

# CITY OF PORTSMOUTH, NEW HAMPSHIRE

## FOR CONSTRUCTION

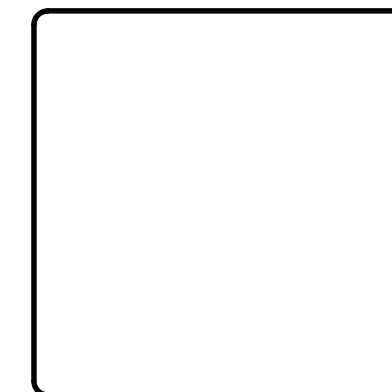
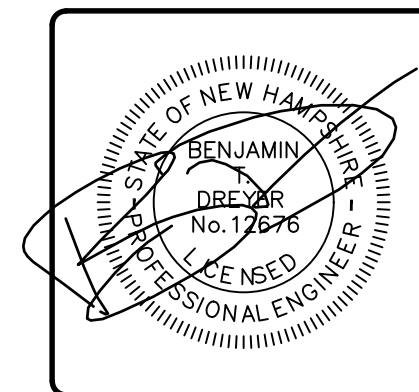
# CORPORATE DRIVE

# MAINTENANCE DREDGING & OUTFALL IMPROVEMENTS

### CITY BID No. 37-22



PREPARED BY  
**UNDERWOOD ENGINEERS, INC.**  
 PORTSMOUTH, NEW HAMPSHIRE  
 APRIL 4, 2022



### PLAN INDEX

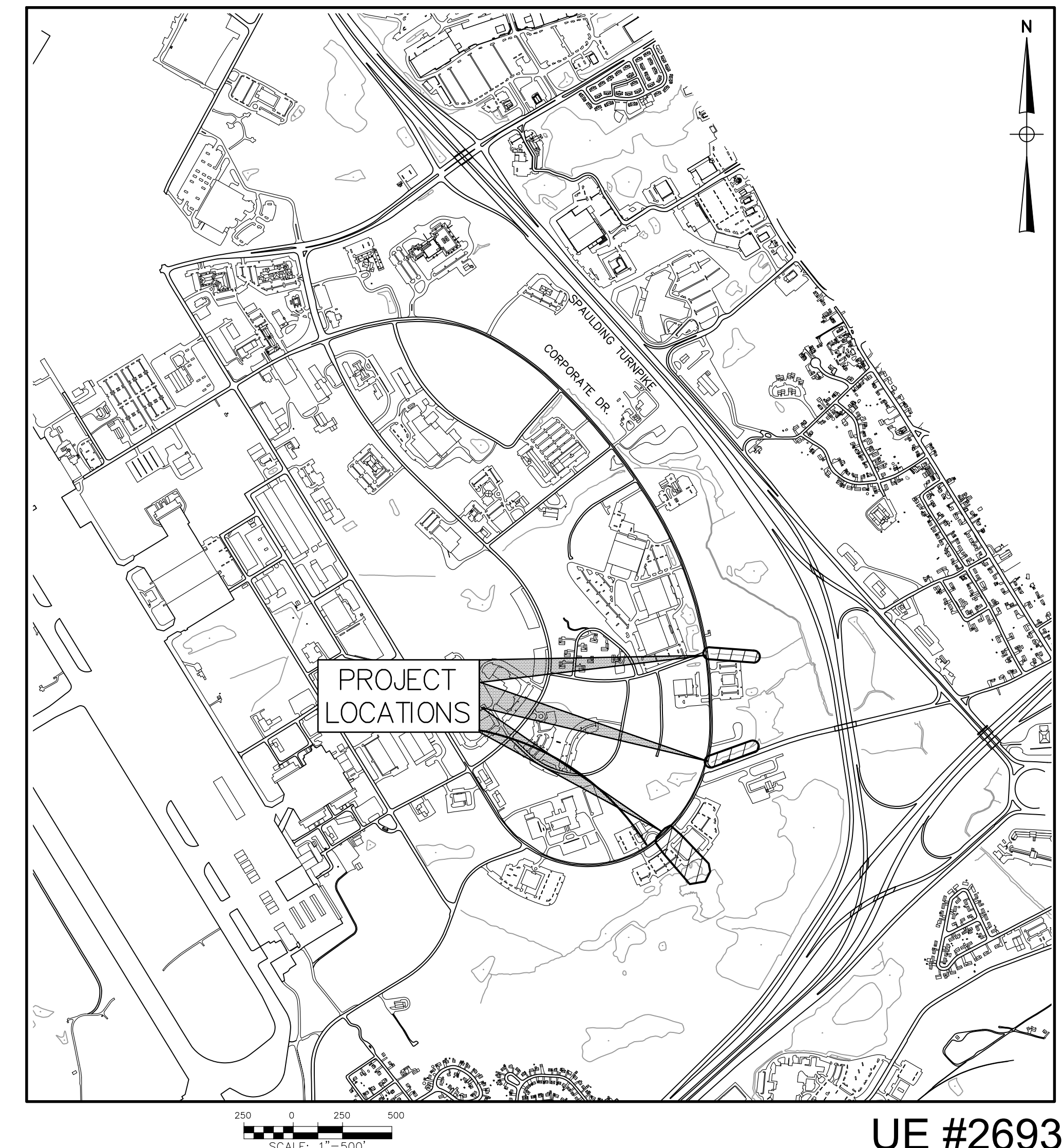
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VICINITY MAP

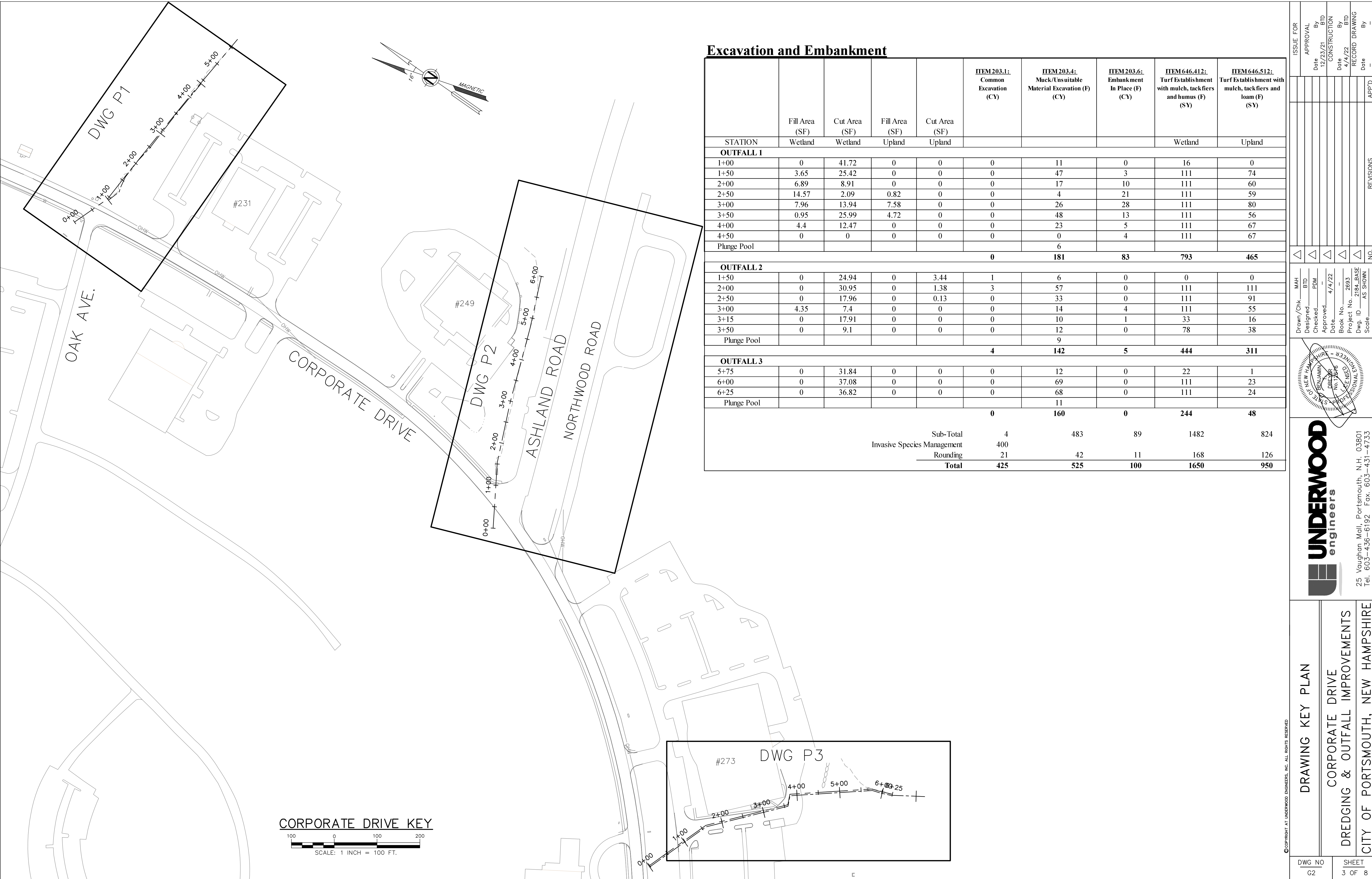


LOCATION PLAN



UE #2693





**Excavation and Embankment**

STATION	ITEM203.1: Common Excavation (CY)		ITEM203.4: Muck/Unsuitable Material Excavation (F) (CY)		ITEM203.6: Embankment In Place (F) (CY)		ITEM646.412: Turf Establishment with mulch, tackifiers and humus (F) (SY)		ITEM646.512: Turf Establishment with mulch, tackifiers and loam (F) (SY)	
	Wetland	Upland	Wetland	Upland	Wetland	Upland	Wetland	Upland	Wetland	Upland
<b>OUTFALL 1</b>										
1+00	0	41.72	0	0	0	11	0	16	0	
1+50	3.65	25.42	0	0	0	47	3	111	74	
2+00	6.89	8.91	0	0	0	17	10	111	60	
2+50	14.57	2.09	0.82	0	0	4	21	111	59	
3+00	7.96	13.94	7.58	0	0	26	28	111	80	
3+50	0.95	25.99	4.72	0	0	48	13	111	56	
4+00	4.4	12.47	0	0	0	23	5	111	67	
4+50	0	0	0	0	0	0	4	111	67	
Plunge Pool						6				
<b>0      181      83      793      465</b>										
<b>OUTFALL 2</b>										
1+50	0	24.94	0	3.44	1	6	0	0	0	
2+00	0	30.95	0	1.38	3	57	0	111	111	
2+50	0	17.96	0	0.13	0	33	0	111	91	
3+00	4.35	7.4	0	0	0	14	4	111	55	
3+15	0	17.91	0	0	0	10	1	33	16	
3+50	0	9.1	0	0	0	12	0	78	38	
Plunge Pool						9				
<b>4      142      5      444      311</b>										
<b>OUTFALL 3</b>										
5+75	0	31.84	0	0	0	12	0	22	1	
6+00	0	37.08	0	0	0	69	0	111	23	
6+25	0	36.82	0	0	0	68	0	111	24	
Plunge Pool						11				
<b>0      160      0      244      48</b>										
					Sub-Total	4	483	89	1482	824
					Invasive Species Management	400				
					Rounding	21	42	11	168	126
					<b>Total</b>	<b>425</b>	<b>525</b>	<b>100</b>	<b>1650</b>	<b>950</b>

ISSUE FOR		APPROVAL	DATE
DATE	BY	DATE	BY
12/23/21	BTD	12/23/21	BTD
CONSTRUCTION		CONSTRUCTION	CONSTRUCTION
DATE	BY	DATE	BY
4/4/22	BTD	4/4/22	BTD
RECORD DRAWING		RECORD DRAWING	RECORD DRAWING
DATE	BY	DATE	BY
APP'D	NO.	APP'D	NO.
Drawn/Chk.	M.H.	Checked	P.D.M.
Designed	B.T.D.	Approved	4/4/22
		Date	
Book No.	2683	Project No.	2184-BASE
Dwg. ID	AS SHOWN	Scale	AS SHOWN

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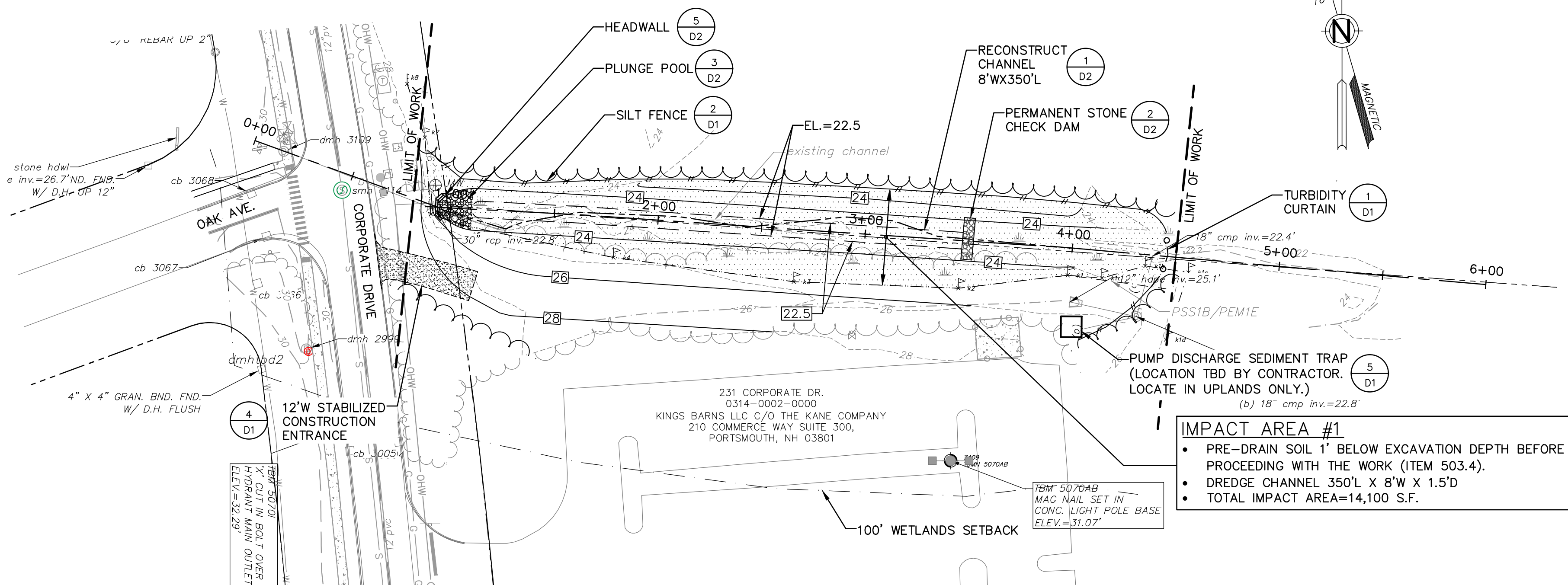
25 Vaughan Mall, Portsmouth, N.H. 03801  
Tel. 603-436-6192 Fax. 603-431-4733

