVED AT THE END OF THE PROJECT. THE FENCING MUST BE LOCATED SUCH THAT IT INCLUDES THE ENTIRETY OF THE CRITICAL ROOT ZONE, WHICH IS DEFINED AS 1.5 FEET IN RADIUS PER 1 INCH OF TREE DIAMETER.



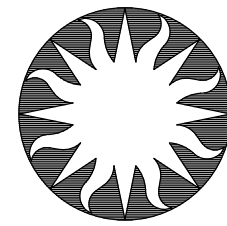


KEY PLAN & SECTION



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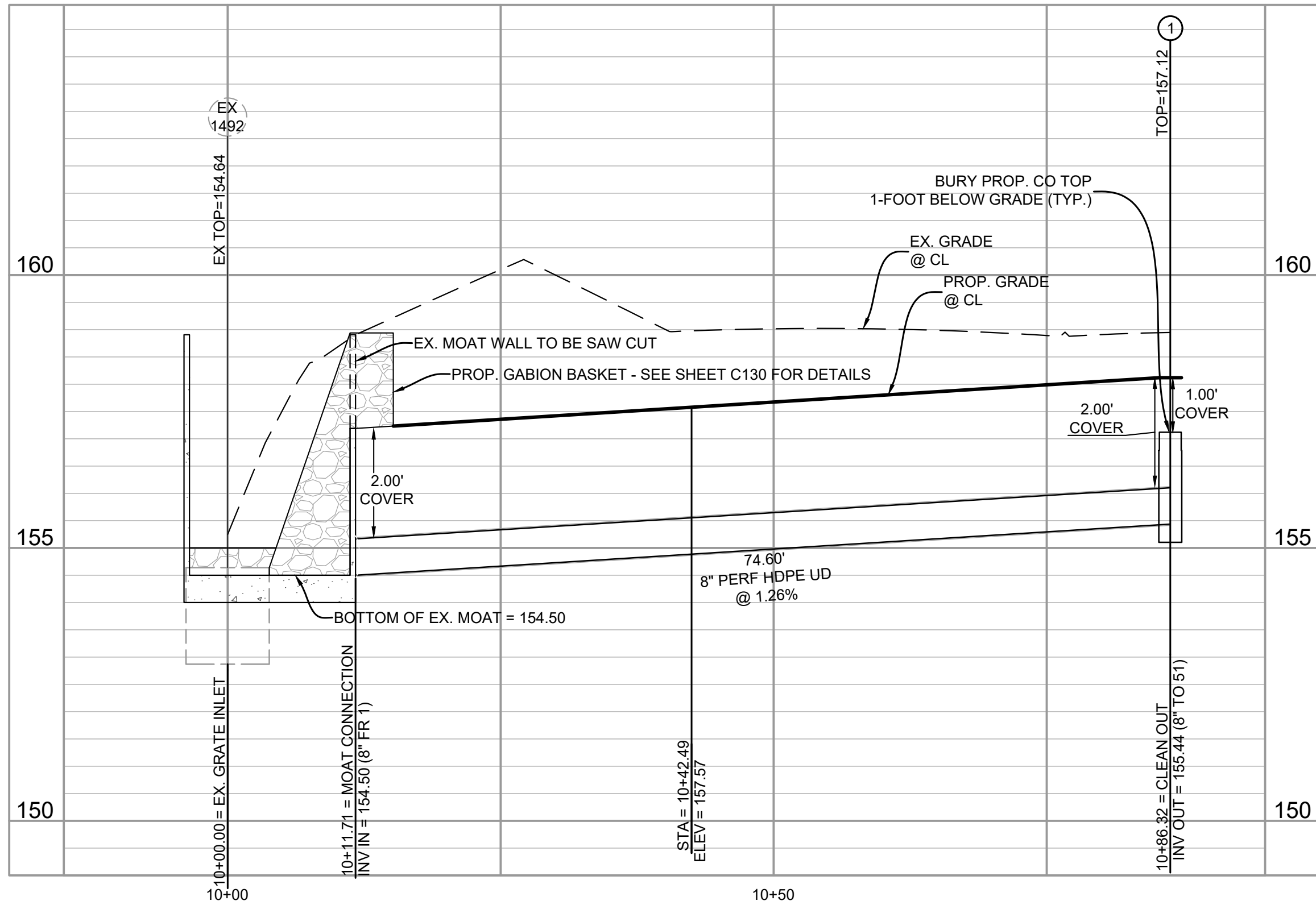
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01/30/2026	FINAL SUBMISSION
REVISION	REVISION
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REVISION 2	
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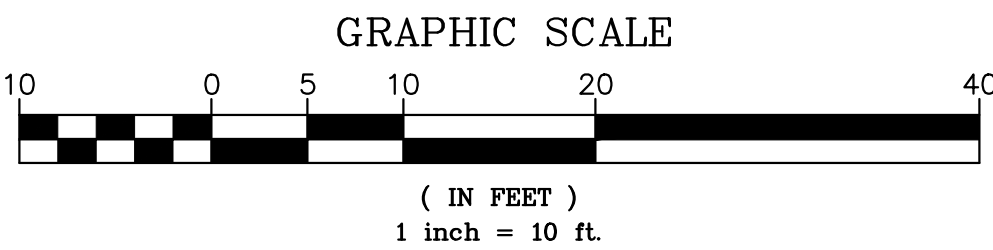
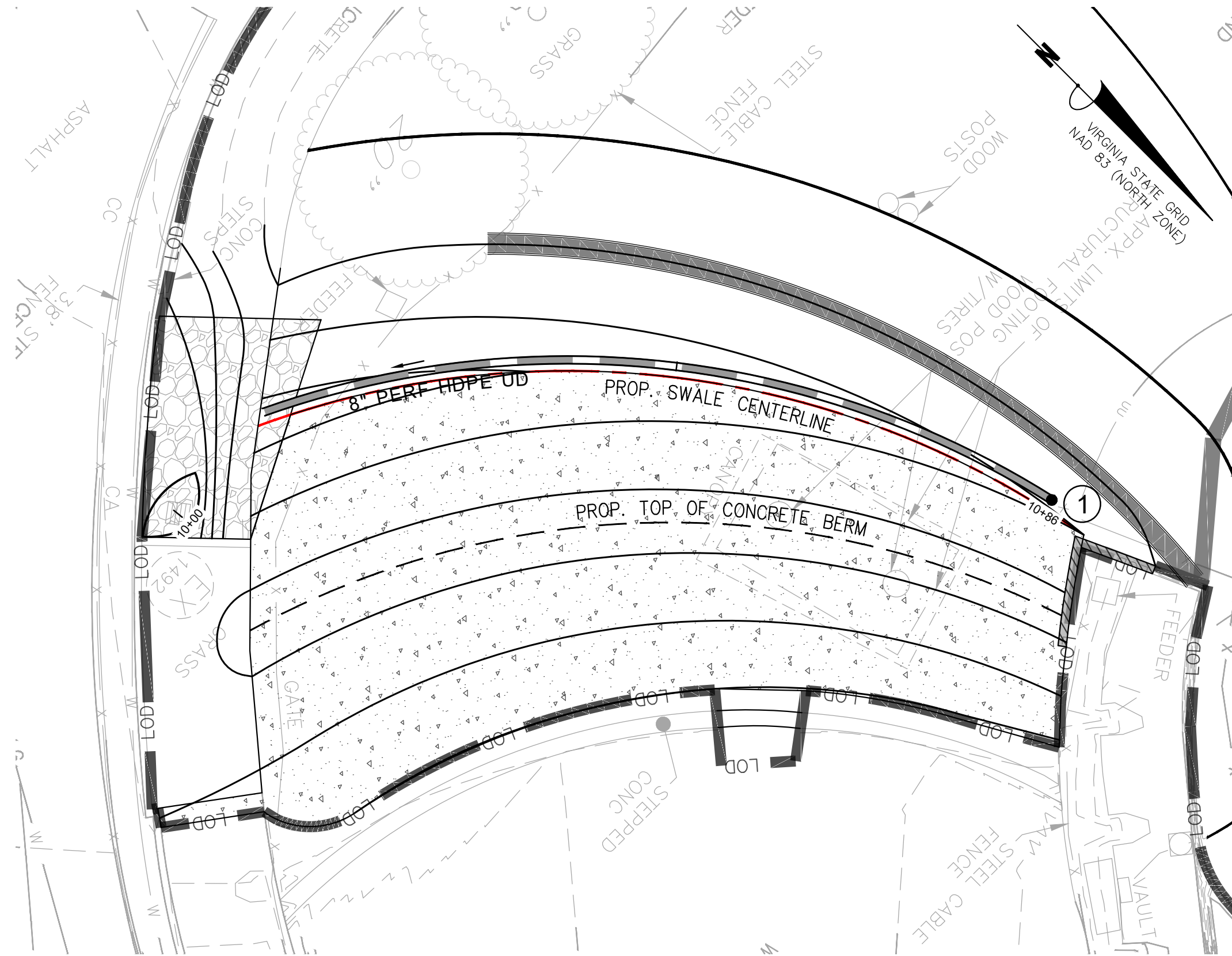
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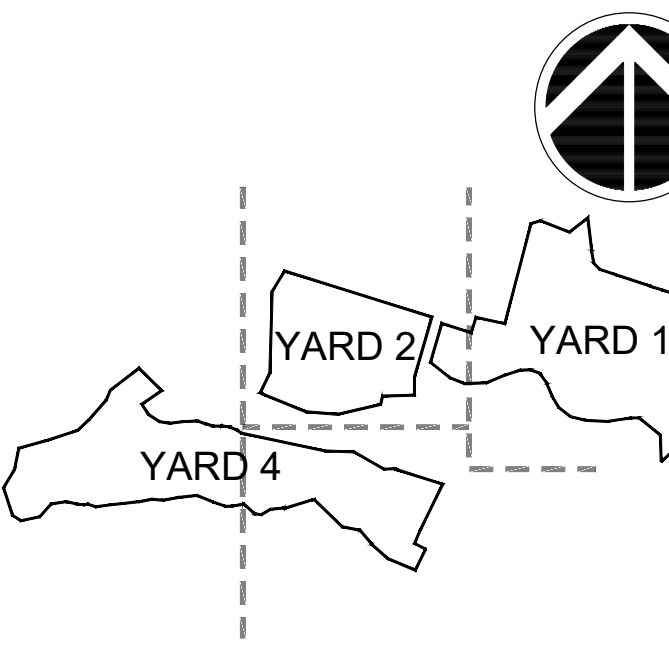
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Washington, DC 20024

BUILDING NAME	NATIONAL ZOOLOGICAL PARK		
ADDRESS	3001 CONNECTICUT AVE NW WASHINGTON, DC 20008		
PROJECT TITLE	MITIGATE STORMWATER AT ELEPHANT YARDS		
SF PROJECT NUMBER	2233104		
A/E PROJECT NUMBER	20230426		
DRAWING TITLE	STORM PROFILES - YARD 1		
DRAWING TYPE	CIVIL		
WORKING STAFF	KJB	JVM	KJB
DESIGNED BY	DRAWN BY	CHECKED BY	
SHEET NO.	C	1	50
27 OF 39	DISCIPLINE	TYPE	SEQUENCE

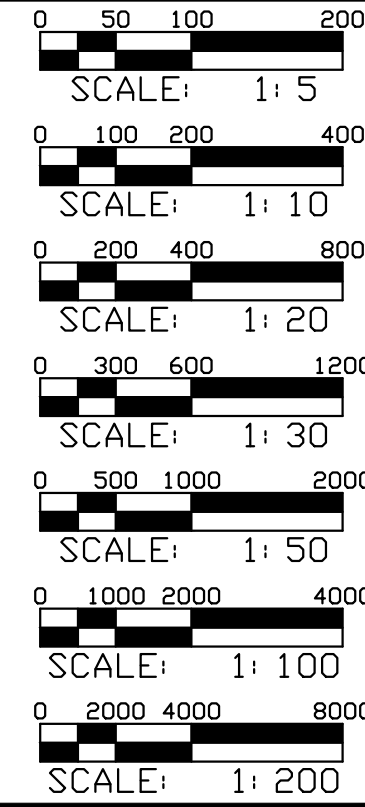


1 TO EX 1492 PROFILE VIEW
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=2'



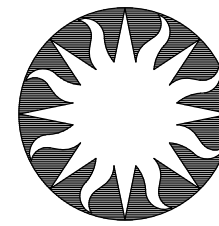


KEY PLAN & SECTION



GRAPHIC SCALE(S)

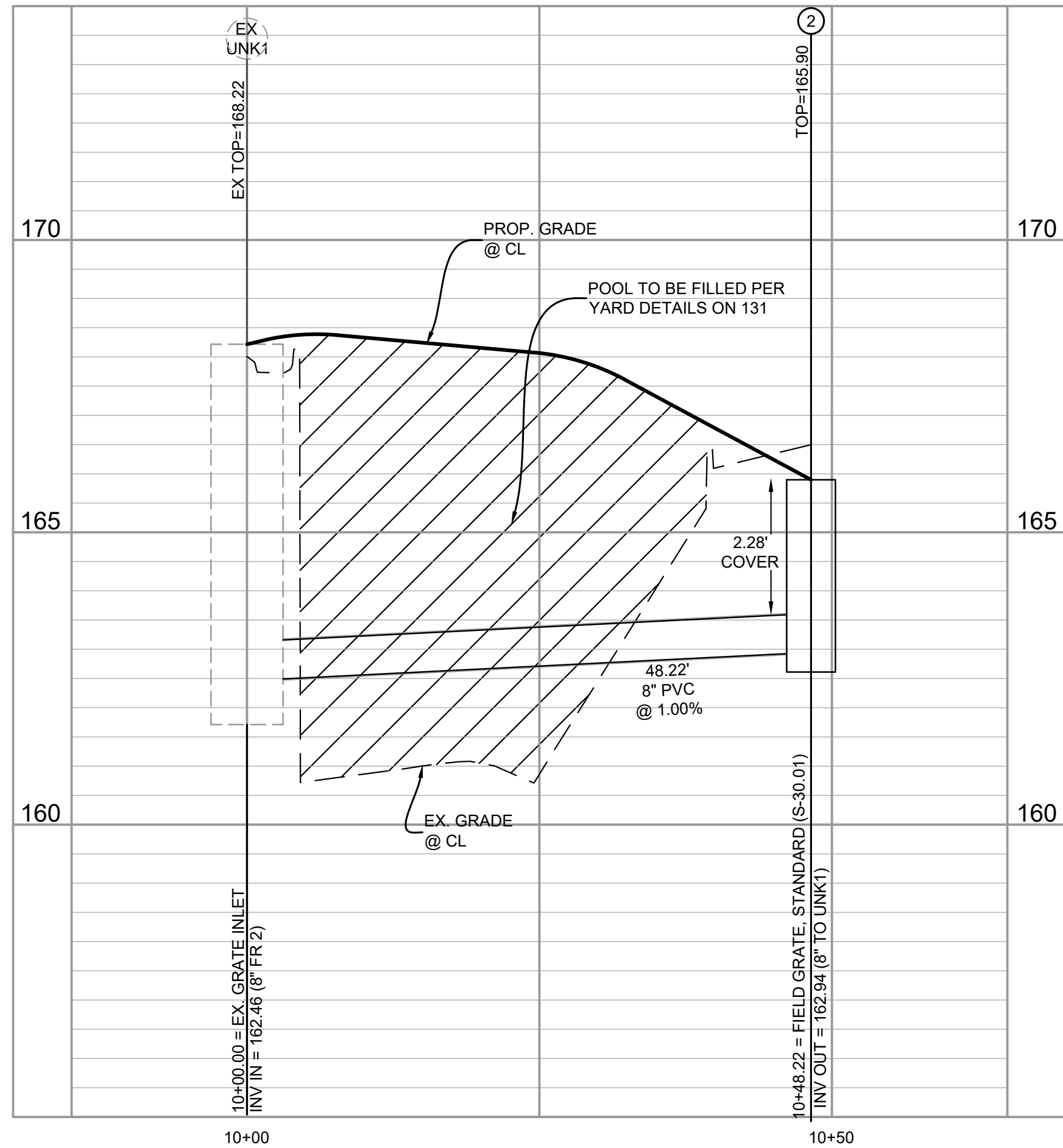
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01/30/2026	FINAL SUBMISSION
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REVISION 7	



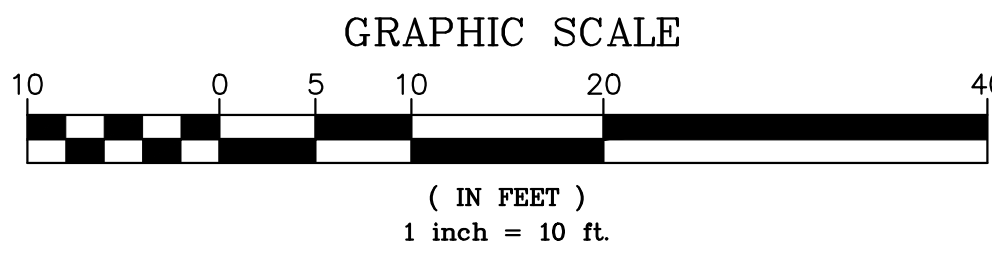
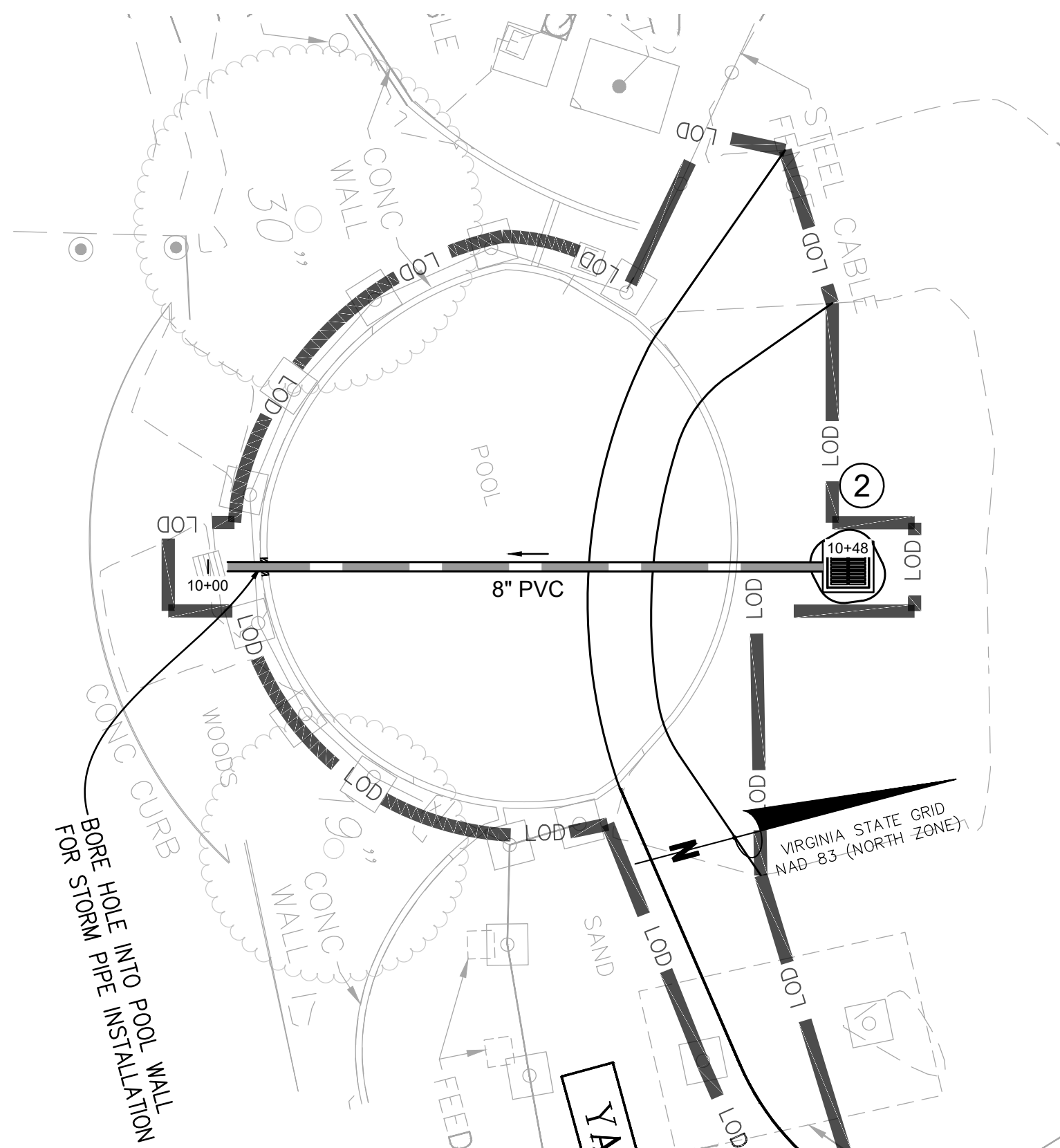
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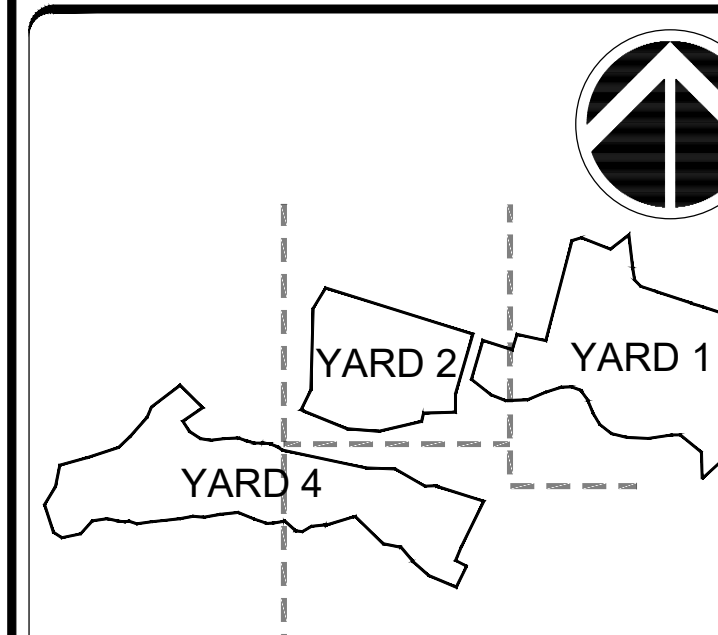
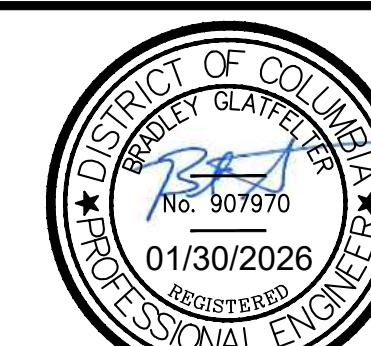
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ADDRESS	3001 CONNECTICUT AVE NW WASHINGTON, DC 20008
PROJECT TITLE	MITIGATE STORMWATER AT ELEPHANT YARDS
SF PROJECT NUMBER	2233104
A/E PROJECT NUMBER	20230426
DRAWING TITLE	STORM PROFILES - YARD 2
DRAWING TYPE	CIVIL
WORKING STAFF	DESIGNED BY: KJB DRAWN BY: JVM CHECKED BY: KJB
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28 OF 39	DISCIPLINE TYPE SEQUENCE

