

# PORT OF TACOMA

## PARCEL 86 STORMWATER CONVEYANCE IMPROVEMENTS

PROJECT NO. 201146.01

CONTRACT NO. 071742

### PORT COMMISSIONERS:

RICHARD P. MARZANO  
DON MEYER  
JOHN MCCARTHY  
KRISTIN ANG  
DEANNA KELLER

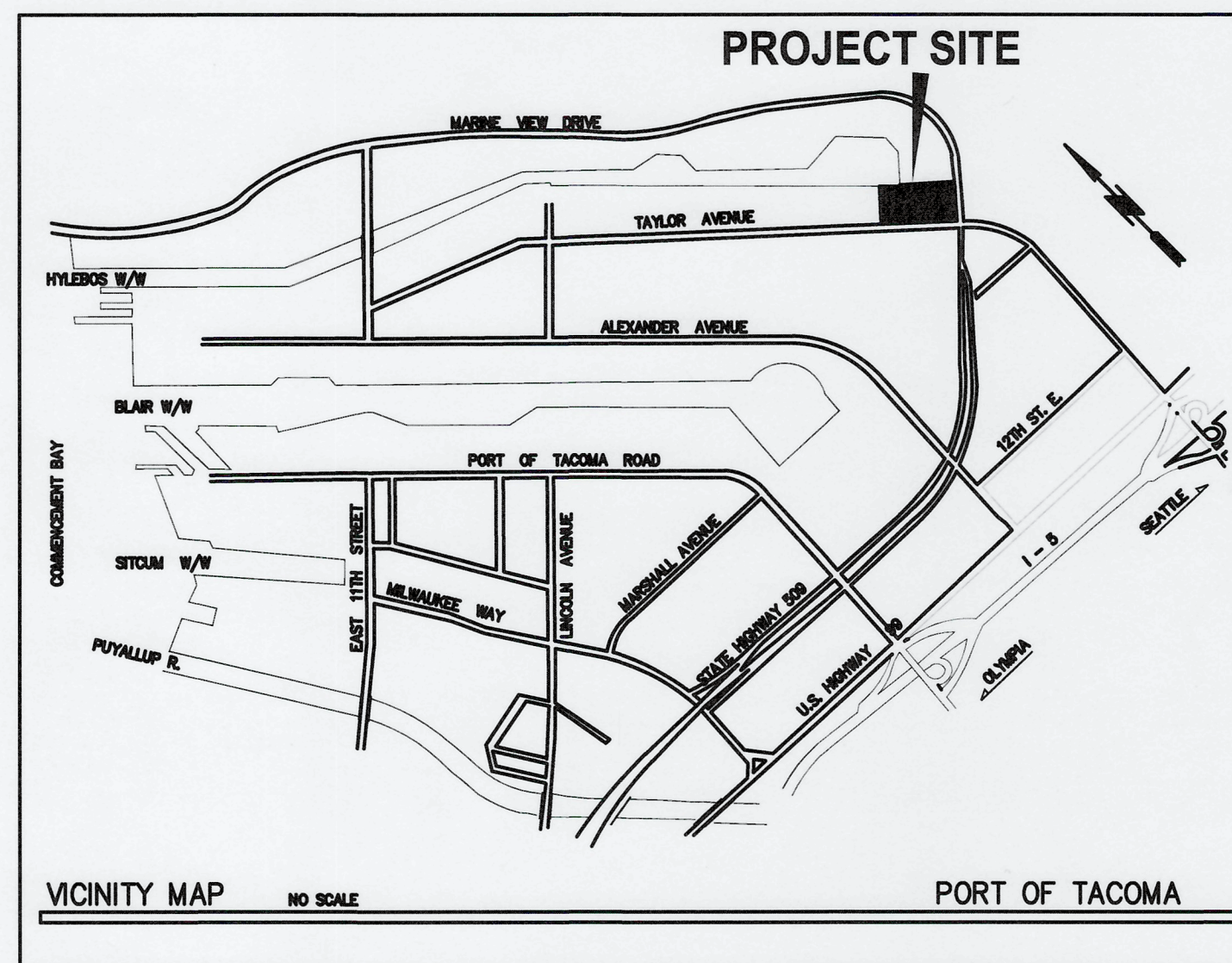
### PORT STAFF:

JOHN WOLFE  
NWSA Chief Executive Officer

ERIC JOHNSON  
Port of Tacoma Executive Director

THAIS HOWARD, P.E.  
Director of Engineering

KYLE SMITH, P.E.  
Project Manager



CONSULTANT:  
KENNEDY JENKS  
32001 32ND AVE SOUTH, SUITE 100  
FEDERAL WAY, WA 98001  
(253) 835-6400

DRAWING LIST			
SHEET DESIGNATION	SHEET #	SHEET TITLE	REVISION
G1	1	VICINITY MAP AND INDEX OF DRAWINGS	0
G2	2	LEGEND, ABBREVIATIONS, AND GENERAL NOTES	0
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 Port of Tacoma P.O. BOX 1837 TACOMA, WA 98401 (253) 835-1841	Kennedy Jenks 	MARK:	REVISION:	BY:	APPR:	DATE:
<b>G1</b> 1 OF 7 CONT/CONS: M. ID: 101493.01 PHASE: BID ISSUE	<b>PARCEL 86</b> <b>STORMWATER CONVEYANCE IMPROVEMENTS</b> VICINITY MAP AND INDEX OF DRAWINGS	APPROVED:  DIRECTOR	RWD MAR. 2023 CHECKED BY DATE NTW MAR. 2023 PROJ. ENGR DATE PRINTED BY: Samantha Kappa Mar 06, 2023 PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837	THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION		

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		CATCH BASIN
		STORM DRAIN MANHOLE
		FENCE
		STORM DRAIN LINE
		SANITARY SEWER LINE
		GAS LINE
		WATER LINE
		BURIED POWER
		FIBER OPTIC LINE
		FIRE SUPPRESSION LINE
		POWER LINE
		CHECK VALVE
		WORK AREA LIMITS
		FLOW DIRECTION
		SECTION DETAIL CX-SHEET ON WHICH SECTION OR DETAIL IS SHOWN CY-SHEET ON WHICH SECTION OR DETAIL IS REFERENCED
		SECTION CALLOUT CX-SHEET ON WHICH SECTION OR DETAIL IS SHOWN CY-SHEET ON WHICH SECTION OR DETAIL IS REFERENCED
		DETAIL CALLOUT CX-SHEET ON WHICH SECTION OR DETAIL IS REFERENCED
		FACILITY TRAFFIC ROUTING

OWNER CONTACT INFORMATION  
KYLE SMITH  
PORT OF TACOMA  
ONE SITCUM PLAZA  
TACOMA, WA 98421  
(253) 888-4755

ENGINEER CONTACT INFORMATION  
NATHAN WARD, P.E.  
KENNEDY JENKS  
32001 32ND AVE SOUTH, SUITE 100  
FEDERAL WAY, WA 98001  
(253) 835-6415

ABBREVIATIONS

&	AND	PP	POWER POLE
@	AT	PVMT	PAVEMENT
ABND	ABANDONED	PWR	POWER
AGG	AGGREGATE	QTY	QUANTITY
ALT	ALTERNATE	R	RADIUS
APPROX	APPROXIMATE, APPROXIMATELY	RCC	REINFORCED CONCRETE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	RD	ROAD
		REF	REFERENCE
AVE	AVENUE	REQ'D	REQUIRED
BMP	BEST MANAGEMENT PRACTICE	R.O.W.	RIGHT OF WAY
BOT	BOTTOM	RT	RIGHT
BP	BURIED POWER	S	SOUTH, SLOPE
CB	CATCH BASIN	SD	STORM DRAIN
C/C	CENTER TO CENTER	SDFM	STORM DRAIN FORCE MAIN
CDF	CONTROLLED DENSITY FILL	SDMH	STORM DRAIN MANHOLE
CFS	CUBIC FOOT PER SECOND	SE	SOUTHEAST
CL, CL	CENTERLINE	SIM	SOUTH INTERMODAL YARD
CLF	CHAIN LINK FENCE	SPEC	SPECIFICATION
CLR	CLEAR, CLEARANCE	SS	SANITARY SEWER
CMP	CORRUGATED METAL PIPE	SST	STAINLESS STEEL
COMM	COMMUNICATION LINE	STA	STATION
CONN	CONNECTION	STD	STANDARD
CO	COORDINATE	STRC	STRUCTURE
CONST	CONSTRUCTION	SQ	SQUARE
CP	CONTROL POINT	TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
CPP	CORRUGATED PLASTIC PIPE	TELE	TELEPHONE
CSBC	CRUSHED SURFACING BASE COURSE	THRU	THROUGH
CSTC	CRUSHED SURFACING TOP COURSE	TMNT	TREATMENT
CSW	CONSTRUCTION STORMWATER	TR	TOP OF RAIL
CV	CHECK VALVE	TYP	TYPICAL
DET	DETAIL	VERT	VERTICAL
DI	DRAINAGE INLET, DUCTILE IRON	W	WEST, WATER
DIA	DIAMETER	W/	WITH
DIP	DUCTILE IRON PIPE	WA	WORK AREA
DWG	DRAWING	WASHA	WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT
(E)	EXISTING	WQ	WATER QUALITY
E	EAST, EASTING	WWL	WALLENUS WILHELMSEN LOGISTIC
EC	END CURVE		
ECC	ECCENTRIC		
EHW	EXTREME HIGH WATER		
EL, ELEV	ELEVATION		
EOP	EDGE OF PAVEMENT		
EQ	EQUAL, EQUATION		
EXIST	EXISTING		
FG	FINISHED GRADE		
FH	FIRE HYDRANT		
FM	FORCE MAIN		
FO	FIBER OPTIC		
FT	FOOT OR FEET		
FW	FIRE SUPPRESSION WATER LINE		
HDPE	HIGH DENSITY POLYETHYLENE		
HMA	HOT MIX ASPHALT		
HORIZ	HORIZONTAL		
HP	HIGH POINT		
ID	IDENTIFICATION, INNER DIAMETER		
IE	INVERT ELEVATION		
IN	INCH OR INCHES		
L	LENGTH		
LB	POUND		
LF	LINEAR FEET		
LP	LOW POINT		
LT	LEFT		
MAINT	MAINTENANCE		
MAX	MAXIMUM		
MH	MANHOLE		
MIN	MINIMUM		
MOW	MAINTENANCE-OF-WAY		
MP	MAINTENANCE PORT		
MW	MONITORING WELL		
MHHW	MEAN HIGHER-HIGH WATER		
N	NORTH, NORTHING		
NIM	NORTH INTERMODAL YARD		
#	NUMBER		
NTS	NOT TO SCALE		
NW	NORTHWEST		
OC, O.C.	ON CENTER		
OD	OUTER DIAMETER		
OSHA	OCCUPATIONAL SAFETY AND HEALTH ACT		
PCC	PORTLAND CEMENT CONCRETE		
PE	POLYETHYLENE		
PIP	PROTECT IN PLACE		

