



VICINITY MAP
N.T.S.

SEARS PROPERTY FINAL ENGINEERING PLANS

7414 78TH AVE SE, MERCER ISLAND, WA 98040
CITY OF MERCER ISLAND FILE NO: SUB23-001



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GOVERNING AGENCY

CITY OF MERCER ISLAND
PUBLIC WORKS DEPARTMENT
9601 SE 36TH STREET
MERCER ISLAND, WA 98040
(206) 275-7608

OWNER/APPLICANT

SAINTFIELD2 LLC
P.O. BOX 791
MERCER ISLAND, WA 98040
(206) 749-9600
CONTACT: WES GIESBRECHT

CONSULTANTS

CIVIL:
NAVIX ENGINEERING, INC.
11400 SE 6TH STREET, SUITE 150
BELLEVUE, WA 98004
(425) 458-7900
CONTACT: JOE TAFLIN, P.E.

SURVEYOR:
CORE DESIGN
12100 NE 195TH ST, SUITE 300
BOTHELL, WA 98011
(425) 885-7877
CONTACT: JEREMY REEFF

ARCHITECT:
ARCHITECTURAL INNOVATIONS, P.S.
14311 SE 16TH ST
BELLEVUE, WA 98007
(425) 642-8651
CONTACT: SCOTT MCMILLEN

LANDSCAPE ARCHITECT:
LYON LANDSCAPE ARCHITECTS
1015 PACIFIC AVE, SUITE 203
TACOMA, WA 9402
(253) 209-4053
CONTACT: MOGHAN LYON

ARBORIST:
CREATIVE LANDSCAPE SOLUTIONS
SPRINCE@AOL.COM
(425) 890-3808
CONTACT: SUSAN PRINCE

UTILITIES

WATER:
CITY OF MERCER ISLAND
PUBLIC WORKS DEPARTMENT
9601 SE 36TH STREET
MERCER ISLAND, WA 98040
(206) 275-7608
CONTACT: RUJI DING

STORMWATER:
CITY OF MERCER ISLAND
PUBLIC WORKS DEPARTMENT
9601 SE 36TH STREET
MERCER ISLAND, WA 98040
(206) 275-7608
CONTACT: RUJI DING

POWER:
PUGET SOUND ENERGY
CONTACT: MAKAYLA CANDILIERE
MAKAYLA.CANDILIERE@PSE.COM

NATURAL GAS:
PUGET SOUND ENERGY
10885 N.E. 4TH STREET
BELLEVUE, WA 98004
(425) 452-1234

SANITARY SEWER:
CITY OF MERCER ISLAND
PUBLIC WORKS DEPARTMENT
9601 SE 36TH STREET
MERCER ISLAND, WA 98040
(206) 275-7608
CONTACT: RUJI DING

FIRE:
CITY OF MERCER ISLAND
FIRE DEPARTMENT
3030 78TH AVENUE SE
MERCER ISLAND, WA 98040
(206) 275-7966
CONTACT: JEREMY HICKS

TELECOM:
COMCAST
(425) 263-5353
CONTACT: JEFF BURRIS
JEFFREY_BURRIS@COMCAST.COM

LOT INFORMATION							
LOT #	GROSS FLOOR AREA CALCULATIONS		LOT SLOPE CALCULATIONS			LOT COVERAGE CALCULATIONS	
	LOT AREA	MAX GROSS FLOOR AREA (SF)	HIGHEST ELEVATION (FT)	LOWEST ELEVATION (FT)	SHORTEST DISTANCE (FT)	LOT SLOPE (%)	NET MAX LOT COVERAGE (%)
1	16,254	6,502	308.6	291.7	272.7	6.20%	40%
2	12,959	5,184	311.6	295.7	341.3	4.65%	40%
3	12,498	4,999	320.5	310.2	129.8	8.00%	40%
4	15,924*	6,370	328.2	315.9	211.9	5.82%	40%

*GROSS LOT AREA - (EASEMENT AREA) = NET LOT AREA
15,924 - 3,277 = 12,647 SF

PROJECT INFORMATION

ADDRESS: 7414 78TH AVE SE, MERCER ISLAND, WA 98040
ZONING: R-9.6 (SINGLE FAMILY)
TOTAL PARCEL AREA: 68,827 SF (1.58 AC)
PROPOSED NUMBER OF LOTS: 4
MIN. LOT SIZE: 9,600 SF
MIN. LOT DEPTH: 80'
MIN. LOT WIDTH: 75'
MAX. BUILDING HEIGHT: 30'
MAX. GROSS FLOOR AREA: 45% LOT AREA
MAX. LOT COVERAGE: 40% (SLOPE < 15%)
35% (SLOPE < 30%)
TAX PARCEL NUMBER: 2524049075
SETBACKS:
FRONT: 20'
REAR: 25'
SIDE: 15' TOTAL (5' MIN.)
FROM PUBLIC R.O.W.: 10'

DATUM AND BENCHMARK

N01°22'00"E BETWEEN THE TWO FOUND MONUMENTS IN THE CENTERLINE OF 78TH AVENUE SE PER REFERENCE 1.
(ROTATED N00°00'34"E ONTO WASHINGTON STATE PLANE COORDINATES PER GNSS OBSERVATIONS)

Vertical Datum
NAVD88 (GNSS DERIVED)

Benchmarks
PROJECT BENCHMARK 1:
SET NAIL WITH WASHER STAMPED "CORE CONTROL" IN ASPHALT ON WEST SIDE OF 78TH AVENUE SE JUST NORTH OF D/W TO 7405 78TH AVE SE.
EL=289.92

PROJECT BENCHMARK 2:
SET NAIL WITH WASHER STAMPED "CORE CONTROL" IN ASPHALT ON WEST SIDE OF 78TH AVENUE SE JUST NORTH OF D/W TO 7415 78TH AVE SE.
EL=293.77

LEGAL DESCRIPTION

THE EAST HALF OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 24 NORTH, RANGE 4 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THE NORTH 769.98 FEET THEREOF;

AND EXCEPT THE SOUTH 450 FEET THEREOF;

AND EXCEPT THE WEST 30 FEET THEREOF.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

CONSTRUCTION REQUIREMENTS (MERCER ISLAND)

- ALL IMPROVEMENTS SHALL BE INSTALLED PURSUANT TO PLANS APPROVED BY THE CITY IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SCHEDULE.
- ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF MERCER ISLAND, CONDITIONS OF PERMITS ISSUED, THE GEOTECHNICAL EVALUATION RECOMMENDATIONS, AND CONSTRUCTION PLANS ACCEPTED BY THE CITY. THE ENGINEER OF RECORD MAY BE REQUIRED TO MONITOR THE CONSTRUCTION, EROSION CONTROL, SITE STABILIZATION MEASURES AND PROVIDE INSPECTION REPORTS TO THE CITY ENGINEER THAT DOCUMENT ALL OF THE WORK PERFORMED.
- THE SEASON FOR CLEARING, GRADING, AND THE CONSTRUCTION OF UTILITIES, STORM DRAINAGE FACILITIES, ROADWAYS, AND RETAINING WALLS SHALL NOT BEGIN UNTIL APRIL 1, AND SHALL END BY OCTOBER 1 OF ANY YEAR, UNLESS OTHERWISE APPROVED BY THE CODE OFFICIAL AND CITY ENGINEER.
- ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN A MANNER THAT RETAINS AS MUCH NATURAL VEGETATION AS POSSIBLE.
- THE TYPE OF EQUIPMENT TO BE USED FOR LAND CLEARING AND ROADWAY AND UTILITIES CONSTRUCTION SHALL BE DEFINED AT THE PRE-CONSTRUCTION CONFERENCE WITH THE CITY. THE NECESSARY DEVELOPMENT AND ROW USE PERMITS SHALL BE OBTAINED PRIOR TO MOVING EQUIPMENT ONTO THE SITE.
- THE CITY ENGINEER MAY REQUIRE THAT CERTAIN IMPROVEMENTS BE HAND DUG.
- THE CITY MAY REQUIRE THAT SPECIFIC CLEARING, GRADING, EXCAVATION, OR SENSITIVE CONSTRUCTION WORK BE EVALUATED AND DETAILED BY A GEOTECHNICAL ENGINEER. AS A CONDITION FOR COMPLETION OF THE WORK, THE CITY MAY REQUIRE THAT THE ENGINEER BE PRESENT DURING WORK TO MONITOR AND REVIEW SITE CONDITIONS, AND TO RECOMMEND APPROPRIATE SPECIAL CONSTRUCTION TECHNIQUES OR MITIGATING MEASURES.
- ALL DAMAGE TO ADJACENT PROPERTIES OR PUBLIC RIGHTS-OF-WAY RESULTING FROM CONSTRUCTION (E.G., SILTATION, MUD, WATER, RUNOFF, ROADWAY DAMAGE CAUSED BY CONSTRUCTION EQUIPMENT OR HAULING) SHALL BE EXPEDITIOUSLY MITIGATED AND REPAIRED BY THE CONTRACTOR, AT THEIR EXPENSE. FAILURE TO MITIGATE AND REPAIR SAID DAMAGE, OR TO COMPLY WITH THE ACCEPTED CONSTRUCTION PLANS, THE PERMITS ISSUED BY THE CITY, OR THE CITY REQUIREMENT FOR CORRECTIVE ACTION SHALL BE CAUSE FOR THE ISSUANCE OF A "STOP WORK" ORDER, FORECLOSURE ON THE PLAT PERFORMANCE GUARANTEE, AND/OR OTHER MEASURES DEEMED APPROPRIATE BY THE CITY ENGINEER.

SITE DATA

TOTAL DISTURBED AREA	68,827
EXISTING IMPERVIOUS	2,390
EXISTING PERVIOUS	66,435
TOTAL PROPOSED IMPERVIOUS	26,552
NEW ASPHALT PAVING	13,792
NEW CONCRETE (I.E. DRIVEWAY, ETC)	2,912
TOTAL PROPOSED PERVIOUS	42,275

GENERAL NOTES (NAVIX)

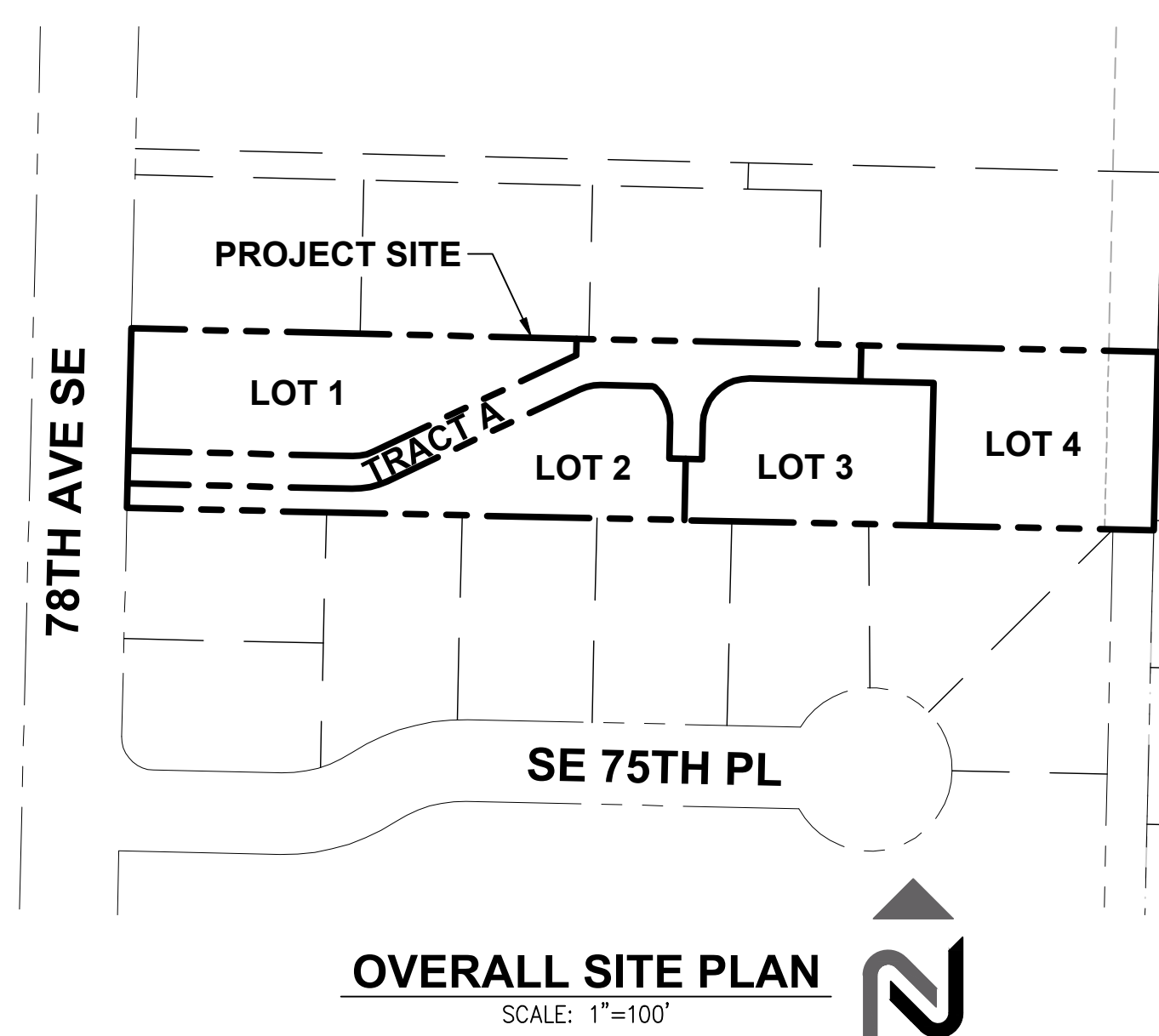
- SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE PROJECT SPECIFICATIONS, THE CITY OF MERCER ISLAND STANDARD SPECIFICATIONS,
- ALL CITY/COUNTY REGULATIONS AND CODES, O.S.H.A. AND THE A.P.W.A. STANDARDS WHICH ARE HEREBY REFERENCED AS PART OF THESE PLANS.
- THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. IF CONTRACTOR DOES NOT ACCEPT EXISTING SURVEY, INCLUDING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
- CAUTION - NOTICE TO CONTRACTOR: THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
- ALL EXISTING UTILITY CROSSINGS SHALL BE POTHOLED UTILIZING A SOIL VACUUM METHOD TO IDENTIFY THE EXISTING UTILITY PRIOR TO DIGGING WITHIN 5' OF A KNOWN UTILITY.

REFERENCE DOCUMENTS

- BOUNDARY AND TOPOGRAPHIC SURVEY, DATED JUNE 10, 2022, BY CORE DESIGN.
- GEOTECHNICAL REPORT: PROPOSED SHORT PLAT 7414-78TH AVENUE SOUTHEAST, MERCER ISLAND, WASHINGTON, DATED DECEMBER 15, 2022 BY TERRA ASSOCIATES, INC.

EXISTING LEGEND

	LIGHT POLE WITH ARM		POST INDICATOR VALVE
	LIGHT POLE WITH NO ARM / PEDESTRIAN SIGNAL POLE		FIRE DEPARTMENT CONNECTION
	POWER VAULT		HOSE BIBB
	UTILITY POLE		CATCH BASIN, TYPE 1
	GUY ANCHOR		CATCH BASIN, TYPE 2
	SIGNAL POLE		STORM MANHOLE
	SIGNAL POLE WITH LUMINAIRE ARM		STORM DRAIN CLEANOUT CULVERT
	POWER METER		SANITARY SEWER MANHOLE
	POWER JUNCTION BOX		SANITARY SEWER CLEANOUT
	POWER HANDHOLE		ROCKERY
	TRANSFORMER		BOLLARD
	TRAFFIC SIGNAL CONTROL BOX		SIGNPOST
	STREET LIGHT CONTROL BOX		MAILBOX
	CABLE TV JUNCTION BOX		WETLAND FLAG
	COMMUNICATIONS VAULT		DECIDUOUS TREE
	TELEPHONE PEDESTAL		CONIFEROUS TREE
	TELEPHONE JUNCTION BOX		MONUMENT
	GAS METER		FOUND REBAR/CAP
	GAS VALVE		TACK IN LEAD
	WATER VAULT		STORM DRAIN LINE
	FIRE HYDRANT		GAS LINE
	WATER VALVE		OVERHEAD POWER LINE
	WATER METER		UNDERGROUND POWER LINE
	MONITOR WELL		SANITARY SEWER LINE
	BLOWOFF VALVE		SANITARY SEWER FORCE MAIN
	PRESSURE RELIEF VALVE		OVERHEAD TELEPHONE LINE
	IRRIGATION CONTROL VALVE		UNDERGROUND TELEPHONE LINE



SHEET INDEX

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TO01	TOPOGRAPHIC SURVEY & BOUNDARY
C1.01	TREE PROTECTION AND SITE DEMOLITION PLAN
C1.02	TREE INVENTORY TABLE
C2.01	T.E.S.C. PLAN
C2.02	TREE PROTECTION AND T.E.S.C. DETAILS
C2.03	T.E.S.C. DETAILS
C3.01	PAVING PLAN
C3.02	HORIZONTAL CONTROL PLAN
C3.03	EASEMENT PLAN
C3.04	SITE AND STREET IMPROVEMENT SECTIONS
C4.01	GRADING PLAN
C4.02	GRADING DETAILS
C5.01	DRAINAGE PLAN
C5.02	ROAD AND DRAINAGE PROFILE
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C5.06	STORM VAULT DETAILS
C6.01	WATER AND SEWER PLAN
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C6.04	WATER DETAILS
C6.05	SEWER DETAILS
C6.06	SEWER DETAILS
C7.01	FRANCHISE UTILITY PLAN
S1	STRUCTURAL NOTES AND TYPICAL DETAIL
S2	VAULT LID AND FOUNDATION PLANS AND DETAILS
S3	WALL SECTIONS AND DETAILS

CLIENT/OWNER

SAINTFIELD2 LLC

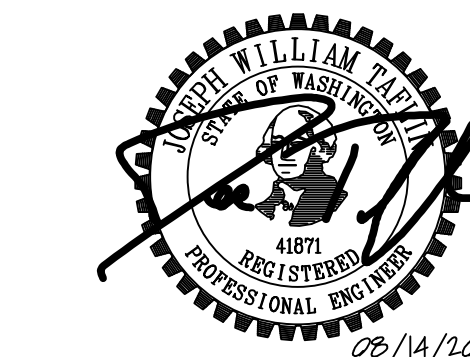
PROJECT NAME

SEARS

NAVIX PROJECT NUMBER: 50-215-004
PROJECT ADDRESS

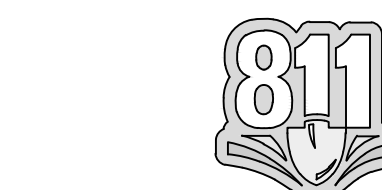
7414 78TH AVE SE
MERCER ISLAND, WA 98040

STAMP



REVISIONS

REV	ISSUED FOR:	DATE
1	PERMIT RESUBMITTAL	07/01/24
2	PERMIT RESUBMITTAL	08/14/24



SECTION, TOWNSHIP, RANGE:
SECTION 25, TOWNSHIP 24 NORTH,
RANGE 4 EAST, W.M.

PROJECT TEAM
DESIGNED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

SHEET NAME

COVER SHEET

SHEET NUMBER

C0.00



GENERAL SITE NOTES (NAVIX)

- DIMENSIONS SHOWN REFER TO FACE OF CURB UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL PROVIDE A TEMPORARY TRAFFIC CONTROL PLAN FOR THE CITY ENGINEER'S APPROVAL PRIOR TO ANY WORK WITHIN THE CITY RIGHT-OF-WAY.
- REFER TO BOUNDARY SURVEY FOR LEGAL DESCRIPTION, DIMENSIONS OF PROPERTY LINES, BASIS OF BEARINGS & BENCHMARK INFORMATION.
- SEE SITE PLAN FOR SITE DIMENSIONS.
- ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
- EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
- ALL DISTURBED AREAS THAT WILL BE PERMANENTLY LANDSCAPED ARE TO RECEIVE TOPSOIL, SEED, MULCH AND WATER, AS REQUIRED BY LOCAL JURISDICTION, UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
- THE PORTLAND CEMENT CONCRETE PAVEMENT MIXTURE SHALL BE IN ACCORDANCE WITH CONCRETE FOR PAVEMENT SECTION 5-05 OF THE LATEST EDITION OF THE WSDOT STANDARD SPECIFICATIONS. THE MIXTURE SHALL BE DESIGNED TO DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS WITH A 4 INCH MAXIMUM SLUMP.

GENERAL EROSION CONTROL NOTES (NAVIX)

- THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE PLAN DOES NOT REPRESENT A DETAILED FIELD SURVEY. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON SURVEY PREPARED BY CORE DESIGN, INC., DATED JUNE 14, 2022. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. IF CONTRACTOR DOES NOT ACCEPT EXISTING SURVEY, INCLUDING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
- CAUTION — NOTICE TO CONTRACTOR:**
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE.
- THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
- ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE MOST CURRENT APPLICABLE LOCAL, STATE, AND FEDERAL STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR PREVENTING SILT-LADEN RUNOFF FROM DISCHARGING FROM THE PROJECT SITE. FAILURE BY THE CONTRACTOR CAN RESULT IN A FINE. THE DESIGNATED TEMPORARY CONTACT PERSON NOTED ON THIS PLAN MUST BE AVAILABLE FOR CONTACT BY TELEPHONE ON A 24 HOUR BASIS THROUGHOUT CONSTRUCTION AND UNTIL THE PROJECT HAS BEEN COMPLETED AND APPROVED BY THE GOVERNMENTAL AGENCY WITH JURISDICTION.
- THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR FROM THE BEGINNING OF CONSTRUCTION UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE GOVERNMENTAL AGENCY WITH JURISDICTION AND THE SITE IS STABILIZED.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED AND INSPECTED BY THE LOCAL JURISDICTION PRIOR TO ANY CLEARING OR CONSTRUCTION TAKING PLACE. DURING CONSTRUCTION, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE OWNER AND/OR CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
- THE EROSION AND SEDIMENTATION CONTROL FACILITIES SHOWN ON THIS PLAN ARE TO BE CONSIDERED ADEQUATE BASIC REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. DURING CONSTRUCTION, DEVIATIONS FROM THIS PLAN MAY BE NECESSARY IN ORDER TO MAINTAIN WATER QUALITY.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR ON A FREQUENT BASIS AND IMMEDIATELY AFTER EACH RAINFALL, AND MAINTAINED AS NECESSARY TO INSURE THEIR CONTINUED FUNCTIONING. ALL SEDIMENT MUST BE REMOVED FROM SILT FENCES, STRAW BALES, SEDIMENT PONDS, ETC. PRIOR TO THE SEDIMENT REACHING 1/2 ITS MAXIMUM POTENTIAL DEPTH.
- AT NO TIME SHALL CONCRETE, CONCRETE BYPRODUCTS, VEHICLE FLUIDS, PAINT, CHEMICALS, OR OTHER POLLUTING MATTER BE PERMITTED TO DISCHARGE TO THE TEMPORARY OR PERMANENT DRAINAGE SYSTEM, OR TO DISCHARGE FROM THE PROJECT SITE.
- THE CONTRACTOR PERFORMING THE WORK SHALL MAINTAIN A SET OF THE APPROVED CONSTRUCTION DRAWINGS ON SITE AT ALL TIMES WHILE CONSTRUCTION IS IN PROGRESS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING THE WORK TO OBTAIN ALL NECESSARY PERMITS FROM THE LOCAL JURISDICTION PRIOR TO COMMENCING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
- THE CONTRACTOR PERFORMING THE WORK SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE TRAFFIC CONTROL AT ALL TIMES DURING CONSTRUCTION ALONGSIDE OR WITHIN ALL PUBLIC ROADWAYS.
- THIS APPROVED "TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN" MUST BE IMPLEMENTED PRIOR TO ANY SITE WORK. SEE THE PLANS AND DETAILS FOR FURTHER INFORMATION.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IN THE EVENT OF DISCOVERY OF POOR SOILS, GROUNDWATER OR DISCREPANCIES IN THE EXISTING CONDITIONS AS NOTED ON THE PLANS.
- MAXIMUM SLOPES SHALL BE 3:1 HORIZ:VERT FOR FILL SLOPES, AND 3:1 HORIZ:VERT FOR CUT SLOPES, WITH THE EXCEPTION OF RIGHT-OF-WAY. 2:1 IS THE MAXIMUM ALLOWED SLOPE FOR WORK WITHIN THE RIGHT-OF-WAY.
- ROCKERIES OR OTHER RETAINING FACILITIES EXCEEDING 4' IN HEIGHT REQUIRE A SEPARATE BUILDING PERMIT.
- ALL AREAS DISTURBED DURING CONSTRUCTION WHERE PERMANENT LANDSCAPING WILL NOT BE PROVIDED WITHIN 60 DAYS SHALL BE HYDROSEED, OR OTHERWISE STABILIZED, AS REQUIRED. STRAW MULCHING OR PLASTIC SHEETING ARE ACCEPTABLE ALTERNATIVES TO TEMPORARY HYDROSEEDING DURING PERIODS OF LOW GROWTH.
- SLOPE STABILIZATION. CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. ROUGHENED SOIL SURFACES ARE PREFERRED TO SMOOTH SURFACES. INTERCEPTORS SHOULD BE CONSTRUCTED AT THE TOP OF LONG, STEEP SLOPES WHICH HAVE SIGNIFICANT AREAS ABOVE THAT CONTRIBUTE RUNOFF. CONCENTRATED RUNOFF SHOULD NOT BE ALLOWED TO FLOW DOWN THE FACE OF A CUT OR FILL SLOPE UNLESS CONTAINED WITHIN AN ADEQUATE CHANNEL OR PIPE SLOPE DRAIN. WHEREVER A SLOPE FACE CROSSES A WATER SEEPAGE PLANE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHOULD BE PROVIDED. IN ADDITION, SLOPES SHOULD BE STABILIZED IN ACCORDANCE WITH ITEM (17) ABOVE.
- STORM DRAIN INLET PROTECTION. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORMWATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- REFER TO PROJECT SPECIFICATIONS FOR SURFACE WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE.
- PH SAMPLING MAY BE REQUIRED IF PROJECT INCLUDES MORE THAN 40 CUBIC YARDS OF POURED OR RECYCLED CONCRETE.
- IF SAMPLING REVEALS HIGH PH LEVELS, CONTRACTOR SHALL IMPLEMENT BMP C252 TO NEUTRALIZE THE PH LEVELS.
- SOIL MUST NOT REMAIN EXPOSED AND UNWORKED FOR MORE THAN THE TIME PERIODS SET FORTH BELOW TO PREVENT EROSION:
 - DURING THE DRY SEASON (MAY 1 – SEPT 30): 7 DAYS
 - DURING THE WET SEASON (OCTOBER 1 – APRIL 30): 2 DAYS

GRADING NOTES (NAVIX)

- THE SPOT ELEVATIONS INDICATED ON THIS PLAN REPRESENT THE DESIGN TOP OF PAVEMENT, UNLESS OTHERWISE NOTED.
- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.
- CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH LOCAL SPECIFICATION.
- ALL CUT AND FILL SLOPES SHALL BE CONSTRUCTED PER THE UBC CODE AND APPLICABLE LOCAL REGULATION. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS AND SHALL GRADE ALL AREAS TO PRECLUDE PONDING OF WATER.
- ALL POLLUTANTS OTHER THAN SEDIMENT ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- PROPERTIES AND WATERWAYS DOWNSTREAM OF THE SITE SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FROM PROJECT SITE.
- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
- CONTRACTOR TO REMOVE UNSUITABLE SOILS LOCATED WITHIN THE BUILDINGS SPLAY LINE OF THE FOOTINGS.
- FOR BOUNDARY AND TOPOGRAPHIC INFORMATION REFER TO PROJECT SURVEY.
- ALL GRADING, SITE PREPARATION, AND EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL ENGINEERING REPORT.
- ALL FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT AND COMPACTION.
- IF NEW FILL IS PLACED OVER EXISTING SLOPES OF 20% OR GREATER, THE STRUCTURAL FILL SHOULD BE KEYED AND BENCHED INTO COMPETENT NATIVE SLOPE SOILS. SEE FIGURE 3 ON SHEET C-2.11.

STORM DRAINAGE NOTES (NAVIX)

- ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE MOST CURRENT APPLICABLE LOCAL, STATE, AND FEDERAL STANDARDS.
- EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
- STORM DRAINAGE PIPE WITH LESS THAN 2'-0" COVER SHALL BE CLASS IV REINFORCED CONCRETE PIPE, OR APPROVED EQUAL TO SUSTAIN H-20 LOADING.
- ALL ONSITE STORM DRAINAGE PIPE SHALL BE SMOOTH WALLED INTERIOR, MANUFACTURER'S VERIFICATION OF MANNING'S ROUGHNESS COEFFICIENT N=0.012 OR LESS.
- PRECAST STRUCTURES MAY BE USED AT CONTRACTOR'S OPTION.
- ALL CATCH BASINS AND AREA DRAINS ARE TO BE SITUATED SUCH THAT THE OUTSIDE EDGE OF GRATE FRAME IS AT TOE OF CURB OR FLOW LINE OF GUTTER (WHERE APPLICABLE).
- CATCH BASIN INLET PROTECTION / EROSION CONTROL TO BE USED FOR ALL NEW INLETS.
- ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
- ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING AND COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
- ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT, UNLESS OTHERWISE SHOWN IN THE CATCH BASIN DETAIL.
- CONTRACTOR SHALL CONNECT ROOF DRAIN LEADERS TO PROPOSED STORM DRAINS AS SHOWN.

GENERAL UTILITY NOTES (NAVIX)

- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND DIMENSIONS OF SLOPED PAVING, EXIT PORCHES, SIDEWALKS, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
- REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
- ALL FILL MATERIAL SHALL BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
- CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
- MINIMUM WATER AND SANITARY SEWER TRENCH WIDTH SHALL BE 2 FEET.
- ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
- IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINE (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATERLINE SHALL BE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE, MEETING REQUIREMENTS OF ANSI A21.10 AND ANSI 21.11 (AWWA C-151) (CLASS 50).
- LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARD TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
- CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
- CONTRACTOR TO PROVIDE TRENCHING, BACKFILL, 2 - 4" PVC SCHEDULE 40 CONDUITS, AND PULLING WIRES FOR UNDERGROUND TELEPHONE SERVICE FROM EXISTING FACILITIES AS SHOWN ON PLANS. CONTRACTOR TO COORDINATE INSTALLATION AND POINT OF CONNECTION WITH UTILITY PROVIDER.
- CONTRACTOR IS TO PROVIDE TRENCHING, CONDUIT, AND BACKFILL FOR ALL UNDERGROUND POWER LINE AND VAULTS AS REQUIRED BY UTILITY PROVIDER. POWER LINES AND POLES TO BE INSTALLED BY UTILITY PROVIDER. SEE SITE ELECTRICAL PLAN FOR SITE LIGHTING AND FOR PRIMARY ELECTRIC SERVICE LOCATIONS.
- GAS PIPING SHOWN FOR COORDINATION ONLY. INSTALLATION OF THE GAS MAIN AND METER TO BE ACCOMPLISHED BY UTILITY PROVIDER.

SANITARY SEWER NOTES (NAVIX)

- ALL CONSTRUCTION/INSTALLATION OF SANITARY SEWER MAINS SHALL BE DONE IN A SAFE, NEAT AND PROFESSIONAL MANNER, AND UNDER SUPERVISION OF CITY FORCES AT ALL TIMES. ALL SAFETY REQUIREMENTS FROM OSHA AND OTHER STATE REGULATORY AGENCIES MUST BE MET.
- THE MINIMUM SIZE FOR PUBLIC SEWER MAINS SHALL BE 8" DIAMETER. ALL SANITARY SEWER PIPING SHALL BE SCHEDULE D3034 PVC OR EQUAL. MINIMUM PIPE DIAMETER FOR PRIVATE LATERALS IS 4" AND OF SCHEDULE D3034 PVC OR EQUAL. ALL SANITARY SEWER LATERALS MUST BE PROPERLY MARKED AT ENDS.
- CONNECTIONS INTO THE EXISTING SANITARY SEWER MAINS REQUIRE ISSUANCE OF PUBLIC WORKS PERMIT AND INSPECTION BY THE LOCAL JURISDICTION PRIOR TO BACKFILLING.
- ALL NEW SANITARY SEWER PIPES AND MANHOLES MUST BE THOROUGHLY CLEANED, INSPECTED AND PRESSURE/VACUUM TESTED AS REQUIRED BY UTILITY PROVIDER AND GOVERNMENTAL AGENCIES WITH JURISDICTION. ALL TESTS MUST BE WITNESSED AND PASSED BY THE UTILITY PROVIDER AND GOVERNMENTAL AGENCIES WITH JURISDICTION PRIOR TO PLACING INTO OPERATION.
- THE CONTRACTOR SHALL PROVIDE TO THE UTILITY PROVIDER ANY GUARANTEE OR WARRANTY NORMALLY FURNISHED WITH THE PURCHASE OF ANY MATERIALS USED IN CONNECTION WITH THE PROJECT AT HAND.

WATER NOTES (NAVIX)

- ALL CONSTRUCTION/INSTALLATION OF WATER MAINS SHALL BE DONE IN A SAFE, NEAT AND WORKMANLIKE MANNER, AND UNDER SUPERVISION BY UTILITY PROVIDER FORCES AT ALL TIMES. ALL SAFETY REQUIREMENTS FROM OSHA AND OTHER STATE REGULATING AGENCIES MUST BE MET.
- WATER MAIN PIPE MATERIAL SHALL BE CLASS 52 DUCTILE IRON OR PVC PIPE MEETING LOCAL REQUIREMENTS. POLYETHYLENE WRAP IS REQUIRED ON ALL METALS.
- AN 18-INCH MINIMUM SEPARATION IS REQUIRED ON SERVICE TAPS ON A MAIN LINE.
- CLASS 52 DUCTILE IRON MAY BE DIRECT TAPPED FOR 3/4 INCH AND 1-INCH SIZE SERVICES. SADDLES SHALL BE USED ON ALL TAPS 1-1/4" - 2" DIAMETER IN ANY PUBLIC MAIN.
- ALL ELBOWS/BENDS ON WATER MAINS SHALL HAVE THRUST BLOCKS.
- WATER MAIN DEPTH SHALL FOLLOW MANUFACTURES SPECIFICATIONS. THE WATER MAIN WAS DESIGNED WITH A MINIMUM DEPTH OF 36" TO A MAXIMUM OF 60" FROM FINISHED GRADE TO THE TOP OF THE PIPE.
- ALL NEW PIPES MUST BE PROPERLY FLUSHED, PRESSURE TESTED, AND CHLORINATED BY THE CONTRACTOR, AND INSPECTED BY UTILITY PROVIDER AND GOVERNMENTAL AGENCIES WITH JURISDICTION.
- ALL BACKFLOW PREVENTION DEVICES (DOUBLE CHECK BACKFLOW PREVENTORS, REDUCED PRESSURE BACKFLOW PREVENTORS, PRESSURE AND ATMOSPHERIC VACUUM BREAKERS, ETC.) MUST BE APPROVED BY THE UTILITY PROVIDER AND GOVERNMENTAL AGENCIES WITH JURISDICTION.
- ALL NEW CONNECTIONS TO EXISTING WATER MAINS REQUIRE ISSUANCE OF A PUBLIC WORKS PERMIT AND INSPECTION BY THE CITY OR GOVERNMENTAL AGENCIES WITH JURISDICTION PRIOR TO BACKFILLING.
- BACKFLOW PREVENTION DEVICES SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS.



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CLIENT/OWNER

SAINTFIELD2 LLC

PROJECT NAME

SEARS

NAVIX PROJECT NUMBER: 50-215-004

PROJECT ADDRESS

7414 78TH AVE SE
MERCER ISLAND, WA 98040

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REVISIONS

REV	ISSUED FOR:	DATE
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2	PERMIT RESUBMITTAL	08/14/24



SECTION, TOWNSHIP, RANGE:

SECTION 25, TOWNSHIP 24 NORTH,
RANGE 4 EAST, W.M.

PROJECT TEAM

DESIGNED BY: G. GOUDY
REVIEWED BY: B. MCMURTRY

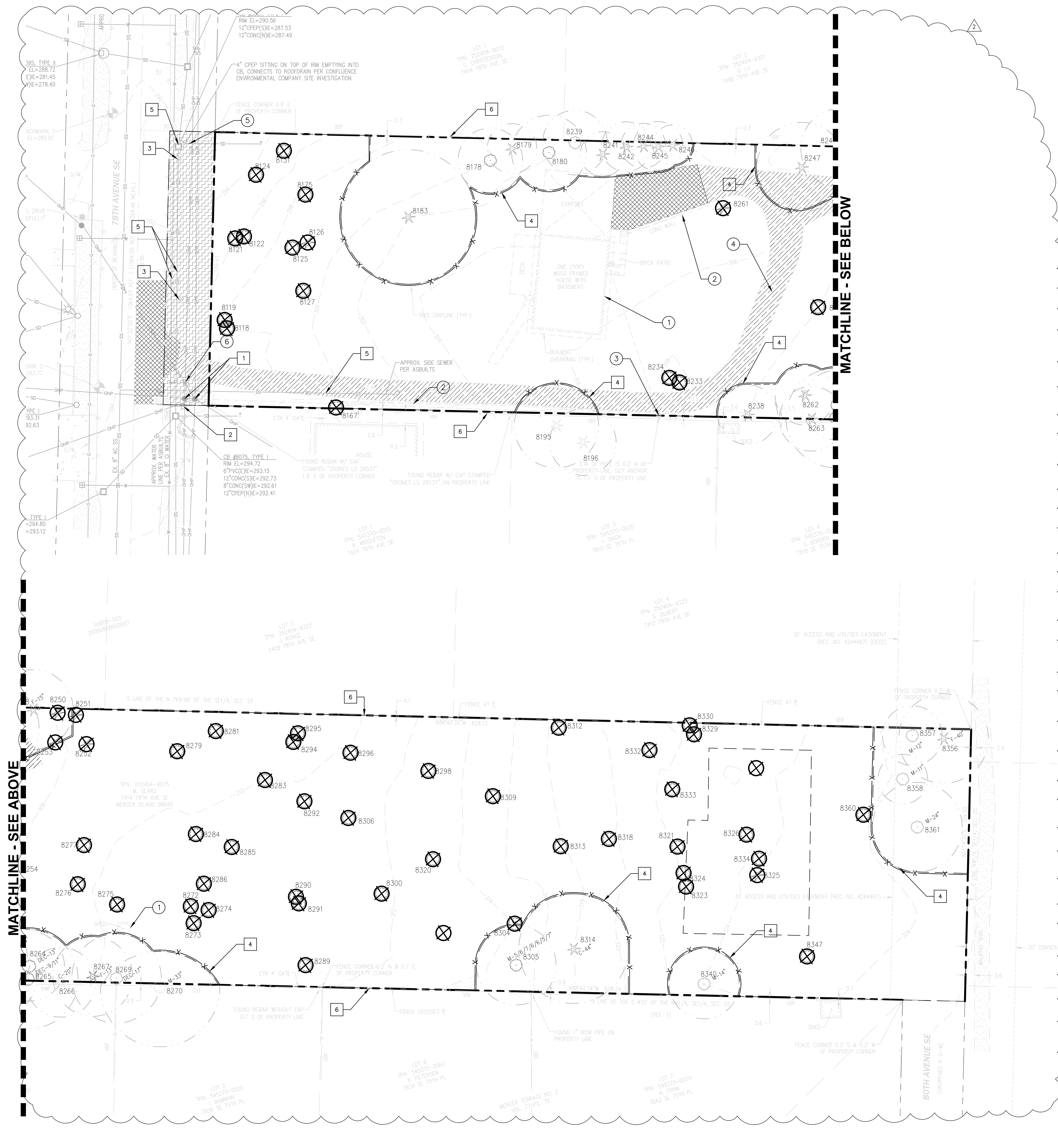
SHEET NAME

GENERAL
NOTES

SHEET NUMBER

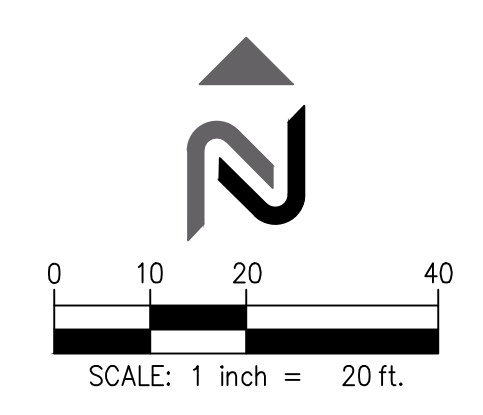
C0.01





LEGEND

- PROPERTY LINE
- EXISTING R.O.W.
- CENTERLINE
- EXISTING GRAVEL TO BE REMOVED SEE NOTE 6.
- EXISTING ASPHALT GRIND AND OVERLAY AREA
- ROW PLANTING REMOVAL
- LIMIT OF DISTURBANCE
- UTILITY TERMINATION POINT
- TREE PROTECTION FENCING (SEE SHEET C2.02)
- TREE TO REMOVE
- TREE TO REMAIN W/ PROTECTION



PRESERVE/PROTECT

KEY	ITEM
1	UTILITY POLE
2	FIRE HYDRANT
3	MAILBOX
4	TREE PROTECTION FENCE. SEE SHEET C2.02
5	IN-GROUND UTILITY/STRUCTURE
6	FENCE

DEMOLITION SCHEDULE

KEY	ITEM
1	EXISTING BUILDINGS AND ALL APPURTENANCES
2	EXISTING RETAINING WALL
3	UTILITY POLE
4	GRAVEL DRIVEWAY
5	EXISTING ROOF/ FOUNDATION DRAIN OUTFALL

- ### TREE RETENTION NOTES
- QUANTITIES OF TREES TO BE REMOVED IN THE TREE RETENTION LEGEND REFLECT TOTAL TREES THAT WILL REQUIRE REMOVAL AS PART OF THE SITE DEVELOPMENT.
 - QUANTITIES OF TREES TO REMAIN IN THE TREE RETENTION LEGEND INCLUDES ALL TREES WITHIN THE STUDY AREA.
 - PER MCC 19.16.010, A SIGNIFICANT TREE ON MERCER ISLAND IS ANY TREE WITH A DIAMETER OF TEN INCHES OR MORE.
 - TREES DESIGNATED FOR REMOVAL WITHIN TREE PROTECTION FENCE SHOULD BE SNAGGED OR FLUSH CUT TO MINIMIZE ROOT DAMAGE TO REMAINING TREES. DO NOT REMOVE TREES DESIGNATED FOR REMOVAL WITHIN TREE PROTECTION FENCING AREA BY PUSHING OVER WITH MACHINERY.
 - EXISTING TREES TO REMAIN SHALL NOT BE DISTURBED DURING DEMOLITION OF EXISTING STRUCTURES OR CONSTRUCTION OF PROPOSED FEATURES. THIS INCLUDES DAMAGES TO TREE TRUNK, ROOTS, AND LIMBS. IF TREE LIMBS RESTRICT VERTICAL LIMITS OF DEMOLITION MACHINERY, A CERTIFIED ARBORIST MAY LIFT CANOPY BY PRUNING LIMBS UP TRUNK.
 - GRAVEL DRIVEWAY INSIDE OF TREE PROTECTION TO BE REMOVED UNDER DIRECTION OF CERTIFIED ARBORIST.

- ### DEMOLITION NOTES
- THE EXISTING ONSITE WELL SHALL BE CAPPED AND DECOMMISSIONED PER DEPARTMENT OF ECOLOGY REQUIREMENTS.
 - RIGHT-OF-WAY PLANTING REMOVAL WILL BE LIMITED TO THE EXTENTS SHOWN ON THIS PLAN.

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SECTION 25, TOWNSHIP 24 NORTH,
RANGE 4 EAST, W.M.

PROJECT TEAM
REVIEWED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

SHEET NAME

TREE PROTECTION AND SITE DEMOLITION PLAN

SHEET NUMBER
C1.01



TREE PROTECTION AREA (TPZ)

KEEP OUT!

DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

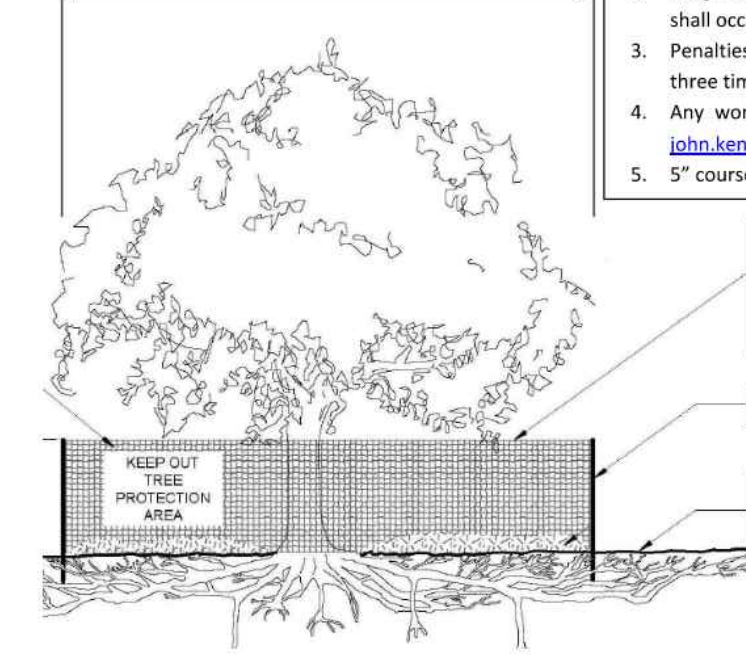
Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees/financial penalties
3. Arborist reports recommending mitigation

Notes

1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
4. Any work in approved TPZ must be with the permission of the City Arborist (206) 275-7713, john.kenney@mercergov.org
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

Crown line or other line of Tree Protection Area. See Site/Utility Plan for fence alignment.

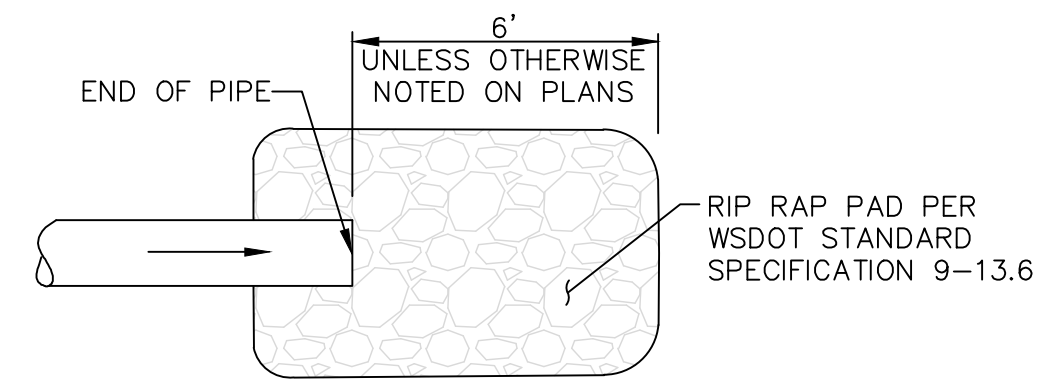


Tree protection fence: 6' chain link fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

2" x 6" steel posts or approved equal

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

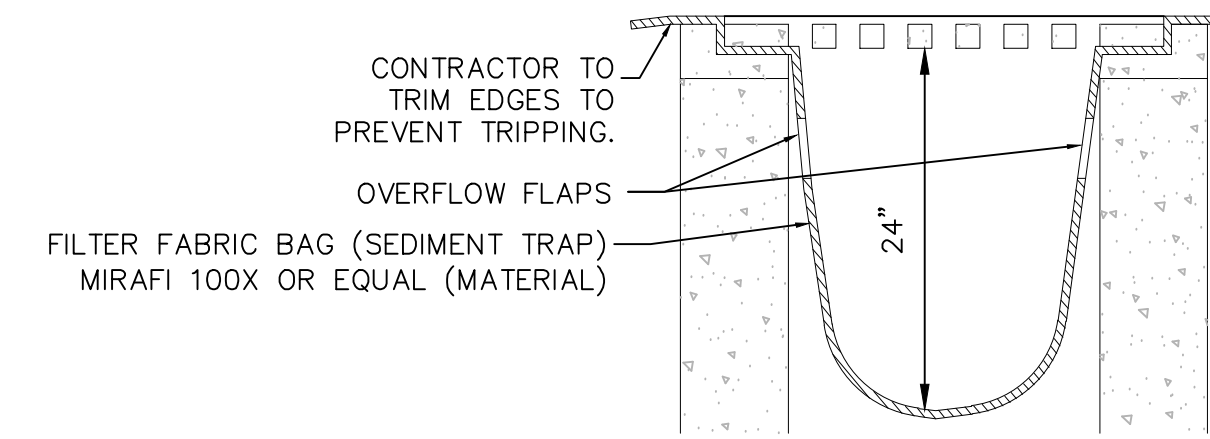
Any work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org



PIPE INLET/OUTLET PROTECTION

N.T.S.

2



NOTES:

1. WHERE CATCH BASIN IS LOCATED IN PAVED AREA USE OF SILT BAG IS ACCEPTABLE
2. INLET PROTECTION TYPE TO BE SELECTED BY CONTRACTOR BASED ON SITE CONDITIONS.

TEMPORARY INLET PROTECTION

N.T.S.

3

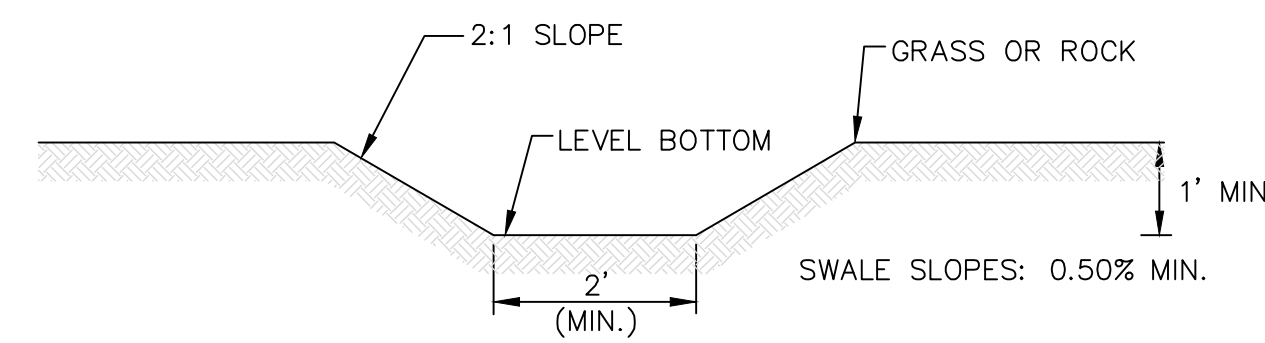
TREE PROTECTION DETAIL

N.T.S.