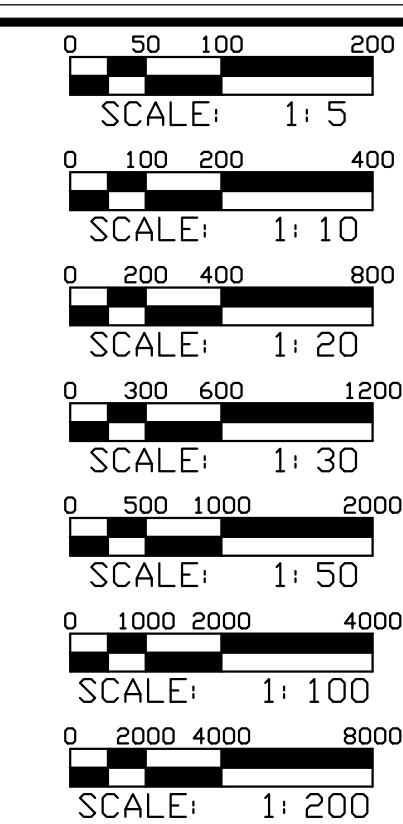


21 TO EX. GRATE PROFILE VIEW
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=2'



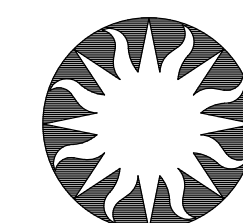


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GRAPHIC SCALE(S)

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ADDRESS	3001 CONNECTICUT AVE NW WASHINGTON, DC 20008

PROJECT TITLE	MITIGATE STORMWATER AT ELEPHANT YARDS
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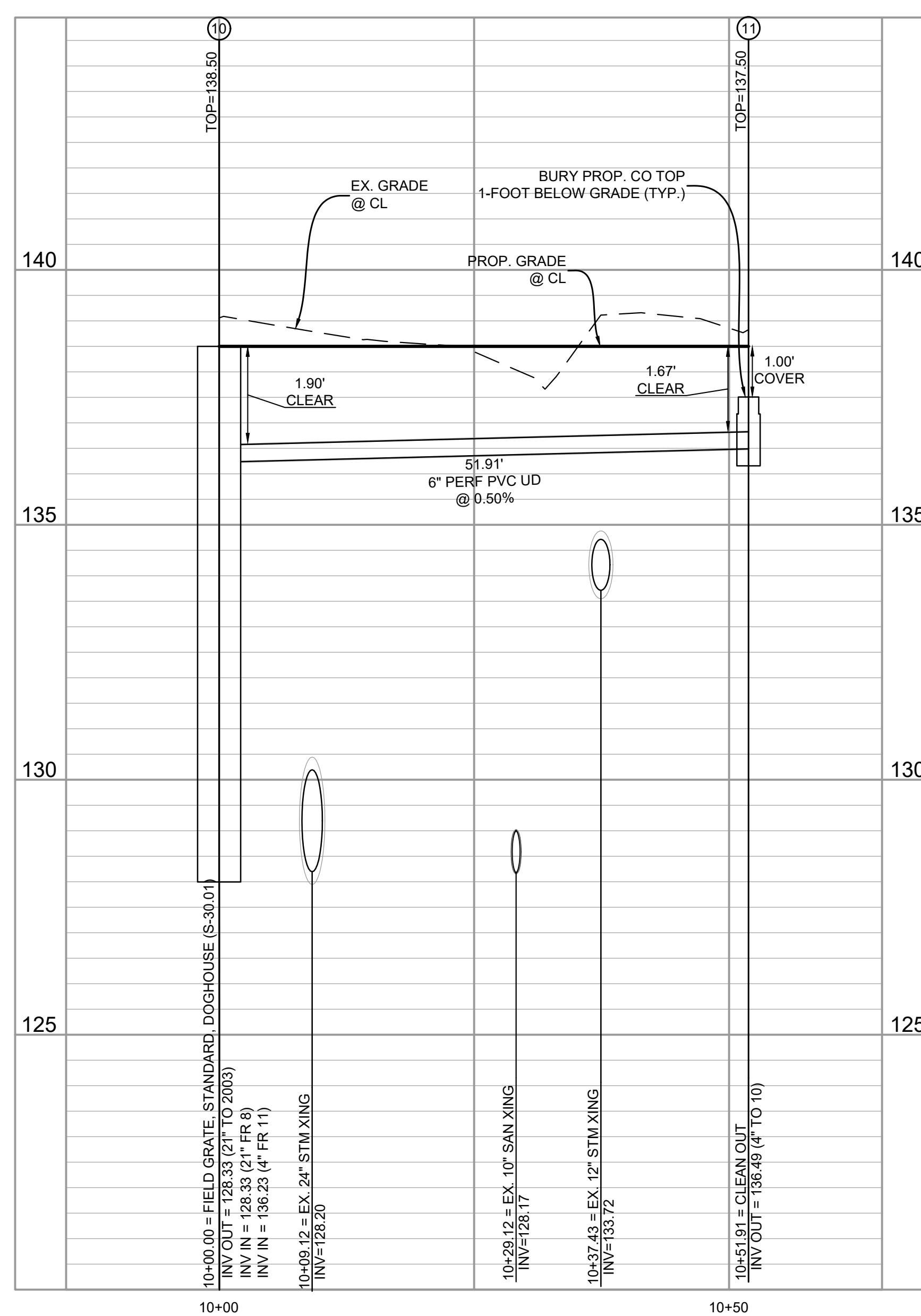
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A/E PROJECT NUMBER	20230426

DRAWING TITLE

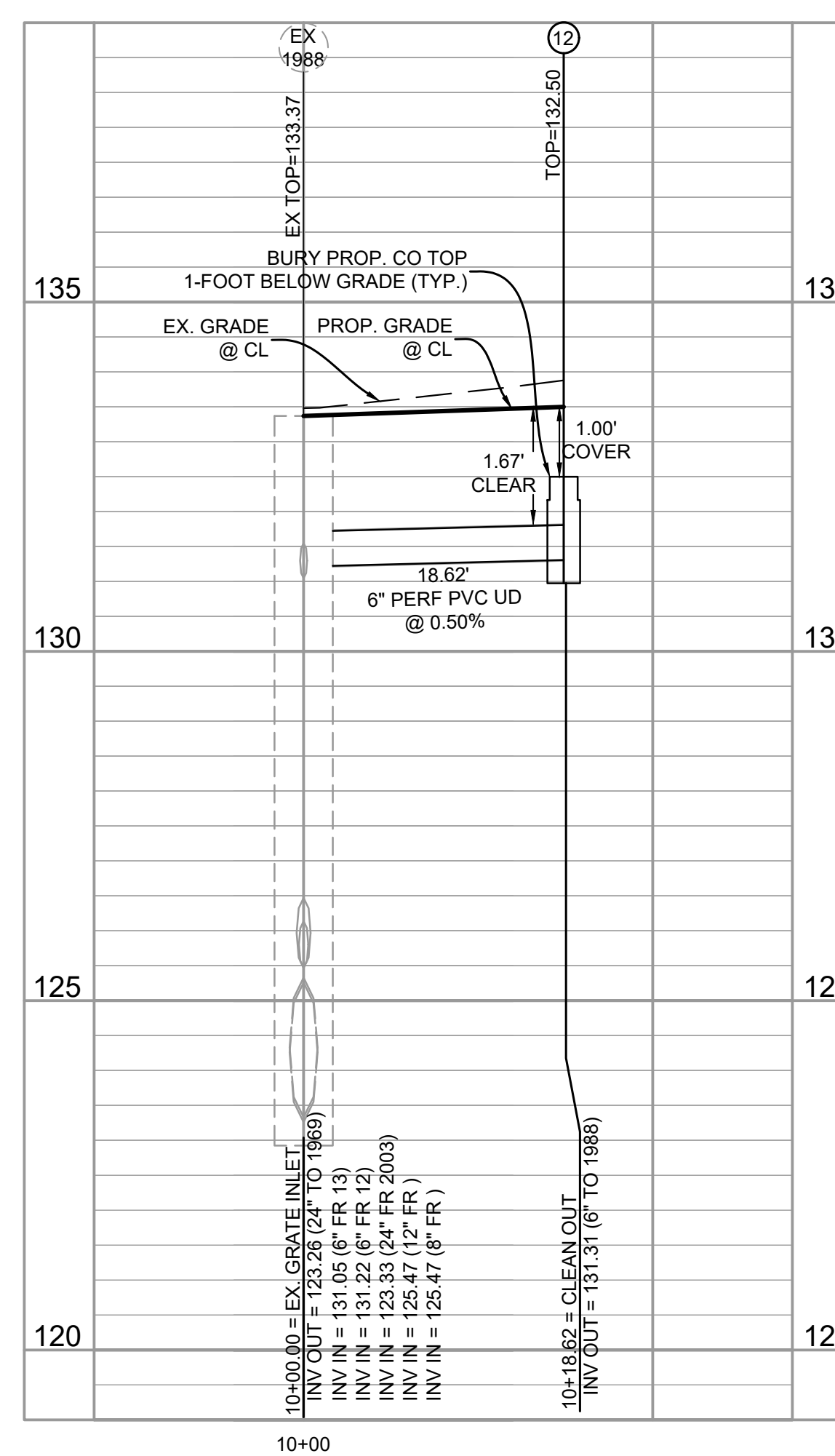
STORM PROFILES - YARD 4

DRAWING TYPE	CIVIL		
WORKING STAFF	KJB	JVM	KJB
	DESIGNED BY	DRAWN BY	CHECKED BY

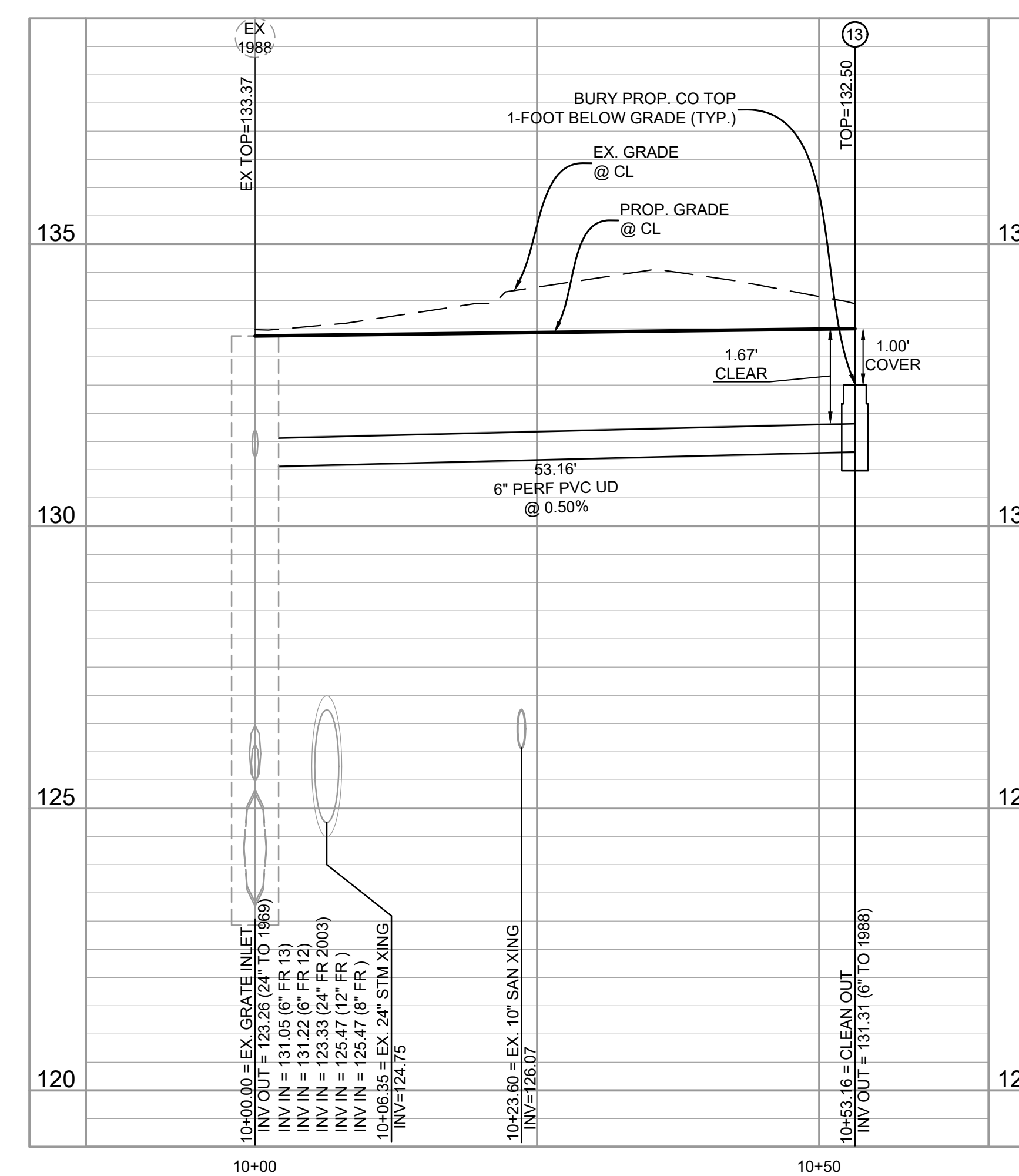
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29 OF 39	DATE/2011/01	TYPE	SPREADSHEET



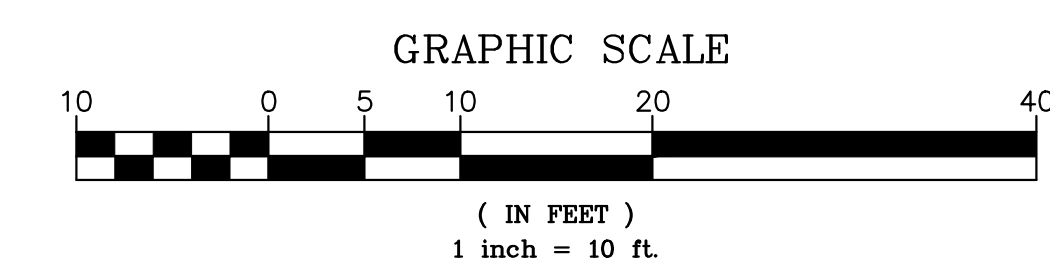
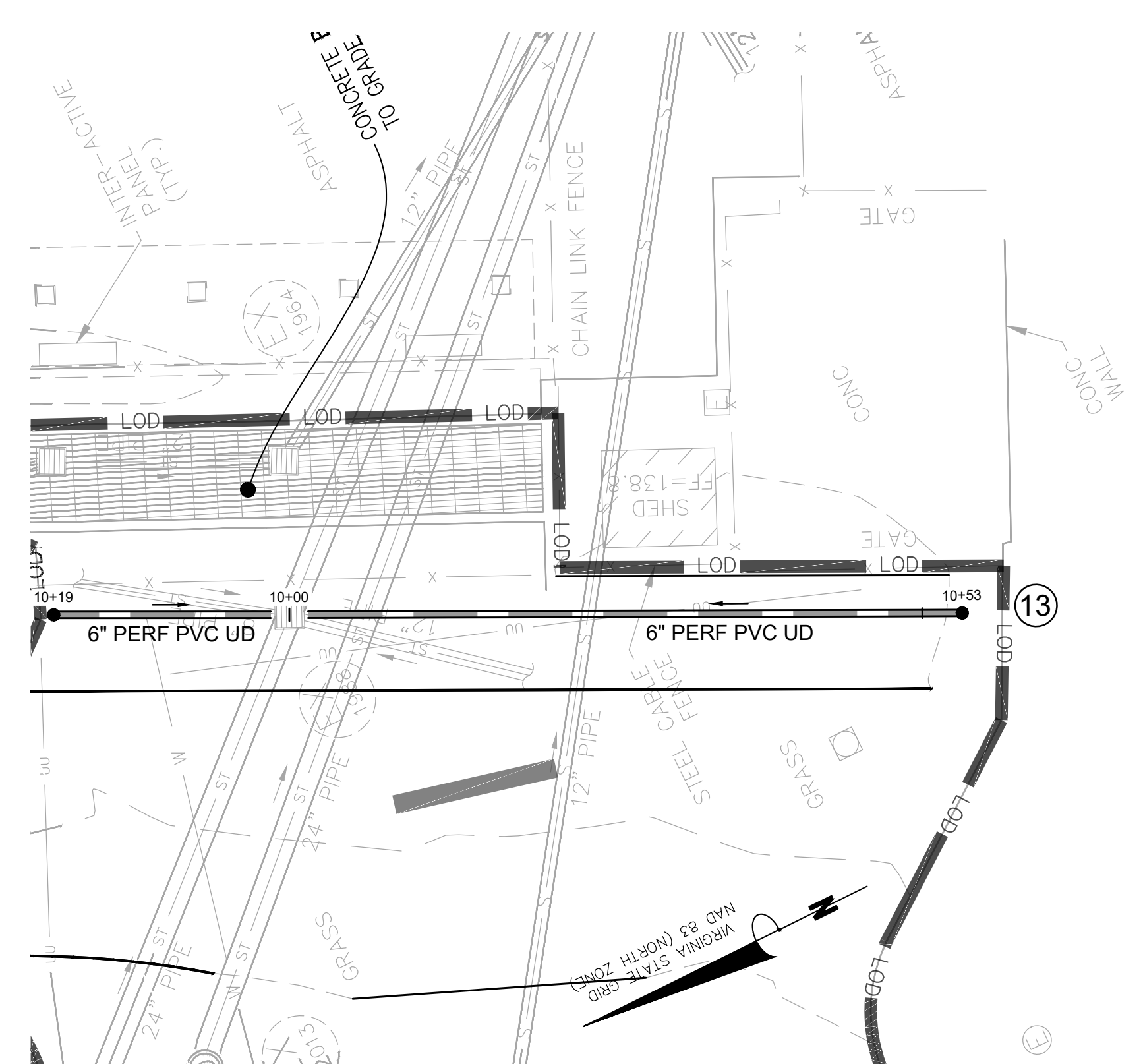
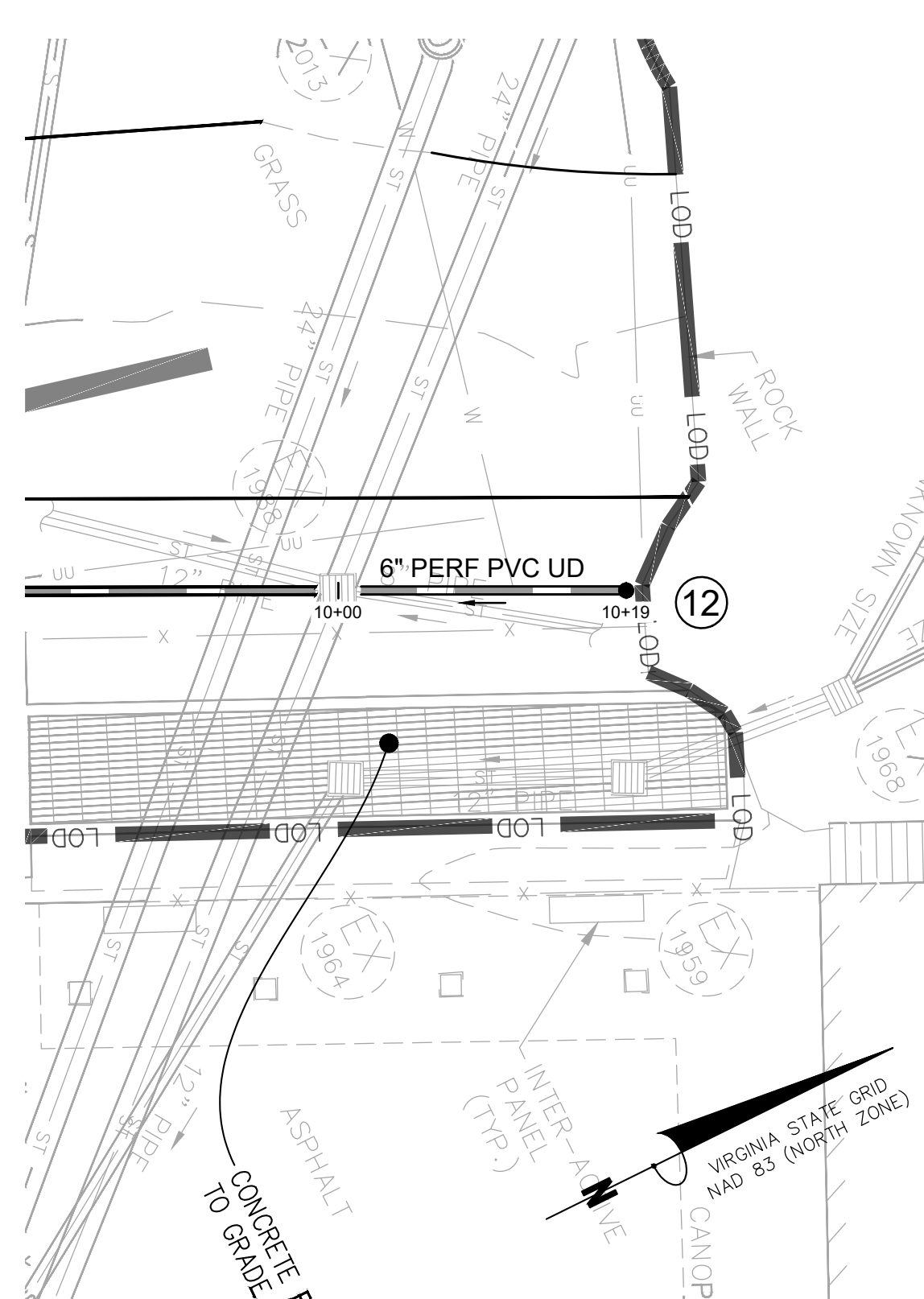
11 TO 10 PROFILE VIEW
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=2'