GENERAL NOTES

- PROJECT SITE IS PARCEL 86 AT THE PORT OF TACOMA CONTAINER TERMINAL LOCATED AT 3701 TAYLOR WAY IN TACOMA, WASHINGTON 98421.
- PROJECT CONSISTS OF RETROFITTING AN EXISTING STORMWATER CONVEYANCE SYSTEM, REROUTING A PORTION THROUGH TREATMENT, AND CONSTRUCTING A NEW OUTFALL.
- ALL INDICATED SCALES, QUANTITIES, AND DIMENSIONS IN DRAWINGS ARE APPROXIMATE. DIMENSIONS SHOWN TAKE PRECEDENCE OVER SCALED DISTANCES. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING QUANTITIES, DIMENSIONS AND MATERIAL PARAMETERS PRIOR TO CONSTRUCTION.
- EXISTING FEATURES WERE DETERMINED BY FIELD SURVEYS PERFORMED BY KPG IN DECEMBER OF 2021 AND AUGUST OF 2022.
- EXISTING UTILITY INFORMATION SHOWN ON THESE DRAWINGS WAS COMPILED FROM THE ABOVE-MENTIONED FIELD SURVEYS AND PLANS PROVIDED BY THE PORT OF TACOMA AND LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.
- ALL SAFETY CODES, REGULATIONS AND SPECIFICATIONS SHALL BE COMPLIED WITH FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG MEN, OR OTHER DEVICES TO PROVIDE FOR PUBLIC SAFETY.
- ALL CONSTRUCTION SHALL BE COORDINATED WITH THE PORT OF TACOMA'S DESIGNATED ENGINEER.
- PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING AND VERIFY EXISTING UTILITY LOCATIONS, AS WELL AS CALL AND ARRANGE FOR AN INDEPENDENT LOCATE CONTRACTOR TO PROVIDE UTILITY LOCATES ON THE CONSTRUCTION SITES. THE CONTRACTOR SHALL ALSO WALK THE SITE WITH THE ENGINEER AND PORT PROJECT MANAGER TO REVIEW EXACT LOCATION OF PROPOSED TREATMENT SYSTEMS AND TIE-IN LOCATIONS TO EXISTING CONVEYANCE SYSTEMS.
- ALL TRACK, PAVEMENT, AND EXCAVATION MATERIALS NOT REQUIRED FOR NEW WORK, AND OTHER MISCELLANEOUS ITEMS DESIGNATED FOR REMOVAL SHALL BE DISPOSED OF OFF OF PORT PROPERTY IN ACCORDANCE WITH ALL PROJECT SPECIFICATIONS AND APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.
- FOR ALL PROJECT EXCAVATIONS, CONTRACTOR SHALL DEWATER AS NECESSARY FOR DRY PLACEMENT OF NEW MATERIALS AND SHORE EXCAVATIONS IN ACCORDANCE WITH OSHA OR WISHA REQUIREMENTS AS APPLICABLE. REFER TO SPECIFICATION SECTION 31 00 00.
- CONTRACTOR TO RESTORE ALL AREAS AFFECTED BY THE WORK AND OPERATIONS. UPON COMPLETION OF A WORK AREA, THE CONTRACTOR SHALL THOROUGHLY CLEAN AND BROOM SWEEP THE AREA PRIOR TO MOVING TO THE NEXT WORK AREA.

CONSTRUCTION PHASING AND STAGING NOTES

- CONSTRUCTION SHALL PROCEED FROM UPSTREAM TO DOWNSTREAM ALONG THE NEW STORMWATER PIPELINE.
- CONSTRUCTION STAGING SHALL BE LIMITED TO THE AREA SHOWN ON C2.

TEMPORARY FACILITIES, BARRIERS AND ENCLOSURE NOTES

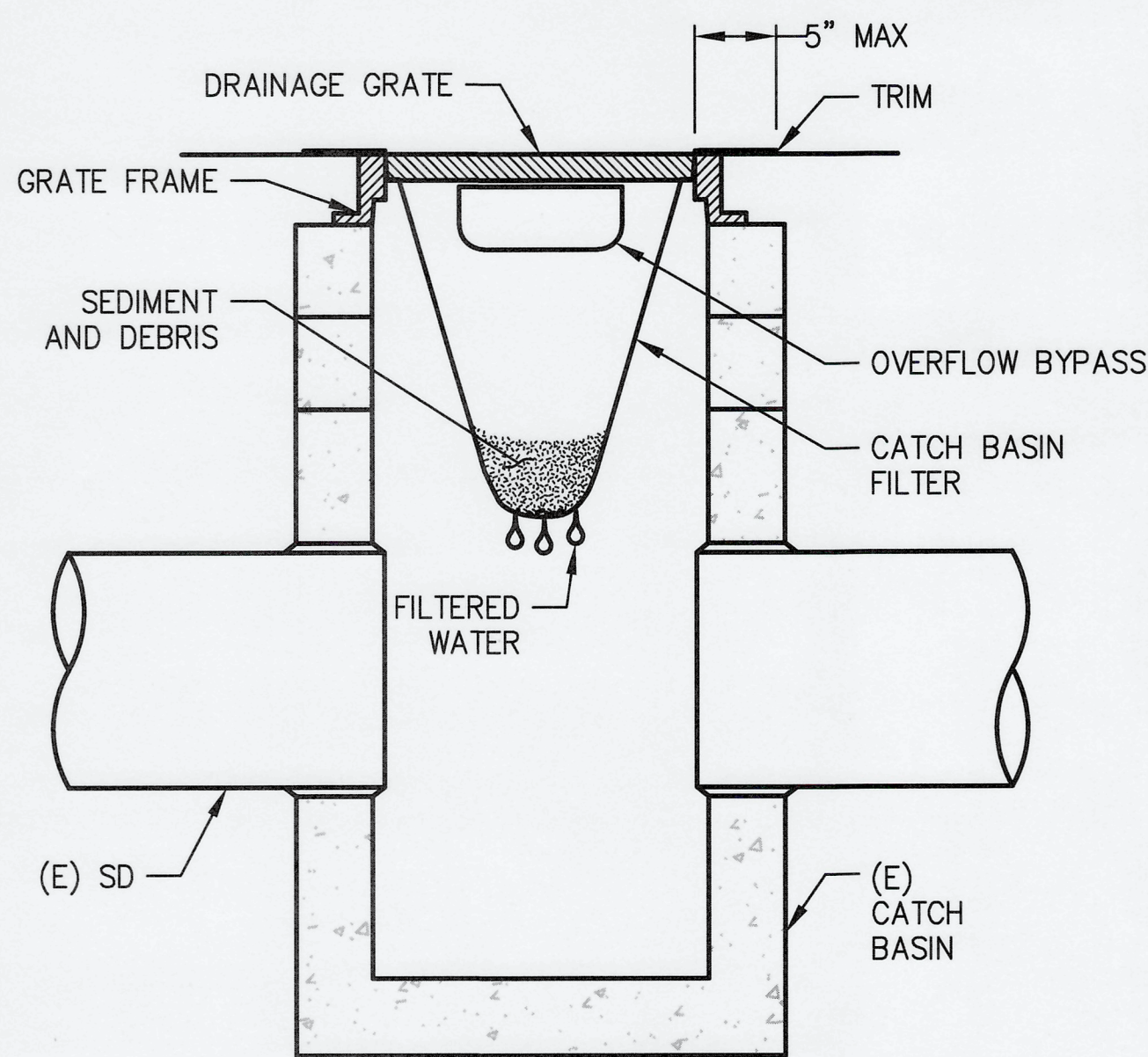
- CONTRACTOR SHALL COORDINATE WITH THE PORT TO PROVIDE TEMPORARY BARRIERS AS REQUIRED TO SEGREGATE THE WORK AREA LIMITS FROM TERMINAL OPERATIONS.
- BARRIERS SHALL CONSIST OF HIGH VISIBILITY CONES, AND PLASTIC BARRELS, AND/OR OTHER METHODS AS APPROVED BY THE PORT.
- CONTRACTOR TO PROVIDE SANITARY FACILITIES FOR CONTRACTOR STAFF.

TEMPORARY STORMWATER REROUTE NOTES

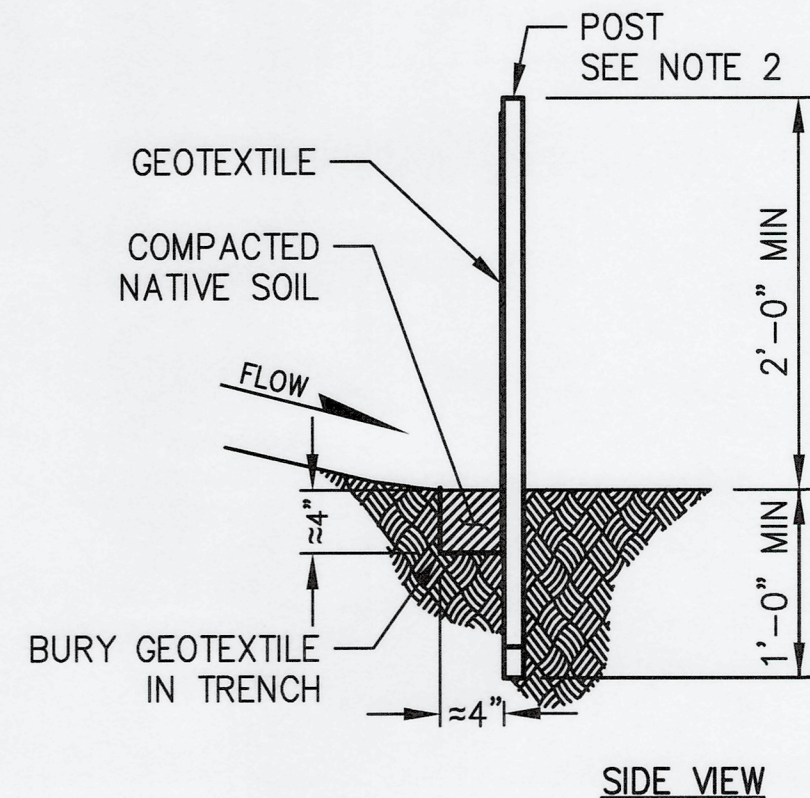
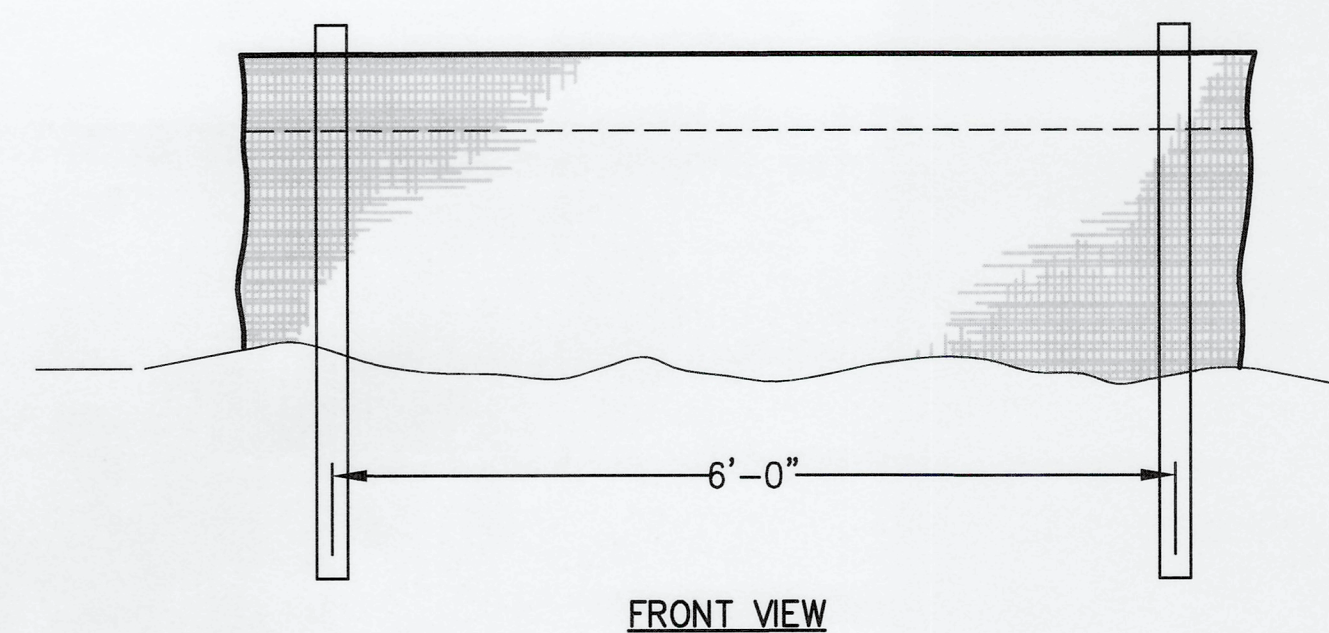
- CONTRACTOR SHALL PROVIDE A TEMPORARY STORMWATER REROUTE PLAN IN ACCORDANCE WITH SPECIFICATION SECTION 02 96 00 DURING CONSTRUCTION AND UNTIL THE OWNER ACCEPTS THE PROJECT AS COMPLETE.
- CONTRACTOR SHALL PROVIDE A TEMPORARY PLUG FOR EACH VAULT INLET PIPE AND UTILIZE THE EXISTING UPSTREAM CONVEYANCE SYSTEM FOR DETENTION.
- CONTRACTOR SHALL DRAIN THE UPSTREAM CONVEYANCE SYSTEM TO THE EXISTING OUTFALL AND PUMP STORMWATER AS REQUIRED TO MANAGE SITE STORMWATER AND PREVENT FLOODING OF THE TERMINAL. CONTRACTOR SHALL PROTECT NEW WORK AS REQUIRED DURING DRAIN DOWN EVENTS.
- APPROXIMATE DRAINAGE BASIN AREAS AND FLOWS ARE PROVIDED FOR REFERENCE ONLY.