1

TREE PROTECTION NOTES

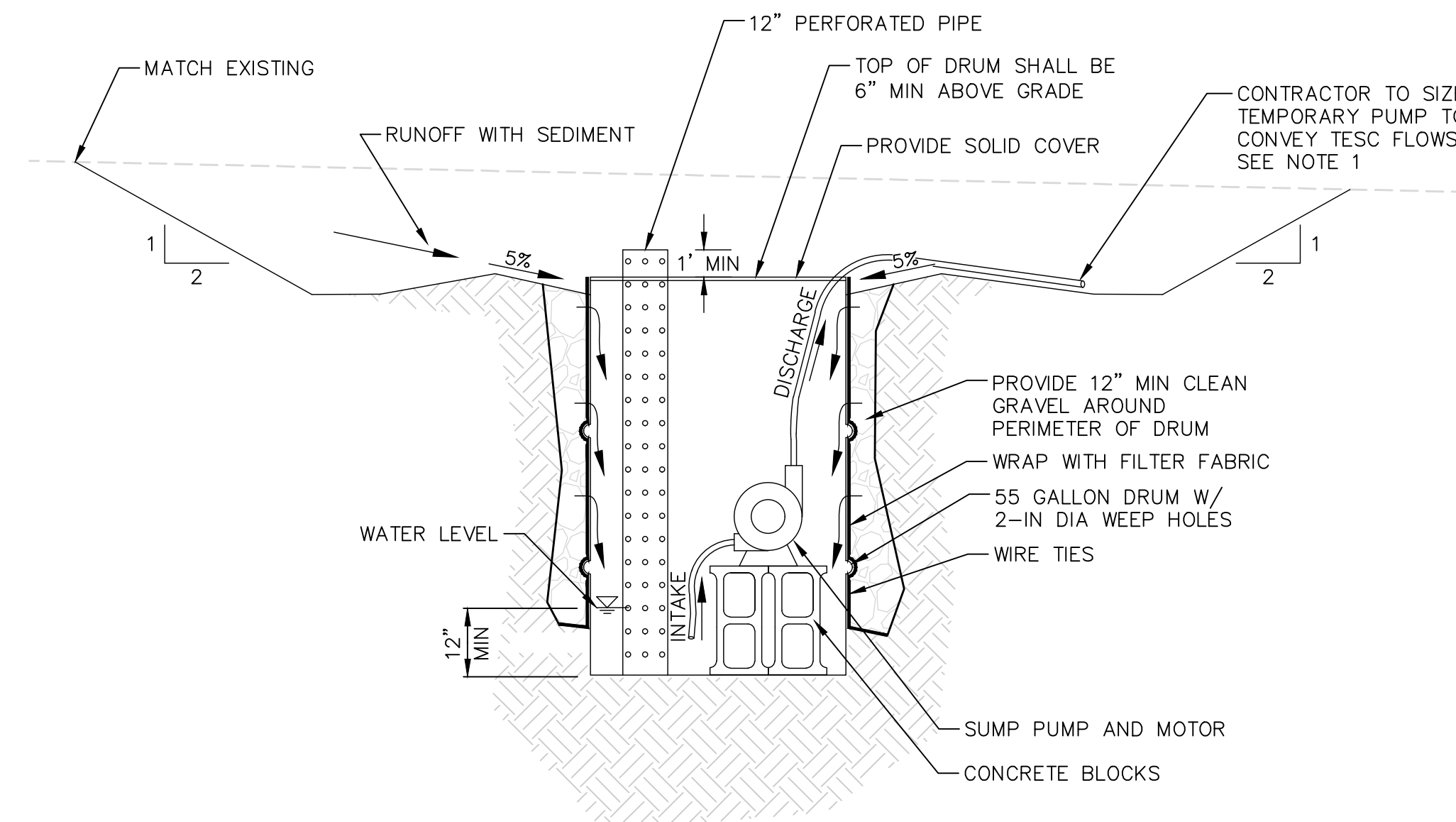
1. EXISTING TREES TO REMAIN SHALL NOT BE DISTURBED DURING DEMOLITION OF EXISTING STRUCTURES OR CONSTRUCTION OF PROPOSED FEATURES. THIS INCLUDES DAMAGES TO TREE TRUNK, ROOTS, AND LIMBS. IF TREE LIMBS RESTRICT VERTICAL LIMITS OF DEMOLITION MACHINERY, A CERTIFIED ARBORIST MAY LIFT CANOPY BY PRUNING LIMBS UP TRUNK.



TEMPORARY INTERCEPTOR SWALE

N.T.S.

4



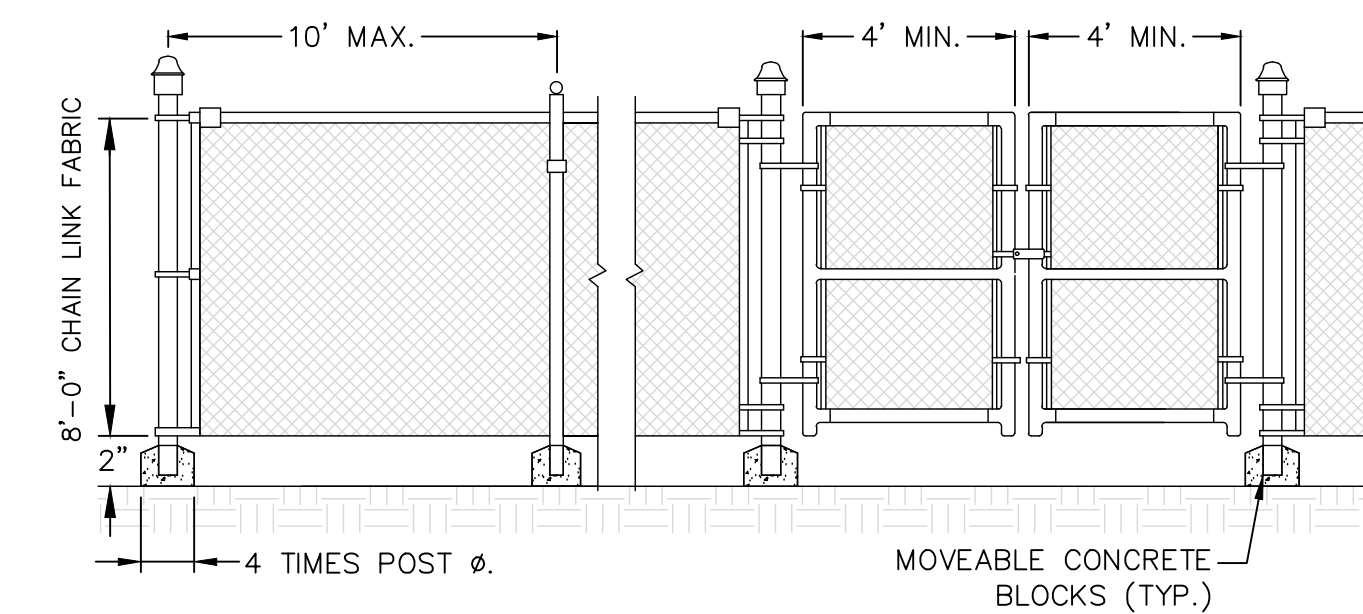
NOTE:

CONTRACTOR SHALL ENSURE DISCHARGE WATER FROM THE TEMPORARY SUMP DRUM AND PUMP ON THE TESC PLAN PASSES WATER QUALITY REQUIREMENTS PER CITY OF MERCER ISLAND AND DEPARTMENT OF ECOLOGY STANDARDS. CONTRACTOR SHALL ADD PROVISIONS AS NECESSARY TO MEET CITY AND STATE STANDARDS DURING CONSTRUCTION.

TEMPORARY SUMP DRUM PUMP

N.T.S.

5



NOTE:

8'-0" TALL FENCE UNLESS OTHERWISE NOTED.

TEMPORARY CHAIN LINK FENCE

N.T.S.

6

CLIENT/OWNER

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SECTION, TOWNSHIP, RANGE:

SECTION 25, TOWNSHIP 24 NORTH, RANGE 4 EAST, W.M.

PROJECT TEAM

REVIEWED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

SHEET NAME

TREE PROTECTION AND T.E.S.C. DETAILS

SHEET NUMBER

C2.02



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DESIGNED BY: B. MCMURTRY

SHEET NAME

T.E.S.C. DETAILS

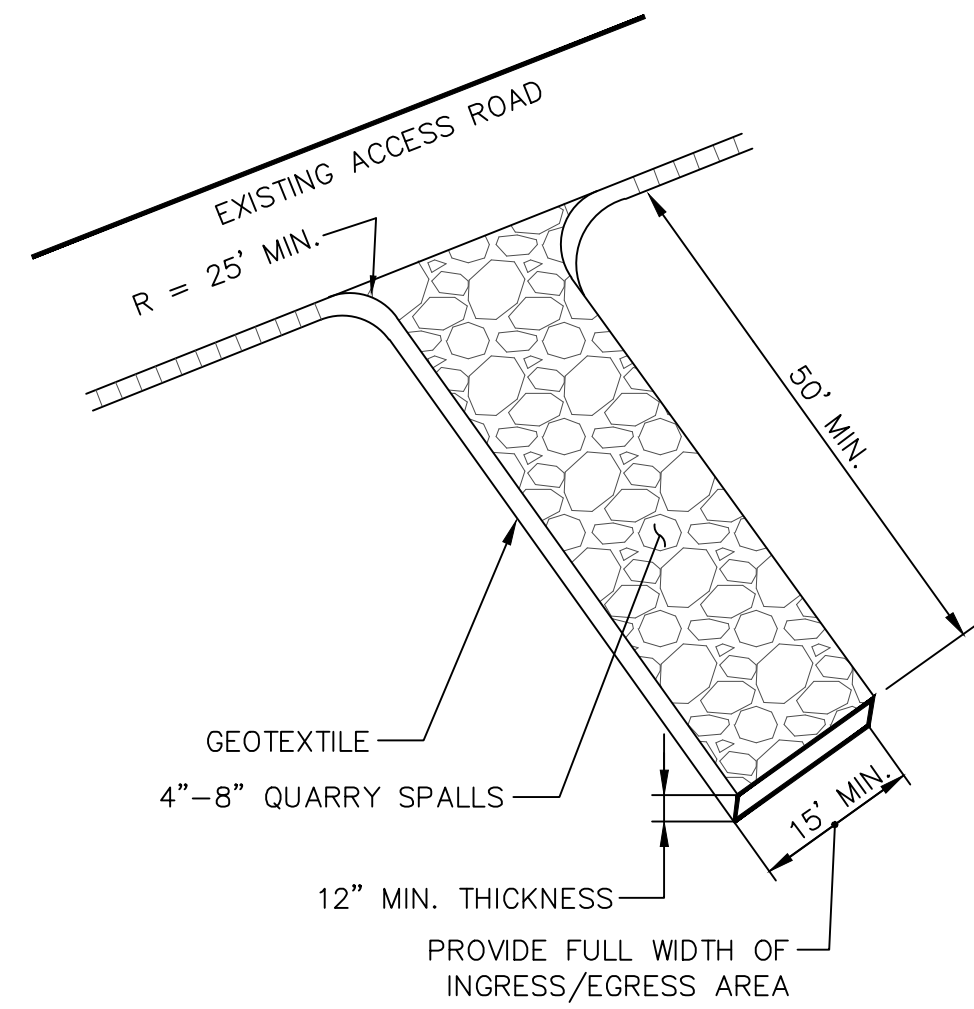
SHEET NUMBER

C2.03



NOTES:

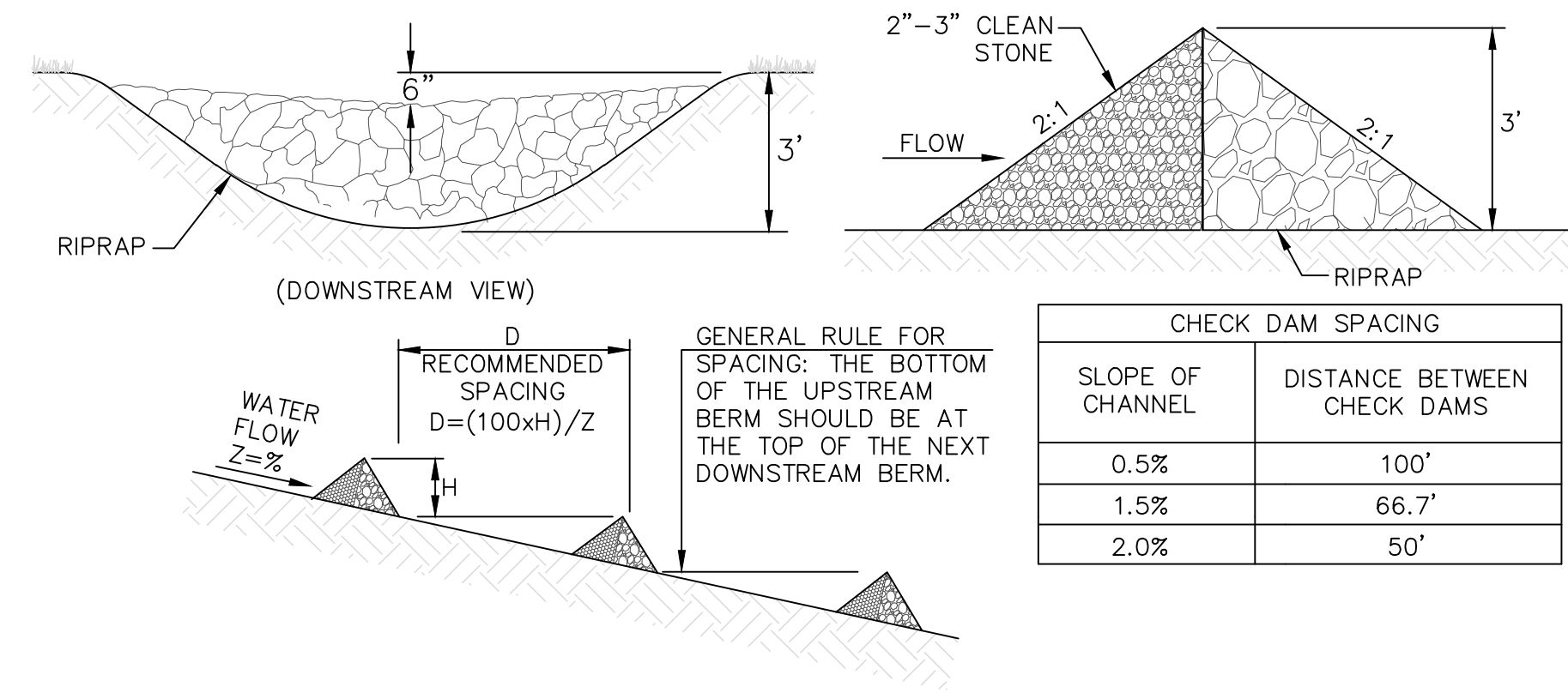
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE, WHEEL WASH, OR BY OTHER MEANS AND METHODS TO AVOID SOIL FROM BEING TRACKED TO PUBLIC R.O.W.
2. DRIVEWAYS SHALL BE PAVED TO THE EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD
3. MATERIAL SHALL BE 4" TO 6" QUARRY SPALLS AND MAY BE TOP-DRESSED WITH 1" TO 3" ROCK. (STANDARD SPECIFICATIONS).
4. THE ROCK PAD SHALL BE AT LEAST 12 INCHES THICK AND 100 FEET LONG. WIDTH SHALL BE THE FULL WIDTH OF THE VEHICLE INGRESS AND EGRESS AREA.
5. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD.
6. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE WHEELS, THE WHEELS SHALL BE HOSED OFF BEFORE THE VEHICLE ENTERS A PAVED STREET. THE WASHING SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK AND WASH WATER SHALL DRAIN TO A SEDIMENT RETENTION FACILITY OR THROUGH SILT FENCE.



CONSTRUCTION ENTRANCE

N.T.S.

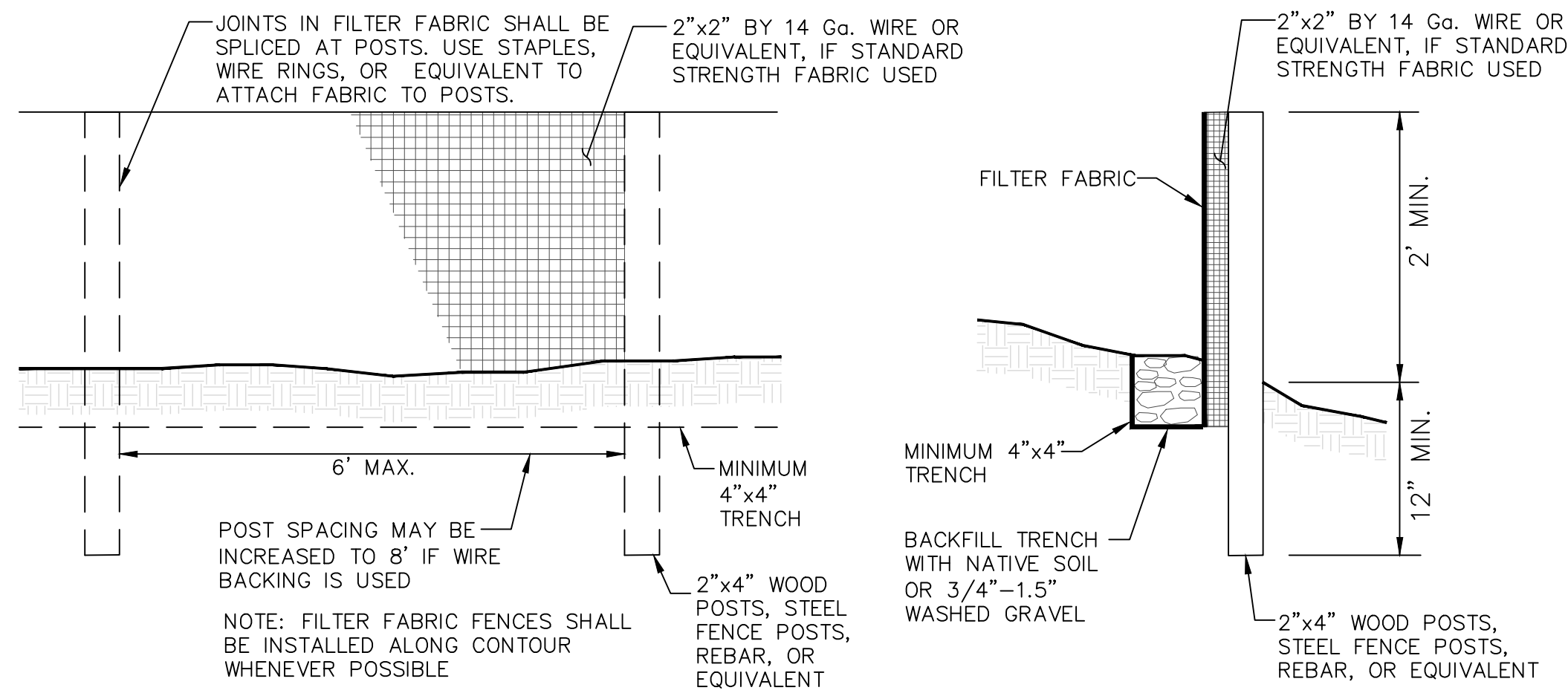
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ROCK CHECK DAM

N.T.S.

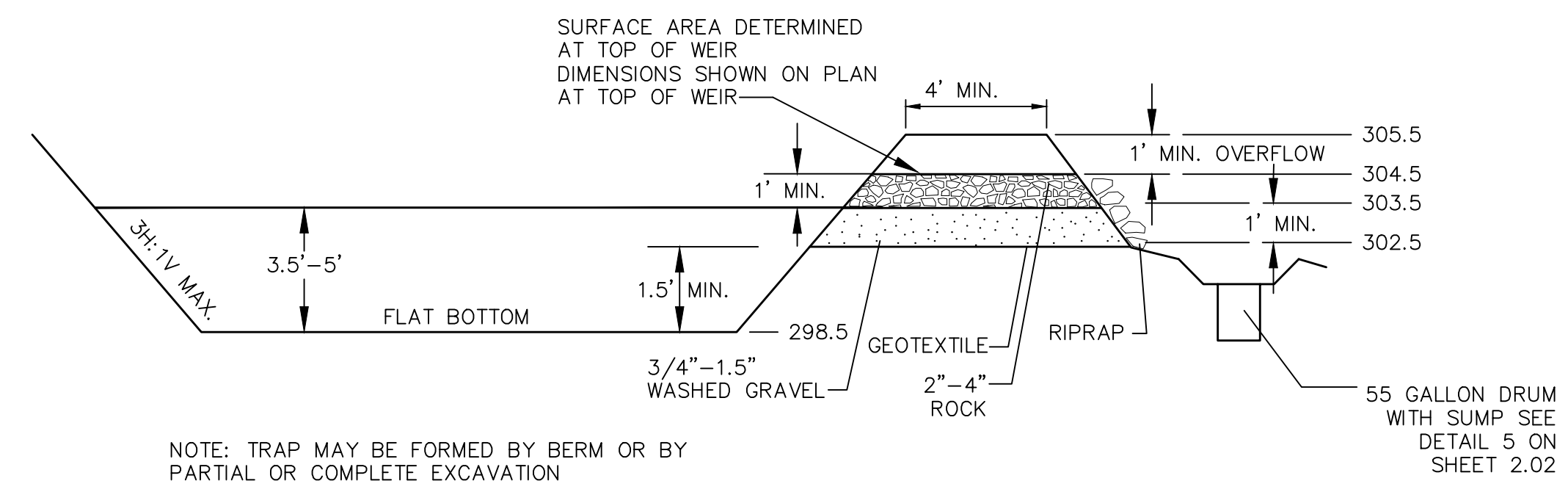
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SILT FENCE

N.T.S.

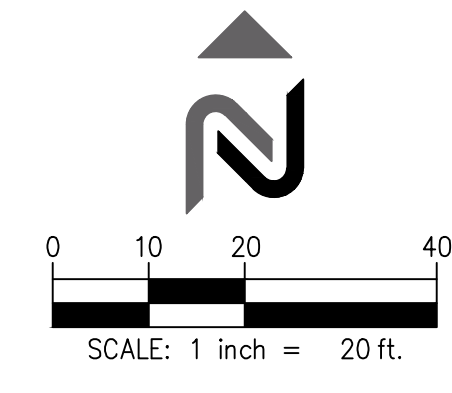
3



TEMPORARY SEDIMENT TRAP

N.T.S.

4



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LEGEND

	PARCEL LINE
	BUILDING SETBACK LINE
	BUILDING PAD
	CONCEPTUAL BUILDING LINE
	TREE PROTECTION FENCE
	LIMITS OF DISTURBANCE
	ASPHALT PAVEMENT
	CONCEPTUAL CONCRETE DRIVEWAY

SITE DATA

TOTAL DISTURBED AREA (SF)	68,824.8
EXISTING IMPERVIOUS (SF)	2,390.0
EXISTING PERVIOUS (SF)	66,434.8
TOTAL PROPOSED IMPERVIOUS (SF)	25,392.8
NEW ASPHALT PAVING (SF)	12,638.9
NEW CONCRETE (SF)	2,904.4
TOTAL PROPOSED PERVIOUS (SF)	43,462.0

PARCEL AREA

TRACT A	11,191
LOT 1	16,254
LOT 2	12,959
LOT 3	12,498
LOT 4	15,924
TOTAL	68,826

CLIENT/OWNER
SAINTFIELD2 LLC

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PROJECT TEAM
 REVIEWED BY: G. GOUDY
 DESIGNED BY: B. MCMURTRY

SHEET NAME

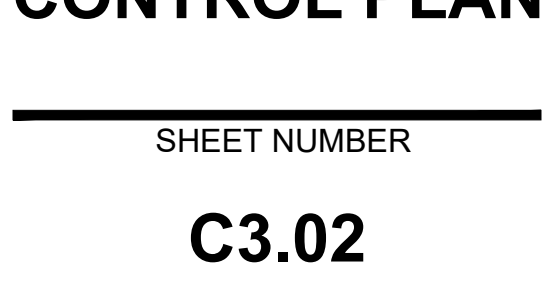
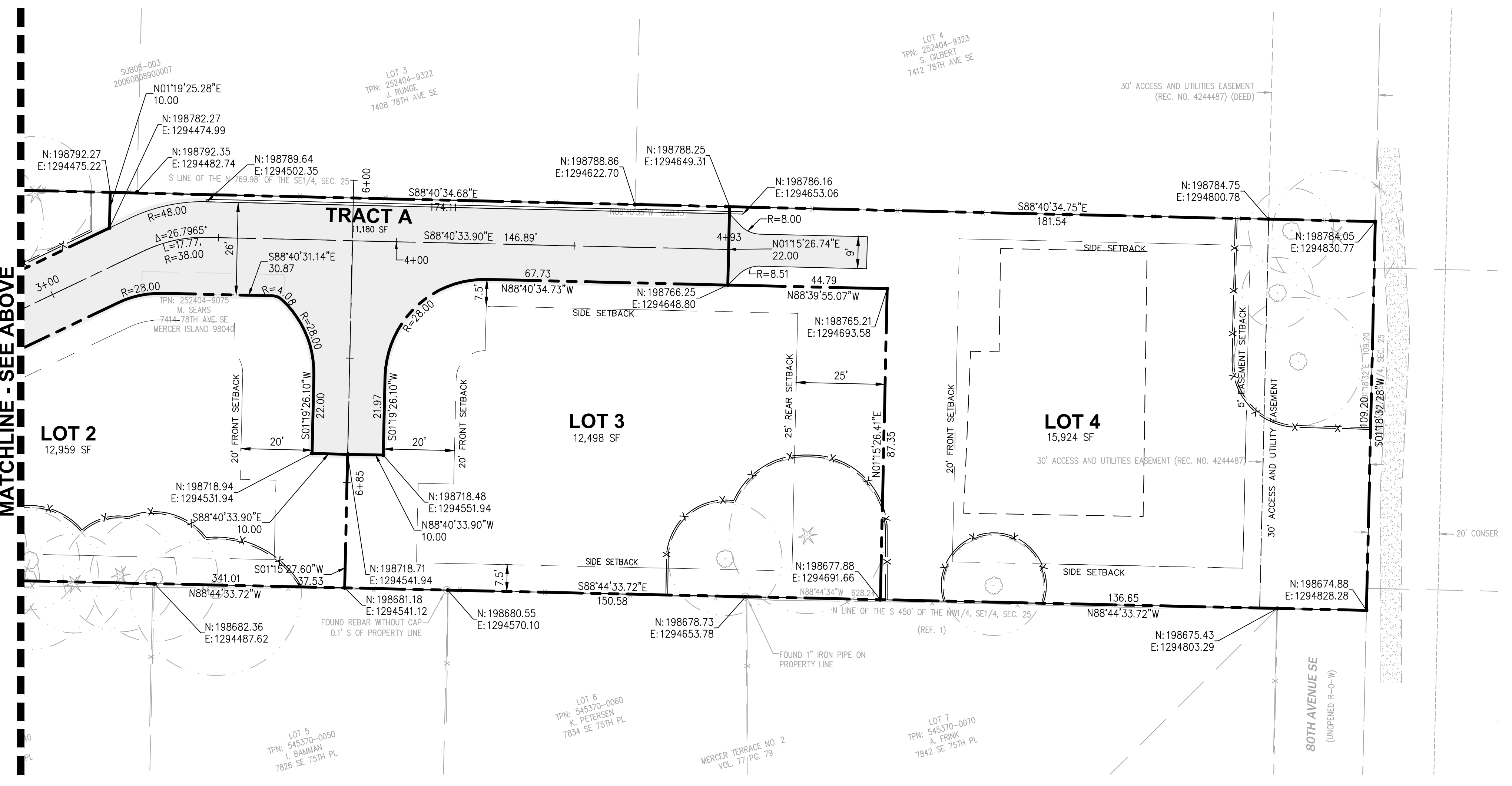
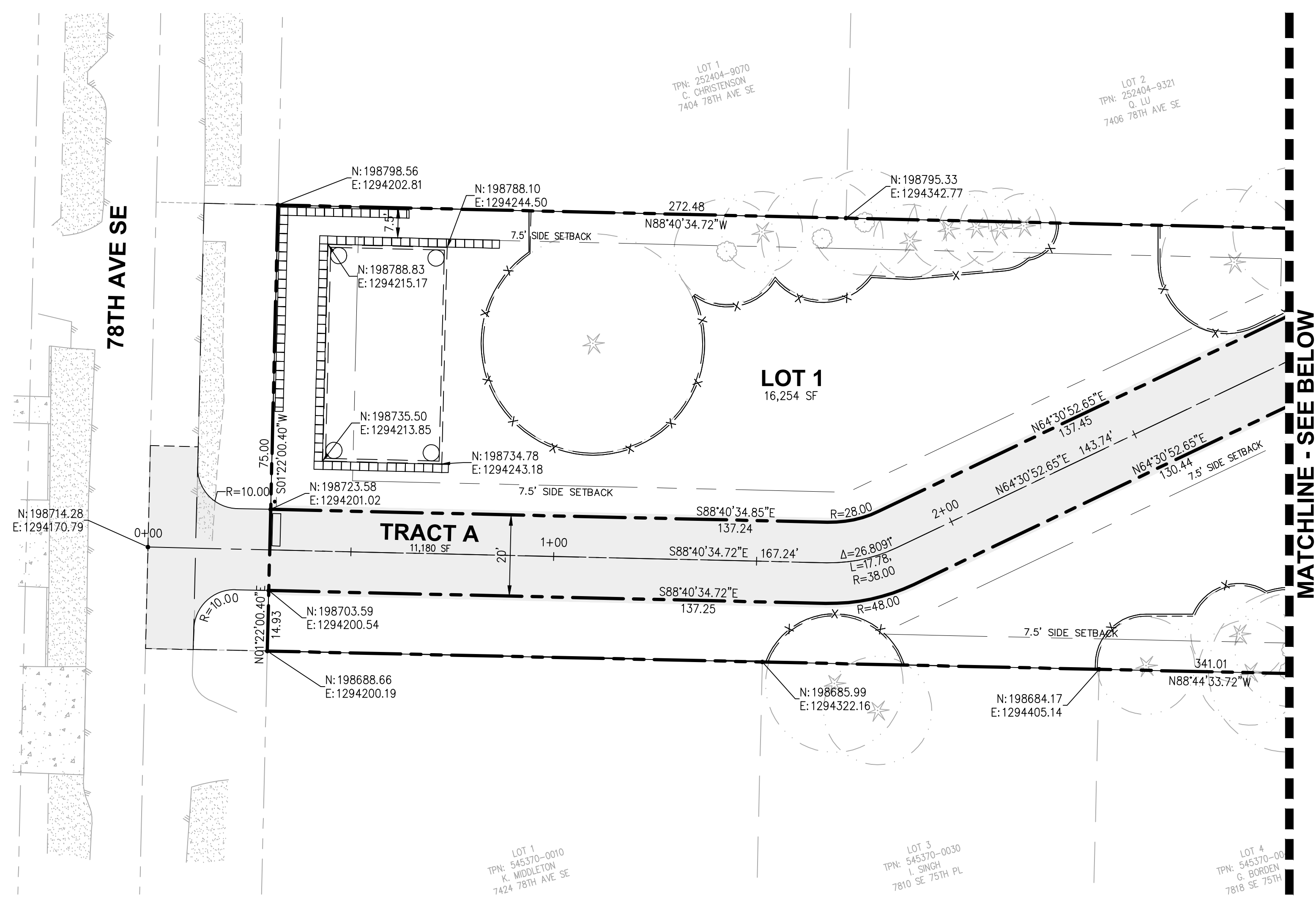
HORIZONTAL CONTROL PLAN

SHEET NUMBER

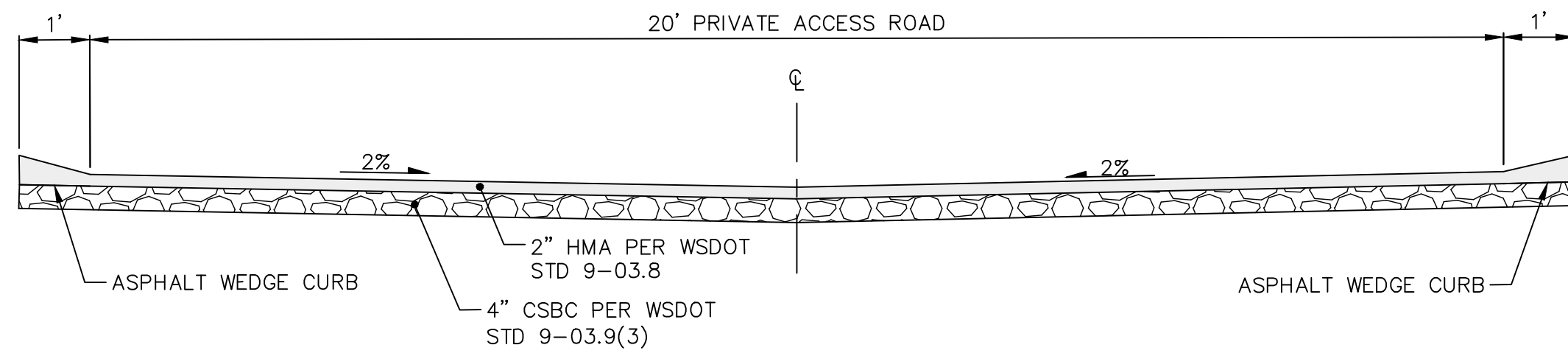
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 September 12, 2024
 SITE COPY



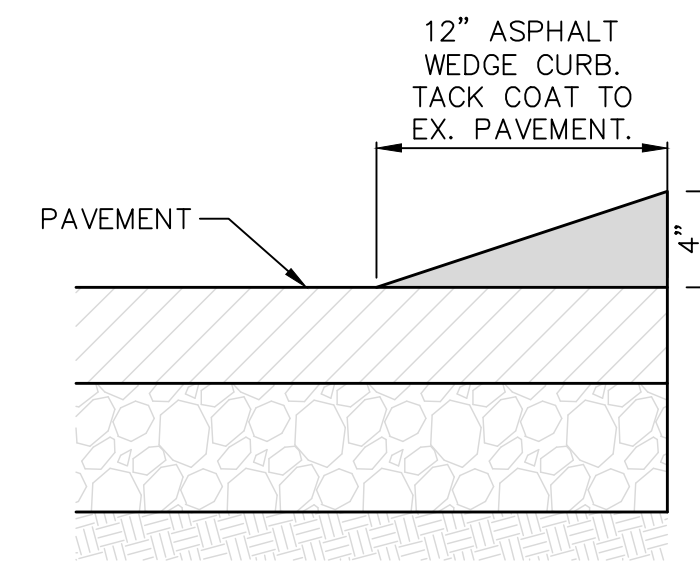
REVIEWED FOR CODE COMPLIANCE
 September 12, 2024
 SITE COPY



TYPICAL TRACT A ROAD SECTION

SCALE: H: 1"=2' V: 1"=2'

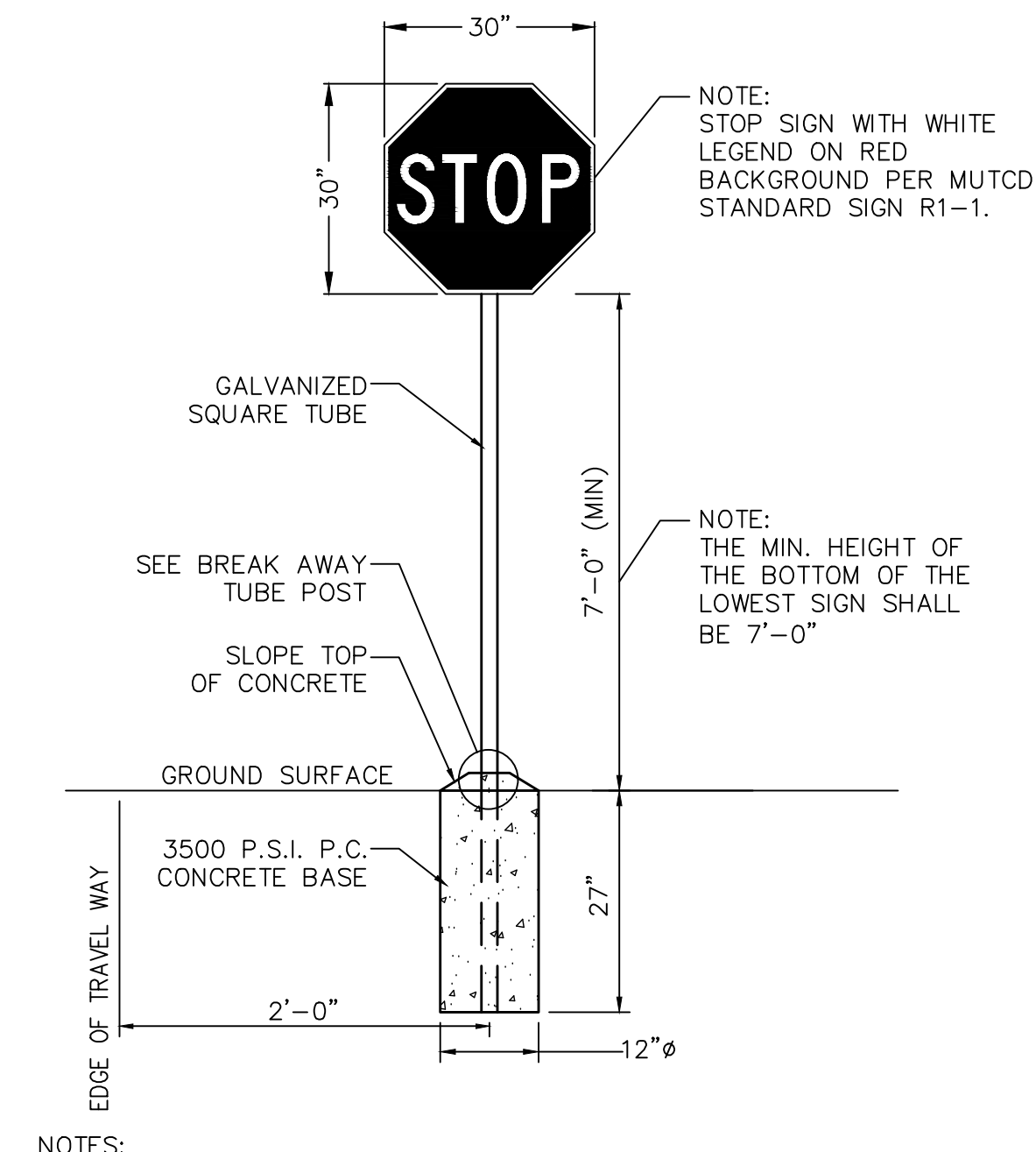
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ASPHALT WEDGE CURB

N.T.S.

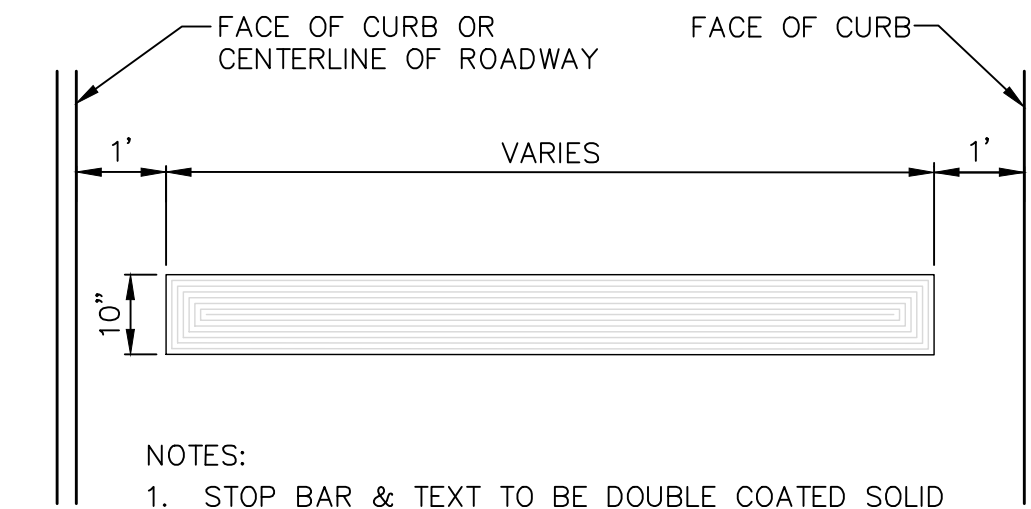
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STOP SIGN

N.T.S.

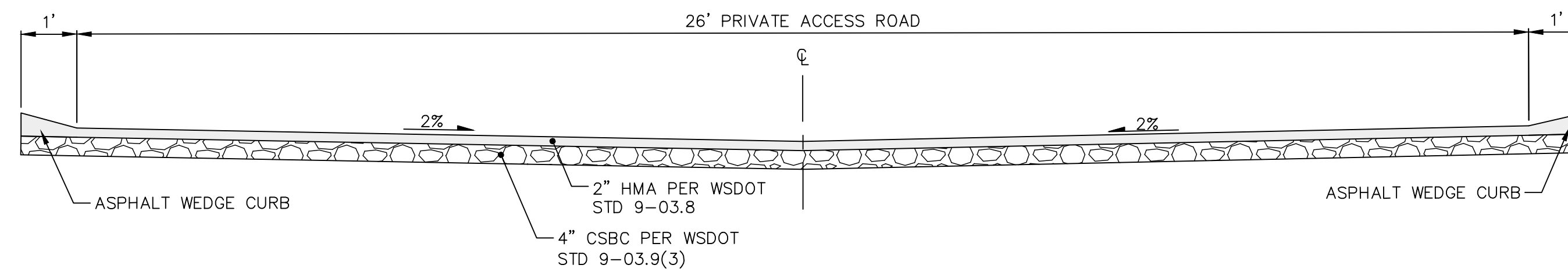
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PAINTED STOP BAR

N.T.S.

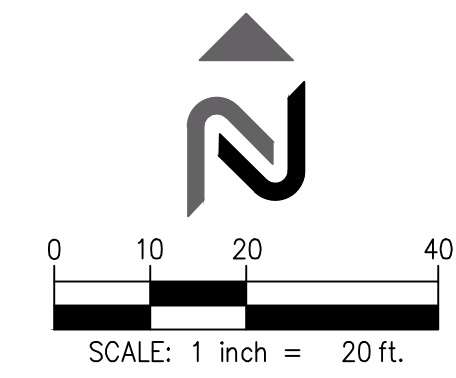
4



FIRE DEPT. HAMMERHEAD TURN-AROUND ROAD SECTION

SCALE: H: 1"=2' V: 1"=2'

5



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SECTION 25, TOWNSHIP 24 NORTH,
RANGE 4 EAST, W.M.

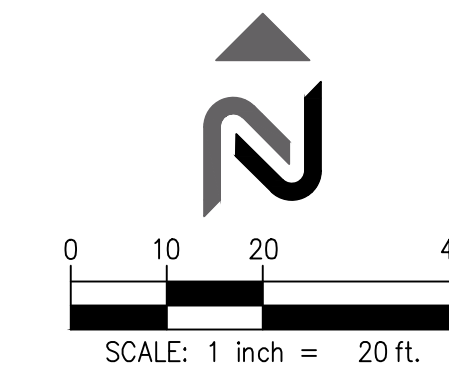
PROJECT TEAM
REVIEWED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

SHEET NAME
SITE AND STREET IMPROVEMENT SECTIONS

SHEET NUMBER

C3.04



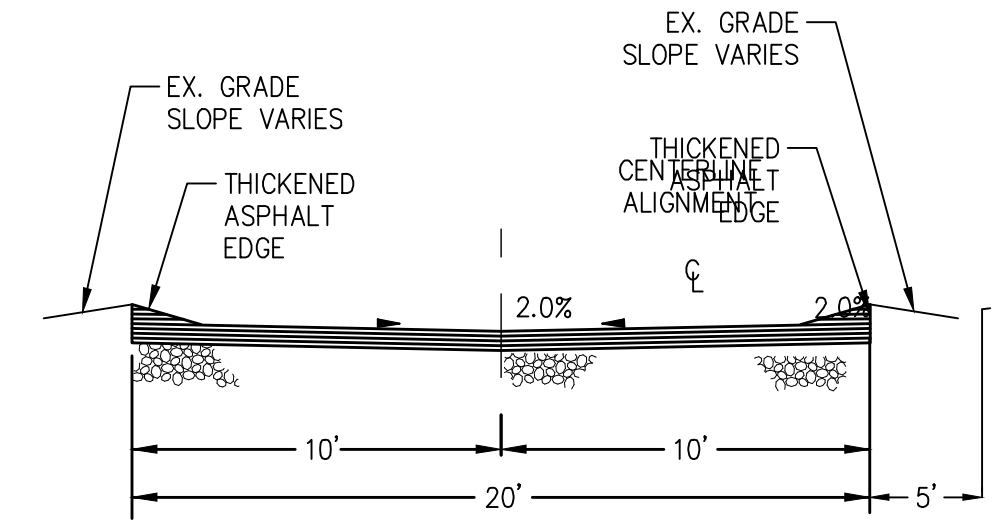


GRADING LEGEND:

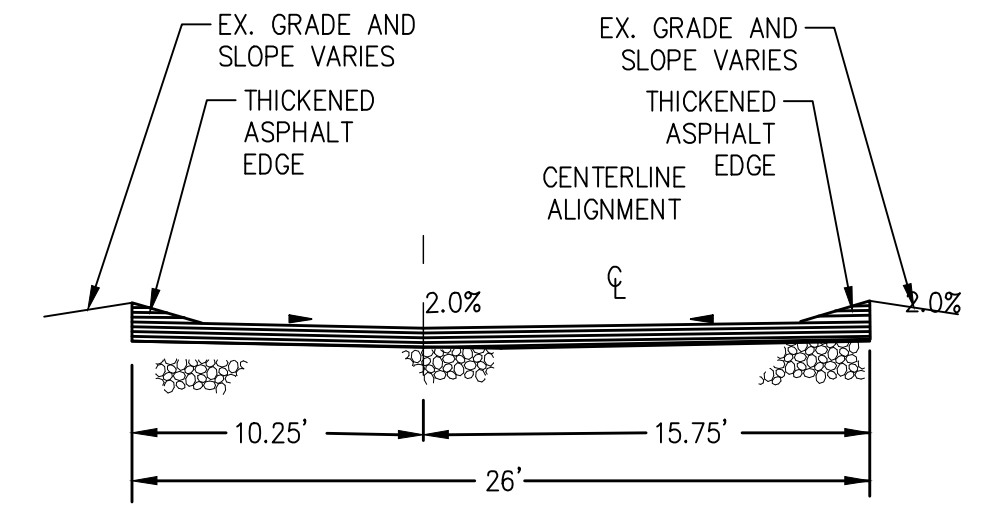
LIMIT OF DISTURBANCE	---
PROPERTY LINE	---
TREE PROTECTION FENCE	-X-X-
EXISTING CONTOUR	- - - -
PROPOSED CONTOUR	— — — —
GRADE BREAK	— — — —
SLOPE DIRECTION	2.0%
SPOT ELEVATION	TP=XX.XX (M.E.)
TOP OF PAVEMENT	TP
MATCH EXISTING	(M.E.)
DOOR THRESHOLD	THR
TOP OF FACE OF CURB	TC
BOTTOM OF FACE OF CURB	BC
FINISHED GRADE AT TOP OF WALL/ROCKERY	TW
FINISHED GRADE AT BOTTOM WALL/ROCKERY	BW
STORM STRUCTURE RIM	RM

GRADING NOTES:

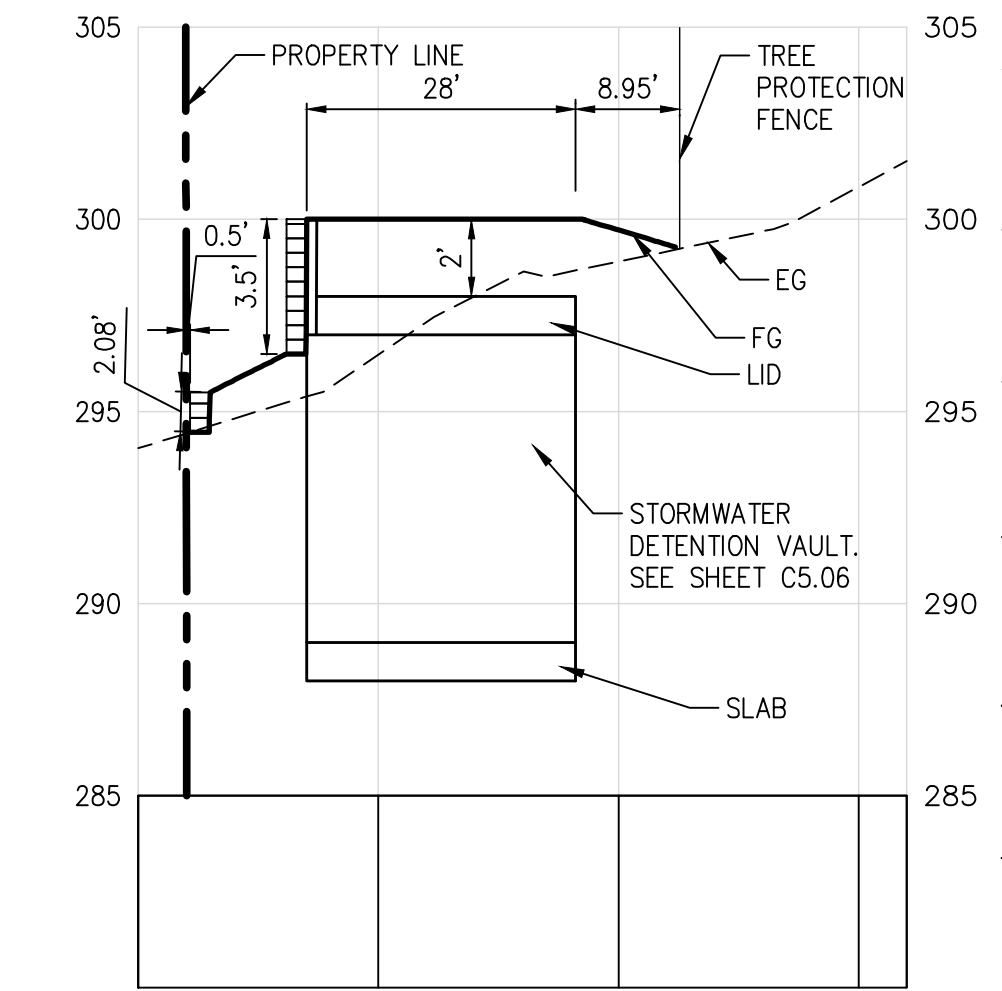
1. ALL EXCAVATION ADJACENT TO EXISTING TREES TO REMAIN ALONG ROADWAY SHALL BE DONE BY AIR-SPADE INVESTIGATION, WITH CERTIFIED ARBORIST INSPECTING CONSTRUCTION.