DRAWING KEY PLAN	
CORPORATE DRIVE	
DREDGING & OUTFALL IMPROVEMENTS	
CITY OF PORTSMOUTH, NEW HAMPSHIRE	

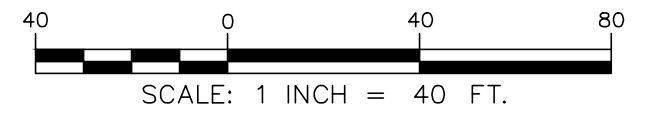
DWG NO	SHEET
G2	3 OF 8

**CORPORATE DRIVE KEY**  
SCALE: 1 INCH = 100 FT.

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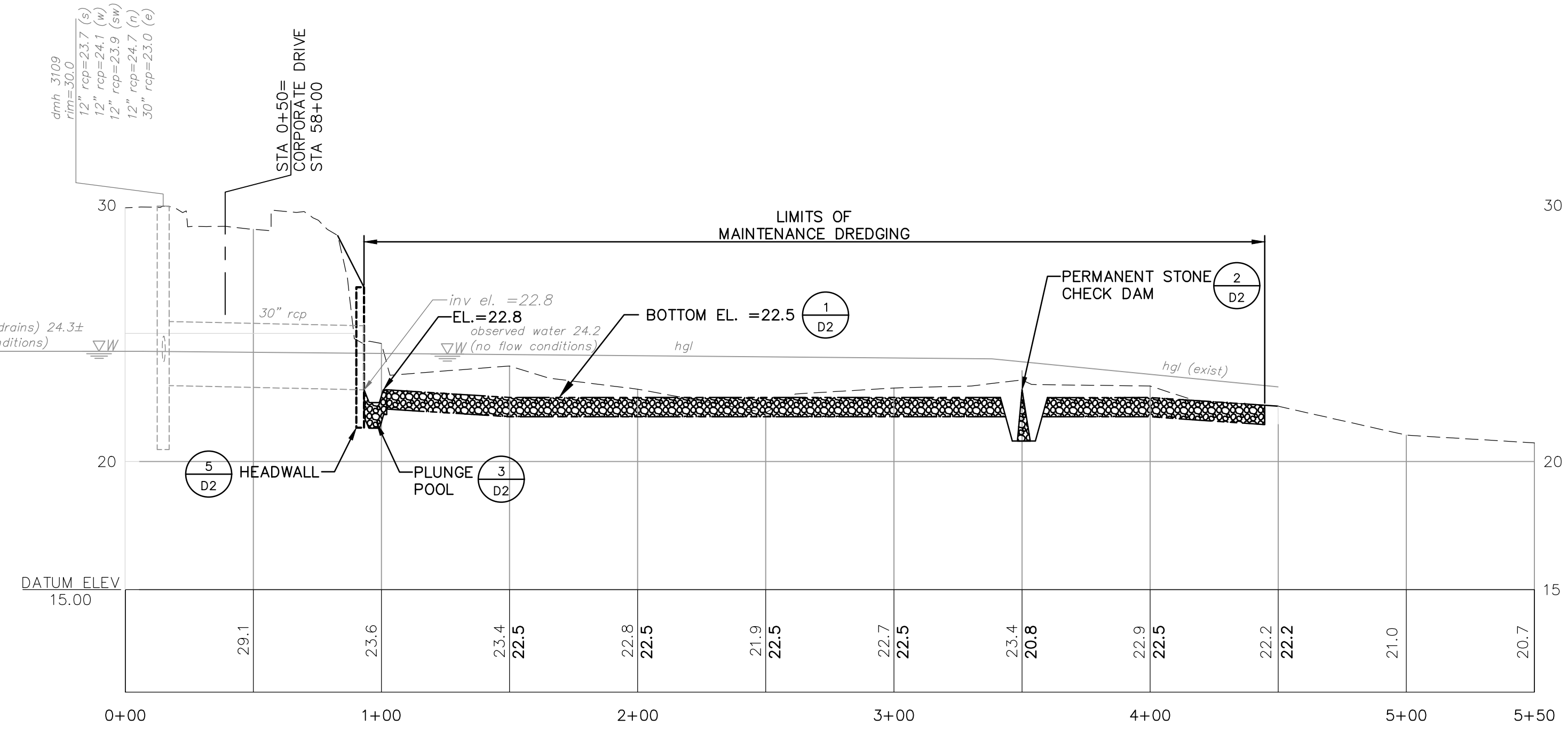


**DRAINAGE PLAN**

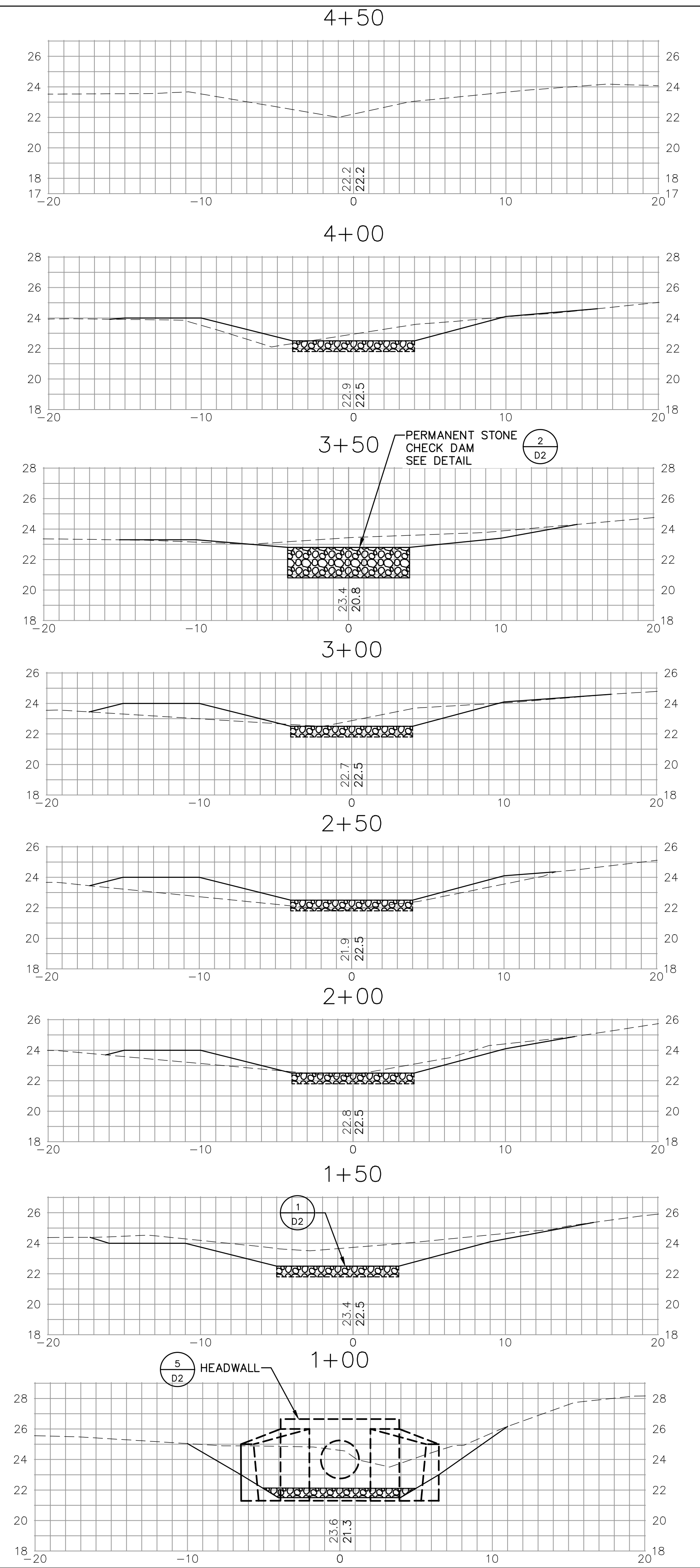
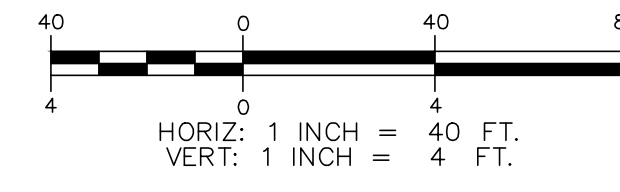


**IMPACT AREA #1**

- PRE-DRAIN SOIL 1' BELOW EXCAVATION DEPTH BEFORE PROCEEDING WITH THE WORK (ITEM 503.4).
- DREDGE CHANNEL 350'L X 8'W X 1.5'D
- TOTAL IMPACT AREA=14,100 S.F.



**CHANNEL PROFILE VIEW**

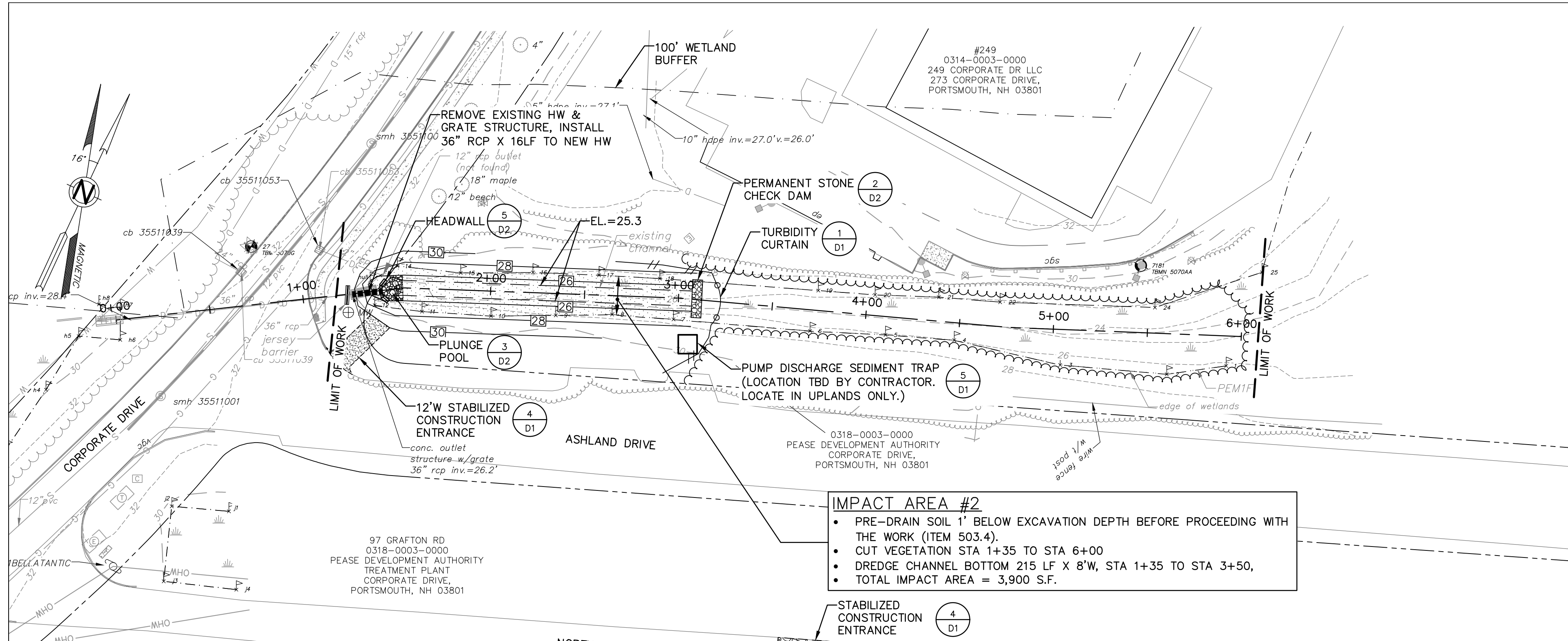


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CONSTRUCTION		4/12/22		BTD	
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Drawn/Chk	MAH	Designed	BTD	Checked	PDM
Approved	4/14/22	Book No.	2693	Project No.	2184-BASE
Scale	AS SHOWN	Dwg. ID	AS SHOWN		

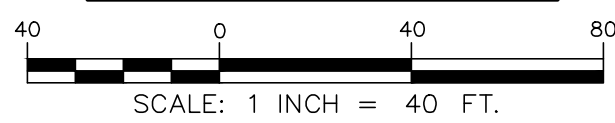
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<b>PLAN &amp; PROFILE</b>	
<b>OUTFALL #1</b>	
CORPORATE DRIVE	
DREDGING & OUTFALL IMPROVEMENTS	
CITY OF PORTSMOUTH, NEW HAMPSHIRE	
DWG NO	SHEET
P1	4 OF 8



### DRAINAGE PLAN



### SOIL MANAGEMENT

1. THE AREA WITHIN THE TURN AROUND ON NORTHWOOD ROAD SHALL BE USED FOR MANAGEMENT OF DREDGED SOIL (MUCK) FROM OUTFALLS 1-3.
2. THE INTENT IS TO PROVIDE SPACE FOR EXCAVATED MUCK SOIL TO BE SPREAD FOR DRYING AND STOCKPILING (ITEM 203.67-MANAGING AND STOCKPILING SURPLUS SOILS-MUCK). THE FINAL STOCKPILE WILL REMAIN FOR FUTURE USE BY THE PEASE DEVELOPMENT AUTHORITY (PDA).
3. PRIOR TO SOIL MANAGEMENT OPERATIONS, EROSION CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED SWPPP.
4. DREDGE MUCK SOILS SHALL REMAIN ON PDA PROPERTY. MANAGEMENT IS REQUIRED TO LIMIT POTENTIAL TRANSPORT OF PFAS AND/OR INVASIVE SPECIES.
5. THE CONTRACTOR SHALL COORDINATE THE SOIL MANAGEMENT WORK WITH THE APPROVED INVASIVE SPECIES MANAGEMENT PLAN.