DRAINAGE BASIN AREA = 2.03 ACRES  
2-YEAR, 24 HOUR STORM FLOW = 1.48 CFS

	Kennedy Jenks		RWD MAR. 2023	CHECKED BY DATE
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	2 OF 7	PARCEL 86 STORMWATER CONVEYANCE IMPROVEMENTS LEGEND, ABBREVIATIONS, AND GENERAL NOTES	DIRECTOR ENG. DATE	DATE
			PRINTED BY: Samantha Kappa Mar 06, 2023	DATE
CONT/CONS:	TOWNSHIP: 21N	RANGE: 03E	SECTION: 36	
M. ID: 101493.01	DATE-HRZ: WA83-SF	VERT: MLLW 19.39 @ Tide 22 1933	PORT ADDRESS: ONE SITCUM PLAZA	
PHASE: BID ISSUE	PARCEL: 86	DRAWING SCALE: AS NOTED	TACOMA, WA 98401-1837	

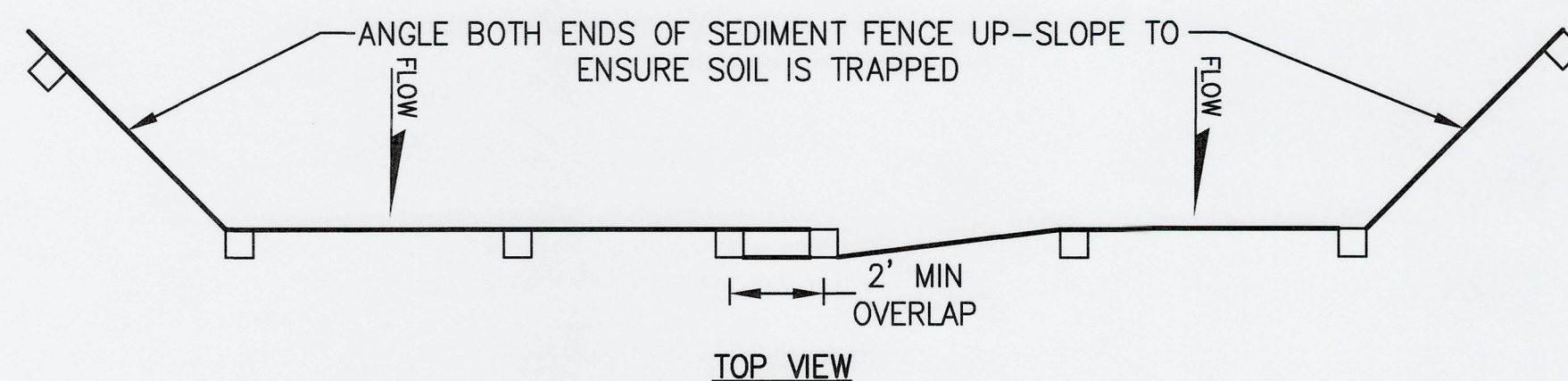


CATCH BASIN FILTER 1  
NTS

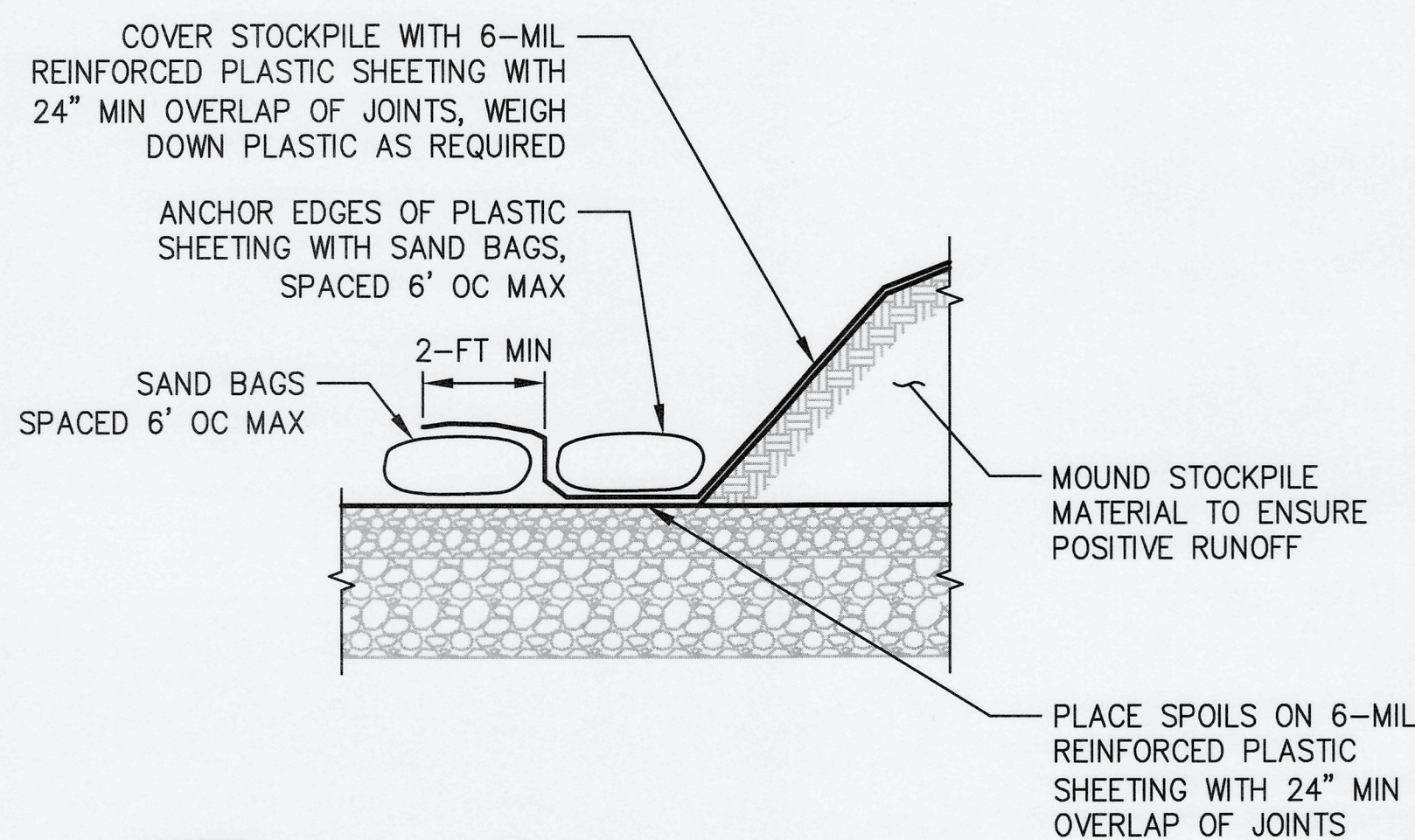


- NOTES:
1. REFER TO SPECIFICATIONS SECTION 01 57 13 FOR COMPLETE SEDIMENT AND EROSION CONTROL REQUIREMENTS.
  2. BURY BOTTOM OF FILTER FABRIC 4" MIN VERTICALLY BELOW FINISHED GRADE.
  3. 2" x 2" FIR, PINE, OR STEEL FENCE POSTS.
  4. STITCHED LOOPS TO BE INSTALLED UPHILL SIDE OF SLOPE.
  5. COMPACT NATIVE FILL IN ALL AREAS OF FILTER FABRIC TRENCH.
  6. DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS.

SEDIMENT FENCE SPACING:	
SLOPE	SPACING
<10%	300 FT
<15%	150 FT
<20%	100 FT
<30%	50 FT
<50%	25 FT
STOCK PILE	
SLOPE >50%	25 FT



FILTER FABRIC FENCE 2  
NTS



- NOTES:
1. RIPS AND/OR TEARS IN THE PLASTIC SHEETING SHALL BE REPAIRED IN A TIMELY MANNER PER SPECIFICATION SECTION 01140.
  2. MATERIAL SHALL BE STOCKPILED NO STEEPER THAN 1 TO 1 SLOPE.
  3. THE TOE OF THE STOCKPILE SHALL BE NO CLOSER THAN 2 FT FROM THE EDGE OF EXCAVATION.
  4. STOCKPILE HEIGHT SHALL NOT EXCEED 10 FT.

STOCKPILE DETAIL 3  
NTS

## TEMPORARY EROSION & SEDIMENTATION CONTROL NOTES:

1. CONTRACTOR SHALL SUBMIT CSW PERMIT SWPPP IN ACCORDANCE WITH SPECIFICATIONS SECTION 01 57 13.
2. SEE SHEETS C2 FOR PROPOSED BMP LOCATIONS.
3. ALTERNATIVE BMPs MAY BE SUBMITTED BY CONTRACTOR FOR REVIEW AND APPROVAL.
4. THE IMPLEMENTATION OF TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED.
5. ALL TESC FACILITIES SHALL BE CONSTRUCTED PRIOR TO AND/OR IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
6. THE TESC FACILITIES SHOWN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
7. THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT OR AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTION.
8. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN SEDIMENT TRAP.
9. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
10. CLEAN ENTRANCES ARE REQUIRED. SINCE STABILIZED ENTRANCES MAY NOT BE PRACTICAL, CONTRACTOR MAY SUBMIT ALTERNATIVE METHODS FOR APPROVAL.

### CONSTRUCTION:

1. CONSTRUCT AND MAINTAIN ALL TESC BMPs IN ACCORDANCE WITH SPEC SECTION 01 57 13.
2. CLEARING AND GRADING: LIMIT CLEARING AND GRADING TO LIMITS SHOWN ON SHEETS C2 THRU C3. DO NOT INFRINGE ON ADJACENT PROPERTY.
3. COVER: IF AN AREA IS CLEARED, BUT NOT PERMANENTLY STABILIZED, OR MATERIAL IS STOCKPILED, COVER SHALL BE PROVIDED IN ACCORDANCE WITH THE SPECIFICATION SECTION 31 23 33.
4. CARE SHALL BE TAKEN TO PREVENT DAMAGE TO EXISTING PAVEMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR PAVEMENT RESTORATION IF DAMAGE OCCURS.
5. PROVIDE PLASTIC SHEETING FOR MATERIAL STOCKPILES.