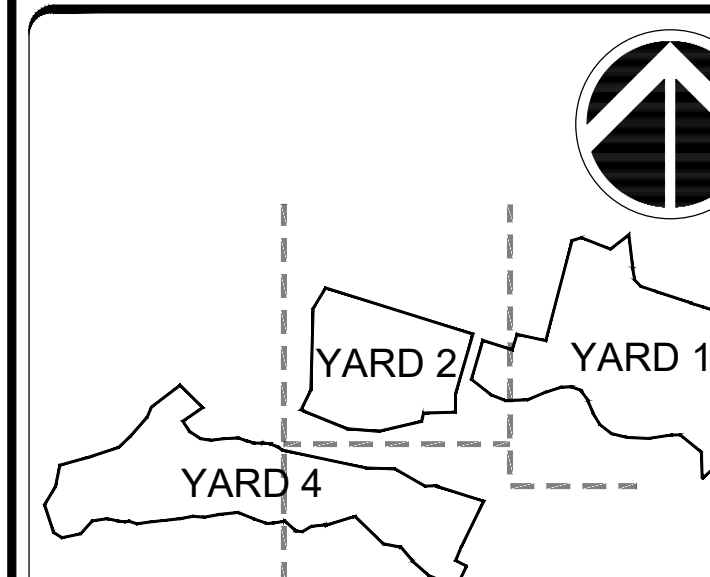
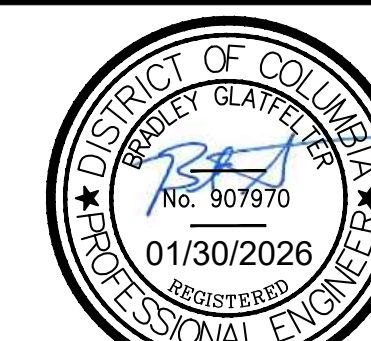


12 TO EX. 1988 PROFILE VIEW
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VERTICAL SCALE: 1"=2'

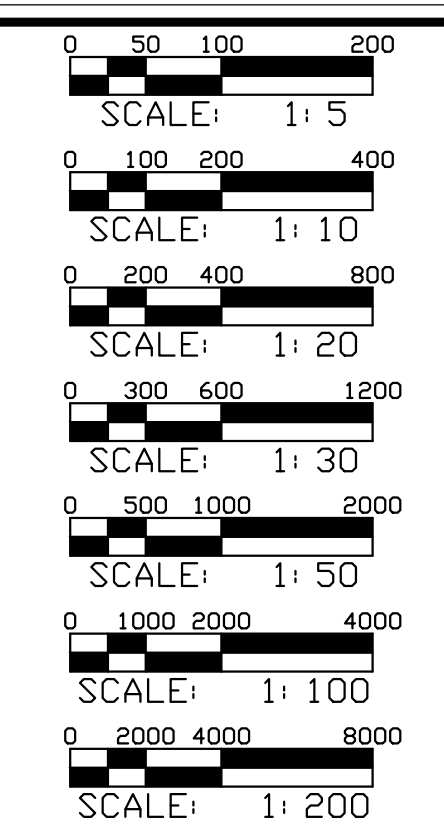


13 TO EX. 1988 PROFILE VIEW
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=2'



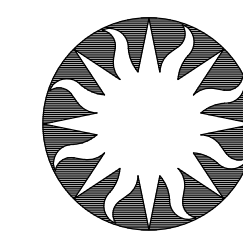


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DATE	SUBMISSION
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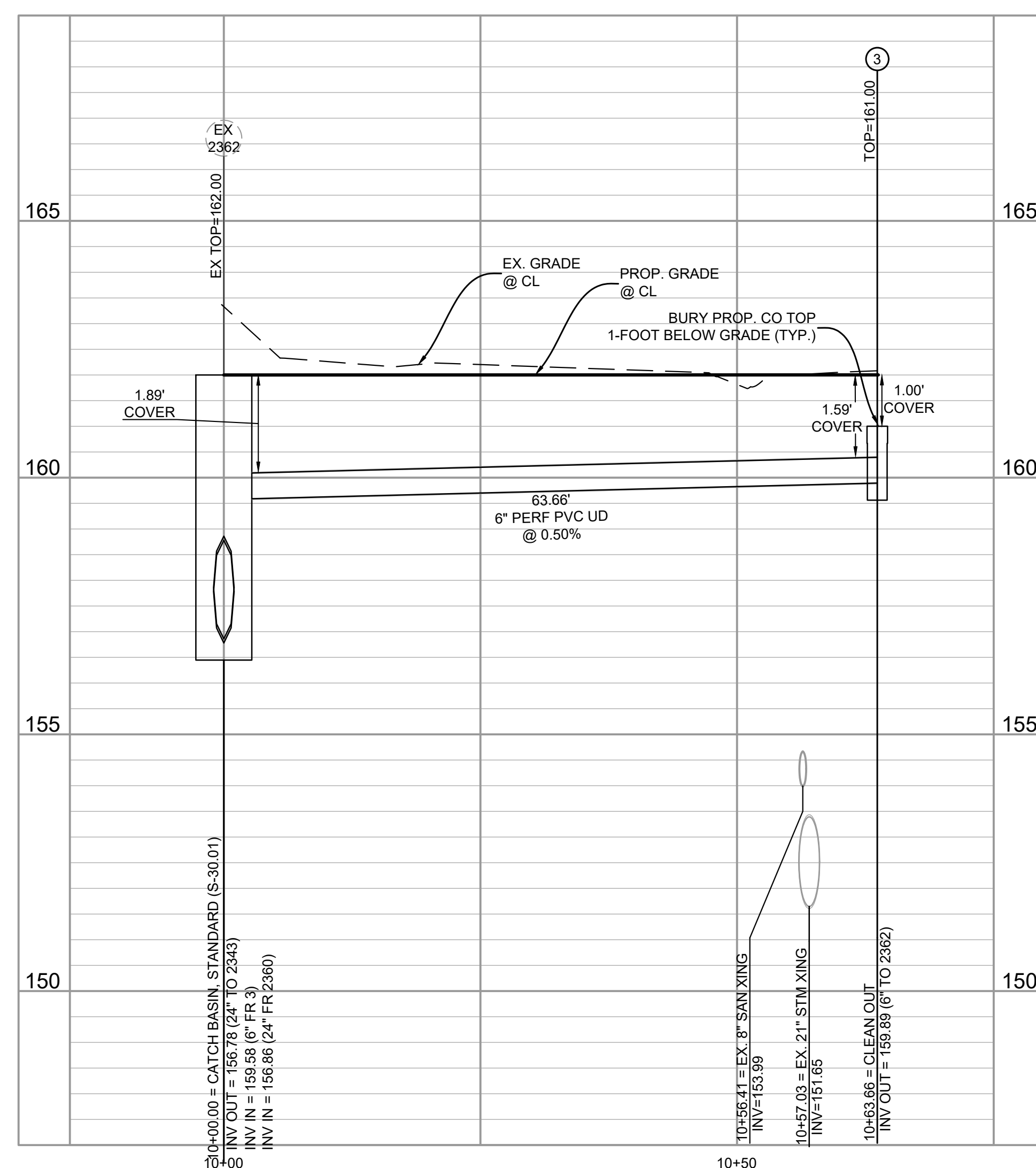
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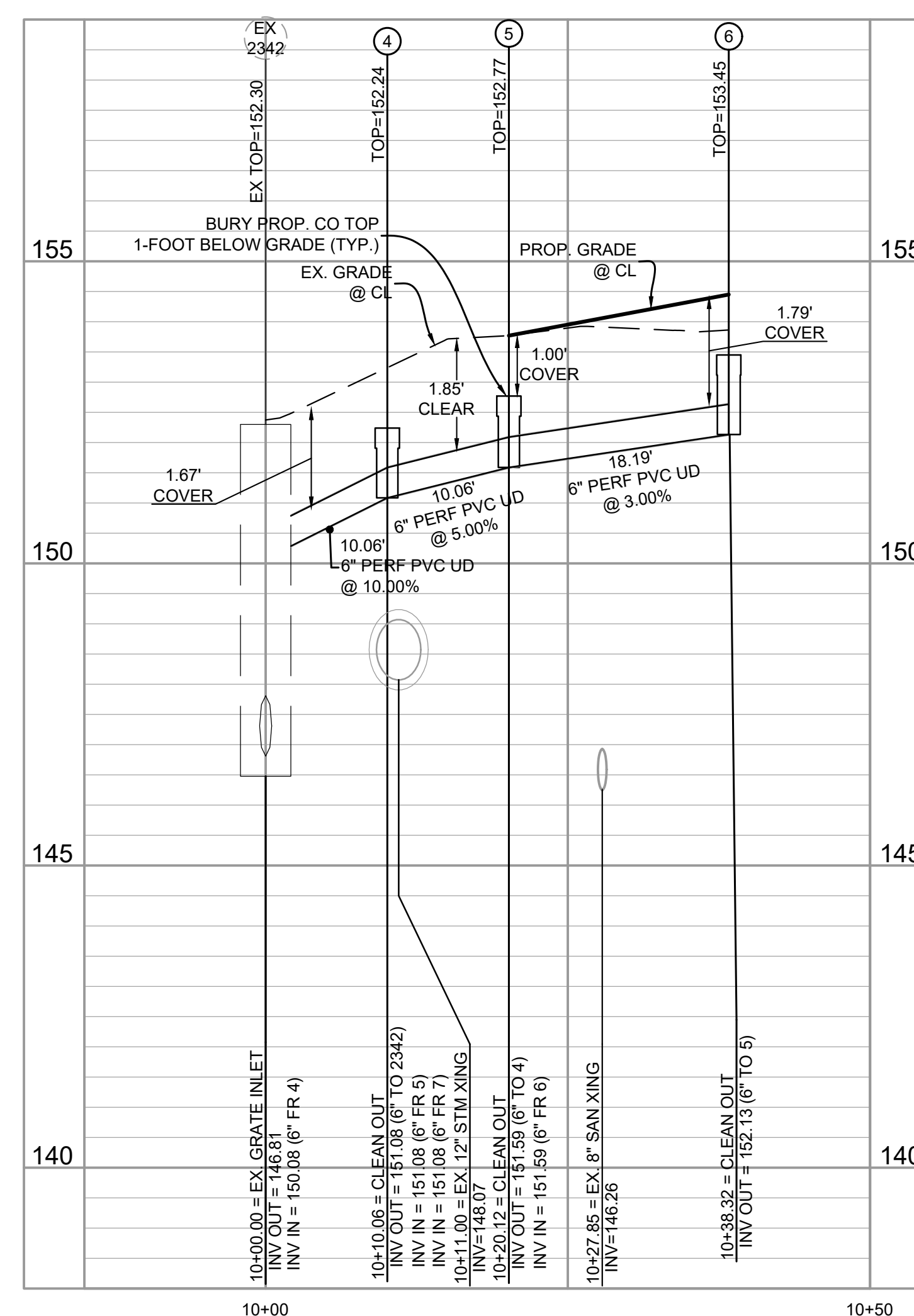
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SF PROJECT NUMBER	2233104
A/E PROJECT NUMBER	20230426

DRAWING TITLE	STORM PROFILES - YARD 4		
DRAWING TYPE	CIVIL		
WORKING STAFF	KJB	JVM	KJB
	DESIGNED BY	DRAWN BY	CHECKED BY

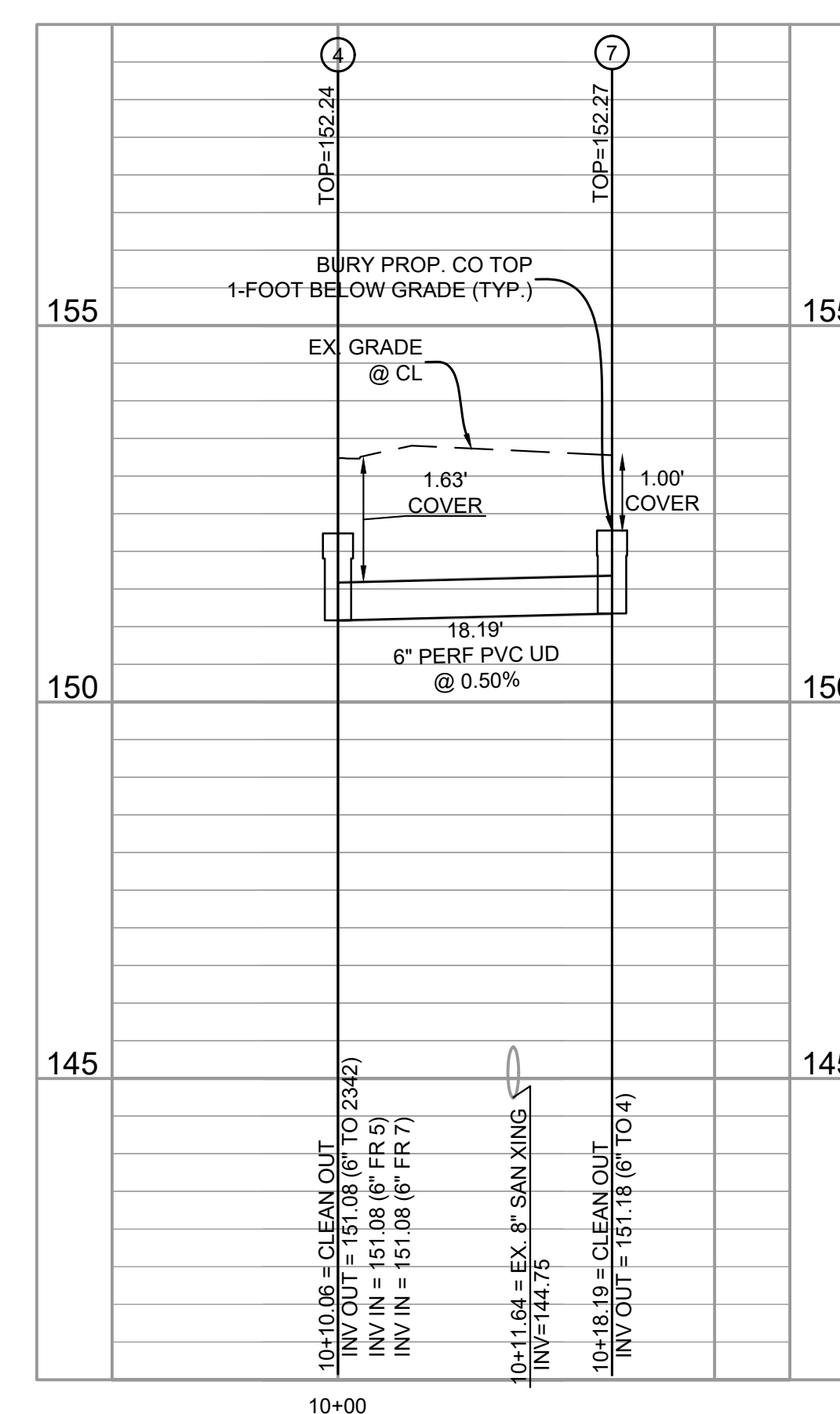
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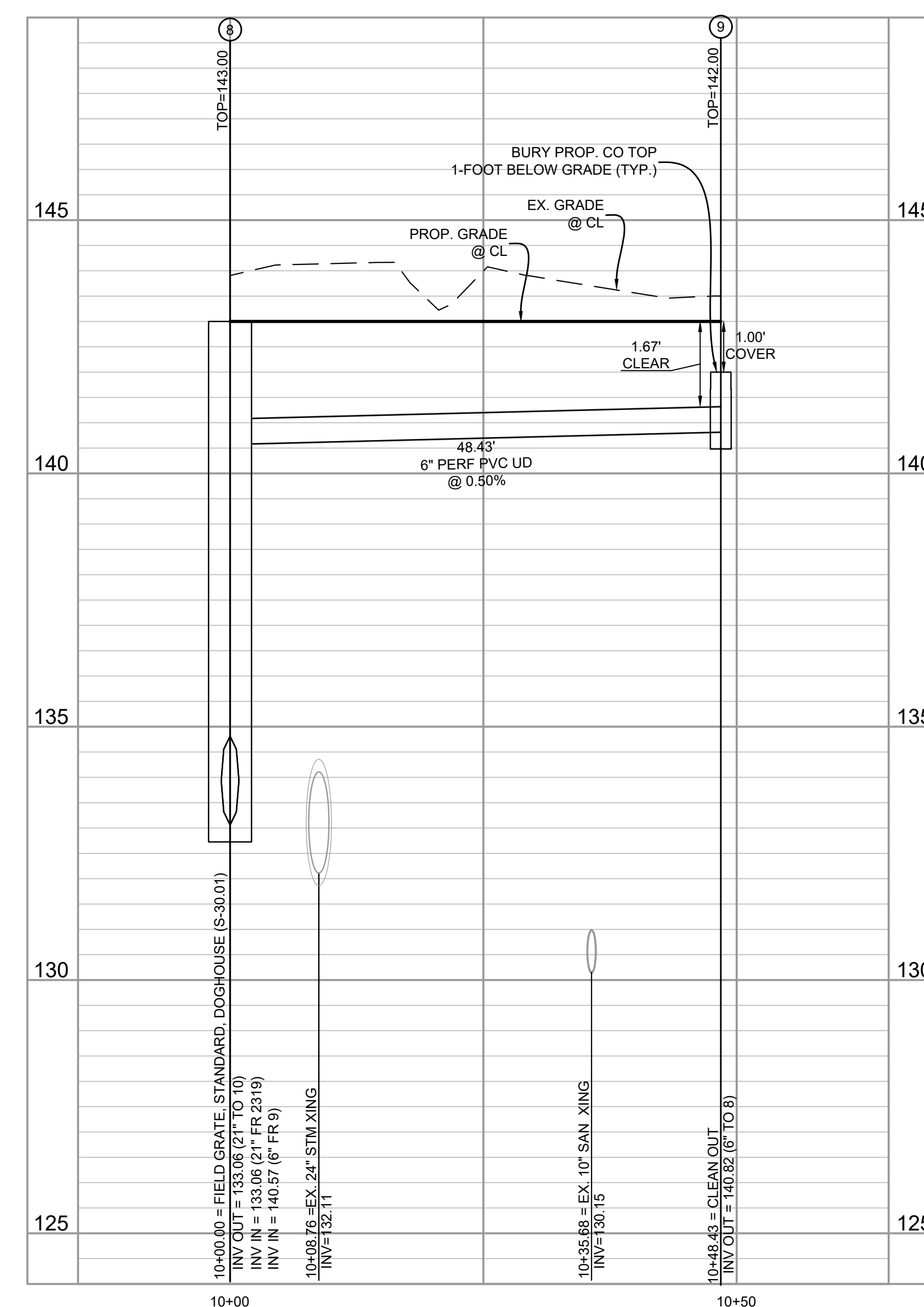
3 TO EX 2362 PROFILE VIEW
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=2'