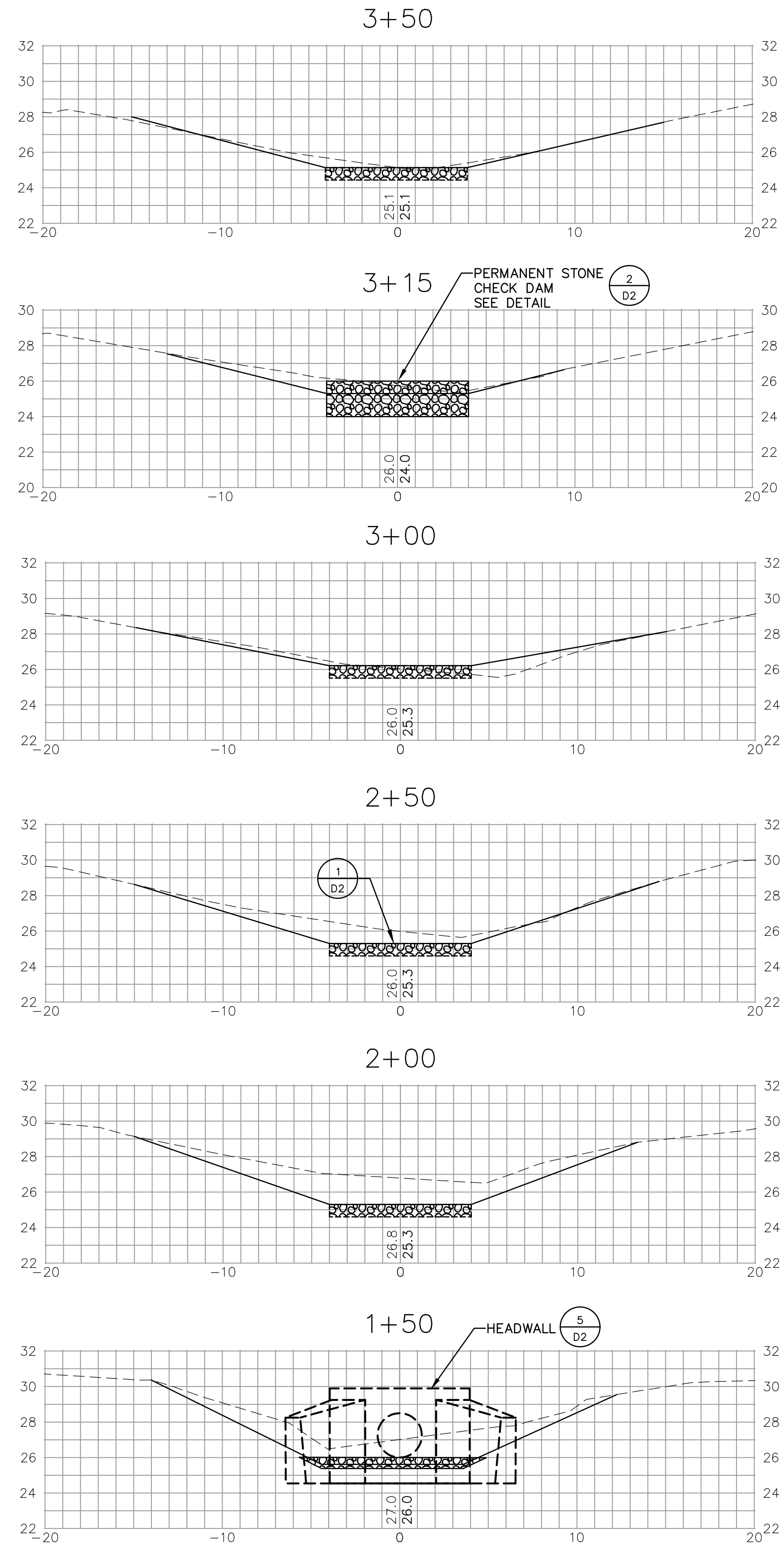
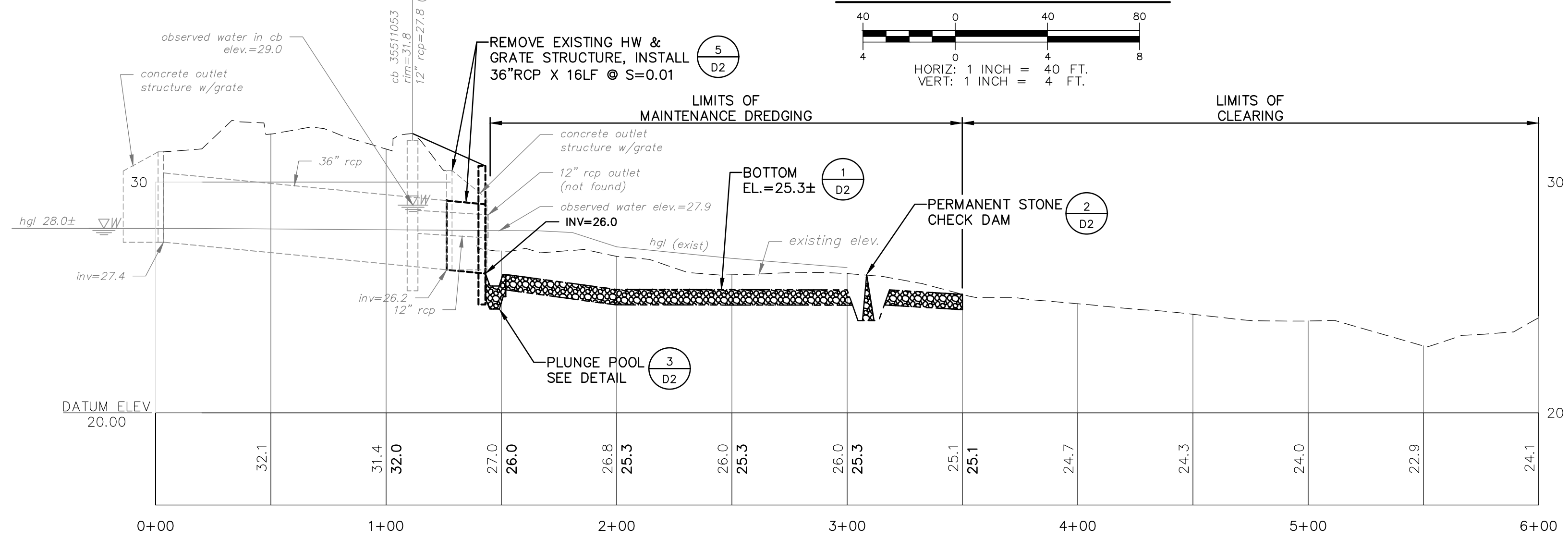
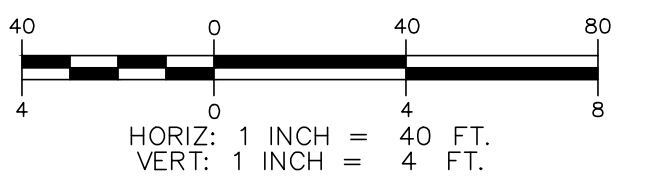
**IMPACT AREA #2**

- PRE-DRAIN SOIL 1' BELOW EXCAVATION DEPTH BEFORE PROCEEDING WITH THE WORK (ITEM 503.4).
- CUT VEGETATION STA 1+35 TO STA 6+00
- DREDGE CHANNEL BOTTOM 215 LF X 8'W, STA 1+35 TO STA 3+50,
- TOTAL IMPACT AREA = 3,900 S.F.

(2) D1 SILT FENCE  
SEE DETAIL

AREA TO BE USED FOR  
MANAGEMENT OF  
DREDGED SOILS  
(SEE NOTES THIS SHEET)

### CHANNEL PROFILE VIEW



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DATE	BY	DATE	BY
REVISIONS			
NO.	DESCRIPTION	DATE	BY
DRAWN/CHECKED BY: MAH			
DESIGNED BY: BTD			
CHECKED BY: PDM			
APPROVED BY: PDM			
DATE: 4/4/22			
BOOK NO.: 2693			
PROJECT NO.: 2184-BASE			
DWG. ID.: AS SHOWN			
SCALE:			
APP'D			

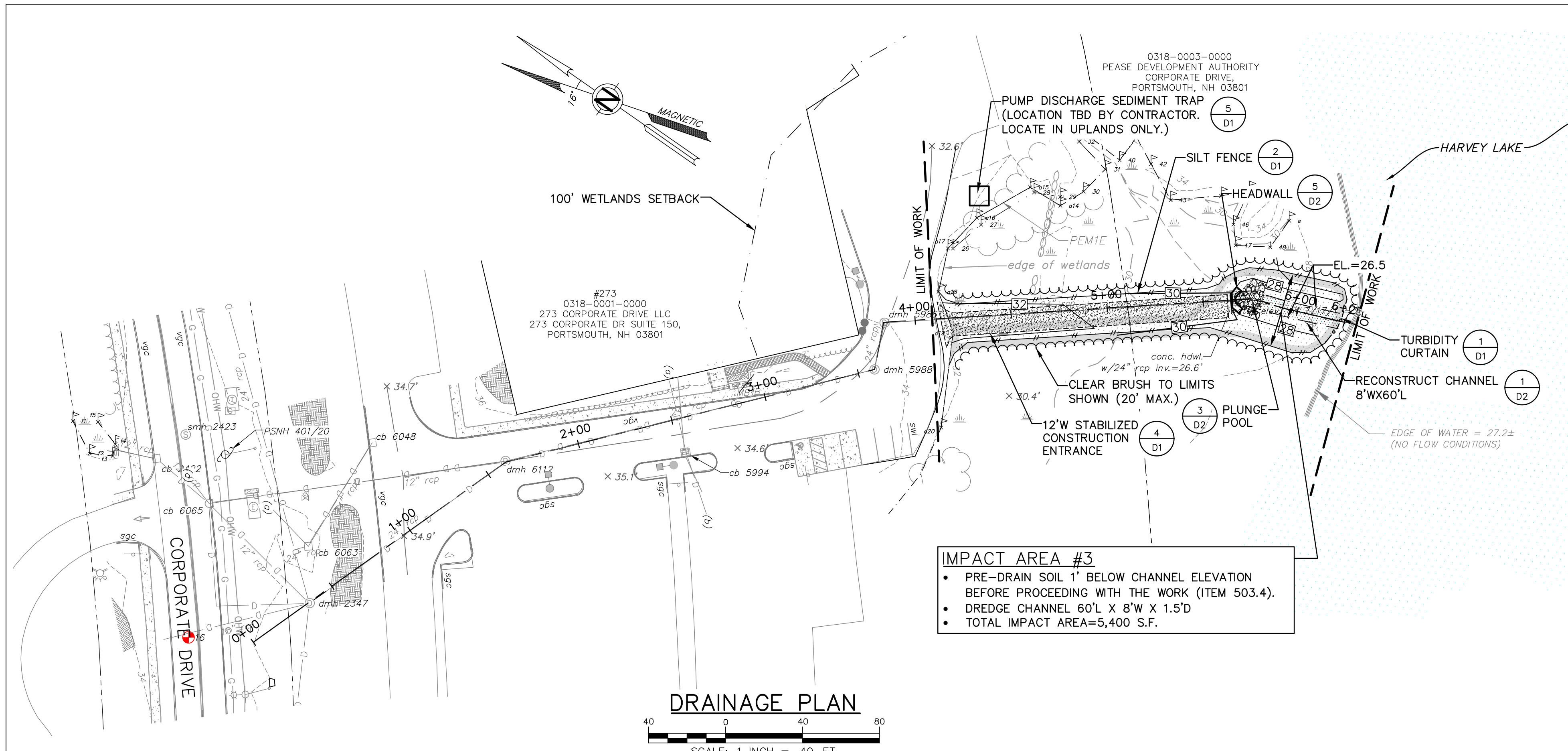
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PLAN & PROFILE  
OUTFALL #2