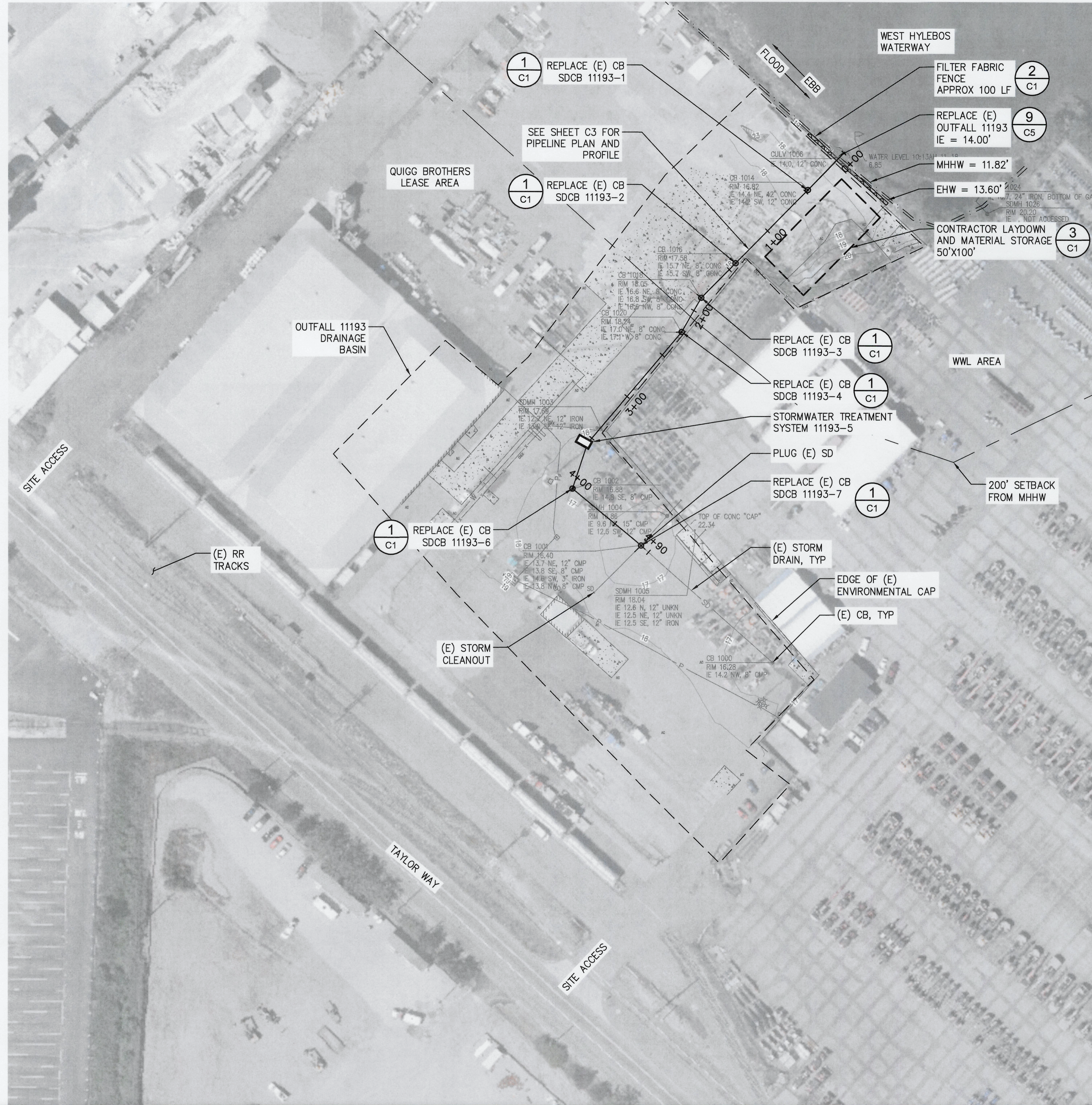
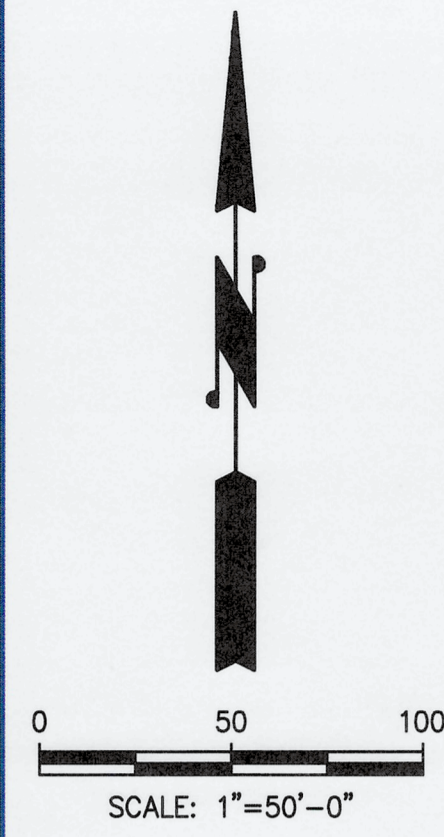
### POST CONSTRUCTION:

1. REMOVE TEMPORARY FACILITIES: REMOVE ALL TEMPORARY EROSION/ SEDIMENTATION FACILITIES INCLUDING ROADWAY MATERIAL AND FILTER FABRIC FENCE.
2. REMOVE AND REPLACE CATCH BASIN FILTERS.
3. SILT AND DEBRIS: CLEAN AND REMOVE ALL SILT AND DEBRIS FROM ALL AREAS INCLUDING CATCH BASINS, PIPES, MANHOLES AND VALVE VAULTS.
4. OPERATION: ENSURE THAT STORM DRAINAGE COLLECTION AND CONTAINMENT FACILITIES ARE OPERATING AS INTENDED.

### EROSION CONTROL MONITORING PLAN:

1. OBSERVE EROSION CONTROL MEASURES AT THE BEGINNING AND END OF EACH DAY. REPAIR AND/OR REPLACE AS NECESSARY TO ASSURE PROPER FUNCTION.
2. OBSERVE COLLECTION FACILITIES HOURLY DURING PERIODS OF HEAVY RAINFALL OR WET WEATHER CONDITIONS.

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	PARCEL 86 STORMWATER CONVEYANCE IMPROVEMENTS TESC NOTES AND DETAILS			
	TOWNSHIP: 21N RANGE: 03E DAT-HRZ: WA83-SF M. ID: 101493.01 PHASE: BID ISSUE	SECTION: 36 VERT: MLLW 19.39' @ Tide 22 1933 DRAWING SCALE: AS NOTED	PARCEL: 86	



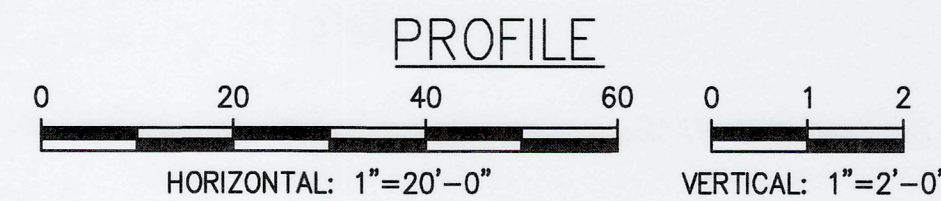
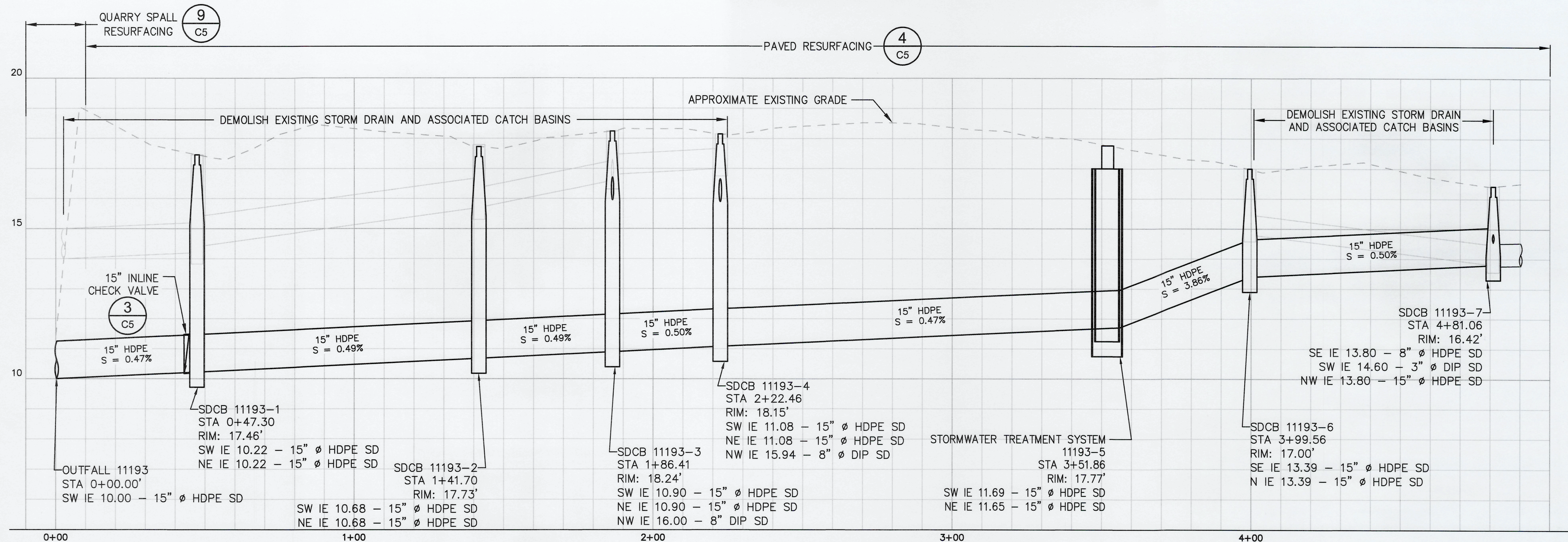
- NOTES:**
1. PROTECT IN PLACE ALL EXISTING UNDERGROUND PIPING AND OTHER UTILITIES DURING ALL CONSTRUCTION PHASES UNLESS INDICATED OTHERWISE.
  2. ALL DEMOLISHED MATERIALS SHALL BE DISPOSED AND/OR SALVAGED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECS.
  3. PAVEMENT TO BE REMOVED OR DEMOLISHED SHALL BE SAW CUT IN STRAIGHT AND PERPENDICULAR LINES.
  4. CONTRACTOR SHALL FIELD VERIFY EXISTING STORM DRAIN MANHOLE RIM AND INVERT ELEVATIONS, AND EXISTING PIPE SIZES PRIOR TO CONSTRUCTION.

<b>C2</b> OF 7 <b>4</b>	<b>PARCEL 86</b> <b>STORMWATER CONVEYANCE IMPROVEMENTS</b> OVERALL SITE PLAN	<b>APPROVED:</b>  <i>[Signature]</i>	RWD MAR. 2023	Kennedy Jenks	 Port of Tacoma P.O. BOX 1937 TACOMA, WA 98401 (206)335-9464	
			CHECKED BY DATE			
			NTW MAR. 2023			
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PHASE: BID ISSUE	PARCEL: 86	DRAWING SCALE:	AS NOTED			

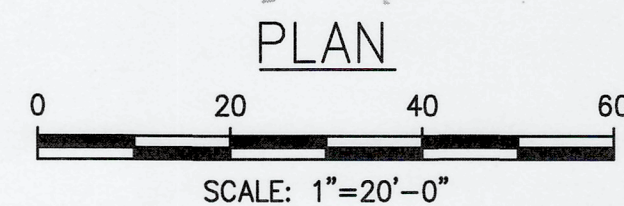
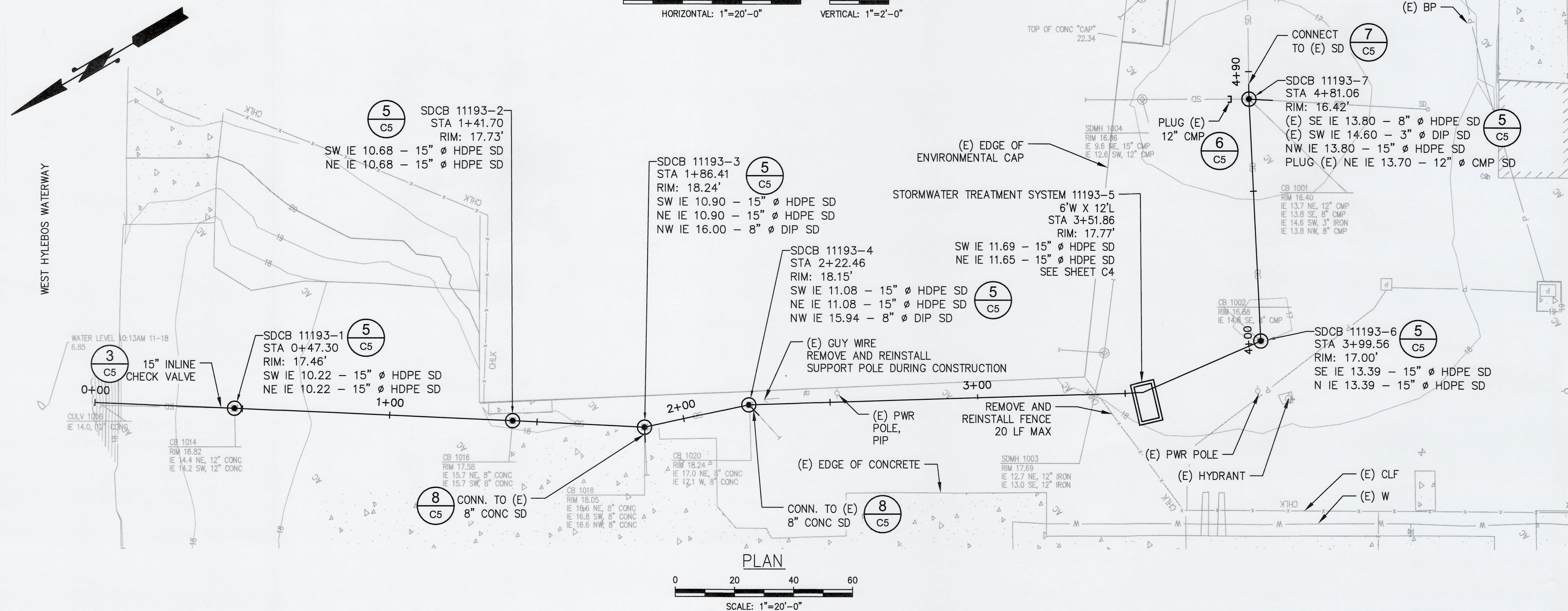
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BINDING EDGE