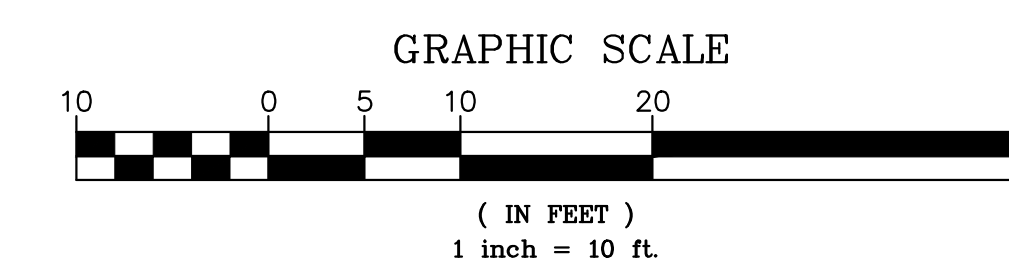
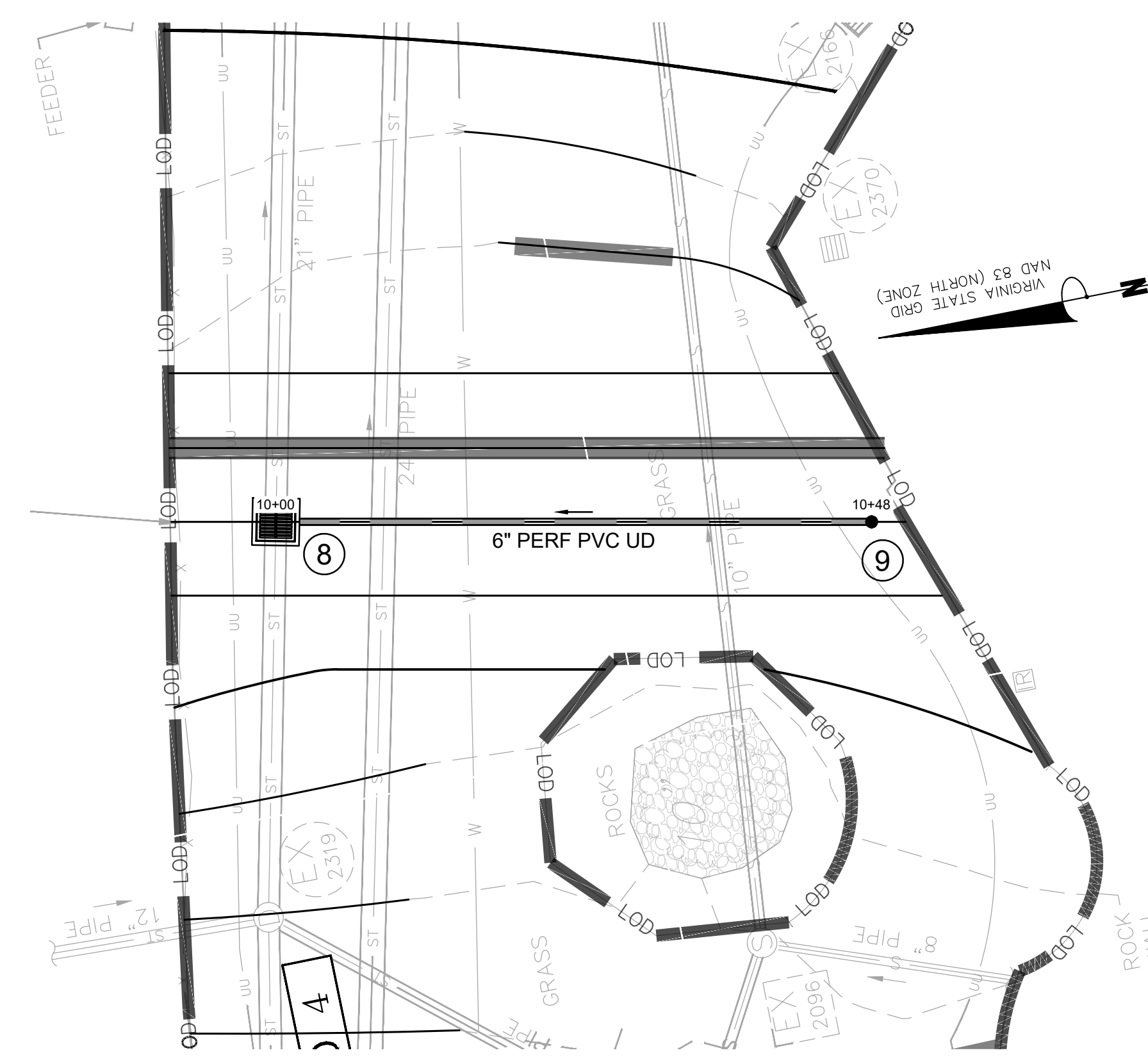
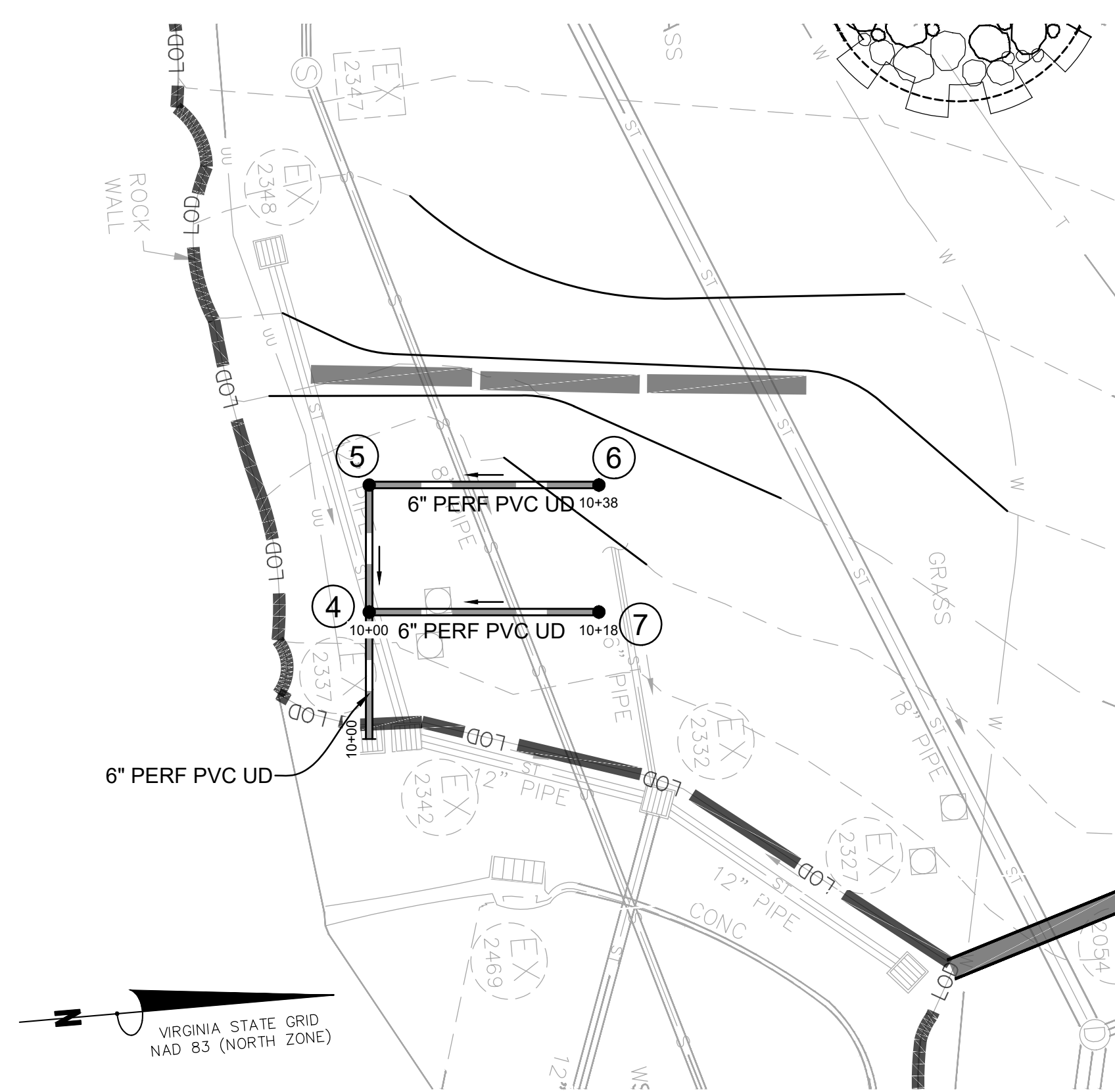
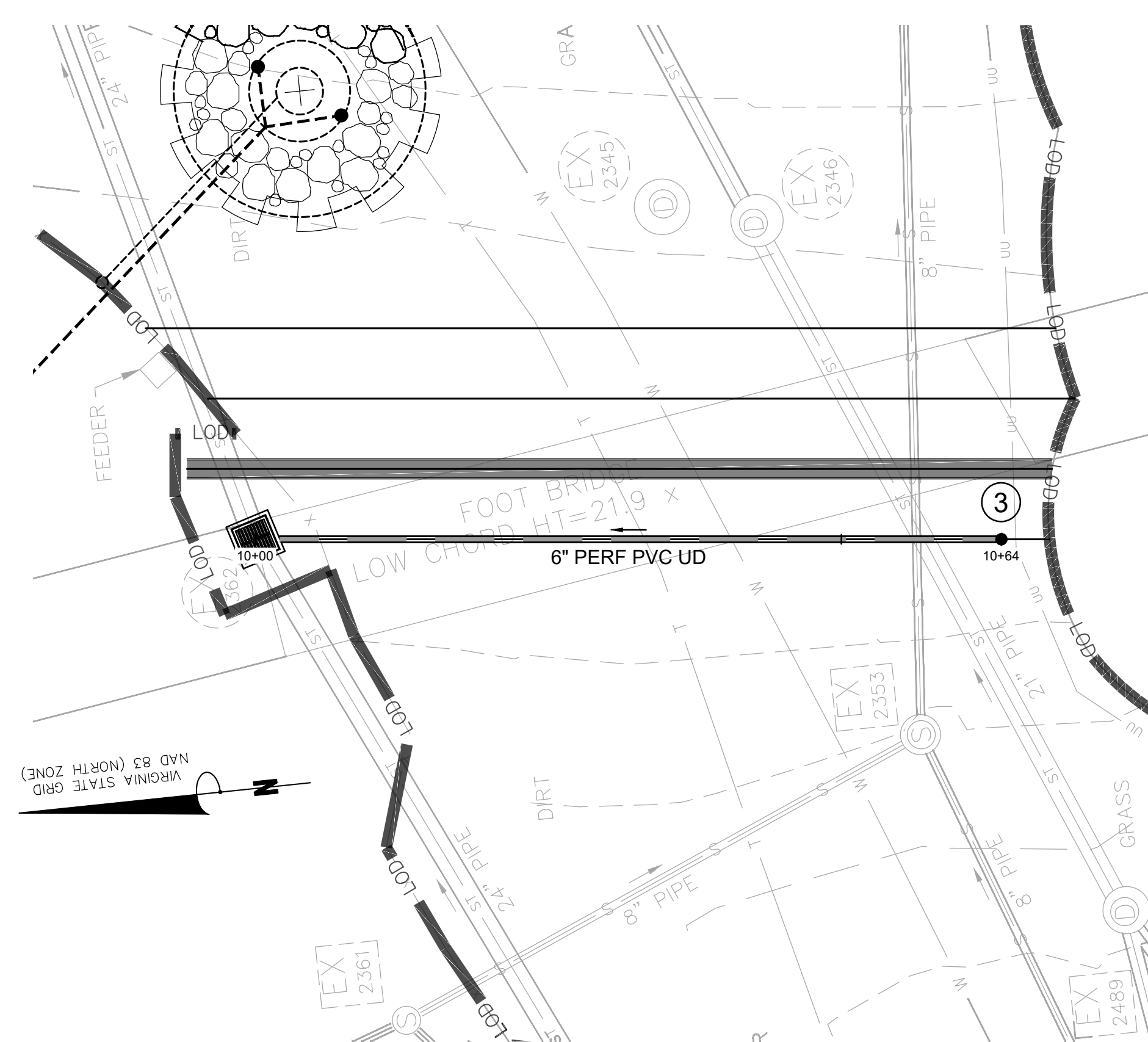
6 TO EX 2342 PROFILE VIEW
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=2'