CORPORATE DRIVE  
DREDGING & OUTFALL IMPROVEMENTS

CITY OF PORTSMOUTH, NEW HAMPSHIRE

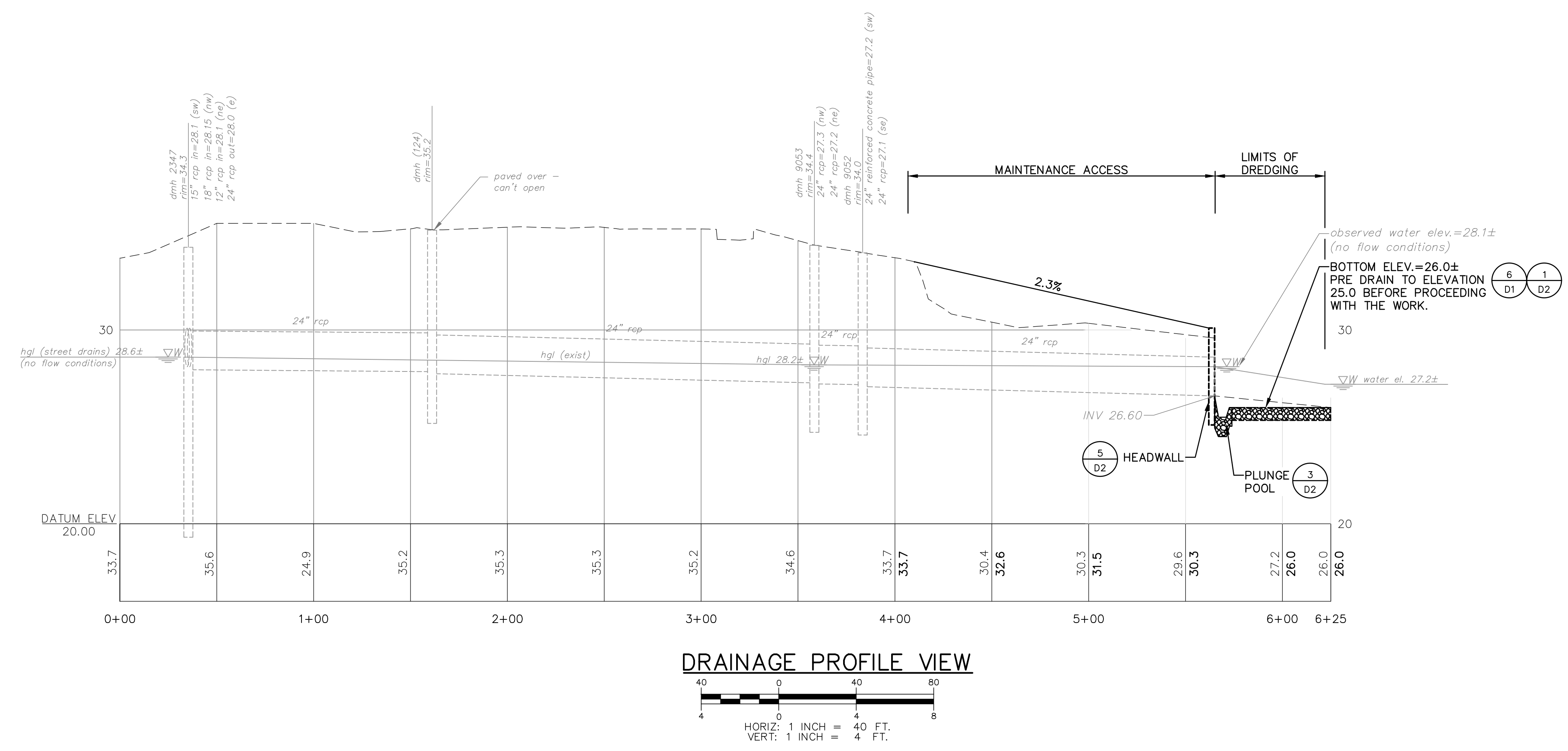
DWG NO	SHEET
P2	5 OF 8



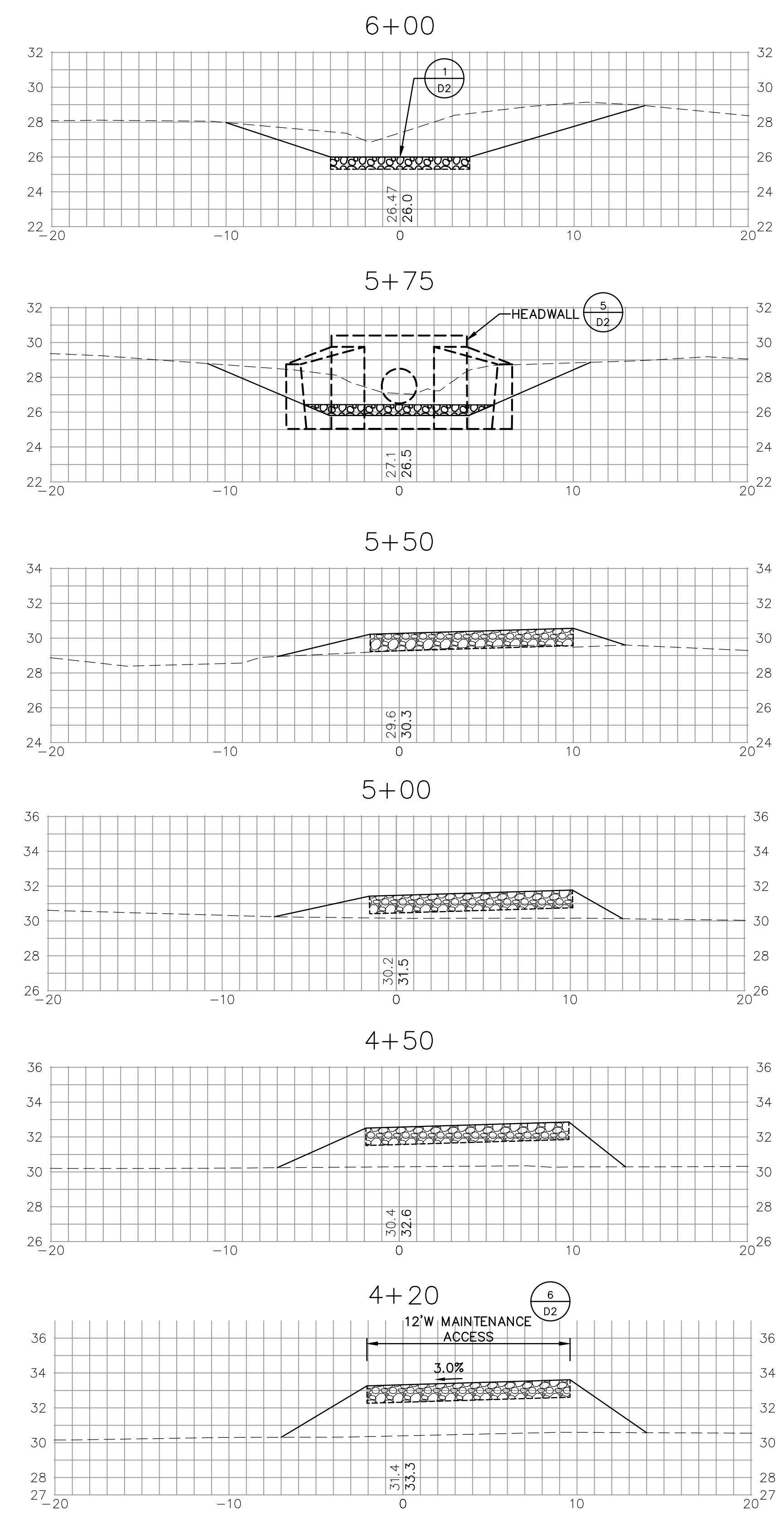
**IMPACT AREA #3**

- PRE-DRAIN SOIL 1' BELOW CHANNEL ELEVATION BEFORE PROCEEDING WITH THE WORK (ITEM 503.4).
- DREDGE CHANNEL 60'L X 8'W X 1.5'D
- TOTAL IMPACT AREA=5,400 S.F.

**DRAINAGE PLAN**  
SCALE: 1 INCH = 40 FT.



**DRAINAGE PROFILE VIEW**  
HORIZ: 1 INCH = 40 FT.  
VERT: 1 INCH = 4 FT.



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MAH	DESIGNED			
BTD	CHECKED			
PDM	APPROVED	4/4/22		
	DATE			
	BOOK NO.	2693		
	PROJECT NO.	2187-BASE		
	DWG. ID	AS SHOWN		
	SCALE			

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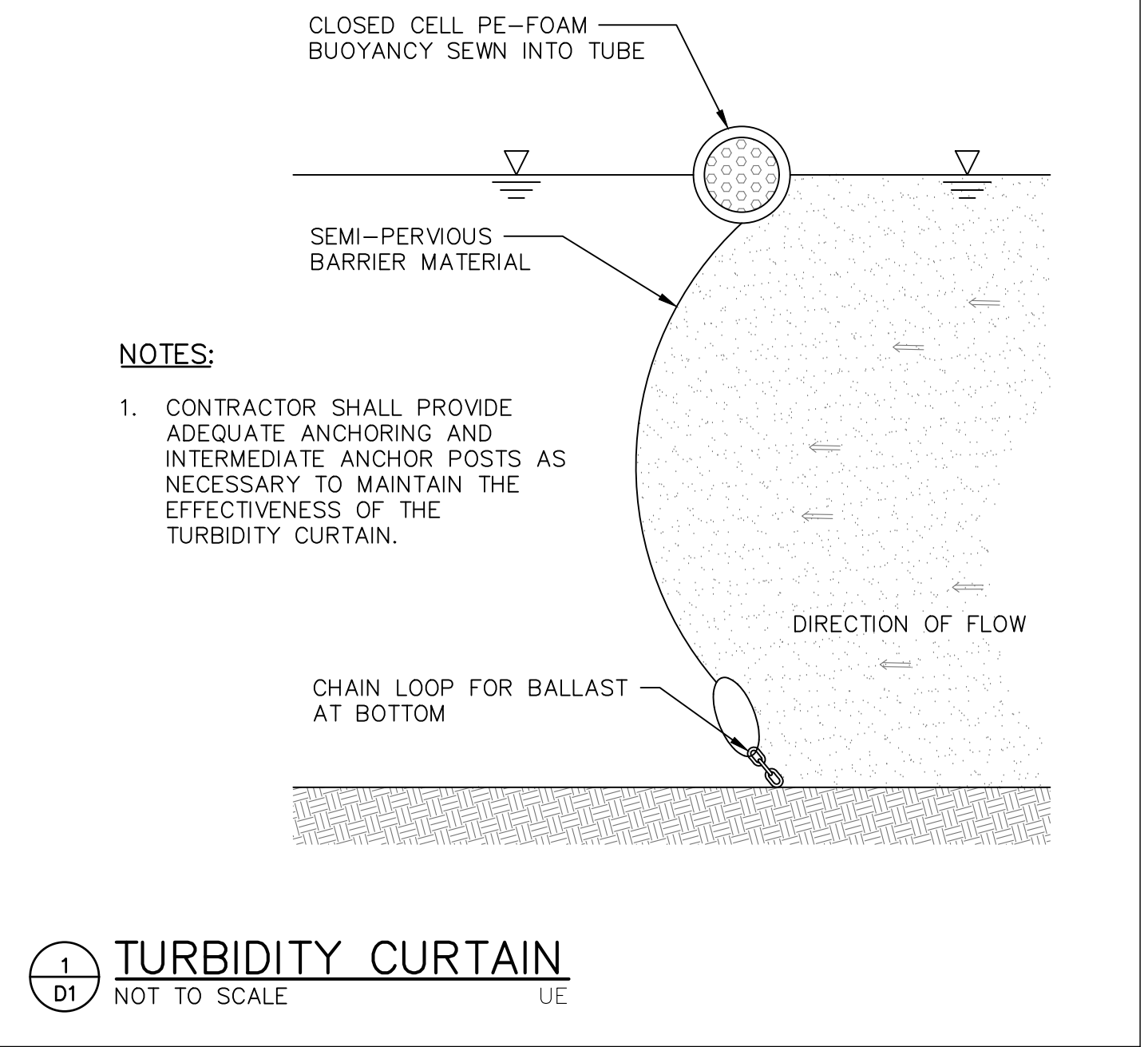
**PLAN & PROFILE  
OUTFALL #3**  
CORPORATE DRIVE  
DREDGING & OUTFALL IMPROVEMENTS  
CITY OF PORTSMOUTH, NEW HAMPSHIRE

DWG NO: P3  
SHEET: 6 OF 8

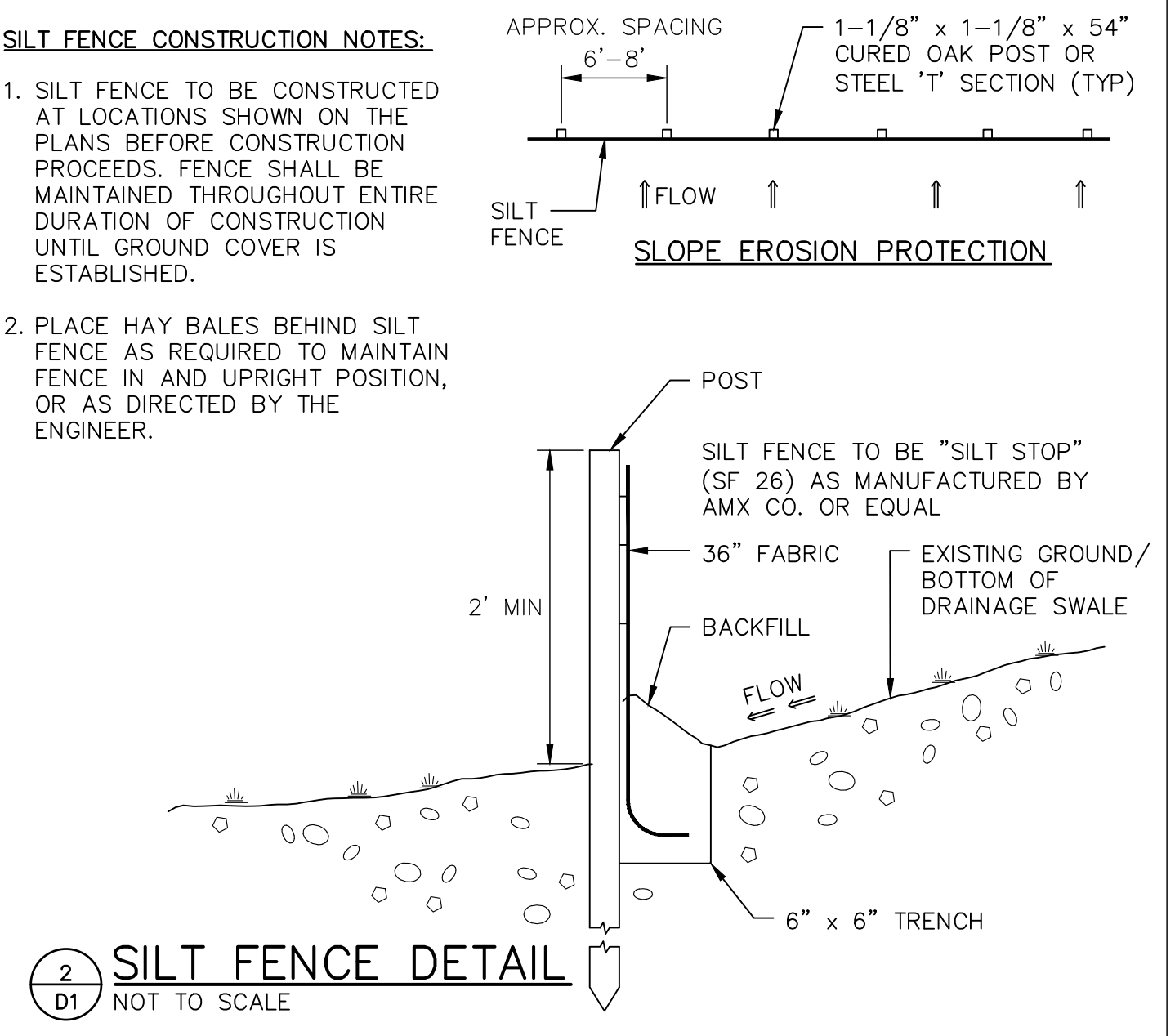
**EROSION & SEDIMENT CONTROL NOTES (GENERAL):**