ACCESS ROAD SECTION
STATION FROM 0+30.35 TO 3+42.13
AND 4+25.55 TO 4+93
N.T.S.



ACCESS ROAD SECTION
STATION FROM 3+42.13 TO 4+09.70
N.T.S.



VAULT SURFACE SAMPLE PROFILE
SCALE:
HORIZONTAL: 1"=20'
VERTICAL: 1"=5'



11235 s.e. 6th street | suite 150 bellevue, wa 98004
t: 425.453.9501 | f: 425-453-8208
www.navixeng.com

CLIENT/OWNER

SAINTFIELD2 LLC

PROJECT NAME

SEARS

NAVIX PROJECT NUMBER: 50-215-004
PROJECT ADDRESS

7414 78TH AVE SE
MERCER ISLAND, WA 98004

STAMP



REVISIONS

REV	ISSUED FOR:	DATE
1	PERMIT RESUBMITTAL	07/01/24
2	PERMIT RESUBMITTAL	08/14/24



SECTION, TOWNSHIP, RANGE:
SECTION 25, TOWNSHIP 24 NORTH,
RANGE 4 EAST, W.M.

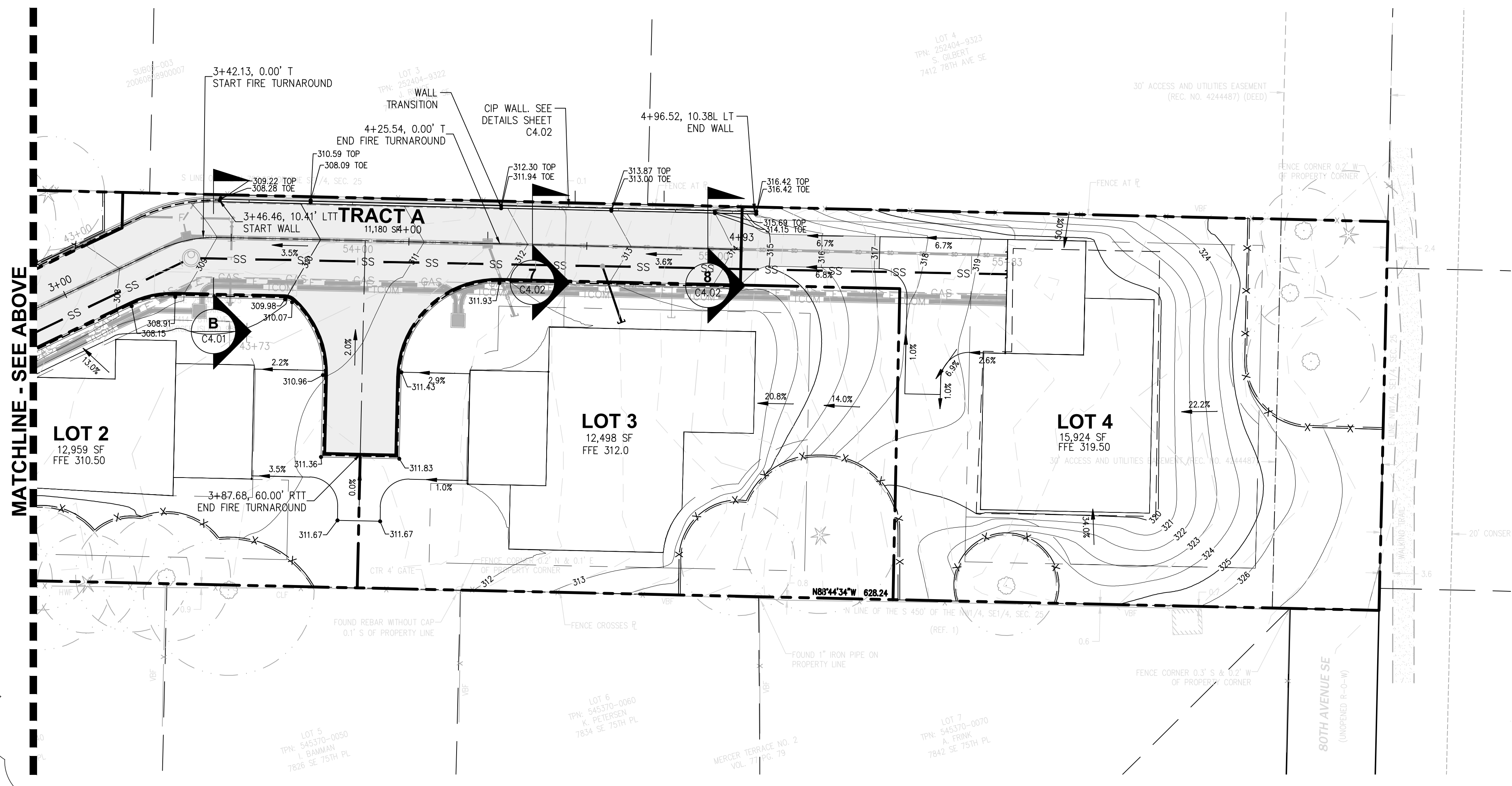
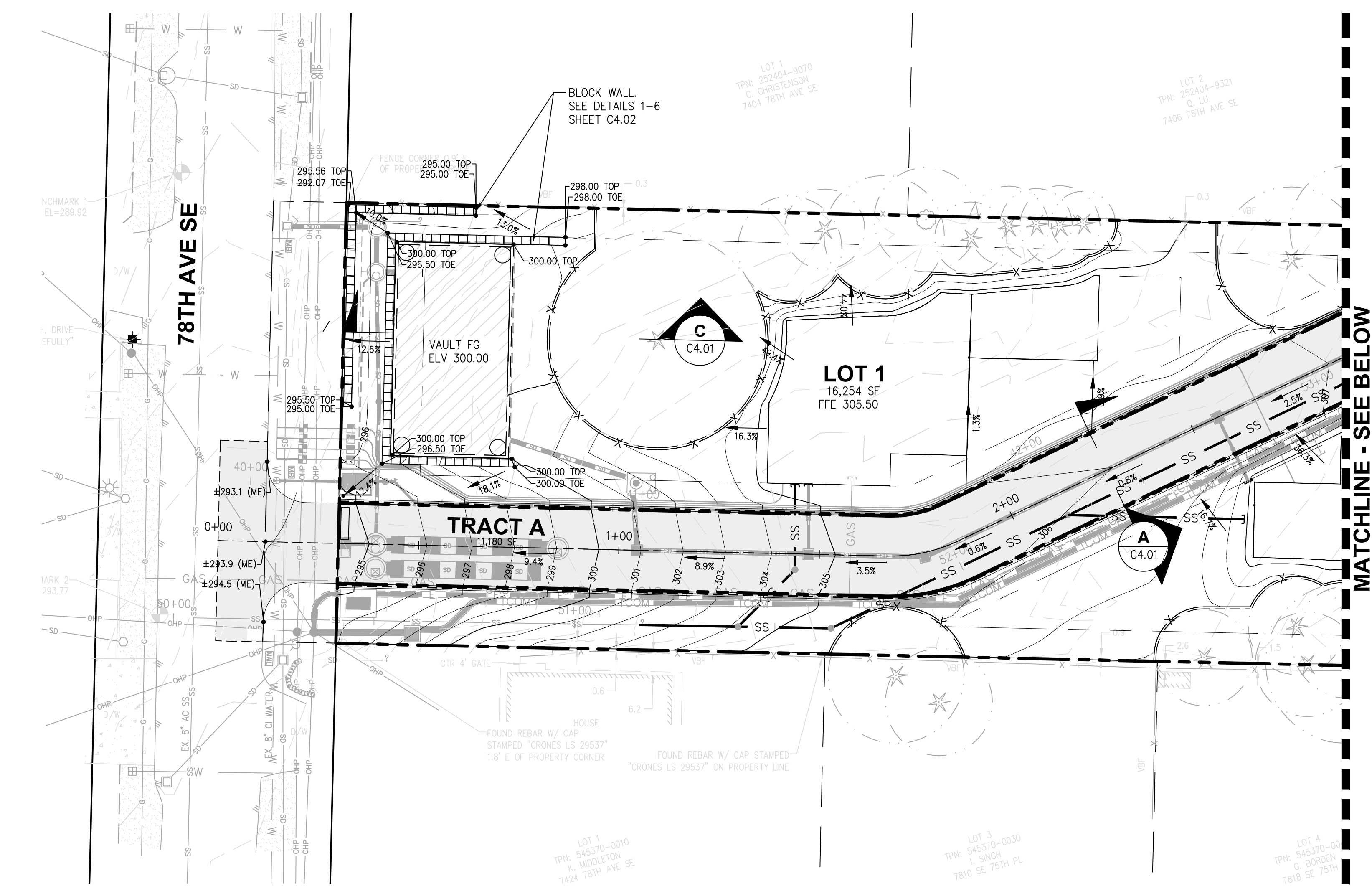
PROJECT TEAM
REVIEWED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

SHEET NAME

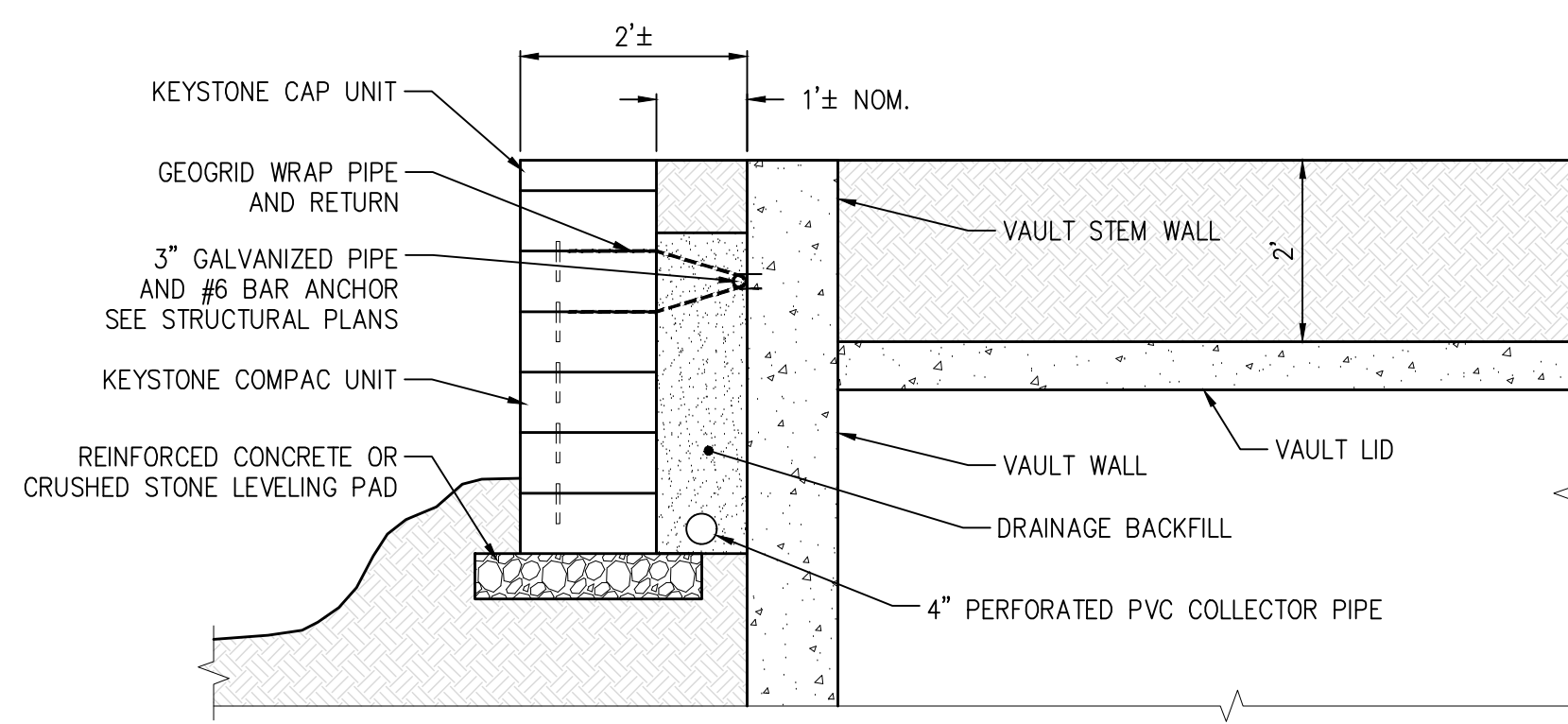
GRADING PLAN

SHEET NUMBER

C4.01

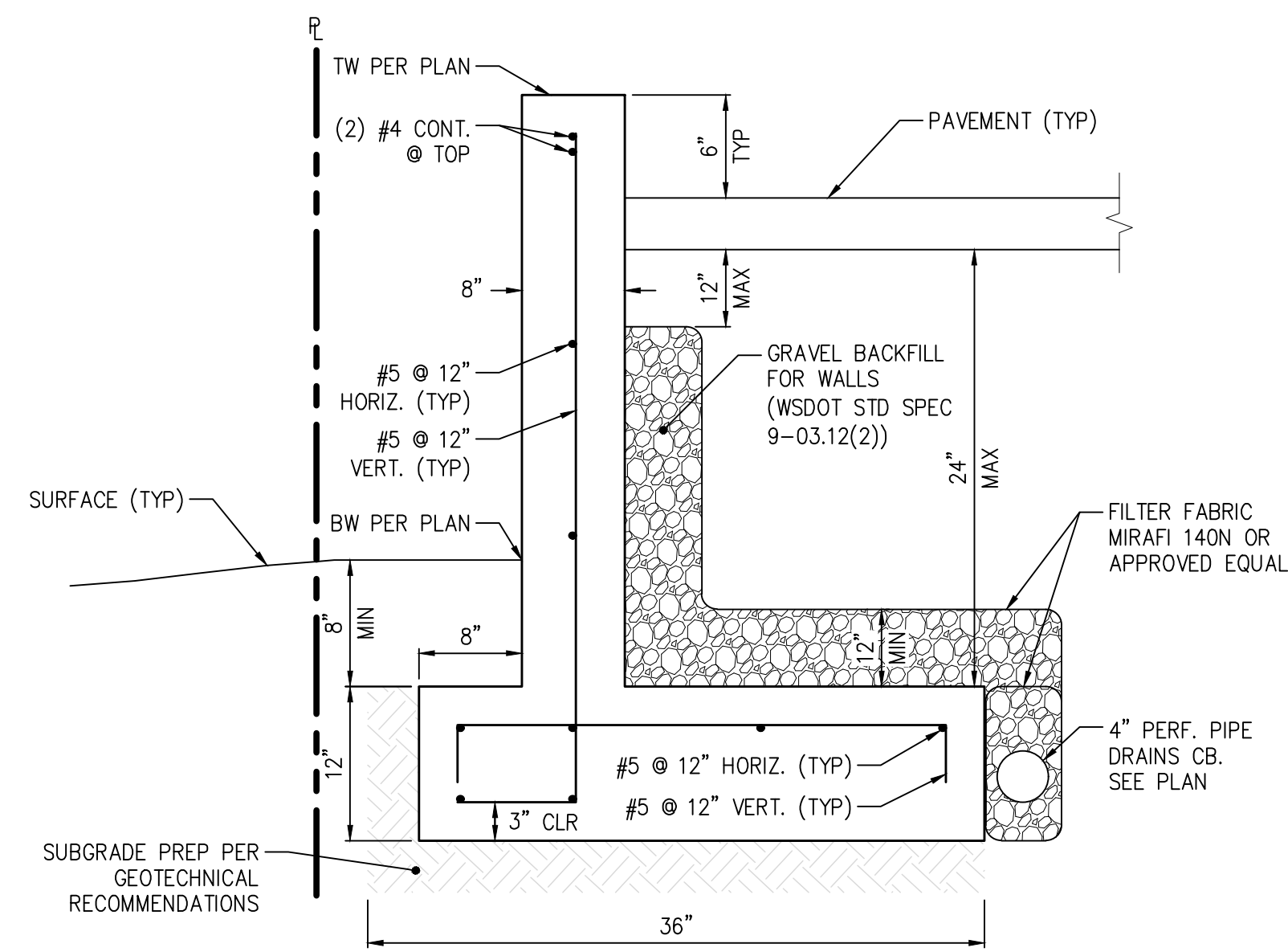


2



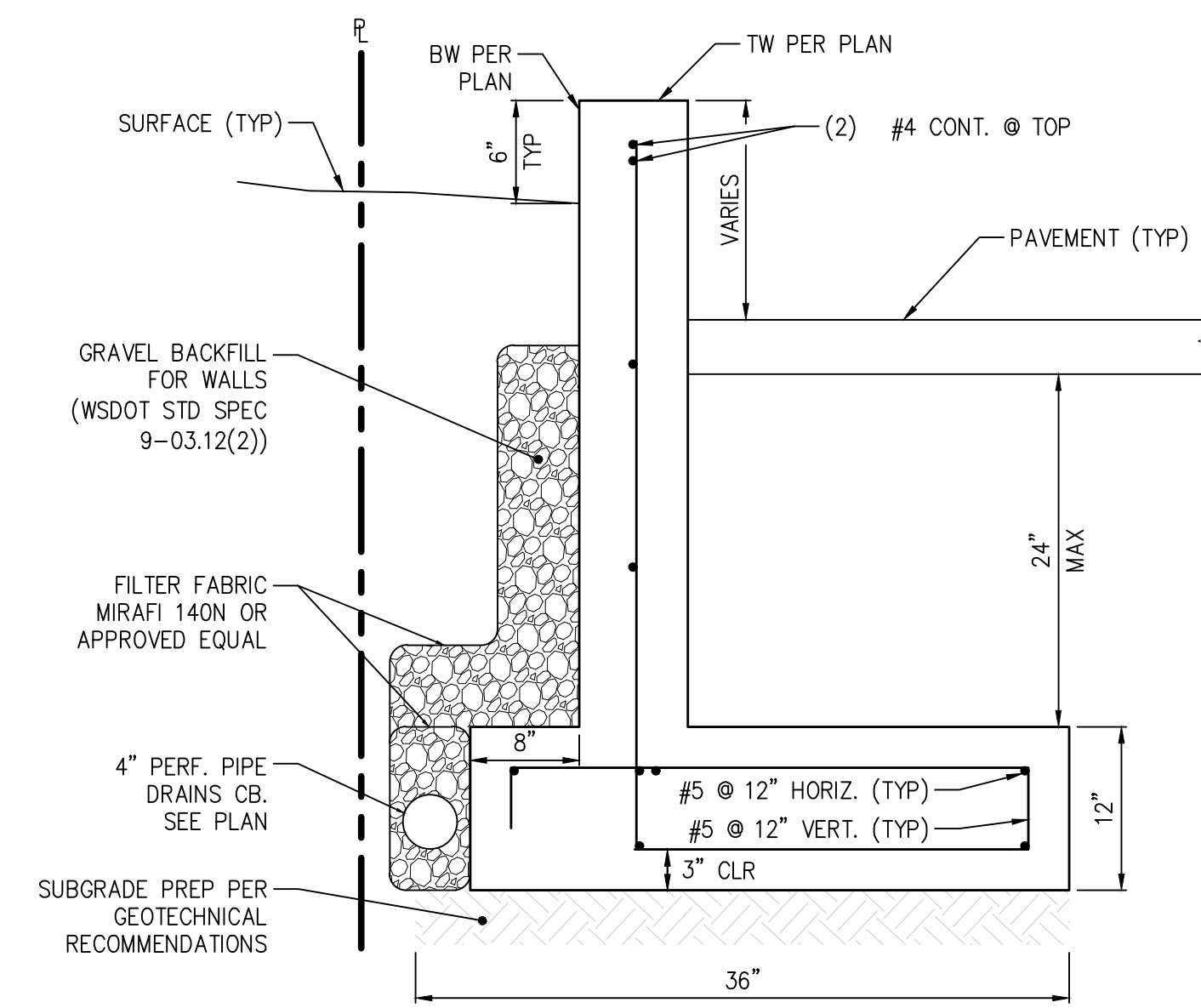
TYPICAL VAULT WALL SECTION
N.T.S.

1



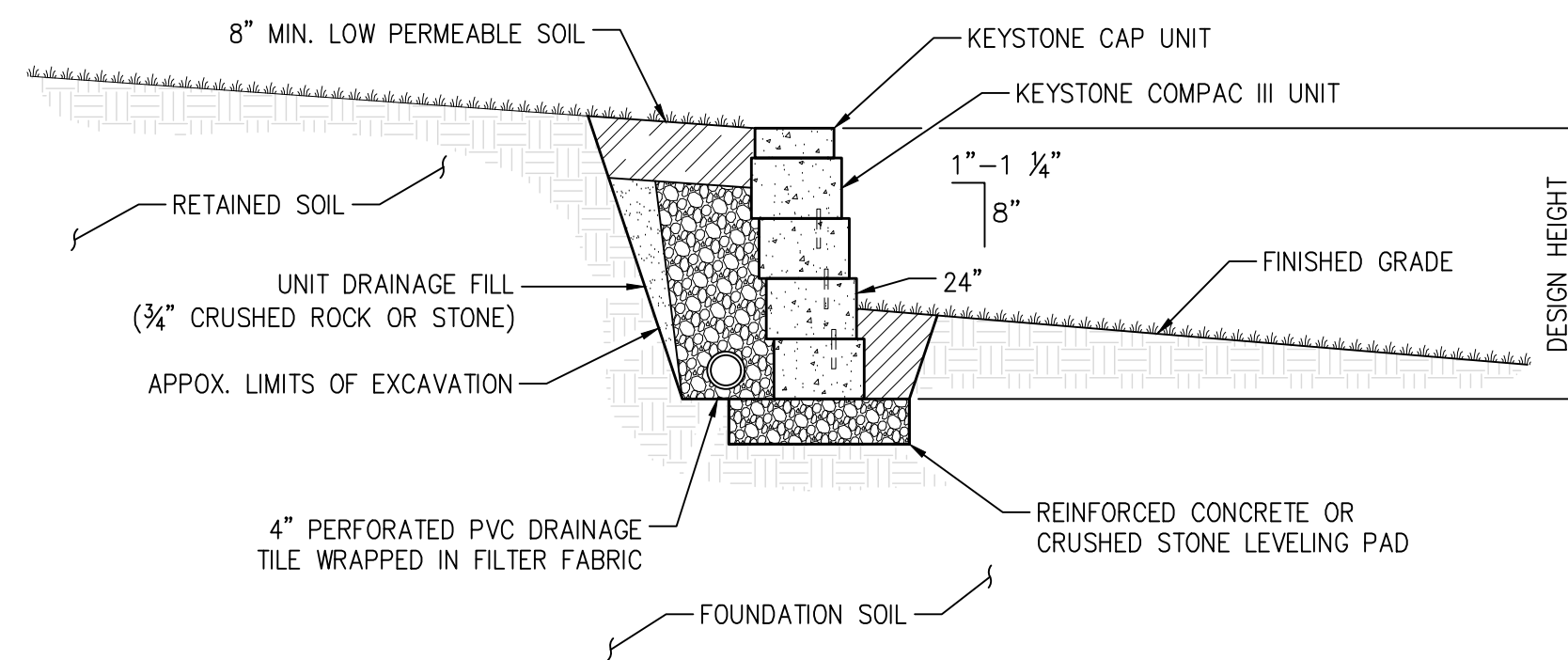
RETAINING WALL TYPE A
N.T.S.

7



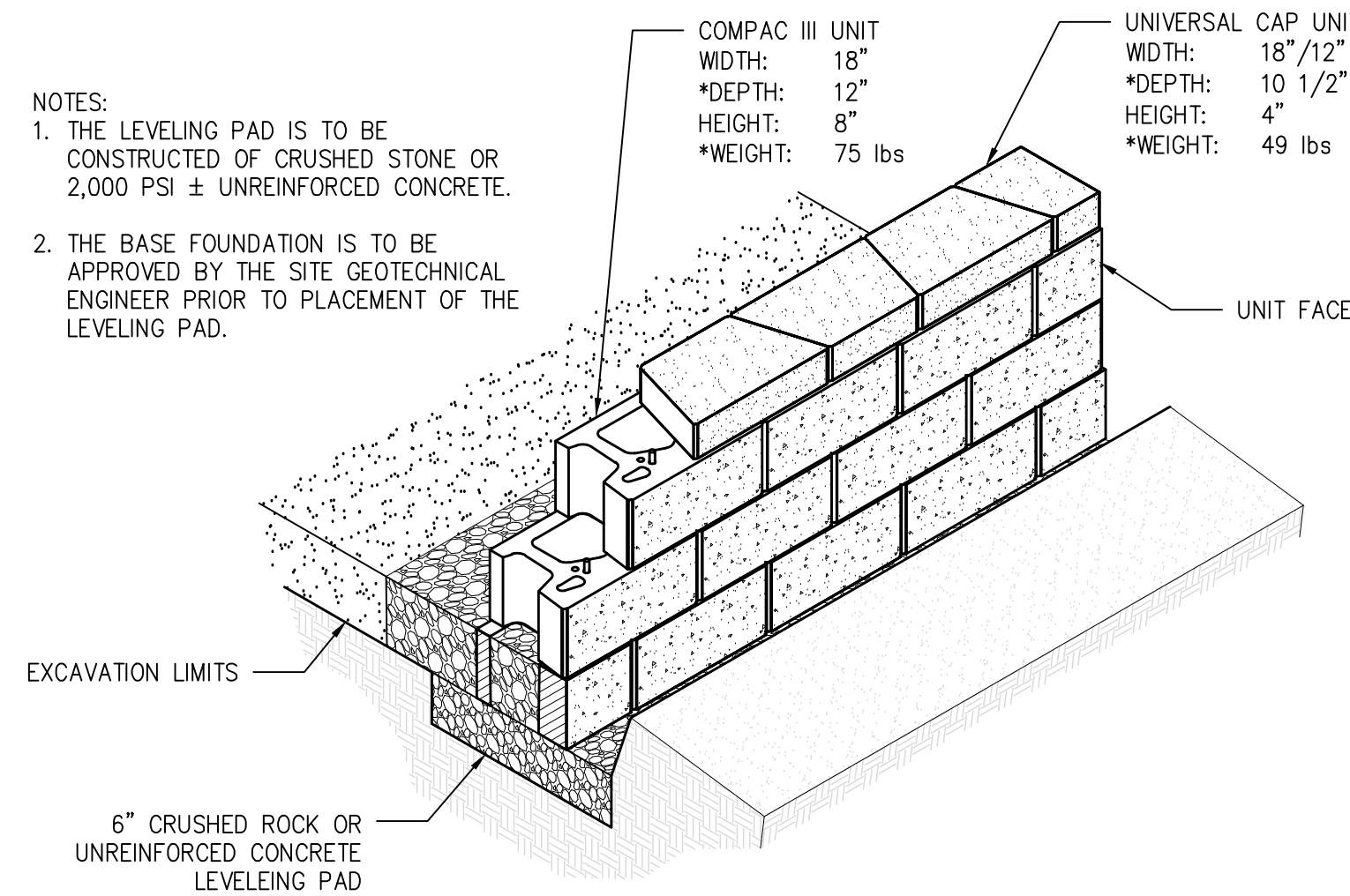
RETAINING WALL TYPE B
N.T.S.

8



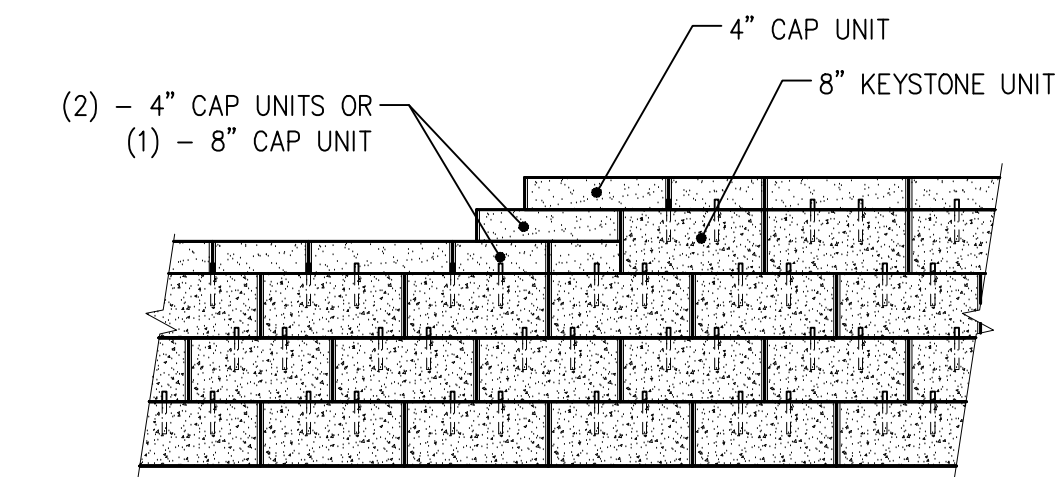
COMPAC III UNIT - 1\"/>

2



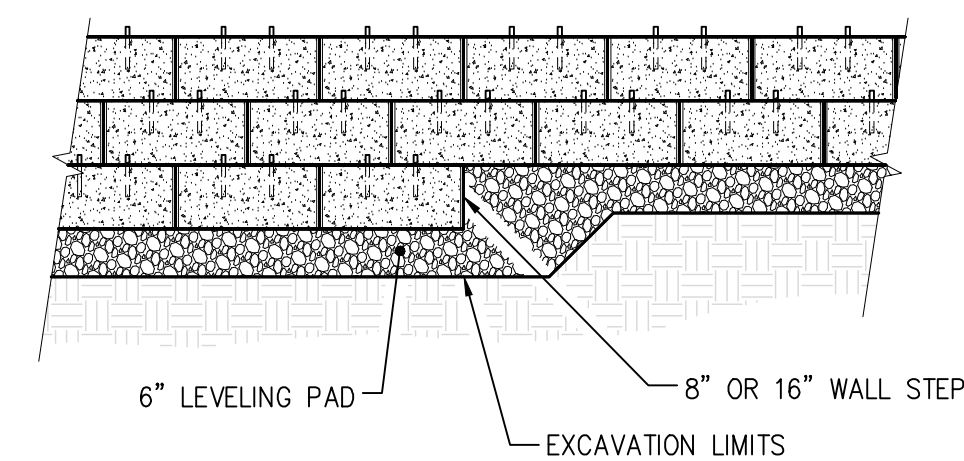
COMPAC III UNIT/BASE PAD ISOMETRIC SECTION VIEW
N.T.S.

3



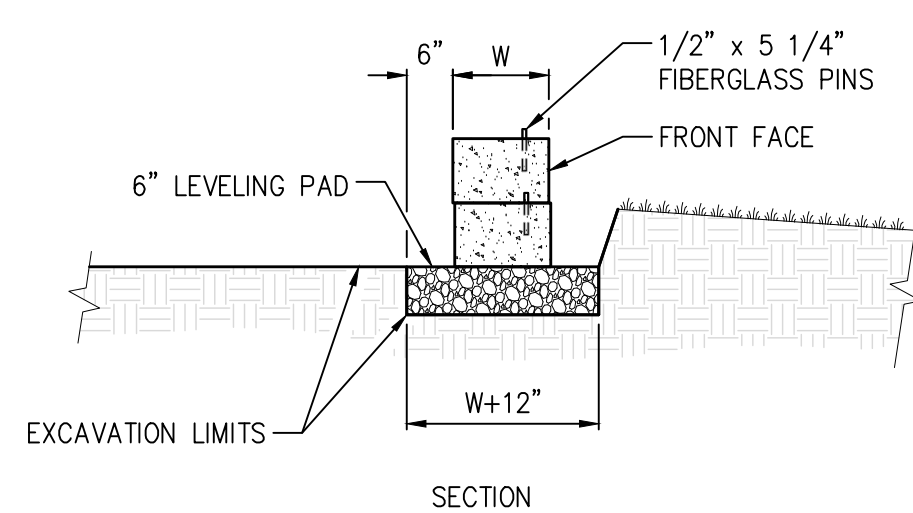
TOP OF WALL STEPS
N.T.S.

6



NOTE:
THE LEVELING PAD IS TO BE CONSTRUCTED OF CRUSHED STONE OR 2000 PSI ± UNREINFORCED CONCRETE.

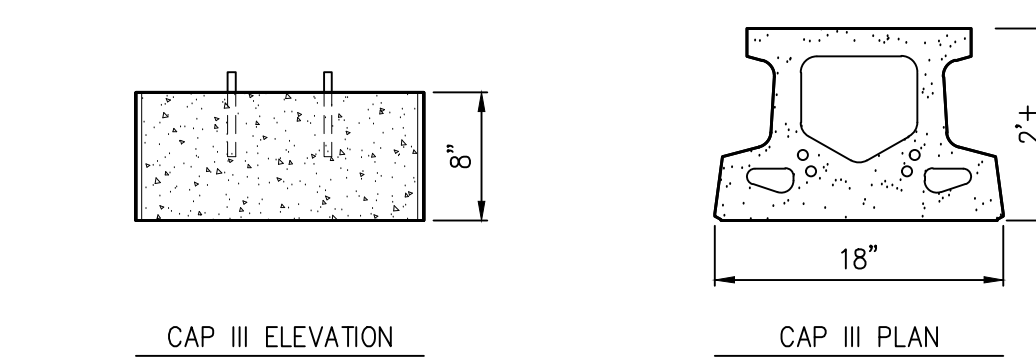
ELEVATION



SECTION

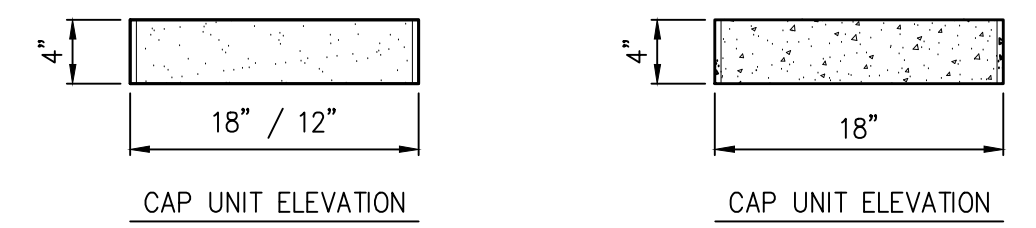
LEVELING PAD DETAIL
N.T.S.

4



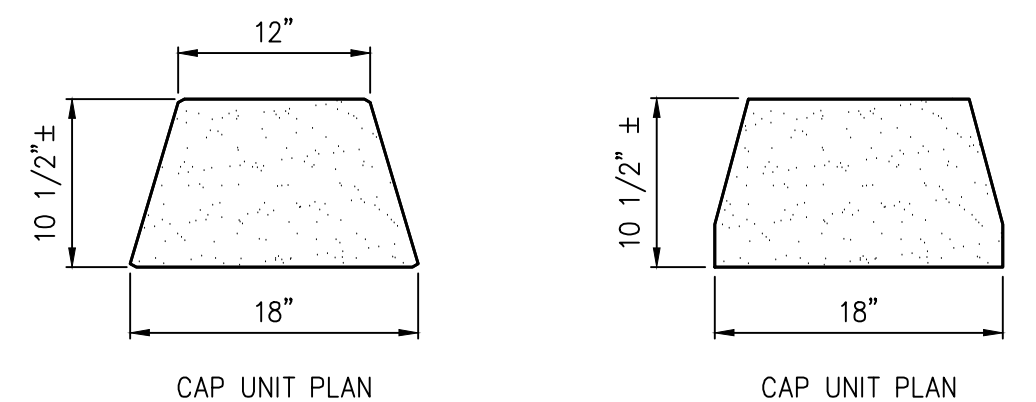
CAP III ELEVATION

CAP III PLAN



CAP UNIT ELEVATION

CAP UNIT ELEVATION



CAP UNIT PLAN

CAP UNIT PLAN

UNIVERSAL CAP UNIT OPTION

STRAIGHT SPLIT CAP UNIT OPTION

CAP UNIT DETAILS
N.T.S.

5

CLIENT/OWNER

SAINTFIELD2 LLC

PROJECT NAME

SEARS

NAVIX PROJECT NUMBER: 50-215-004
PROJECT ADDRESS

7414 78TH AVE SE
MERCER ISLAND, WA 98040

STAMP



REVISIONS

REV	ISSUED FOR:	DATE
1	PERMIT RESUBMITTAL	07/01/24
2	PERMIT RESUBMITTAL	08/14/24



SECTION, TOWNSHIP, RANGE:
SECTION 25, TOWNSHIP 24 NORTH,
RANGE 4 EAST, W.M.

PROJECT TEAM

REVIEWED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

SHEET NAME

RETAINING WALL DETAILS

SHEET NUMBER

C4.02

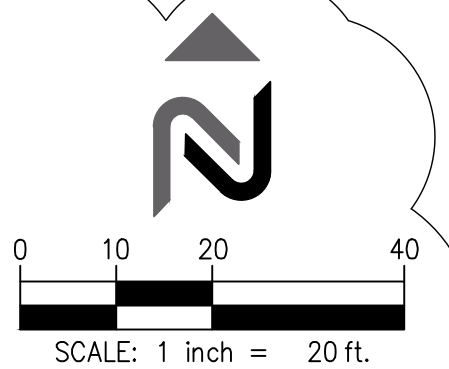




REVISIONS		
REV	ISSUED FOR:	DATE
1	PERMIT RESUBMITTAL	07/01/24
2	PERMIT RESUBMITTAL	08/14/24

SECTION, TOWNSHIP, RANGE:		
PROJECT TEAM		
SHEET NAME		
SECTION 25, TOWNSHIP 24 NORTH, RANGE 4 EAST, W.M.		
REVIEWED BY:	G. GOUDY	
DESIGNED BY:	B. MCMURTRY	
SHEET NAME		

DRAINAGE PLAN



LEGEND

- LIMIT OF DISTURBANCE
- X-X- TREE PROTECTION FENCE
- SD STORM DRAIN PIPE
- SD 6" PVC STORM LOT STUB
- ZURN Z886 TRENCH DRAIN OR APPROVED EQUAL, WITH SLOTTED HEEL-PROOF GRATE
- 4" FOUNDATION DRAINAGE
- STORM DRAIN CLEANOUT
- CATCH BASIN, TYPE 1
- MH/CATCH BASIN, TYPE 2
- WATER QUALITY VAULT
- WATER QUALITY CATCH BASIN
- ▨ STORM DRAINAGE VAULT

NOTES:

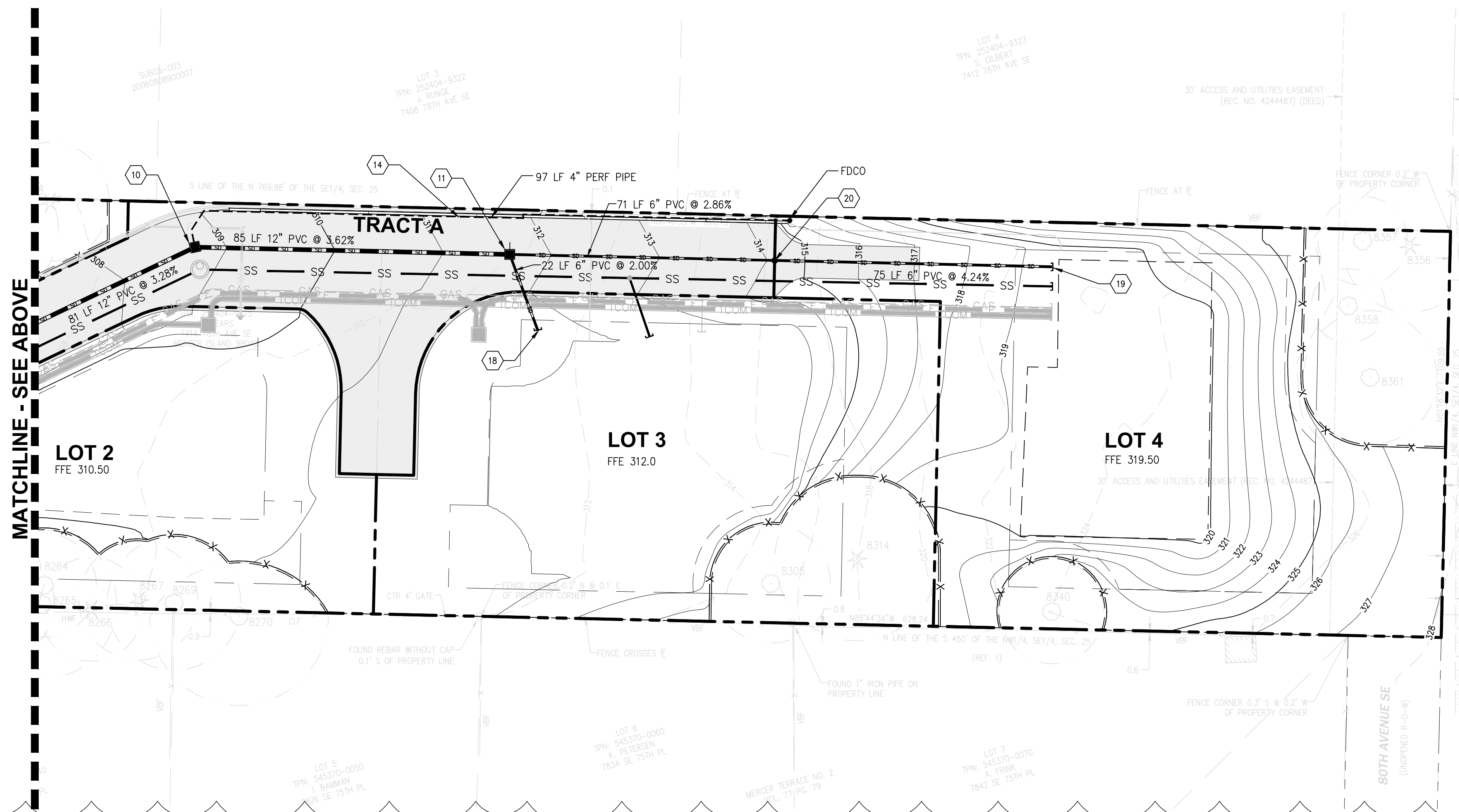
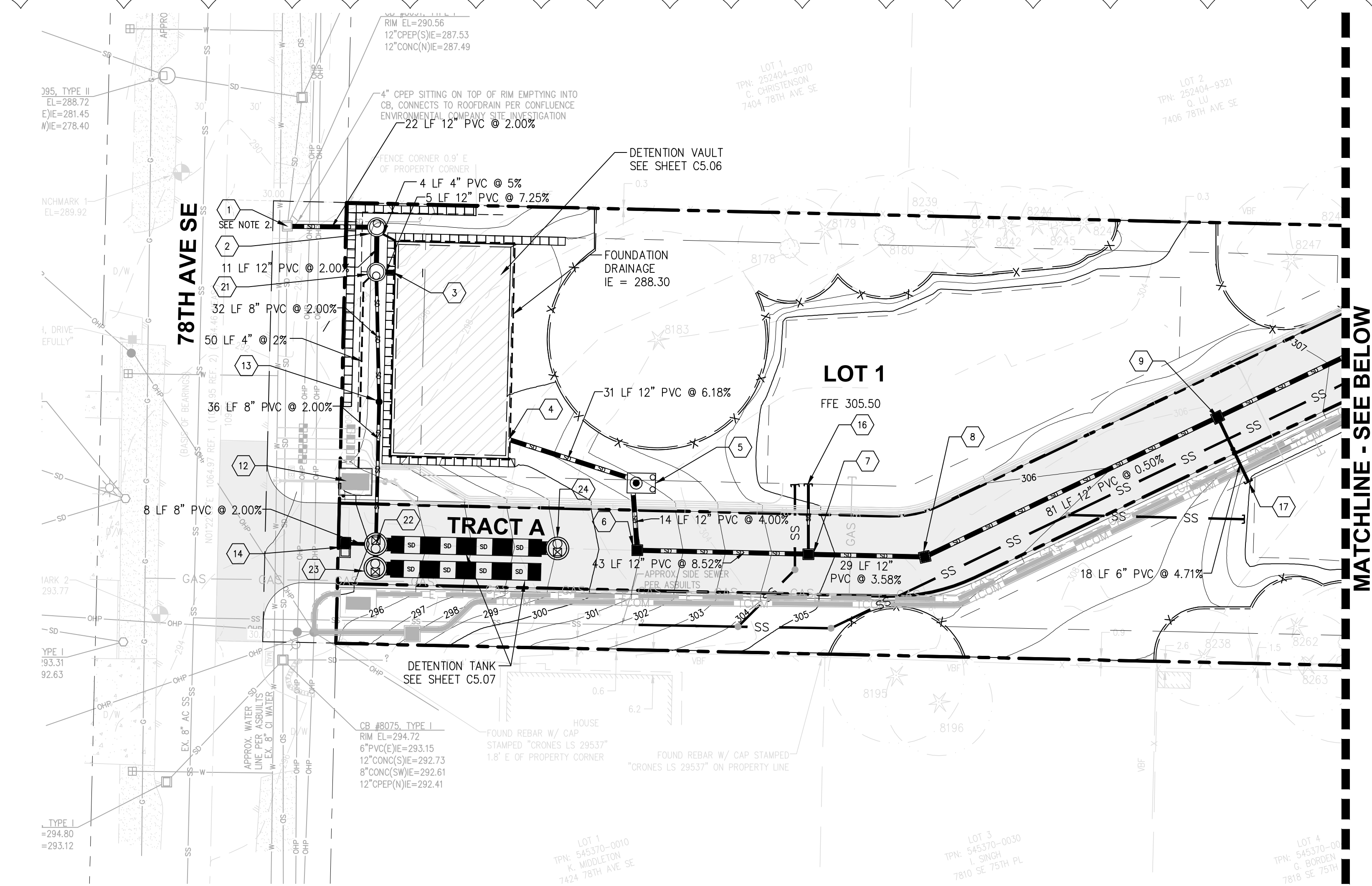
- CONTRACTOR TO MARK EACH SEWER STUB WITH A 2x4 LABELED "STORM" AND NOTE THE INVERT ELEVATION AND PIPE SIZE ON THE 2x4 MARKER.
- CONTRACTOR TO VERIFY CONDITION OF EXISTING CATCH BASIN PRIOR TO CONNECTION WITH NEW SYSTEM. A NEW CATCH BASIN WILL BE REQUIRED IF THE EXISTING CONDITION IS INSUFFICIENT FOR A NEW CONNECTION.

STORM DRAINAGE SCHEDULE

1	EX. SDCB (SEE NOTE 2) N:198792.64 E:1294188.05 RIM: 290.56 12" IE: 287.49 (E) 12" IE: 287.49 (N) 12" IE: 287.53 (S)	9	SDCB #7 (TYPE 1L) RIM: 306.26 12" IE: 302.08 (NE) 6" IE: 302.58 (SE) 12" IE: 302.07 (SW)	18	LOT 3 SD STUB N:198757.28 E:1294565.37 6" IE: 308.73 (N)
2	SDMH #1 (48") (TYPE 3 W/ SOLID LID) N:198792.42 E:1294210.41 RIM: 296.09 12" IE: 287.94 (S) 12" IE: 287.94 (W) 4" IE: 288.30 (E)	10	SDCB #8 (TYPE 1) RIM: 308.73 12" IE: 304.73 (E) 12" IE: 304.73 (SW) 4" IE: 306.00 (N)	19	LOT 4 SD STUB N:198774.54 E:1294723.83 6" IE: 313.50 (W)
3	VAULT OUTLET 12" IE: 288.50 (W) 4" IE: 288.50 (NW) FTG	11	SDCB #9 (TYPE 1L) RIM: 311.61 6" IE: 308.29 (E) 6" IE: 308.29 (S) 12" IE: 307.79 (W)	20	SDCO #2 N:198776.26 E:1294549.02 RIM: 314.06 6" IE: 310.33 (E) 6" IE: 310.33 (W)
4	VAULT INLET 12" IE: 294.00 (E)	12	FIRE BACKFLOW VAULT WITH 4" DRAIN AND UNDERDRAIN 4" PERF PIPE	21	SDMH #2 (48") (TYPE 3 W/ SOLID LID) N:198751.28 E:1294210.28 RIM: 296.18 8" IE: 288.16 (S) 12" IE: 288.16 (E) 12" IE: 288.16 (N) 4" IE: 288.50 (S)
5	WQ#1 OLDCASTLE BIO-POD N:198728.62 E:1294275.07 RIM: 301.77 12" IE: 296.42 (S) 12" IE: 295.92 (W)	13	SDCO #1 N:198748.89 E:1294210.97 RIM: 296.36 8" IE: 288.81 (S) 8" IE: 288.81 (N)	22	SDCB #3 (60") (TYPE 2 W/ SOLID LID) N:198713.37 E:1294210.16 RIM: 295.10 8" IE: 291.85 (W) 8" IE: 289.52 (N) 36" IE: 289.52 (E) 12" IE: 289.52 (S)
6	SDCB #4 (TYPE 1) RIM: 300.91 12" IE: 296.99 (E) 12" IE: 296.99 (N)	14	WQ#2 OLDCASTLE PERKFILTER CB RIM: 294.68 8" IE: 292.00 (E)	23	SDCB #4 (60") (TYPE 2 W/ SOLID LID) N:198707.39 E:1294210.02 RIM: 295.22 12" IE: 289.52 (N) 36" IE: 289.52 (E)
7	SDCB #5 (TYPE 1) RIM: 304.63 12" IE: 300.63 (E) 12" IE: 300.63 (W) 6" IE: 301.13 (N)	15	4" PERFORATED DRAIN PIPE	24	SDCB #5 (60") (TYPE 2 W/ SOLID LID) N:198712.32 E:1294255.45 RIM: 299.02 36" IE: 289.52 (W)
8	SDCB #6 (TYPE 1L) RIM: 305.67 12" IE: 301.67 (NE) 12" IE: 301.67 (W)	16	LOT 1 SD STUB N:198728.38 E:1294318.01 6" IE: 299.39 (S)		
		17	LOT 2 SD STUB N:198728.87 E:1294427.80 6" IE: 303.42 (NW)		



REVIEWED FOR CODE COMPLIANCE
September 12, 2024
SITE COPY



CLIENT/OWNER

SAINTFIELD2 LLC

PROJECT NAME

SEARS

NAVIX PROJECT NUMBER: 50-215-004
 PROJECT ADDRESS

7414 78TH AVE SE
 MERCER ISLAND, WA 98040

STAMP



REVISIONS

REV	ISSUED FOR:	DATE
1	PERMIT RESUBMITTAL	07/01/24
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SECTION, TOWNSHIP, RANGE:
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 RANGE 4 EAST, W.M.