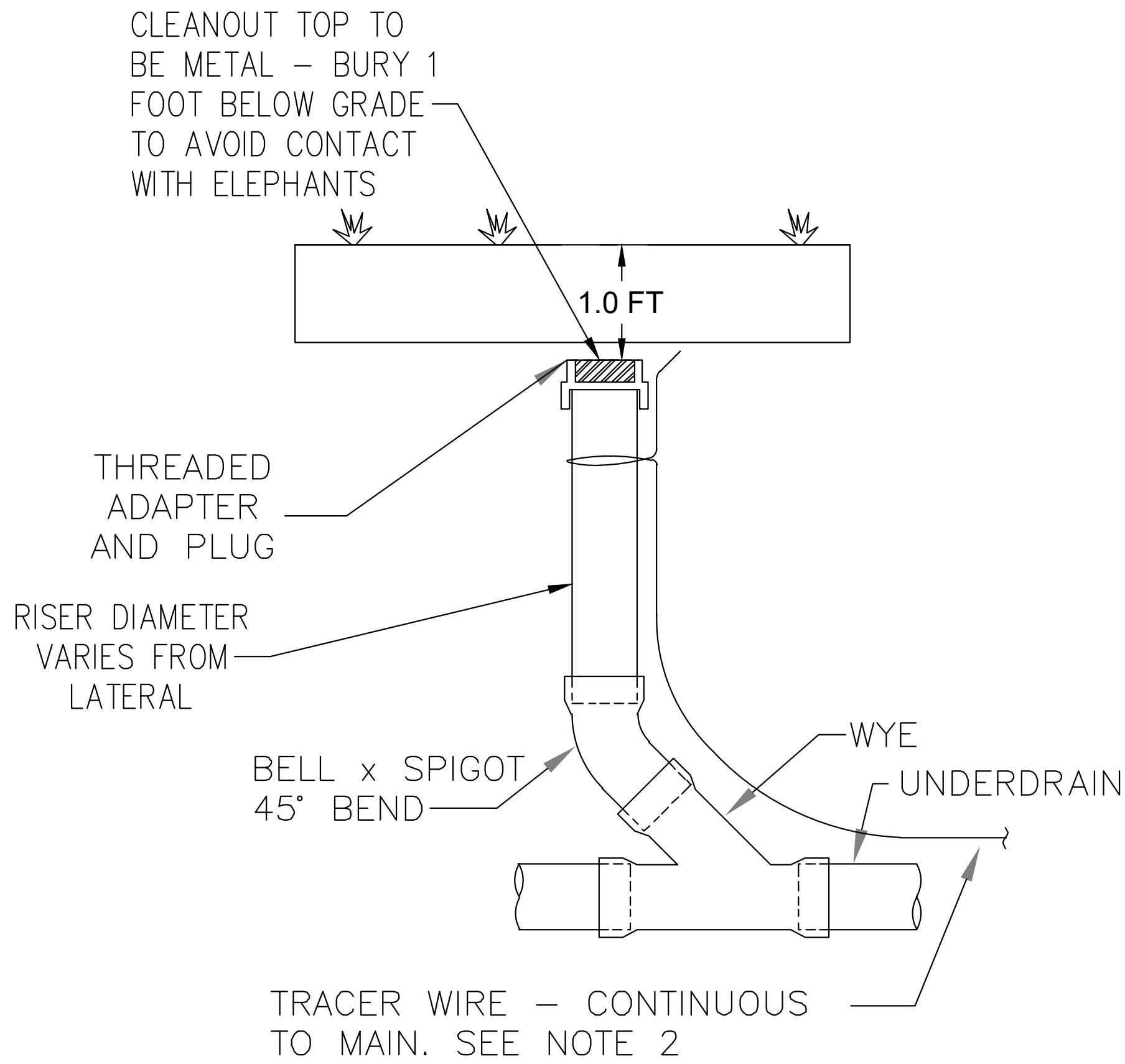


7 TO 4 PROFILE VIEW
HORIZONTAL SCALE: 1"=10'
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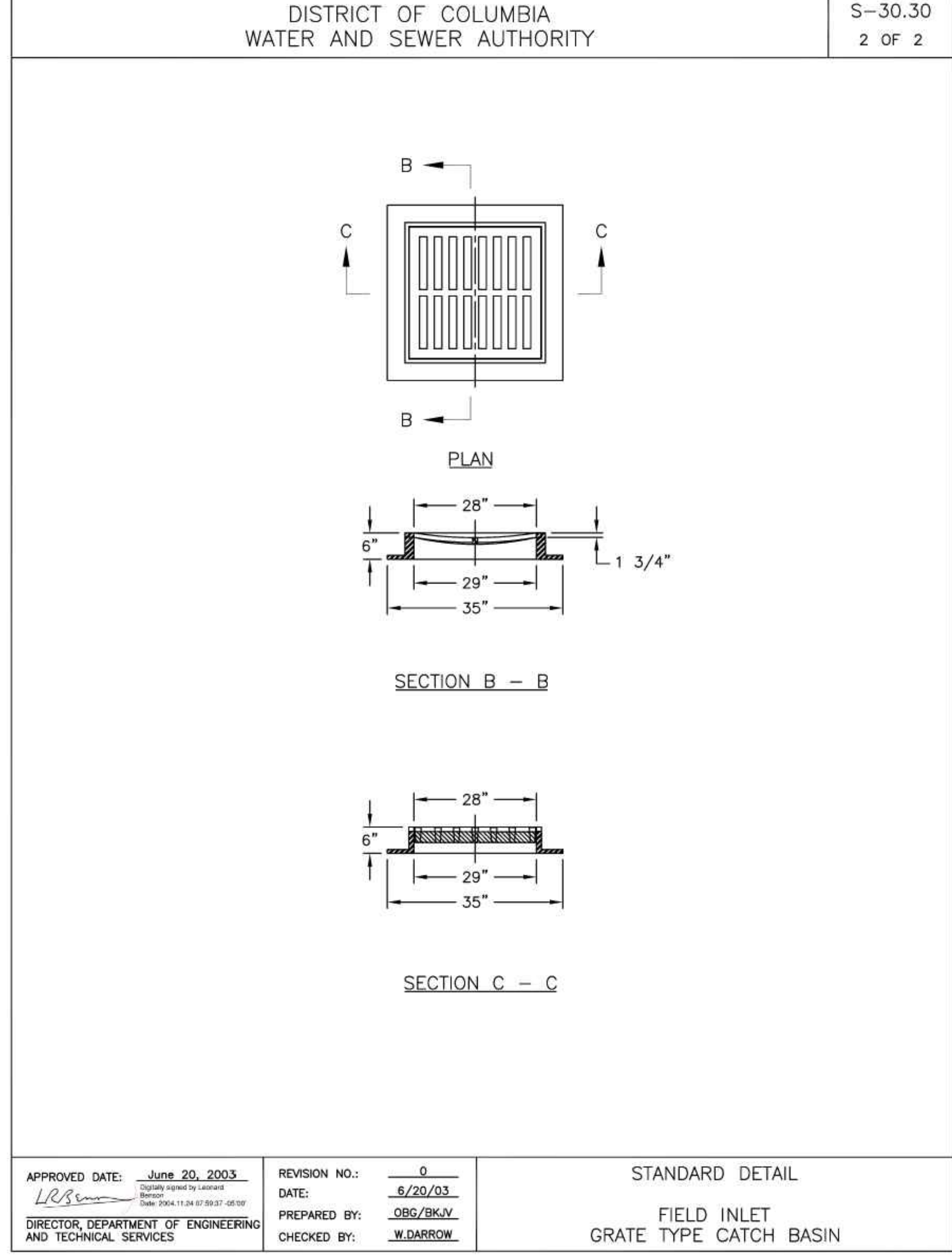
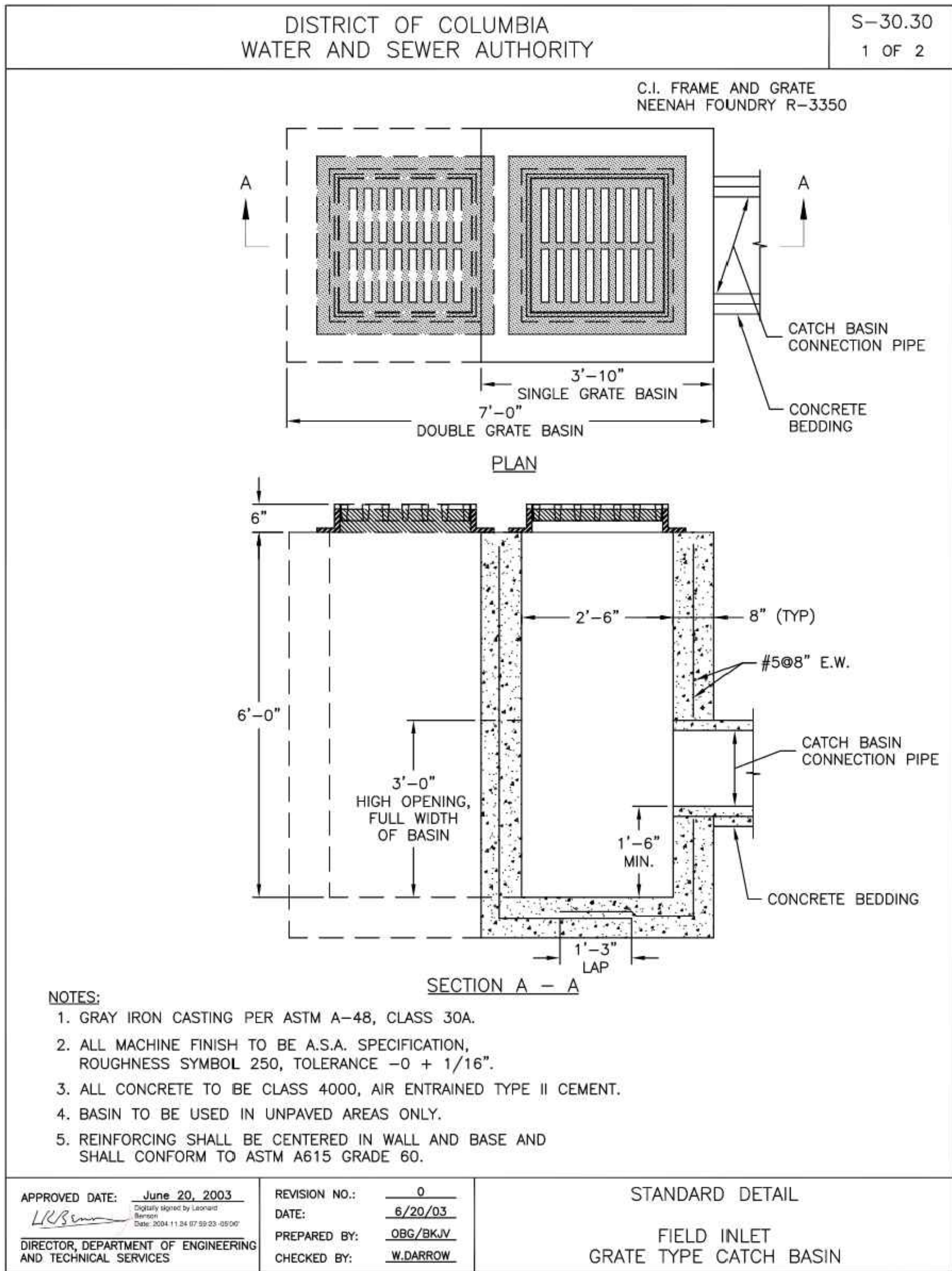


9 TO 8 PROFILE VIEW
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=2'





LOCATED IN EXHIBIT YARDS



FlexStorm Pure™ Bag Options

FlexStorm Pure, for permanent applications, has three filter bag options available to meet your specific needs. They have varying degrees of TSS and hydrocarbon oil removal properties.

FlexStorm Filter Bags



Filter Bag Test Results

FX	TSS Filtration Efficiency = 85% ¹
PCP	TSS Filtration Efficiency = 97% ¹

¹ Large scale, 3rd party testing per ASTM D 7351 modified for inlet filters

Filter Bag Specifications & Capabilities

Bag Type (P/N)	Geotextile Flow Rate (GPM/SqFt)	Min A.O.S. (US Sieve)
Woven (FX/FP)	200	40
Post Construction (PCP)	137	140

Total Bypass Capacity

Bypass capacity will vary with each size drainage structure. FlexStorm designs filter bypass to meet the minimum design flow of the particular drainage structure.

Standard Bag Sizes (match frame sizes)	Solids Storage Capacity ft ³ (m ³)	Filtered Flow Rate at 50% Max (CFS)		Oil Retention (Oz)	
		FX	PCP	FXP	PCP
Small	1.6 (0.5)	1.2	0.8	89	168
Medium	2.1 (0.6)	1.7	1.2	89	204
Large	3.8 (1.2)	2.7	1.8	89	262
XL	4.2 (1.3)	3.6	2.4	178	319



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FlexStorm Pure™ Replacement Bag Maintenance Guide

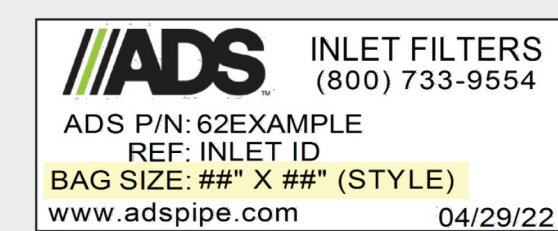
After following the FlexStorm Operation and Maintenance Guide and performing routine maintenance, you may notice damage or degradation of the inlet filter's geotextile bag. This will require replacement of the geotextile bag portion of your inlet filter device. FlexStorm Pure™ (permanent) has replacement bags. If a FlexStorm Lite™ (temporary) filter is damaged, please replace the entire filter unit.

Sizing the Replacement Bag

Option 1: Check the Label

Locate the inlet filter's label attached on the inside visible perimeter of the existing filter frame.

Note the bag size and style listed: (##" x ##" & STYLE)

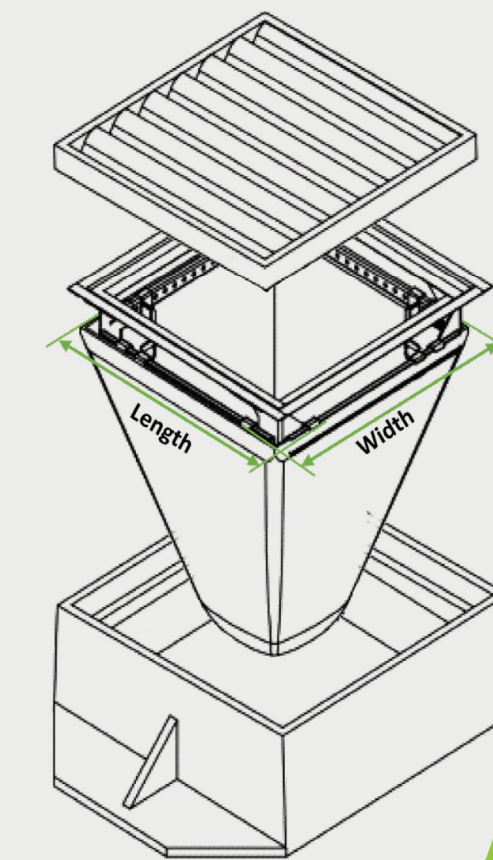


Option 2: Take Measurements

If the label cannot be located, remove the filter from the inlet and take off the existing bag. Measure the length and width of the frame perimeter that holds the bag's hose clamp as shown on the right.

Note: If the filter is round provide the outer diameter of the bottom framing channel.

It is necessary to also provide the bag style that was originally provided on the filter. Pure filters have a variety of options available for replacement bags pertaining to treatment properties required ("FX" or "PCP").



Sediment Bag Replacement

1. Remove the bag by loosening or cutting off the clamping band.
2. Take the new, correctly sized geotextile bag and secure the hose clamping band to the frame channel as previously removed.
3. Ensure the bag is secure and there is no slack around perimeter.



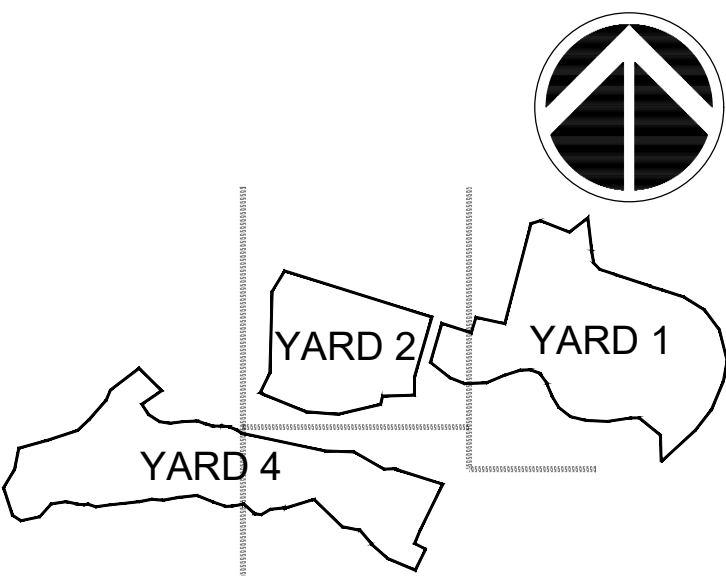
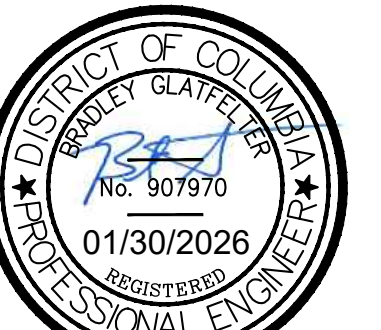
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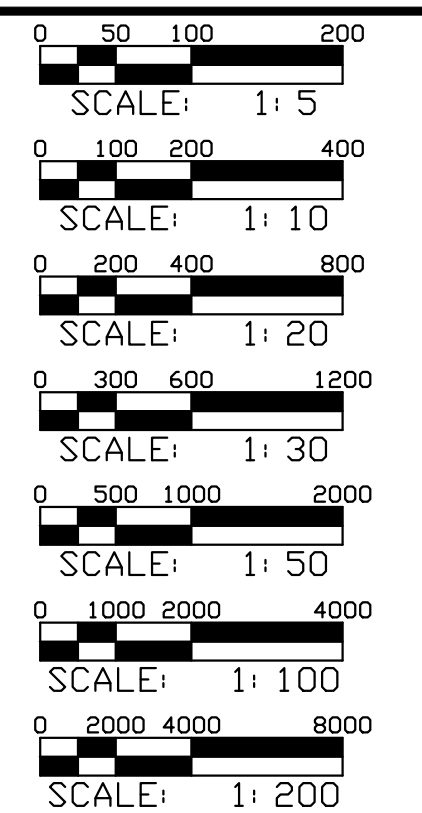
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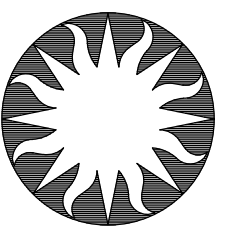


KEY PLAN & SECTION



GRAPHIC SCALE(S)

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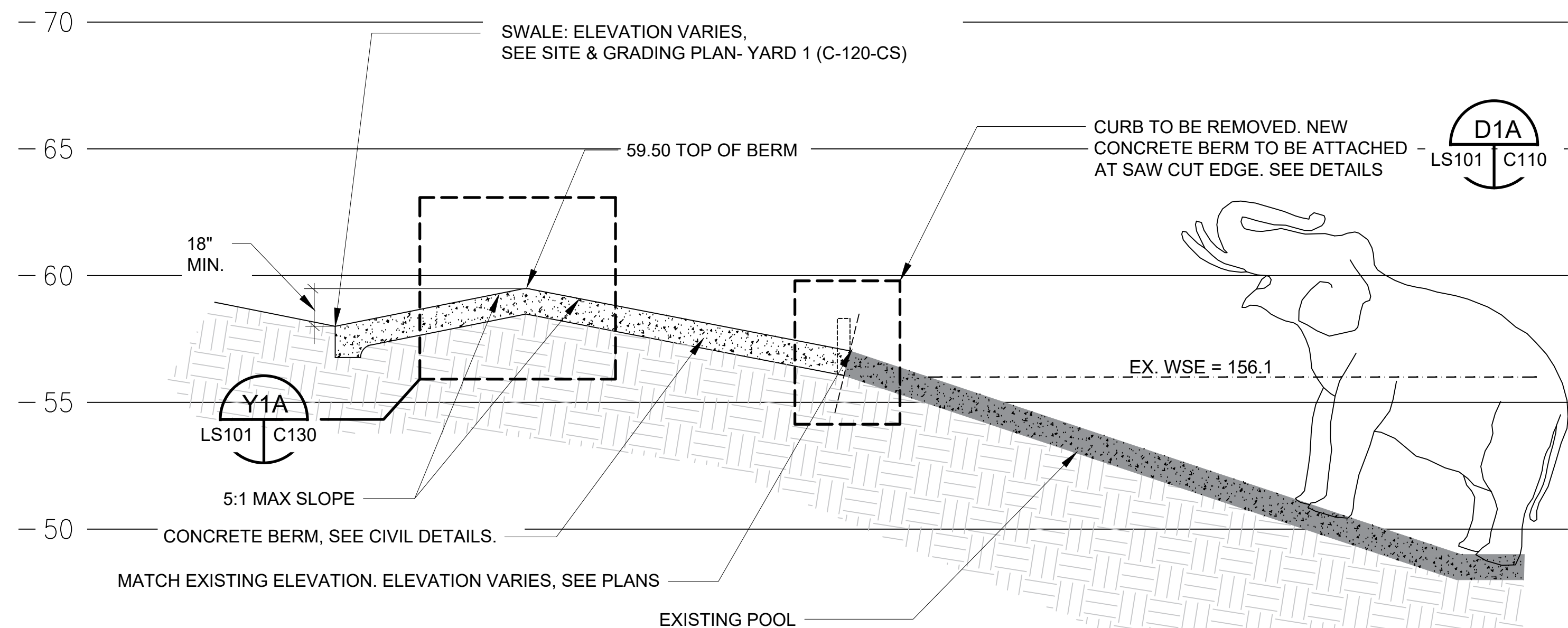
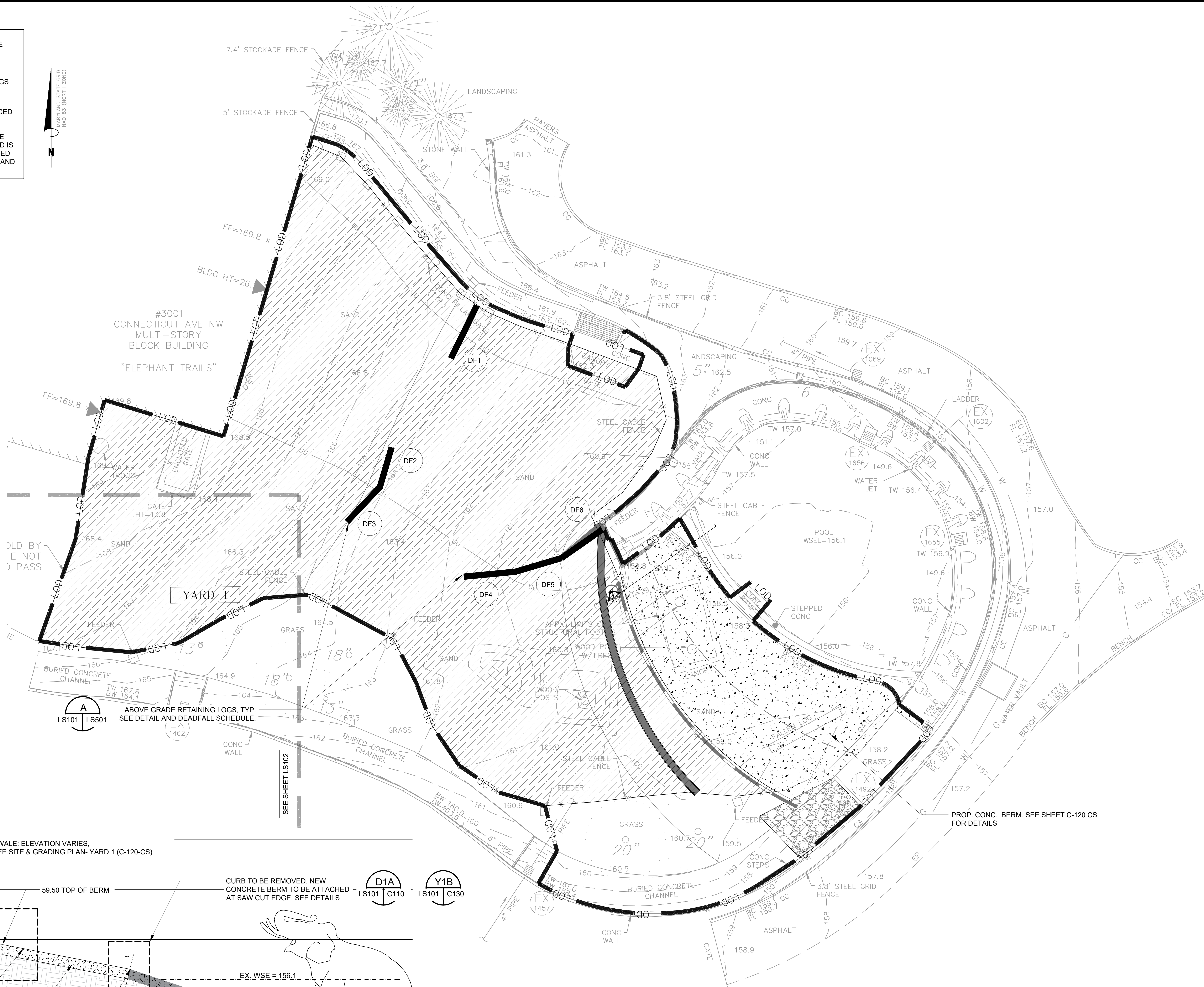
BUILDING NAME	NATIONAL ZOOLOGICAL PARK		
ADDRESS	3001 CONNECTICUT AVE NW WASHINGTON, DC 20008		
PROJECT TITLE	MITIGATE STORMWATER AT ELEPHANT YARDS		
SF PROJECT NUMBER	2233104		
A/E PROJECT NUMBER	20230426		
DRAWING TITLE	SITE DETAILS		
DRAWING TYPE	CIVIL		
WORKING STAFF	KJB	JVM	KJB
	DESIGNED BY	DRAWN BY	CHECKED BY
SHEET NO.	C	1	60
31 OF 39	DISCIPLINE	TYPE	SEQUENCE

LEGEND

LOD LOD - LIMITS OF DISTURBANCE

DF ABOVE GRADE RETAINING LOGS

EXISTING SAND TO BE SALVAGED AND REAPPLIED. SUBSTRATE DEPTH TO BE 18" UNLESS OTHERWISE SPECIFIED. IN THE EVENT THAT ADDITIONAL SAND IS REQUIRED TO ACHIEVE DESIRED SUBSTRATE DEPTH, UTILIZE SAND AS PER SPECIFICATIONS.