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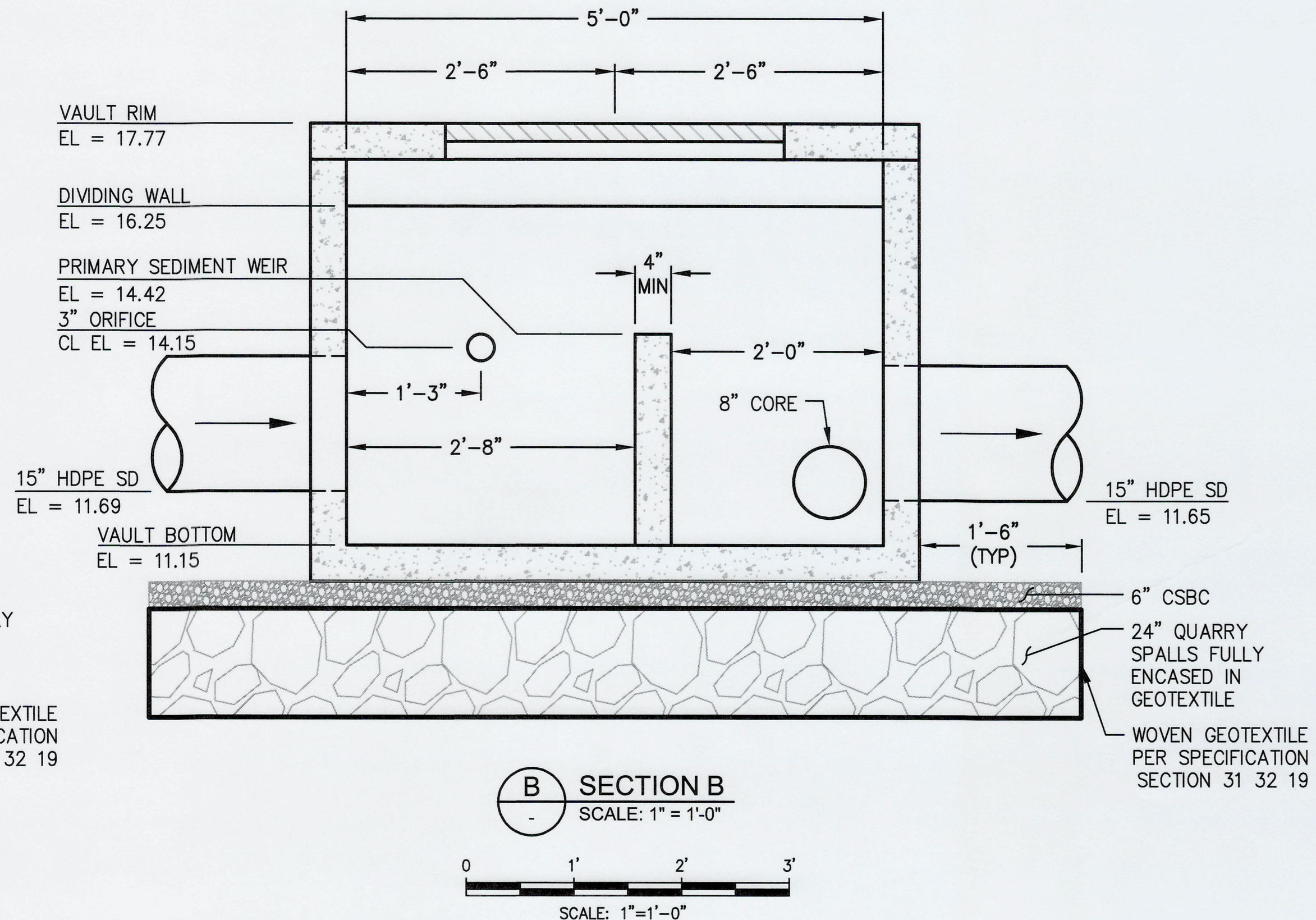
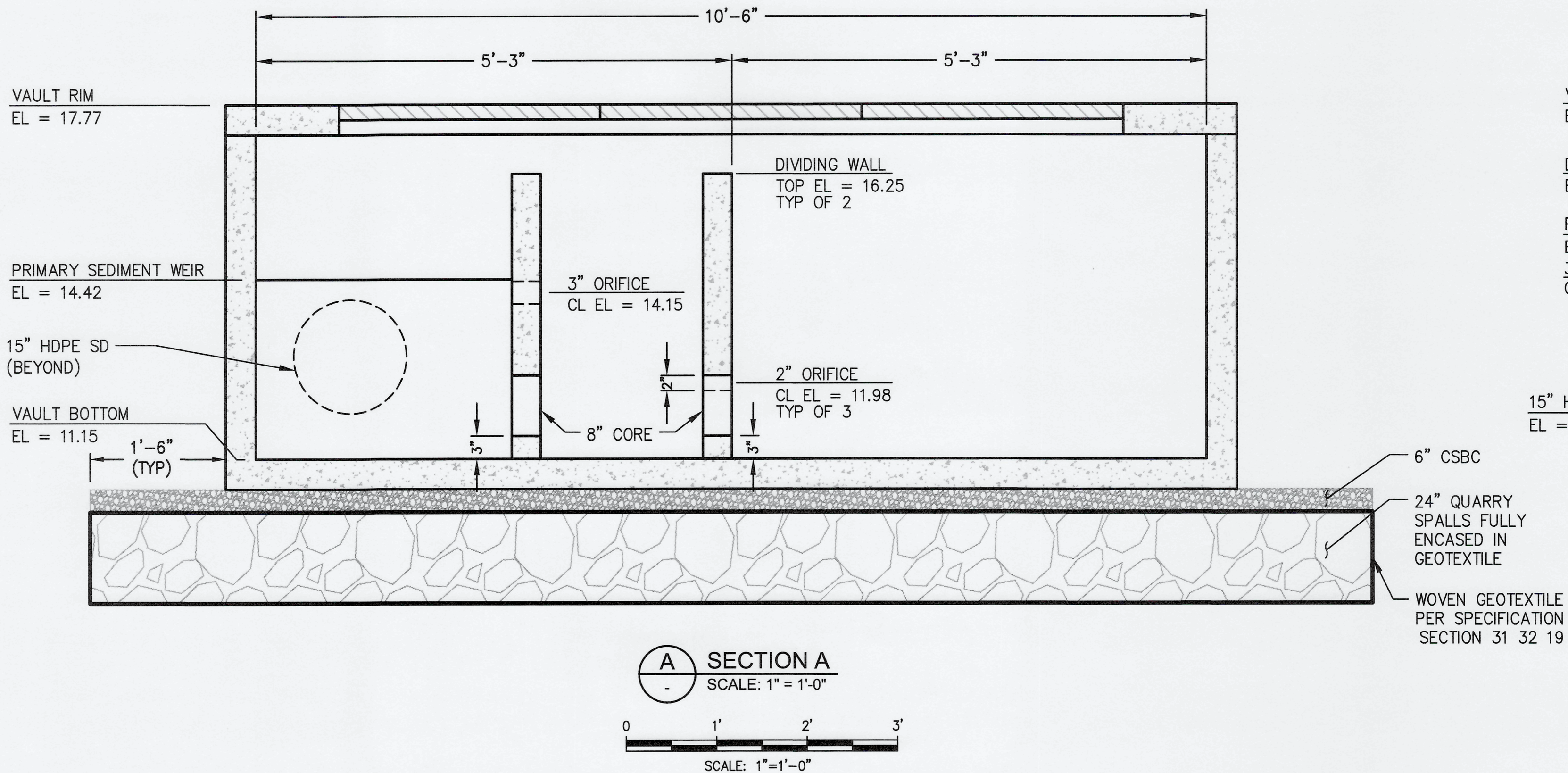
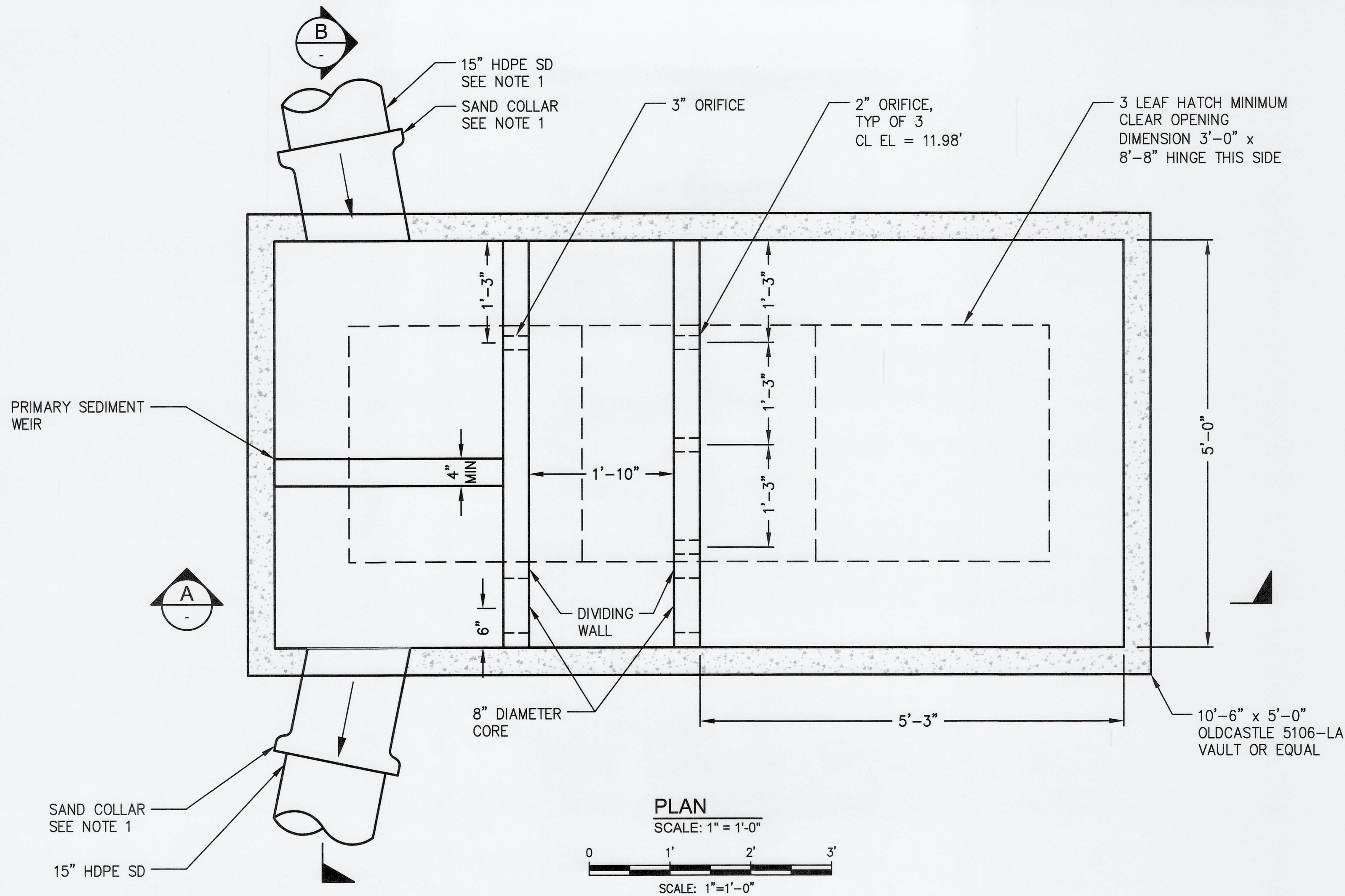