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED:

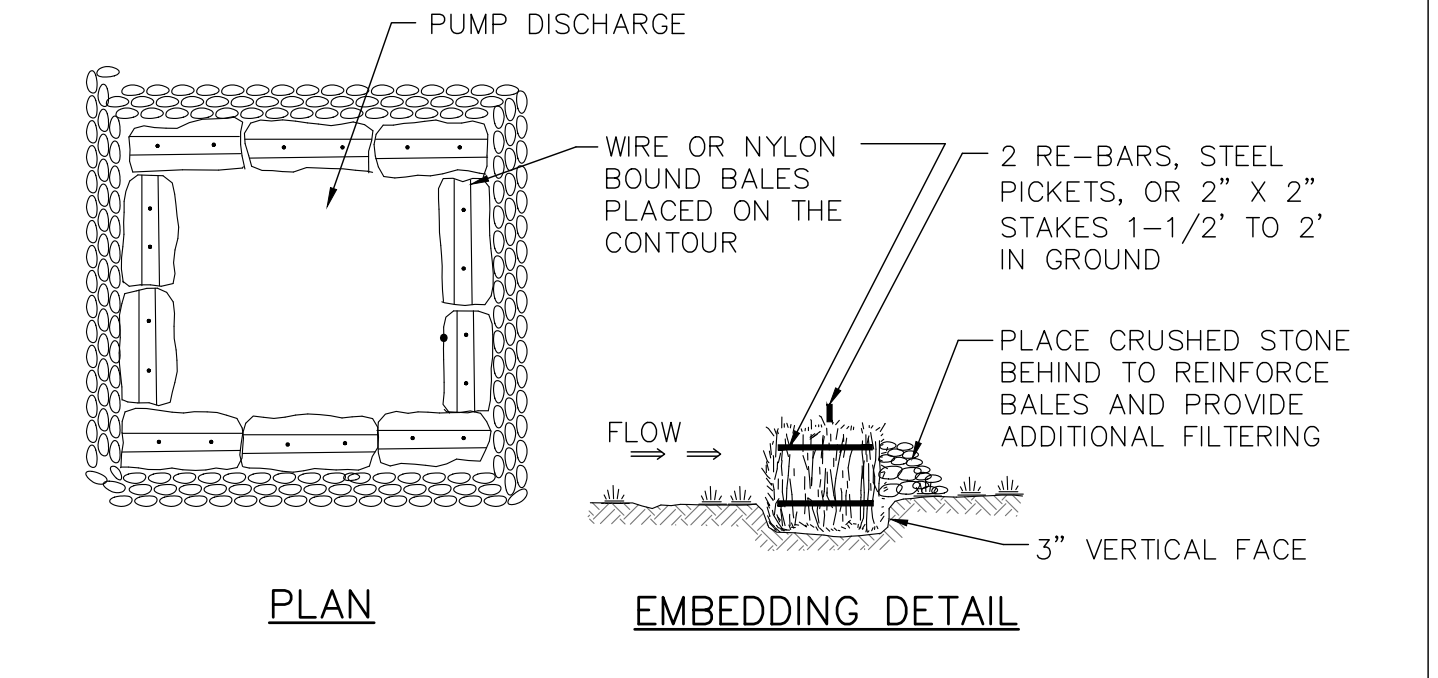
1. EROSION CONTROLS SHALL BE IN PLACE BEFORE EARTH MOVING OPERATIONS CAN BEGIN.
2. EXCAVATION AND EARTHWORK SHALL BE CONDUCTED IN A MANNER THAT WILL MINIMIZE EFFECTS OF EROSION THROUGHOUT CONSTRUCTION.
3. PROVIDE A STABILIZED CONSTRUCTION ENTRANCE EXTENDING FROM THE ACCESS POINT OF EACH OUTFALL AREA. INSTALL SILT FENCE ALONG PERIMETER OF WORK AREAS IN WETLANDS TO PREVENT UNAUTHORIZED IMPACTS.
4. DREGGED CHANNEL AREAS SHALL BE RESTORED USING EXISTING SOILS AND WETLAND SAND MIX.
5. THE SMALLEST PRACTICABLE AREA OF LAND SHALL BE EXPOSED FOR THE SHORTEST PRACTICAL PERIOD AT ANY GIVEN TIME DURING CONSTRUCTION. DRAINAGE DITCHES, SWALES AND STEEP SLOPE EMBANKMENTS SHALL BE LOAMED, SEEDED AND STABILIZED WITHIN 72-HOURS OF FINAL GRADING. THE MAXIMUM PERIOD ANY ONE AREA MAY BE EXPOSED IS 45 CALENDAR DAYS.
6. REFER TO DRAINAGE AND EROSION CONTROL DETAILS FOR ADDITIONAL NOTES AND SPECIFICATIONS.
7. PERMANENT SEEDING AND MULCHING OF UPLAND AREAS:
  - ALL DISTURBED AREAS SHALL BE GRADED IN A MANNER CONSISTENT WITH SURROUNDINGS AS SHOWN ON THE DRAWINGS, AFTER SEEDING, STEEP SLOPES SHALL BE MULCHED WITH EXCELSIOR OR EQUAL AND A CHEMICAL TACKIFIER SHALL BE APPLIED TO ALL SIDE SLOPES STEEPER THAN 3:1. RATE OF APPLICATION SHALL BE AS RECOMMENDED BY THE MANUFACTURER. INSTALL JUTE MATTING, EXCESIOR STABILIZATION BLANKET OR STONE FILL ON STEEP SLOPES, WHERE DIRECTED.
  - SCARIFY UNDERLYING SOIL TO A MINIMUM DEPTH OF 4 INCHES PRIOR TO PLACEMENT OF TOPSOIL.
9. UPLAND SLOPES (3:1 OR FLATTER) SHALL BE SEEDED WITH PARK SEED MIXTURE, NHDOT SECTION 644.2.2.
10. UPLAND SLOPES (STEEPER THAN 3:1) SHALL BE SEEDED WITH A SLOPE SEED MIXTURE, SECTION 644.2.3. AFTER SEEDING, STEEP SLOPES SHALL BE MULCHED WITH EXCELSIOR OR EQUAL AND A CHEMICAL TACKIFIER SHALL BE APPLIED TO ALL SIDE SLOPES STEEPER THAN 3:1. RATE OF APPLICATION SHALL BE AS RECOMMENDED BY THE MANUFACTURER. INSTALL JUTE MATTING, EXCESIOR STABILIZATION BLANKET OR STONE FILL ON STEEP SLOPES, WHERE DIRECTED.
11. TEMPORARY SEEDING AND MULCHING:
  - TEMPORARILY SEED DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR MORE THAN 21 DAYS WITH ANNUAL RYEGRASS AND MULCH.
  - TEMPORARILY MULCH DISTURBED AREAS, INCLUDING STOCKPILES, WHICH WILL NOT BE WORKED FOR 7 TO 21 DAYS WITH CHOPPED HAY AND NETTING.
12. EROSION & SEDIMENT CONTROL SHALL BE INSTALLED WHERE NECESSARY TO MINIMIZE THE POTENTIAL FOR EROSION. ALL WORK SHALL BE COMPLETED IN CONFORMANCE WITH THE LATEST EDITION OF NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3 "EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION" TO PREVENT THE DEGRADATION OF DOWNSTREAM PROPERTIES AND DRAINAGE.
13. THE EROSION CONTROL SPECIFIED AND DETAILED ON THE PLANS SHALL BE CONSIDERED THE MINIMUM REQUIRED AND IS TO BE USED AS A GUIDELINE ONLY. ADDITIONAL MEASURES MAY BE DICTATED BY FIELD CONDITIONS. PROVIDE ADDITIONAL EROSION CONTROL AS REQUIRED BY THE TOWN, STATE OR THE ENGINEER.
14. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED: FINISHED COURSE GRAVELS HAVE BEEN INSTALLED; A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED, NON-EROSIVE MATERIALS SUCH AS PERMANENT EROSION MATTING, CONCRETE STONE OR RIP RAP HAS BEEN PROPERLY INSTALLED, OR EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
15. WINTER CONSTRUCTION NOTES:
  - A. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
  - B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
16. THE CONTRACTOR IS RESPONSIBLE FOR STORMWATER MANAGEMENT DURING ALL PHASES OF CONSTRUCTION. NO WORK SHALL BE PERMITTED IN FLOWING WATER. DIVERSION SHALL BE ACCOMPLISHED BY THE USE OF SAND BAGS, BERMS, TEMPORARY CULVERTS/SWALES, AND/OR PUMPING. ALL DIVERTED WATER SHALL BE DISCHARGED TO DIRT BAGS, STONE FILL OR OTHER SUITABLE EROSION CONTROL STRUCTURE.
17. THE CONTRACTOR MAY NOT REMOVE EROSION CONTROL MEASURES UNTIL TURF IS ESTABLISHED. DISTURBED AREAS REMAINING AFTER OR AS A RESULT OF THE REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE LOAMED, SEEDED AND MULCHED.
18. PERMITS: IN ADDITION TO THE PERMITTING APPROVAL BY NHDES WETLANDS BUREAU, THE PROPOSED PROJECT IS SUBJECT TO A NPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES ISSUED BY EPA. REGULATORY PERMITTING PERSONNEL AND THE ENGINEER MAY DIRECT THE CONTRACTOR TO MODIFY THE EROSION CONTROL PRACTICES AND THE APPROVED PLAN AT ANY TIME BASED ON SITE CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
19. TEMPORARY EROSION CONTROL MEASURES, HAY BALE BARRIERS, SEDIMENT TRAPS AND STONE CHECK DAMS ARE TO BE MAINTAINED AND KEPT CLEAN UNTIL ALL EXPOSED AREAS HAVE A HEALTHY STAND OF GROUND COVER, AT WHICH TIME TEMPORARY MEASURES ARE TO BE REMOVED. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF EROSION CONTROL MEASURES, AND DISPOSAL OF TEMPORARY MATERIALS AND SILT.