YARD 1 POOL EDGE SECTION

SCALE: 1/4" = 1'

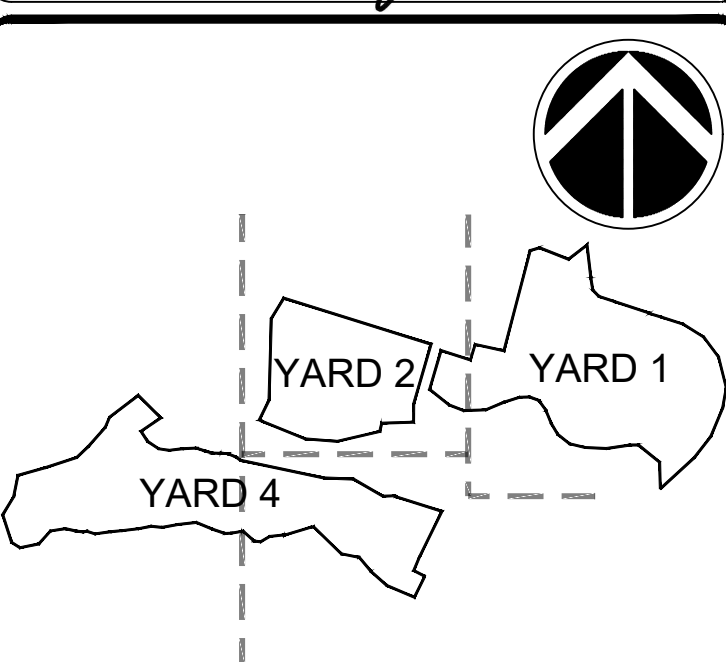
LANDSCAPE PLAN- YARD 1

SCALE: 1"=10'

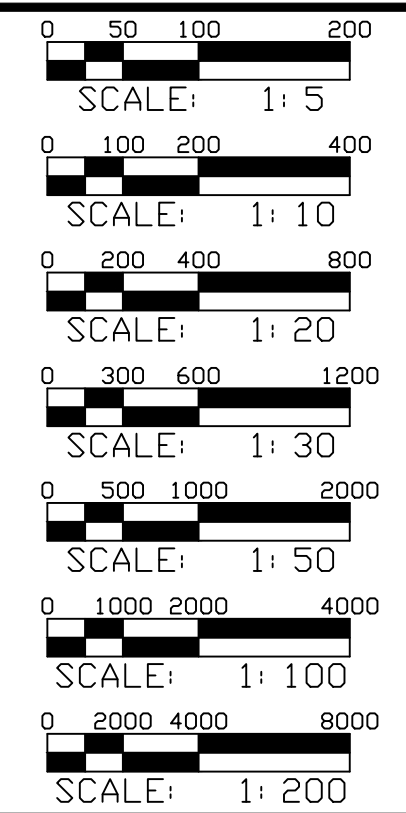
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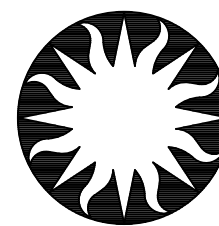


KEY PLAN & SECTION



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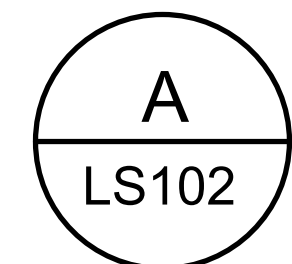
DRAWING TITLE	LANDSCAPE PLAN- YARD 1
DRAWING TYPE	LANDSCAPE
DESIGNED BY	JS
DRAWN BY	AC
CHECKED BY	JS
SHEET NO.	LS
DISCIPLINE	1
SEQUENCE	01

LOD - LIMITS OF DISTURBANCE

DF XXXXXXXXXX ABOVE GRADE RETAINING LOGS

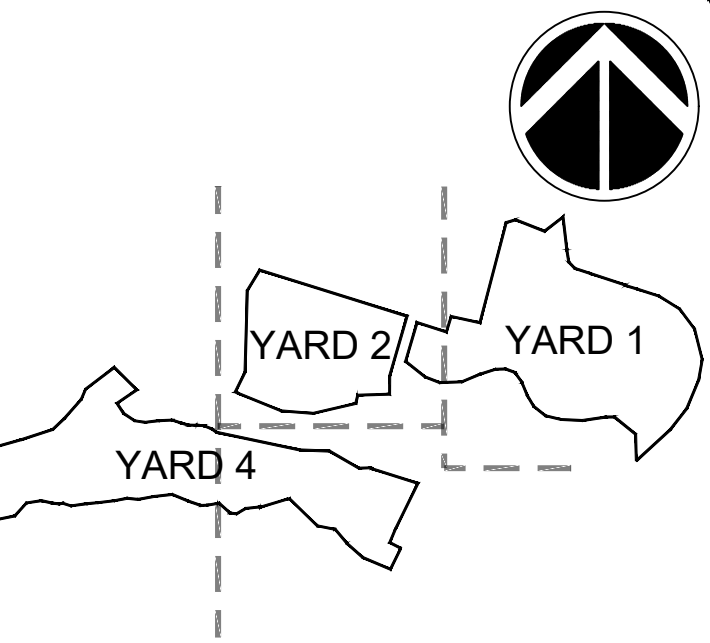
NOTES:

- SPRIG MIX: 100% BERMUDA GRASS
- SEED MIX FOR OVERSEEDING: 60% ORCHARD GRASS, 20% ENDOPHYTE FREE RYE GRASS & 20% KENTUCKY BLUE GRASS
- SOD MIX: 100% BERMUDA GRASS



SCALE: 1" = 10'

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1/30/2026 REVISION REVISION 1 REVISION 2 REVISION 3 REVISION 4 REVISION 5 REVISION 6 REVISION 7	SUBMISSION
	FINAL SUBMISSION
	REVISION



LEGEND

LOD

LOD - LIMITS OF DISTURBANCE

DF

ABOVE GRADE RETAINING LOGS

NEW IRRIGATION LINE

HOT GRASS BARRIER SYSTEM

TREE PROTECTION BOULDERS

NEW TREE

EXISTING SAND TO BE SALVAGED AND REAPPLIED. SUBSTRATE DEPTH TO BE 18" UNLESS OTHERWISE SPECIFIED. IN THE EVENT THAT ADDITIONAL SAND IS REQUIRED TO ACHIEVE DESIRED SUBSTRATE DEPTH, UTILIZE SAND AS PER SPECIFICATIONS.

24" DEPTH PLANTING SOIL PER SPECIFICATIONS.

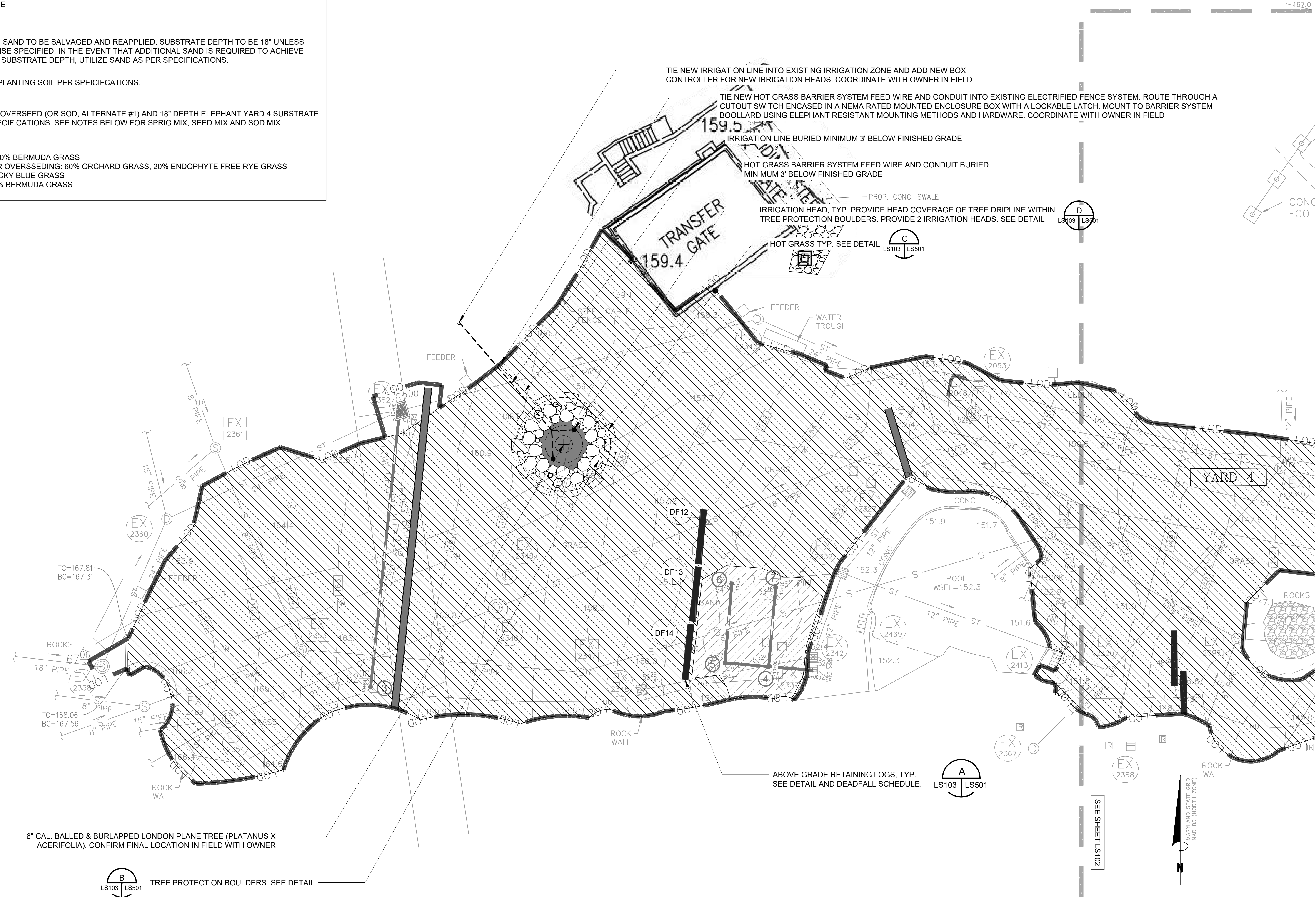
SPRIG AND OVERSEED (OR SOD, ALTERNATE #1) AND 18" DEPTH ELEPHANT YARD 4 SUBSTRATE AS PER SPECIFICATIONS. SEE NOTES BELOW FOR SPRIG MIX, SEED MIX AND SOD MIX.

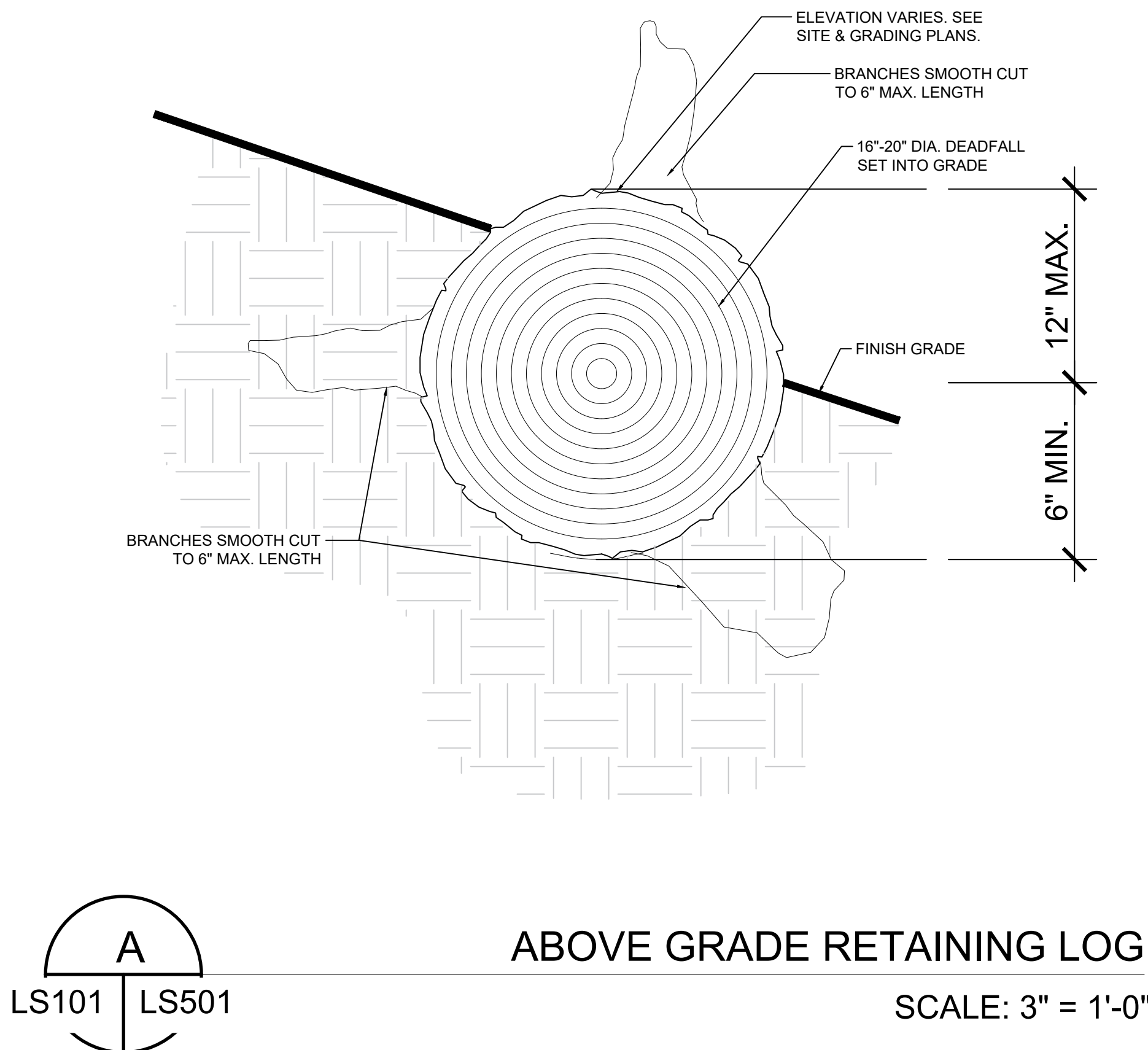
NOTES:

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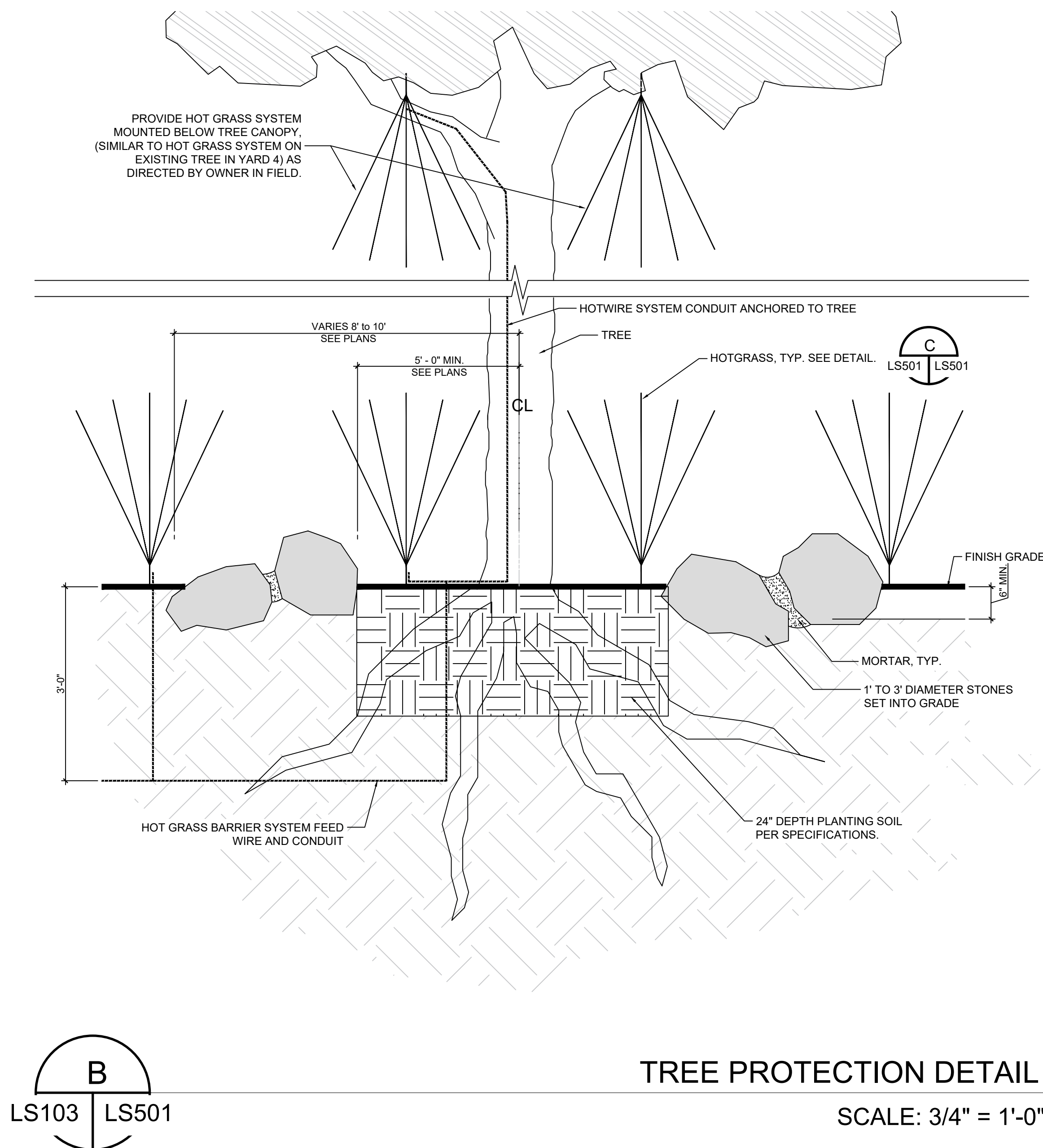


ABOVE GRADE RETAINING LOG

SCALE: 3" = 1'-0"

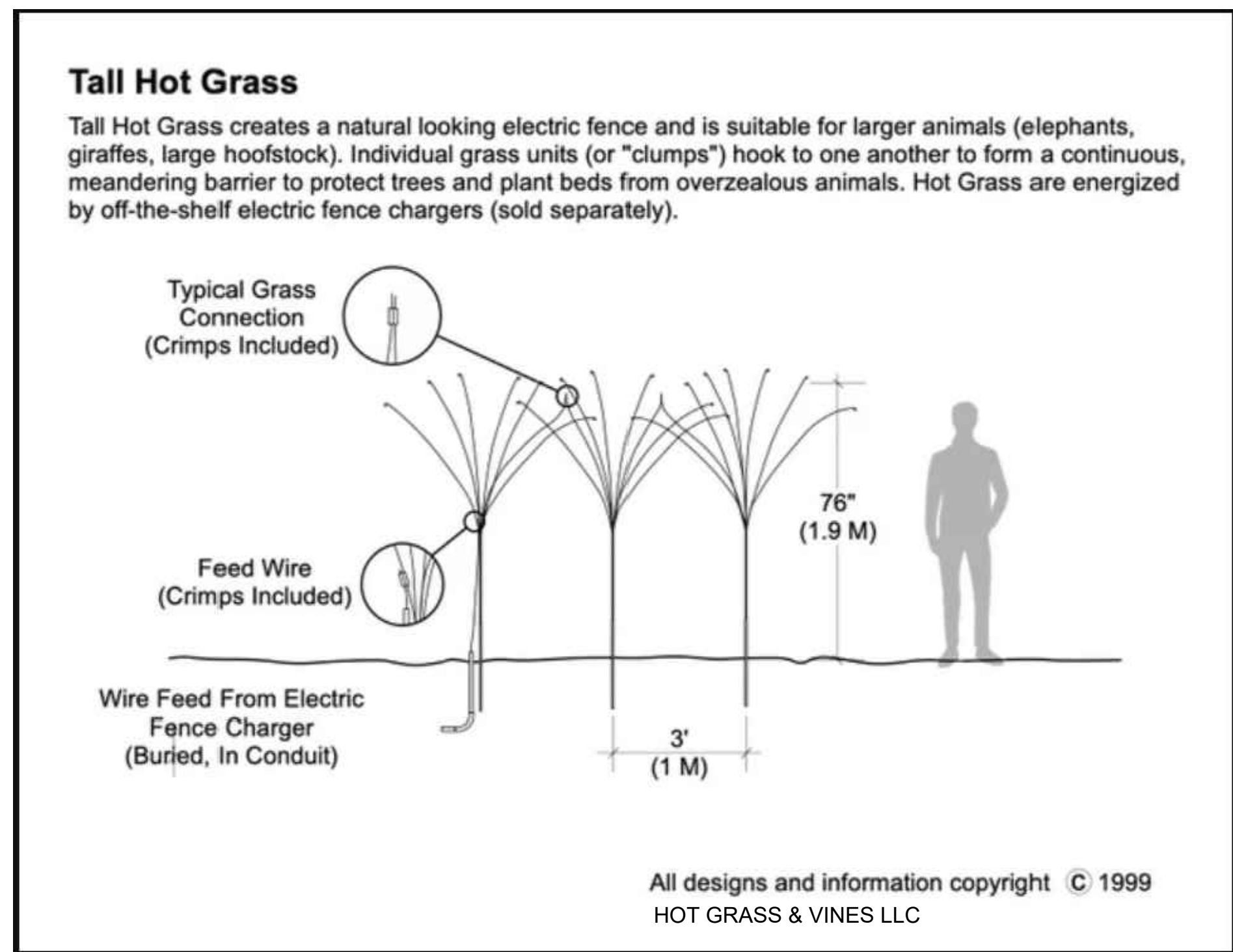
DEADFALL SCHEDULE			
NO.	SHEET LOCATION	APPROX. LENGTH	NOTES
DF1	LS-101SP	15'	
DF2	LS-101SP	11'	
DF3	LS-101SP	12'	
DF4	LS-101SP	13'	
DF5	LS-101SP	12'	
DF6	LS-101SP	13'	
DF7	LS-102SP	13'	
DF8	LS-102SP	10'	
DF9	LS-102SP	13'	
DF10	LS-102SP	13'	
DF11	LS-102SP	13'	
DF12	LS-103SP	13'	
DF13	LS-103SP	13'	
DF14	LS-103SP	13'	

- NOTES:
- DEADFALL PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
 - DEADFALL TO BE STRIPPED OF BARK BY CONTRACTOR AND ALL BRANCHES TO BE SMOOTH CUT TO 6" MAX. LENGTH.