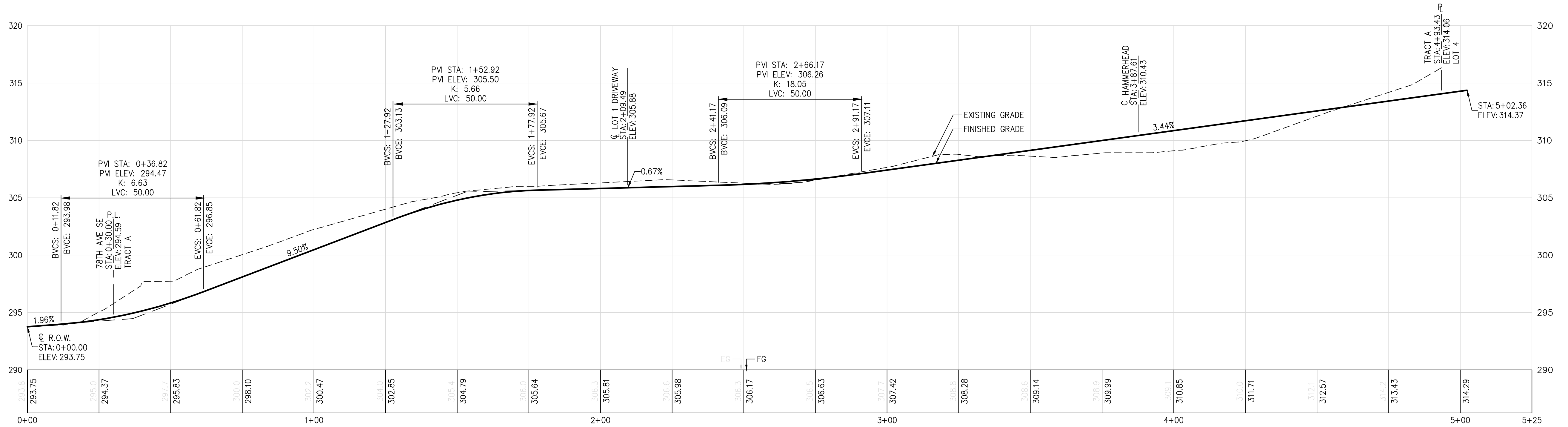
PROJECT TEAM
 REVIEWED BY: G. GOUDY
 DESIGNED BY: B. MCMURTRY

SHEET NAME

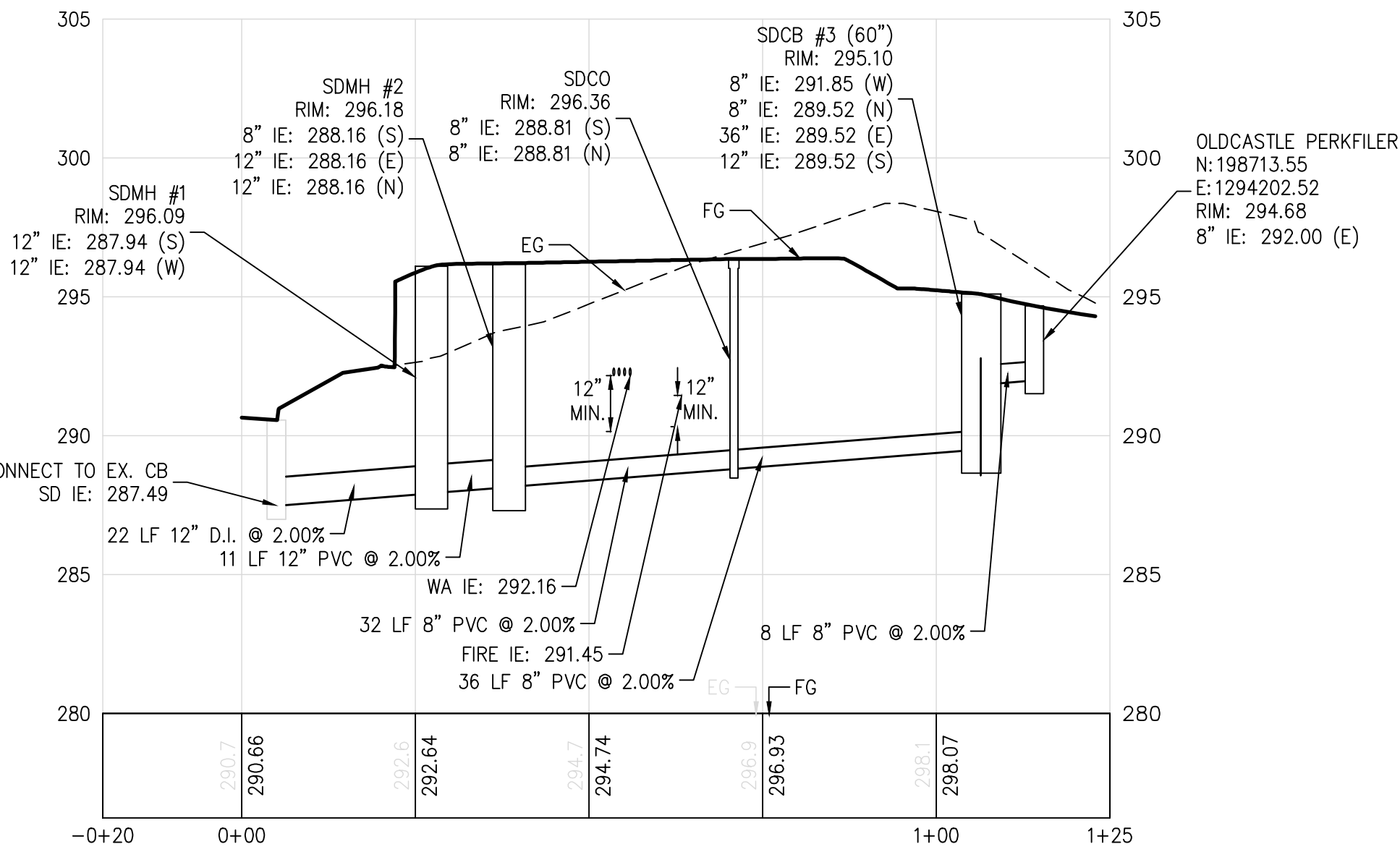
ROAD AND DRAINAGE PROFILE

SHEET NUMBER

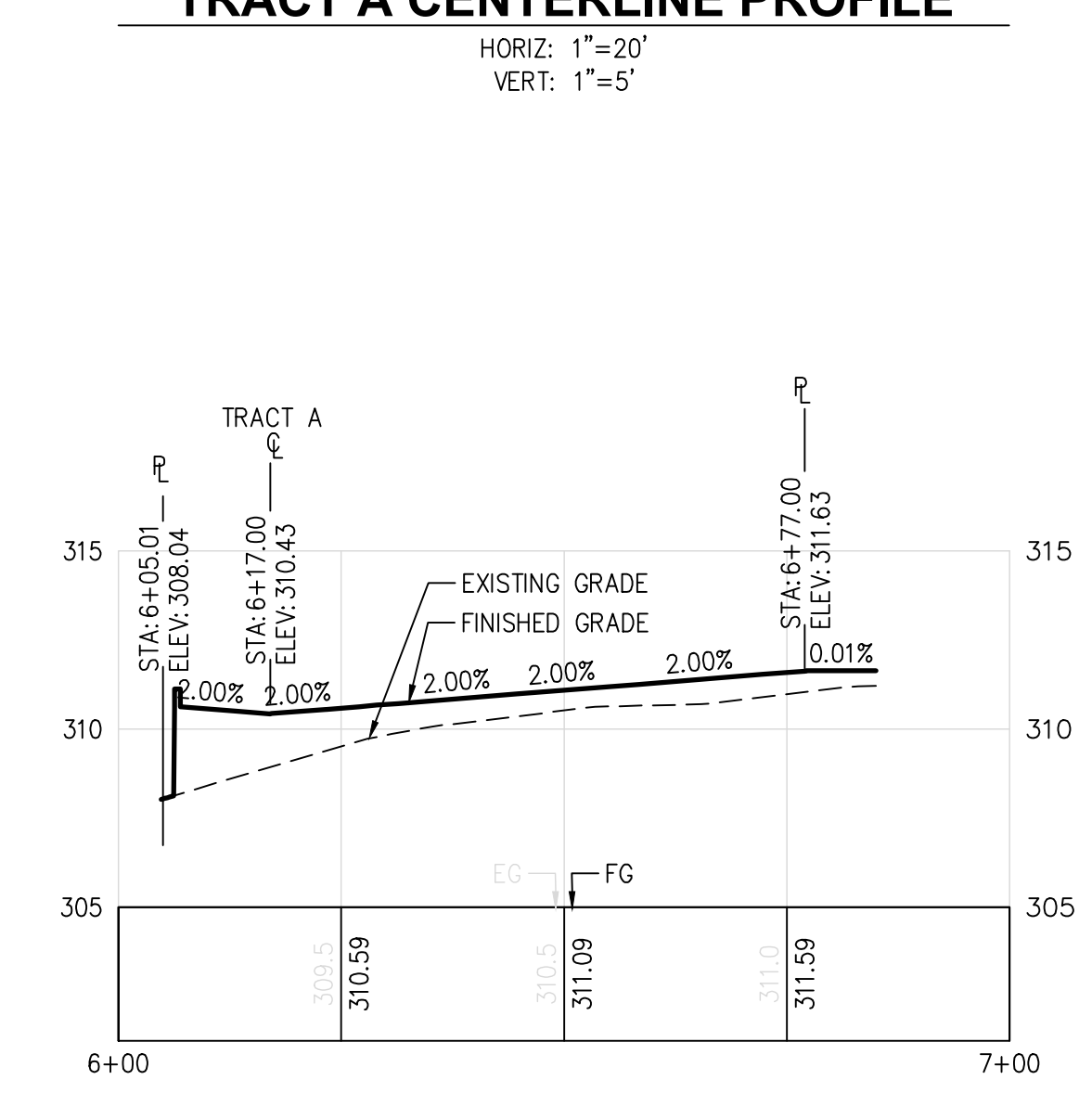
C5.02



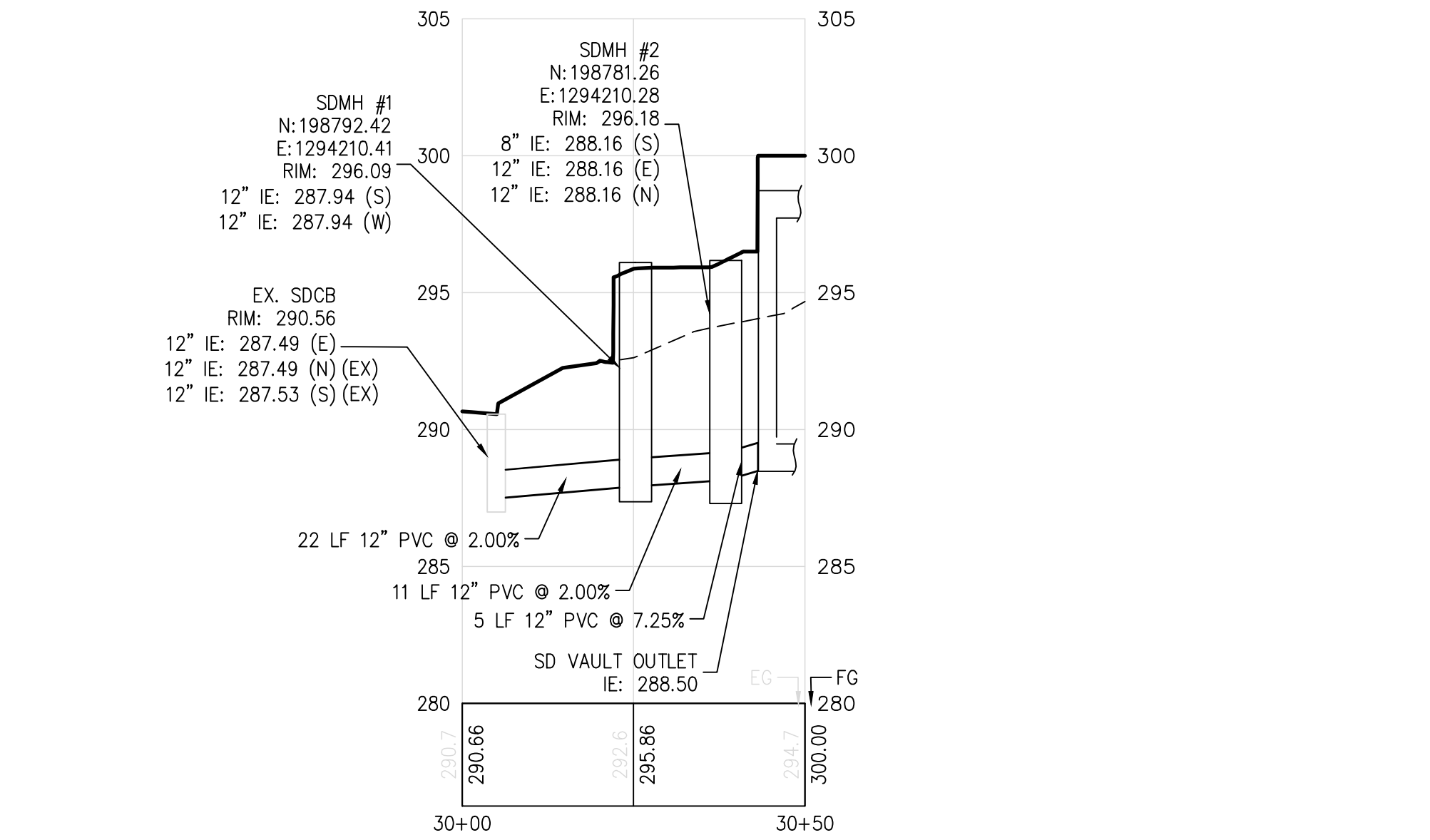
TRACT A CENTERLINE PROFILE



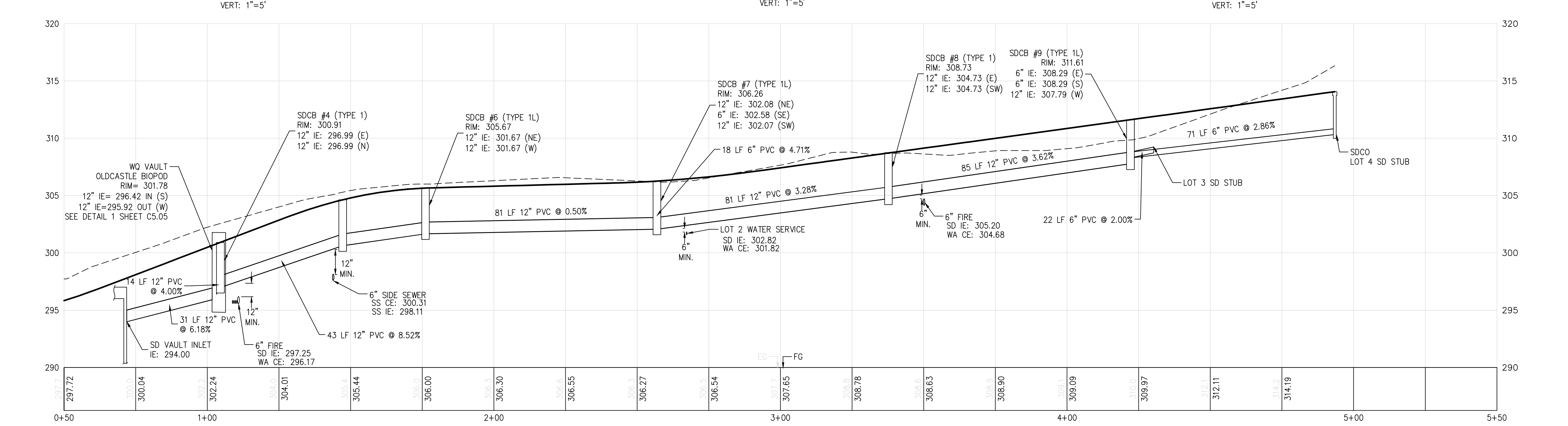
CATCH BASIN PROFILE



FIRE DEPARTMENT HAMMERHEAD PROFILE

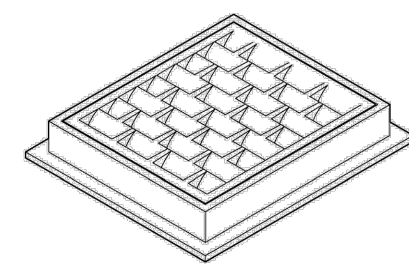


VAULT DISCHARGE ALIGNMENT PROFILE

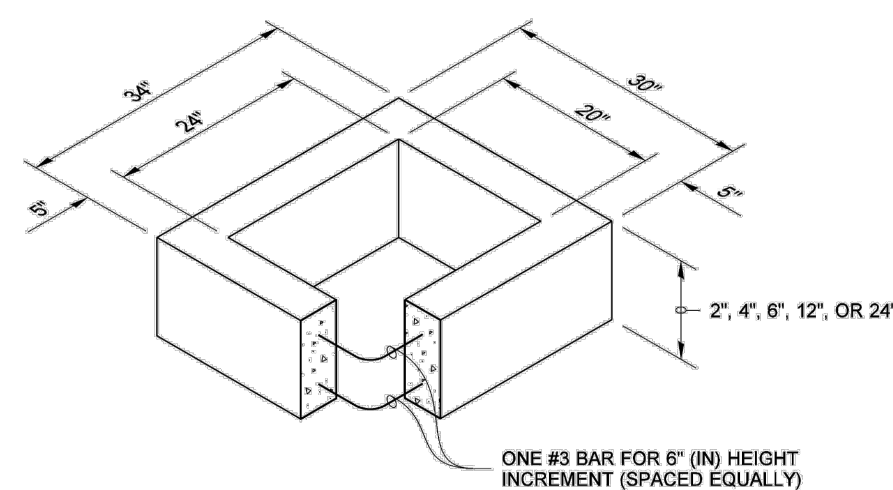


STORM DRAINAGE PROFILE

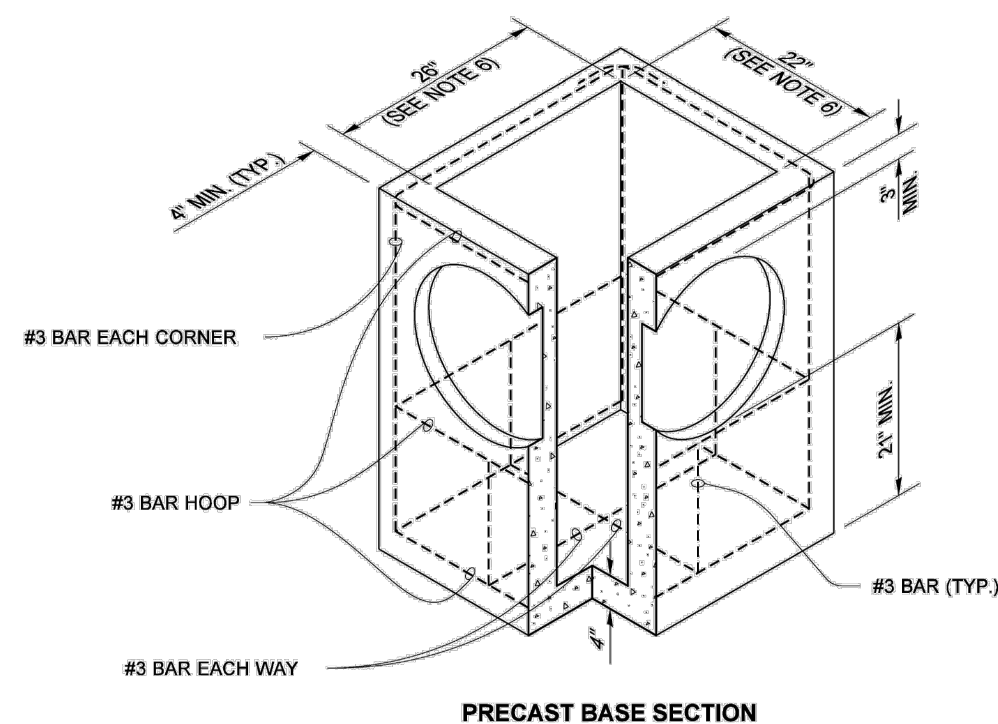
DRAWN BY: FERN LOBELLE



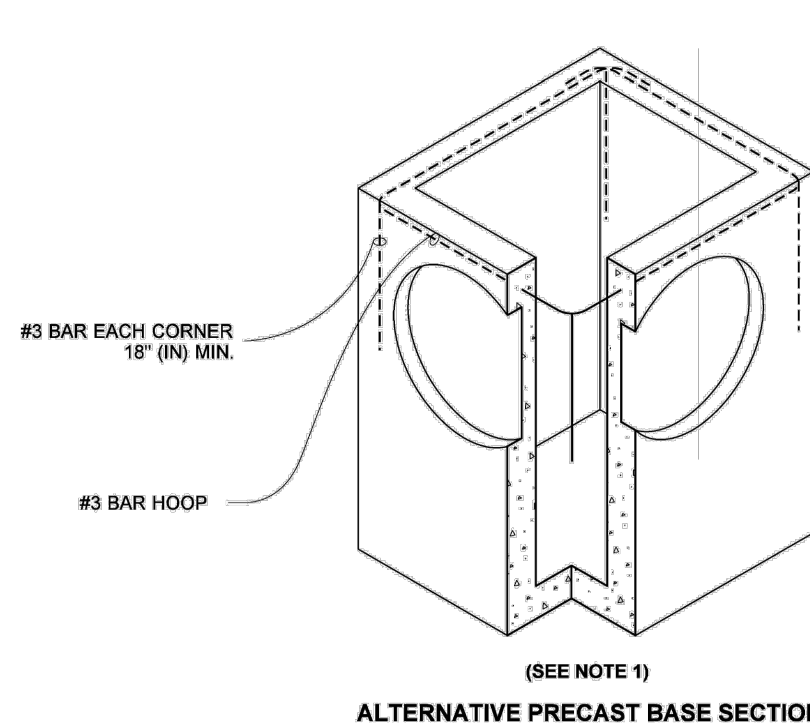
FRAME AND VANED GRATE



RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION



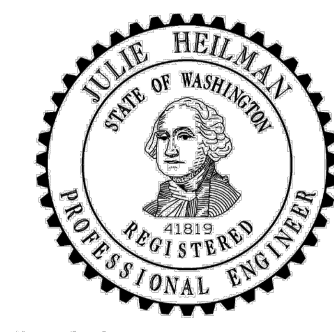
ALTERNATIVE PRECAST BASE SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CRSSP * (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15"

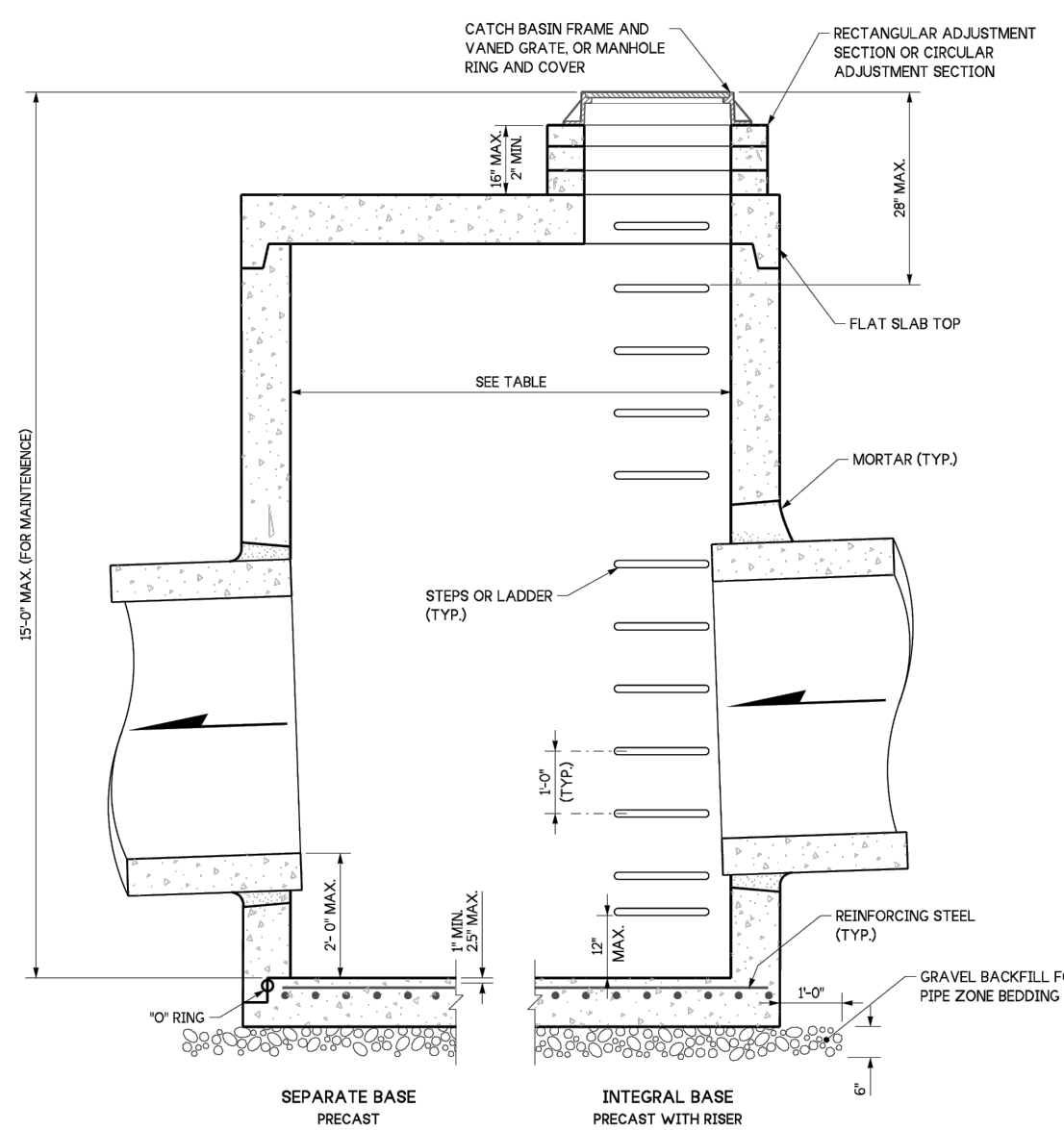
* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

- As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.
- The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.
- The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
- The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
- The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
- The opening shall be measured at the top of the Precast Base Section.
- All pickup holes shall be grouted full after the basin has been placed.



Julie Helman
2020.09.01 07:52:50 -0700
CATCH BASIN TYPE 1
STANDARD PLAN B-5.20-03
SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Roark, Steve
Digitally signed by Roark, Steve
Date: 2020.09.01 09:45:23 -0700
STATE DESIGN ENGINEER
Washington State Department of Transportation



CATCH BASIN DIMENSIONS				
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	6"	42"	8"
60"	5"	6"	48"	8"
72"	6"	6"	60"	12"
84"	6"	12"	72"	12"
96"	6"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

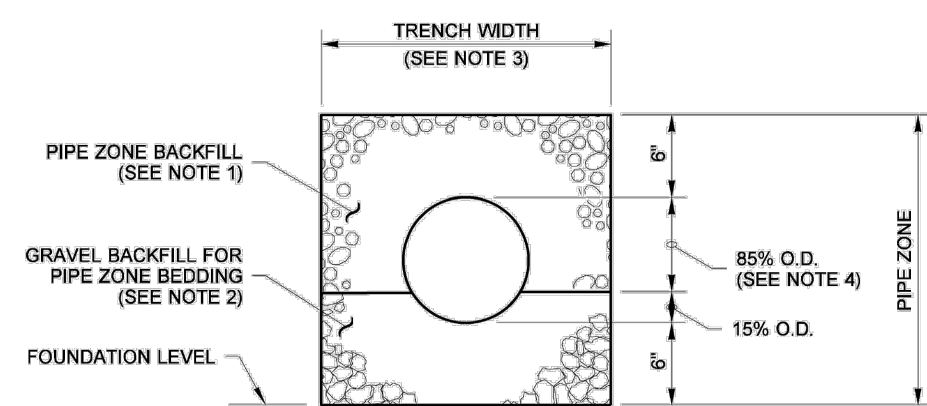
PIPE ALLOWANCES				
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER			
	CONCRETE	ALL METAL	CRISP (1) PP (2)	SOLID WALL PVC (3) PROFILE WALL PVC (4)
48"	24"	30"	24"	30"
54"	30"	36"	30"	36"
60"	30"	42"	36"	42"
72"	42"	54"	42"	48"
84"	54"	60"	54"	48"
96"	60"	72"	60"	48"
120"	66"	84"	60"	48"
144"	78"	96"	60"	48"

① Corrugated Polyethylene Storm Sewer Pipe
② See Standard Specification Section 9-05.20
③ See Standard Specification Section 9-05.12(1)
④ See Standard Specification Section 9-05.12(2)
⑤ Polypropylene Pipe (See Standard Specification Section 9-05.24)

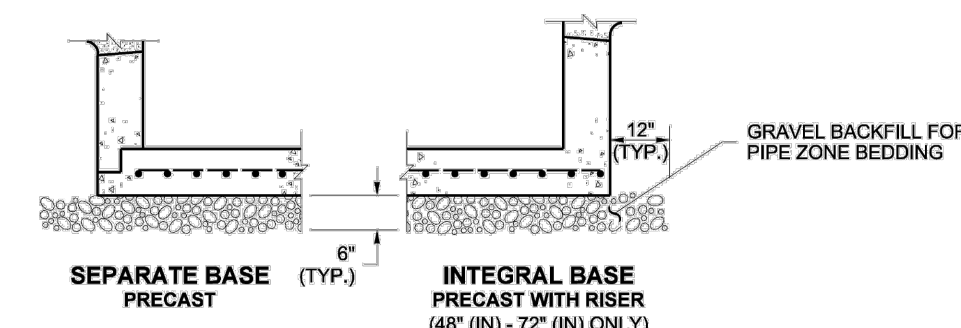


Julie Helman
2020.09.01 07:52:50 -0700
CATCH BASIN TYPE 2
STANDARD PLAN B-10.20-03
SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Mark A. Hanes
Digitally signed by Mark A. Hanes
Date: 2023.08.23 09:45:23 -0700
STATE DESIGN ENGINEER
Washington State Department of Transportation

DRAWN BY: FERN LOBELLE

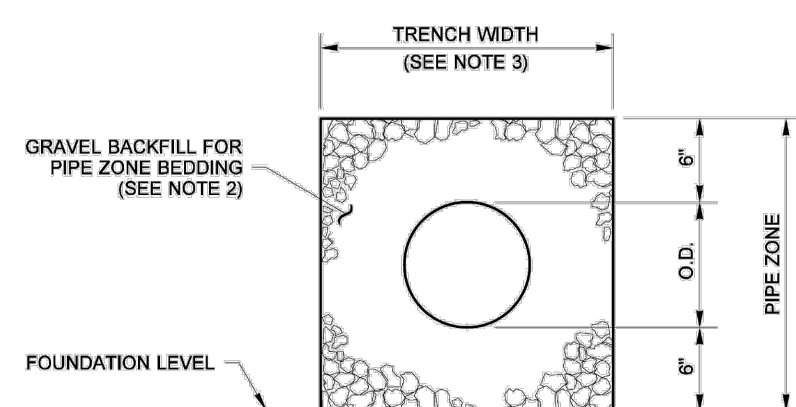


CONCRETE AND DUCTILE IRON PIPE

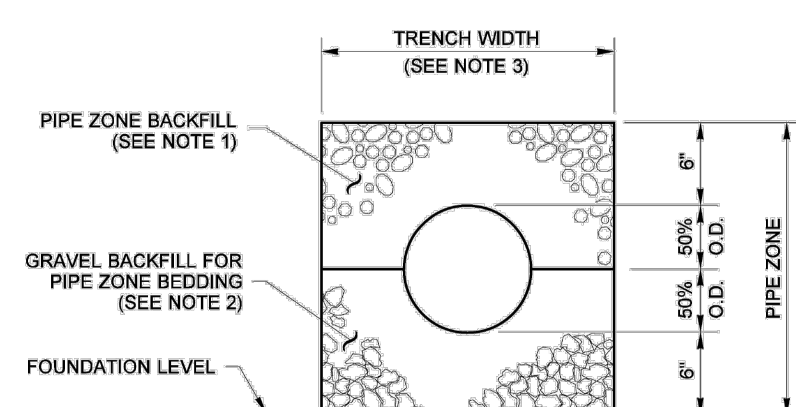


TYPICAL CONDITION FOR DRAINAGE STRUCTURE

THIS DETAIL APPLIES TO STANDARD PLANS B-5.20, B-6.40, B-6.60, B-10.20, B-10.40, B-15.20, B-15.40, B-15.60, B-20.20, B-20.60, B-25.20 AND B-35.40.



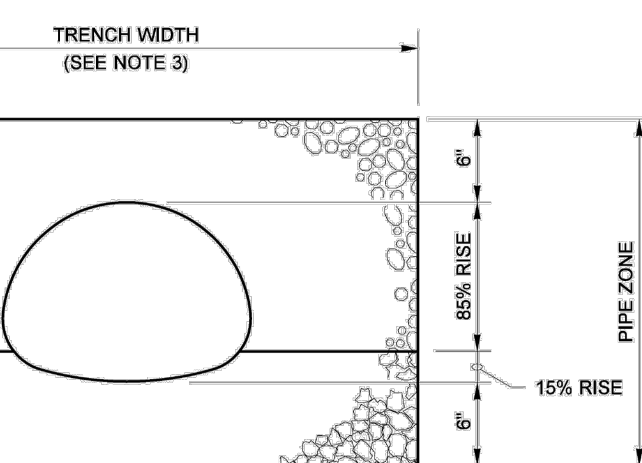
THERMOPLASTIC PIPE



METAL AND STEEL RIB REINFORCED POLYETHYLENE PIPE

NOTES

- See Standard Specifications Section 7-08.3(3) for Pipe Zone Backfill.
- See Standard Specifications Section 9-03.12(3) for Gravel Backfill for Pipe Zone Bedding.
- See Standard Specifications Section 2-09.4 for Measurement of Trench Width.
- For sanitary sewer installation, concrete pipe shall be imbedded to spring line.



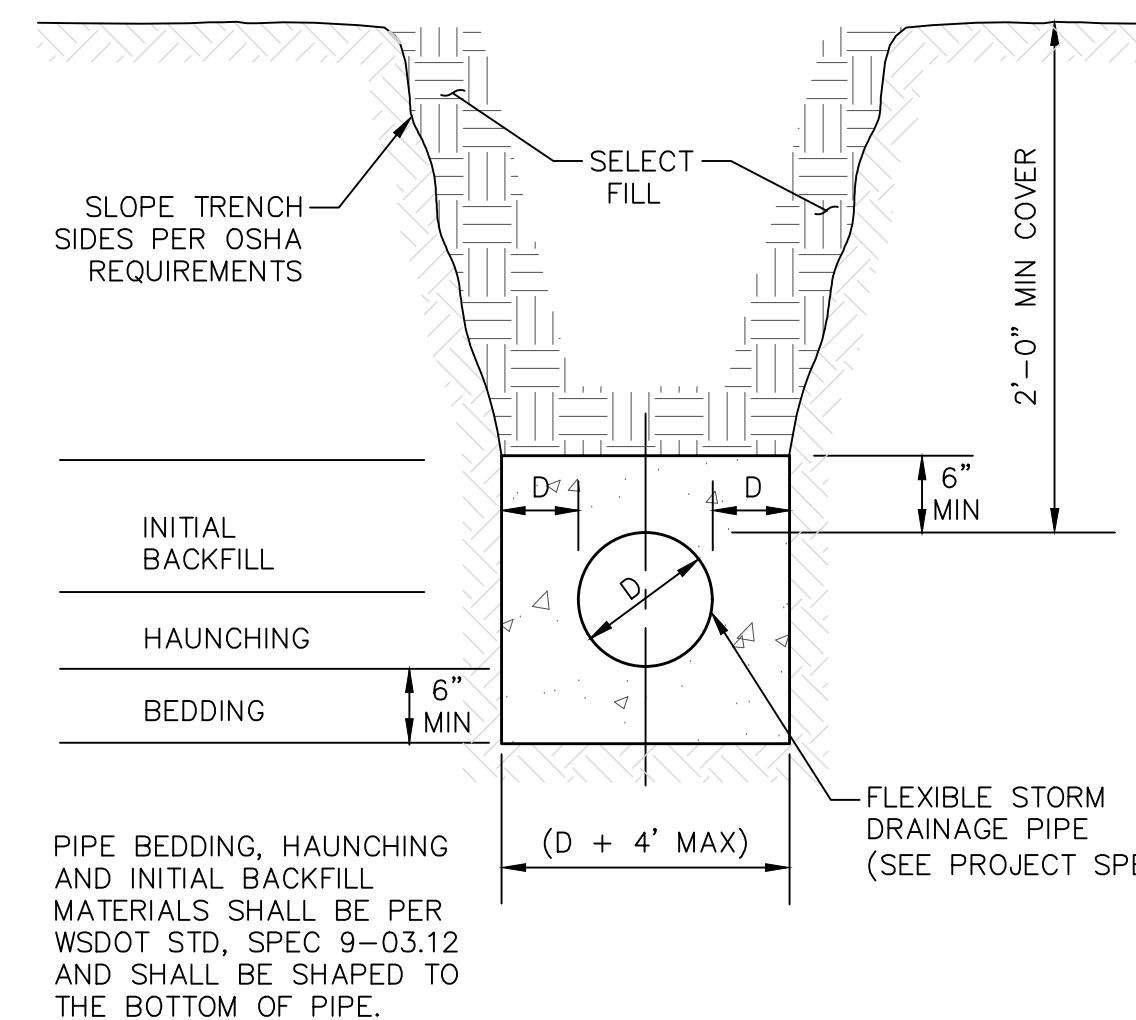
PIPE ARCHES

CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS		
PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	UP TO 48"	24"
METAL PIPE ARCH (SPAN)	48" AND LARGER	DIAMETER/2 OR 36" WHICHEVER IS LESS

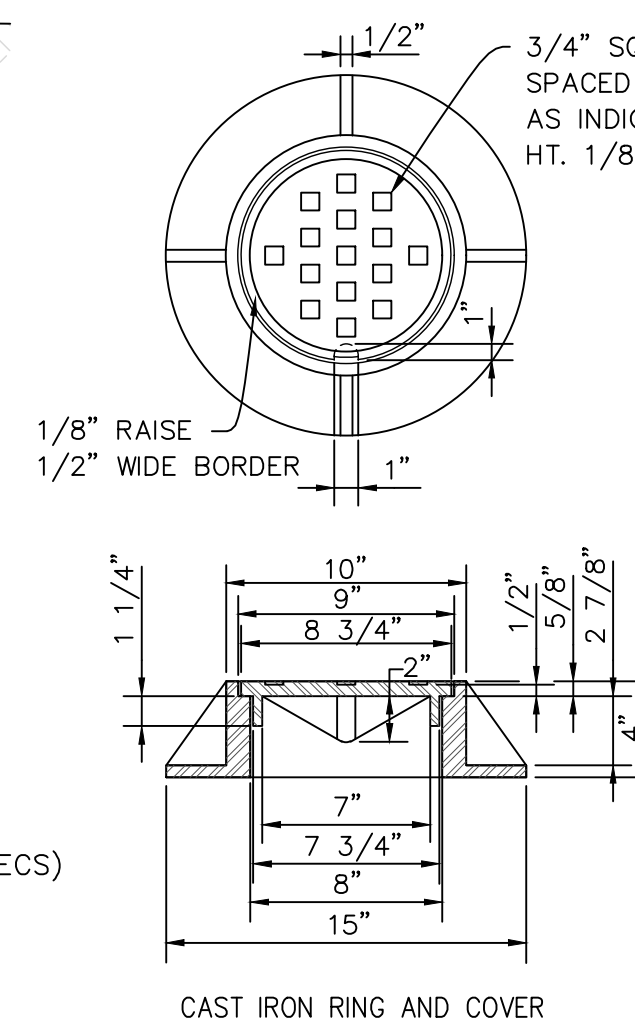


Aug 17, 2021
PIPE ZONE BEDDING AND BACKFILL
STANDARD PLAN B-55.20-03
SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Aug 17, 2021
STATE DESIGN ENGINEER
Washington State Department of Transportation

SELECT FILL: MATERIAL SHALL BE FREE OF LARGE ROCKS (3"+) AND SHALL BE PLACED IN 8" MAX LOOSE LIFTS AND COMPACTED TO 95% OF MAX. DENSITY PER MODIFIED PROCTOR TEST (ASTM D1557)



DRAINAGE TRENCH AND BEDDING



STORM DRAINAGE CLEANOUT

NOTES:

- No steps are required when height is 4' or less.
- The bottom of the precast catch basin may be sloped to facilitate cleaning.
- The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
- Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.
- Pipe allowances will vary depending on the pipe material used. Contact the Region Hydraulics Engineer for assistance.



11235 s.e. 6th street | suite 150 bellvue, wa 98004
t: 425.453.9501 | f: 425-453-8208
www.navixeng.com

CLIENT/OWNER

SAINTFIELD2 LLC

PROJECT NAME

SEARS

NAVIX PROJECT NUMBER: 50-215-004
PROJECT ADDRESS

7414 78TH AVE SE
MERCER ISLAND, WA 98040

STAMP



REVISIONS

REV	ISSUED FOR:	DATE
1	PERMIT RESUBMITTAL	07/01/24
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SECTION, TOWNSHIP, RANGE:
SECTION 25, TOWNSHIP 24 NORTH,
RANGE 4 EAST, W.M.

PROJECT TEAM
REVIEWED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

SHEET NAME

DRAINAGE DETAILS

SHEET NUMBER

C5.03



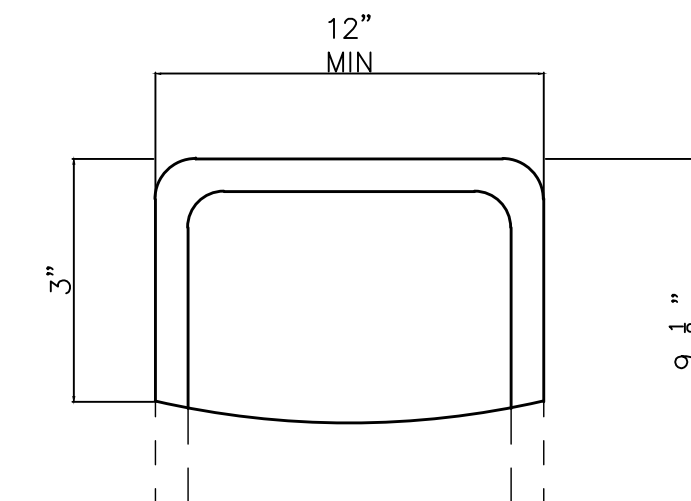
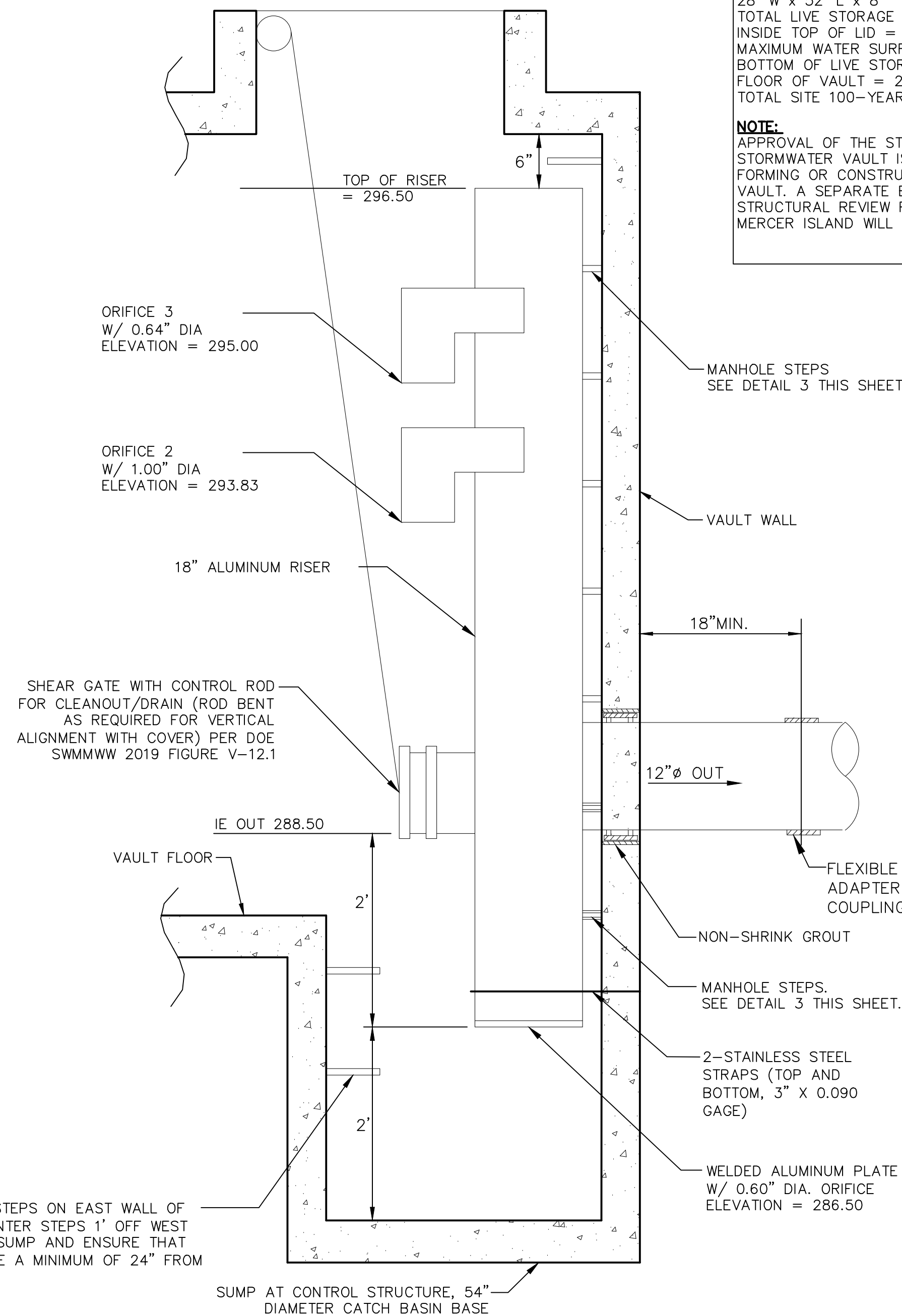
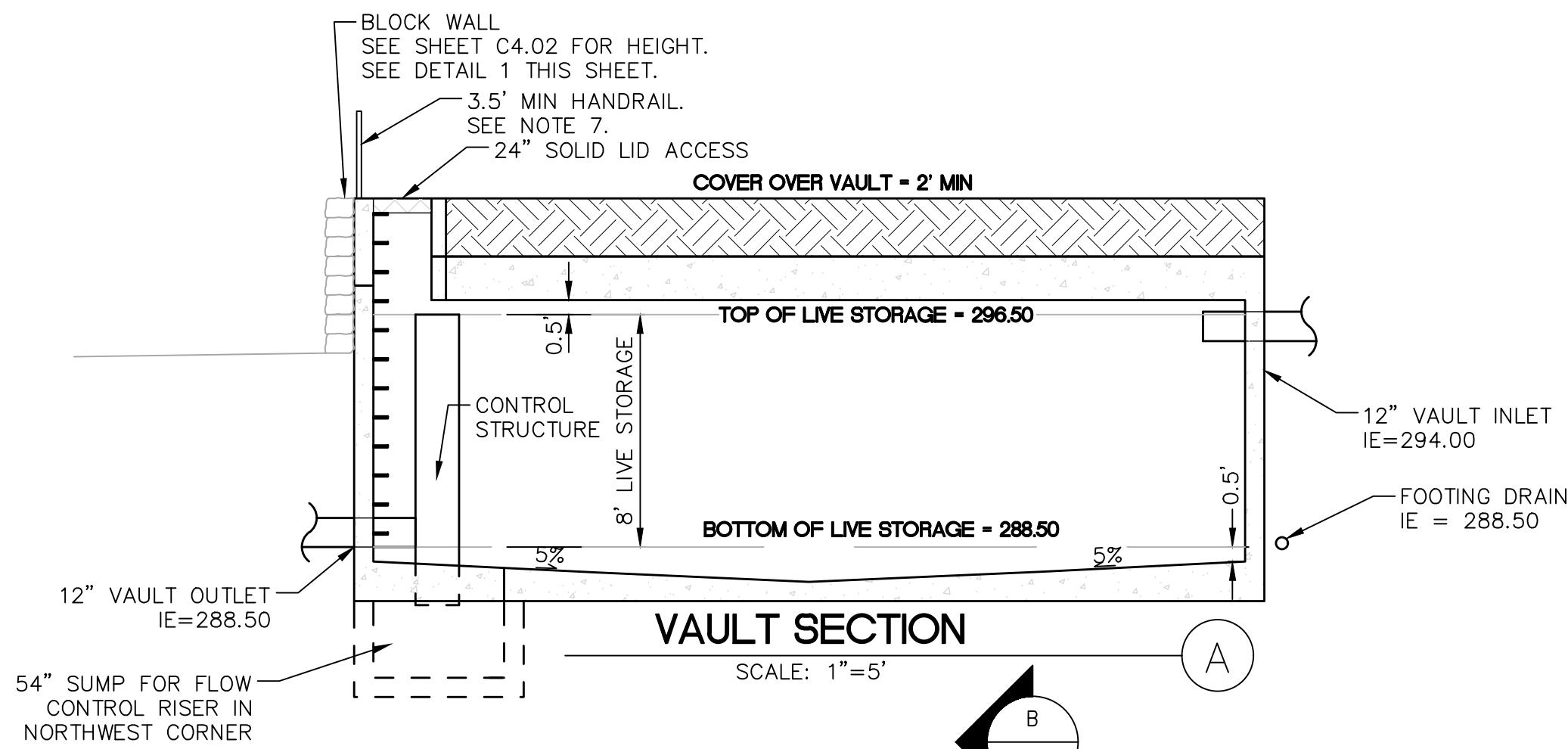
NOTES

1. GRATED ACCESS PANEL BY UTILITY VAULT OR SIMILAR AND LOADING AS REQUIRED BY THE PROJECT STRUCTURAL ENGINEER.
2. GRATED ACCESS PANEL SHALL BE 5'W X 10'L (MIN.).
3. GRATED ACCESS PANEL SHALL HAVE A SKID RESISTANT TEXTURE.
4. PROVIDE STEPS AND/OR LADDER AT EACH INLET AND AT THE 5' X 10' GRATE. LADDER RUNGS SHALL BE INSTALLED FROM FLOOR TO ACCESS COVER, ADJACENT TO ALL INLET/OUTLET PIPES. ORIENT STEPS OR LADDER WITH INLETS SO STEPS WILL BE CLEAR. SEE WSDOE FIGURE V-12.16 IN 2019 SWMMWW.
5. SIGN INDICATING CONFINED SPACE ACCESS LOCATION SHALL BE PLACED UNDER EACH ACCESS MANHOLE PER OSHA REQUIREMENTS.
6. SEE STRUCTURAL PLANS FOR VAULT DESIGN. ALL CONSTRUCTION JOINTS TO BE FILLED WITH WATER STOPS.
7. HANDRAIL ONLY REQUIRED WHERE VERTICAL DROP EXCEEDS 30 INCHES. HANDRAIL SHALL BE PER DETAIL 4 SHEET C5.08 OR APPROVED EQUAL AND EMBEDDED IN VAULT STEM WALL PER STRUCTURAL DETAILS.