- NOTES:
1. MANHOLES AND ASSOCIATED RISERS SHALL WITHSTAND THE WHEEL LOADS IN ACCORDANCE WITH SPECIFICATION SECTION 33 49 13.
  2. PIPE CONNECTIONS TO PRECAST STRUCTURES SHALL BE INSTALLED PER DETAIL 2 ON SHEET C5.
  3. ALL EXCAVATION, BACKFILL, AND COMPACTION TESTING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 31 23 33.
  4. CONTRACTOR SHALL LOCATE ALL UTILITIES WITHIN EXCAVATION LIMITS, WHETHER SHOWN HEREON OR NOT, AND PROTECT THEM IN PLACE UNLESS DESIGNATED OTHERWISE.
  5. SHORING AND DEWATERING SYSTEMS SHALL BE DESIGNED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT THESE ITEMS TO THE PORT AND THE ENGINEER FOR FAVORABLE REVIEW PRIOR TO INSTALLATION IN ACCORDANCE WITH SPECIFICATION SECTION 31 23 19 AND 31 23 33.
  6. CONTRACTOR STAGING AND LAYDOWN SHALL BE LIMITED TO THE AREA SHOWN ON SHEET C2.
  7. EXISTING FENCES SHALL BE PROTECTED IN PLACE, EXCEPT WHERE THE WORK REQUIRES THEIR TEMPORARY REMOVAL OR RELOCATION. UPON COMPLETION OF THE WORK, ALL SECTIONS OF FENCING THAT WERE REMOVED WILL BE REPLACED WITH THE REMOVED MATERIAL IF PRIOR CONDITION OF MATERIALS HAS BEEN MAINTAINED, OR NEW MATERIALS OF EQUIVALENT QUALITY.

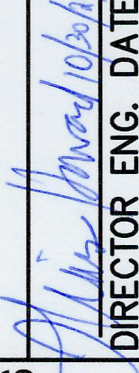





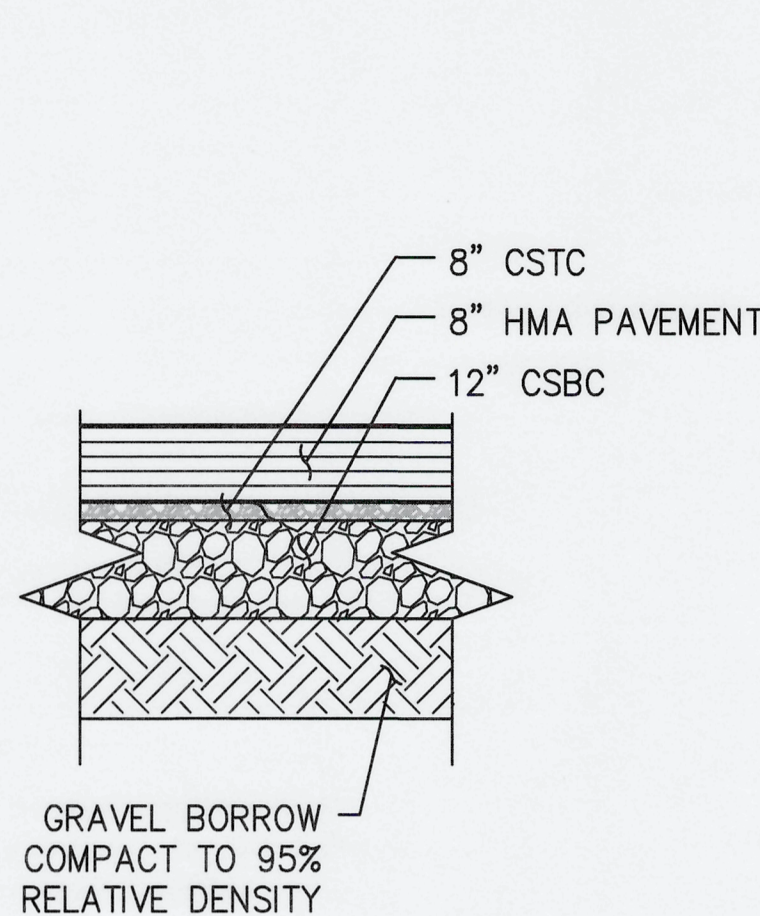
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<b>NATIONAL BOARD OF PROFESSIONAL ENGINEERS</b>	BY:	
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<b>PARCEL 86</b> STORMWATER CONVEYANCE IMPROVEMENTS STORM DRAIN PLAN AND PROFILE	CHECKED BY:	DATE:
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<b>C3</b> OF 7	TOWNSHIP:	SECTION:
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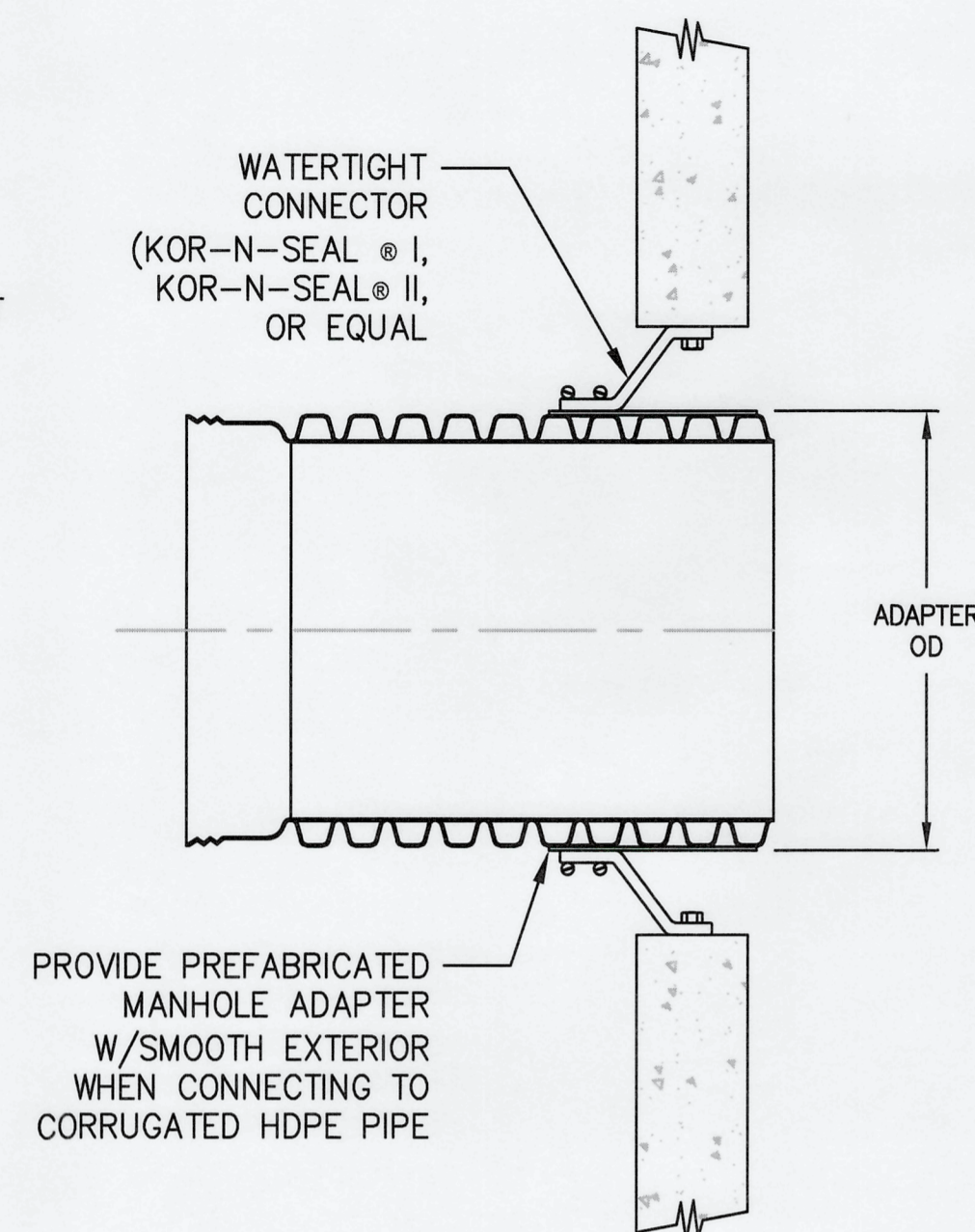
NOTE:  
1. CONNECT PIPING TO PRECAST VAULT USING SANDED COLLAR  
GROUTED IN PLACE. PROVIDE PIPE JOINT WITHIN 2 FEET OF  
VAULT EXTERIOR WALL.

C4 SH 6 OF 7	CONT/CONS: M. ID: 101493.01 PHASE: BID ISSUE	STORMWATER CONVEYANCE IMPROVEMENTS STORMWATER TREATMENT PLAN AND SECTIONS				APPROVED:  DIRECTOR PRINTED BY: Samantha Karpas PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837	RWD MAR. 2023 CHECKED BY NTW MAR. 2023 PROJ. ENGR DATE MAR 06, 2023	 NATHAN WARD PROFESSIONAL 03/06/23	 Port of Tacoma P.O. BOX 1837 TACOMA, WA 98401 (206) 388-5841	Kennedy Jenks	