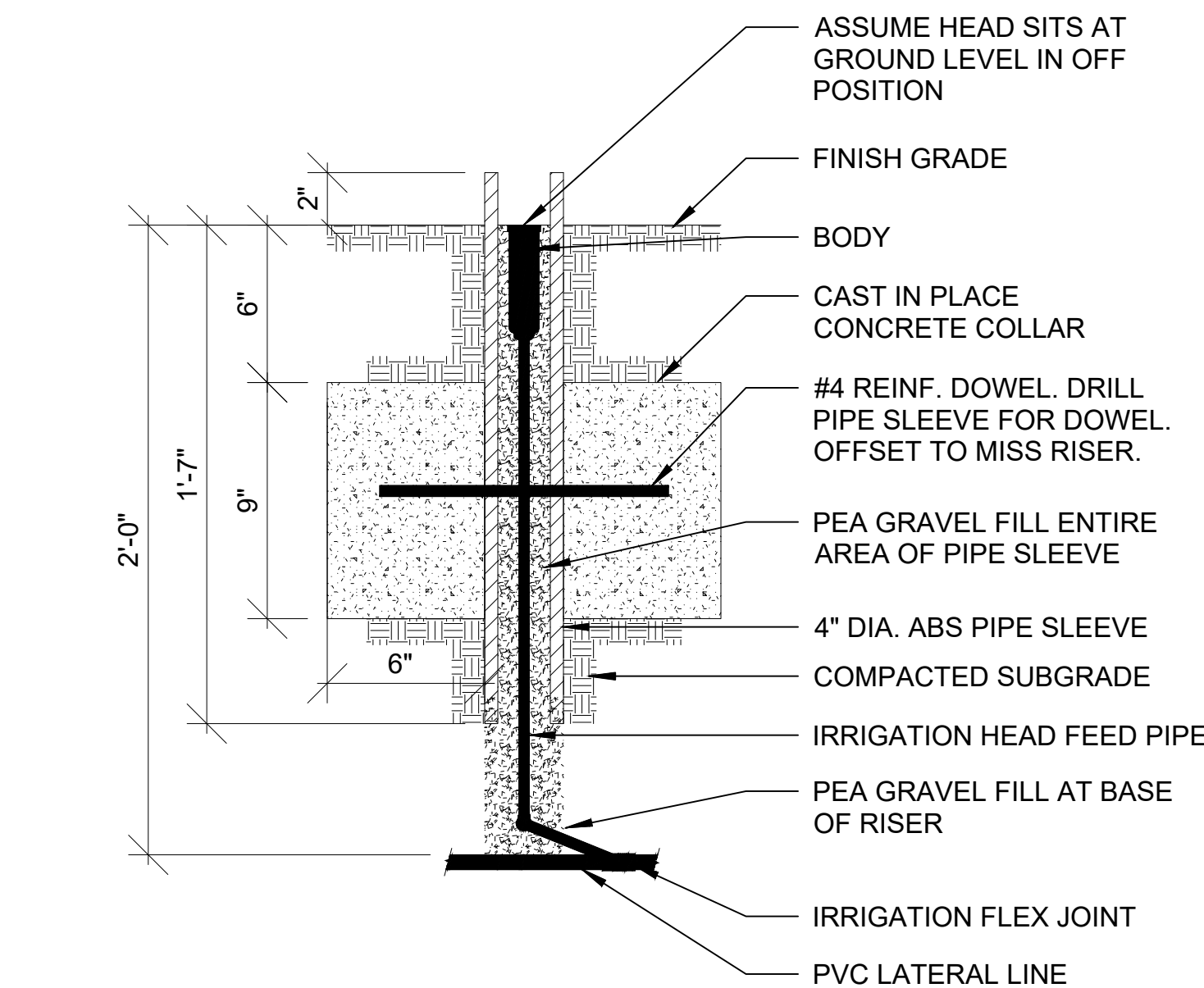
TREE PROTECTION DETAIL

SCALE: 3/4" = 1'-0"



HOT GRASS DETAIL

SCALE: NTS



IRRIGATION DETAIL

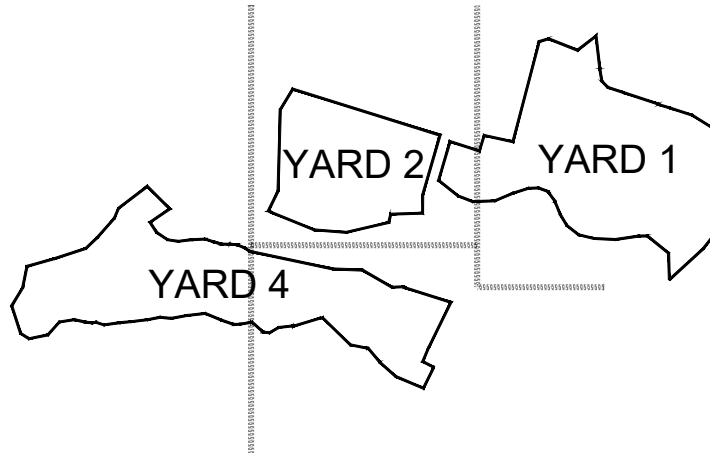
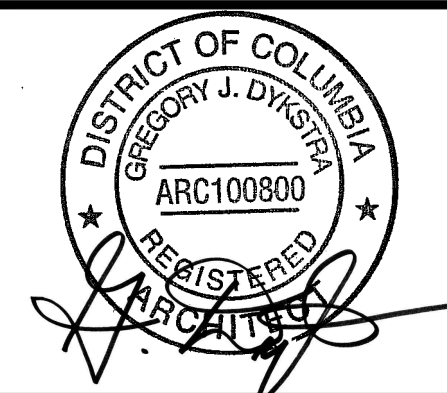
SCALE: 1" = 1/2"

- NOTES:
- BASIS OF DESIGN FOR BODY: HUNTER PROS 12- PRS40-CV-R OR EQUAL

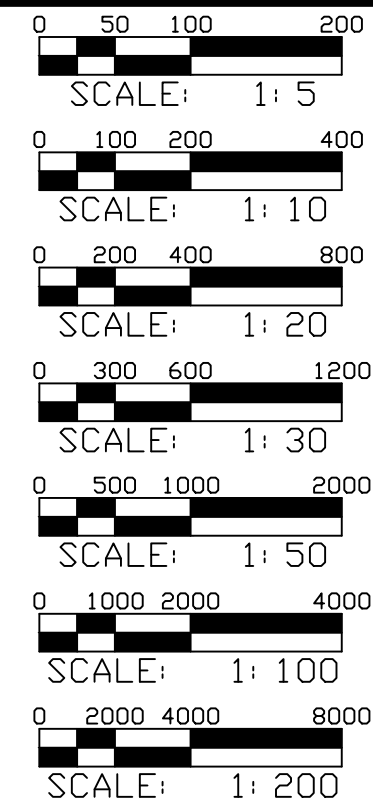
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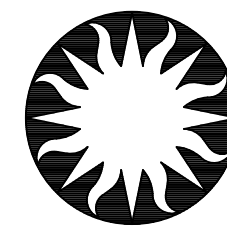


KEY PLAN & SECTION



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V/E PROJECT NUMBER	20230426

DRAWING TITLE	LANDSCAPE DETAILS
DRAWING TYPE	LANDSCAPE
WORKING STAFF	JS AC JS
DESIGNED BY	DRAWN BY
CHECKED BY	

SHEET NO.	LS	5	01
35 OF 39	DISCIPLINE	TYPE	SEQUENCE

SPECIFICATIONS

1. Refer to Project Specifications for detailed requirements for materials and workmanship.

ELEVATIONS AND DIMENSIONS

1. All elevations and dimensions shown for new construction are based on the Civil Drawings. Coordinate all elevations and dimensions before proceeding with construction.
2. Existing building information shown is based on existing building drawings, field observations, or as indicated on the architectural drawings. Contractor shall verify all existing building information shown (dimensions, elevations, etc) and notify the SER of any discrepancies.

BUILDING CODE

1. The following building codes and standards, including all Specifications referenced within, shall apply to the design, construction, quality control, and safety of all work performed on the project.
- A. "District of Columbia Building Code Supplement – 2017." (12 DCMR A), District of Columbia Municipal Regulations.
- B. "District of Columbia Existing Building Code Supplement – 2017." (12 DCMR J), District of Columbia Municipal Regulations.
- C. "International Building Code – 2015." International Code Council, including local jurisdiction amendments.
- D. "International Existing Building Code – 2015." International Code Council, including local jurisdiction amendments.
- E. "Minimum Design Loads for Buildings and Other Structures." (ASCE/SEI 7-10, 2010), American Society of Civil Engineers.
- F. Additional codes and standards for different materials are listed in the sections that follow.

DESIGN LOADS

1. Dead loads (in addition to structure self-weight):
- A. All permanent stationary construction loads including mechanical equipment and their weights where noted on the structural drawings.
2. Live loads (reduced in compliance with applicable building code):
- A. Uniform Load: 150 psf
3. Concentrated floor live loads (distributed over 12 in x 12 in):
- A. Elephant: 12,000 lb
4. Wind load parameters:
- A. Basic wind speed (3-second gust), V = 115 mph
- B. Risk category = II
- C. Exposure category: C
- D. Existing buildings: the scope of work on this project does not change the demand upon nor reduce the resistance provided by the wind force resisting systems (WFRS) by more than 10%. Based on IEBC requirements, no evaluation or upgrade of the existing WFRS has been conducted.
5. Seismic load parameters:
- A. Risk category = II
- B. Seismic importance factor, I_e = 1.0
- C. Mapped spectral response accelerations
1. S(S) = 0.118
2. S(1) = 0.015
- D. Site class: D
- E. Spectral response coefficients
1. S(DS) = 0.126
2. S(01) = 0.081
- F. Seismic design category = B
- G. Existing buildings: the scope of work on this project does not change the seismic demand upon nor reduce the resistance provided by the seismic force resisting systems (SFRS) by more than 10%. Based on IEBC requirements, no evaluation or upgrade of the existing SFRS has been conducted.
6. Earth pressure parameters:
- A. Lateral equivalent fluid pressure:
1. At-rest pressure (braced walls): 60 psf/ft of depth
2. Active pressure (cantilevered retaining walls): 45 psf/ft of depth

GENERAL

1. These drawings represent the completed project which has been designed for the structure self-weight, superimposed gravity and lateral loads indicated in the design load criteria above, and other loads where indicated in the drawings and/or Specifications. Contractor is responsible for maintaining the stability of the structure at all stages of construction until construction is complete.
2. Construction loads and shoring:
- A. Contractor is solely responsible for the means, methods, techniques, sequences, and operation of construction and safety precautions and programs incidental thereto.
- B. Contractor will identify engineering tasks required to perform any related construction process including, but not limited to, means and methods of construction, formwork and shoring, and submission of documents requested outside of the structural project documents listed above. The contractor will hire a structural engineer licensed within the project jurisdiction to perform construction related engineering tasks or document reviews.
- C. Construction phase loads imposed on the base building structure and temporary conditions intended to accommodate construction means and methods are not explicitly considered in this design. The Contractor will be solely responsible for all construction-phase loads imposed.
- D. Structural stability is achieved in the finished construction installed in its entirety. The Contractor is responsible for the stability of the structure until the construction of the structure reaches its finished state. Not all shoring necessary to complete the project is shown. The Contractor will identify and determine where and to what extent temporary shoring is required.
- E. The Contractor is responsible for the design, installation, and removal of all temporary bracing and construction supports, for new and existing structures, as necessary to complete the project.
- F. Materials and equipment will be stored and transported in a manner so as not to exceed the lesser of the allowable floor loadings indicated in the drawings or permitted by the Contractor provided construction loading design.
3. Developing and implementing job site safety and construction procedures are solely the responsibility of the Contractor.
4. All costs of investigation and redesign due to Contractor mis-location of structural elements or other lack of conformance with the construction documents shall be at the Contractor's expense.
5. Contractor shall refer to other disciplines' drawings for size and location of openings, sleeves, housekeeping pads, inserts, and depressions.
6. See other disciplines' drawings and Specifications for detailed information regarding finishes, waterproofing, etc.
7. In case of conflict between the General Notes, Specifications, and details, the most stringent shall govern.
8. Work in some areas is not explicitly detailed on the drawings but is implied to be similar to corresponding areas. Work in these areas shall be the same as that shown at the corresponding locations.
9. Inspections and testing
- A. Structural special inspections and tests are required for this project.
- B. Reference statement of special inspections and special inspections tables included in the drawings.
- C. The Owner shall engage a Special Inspections Engineer of Record (SIER) and testing agency to provide services as indicated in the Specification.
- D. The Contractor shall plan for the inspections and testing in the construction schedule and coordinate all work with the SIER and testing agency.

CONCRETE

1. Codes and standards:
- A. "Building Code Requirements for Structural Concrete, ACI 318-14," American Concrete Institute.
- B. "ACI Manual of Concrete Practice – Parts 1 through 5," American Concrete Institute.
2. Standard specifications and reference standards:
- A. "Manual of Standard Practice," Concrete Reinforcing Steel Institute.
- B. Follow the latest recommendations and specifications of the American Concrete Institute:
1. ACI 301 Specifications for Structural Concrete
2. ACI 302 Concrete Floor and Slab Construction
3. ACI 304 Measuring, Mixing, Transporting, and Placing Concrete
4. ACI 305 Hot Weather Concreting
5. ACI 306 Cold Weather Concreting
6. ACI 315 Detailing Reinforcing Steel
7. ACI 318 General Design of Items Not Otherwise Specified
8. ACI 347 Formwork
3. Concrete materials:
- A. Portland cement: ASTM C150, Type I, II, or III.
- B. Blended cement: ASTM C595 Type II
- C. Fly ash: ASTM C618, Type C or F
- D. Slag cement: ASTM C989, Grade 100
- E. Normal weight aggregates: ASTM C33
1. Fine aggregate: free of materials with deleterious reactivity to alkali in cement.
- F. Air-entrainment: ASTM C260
- G. Shrinkage reducing admixture: ASTM C494 Type S
1. Eclipse by Grace Construction Products or approved equal
- H. Synthetic Macrofiber Reinforcement ASTM C1116 Type III
1. Adfil Strux 90/40 or approved equal
4. Concrete mixtures: proportion mixtures to conform with the properties indicated in the Concrete Mix Design Table.
5. Non-shrink grout: ASTM C1107, non-metallic, 8,000 psi 28-day compressive strength.
6. Steel reinforcement:
- A. Deformed reinforcing bars: ASTM A615 Grade 60
7. Post-installed dowels:
- A. Adhesive substitutions are not permitted.
- B. Refer to plans and details for embedment depth requirements.
- C. Installation procedures (drilling method, hole cleaning, etc) shall be in accordance with the manufacturer's written instructions and the relevant ICC-ES ESR.
- D. Installers shall be trained by the adhesive manufacturer's representative prior to conducting dowel installations. All installers for dowels in overhead, horizontal, and upwardly inclined applications shall have ACI/CRSI adhesive anchor installer certification or an equivalent program approved in advance by the ser (refer to ACI 318 sections 17.8.8.2 and 17.8.8.3).
8. Concrete cover:
- A. Mild reinforced concrete
1. Concrete cast against and permanently exposed to earth: 3 in.
2. Concrete exposed to earth or weather:
- a. #6 bar or larger 2 in.
- b. #5 bar or smaller 1 1/2 in.
9. General requirements:
- A. Floor slabs shall be finished to satisfy flatness and levelness tested in accordance with ASTM E1155. The overall minimum flatness is F(1)≥20 and minimum levelness is F(L)≥17 in any direction. Localized measurements shall not be less than 2/3 of the above values.
- B. Cure unformed concrete surfaces for a minimum of 7 days following concrete placement in accordance with ACI 301. If formwork is removed prior to the end of the curing period, apply another method to cure the previously formed concrete for the remainder of the curing period.
1. Membrane-forming curing compounds shall conform with ASTM C309, Type 1. Curing compounds shall be removed prior to placing adhered finishes, roofing, and waterproofing unless manufacturer certifies that curing compound is suitable to receive those installations.
- C. Chamfer all exposed concrete corners, 3/4 in. X 3/4 in. minimum, unless noted otherwise on the architectural drawings.
- D. Loads greater than the design live loads shall not be placed on the structure. A concrete structure may not support its design live load until it has reached its specified compressive strength. Contractor shall support adjacent structures, utilities, and excavations as required for completion of work.
10. Concrete slabs-on-grade:
- A. Refer to plans for thickness and reinforcement.
- B. Slabs shall be placed over a 6 inch thick drainage course (consisting of clean, well-graded gravel or crushed stone) over a properly compacted subgrade.
- C. The concrete slabs on grade for this project have been designed utilizing a modulus of subgrade reaction "K" equal to 150 pci for all areas of the concrete slabs on grade.
11. Inspection and testing:
- A. The owner shall engage a qualified testing agency to provide services in accordance with the latest editions of ACI 311.6 and ACI 311.7 and as indicated below and to submit reports.
- B. Cast-in-place concrete:
1. The agency shall inspect the formwork, reinforcing steel, concrete placement, etc. For compliance with the contract documents, applicable codes and standards, and the shop drawings.
2. Sample and test fresh concrete for each mixture placed each day, once at initial delivery and repeated for each 50 cubic yards placed.
3. Cast, cure, and test composite samples of standard cylinders. One composite sample shall consist of (2) 6 inch x 12 inch or (3) 4 inch x 8 inch standard cylinders. Number of composite samples at each test shall be as follows:
- a. All concrete:
1. Lab cured 1@7 days, 1@28 days
- b. The agency will make additional tests of in-place concrete at the Contractor's expense when the test results indicate specified concrete strengths have not been attained, as directed by the Structural Engineer.
- C. Post-installed adhesive anchors
1. Inspect initial installations and then periodically throughout project.
- a. Reinstatement of initial continuous inspection required for change of installer personnel or anchor type.
- b. Continuous inspection required for horizontal or upwardly inclined orientations that resist sustained tension loads.
2. Minimum inspection shall include:
- a. Pre-installation
1. Installer qualifications to set adhesive anchors.
- A. Anchors installed horizontally or upwardly inclined to support sustained tension loads shall be performed by personnel certified by an applicable certification program in accordance with ACI/CRSI adhesive anchor installer certification program or equivalent.
2. Anchor type, material, finish, size, and length:
- A. Length identification letter code for anchors used for multiple embedments.
3. Anchors for damage and fouling of threads and oil, dust, mud, or loose coatings that might interfere with bond.
4. Adhesive material for accordance with contract documents and adherence to manufacturer's instructions for proper storage, mixing, and expiration date.
5. Drilling method (including drill bit type and size) and hole cleaning procedure.
6. Concrete in-situ temperature for conformance with requirements of manufacturer's instructions and to establish cure time for the adhesive.
7. Anchor installation and setting procedure.
- b. Installation
1. Hole depth, location, diameter, edge distance, and spacing.
2. Verification that existing reinforcing steel is not cut while drilling holes for anchors.
3. Protection from contamination after cleaning and until adhesive is installed.
4. Verification of proper set including:
- A. Proper injection of adhesive according to the manufacturer's instructions.
- B. Support of anchors during curing process to prevent displacement and maintain perpendicular orientation to the concrete surface.
1. Anchors displaced before full adhesive cure shall be considered damaged and replaced.
- C. Contact SER if anchors fail to set.
5. Installed reinforcing bars/threaded rods shall not be bent after adhesively embedded in hardened, sound concrete, unless permitted by EOR.