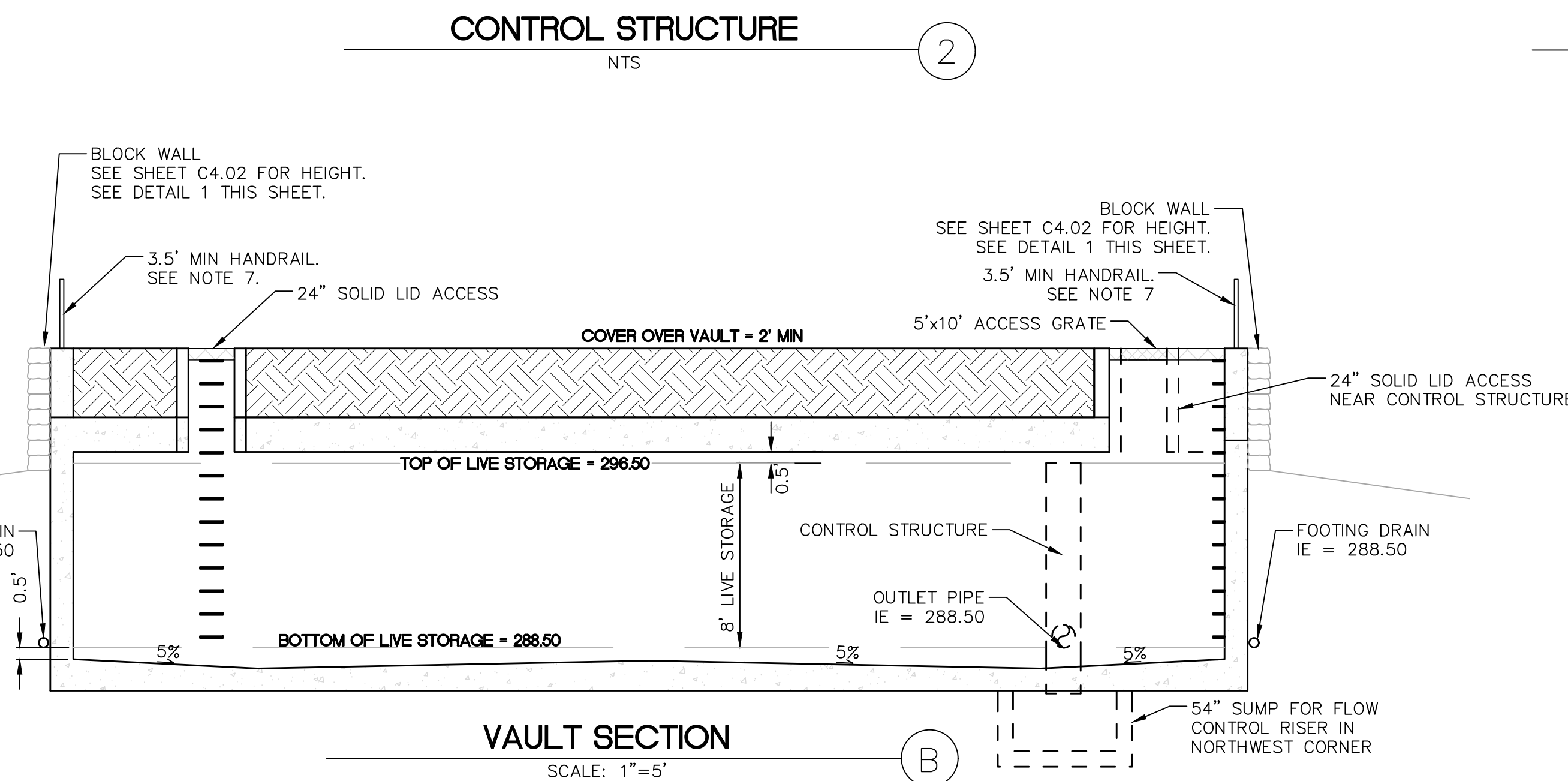
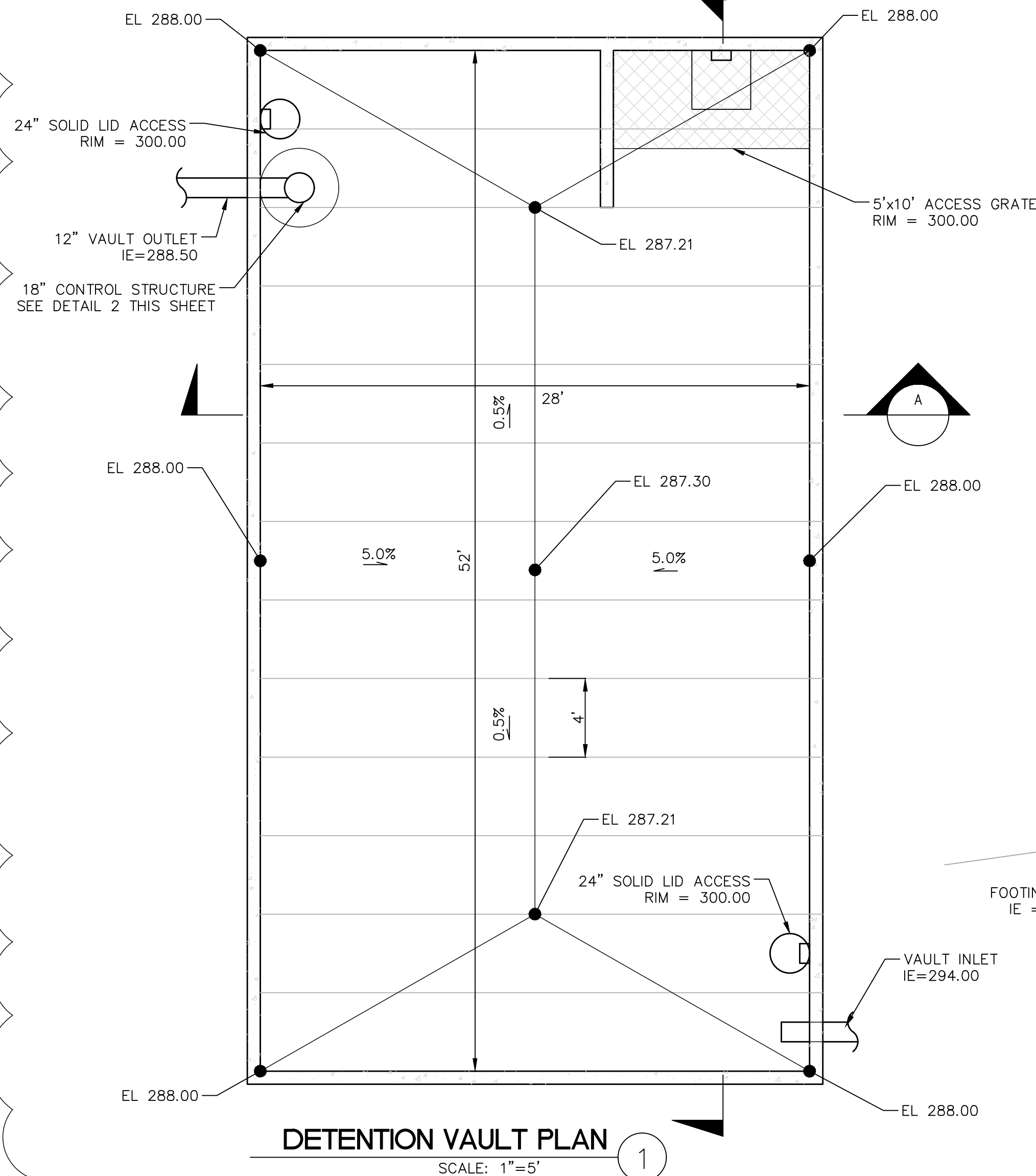
VAULT TABLE

VAULT LIVE STORAGE
 28' W x 52' L x 8'
 TOTAL LIVE STORAGE VOLUME = 11,648 CF
 INSIDE TOP OF LID = 297.00
 MAXIMUM WATER SURFACE = 296.50
 BOTTOM OF LIVE STORAGE = 288.50
 FLOOR OF VAULT = 288.00
 TOTAL SITE 100-YEAR FLOWRATE = 0.144 CFS

NOTE:
 APPROVAL OF THE STRUCTURAL PLANS FOR STORMWATER VAULT IS REQUIRED PRIOR TO FORMING OR CONSTRUCTING ANY PART OF THE VAULT. A SEPARATE BUILDING PERMIT AND STRUCTURAL REVIEW FROM THE CITY OF MERCER ISLAND WILL BE REQUIRED.



- NOTES:**
1. PROPRIETARY MANHOLE STEPS ARE ACCEPTABLE PROVIDED THAT THEY CONFORM TO SEC. R, ASTM C478, AASHTO M199 AND MEET ALL WSHA REQUIREMENTS.
 2. MANHOLE STEP/HANDHOLD LEGS SHALL BE PARALLEL OR APPROXIMATELY RADIAL AT THE OPTION OF THE MANUFACTURER, EXCEPT THAT ALL STEPS IN ANY MANHOLE SHALL BE SIMILAR. PENETRATION OF OUTER WALL BY A LEG IS PROHIBITED.
 3. STEPS SHALL EXTEND TO WITHIN 16" OF BOTTOM OF MANHOLE.



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SECTION, TOWNSHIP, RANGE:

SECTION 25, TOWNSHIP 24 NORTH,
 RANGE 4 EAST, W.M.

PROJECT TEAM

REVIEWED BY: G. GOUDY
 DESIGNED BY: B. MCMURTRY

SHEET NAME

STORM VAULT DETAILS

SHEET NUMBER

C5.06



CLIENT/OWNER

SAINTFIELD2 LLC

PROJECT NAME

SEARS

NAVIX PROJECT NUMBER: 50-215-004
PROJECT ADDRESS

7414 78TH AVE SE
MERCER ISLAND, WA 98040

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SECTION 25, TOWNSHIP 24 NORTH,
RANGE 4 EAST, W.M.

PROJECT TEAM

REVIEWED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

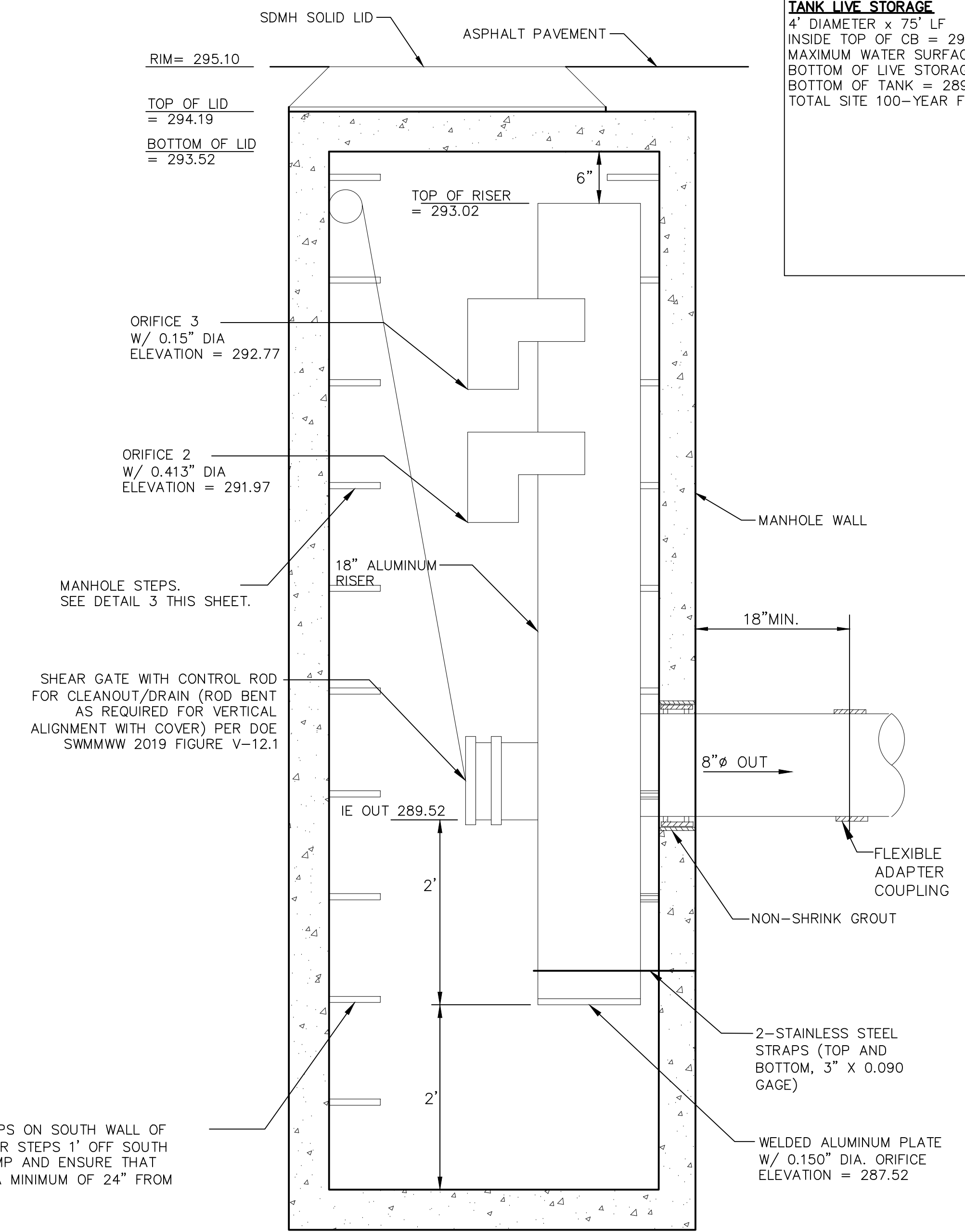
SHEET NAME

STORM TANK
DETAILS

SHEET NUMBER

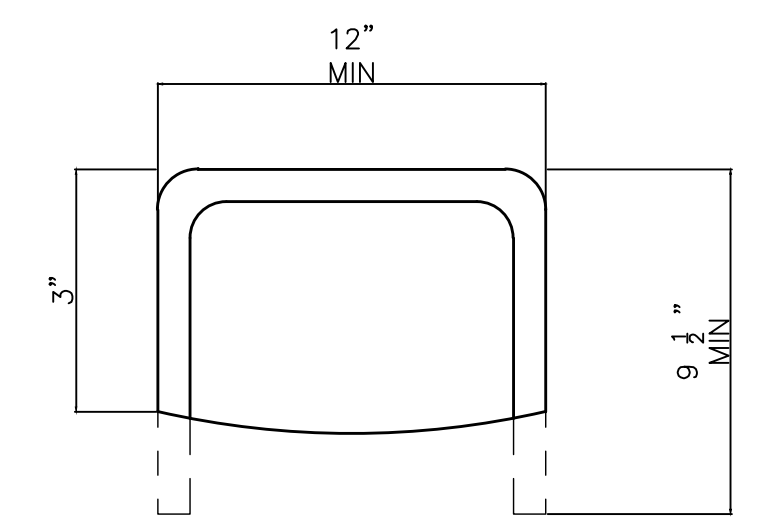
C5.07

TANK TABLE	
TANK LIVE STORAGE	
4" DIAMETER x 75' LF	
INSIDE TOP OF CB = 293.52	
MAXIMUM WATER SURFACE = 293.02	
BOTTOM OF LIVE STORAGE = 289.52	
BOTTOM OF TANK = 289.02	
TOTAL SITE 100-YEAR FLOWRATE = 0.005 CFS	



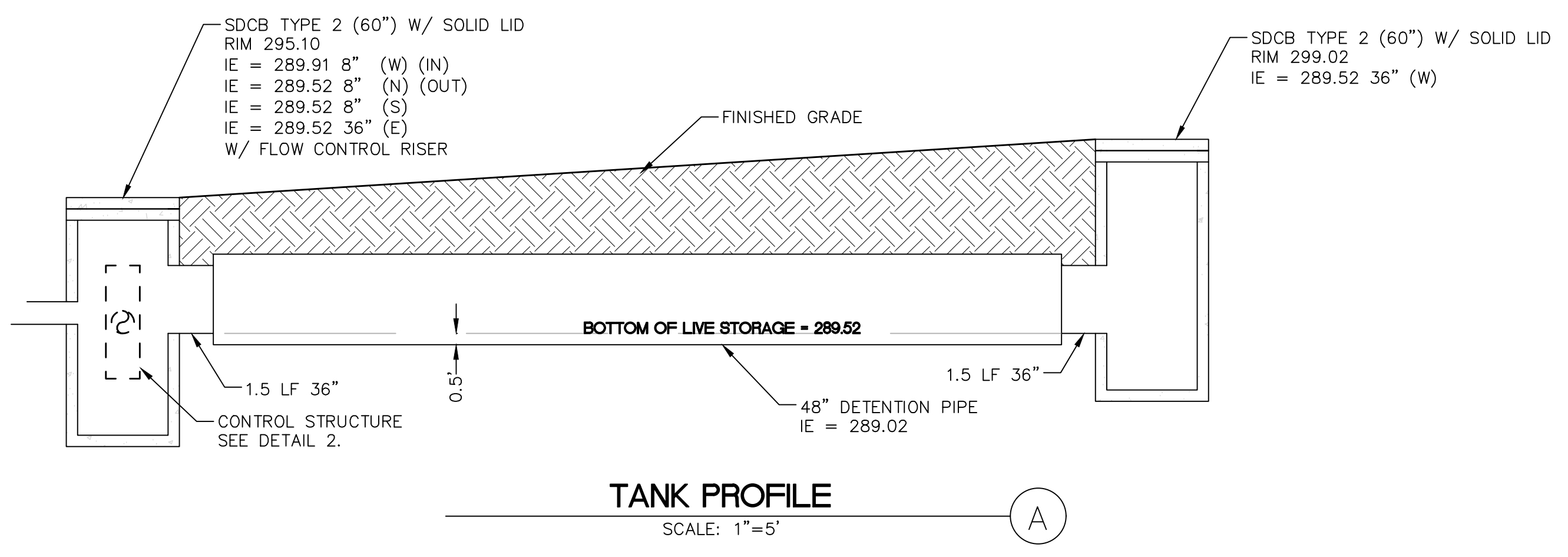
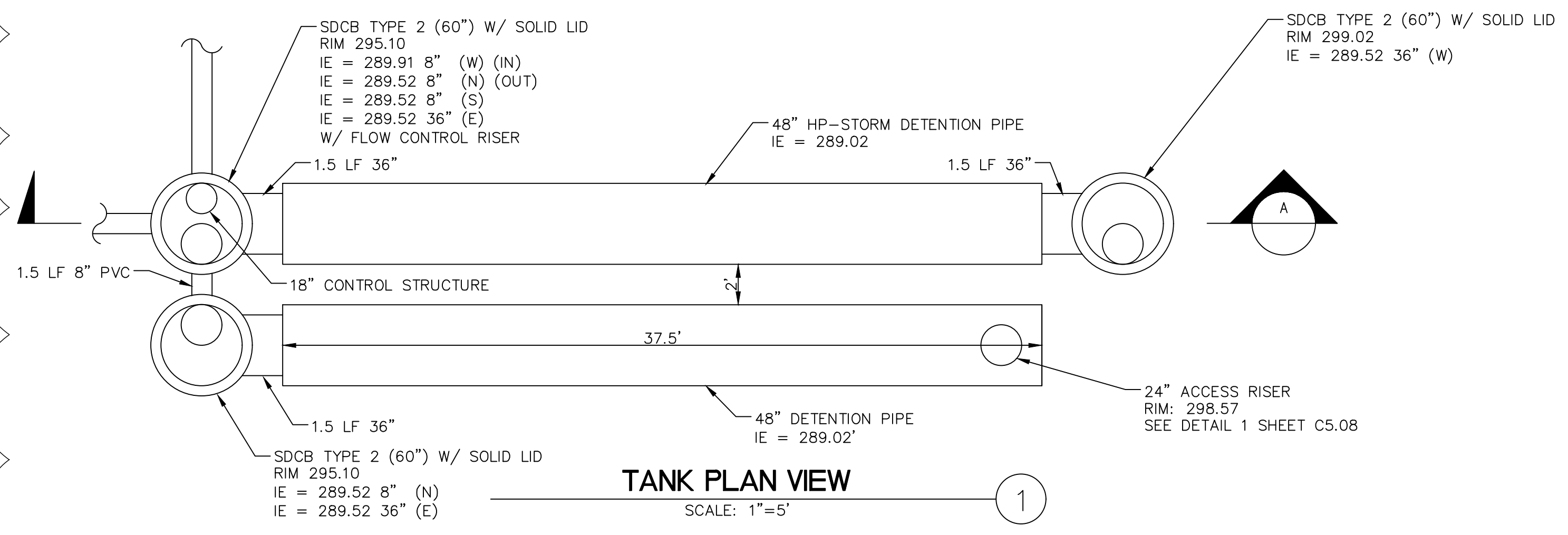
PROVIDE STEPS ON SOUTH WALL OF SUMP. CENTER STEPS 1' OFF SOUTH WALL OF SUMP AND ENSURE THAT STEPS ARE A MINIMUM OF 24" FROM RISER

CONTROL STRUCTURE
NTS



MANHOLE STEP
NTS

- NOTES**
- PROPRIETARY MANHOLE STEPS ARE ACCEPTABLE PROVIDED THAT THEY CONFORM TO SEC. R, ASTM C478, AASHTO M199 AND MEET ALL WISHA REQUIREMENTS
 - MANHOLE STEP/HANDHOLD LEGS SHALL BE PARALLEL OR APPROXIMATELY RADIAL AT THE OPTION OF THE MANUFACTURER, EXCEPT THAT ALL STEPS IN ANY MANHOLE SHALL BE SIMILAR. PENETRATION OF OUTER WALL BY A LEG IS PROHIBITED
 - STEPS SHALL EXTEND TO WITHIN 16" OF BOTTOM OF MANHOLE.



- NOTES**
- DETENTION TANK PIPE SHALL BE HP STORM BY ADS PIPE.
 - INSTALL PIPE PER MANUFACTURER'S RECOMMENDATIONS WITH WATERTIGHT CONNECTIONS.
 - SEE SHEET C5.08 FOR INSTALLATION DETAILS.



CLIENT/OWNER

SAINTFIELD2 LLC

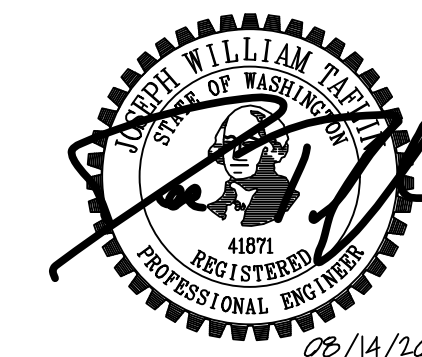
PROJECT NAME

SEARS

NAVIX PROJECT NUMBER: 50-215-004
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MERCER ISLAND, WA 98004

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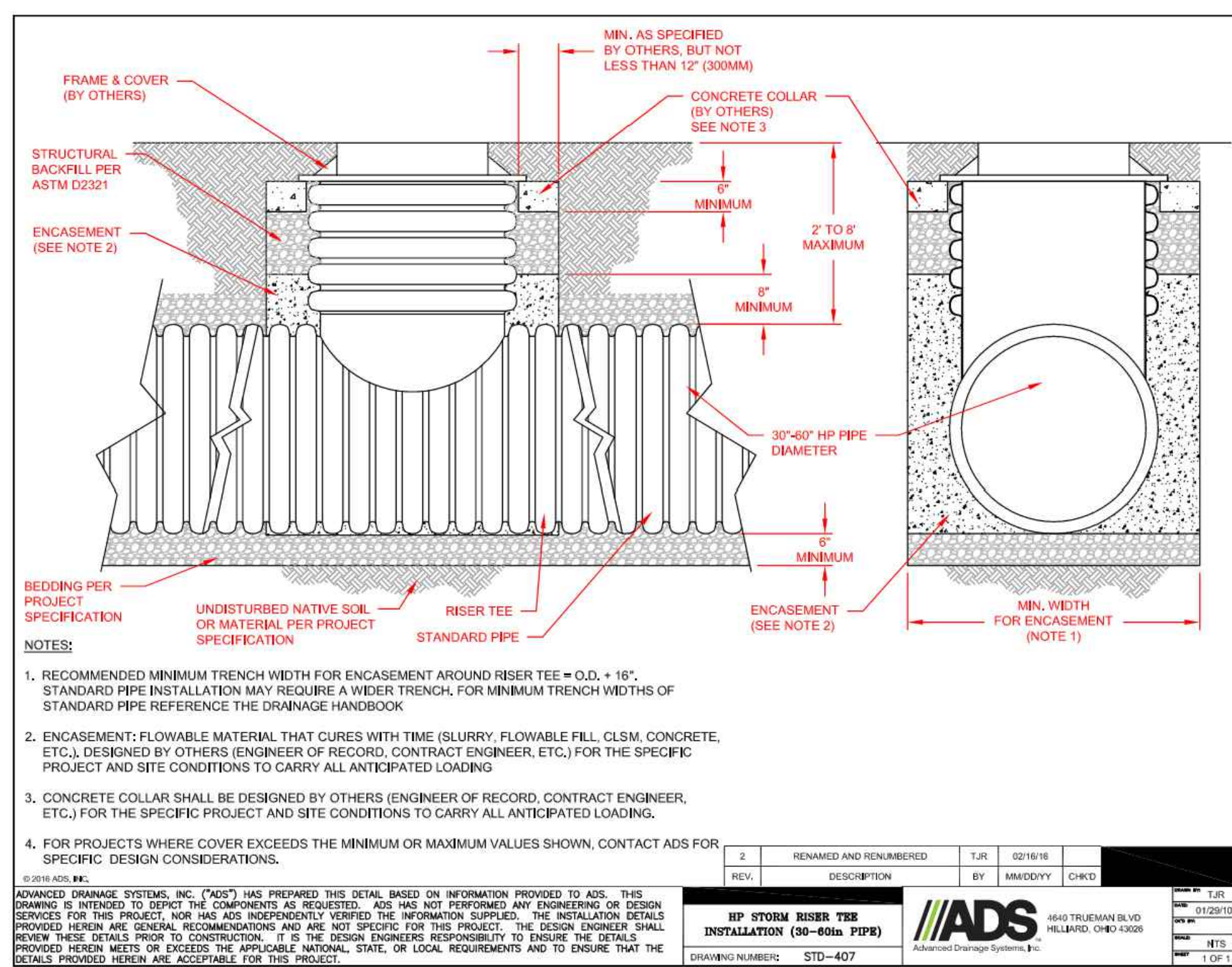
PROJECT TEAM
REVIEWED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

SHEET NAME

**STORM
STRUCTURE
DETAILS**

SHEET NUMBER

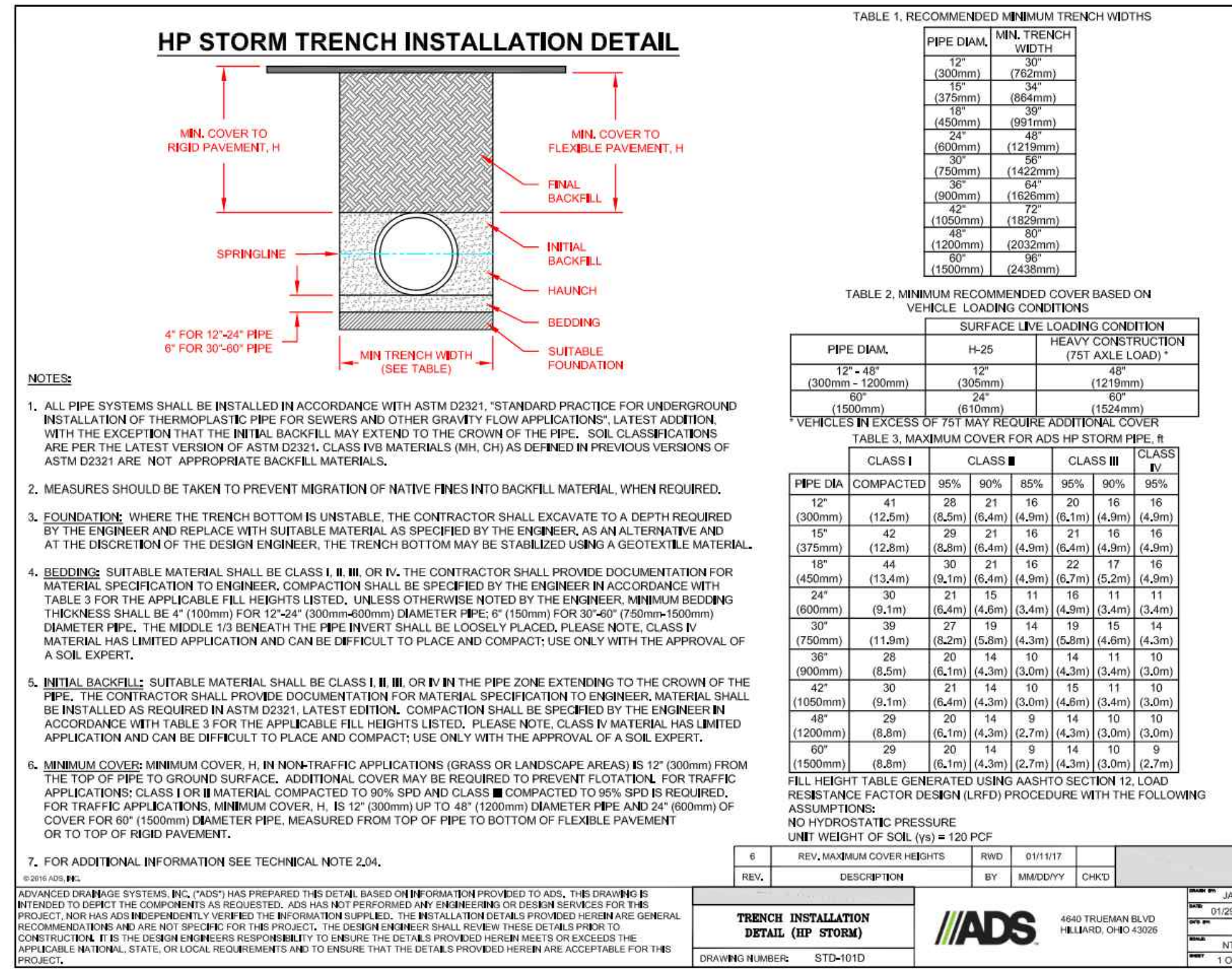
C5.08



ACCESS RISER INSTALLATION DETAIL

N.T.S.

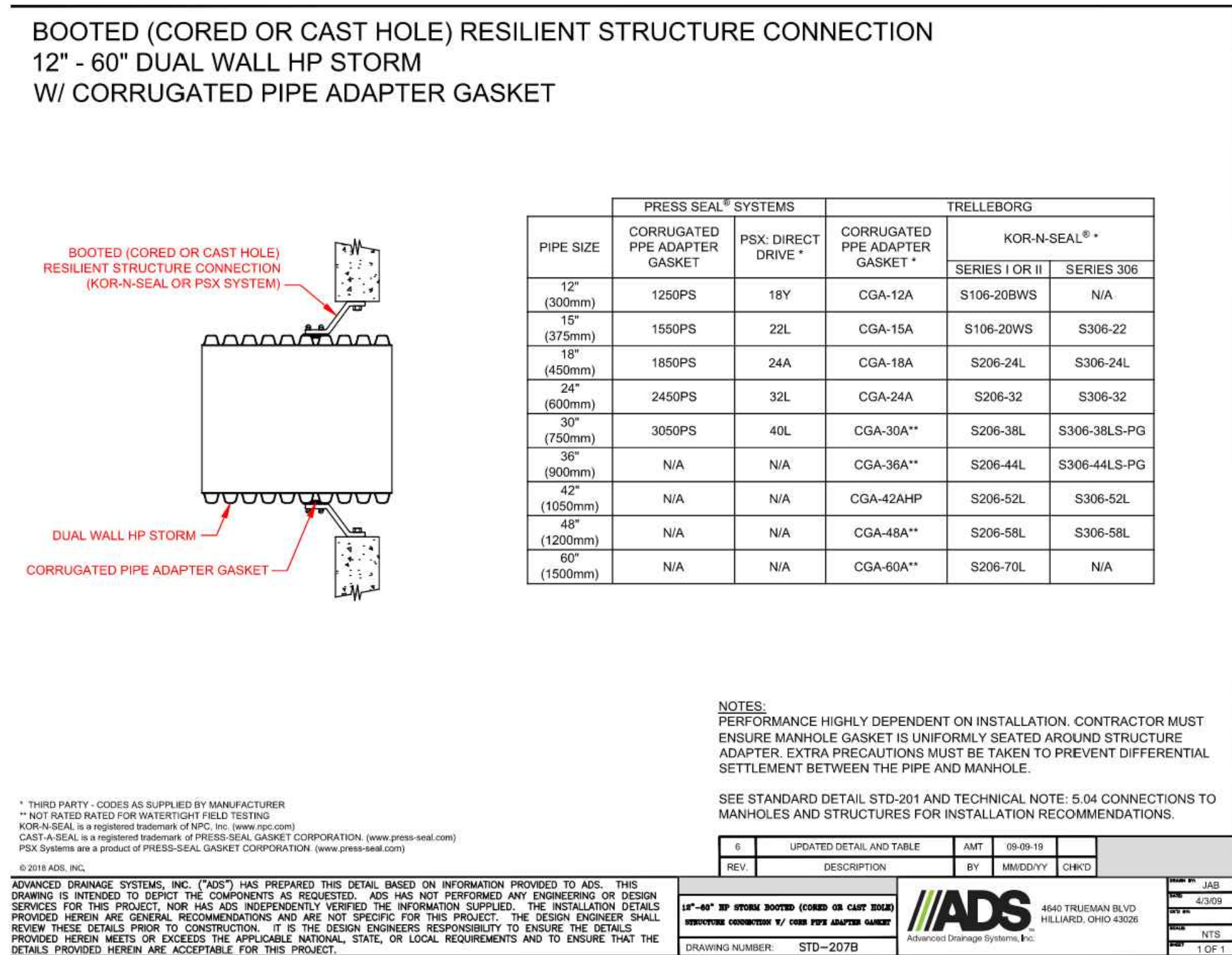
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TRENCH INSTALLATION DETAIL

N.T.S.

2



MANHOLE CONNECTION DETAIL

N.T.S.

3

DETENTION VAULT HANDRAIL DETAIL

N.T.S.

4

Department of Transportation
Road Services Division
2016 Design and Construction Standards

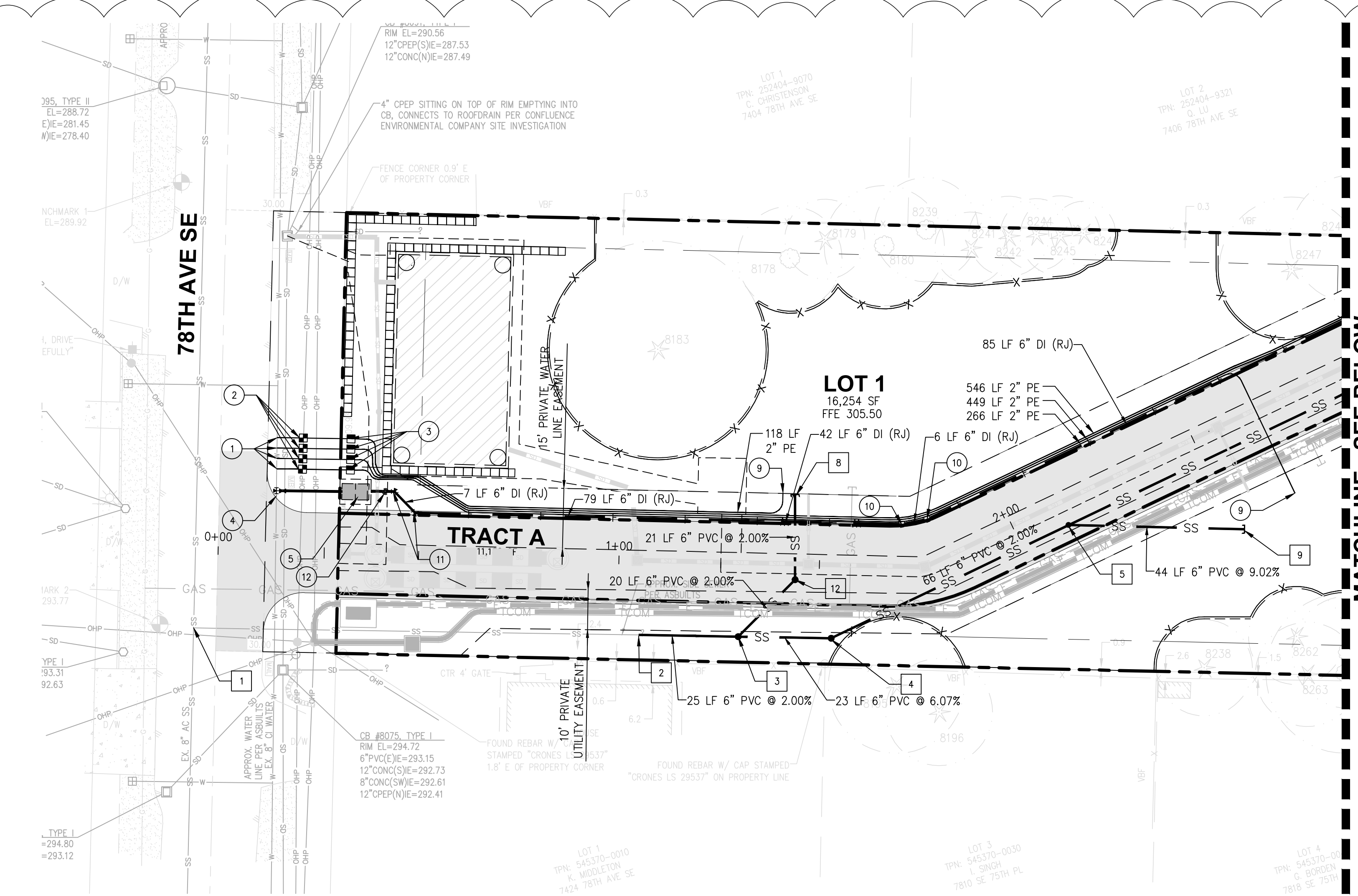
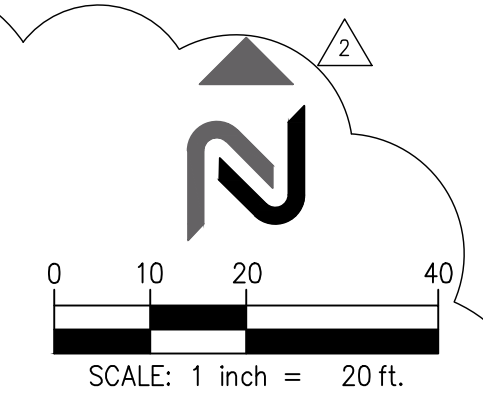
METAL HANDRAIL

FIG. 5-008

5-22

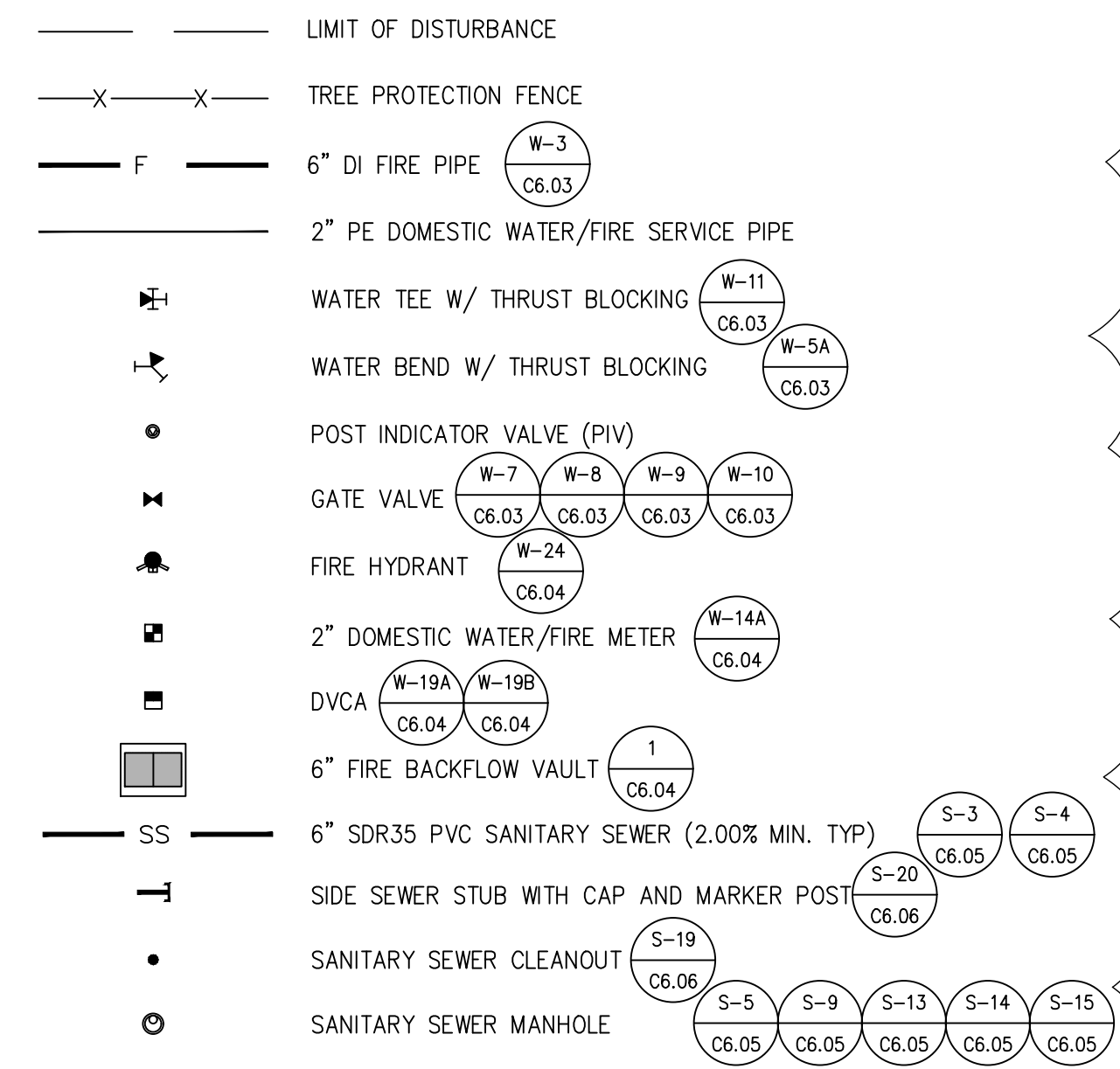


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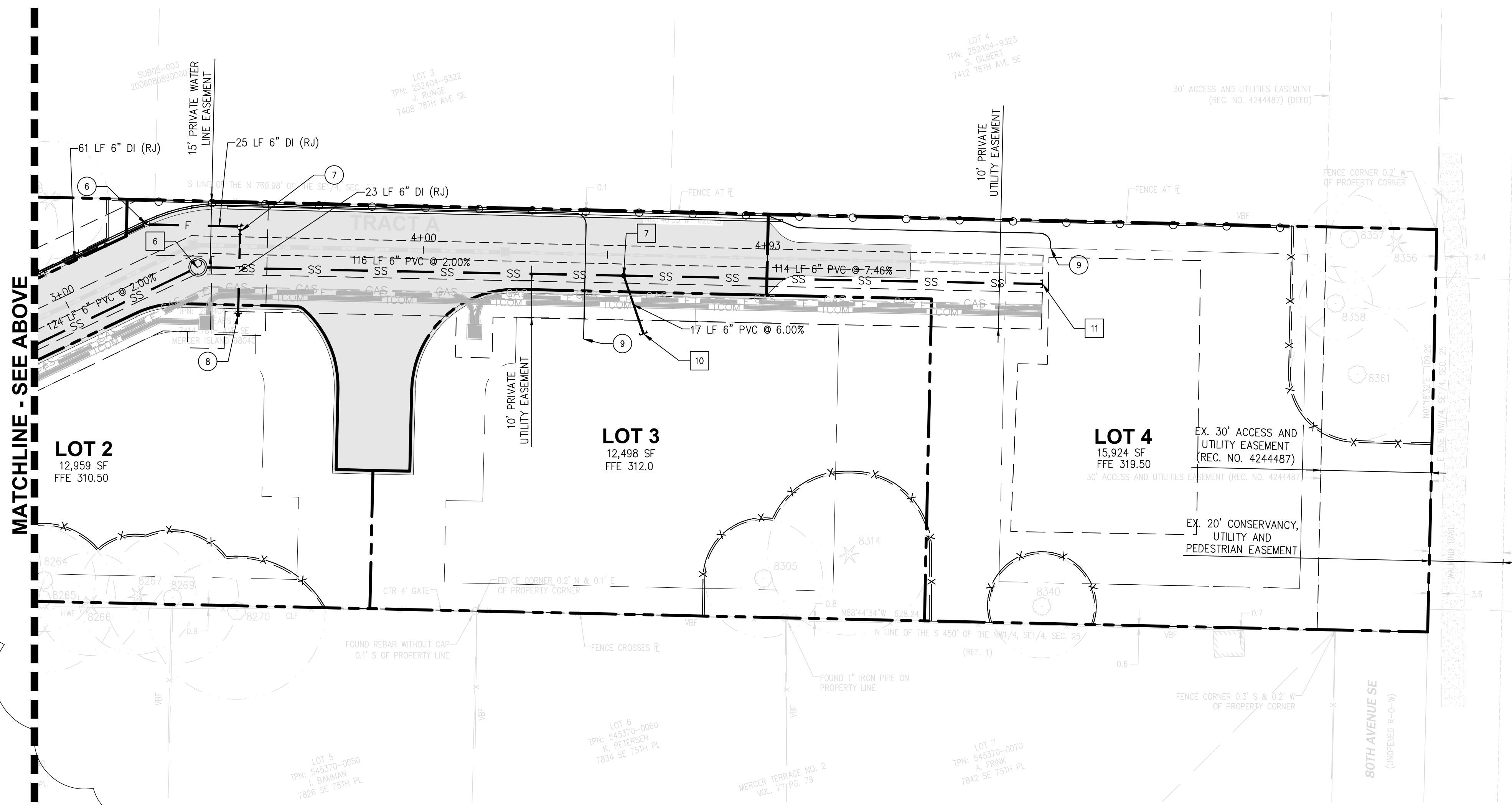
SEWER SCHEDULE	
1	EX. SS CONN. TO MAIN N:198695.04 E:1294164.68 8" IE: 285.35 6" IE: 285.40
2	CONN. TO EX. SS STUB SEE NOTE 4. N:198695.04 E:1294275.71 6" IE: 296.84 CONTRACTOR TO FIELD VERIFY IE SEE NOTE 4
3	SSCO #1 N:198692.82 E:1294300.48 RIM: 303.23 6" IE: 297.15 (NE) 6" IE: 297.35 (E) 6" IE: 297.33 (W)
4	SSCO #2 N:198692.42 E:1294323.68 RIM: 305.03 6" IE: 298.75 (NE) 6" IE: 298.76 (W)
5	SSCO #3 N:198720.64 E:1294382.88 RIM: 305.90 6" IE: 300.06 (NE) 6" IE: 300.04 (E) 6" IE: 300.06 (SW)
6	SSMH #1 (48") N:198773.82 E:1294434.44 RIM: 308.75 6" IE: 302.76 (E) 6" IE: 302.53 (SW)
7	SSCO #4 N:198771.52 E:1294610.03 RIM: 312.84 6" IE: 305.07 (E) 6" IE: 305.07 (S) 6" IE: 305.07 (W)
8	LOT 1 SS STUB WITH CAP AND MARKER POST N:198728.22 E:1294314.69 6" IE: 297.98 (S)
9	LOT 2 SS STUB WITH CAP AND MARKER POST N:198719.60 E:1294426.71 6" IE: 304.00 (W)
10	LOT 3 SS STUB WITH CAP AND MARKER POST N:198755.74 E:1294615.39 6" IE: 306.07 (N)
11	LOT 4 SS STUB WITH CAP AND MARKER POST N:198769.27 E:1294723.72 6" IE: 313.55 (W)
12	SSCO #5 N:198730.50 E:1294615.39 6" IE: 297.55 (N) 6" IE: 297.55 (SW)

LEGEND



NOTES:

- REFER TO SHEET C6.02 FOR WATER AND SEWER PROFILES.
- CONTRACTOR TO LOCATE EACH SS STUB LOCATION WITH A 2x4 MARKER POST LABELED "SEWER" AND NOTE THE INVERT ELEVATION AND PIPE SIZE PER DTL. S-20.
- CONTRACTOR TO VERIFY EXISTING SIDE SEWER LOCATION, SIZE, DEPTH, AND CONDITION PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF CONFLICTS.
- TV INSPECTION OF THE EXISTING SIDE SEWER IS REQUIRED FOR THE CITY SEWER MAIN. IF THE RESULTS OF TV INSPECTION ARE NOT SATISFACTORY AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR THEN THE EXISTING SIDE SEWER MUST BE REPLACED.
- THE DESIGN FOR THE CONNECTION BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING CITY WATER MAIN IS NOT REVIEWED AND APPROVED BY THE CITY UNDER THIS PERMIT. THE APPLICANT MUST POTHOLE THE WATER MAINS AND UTILITIES IN THIS AREA PRIOR TO ANY WORK ASSOCIATED WITH THE WATER MAIN CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR SUBMITTING THE DESIGN BASED ON THE INFORMATION OBTAINED FROM THE FIELD EXPLORATIONS TO THE CITY FOR REVIEWING AND APPROVAL.