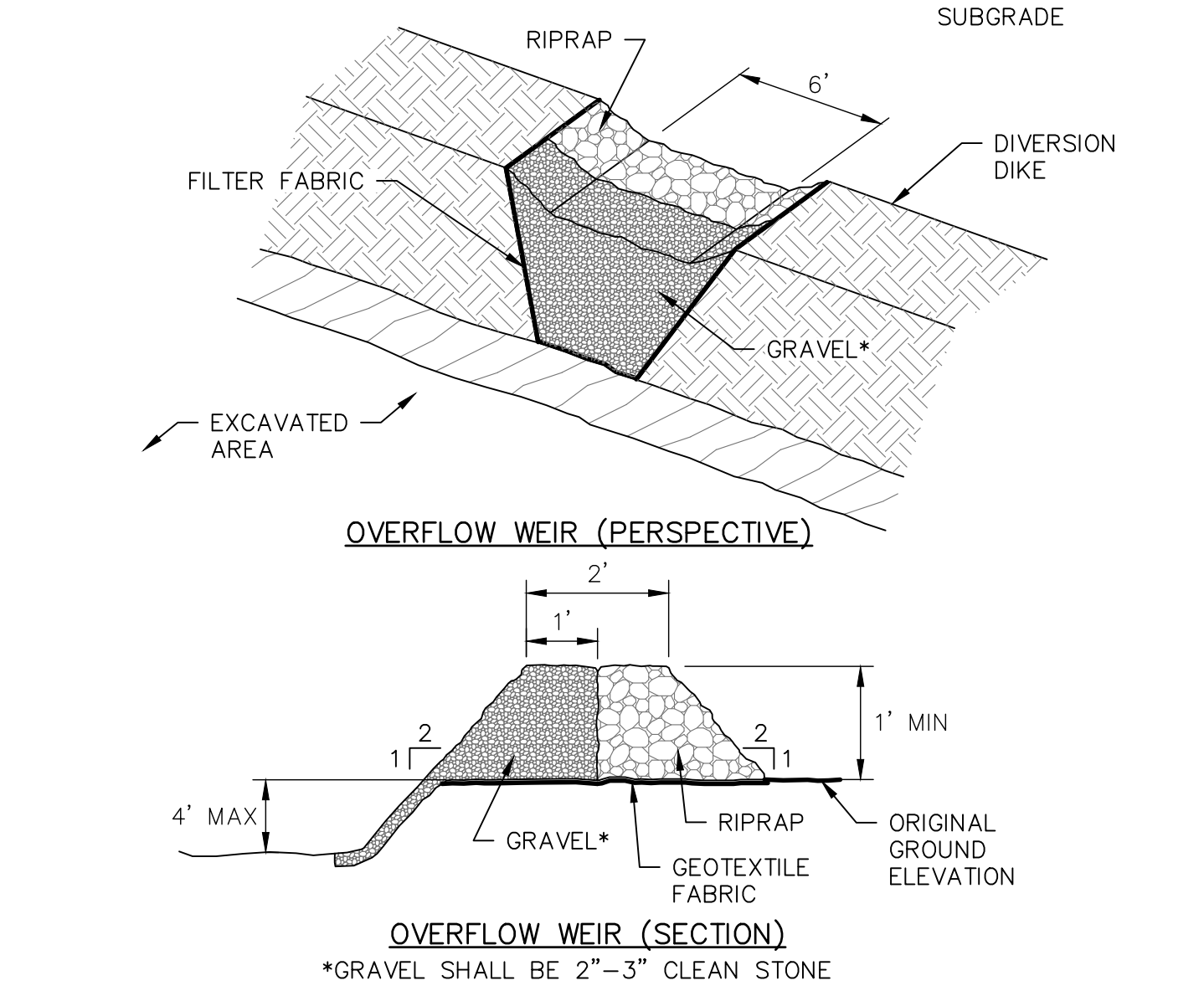
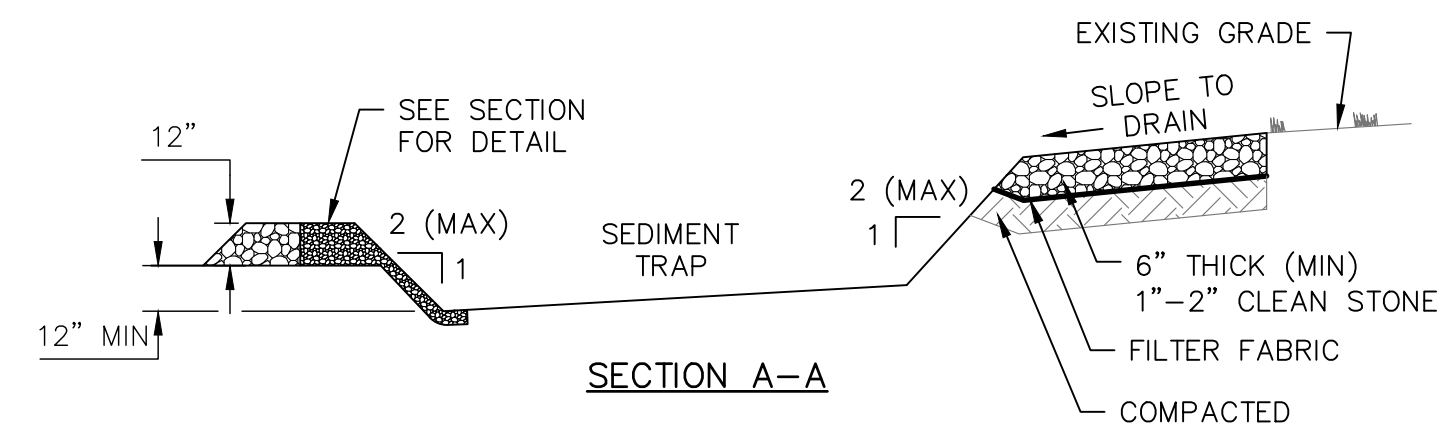
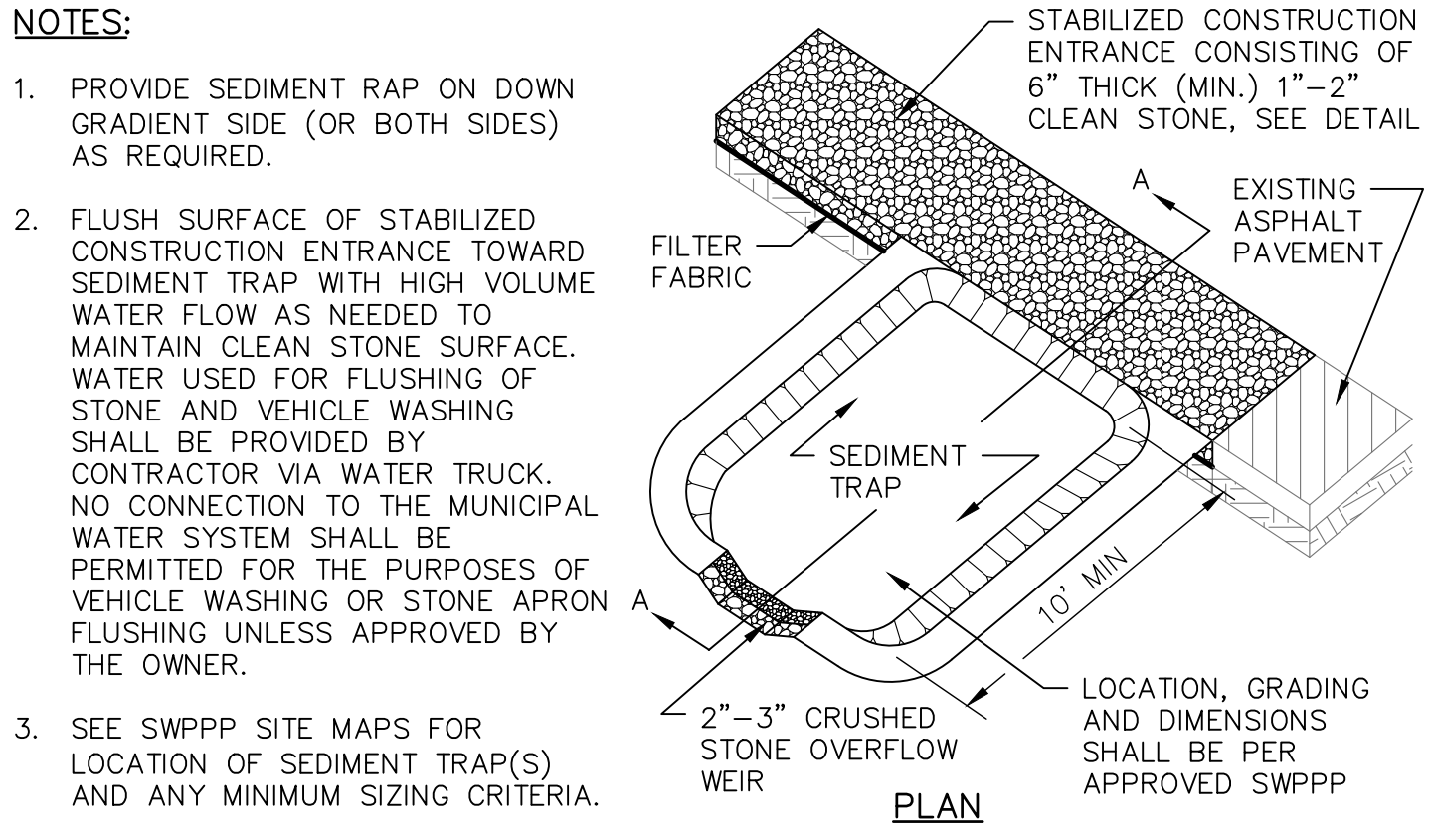
**1** **TURBIDITY CURTAIN**  
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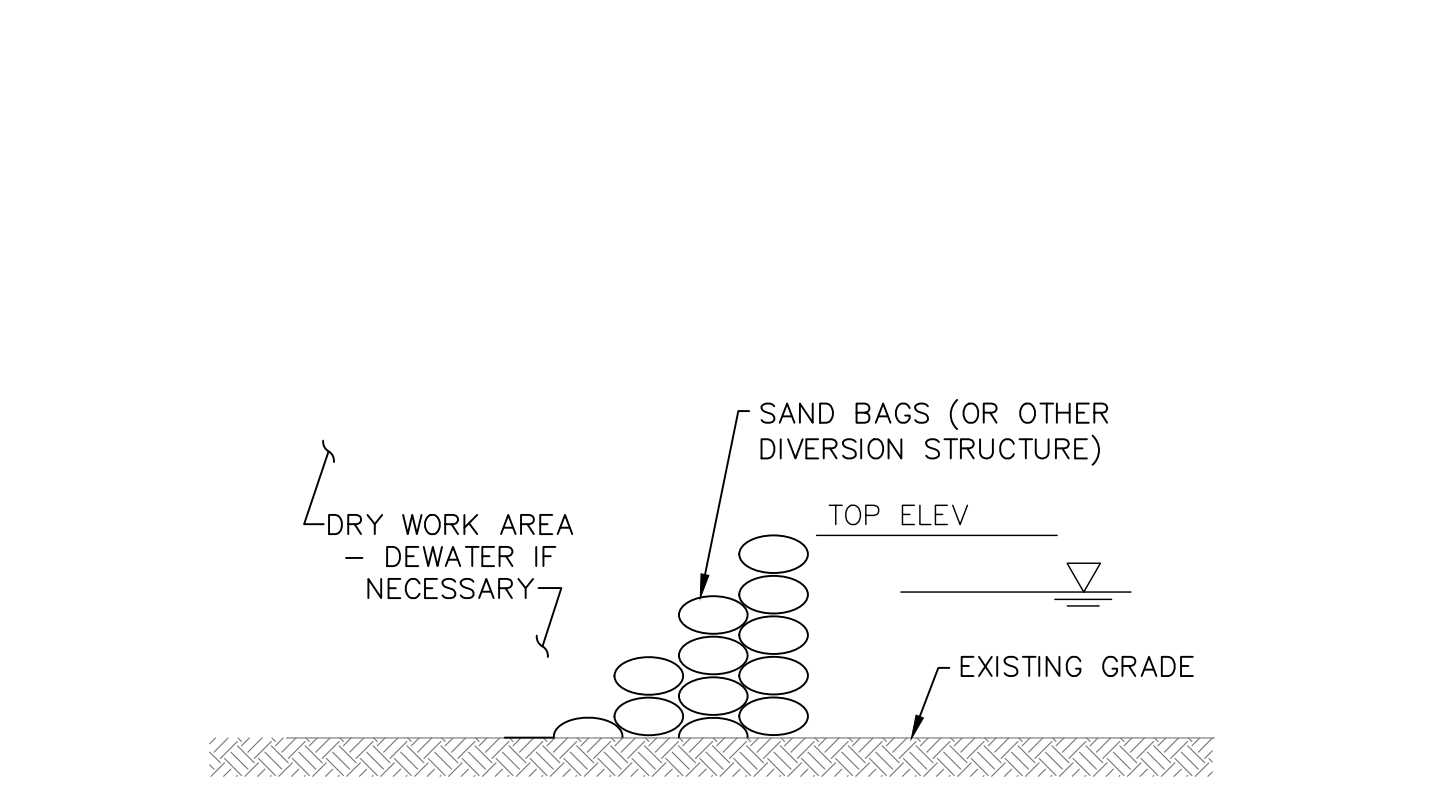
**2** **SILT FENCE DETAIL**  
NOT TO SCALE



**5** **PUMP DISCHARGE SEDIMENT TRAP**  
NOT TO SCALE



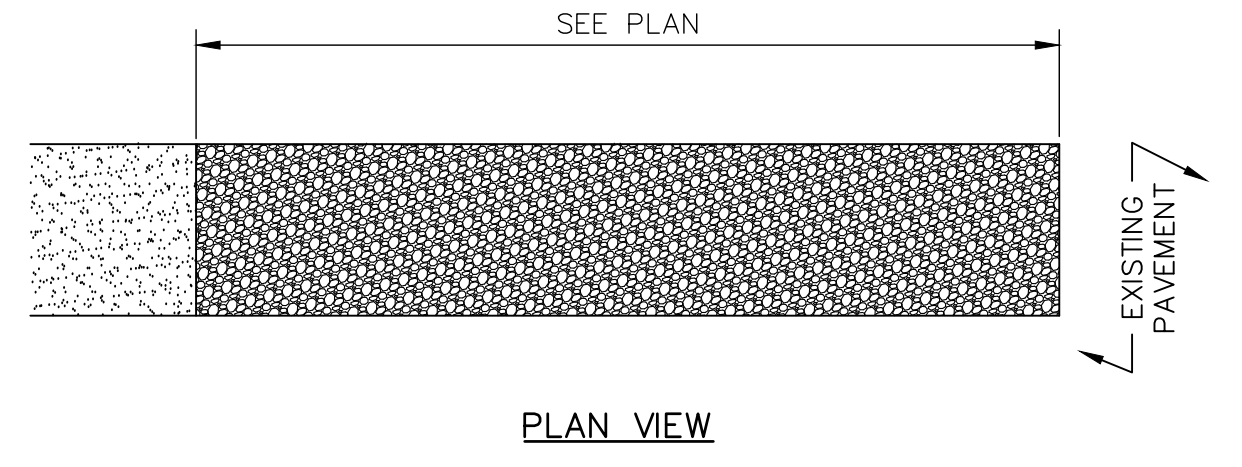
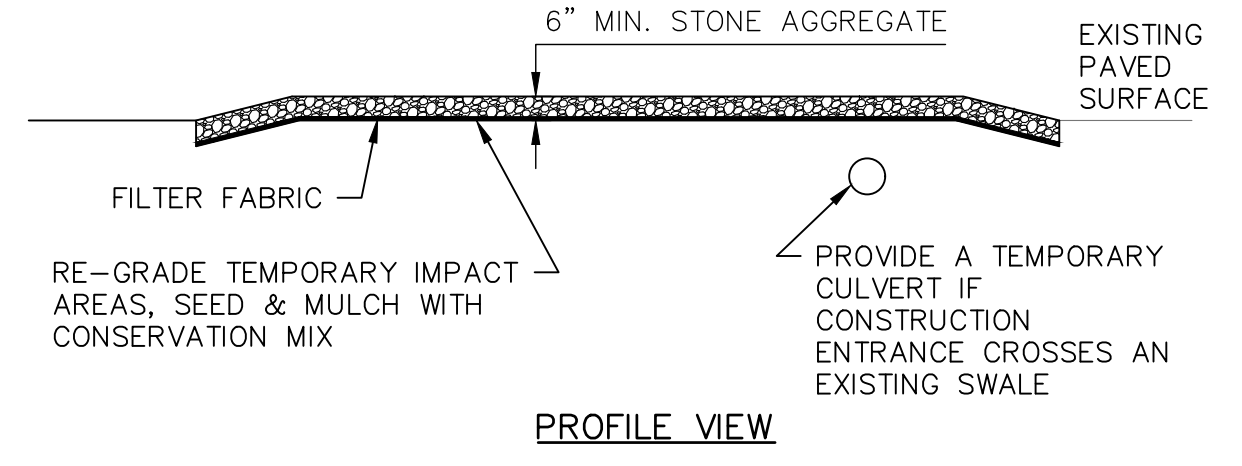
**3** **TEMPORARY SEDIMENT TRAP**  
NOT TO SCALE



**6** **TYPICAL TEMPORARY DIVERSION STRUCTURE DETAIL**  
NOT TO SCALE

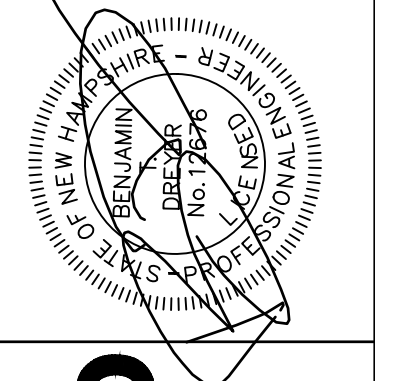
**STABILIZED CONSTRUCTION ENTRANCE SPECIFICATIONS:**

1. THE TEMPORARY STABILIZED CONSTRUCTION ENTRANCE SHALL CONSIST OF PLACING 1"-2" STONE, RECLAIMED STONE OR RECYCLED CONCRETE EQUIVALENT, AT THE LOCATION WHERE CONSTRUCTION VEHICLES EXIT THE SITE IN ORDER TO MINIMIZE MIGRATION OF DIRT ONTO THE ADJOINING PAVED ROADS.
2. STONE SHALL BE 1" TO 2" FRACTURED ROCK.
3. STONE SHALL BE PLACED OVER GEOTEXTILE FABRIC.
4. THE MINIMUM STONE DEPTH SHALL BE 6 INCHES.
5. SURFACE WATER RUNOFF FROM THE PAVED ROAD SHALL NOT BE PERMITTED TO COME IN CONTACT WITH THE STONE ENTRANCE. USE A CROSS CULVERT UNDER THE NEW ENTRANCE OR CONSTRUCT A BERM ALONG THE EDGE OF EXISTING PAVEMENT TO DIVERT WATER AWAY FROM THE STONE.
6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC ROADWAYS. TOP DRESS OR REPLACE STONE AS NEEDED. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAYS SHALL BE IMMEDIATELY REMOVED.
7. THE ENTRANCE SHALL BE MAINTAINED UNTIL THE SITE CONDITIONS WARRANT ITS REMOVAL.