CONCRETE MIX DESIGN TABLE [6]											
ELEMENT	LOCATION [1,2]	UNIT WEIGHT (PCF)	MIN STRENGTH AT 28 DAYS	MAX W/CM RATIO [3]	EXPOSURE CATEGORY [4]				AIR CONTENT [5]	MAX NOMINAL AGGREGATE SIZE (INCH)	SPECIAL NOTES ENGR NOTES:
			F'c (PSI)		F	S	W	C			
ALL CONCRETE	EXTERIOR	145	5000	0.4	F2	S0	W0	C1	6%	3/4	

CONCRETE MIX PROPERTY TABLE NOTES:

- 1 EXTERIOR EXPOSURE IS DEFINED AS ANY CONCRETE ELEMENT OUTSIDE OF A BUILDING ENCLOSURE AND POSITIONED ABOVE SOIL FROST DEPTH. ALL OTHER CONCRETE IS INTERIOR EXPOSURE.
- 2 PROVIDE SHRINKAGE REDUCING ADMIXTURE IN ALL CONCRETE. SEE SPECIFICATIONS FOR DOSAGE AND PERFORMANCE REQUIREMENTS.
- 3 PROVIDE SYNTHETIC MACROFIBER REINFORCEMENT IN ALL CONCRETE. MACROFIBER DOSAGE SHALL BE DETERMINED BY THE FIBER MANUFACTURER BASED ON ASTM C1609 AND THE GENERAL RECOMMENDATIONS OF ACI 544.1R-18. MINIMUM FIBER DOSAGE IS 5 LB/CY.
- 4 FOR PUMP MIXES, MAXIMUM WATER/CEMENT (W/C) RATIO SHALL BE MAINTAINED. ADMIXTURES TO INCREASE WORKABILITY ARE PERMITTED SUBJECT TO MIX DESIGN REVIEW.
- 5 PROVIDE CONCRETE MIXES IN ACCORDANCE WITH ACI 301 FOR THE EXPOSURE CATEGORIES IDENTIFIED IN THE ABOVE TABLE, INCLUDING LIMITATIONS ON SUPPLEMENTARY CEMENTITIOUS MATERIAL, CHLORIDE CONTENT, ADMIXTURES ETC.
- 6 AIR ENTRAINMENT SHALL BE MEASURED AT THE POINT OF PLACEMENT WITH A TOLERANCE +/- 1.5%. MEASUREMENT AT POINT OF DELIVERY WILL BE CONSIDERED BY ENGINEER IF ACCEPTABLE CORRELATIONS OF PROPERTIES ARE ESTABLISHED BETWEEN POINT OF PLACEMENT AND POINT OF DELIVERY. AIR CONTENT OF TROWEL FINISHED FLOORS SHALL NOT EXCEED 3%.

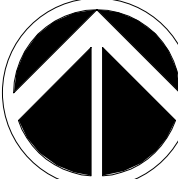
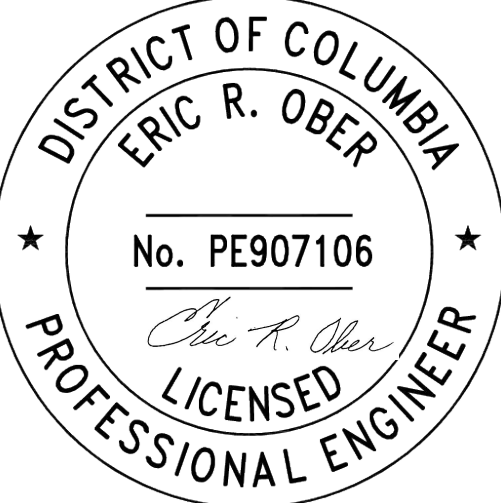
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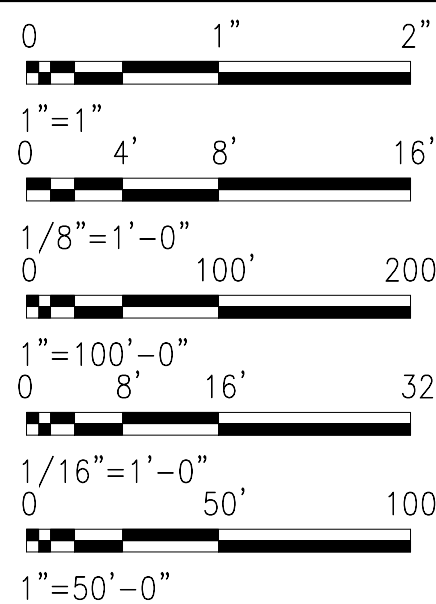
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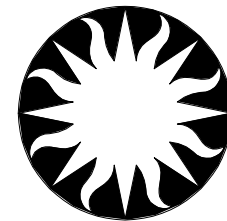


KEY PLAN



GRAPHIC SCALE(S)

DATE	DESCRIPTION
1/30/26	FINAL SUBMISSION
REVISION	REVISION



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600 Maryland Avenue S.W., Suite 5001
Washington, DC 20024-2520

BUILDING NAME	NATIONAL ZOOLOGICAL PARK		
ADDRESS	3001 CONNECTICUT AVE NW WASHINGTON, DC 20008		
PROJECT TITLE	MITIGATE STORM WATER AT ELEPHANT YARDS		
SF PROJECT NUMBER	2233104		
A/C PROJECT NUMBER	20230426		
DRAWING TITLE	OPTION 2 – GENERAL NOTES		
DRAWING TYPE	STRUCTURAL		
WORKING STAFF	JDV	DW	JDV
DESIGNED BY	DRAWN BY	CHECKED BY	
SHEET NO.	S	0	01
36 of 39	DISCIPLINE	TYPE	SEQUENCE

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ERIC R. OBER
No. PE907106
Eric R. Ober
LICENSED
PROFESSIONAL ENGINEER

STAMP



KFY PLAN

0 1" 2"
1"=1"
0 4' 8' 16'
1/8"=1'-0"
0 100' 200'
1"=100'-0"
0 8' 16' 32'
1/16"=1'-0"
0 50' 100'
1"=50'-0"

GRAPHIC SCALE(S)

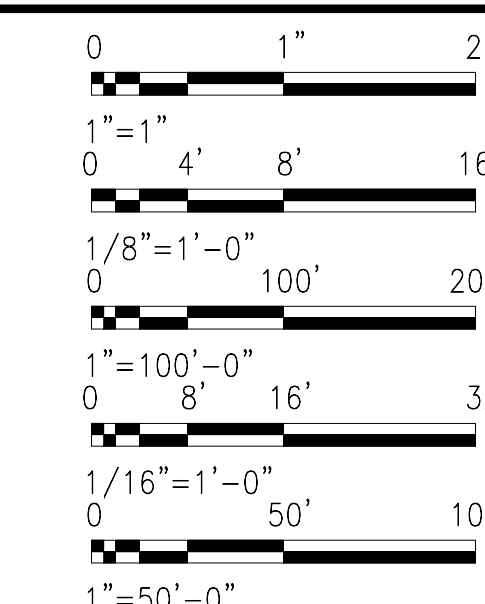
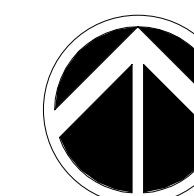
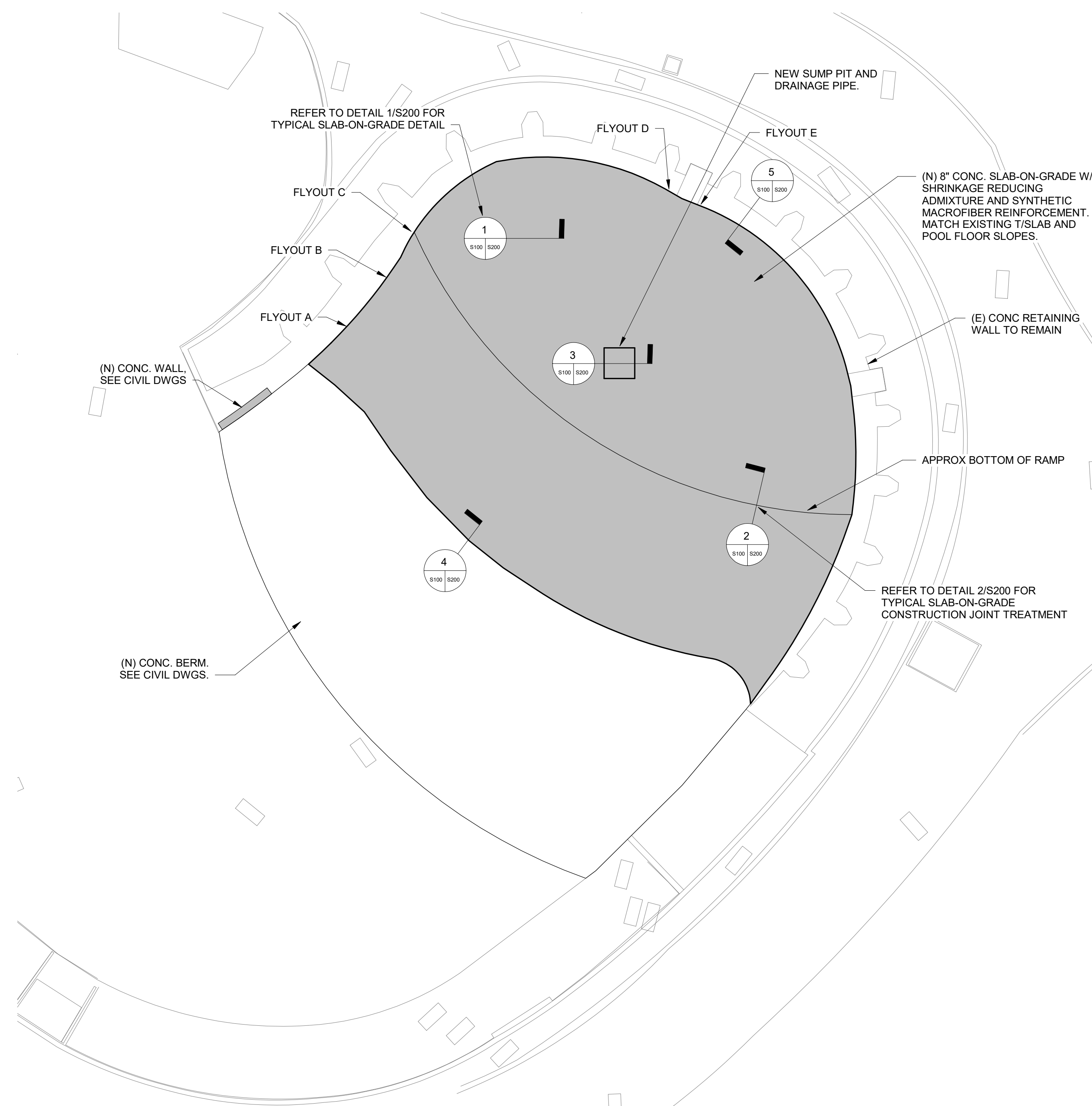
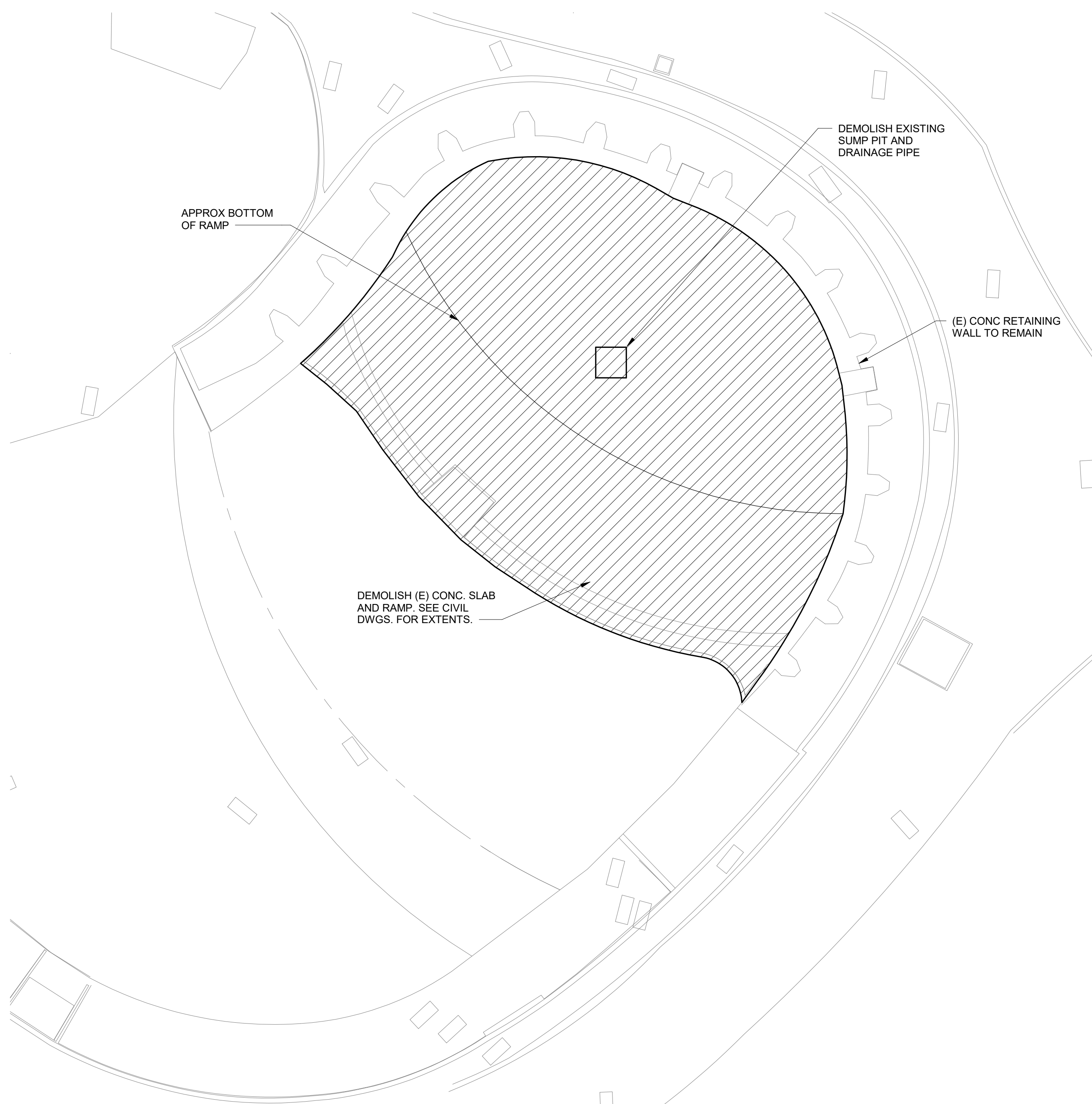
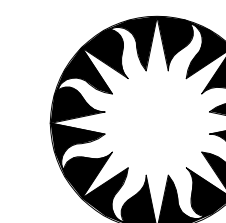
DATE 1/30/26	SUBMISSION FINAL SUBMISSION
REVISION	REVISION



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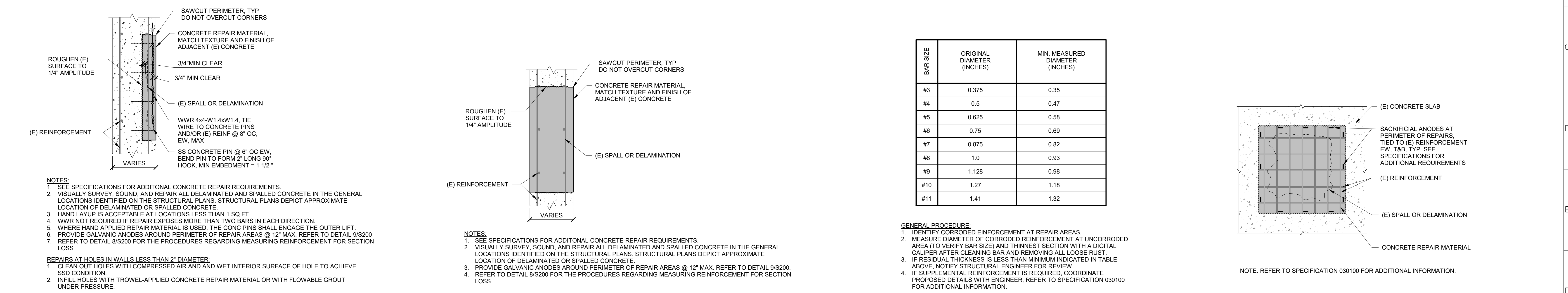
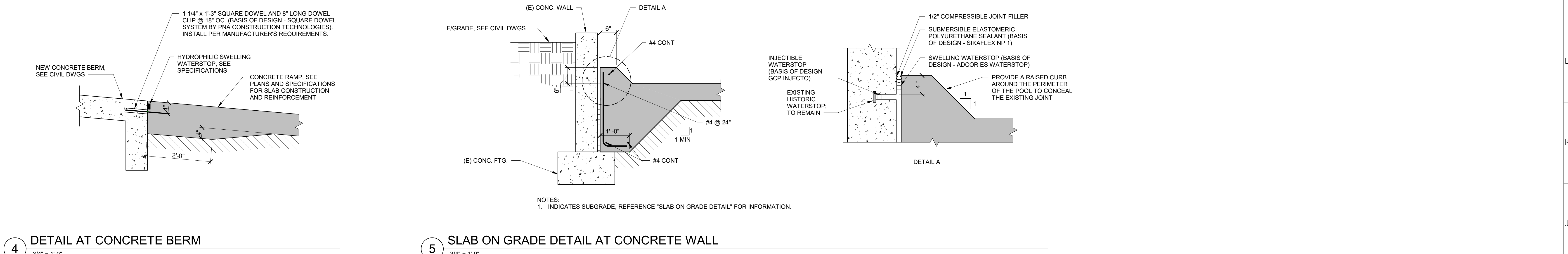
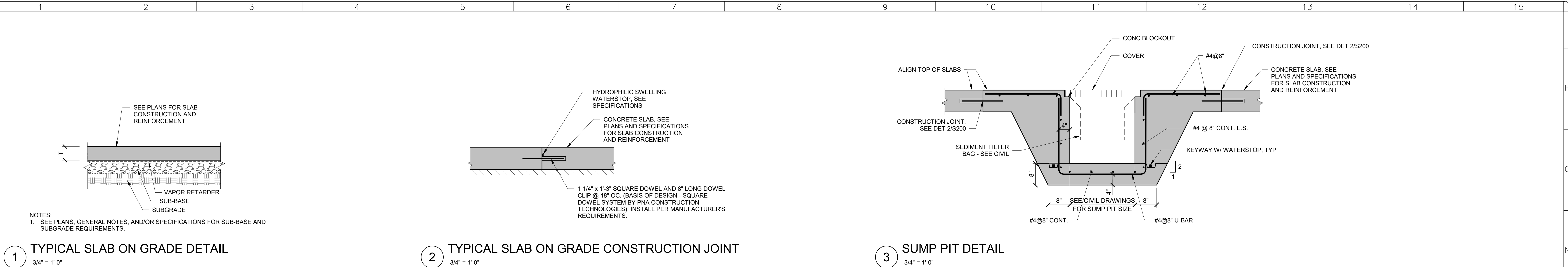
CLIENT NAME	NATIONAL ZOOLOGICAL PARK		
ADDRESS	3001 CONNECTICUT AVE NW WASHINGTON, DC 20008		
PROJECT TITLE	MITIGATE STORM WATER AT ELEPHANT YARDS		
SF PROJECT NUMBER	2233104		
A/C PROJECT NUMBER	20230426		
DRAWING TITLE	SECTION 2 INSPECTIONS		— SPECIAL
DRAWING TYPE	STRUCTURAL		
WORKING STAFF	JDV DESIGNED BY	DW DRAWN BY	JDV CHECKED BY
SHEET NO.	002		
37 of 39	DISC	TYPE	SEQUENCE

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BUILDING NAME	NATIONAL ZOOLOGICAL PARK		
ADDRESS	3001 CONNECTICUT AVE NW WASHINGTON, DC 20008		
PROJECT TITLE	MITIGATE STORM WATER AT ELEPHANT YARDS		
SF PROJECT NUMBER	2233104		
A/P PROJECT NUMBER	20230426		
DRAWING TITLE	OPTION 2 - PLANS		
DRAWING TYPE	STRUCTURAL		
WORKING STAFF	JDV	DW	JDV

SHEET NO. 38 of 39	S	1	00
	DISCIPLINE	TYPE	SEQUENCE



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ERIC R. OBER
No. PE907106
Eric R. Ober
LICENSED
PROFESSIONAL ENGINEER

STAMP

KEY PLAN

GRAPHIC SCALE(S)

0 1" 2"
0 4' 8' 16'
0 100' 200'
0 8' 16' 32'
0 50' 100'
1"=1'-0"
1/8"=1'-0"
1/16"=1'-0"
1"=50'-0"

DATE: 1/30/26

REVISION: FINAL SUBMISSION

REVISION:

REVISION:

REVISION:

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BUILDING NAME: NATIONAL ZOOLOGICAL PARK

ADDRESS: 3001 CONNECTICUT AVE NW
WASHINGTON, DC 20008

PROJECT TITLE: MITIGATE STORM WATER AT
ELEPHANT YARDS

SF PROJECT NUMBER: 2233104

A/C PROJECT NUMBER: 20230426

DRAWING TITLE: OPTION 2 - DETAILS

DRAWING TYPE: STRUCTURAL

WORKING STAFF: JDV DW JDV

SHEET NO. 39 of 39

S 2 00

DISCIPLINE: TYPE: SEQUENCE: S200