WATER SCHEDULE

1	1-2" TAPPING TEE PER DTL. W-14 6 LF 2" PE WATER LINE
2	1-1.5" DOMESTIC WATER/FIRE METER PER DTL. W-14 1-STEEL METER BOX PER DTL. W-17 1-2" CORP. STOP 10 LF 2" PE WATER LINE
3	1-PRIVATE DOUBLE CHECK VALVE ASSEMBLY (DCVA) IN BELOW-GRADE UTILITY BOX
4	1-6" TAPPING TEE PER DTL. W-11
5	1-6" DCVA IN OLDCASTLE 687-LA VAULT PER DTL. W-19 AND W-19A
6	1-6" 22.5' BEND THRUST BLOCKING PER DTL. W-5A
7	1-6" 90' BEND THRUST BLOCKING PER DTL. W-5A 1-6" GATE VALVE (FLMJ)
8	1-FIRE HYDRANT ASSEMBLY PER DTL. W-24 1-4" STORZ ADAPTER THRUST BLOCKING PER DTL. W-5A
9	1-2" DOMESTIC WATER LINE STUB WITH MARKER BOARD FOR FUTURE CONNECTION
10	1- 6" 11.25' BEND THRUST BLOCKING PER DTL. W-5A
11	1-6" 45' BEND THRUST BLOCKING PER DTL. W-5A
12	1-6" POST INDICATOR VALVE



CLIENT/OWNER

SAINTFIELD2 LLC

PROJECT NAME

SEARS

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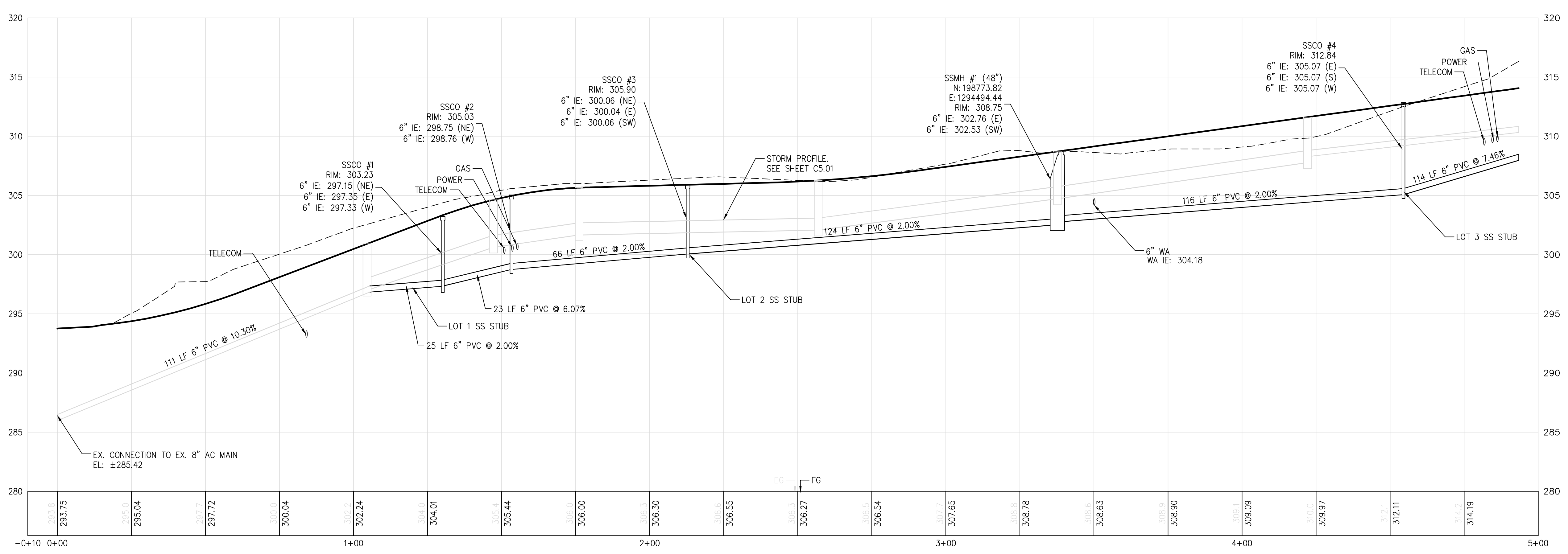
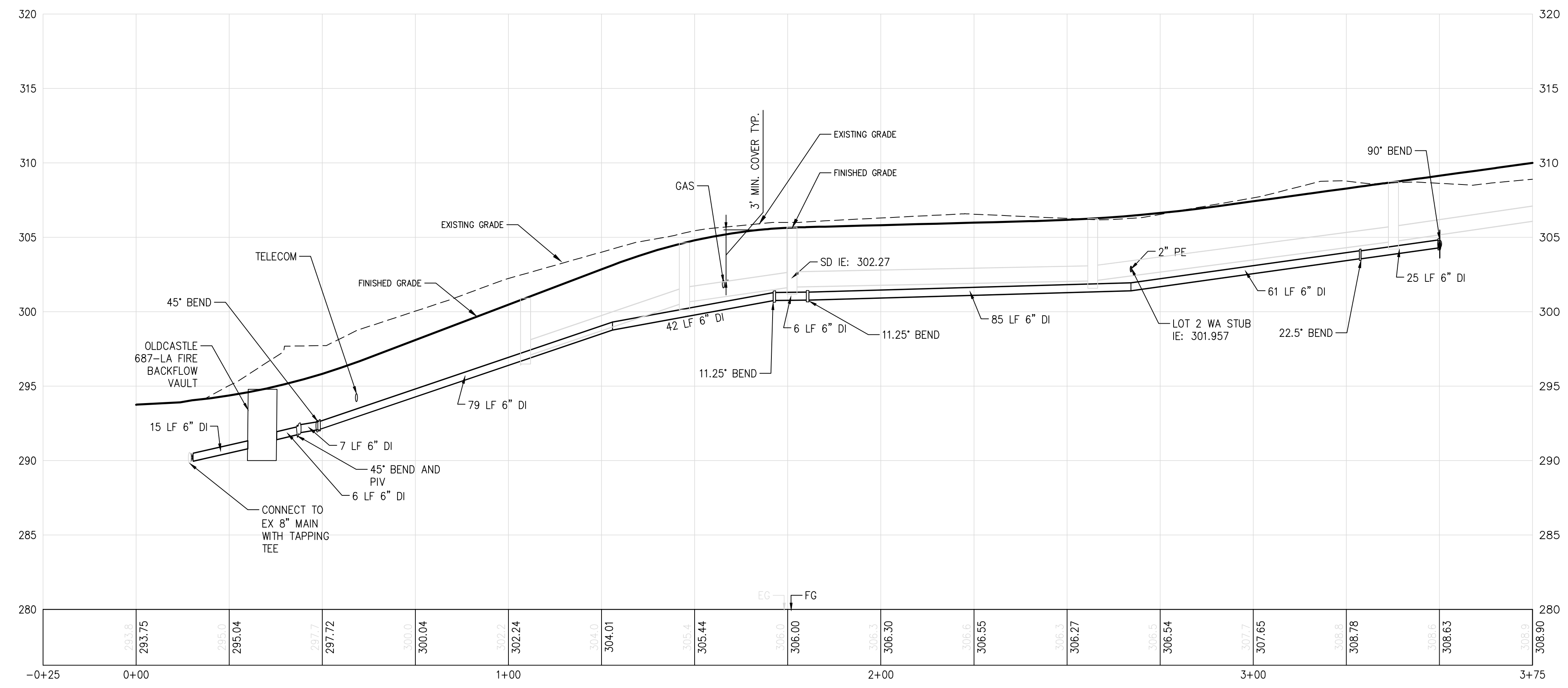
SHEET NAME

WATER AND SEWER PROFILE

SHEET NUMBER

C6.02

NOTE:
1. WHERE STORM DRAIN CROSSES ABOVE WATER, CENTER STICK OF STORM PIPE OVER THE WATER MAIN AT THE CROSSING



ASPHALT TO BE PLACED IN 3" MAXIMUM LIFTS. EDGES OF EXISTING PAVEMENT TO BE SAW CUT SQUARE ENTIRE THICKNESS OF THE PAVEMENT.

EXIST. ROADWAY PAVT. GRAVEL BASE

TRENCH AND RESTORATION LIMITS

CLASS "B" ASPHALT CONC. MATCH EXISTING THICKNESS. 4" MINIMUM THICKNESS ON RESIDENTIAL STREETS AND 8" MINIMUM THICKNESS ON ARTERIALS

GRIND LIMITS (NOTE 4)

5/8" MINUS CRUSHED ROCK COMPACTED TO 95%

EXCAVATION PROTECTION PER SPECIFICATIONS

WATER, SEWER, OR STORM DRAIN PIPE

FOUNDATION MATERIAL AS REQUIRED (NOTE 3)

TRENCH WIDTH SEE TABLE

WIDTH TRENCH			
PIPE ZONE	PIPE ZONE MAX. TRENCH WIDTH	MAX. TRENCH WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE
WATER SERVICES	2'-0"	2'-0"	4'-0"
4" OR 6"	2'-2"	3'-0"	5'-0"
8"	2'-4"	4'-0"	6'-0"
10"	2'-6"	4'-0"	6'-0"
12"	2'-8"	4'-6"	6'-6"
16"	3'-0"	5'-0"	7'-0"

NOTES

- CALL IN LOCATES TWO BUSINESS DAYS BEFORE YOU DIG. (1-800-424-5555)
- IN RIGHT-OF-WAY USE 100% 5/8 MINUS CRUSHED ROCK FOR BEDDING, PIPE ZONE AND BACKFILL.
- FOUNDATION MATERIAL SHALL BE 1 1/2" MINUS CRUSHED ROCK OR OTHER AGGREGATE AS APPROVED BY CITY ENGINEER.
- GRIND AND OVERLAY LIMITS SHALL EXTEND A MINIMUM OF 10' PAST THE END OF TRENCH AREAS.
- SEAL ALL FINAL PATCHING AND PAVING SEAMS WITH LIQUID ASPHALT, SQUEEGEE OR MOP THE SEALER. COVER WITH DRY SAND.

CITY OF MERCER ISLAND STANDARD DETAILS WATER TRENCH SECTION

3-29-2021 NO SCALE **W-3** APPROVED

THRUST BLOCKING TABLE					
PIPE SIZE	MINIMUM BEARING AREA AGAINST UNDISTURBED SOIL IN SQUARE FEET				
	A	B	C	D	E
4	2	2	2	2	2
6	4	3	2	2	2
8	7	5	4	2	2
10	11	8	6	3	2
12	16	12	9	5	3
14	22	16	12	6	3
16	29	20	16	8	4

NOTES

- ROMAC MJ WEDGE ACTION RETAINER MAY BE SUBSTITUTED FOR VERTICAL BLOCKING UPON PRIOR APPROVAL OF THE CITY ENGINEER.
- CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH.
- THRUST BLOCKS SHALL BE CAST-IN-PLACE AND BE CONSTRUCTED WITH CLASS 3000 OR COMMERCIAL CONCRETE.
- BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF BOLTS AND JOINTS TO PERMIT TAKING UP OR DISMANTLING JOINT. WRAP FITTINGS WITH 8 MIL THICK POLYETHYLENE SHEETING PRIOR TO POURING CONCRETE.
- BEARING AREA MUST BE ADJUSTED FOR HIGHER INTERNAL PRESSURES AND LOWER SOIL BEARING VALUES.
- THE CONTRACTOR SHALL INSTALL BLOCK WHICH IS ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY STAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.

CITY OF MERCER ISLAND STANDARD DETAILS WATER HORIZONTAL CONCRETE BLOCKING

3-30-2021 NO SCALE **W-5A** APPROVED

PIPE SIZE NOM. DIAMETER - INCHES	TEST PRESSURE P.S.I.	VERTICAL THRUST BLOCKING FOR 11 1/4" - 22 1/2" - 45°				
		VB	S	d	L	IN CONCRETE (2 EMBEDDED RODS PER SET)
3"	250	11-1/4	3.4	1.8	5/8"	12"
	45	11-1/4	3.4	1.75	5/8"	12"
4"	250	11-1/4	5.4	1.75	5/8"	12"
	45	11-1/4	5.4	1.75	5/8"	12"
6"	250	11-1/4	11.4	2.25	5/8"	12"
	45	11-1/4	11.4	2.25	5/8"	12"
8"	250	11-1/4	20.8	2.75	5/8"	12"
	45	11-1/4	20.8	2.75	5/8"	12"
10"	250	11-1/4	42.9	3.5	5/8"	12"
	45	11-1/4	42.9	3.5	5/8"	12"
12"	250	11-1/4	76.8	4.25	5/8"	12"
	45	11-1/4	76.8	4.25	5/8"	12"
14"	250	11-1/4	135.3	5.0	3/4"	24"
	45	11-1/4	135.3	5.0	3/4"	24"
16"	250	11-1/4	216.0	6.0	3/4"	24"
	45	11-1/4	216.0	6.0	3/4"	24"
18"	250	11-1/4	344.0	7.25	3/4"	24"
	45	11-1/4	344.0	7.25	3/4"	24"

NOTES

- CONCRETE SHALL BE 3000 PSI CONCRETE
- SHACKLE RODS/ALL THREAD SHALL BE ZINC PLATED. REFER TO CHART FOR SIZE AND NUMBER OF SHACKLE RODS. REFER TO PIPE CLAMP FOR INSTALLATION OF SHACKLE ROD. AFTER CONCRETE IS PLACED, 24 HOURS LATER INSTALL NUT AND WASHER AND TIGHTEN SHACKLE RODS NUTS ON PIPE CLAMP.
- ANVIL PIPE CLAMP 595 FITS 4"-24" DIA.

CITY OF MERCER ISLAND STANDARD DETAILS WATER VERTICAL CONCRETE BLOCKING

3-30-2021 NO SCALE **W-5B** APPROVED

VALVE BOX LID

6 3/4"

18 1/8"

11 3/4"

1 1/8"

8 1/8" DIA.

6 7/8" DIA.

6 3/4" DIA.

9 1/4" DIA.

6 5/8" DIA.

7 3/16" DIA.

5 3/4"

3 1/8"

7 1/2" DIA.

8" DIA.

8 3/4" DIA.

5-5/8" DIA.

5-1/8" DIA.

24", 30" OR 36"

3/8" R

NOTES

- VALVE BOX SHALL BE OLYMPIC FOUNDRY PART NO. VB940 OR EQUAL.
- THE TOP AND LID SHALL HAVE A MACHINED FIT.
- LOCKING LID, WHEN REQUIRED, SHALL BE OLYMPIC FOUNDRY PART NO. 13-5200 OR EQUAL.

CITY OF MERCER ISLAND STANDARD DETAILS WATER VALVE BOX

3-20-2006 NO SCALE **W-7** APPROVED

4'-0" MAX. IF OVER 4' SEE DWG. NO. W-9

8" MIN. OVERLAP

OPERATING NUT

BASE NOT TO REST ON VALVE BODY

NOTES

- VALVE BOX RISER WITH PAVING LUGS SHALL BE OLYMPIC NO. VB2 OR EQUAL.
- MINIMUM VALVE BOX BOTTOM LENGTH OVERALL = 21 1/16". SHORT RISERS ARE NOT PERMITTED.
- SEE DWG. NO. W-7 FOR DETAILS.

CITY OF MERCER ISLAND STANDARD DETAILS WATER WATER VALVE BOX

12-23-2013 NO SCALE **W-8** APPROVED

STANDARD VALVE BOX OLYMPIC FOUNDRY VB940

FINISH GRADE

2' - 4'

SEE DETAIL A-A

SEE DETAIL

VALVE BOX NOT TO REST DIRECTLY ON THE VALVE BODY

VALVE ASSEMBLY WITH EXTENSION PIECE IF REQUIRED

WITH 3/8" ALLEN SET SCREWS TIGHTENED ON TO SQUARE HEAD OF VALVE NUT.

4 1/4" DIA. 1/8" MIN. THICKNESS

2" SQUARE OPERATING NUT W/ 1/4" THICK ROUND PLATE WELDED TO NUT AND EXTENSION STEM

1/8" MIN. THICKNESS 2 1/4" INSIDE DIAMETER 2 1/4" DEPTH

2" SQUARE OPERATING NUT W/ 1/4" THICK ROUND PLATE WELDED TO NUT AND EXTENSION STEM

1/4" STEEL PLATE

FILLET WELD

1" DIA. MILD STEEL OR DOUBLE EXTRA STRONG PIPE EXTENSION STEM

NOTES

- EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN FOUR (4) FEET BELOW FINISHED GRADE.
- EXTENSIONS ARE TO BE A MINIMUM OF ONE (1) FOOT LONG. ONLY ONE EXTENSION PER VALVE WILL BE ALLOWED.
- ALL EXTENSIONS ARE TO BE MADE OF CAST OR DUCTILE IRON, SIZED AS NOTED AND PAINTED WITH TWO COATS ASPHALTIC VARNISH.

CITY OF MERCER ISLAND STANDARD DETAILS WATER WATER VALVE EXTENSION

12-23-2013 NO SCALE **W-9** APPROVED

42"(MAY VARY)

18"

NOTES

- PROVIDE A VALVE MARKER POST FOR EACH VALVE OUTSIDE OF THE PAVEMENT.
- THE FIBERGLASS VALVE MARKER POST SHALL BE BLUE IN COLOR, 3 3/4" WIDE (FLAT), 60" LONG, AND FURNISHED WITH A 2" x 2", HIGH-INTENSITY WHITE REFLECTOR (250 CANDLE POWER) AND A FLEXIBLE ANCHOR BARB. VALVE MARKER SHALL BE CARSONITE UTILITY MARKER CUM 375 OR EQUAL.
- THE POST SHALL BE SITUATED IN A SAFE, REASONABLY CONSPICUOUS LOCATION, AND AT A RIGHT ANGLE TO THE ROADWAY FROM THE VALVE.
- STENCIL FOOTAGE MEASUREMENT ON FRONT OF MARKER USING BRIGHT WHITE PAINT.

CITY OF MERCER ISLAND STANDARD DETAILS WATER VALVE MARKER POST

7-01-2014 NO SCALE **W-10** APPROVED

SEE W-5 FOR 8 MIL THICK POLYETHYLENE SHEETING (TO MATCH W-5)

DUCTILE IRON TAPPING TEE MECHANICAL JOINT SLEEVE

INSTALLED ON ASBESTOS CEMENT PIPE, CAST IRON PIPE AND DUCTILE IRON PIPE

STAINLESS STEEL TAPPING TEE

INSTALLED ON ASBESTOS CEMENT PIPE, CAST IRON PIPE AND DUCTILE IRON PIPE

NOTES

- STAINLESS STEEL TAPPING TEES SHALL HAVE FULL CIRCLE SEAL.
- STEEL TAPPING TEES SHALL BE EPOXY COATED.
- NO SIZE ON SIZE TAPS. TAP SHALL BE AT LEAST 2" SMALLER DIAMETER THAN THE EXISTING MAIN.
- TAPPING TEES SHALL BE MULLER OR EQUAL.

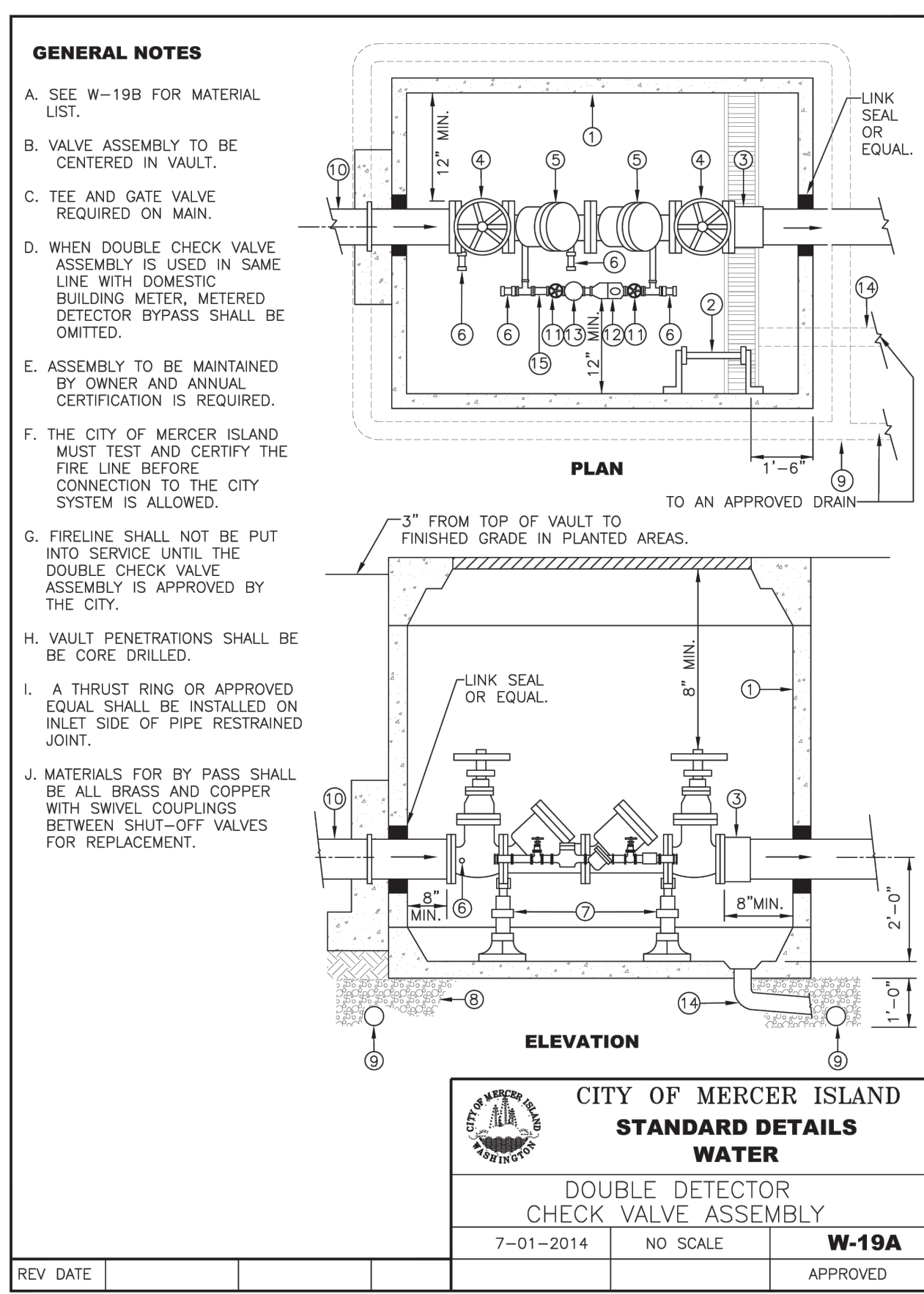
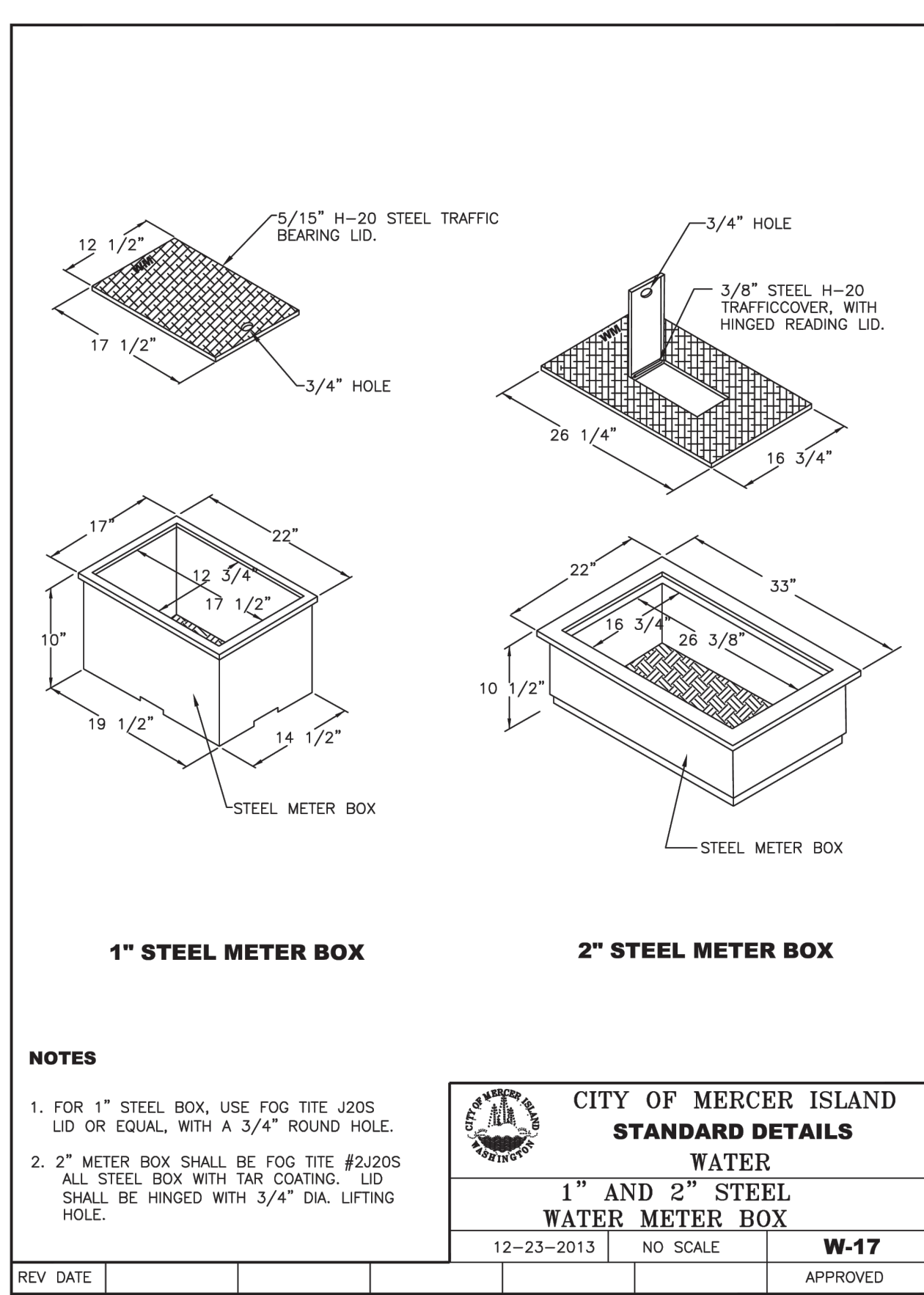
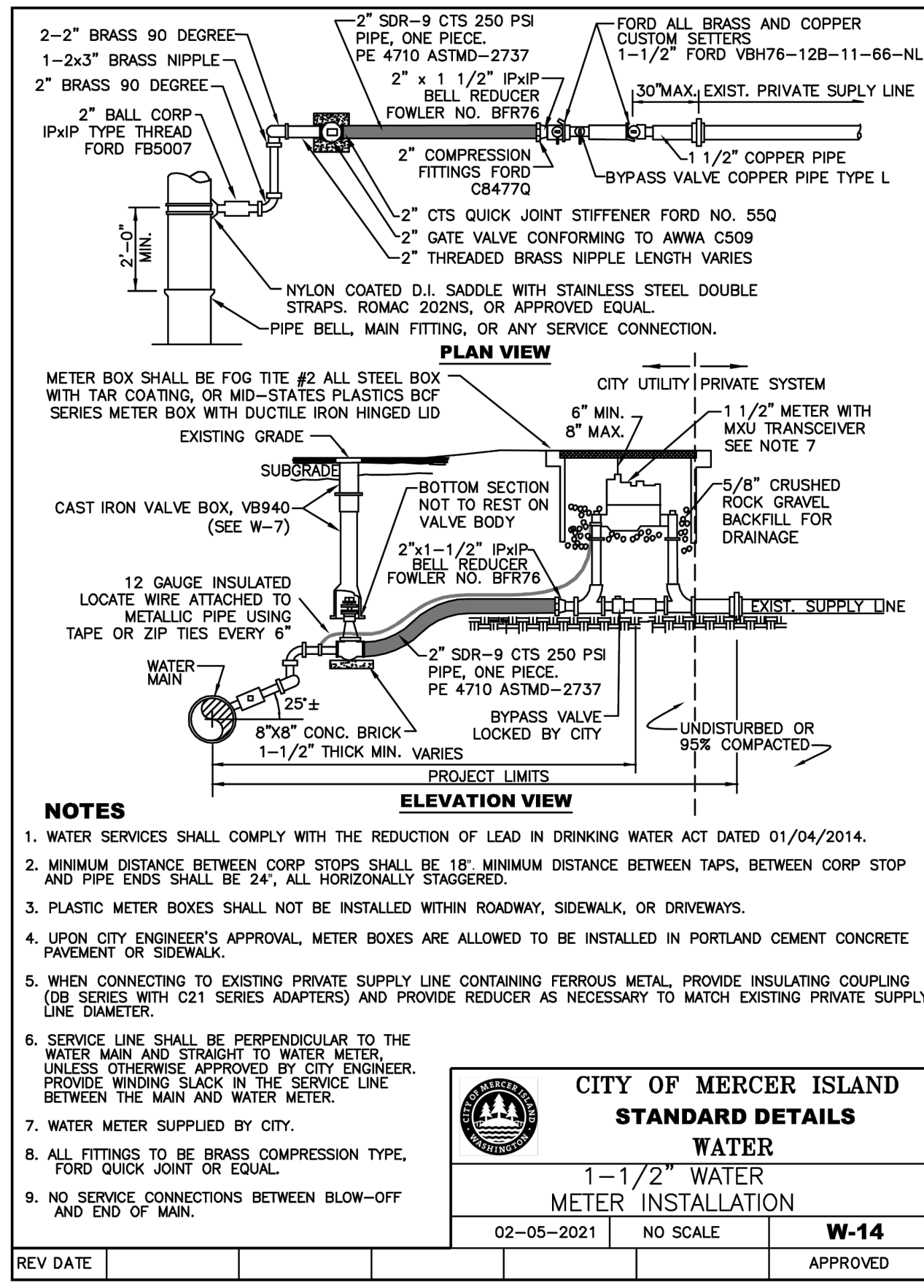
CITY OF MERCER ISLAND STANDARD DETAILS WATER TAPPING TEE

8-12-2009 NO SCALE **W-11** APPROVED



REVISIONS		
REV	ISSUED FOR:	DATE
1	PERMIT RESUBMITTAL	07/01/24
2	PERMIT RESUBMITTAL	08/14/24





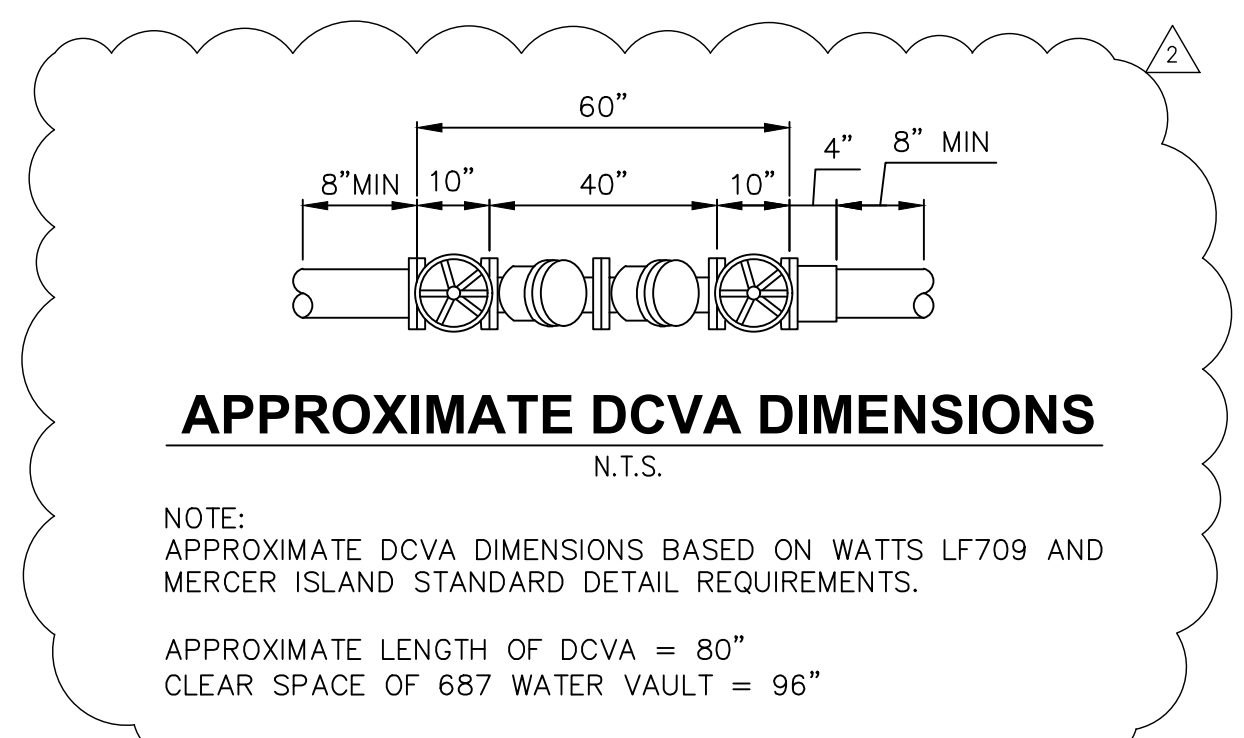
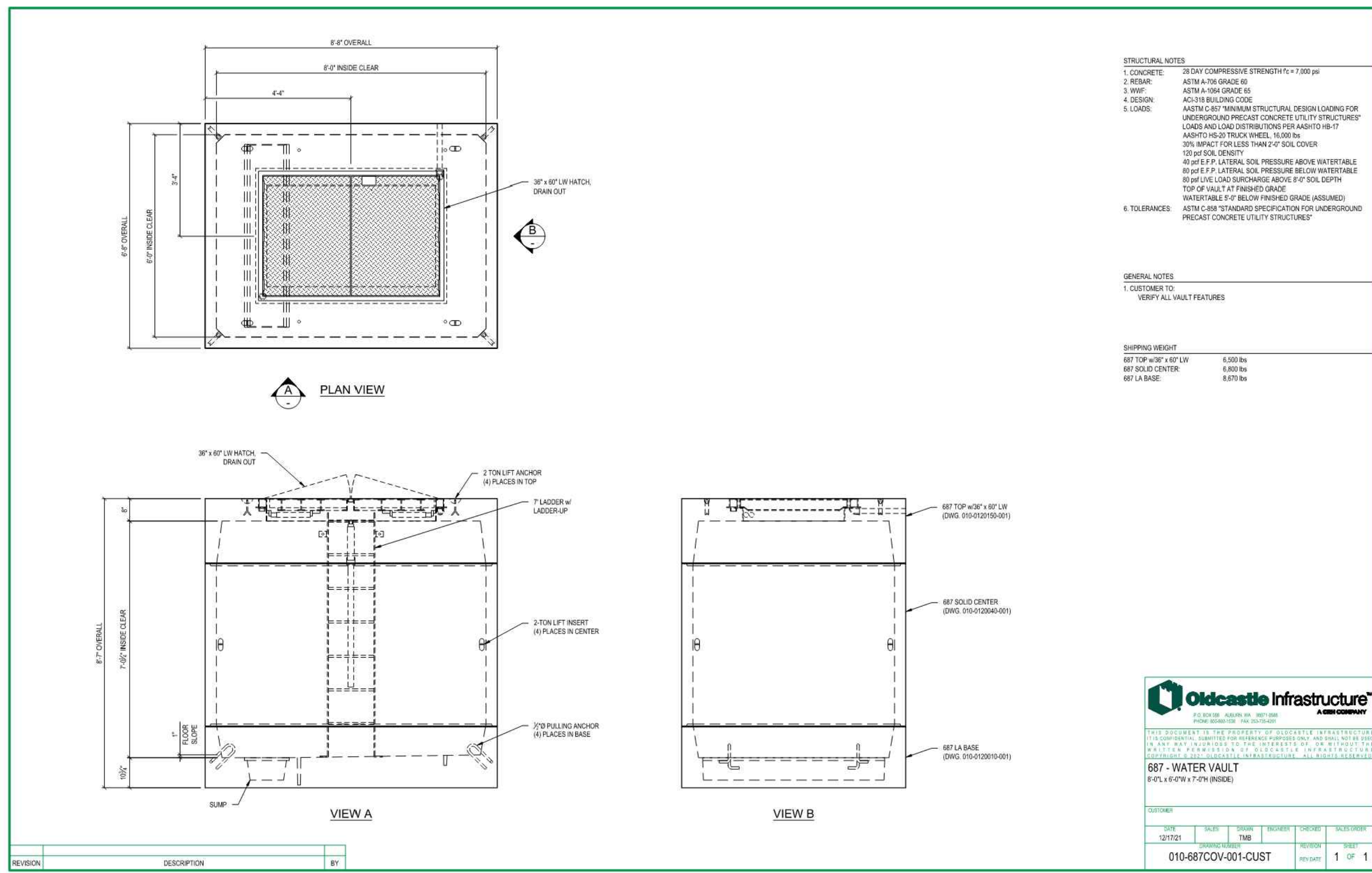
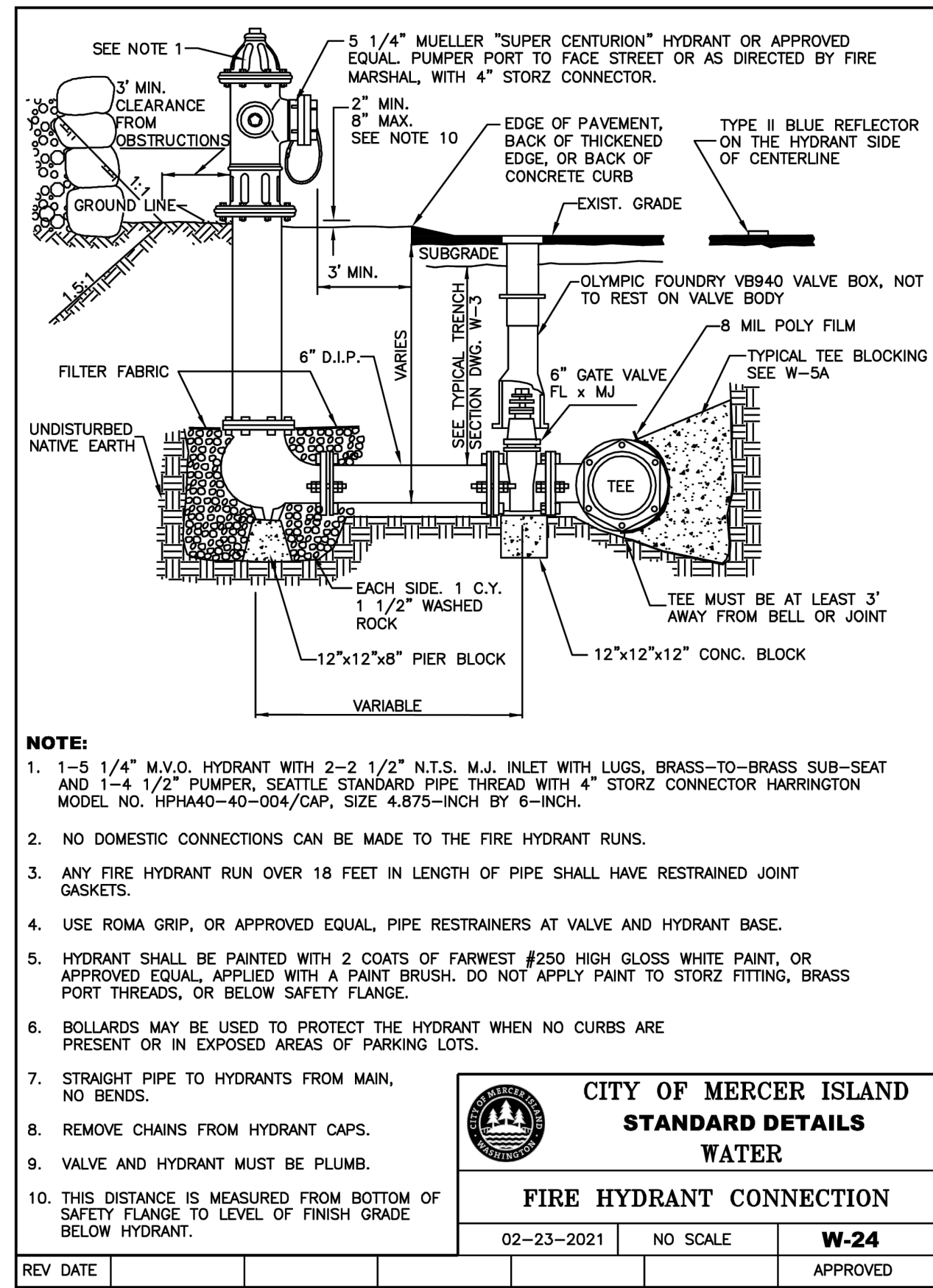
KEY NO.	QUANTITY			MATERIAL
	4"	6"	8"	
1	1	-	-	PRE CAST CONCRETE VAULT AS APPROVED BY THE CITY ENGINEER
1	-	1	-	PRE CAST CONCRETE VAULT AS APPROVED BY THE CITY ENGINEER
1	1	-	-	PRE CAST CONCRETE VAULT AS APPROVED BY THE CITY ENGINEER
1	-	1	-	PRE CAST CONCRETE VAULT AS APPROVED BY THE CITY ENGINEER
1	-	1	-	PRE CAST CONCRETE VAULT AS APPROVED BY THE CITY ENGINEER
1	1	1	1	LW PRODUCTS ALUMINUM, SINGLE DOOR, H-20 OR EQUAL.
2	1	1	1	FABRICATED BOLT-ON LADDER. USE THREE SETS OF MOUNTING BRACKETS ATTACHED TO VAULT WALL WITH 5/8" DIAMETER CORROSION RESISTANT ANCHOR BOLTS (HILT KWIK BOLT, PHILIPS RED HEAD OR APPROVED EQUAL). ALL STEEL FOR LADDER SHALL BE A-36, OSHA APPROVED HOT DIPPED GALVANIZED AFTER FABRICATION. SEE DRAWING NO. W-27c.
3	1	-	-	4" DIAMETER FLEXIBLE FLANGED COUPLING ADAPTER ROCKWELL TYPE 912
3	-	1	-	8" OR 6" DIAMETER FLEXIBLE FLANGED COUPLING ADAPTER ROCKWELL TYPE 912
4	1	-	-	4" O.S. & Y. GATE VALVE U.L. APPROVED
4	-	1	-	8" OR 6" O.S. & Y. GATE VALVE U.L. APPROVED
5	1	-	-	4" D.S.H.S. APPROVED DOUBLE CHECK VALVE ASSEMBLY INCLUDING 2 O.S. & Y. GATE VALVES, TEST COCK, 3/4" DOUBLE CHECK VALVE, SINGLE OR MULTI JET METER (TO READ IN CUBIC FEET) AND 3/4" BRASS OR COPPER BYPASS WITH IN LINE VALVES.
5	-	1	-	8" OR 6" D.S.H.S. APPROVED DOUBLE CHECK VALVE ASSEMBLY INCLUDING 2 O.S. & Y. GATE VALVES, TEST COCK, 3/4" DOUBLE CHECK VALVE, SINGLE OR MULTI JET METER (TO READ IN CUBIC FEET) AND 3/4" BRASS OR COPPER BYPASS WITH IN LINE VALVES.
6	1	1	1	3/4" DIAMETER TEST COCKS
7	2	2	2	ADJUSTABLE PIPE SADDLE SUPPORT (ITT GRINELL FIG 264 OR APPROVED EQUAL). ATTACH TO VAULT FLOOR WITH FOUR 1/2" DIAMETER CORROSION RESISTANT ANCHOR BOLTS (HILT KIWI BOLT, PHILIPS RED HEAD OR APPROVED EQUAL). SEE DRAWING NO. W-27c.
8	-	-	-	PEA GRAVEL BACKFILL FOR PIPE BEDDING UNDER PRECAST CONCRETE UTILITY VAULT.
9	-	-	-	4" DIAMETER UNDERDRAIN, CONNECT TO DRAINAGE SYSTEM, SCHEDULE 200 PERFORATED PVC WITH GALVANIZED SCREEN EACH END.
10	-	-	-	4" DIAMETER CL. 52 DUCTILE IRON PIPE
10	-	-	-	6" OR 8" DIAMETER CL. 52 DUCTILE IRON PIPE
11	1	1	1	3/4" GATE VALVE U.L. LISTED
12	1	1	1	5/8" x 3/4" ACCULINK MULTINET MASTER METER WITH SENSUS COMPATIBLE MXU READ IN CU. FT. MULTI-JET
13	1	1	1	3/4" DOUBLE CHECK VALVE
14	1	1	1	SOLID PVC PIPE SUMP DRAIN. SIZE PER MANUFACTURER'S RECOMMENDATION. CONNECT TO DRAINAGE STRUCTURE AS APPROVED
15	1	1	1	3/4" "Y" STRAINER

NOTES

1. ALL VAULT, BASED AND TOPS TO BE COATED WITH DAMPROOFING.
2. SIZE DETERMINED ON BASIS OF ACTUAL FIRE DEMAND.
3. SEE W-19A FOR ADDITIONAL DETAILED MATERIAL NOTES.

CITY OF MERCER ISLAND STANDARD DETAILS WATER MATERIAL LIST DOUBLE DETECTOR CHECK

7-01-2014 NO SCALE W-19B APPROVED



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CLIENT/OWNER
SAINTFIELD2 LLC

PROJECT NAME

SEARS

NAVIX PROJECT NUMBER: 50-215-004
PROJECT ADDRESS

7414 78TH AVE SE
MERCER ISLAND, WA 98040

STAMP



REVISIONS

REV	ISSUED FOR:	DATE
1	PERMIT RESUBMITTAL	07/01/24
2	PERMIT RESUBMITTAL	08/14/24

SECTION, TOWNSHIP, RANGE:
SECTION 25, TOWNSHIP 24 NORTH,
RANGE 4 EAST, W.M.