**4** **STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE (TEMPORARY)

ISSUE FOR	APPROVAL	DATE	BY
APPROVAL		12/23/21	BTD
CONSTRUCTION		4/4/22	BTD
RECORD DRAWING			BY
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			APP'D
			REVISIONS
			NO.



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engineers

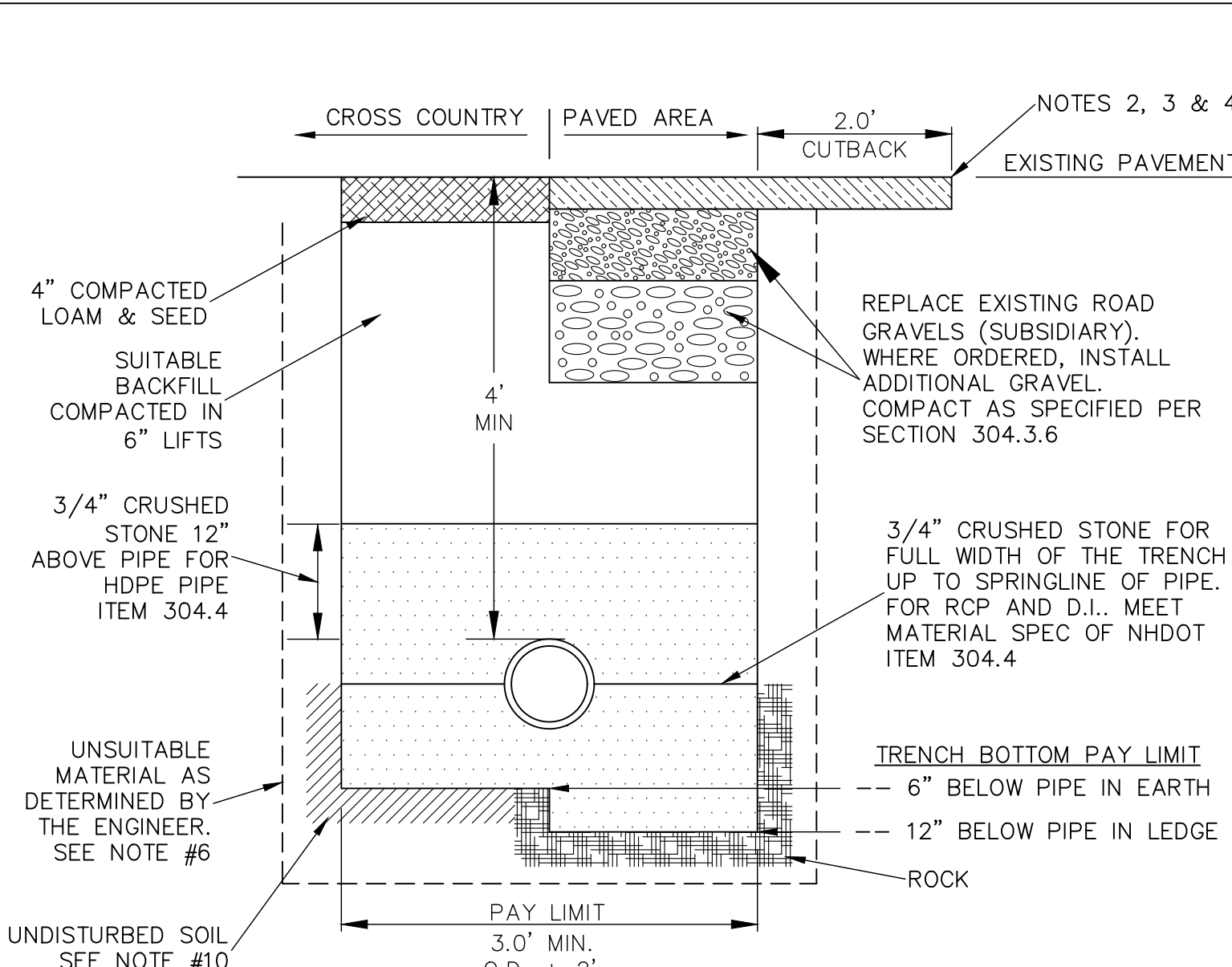
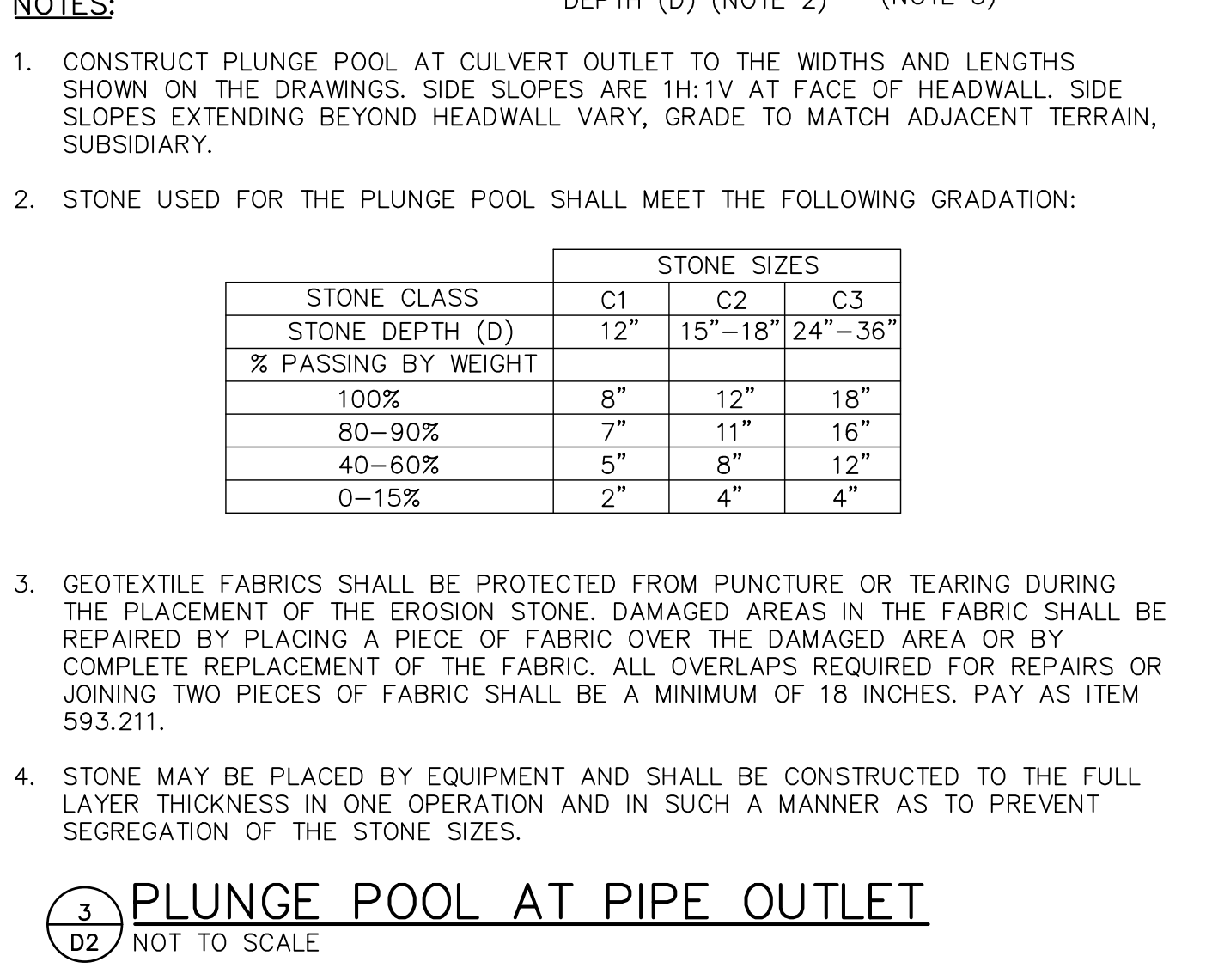
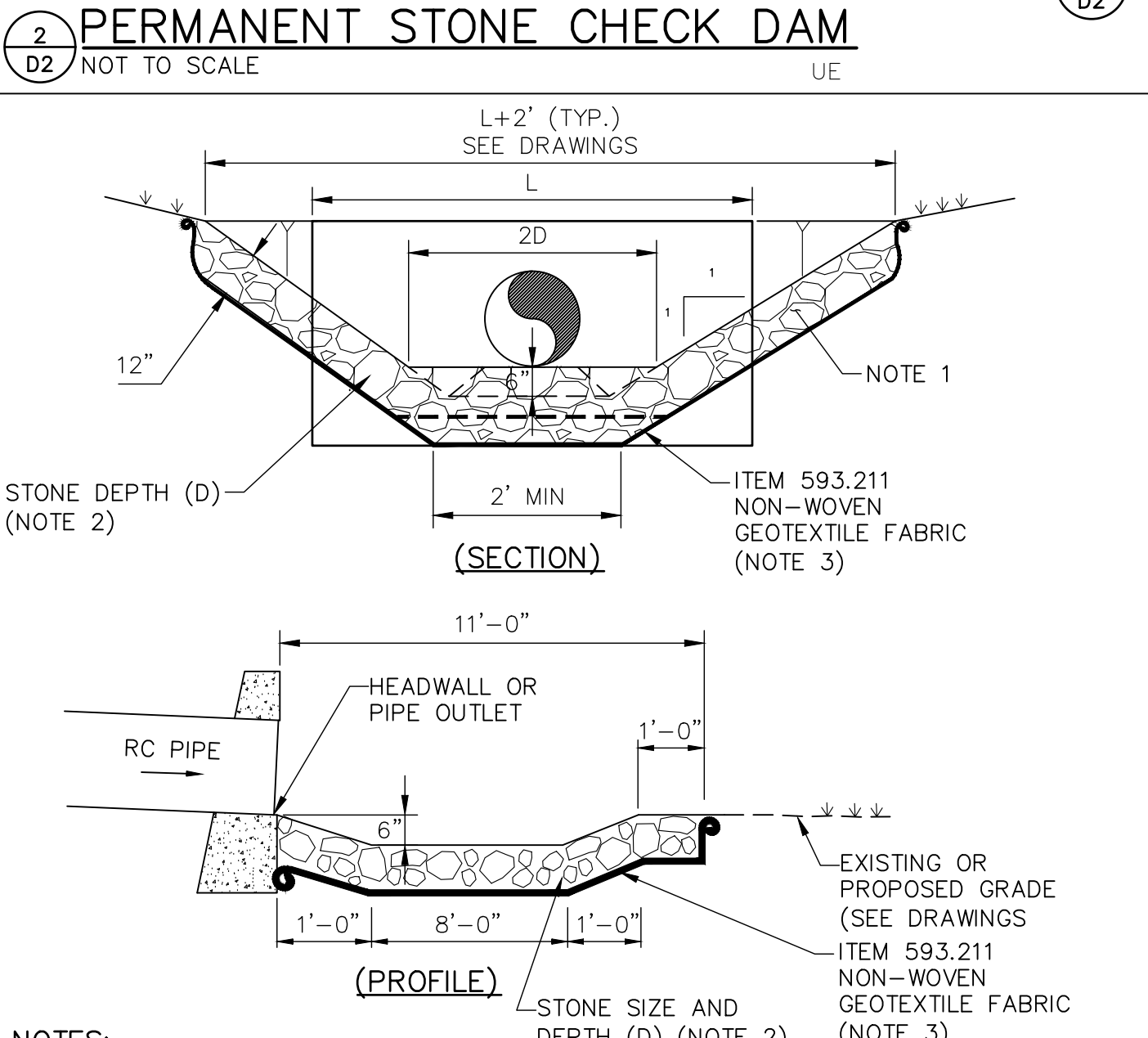
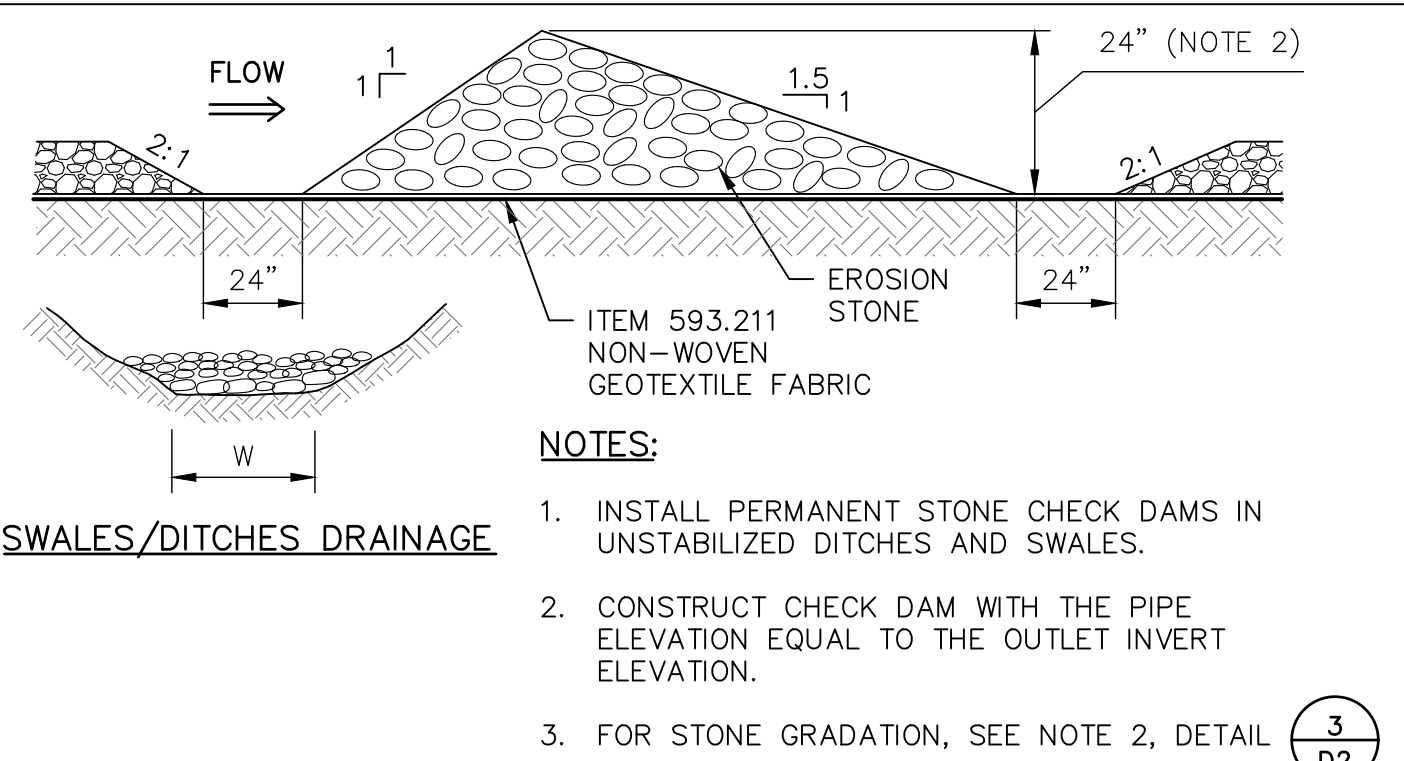
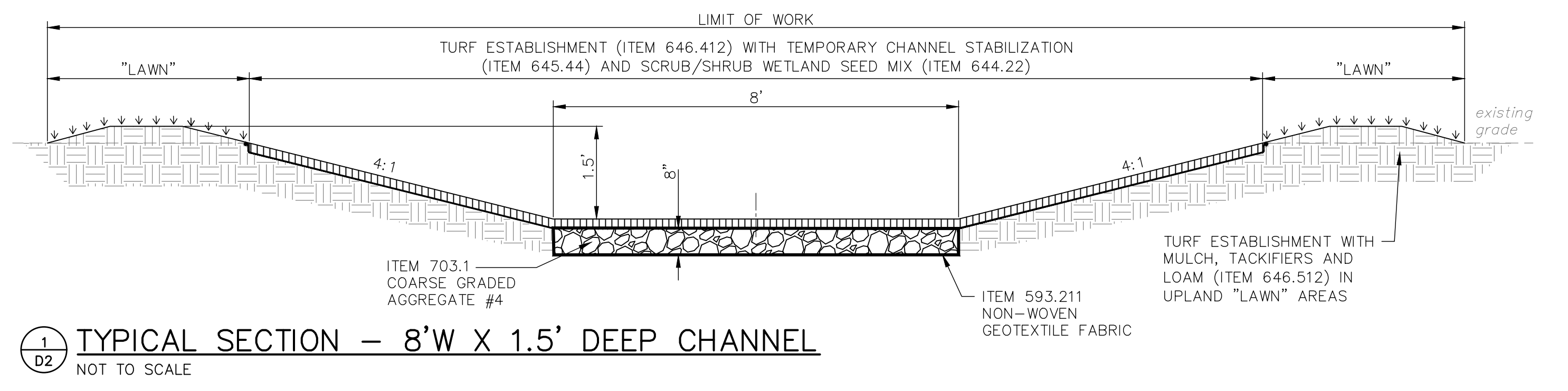
25 Vaughan Mall, Portsmouth, N.H. 03801  
Tel. 603-436-6192 Fax. 603-431-4733