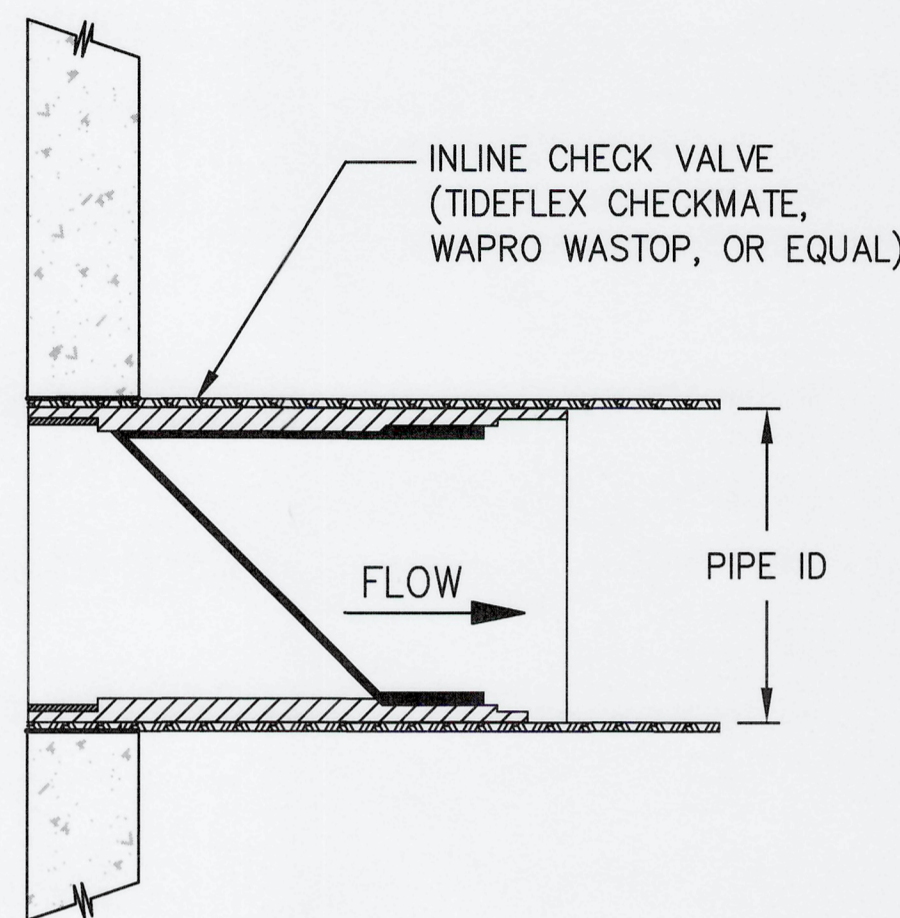


- NOTES:
1. SEE EARTHWORK SPECIFICATION SECTION 31 23 33.
  2. SEE PAVING AND SURFACING SECTION 31 12 16

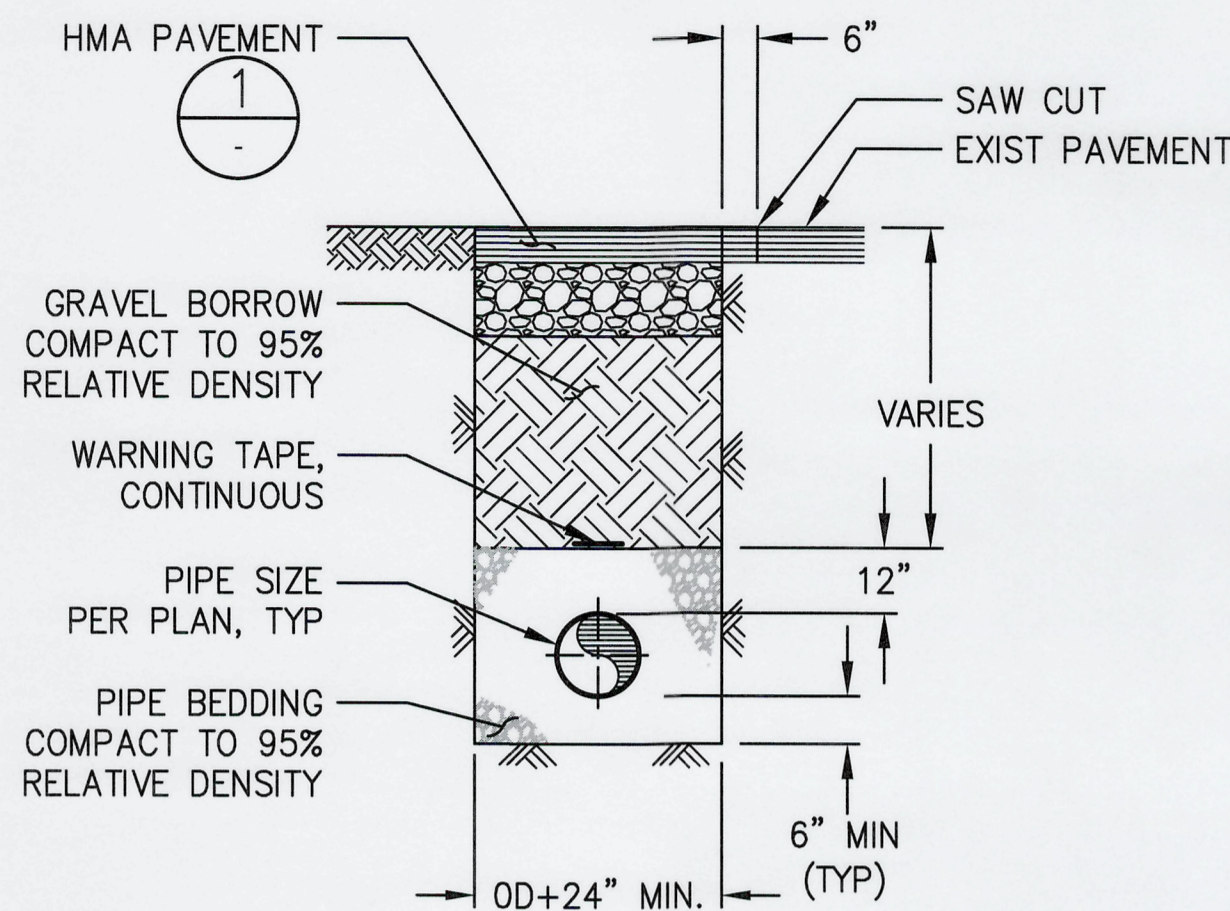
HOT MIX ASPHALT PAVEMENT DETAIL  
NTS



PIPE TO STRUCTURE CONNECTION DETAIL  
NTS

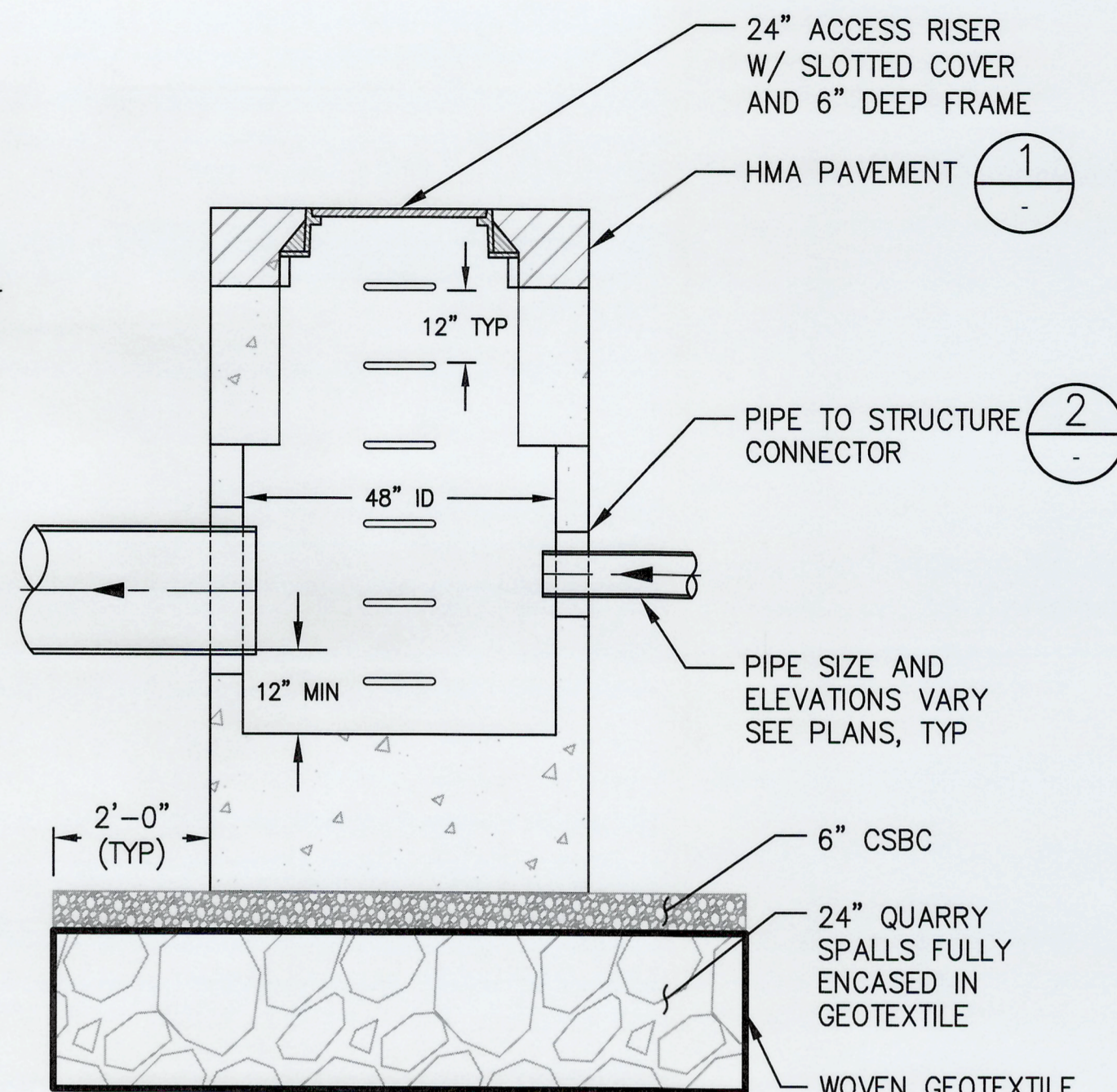


INLINE CHECK VALVE DETAIL  
NTS



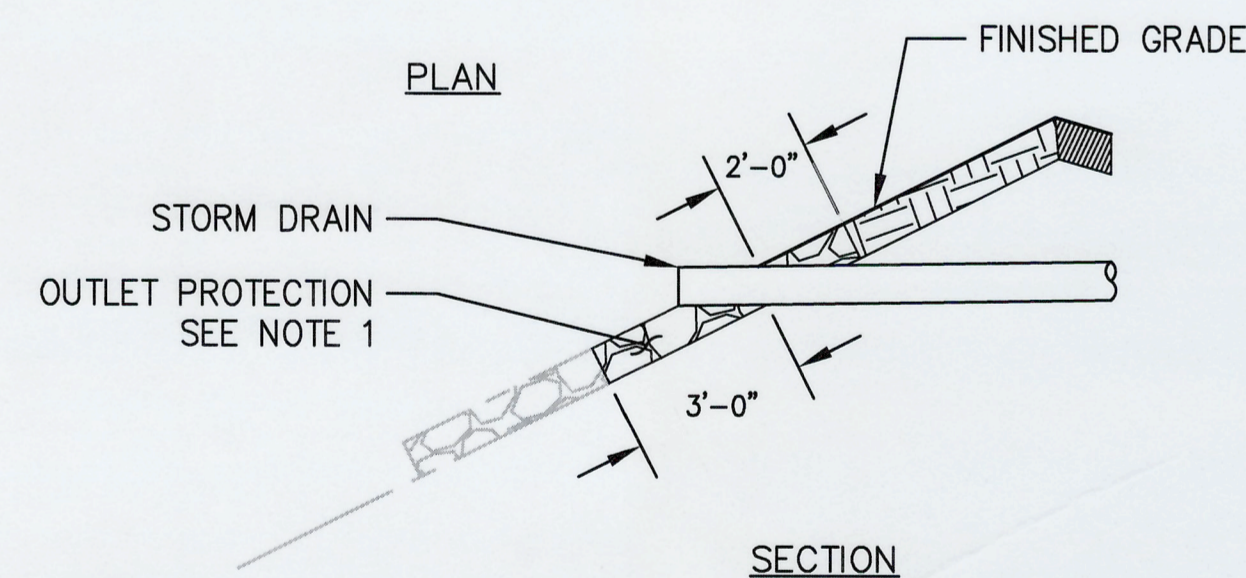
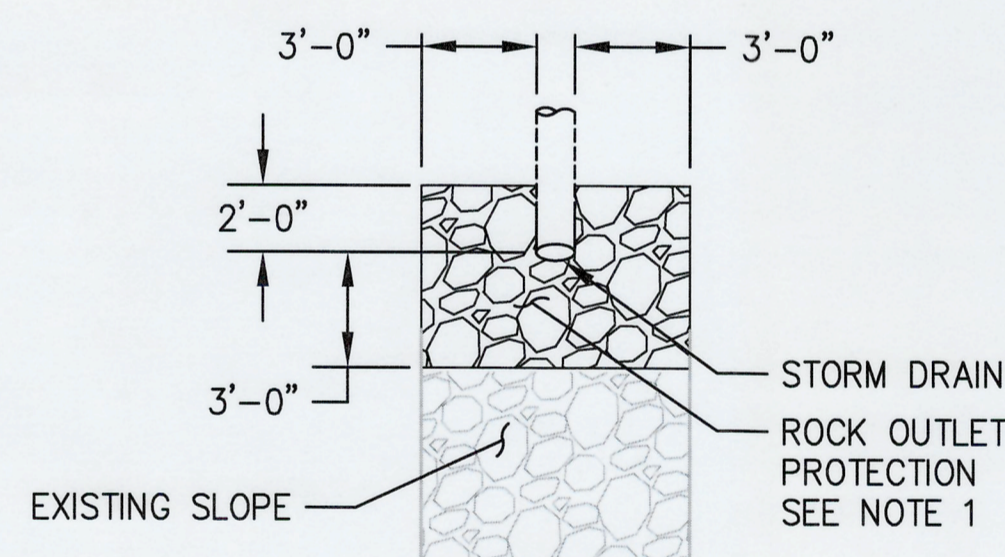
- NOTE:
1. SEE EARTHWORK SPECIFICATION SECTION 31 23 33.