PROJECT TEAM
REVIEWED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

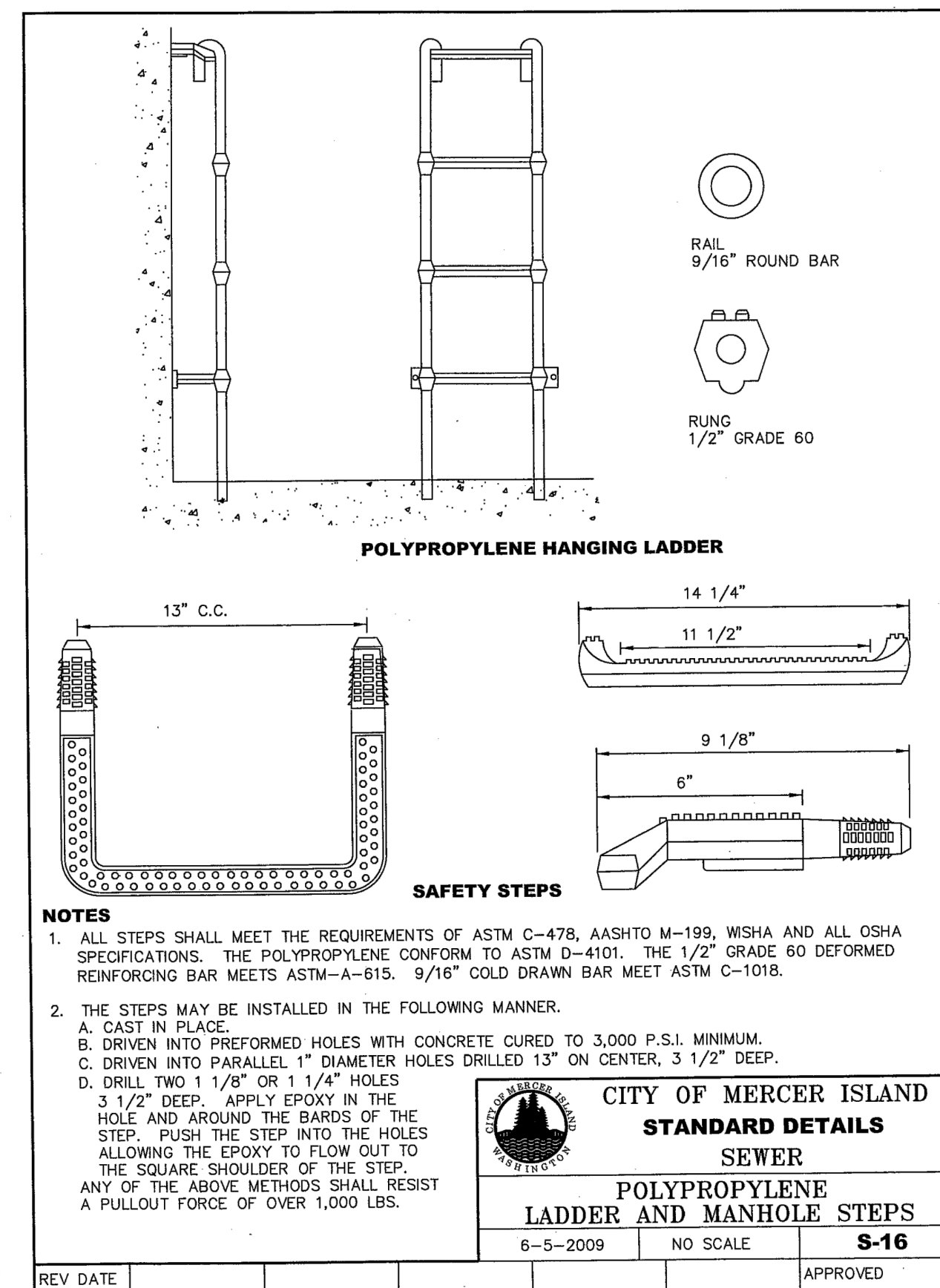
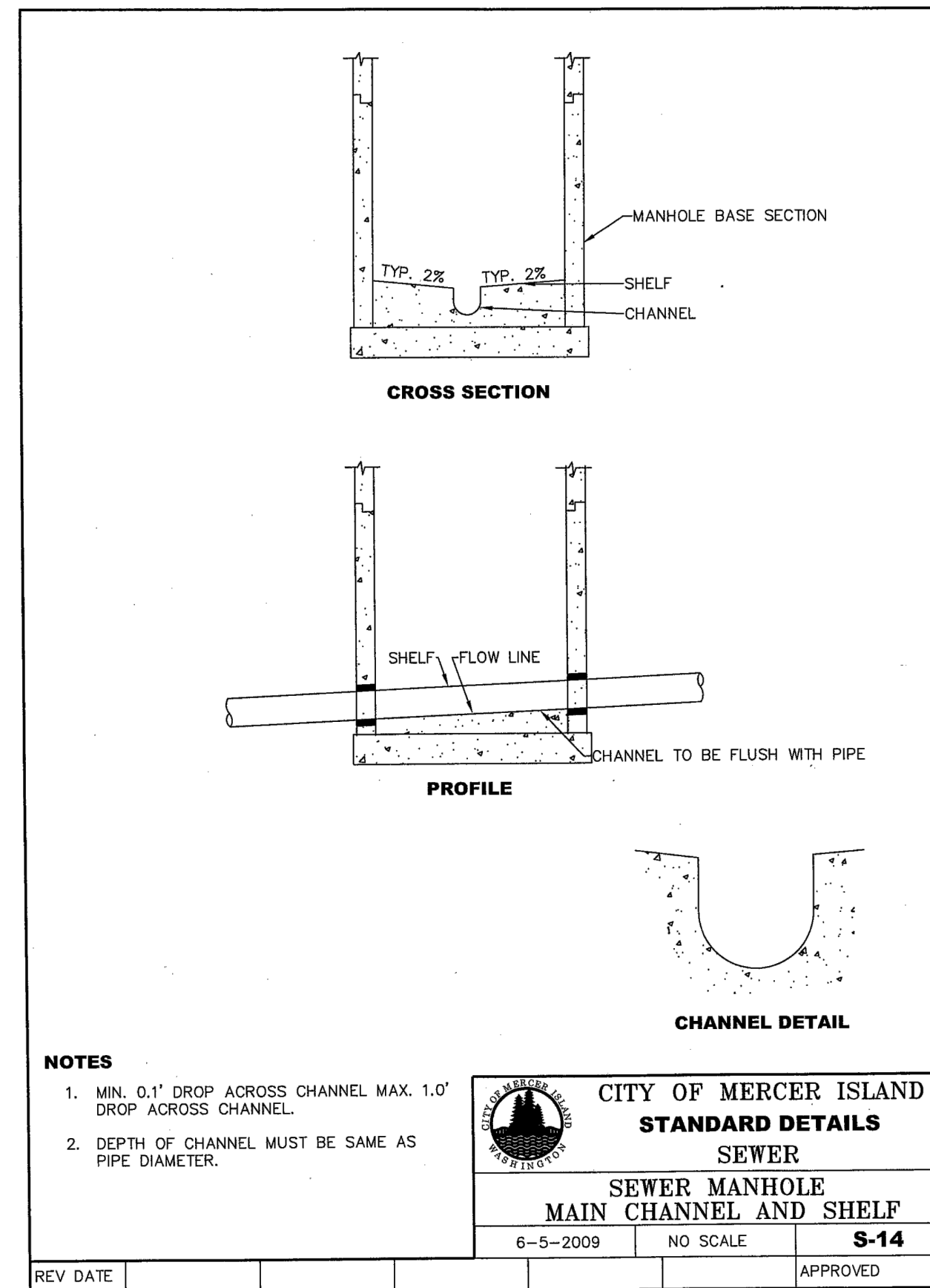
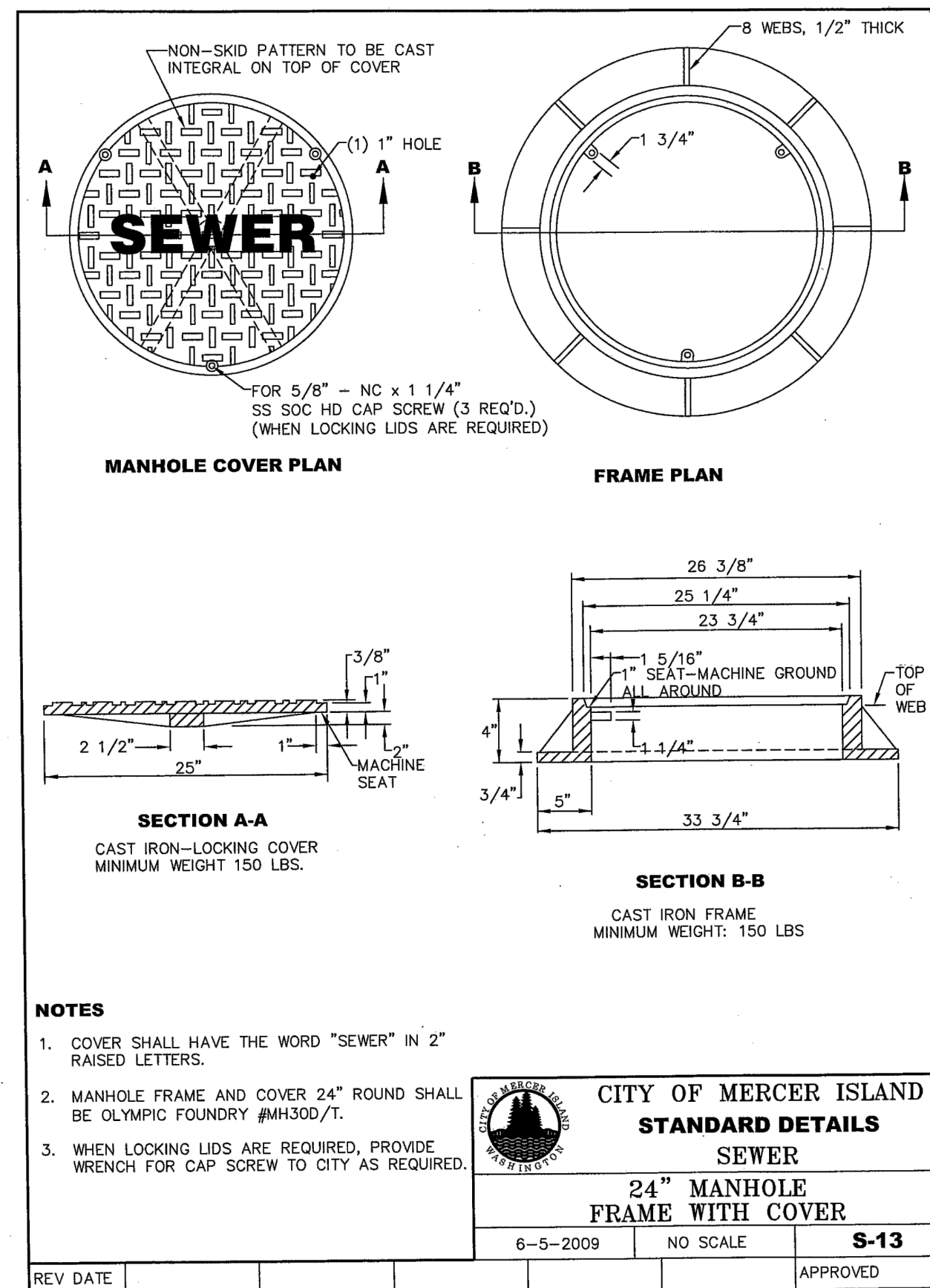
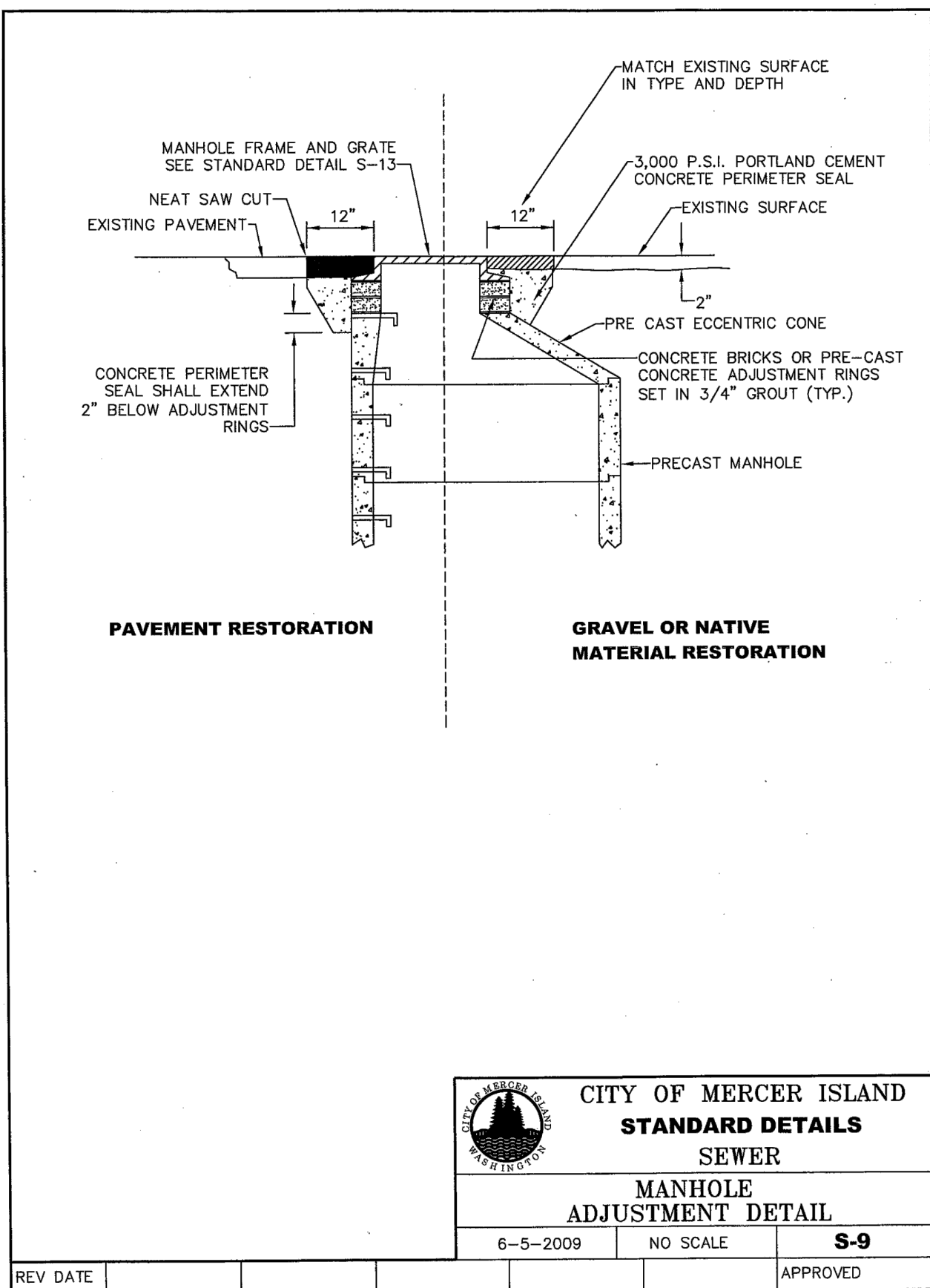
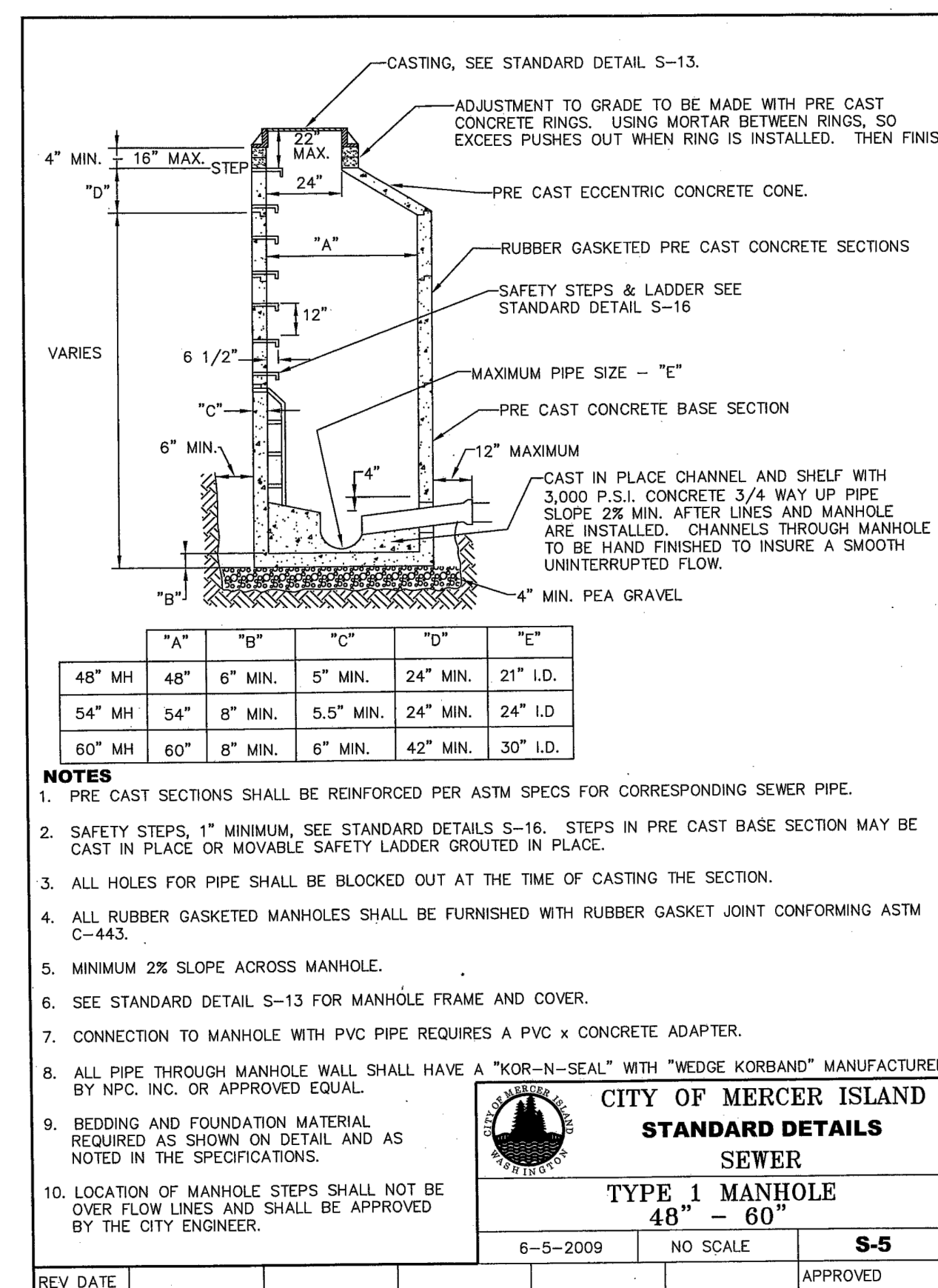
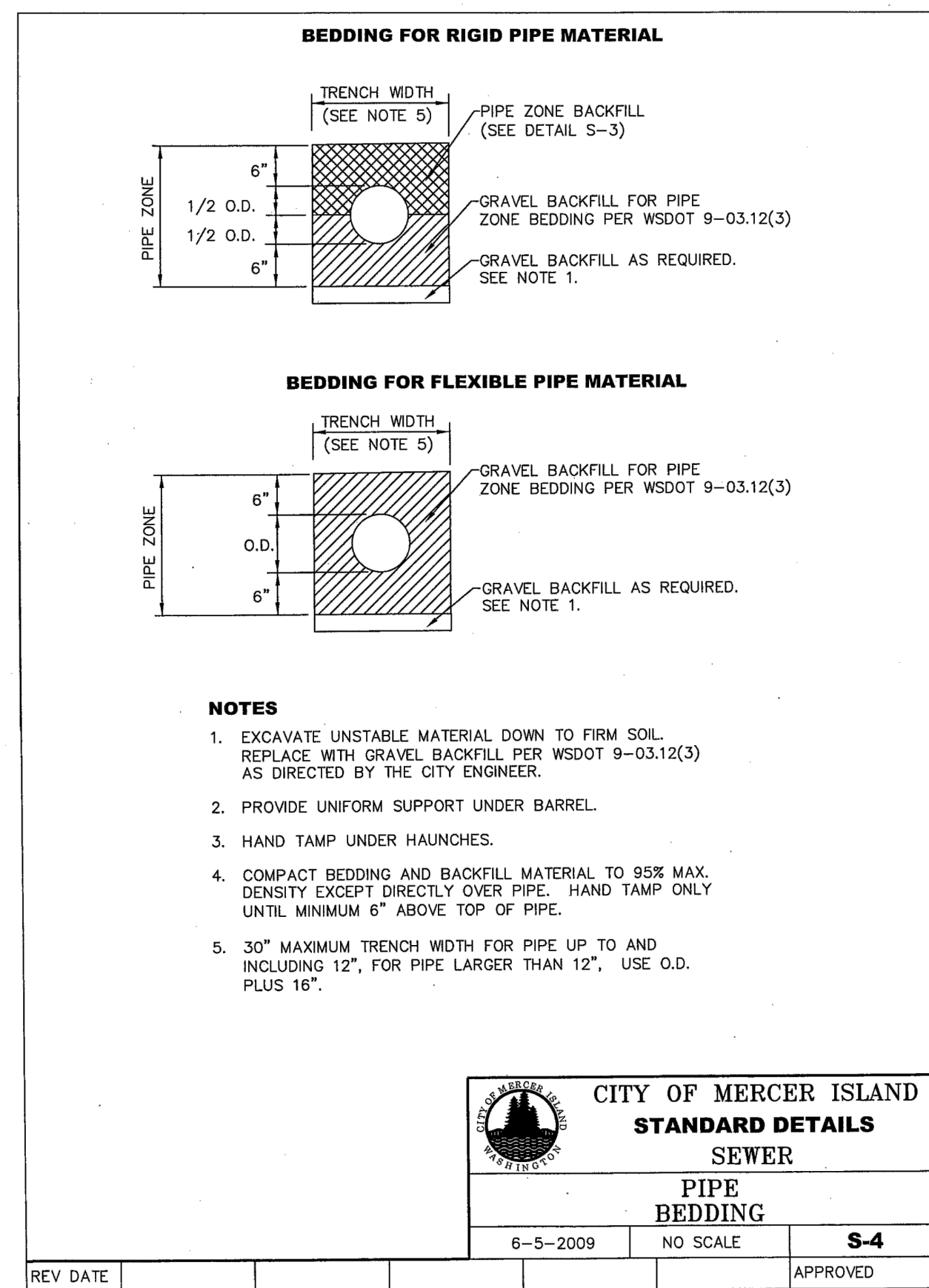
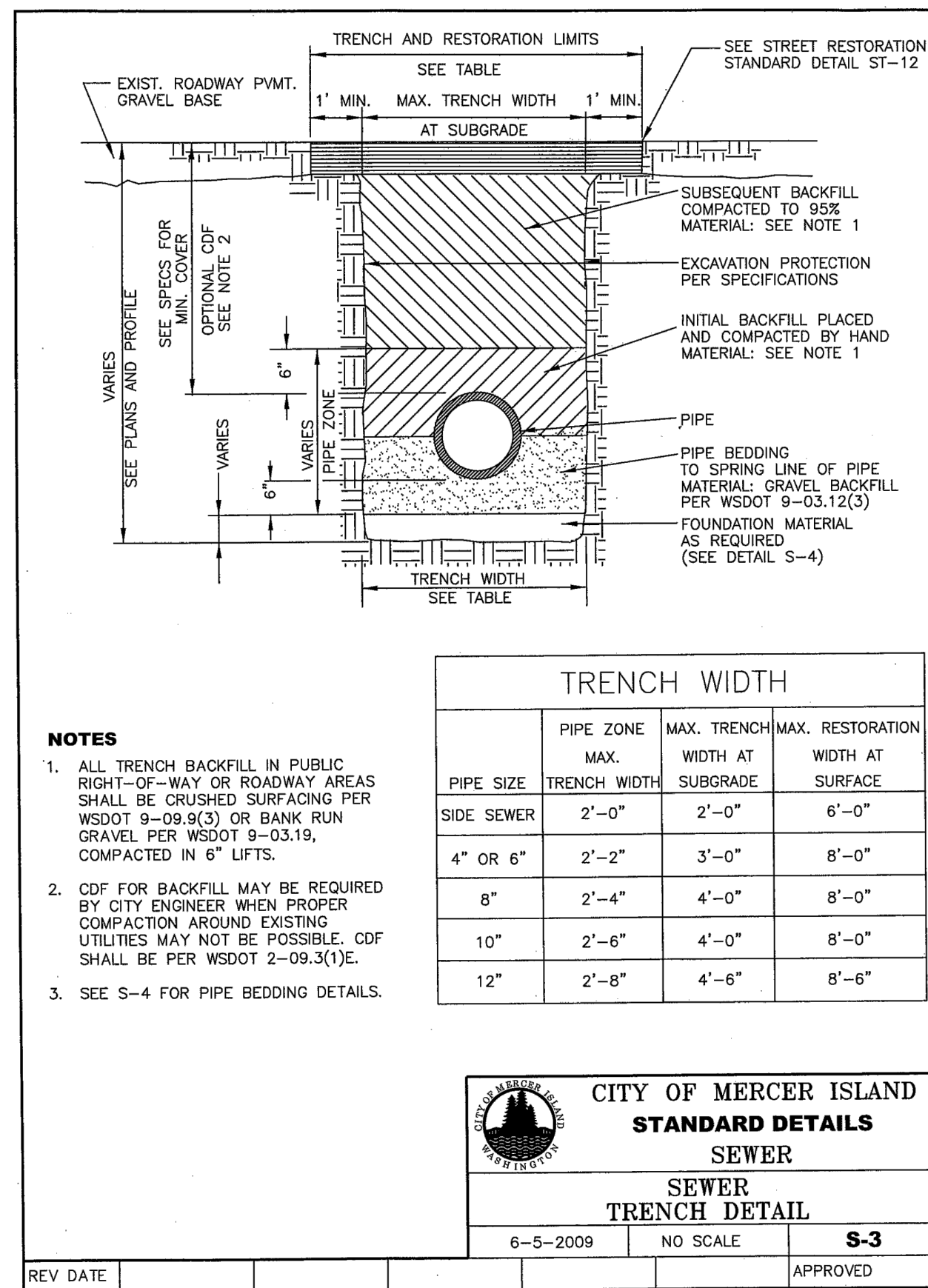
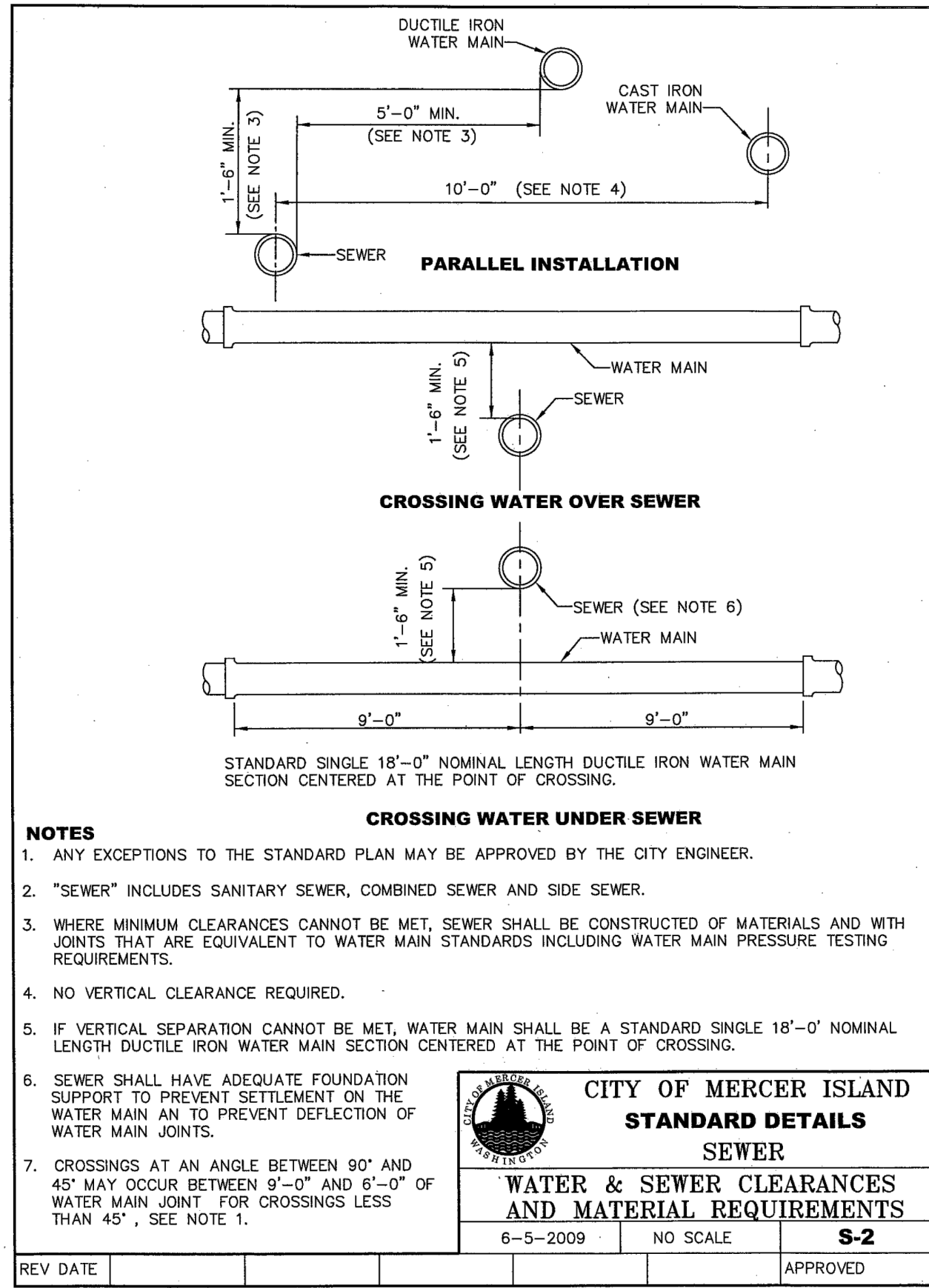
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WATER DETAILS

SHEET NUMBER

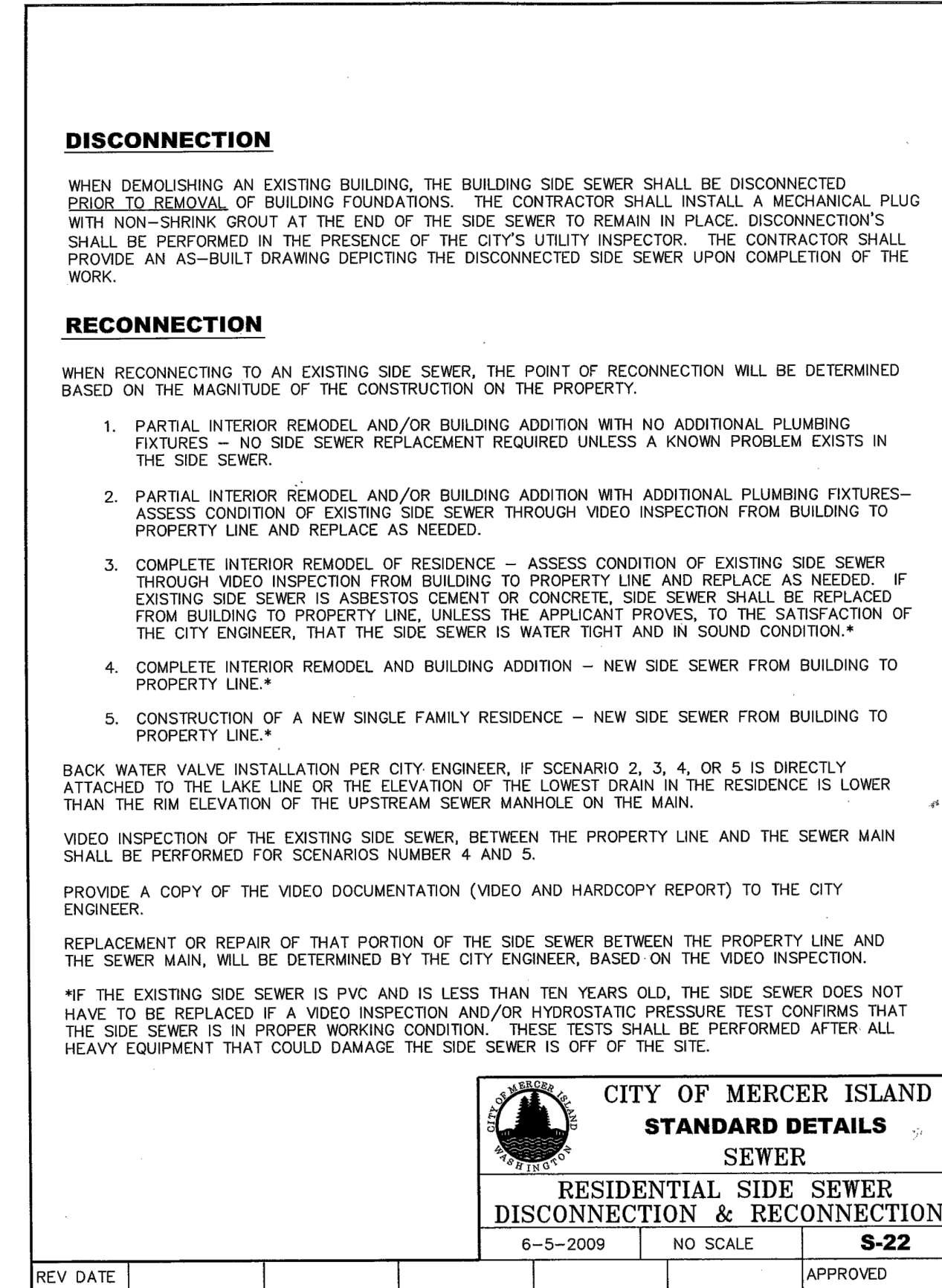
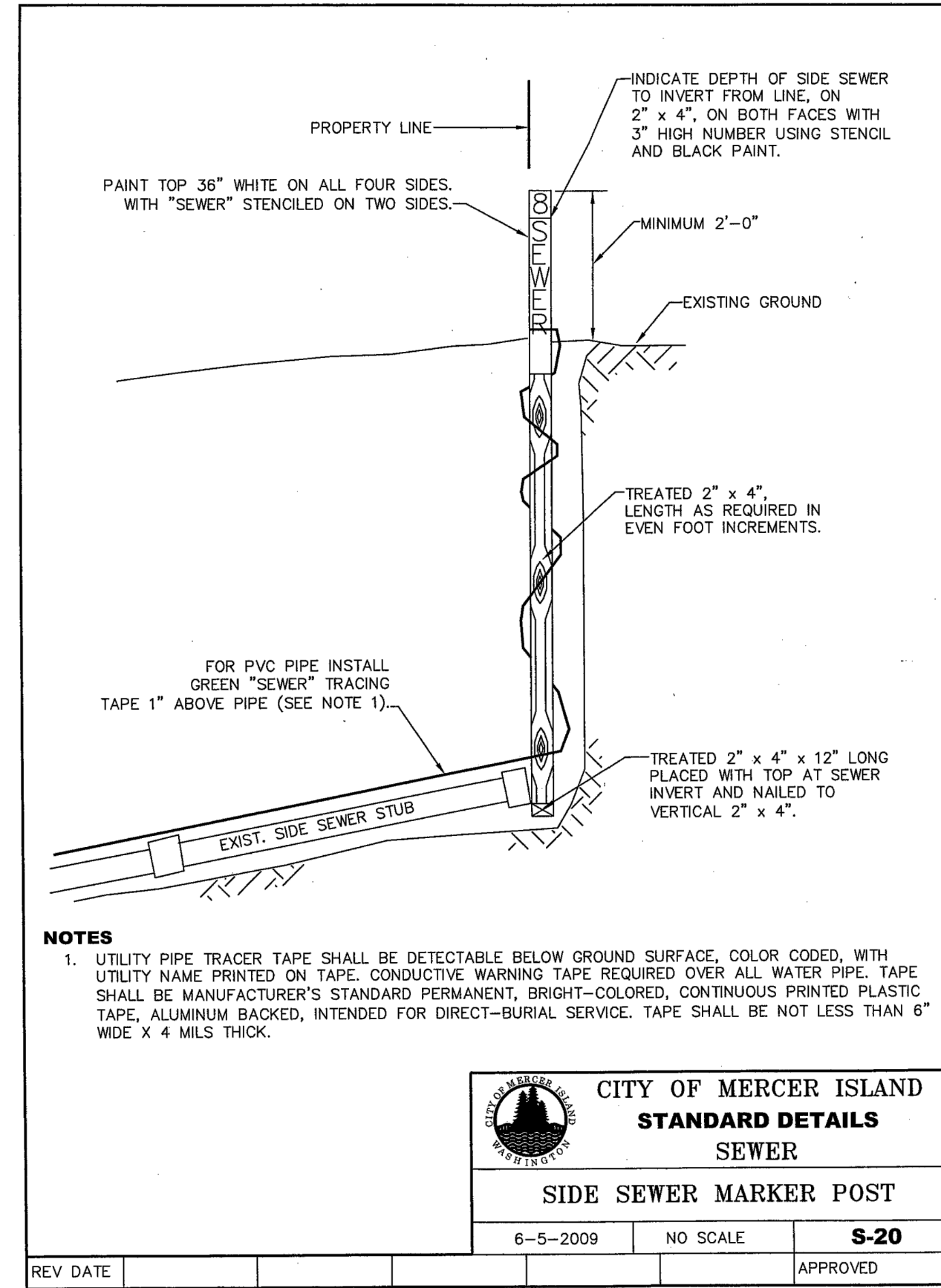
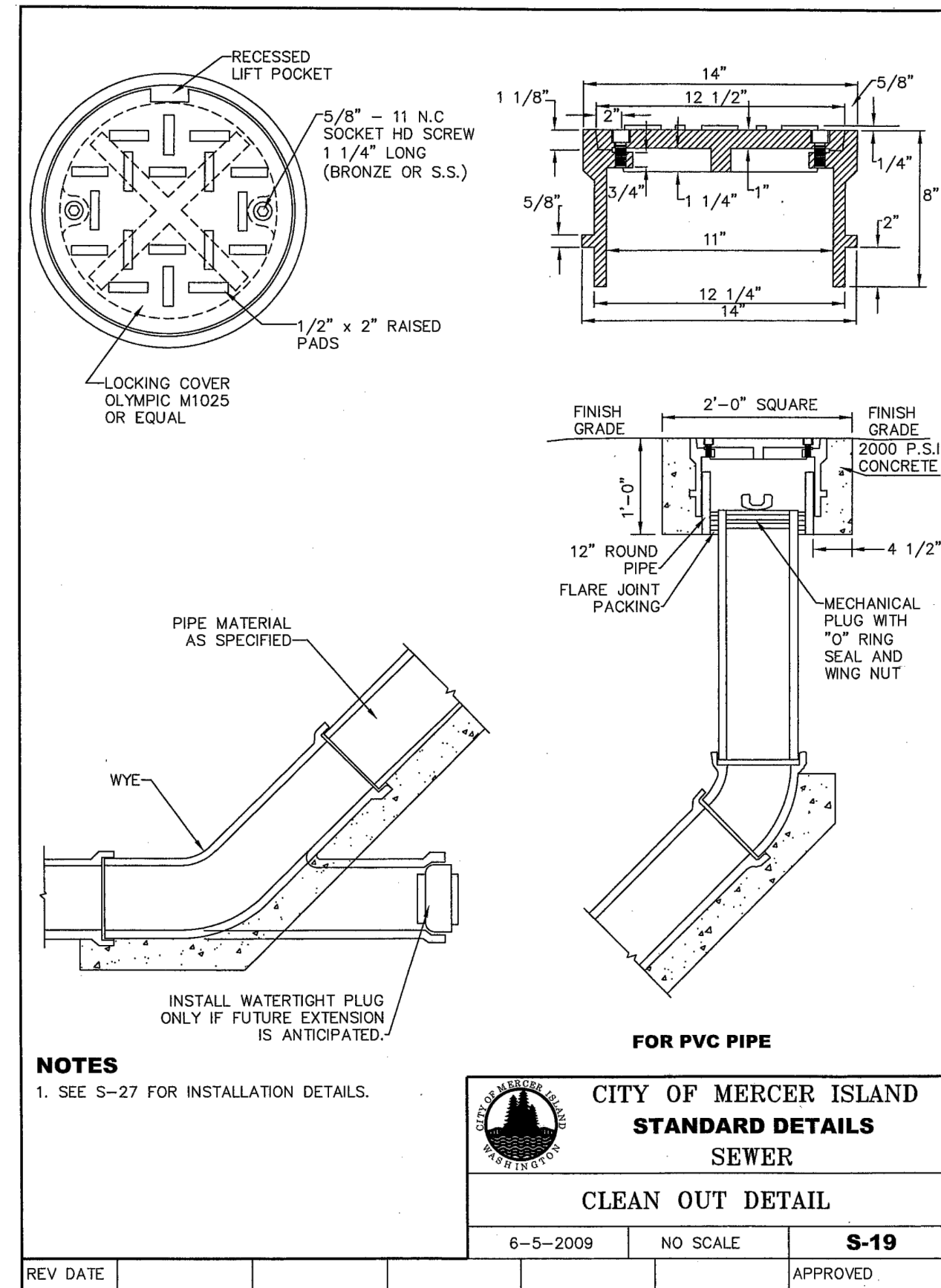
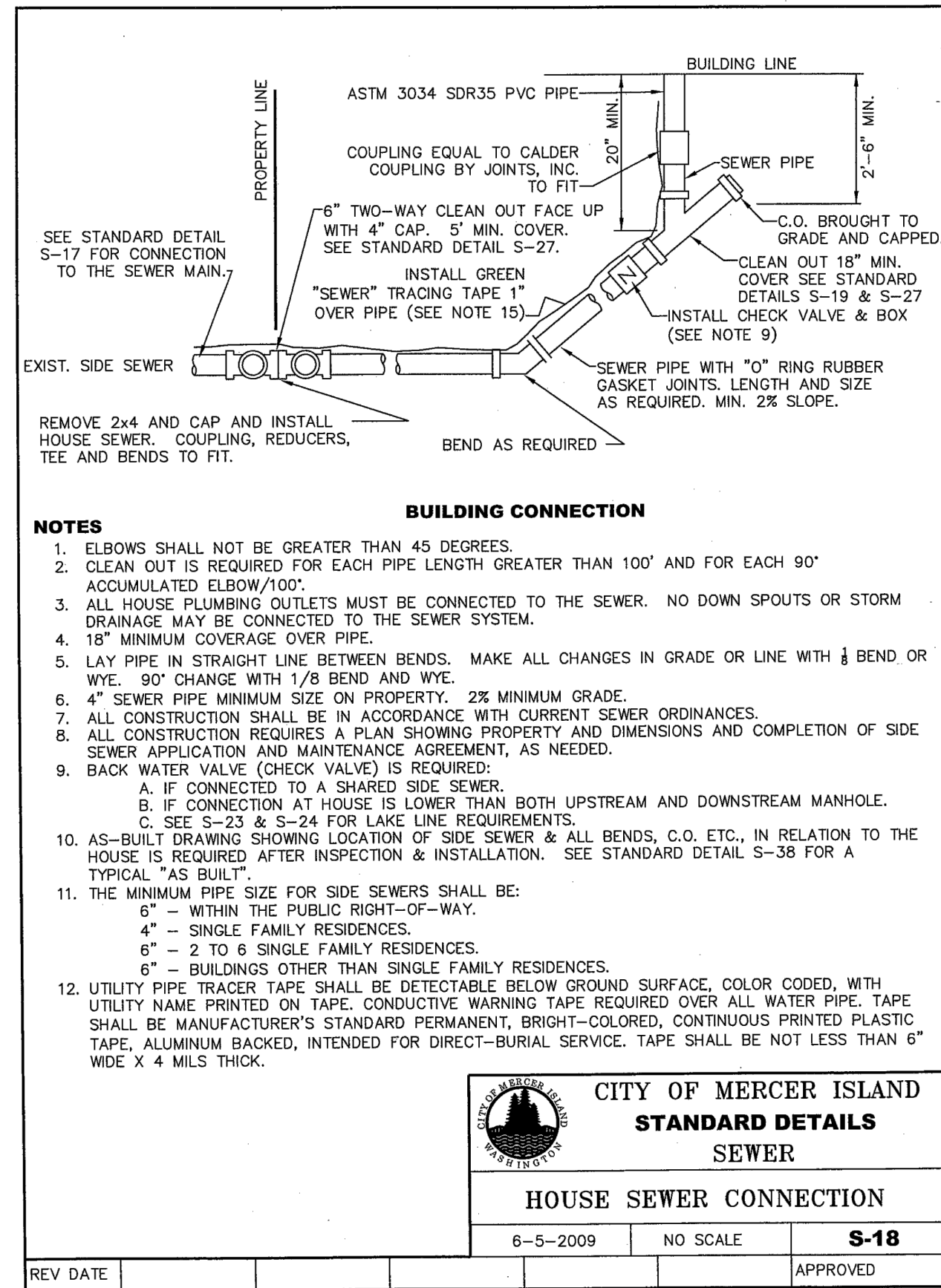
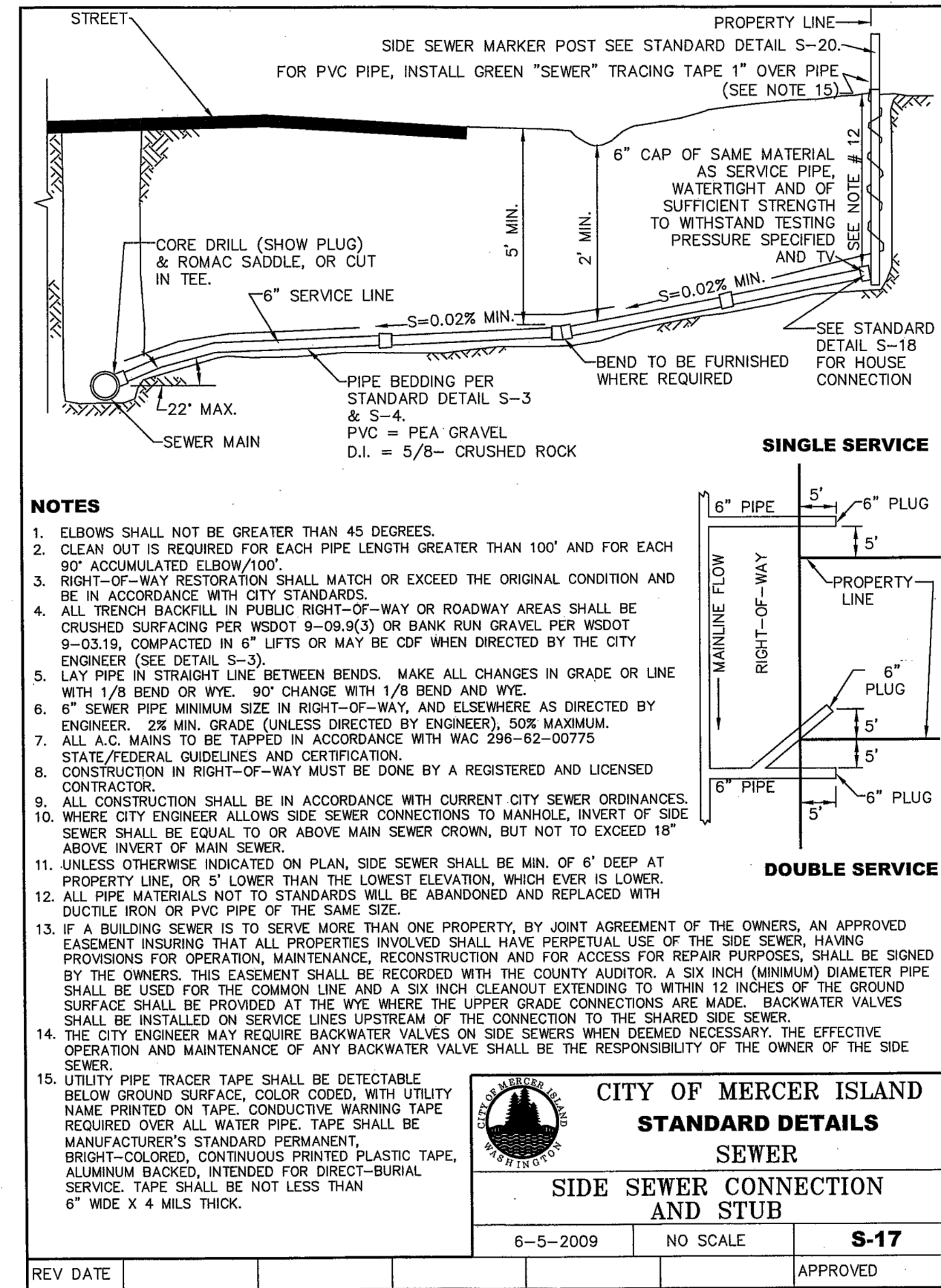
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REV	ISSUED FOR:	DATE
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SECTION, TOWNSHIP, RANGE:
SECTION 25, TOWNSHIP 24 NORTH,
RANGE 4 EAST, W.M.

PROJECT TEAM
REVIEWED BY: G. GOUDY
DESIGNED BY: B. MCMURTRY

SHEET NAME

SEWER DETAILS

SHEET NUMBER

C6.06



GENERAL CONSTRUCTION NOTES

CODE:
VAULT STRUCTURAL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF THE 2021 IBC AS ADOPTED BY THE CITY OF MERCER ISLAND, WASHINGTON.

GENERAL DETAILS:
CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

DISCREPANCIES:
THE CONTRACTOR SHALL NOTIFY ENGINEER UPON FINDING ANY DISCREPANCY OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS.

SHORING & EXCAVATION:
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES, INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES.

WALL BACKFILL:
PRIOR TO BACKFILLING VAULT WALLS THE CONTRACTOR SHALL HAVE PLACED THE LID PLANKS AND PROVIDED A MINIMUM OF 5 DAYS OF CURE ON THE PLANK VOID FILL.

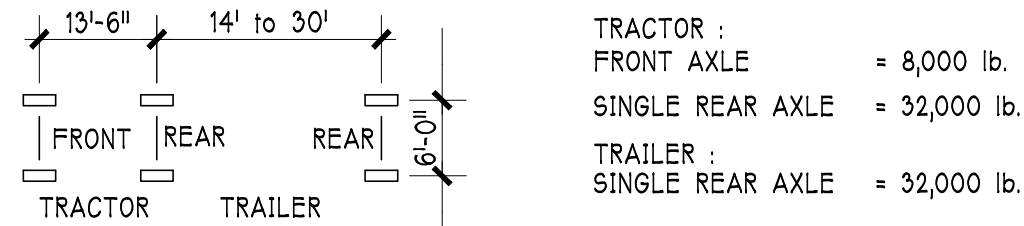
BACKFILL SOIL:
SEE THE GEOTECHNICAL REPORT FOR WALL BACKFILL MATERIAL REQUIREMENTS AND PLACEMENT AND COMPACTION REQUIREMENTS. ALL COMPACTION OCCURRING WITHIN 5' OF THE WALL SHALL BE COMPLETED USING HAND OPERATED MACHINERY.

DESIGN CRITERIA

VERTICAL LOADS ON VAULT LID:

*UNIFORM LIVE LOAD : = 150PSF

*HS20 TRUCK WHEEL LOADS :



* = DESIGN LIVE LOAD AND TRUCK WHEEL LOADS TO BE APPLIED INDEPENDENTLY AND IN COMBINATION WITH THE SOIL COVER DEAD LOAD.

IMPACT & FATIGUE:
DUE TO THE VERY LOW SPEEDS OF THE SERVICE VEHICLES AND THE SOIL COVER OVER THE LID, INCREASES IN VEHICLE LOADS TO ACCOUNT FOR IMPACT & FATIGUE ARE NOT REQUIRED.

RAISED GRATED OPENING
100PSF UNIFORM PEDESTRIAN LIVE LOAD

SOIL COVER FOR LID DESIGN:

PLANK MANUFACTURER SHALL BE RESPONSIBLE FOR DETERMINING THE SOIL COVER DEPTHS USED IN THE LID DESIGN BASED ON THE VAULT AND FINISHED GRADE ELEVATIONS AS SHOWN ON THE PERMITTED CIVIL DWGS.

SOIL COVER FOR SUBSTRUCTURE DESIGN:

THE SUBSTRUCTURE WAS DESIGNED FOR A TYPICAL SOIL COVER OF 2.0FT OVER THE ENTIRE VAULT.

FOUNDATION DESIGN:
FOUNDATION DESIGN IS BASED ON THE FOLLOWING VALUES PROVIDED BY TERRA ASSOCIATES, INC. IN THEIR GEOTECHNICAL REPORT DATED 12-15-2022.

ALLOWABLE BEARING PRESSURE: 5,000 PSF

LATERAL EARTH PRESSURES: DRAINED LEVEL BACKFILL
AT REST CONDITION: 50 PCF EPW

SEISMIC PRESSURE COMPONENT: E = 8H PSF UNIF HORZ PRESSURE

SATURATED SOIL DENSITY: 125 PCF

DEFERRED SUBMITTALS

THE FOLLOWING AREAS OF WORK SHALL BE CONSIDERED AS "DEFERRED SUBMITTALS" AS DEFINED IN THE 2021 IBC

- a. PRECAST PRESTRESSED HOLLOW CORE PLANK

ALL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF WASHINGTON WHO HAS CURRENT DESIGN EXPERIENCE IN THE TYPE OF WORK REVIEWED.

THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED BY THE ENGINEER OF RECORD.

CONTRACTOR SHALL SUBMIT REVIEWED DWGS & CALCS TO THE BUILDING OFFICIAL PRIOR TO INSTALLATION.