**EROSION CONTROL NOTES & DETAILS**

CORPORATE DRIVE  
DREDGING & OUTFALL IMPROVEMENTS  
CITY OF PORTSMOUTH, NEW HAMPSHIRE

DWG NO D1	SHEET 7 OF 8
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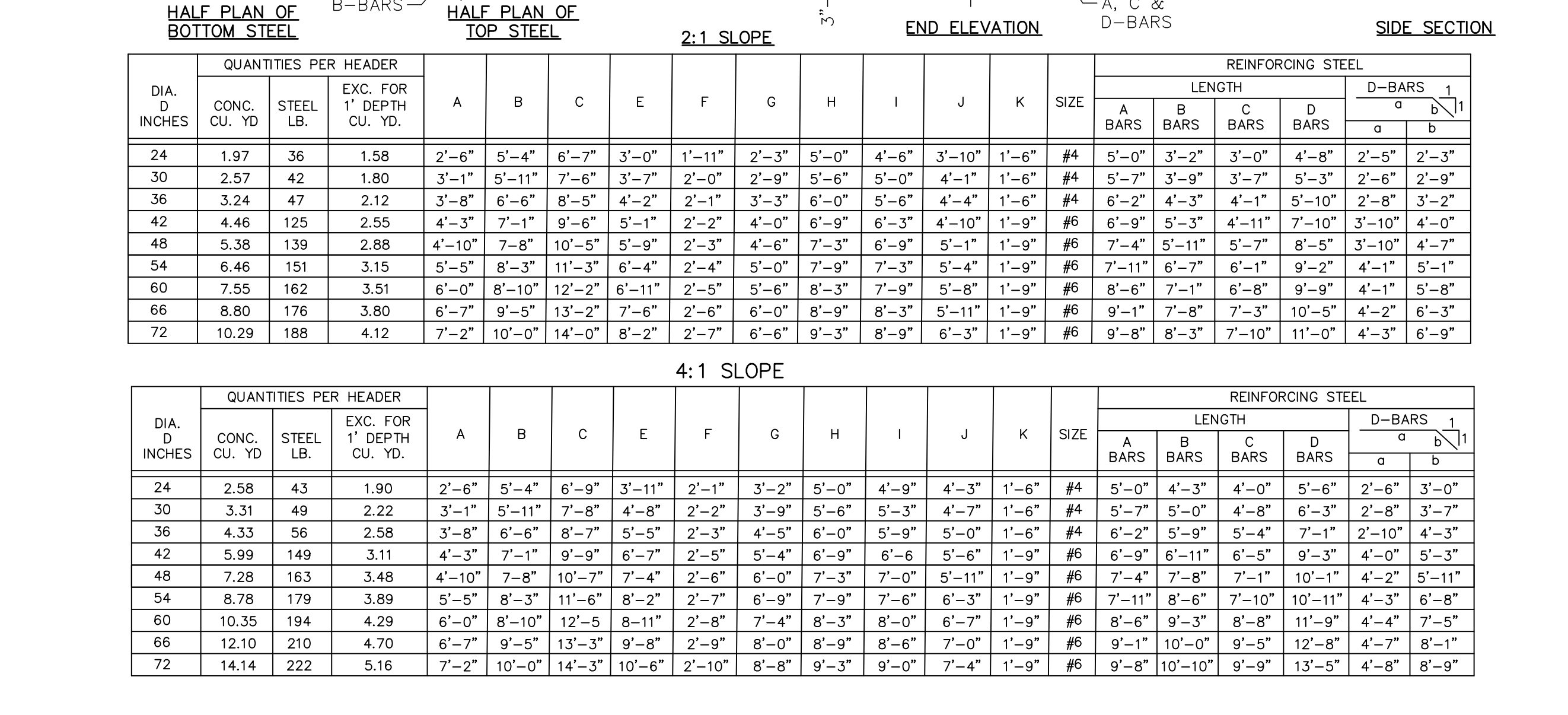
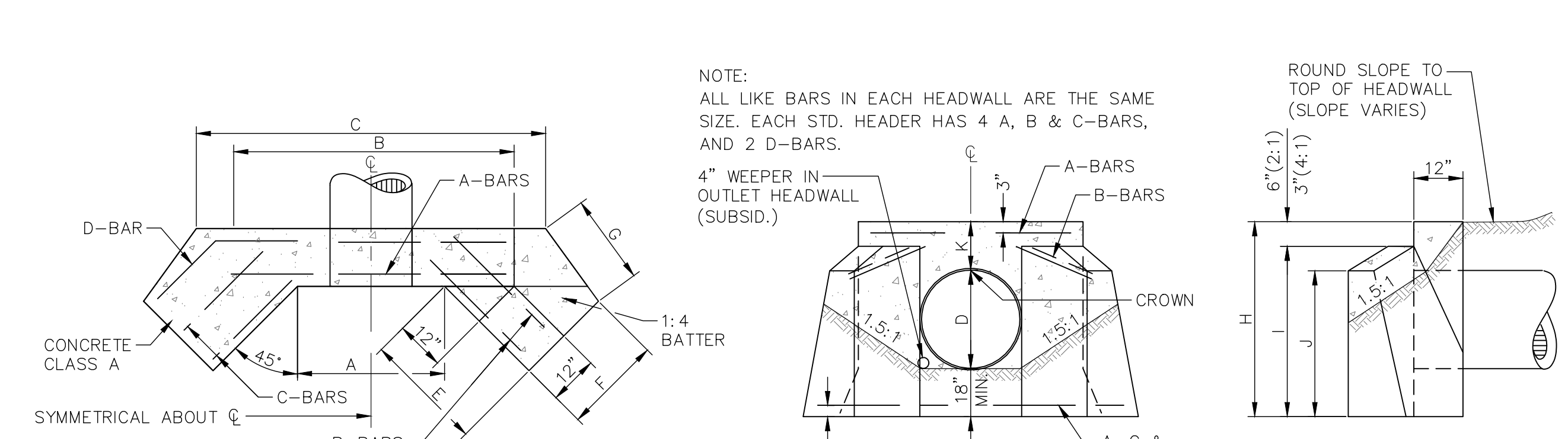
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PAY LIMITS	
TRENCH WIDTH	I.D.
36"	UP TO 12"
I.D. + 24"	12" TO 24"
2 x I.D.	OVER 24"

**DRAINAGE TRENCH NOTES:**

- NOT USED
- NOT USED.
- NOT USED.
- NOT USED.
- INSPECTION:** FOLLOWING INSTALLATION DRAIN LINES SHALL BE CLEANED AND VISUALLY INSPECTED. PIPES SHALL BE TRUE TO LINE AND GRADE PRIOR TO ACCEPTANCE AND USE. DAMAGED OR OTHERWISE DEFICIENT PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE
- UNSUITABLE MATERIAL & OVER EXCAVATION:** ANY EXCAVATION OUTSIDE OF DEFINED PAY LIMIT SHALL BE STRICTLY COORDINATED AND MEASURED WITH THE ENGINEER FOR PAYMENT. ANY MATERIAL REMOVED WITHOUT PRIOR AUTHORIZATION SHALL NOT BE PAID. EXCAVATION AREAS SHALL BE BACKFILLED WITH APPROPRIATE BEDDING MATERIALS. UNSUITABLE REMOVAL AND REPLACEMENT MATERIAL WITHIN TRENCH PAY LIMITS ARE SUBSIDIARY TO THE ITEM.
- MATERIAL SHALL BE REPLACED IN KIND OF WHENEVER POSSIBLE.
- SUITABLE MATERIAL:** SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL AND ALL ROCKS OVER SIX INCHES IN THE LARGEST DIMENSION, OR ANY MATERIAL WHICH WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. SUITABLE MATERIAL SHALL BE PLACED IN 6" LIFTS AND THOROUGHLY COMPACTED.
- COMPACTION:** BACKFILL OF THE TRENCHES SHALL BE COMPACTED TO TO 95% MAX. DRY DENSITY UNDER ALL PAVED AREAS AND 92% MAX. DRY DENSITY UNDER OTHER AREAS IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS - SECTION 304.
- IF TRENCH BOTTOM IS DISTURBED THEN CONTRACTOR SHALL COMPACT UNTIL FIRM.
- SHORING AND STABILIZING OF TRENCH SIDEWALLS DURING EXCAVATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY TRENCH EXCAVATION BEYOND THE LIMITS OF PAY EXCAVATION INDICATED INCLUDING ROCK OR ROCK STRUCTURE EXCAVATION.
- ADHERE TO ALL LOCAL STATE AND FEDERAL SAFETY STANDARDS.



**NOTES:**

- SILT FENCE TO BE INSTALLED PRIOR TO EARTHWORK (SEE PLAN FOR LOCATION.)
- REMOVE HUMUS (TOP SOIL) PRIOR TO PLACEMENT OF GEOGRID. PLACE A 2" LIFT OF CRUSHED STONE FINE (304.4) OVER GEOGRID PRIOR TO PLACING GRANULAR BACKFILL.
- SEE SECTIONS FOR GRADING/GRADING LIMITS.
- INSTALL TEMPORARY SLOPE STABILIZATION TYPE D, WILDLIFE FRIENDLY (ITEM 645.44) ON SLOPES GREATER THAN 2H:1V.

ISSUE FOR	APPROVAL	DATE	BY
		12/23/21	BTD
		4/4/22	CONSTRUCTION
		4/4/22	RECORD DRAWING
			APP'D
			REVISIONS
			NO.
Drawn/Cnk	MAH		
Designed	BTD		
Checked	PDM		
Approved		4/4/22	
Date			
Book No.		2893	
Project No.		2893-detailed	
Dwg. ID		AS SHOWN	
Scale			

**UNDERWOOD engineers**

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Tel. 603-436-6192 Fax. 603-431-4733

**DRAINAGE DETAILS**

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DWG NO  
D2

SHEET  
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