PIPE TRENCH DETAIL  
NTS



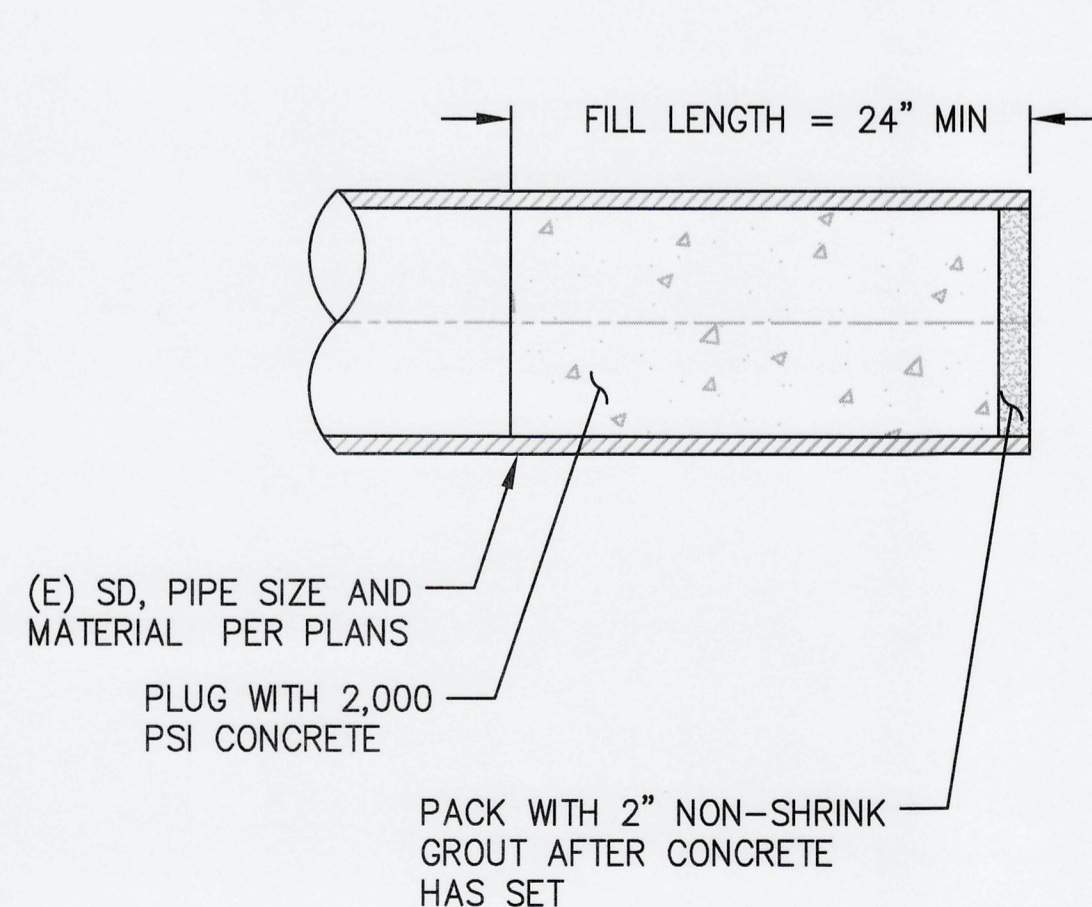
- NOTES:
1. CIRCULAR, SLOTTED LID SHALL BE USED FOR ALL CATCH BASINS.
  2. FRAME SHALL BE CAST INTO CATCH BASIN LID FOR SDCB 11193-3 AND SDCB 11193-4.

CATCH BASIN DETAIL  
NTS

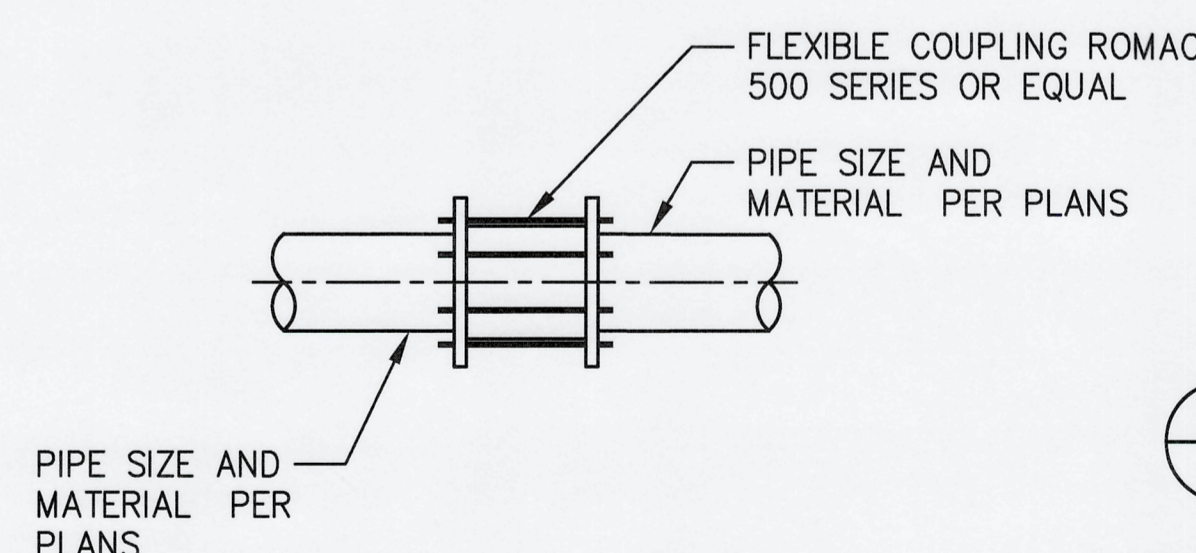


- NOTES:
1. OUTLET PROTECTION SHALL BE QUARRY SPALLS PER SPECIFICATION SECTION 31 23 33, 1-FT THICK. QUARRY SPALLS SHALL EXTEND TO A MIN. 3' DOWNSLOPE FROM END OF PIPE AND 2' ABOVE UPSLOPE FROM END OF PIPE WITH ROCK WIDTH PER PLAN. EXISTING ROCK MAY BE USED IN LIEU OF NEW QUARRY SPALLS IF IT MEETS CRITERIA.
  2. EXISTING ROCK MOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED.

OUTFALL RESTORATION DETAIL  
NTS

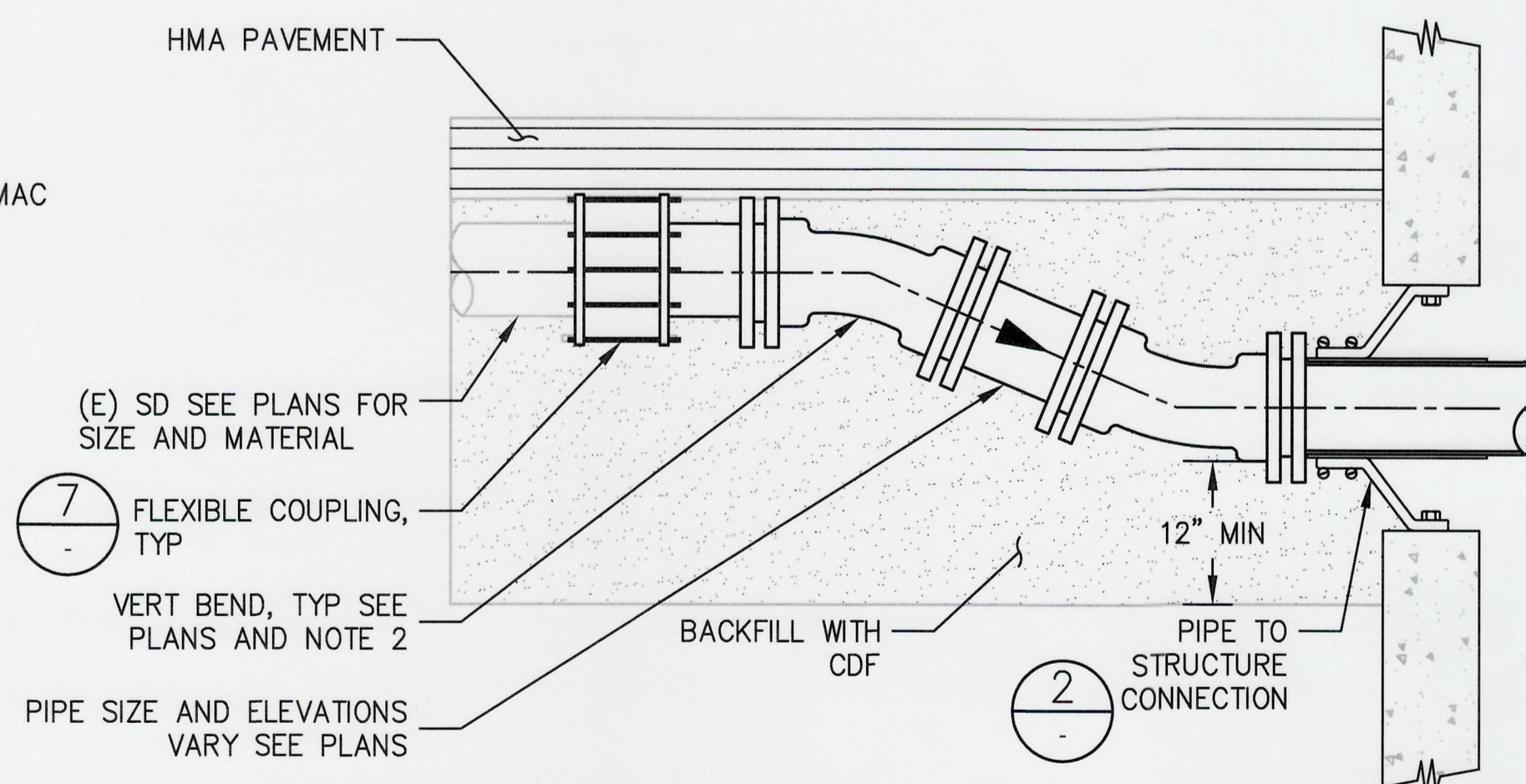


PIPE PLUG DETAIL  
NTS




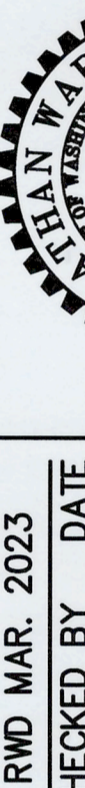

- NOTE:
1. FLEXIBLE COUPLING SHALL MEET THE REQUIREMENTS OF AWWA C219 AND BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

FLEXIBLE COUPLING DETAIL  
NTS



- NOTES:
1. SEE SPECIFICATIONS SECTION 22 11 00 FOR PIPE, FITTINGS, AND OTHER PIPE APPURTENANCE REQUIREMENTS.
  2. VERTICAL BENDS SHALL BE USED TO CONNECT TO EXISTING STORM DRAIN PIPING WHEN NECESSARY TO MINIMUM OR MAXIMUM DIMENSIONS SHOWN HEREON.

SHALLOW PIPE CONNECTION DETAIL  
NTS

<div>C5</div> <div>SH 7 OF 7</div>	PARCEL 86				APPROVED:		RWD MAR. 2023	
	STORMWATER CONVEYANCE IMPROVEMENTS						CHECKED BY DATE	
	CIVIL DETAILS						NTW MAR. 2023	
					DIRECTOR ENG. DATE		PROJ. ENGR DATE	
				PRINTED BY: Samanthakappa Mar 06, 2023				
				PORT ADDRESS: ONE SITCUM PLAZA				
				TACOMA, WA 98401-1837				
				AS NOTED				
				DRAWING SCALE:				
CONTR/CONS:				TOWNSHIP: 21N		RANGE: 03E		
M. ID: 101493.01				DAT-HRZ: WA83-SF		SECTION: 36		
PARCEL: 86				VERT: MLLW 19.39' @ Tide 22 1933				
PHASE: BID ISSUE								
<div></div> <div>03/06/23</div>								
				MARK:		REVISION:		
				BY:				
Kennedy Jenks				APPR:		DATE:		
<div>Part of Tacoma</div> <div>P.O. BOX 4877 TACOMA, WA 98403 (206)383-0644</div>								