OPEN METAL GRATING

OPEN METAL GRATING SHALL BE WELDED STEEL BAR GRATING AS SPECIFIED ON THE DRAWINGS. ALL STEEL GRATING AND GRATING COMPONENTS INCLUDING ITEMS EMBEDDED WITHIN THE CONCRETE SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

SUPPLIER SHALL PROVIDE ALL COMPONENTS NECESSARY TO INSTALL AND SECURE THE GRATING IN PLACE.

SUPPLIER SHALL PROVIDE SHOP DRAWINGS DESCRIBING ALL COMPONENTS OF THE INSTALLATION, FOR REVIEW PRIOR TO FABRICATION.

SPECIAL INSPECTION PLAN

GENERAL:
SPECIAL INSPECTION BY A QUALIFIED INSPECTOR IS REQUIRED IN ACCORDANCE WITH THE 2021 IBC.

QUALIFICATION:
THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL.

REQUIRED VERIFICATION & INSPECTION:
THE SPECIAL INSPECTOR SHALL PERFORM THE VERIFICATIONS & INSPECTIONS NOTED IN THE SCHEDULE BELOW

INSPECTION & TESTING SCHEDULE

TYPES OF WORK	FREQ.	2021 IBC SECTION
CAST IN PLACE CONC		
REINFORCING STEEL, PLACEMENT.	P	1705.3
INSTALLATION & FASTENING OF PRECAST PANELS	P	1705.3
PLACEMENT OF CONCRETE	C	1705.3
VERIFYING USE OF REQUIRED DESIGN MIX	P	1705.3
TESTING OF THE CONCRETE FOR SPECIFIED STRENGTH, AIR CONTENT AND SLUMP	C	1705.3
SOILS		
VERIFICATION OF SOIL-BEARING CAPACITY; INSTALLATION OF DRAINAGE SYSTEM.	P	1705.6
PLACEMENT & COMPACTION OF WALL BACKFILL:	P	1705.6
STRUCTURAL STEEL		
STRUCTURAL STEEL (GRATING) FABRICATION	P	1704.2.5

FREQUENCY LEGEND
C = CONTINUOUS P = PERIODIC
SEE REFERENCES AND STANDARDS LISTED WITHIN THE VERIFICATION & INSPECTION SCHEDULE FOR MEANING OF PERIODIC AND CONTINUOUS INSPECTIONS.

CERTIFICATE OF COMPLIANCE:
THE SPECIAL INSPECTION AGENCY SHALL PROVIDE A FINAL LETTER CERTIFICATE OF COMPLIANCE STATING THAT THE REVIEWED WORK WAS COMPLETED IN ACCORDANCE WITH THE PERMITTED DOCUMENTS.

SUBMITTAL OF REPORTS:
ALL SPECIAL INSPECTION REPORTS AND TESTING REPORTS SHALL BE SUBMITTED TO THE OWNER, SITE STRUCTURES AND THE BUILDING OFFICIAL BY THE AGENCY PERFORMING THE INSPECTION OR TESTING.

CONCRETE

CONCRETE REQUIREMENTS:

LOCATION	STRENGTH	MAX W/C RATIO
WALLS & CIP LID AREAS	4000PSI @ 28 DAYS	0.50
FTGS & GRADE SLAB	4000PSI @ 56 DAYS	0.50
PLANK VOID FILL	TO MEET PLANK MFG'S REQUIREMENTS*	
PLANK JOINT GROUT	TO MEET PLANK MFG'S REQUIREMENTS*	
* MINIMUM STRENGTH SHALL BE 3000PSI @ 28 DAYS.		

AIR CONTENT:
CONC. EXPOSED TO WEATHER SHALL CONTAIN 5% +/-1% ENTRAINED AIR.

MIX DESIGN:
SHALL BE BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE WITH THE SPECIFICATIONS.

SUBMITTALS:
PROVIDE MIX DESIGNS TO THE ENGINEER FOR REVIEW PRIOR TO PLACEMENT.

EXPOSURE CATEGORIES:
FREEZING THAWING FO
SULFATE SO
IN CONTACT W/ WATER WI
CORROSION PROTECTION CI

MATERIAL REQUIREMENTS:
CEMENT: ASTM C150. ADMIXTURES: ACI 301.
AGGREGATES: ASTM C33. WATER: ASTM C94.

PLACING REQUIREMENTS:

PLACING:
PLACE CONCRETE AS NEARLY AS PRACTICABLE TO ITS FINAL POSITION TO AVOID SEGREGATION.

DEBRIS:
REMOVE ALL DEBRIS FROM FORMS PRIOR TO PLACING CONCRETE.

CONSOLIDATION:
CONSOLIDATE CONCRETE BY SUITABLE MEANS. THOROUGHLY WORK CONCRETE AROUND EMBEDDED ITEMS AND INTO CORNERS OF FORMS.

CURING REQUIREMENTS:

CURING:
CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A SUITABLE PERIOD OF TIME AFTER PLACEMENT.

WEATHER CONDITIONS:
ADEQUATE PRECAUTIONS SHALL BE TAKEN DURING HOT AND COLD WEATHER IN ACCORDANCE WITH THE SPECIFICATIONS.

LID PLANK PLACEMENT:

IN NO CASE SHALL THE LID PLANKS BE PLACED BEFORE THE WALLS HAVE BEEN ALLOWED A MINIMUM OF 3 DAYS OF CURE. WHEN AVERAGE AMBIENT TEMPERATURES ARE LESS THAN 50 DEGREES FAHRENHEIT, THE CONTRACTOR MUST ALLOW A MINIMUM CURE TIME OF 7 DAYS OR PROVIDE AN ADDITIONAL SET OF CYLINDERS TO BE BROKEN AT THE TIME OF LID PLACEMENT DEMONSTRATING A MINIMUM CONCRETE STRENGTH OF 1,000 PSI HAS BEEN REACHED.

FINISH:

- a. CONCRETE FINISH TO BE SMOOTH WITH NO FINES, VOIDS, ROCK POCKETS OR OTHER IRREGULARITIES.
- b. CONE SNAP TIES OR SIMILAR ARE REQUIRED AND ARE TO BE REMOVED AND SEALED AT ALL INTERIOR WALL SURFACES. NO FLAT TIES ALLOWED.

REINFORCING BAR

MATERIAL REQUIREMENT:

REINFORCING BARS:
USE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT AS NOTED ON THE DRAWINGS.

FABRICATION AND PLACING REQUIREMENTS:

BENDING:
BARS SHALL BE BENT COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS NOTED OR SHOWN OTHERWISE OR AUTHORIZED BY THE ENGINEER.

PLACING:
REINFORCEMENT SHALL BE SUPPORTED AND TIED TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR BY PLACING OF CONCRETE.

CONCRETE COVER:
MINIMUM CONCRETE COVER FOR REINF. SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
CONCRETE CAST AGAINST EARTH: 3"
CONCRETE CAST AGAINST FORMS AND EXPOSED TO EARTH: 2"

WET SETTINGS:
REINFORCEMENT ANCHOR BOLTS, OR ANY EMBEDDED ITEM WITHIN THE CONCRETE, MAY NOT BE SET INTO THE CONCRETE AFTER IT HAS BEEN POURED WITHIN THE FORMS.

LAP SPLICES:
LAP ALL BARS 24" MIN UNLESS SHOWN OTHERWISE ON THESE DRAWINGS.

SUBMITTALS:
PROVIDE REINFORCING BAR FABRICATION AND PLACEMENT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

STRUCTURAL STEEL

MATERIALS:

- a. STRUCTURAL STEEL SHAPES & PLATES SHALL CONFORM TO ASTM A36.
- b. HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500 GRADE B, Fy=42,000PSI.

WELDING:
CONFORM TO AWS D11 "STRUCTURAL WELDING CODE - STEEL". WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH WABO REQUIREMENTS. USE E70 ELECTRODES OF TYPE REQUIRED FOR MATERIALS TO BE WELDED.

GALVANIZING:
ALL STEEL SECTIONS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION CONFORMING TO ASM A-123. REPAIRS SHALL CONFORM TO ASTM A-780 USING ZINC RICH PAINT. THE COATING THICKNESS FOR THE PAINT MUST BE 50X MORE THAN THE SURROUNDING COATING THICKNESS, BUT NOT GREATER THAN 4.0 MILS.

54" PRECAST CATCH BASIN BASE

SPECIFICATIONS:
PRECAST CATCH BASIN BASE SHALL MEET ASTM C478 AND THE APWA/MSDOT STANDARD SPECIFICATION FOR PRECAST CONCRETE MANHOLE SECTIONS.

MATERIALS:

- a. REINFORCING STEEL Fy=60KSI MINIMUM
- b. CONCRETE f'c=4,000PSI MIN @ 28 DAYS

MINIMUM REQUIREMENTS:

CIRCUMFERENTIAL WALL THICKNESS SHALL BE NO LESS THAN 5-1/2" THICK AND SHALL HAVE A MINIMUM OF 0.135 SQ. IN/FT OF REINFORCING STEEL HORZ AND VERT PLACED AT THE CENTER OF THE WALL.

BASE THICKNESS SHALL BE NO LESS THAN 8" THICK AND SHALL HAVE A MINIMUM OF 0.19 SQ. IN/FT OF REINFORCING STEEL IN EACH ORTHOGONAL DIRECTION PLACED AT THE CENTER OF THE SLAB.

WATERSTOP

PVC WATERSTOP
WATERSTOPS SHALL BE 4" RIBBED WITH CENTER BULB AS MANUFACTURED BY GREENSTREAK, INC - OR EQUIVALENT - AND SHALL BE FORMULATED FROM VIRGIN RAW MATERIAL AND SHALL MEET THE THE ARMY CORPS OF ENGINEERS STANDARD SPECIFICATION CRP-C 572-74. INSTALL WATERSTOP IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATION. SPLICING OF THE WATERSTOP SHALL BE ACCOMPLISHED WITH A THERMOSTATICALLY CONTROLLEDE SPLICING IRON IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTION AND RECOMMENDATIONS.

BENTONITE CLAY WATERSTOP
WATERSTOP SHALL BE RX-101 AS MANUFACTURED BY CETCO OR EQUIVALENT. INSTALL WATERSTOP IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS. WATERSTOP SHALL BE ATTACHED TO THE CONCRETE SURFACE USING A CONTINUOUS BEAD OF CETCO CETSEAL OR SHALL BE MECHANICALLY FASTENED TO THE CONCRETE SURFACE WITH CETCO REVO-FIX AS REQUIRED BY THE TECHNICAL DATA SHEET FOR WATERSTOP-RX.

WATERSTOP SHALL BE PROTECTED AGAINST EXPOSURE TO WATER FROM ANY SOURCE UNTIL THE CONCRETE ENCASES THE WATERSTOP IS PLACED AT THE JOINT.

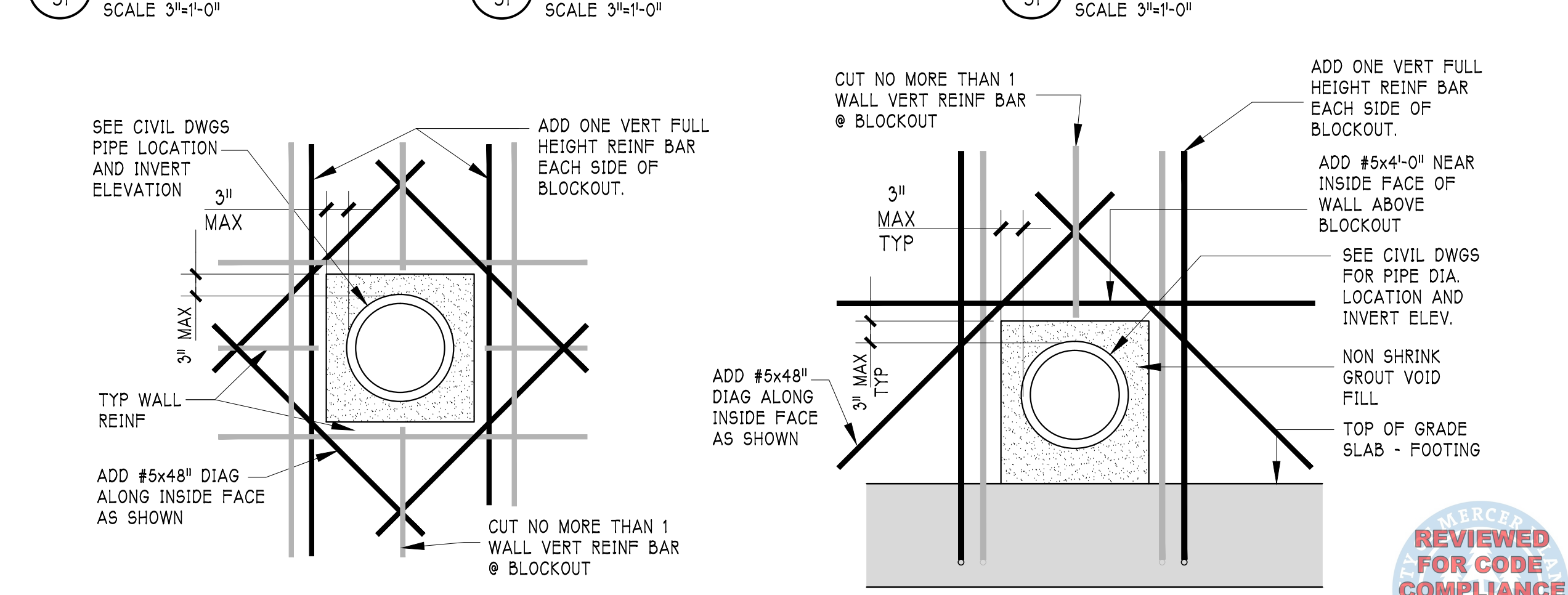
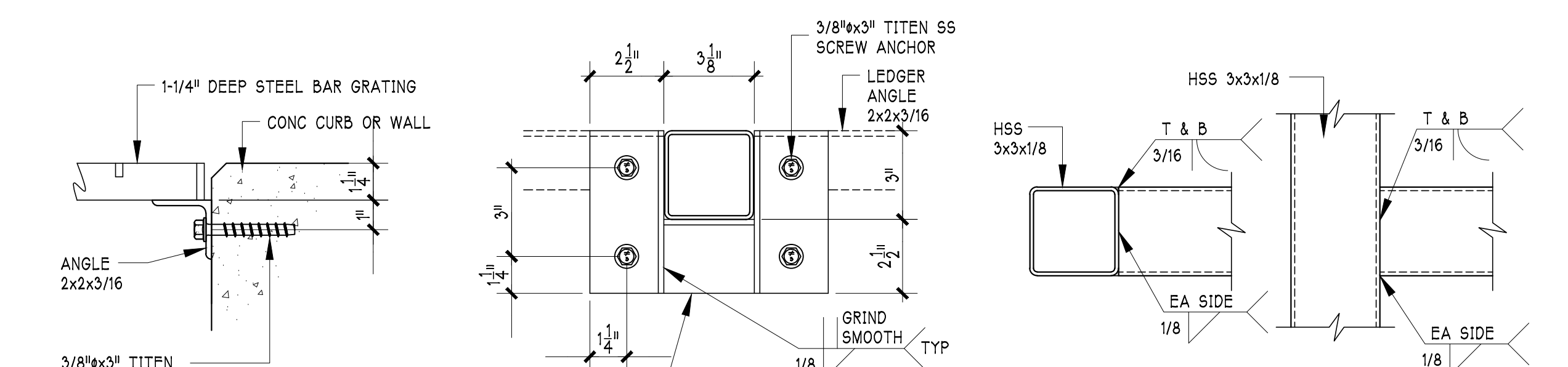
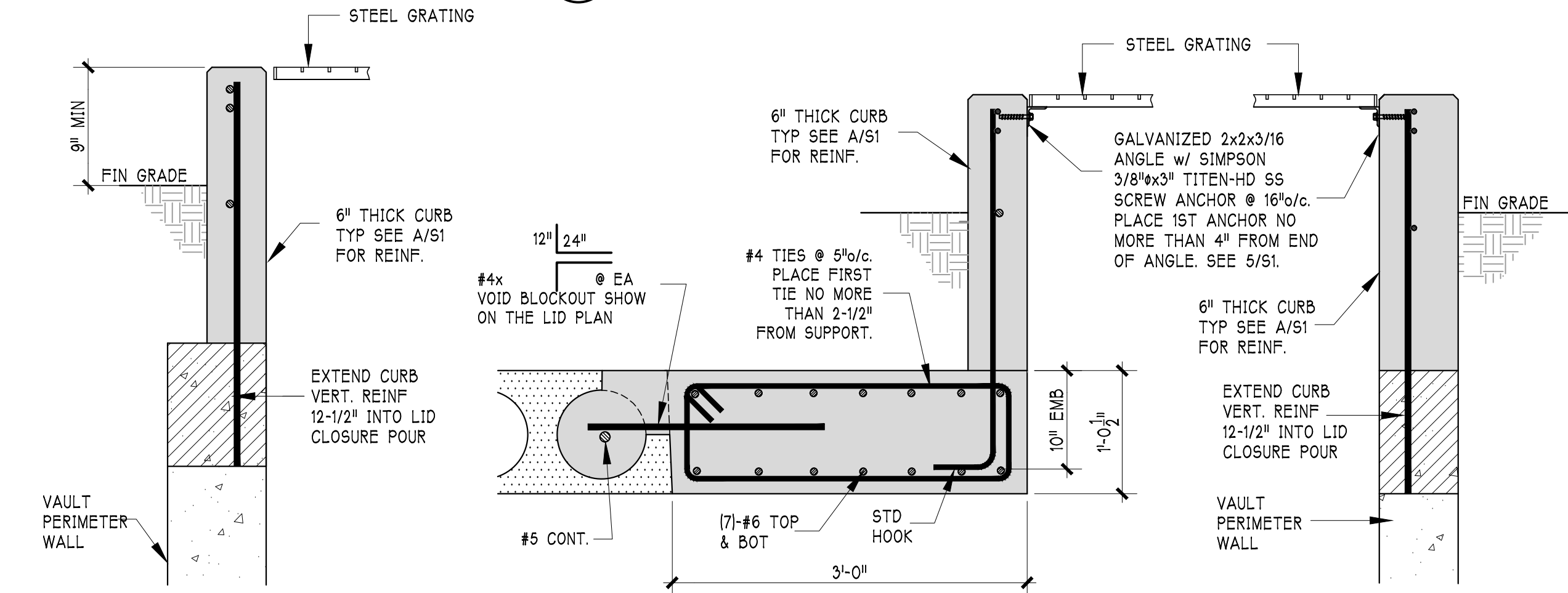
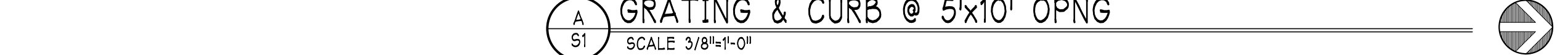
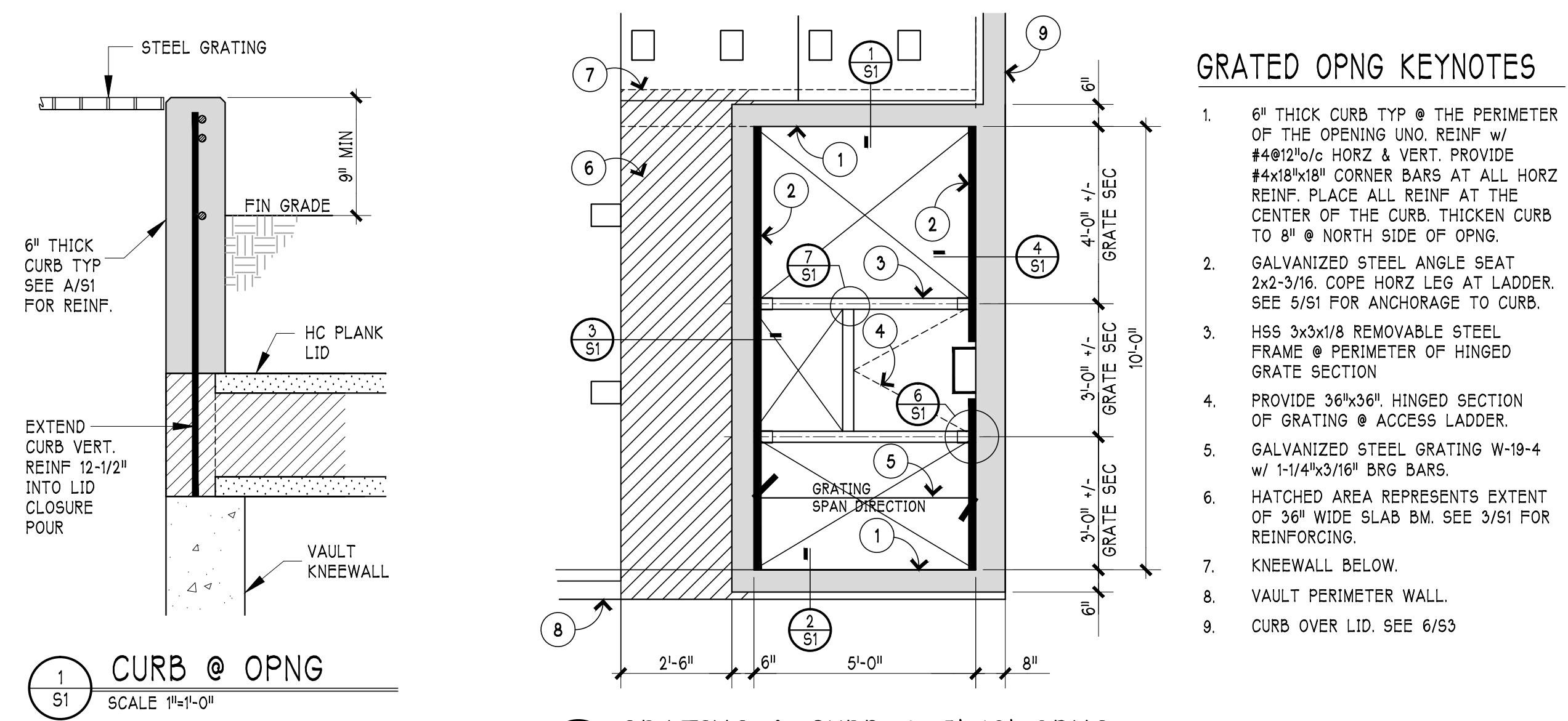
HOLLOW CORE PLANK

SCOPE OF WORK:
THE WORK INCLUDED IS THE DESIGN, MANUFACTURE AND DELIVERY OF PRECAST PRESTRESSED CONCRETE UNITS. DESIGN PLANK FOR THE MOST CRITICAL OF THE LOADING CONDITIONS AS SHOWN WITHIN THE DESIGN CRITERIA NOTE.

THE MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS AND PLACEMENT DRAWINGS SIGNED BY A WASHINGTON STATE REGISTERED CIVIL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

THE MANUFACTURER SHALL INSTALL ALL BLOCK OUTS REQUIRED FOR STRUCTURAL CONNECTIONS AS INDICATED ON THESE DRAWINGS. NO OTHER PENETRATIONS ARE ALLOWED WITHOUT THE PRIOR APPROVAL OF THE PLANK MANUFACTURER.

ALL HOLLOW CORE JOINTS SHALL BE GROUTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.



GRATED OPNG KEYNOTES

- 6" THICK CURB TYP @ THE PERIMETER OF THE OPENING UNO. REINF W/ #4@12"x/c HORZ & VERT. PROVIDE #4x18"x18" CORNER BARS AT ALL HORZ REINF. PLACE ALL REINF AT THE CENTER OF THE CURB. THICKEN CURB TO 8" @ NORTH SIDE OF OPNG.
- GALVANIZED STEEL ANGLE SEAT 2x2-3/16. COPE HORZ LEG AT LADDER. SEE 5/S1 FOR ANCHORAGE TO CURB.
- HSS 3x3x1/8 REMOVABLE STEEL FRAME @ PERIMETER OF HINGED GRADE SECTION
- PROVIDE 36"x36" HINGED SECTION OF GRATING @ ACCESS LADDER
- GALVANIZED STEEL GRATING W-19-4 w/ 1-1/4"x3/16" BRG BARS.
- HATCHED AREA REPRESENTS EXTENT OF 36" WIDE SLAB BM. SEE 5/S1 FOR REINFORCING.
- KNEEWALL BELOW.
- VAULT PERIMETER WALL
- CURB OVER LID. SEE 6/S3

DATE	DESCRIPTION	ISSUED FOR CONST PERMIT APPLICATION	NO
06-27-2024	ISSUED FOR CONST PERMIT APPLICATION	NA	NO
08-13-2024	INCREASE VAULT DEPTH TO 9FT	NA	NO

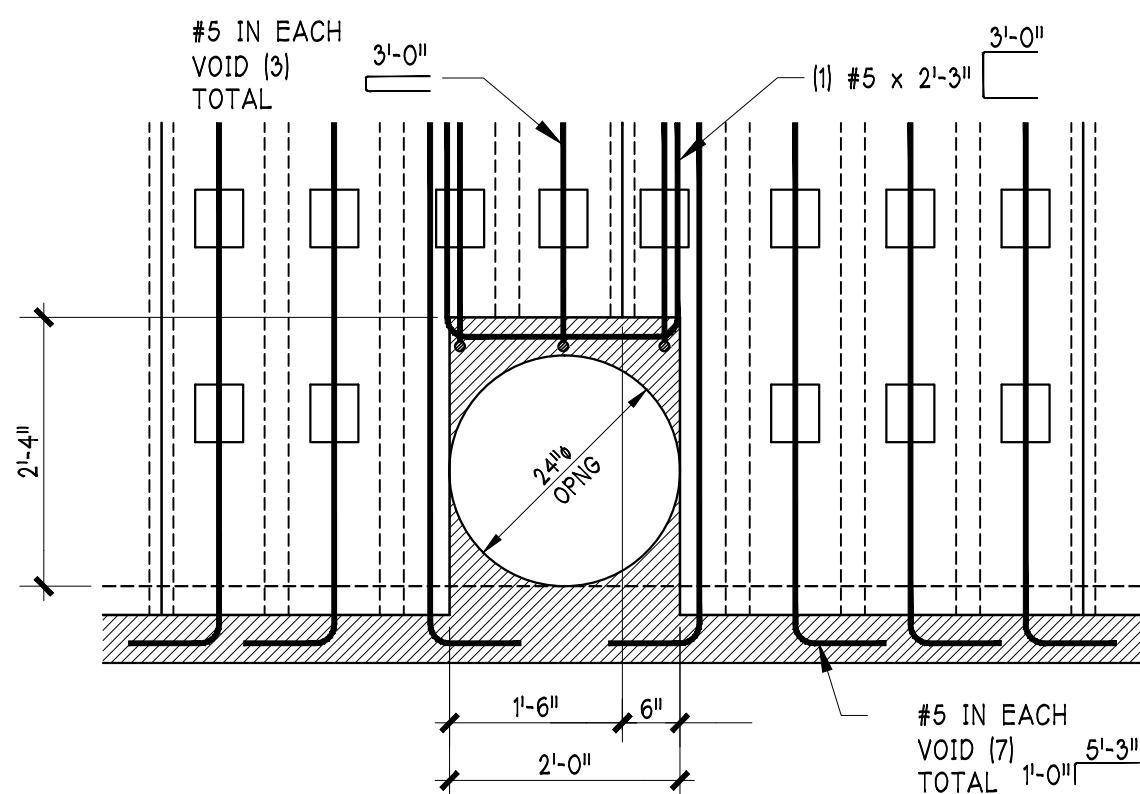
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e-mail: dan@sitestructures.com

08-13-2024
DANIEL J. KOENIG
REGISTERED PROFESSIONAL ENGINEER
NO. 36844
STATE OF WASHINGTON

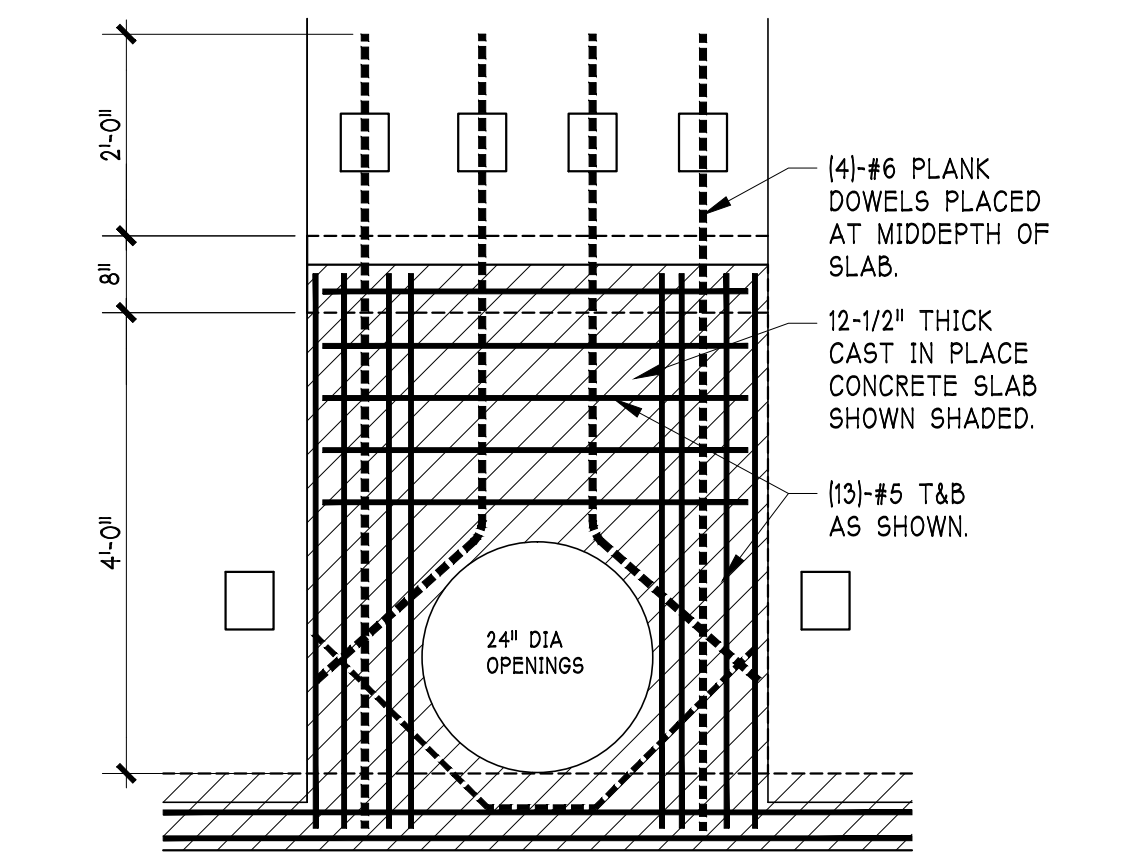
SEARS PLAT
STORM WATER DETENTION VAULT
WASHINGTON
CITY OF MERCER ISLAND,

STRUCTURAL NOTES & TYPICAL DETAILS

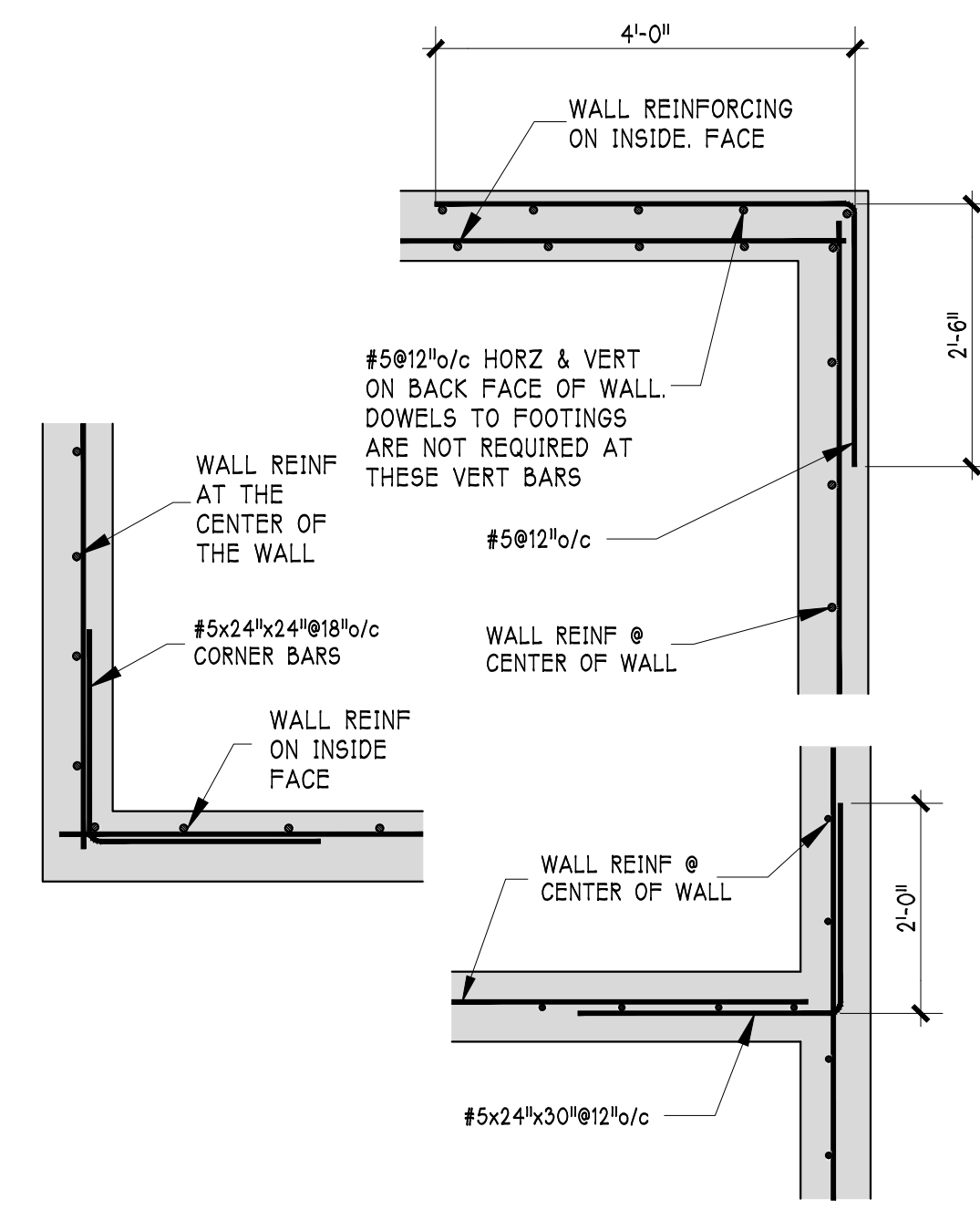




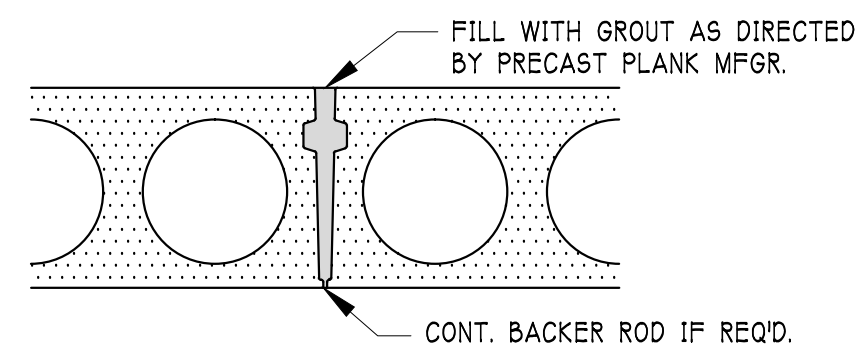
1 LID REINF @ MANHOLE
NTS



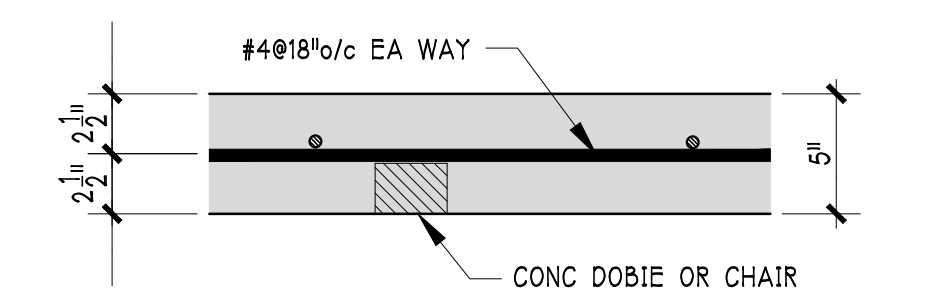
2 LID REINF @ MANHOLE w/ KNEE-WALL
SCALE NTS



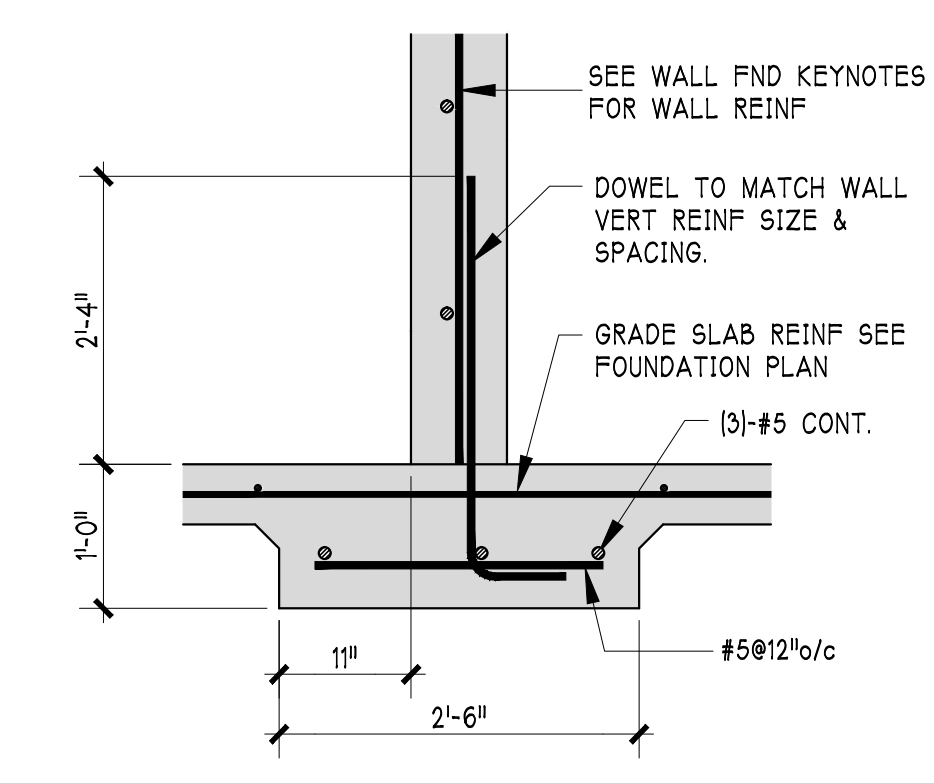
4 TYP WALL CORNER REINF.
NTS



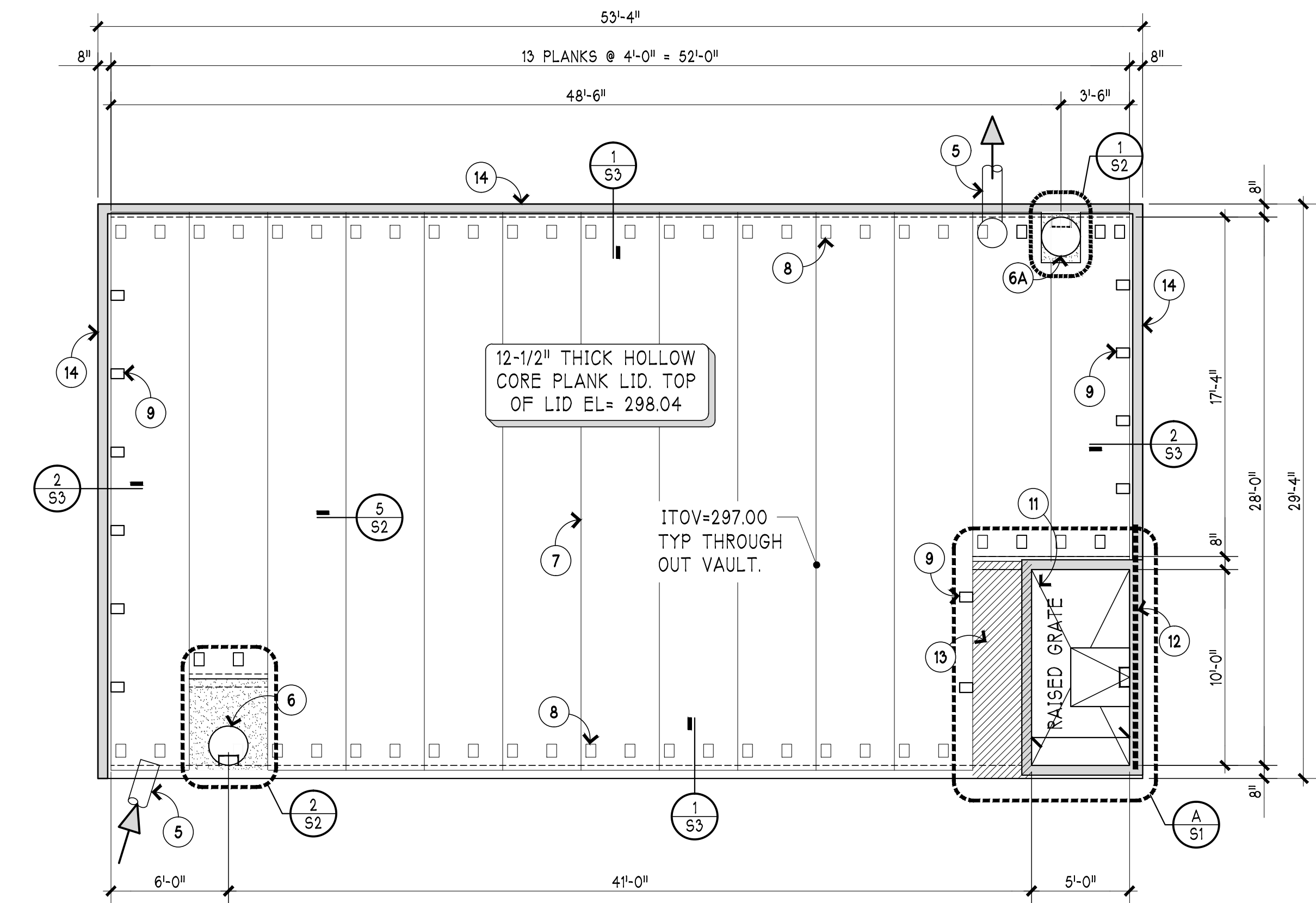
5 TYP PLANK JOINT DETAIL
SCALE 1/4"=1'-0"



6 TYP GRADE SLAB SECTION
SCALE 1-1/2"=1'-0"

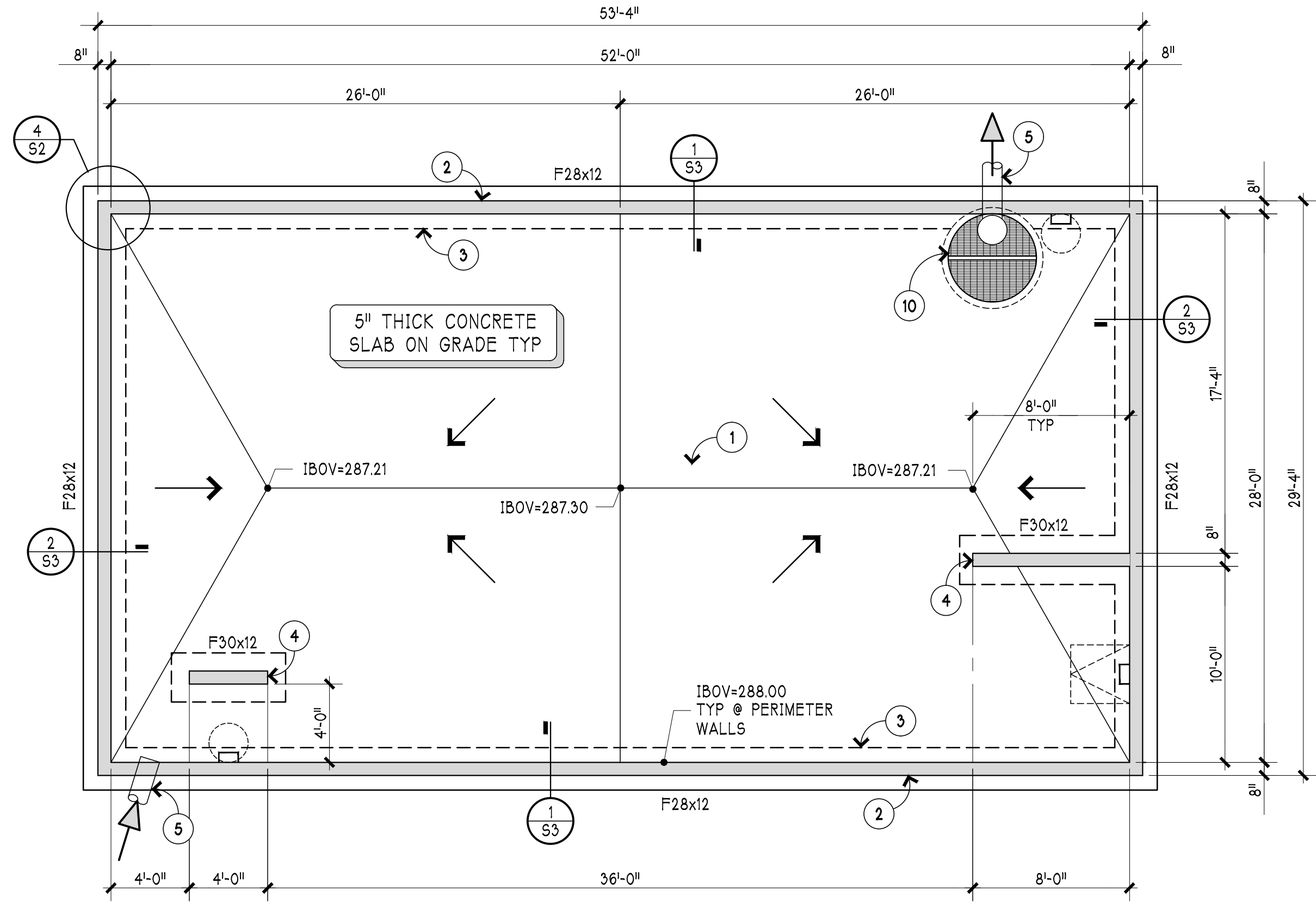


7 KNEEWALL FTG DETAIL
SCALE 3/4"=1'-0"



VAULT LID PLAN

SCALE 3/16" = 1'-0"



VAULT FOUNDATION PLAN

SCALE 3/16" = 1'-0"

PLAN KEYNOTES

- 5" THICK CONCRETE SLAB ON GRADE REINF WITH #4@18"/c EA WAY. PLACE ALL REINF AT MID-DEPTH OF THE SLAB. SEE 6/S2 FOR REINF PLACEMENT. CAST GRADE SLAB IN A SINGLE POUR.
- C.I.P. CONCRETE WALLS AT THE PERIMETER & INTERIOR OF THE VAULT. SEE WALL SECTIONS FOR THICKNESS & REINFORCING. SEE 4/S2 FOR REINF @ WALL CORNERS. SEE 8/S1 FOR WALL REINF @ PIPE PENETRATIONS.
- THICKENED SLAB FOOTINGS TO BE CAST WITH THE GRADE SLAB. SEE WALL SECTIONS FOR SIZE & REINF.
- 8" THICK KNEE-WALL. REINF w/ #5@12"/c HORZ. AND VERT. PLACED AT THE CENTER OF THE WALL. VERTICAL BAR TO EXTEND 10" ABOVE TOP OF WALL. PROVIDE (2)-#5 HORZ AT THE TOP OF THE WALL & (2)-#5@6"/c VERT AT FREE ENDS OF WALL. SEE 7/S2 FOR FTG SIZE & REINF. EXTEND FTG 10" BEYOND END OF WALL.
- PIPE INLET OR OUTLET TO VAULT. SEE CIVIL DWGS FOR PIPE DIAMETER, LOCATION & INVERT ELEVATION. SEE 8/S1 FOR WALL REINF @ PENETRATION. ADDITIONAL REINF IS NOT REQUIRED FOR PIPES LESS THAN 8" PROVIDED THEY ARE PLACED BETWEEN THE TYPICAL WALL REINFORCING.
- 24" DIA. OPENING THRU LID w/ KNEEWALL TO ACCEPT RISERS, LADDER, RING AND LOCKING MANHOLE COVER PER CIVIL DRAWINGS. SEE 1/S2 FOR LID REINF AT MANHOLE.
- 12-1/2" THICK PRECAST HOLLOW CORE PLANK. SEE DESIGN CRITERIA ON S1 FOR LOADING.
- POUR SLOTS IN TOP OF PLANK. MANUFACTURER TO PROVIDE A MINIMUM OF 2 SLOTS @ EACH END OF EACH PLANK. PLANK MANUFACTURER MAY REQUIRE GROUTING OF ADDITIONAL CELLS BEYOND THE MINIMUM SHOWN. THE GENERAL CONTRACTOR SHALL INCLUDE GROUTING OF THESE ADDITIONAL CELLS IN HIS BID. SEE WALL SECTIONS FOR REINF @ POUR SLOTS.
- PROVIDE BLOCKOUTS IN THE EDGE CELL OF THE PLANK PARALLEL TO THE PERIMETER VAULT WALLS & C.I.P. LID. LOCATE BLOCKOUTS APPROXIMATELY AS SHOWN ON THIS PLAN. SEE WALL SECTIONS AND DETAILS FOR REINF @ BLOCKOUTS.
- 54" CATCH BASIN BASE TO ACT AS SUMP. SEE 7/S3 FOR DETAILS.
- 5FTx10FT OPENING TO RECEIVE OPEN METAL BAR GRATING w/ INTEGRAL 36" x 36" HINGED ACCESS HATCH. SET TOP OF GRATING 9" MIN ABOVE THE HIGHEST ADJACENT FINISHED GRADE. SEE A/S1 FOR GRATING ASSEMBLY INFORMATION.
- ADD (2)-#6x15'-0" @ 3"/c WITHIN THE WALL ON THE INTERIOR FACE & AT THE TOP OF THE WALL. PLACE BAR AS SHOWN ON THE PLAN.
- HATCHED AREA REPRESENTS 36" WIDE x 12-1/2" THICK CAST IN PLACE CONCRETE SLAB BEAM WITHIN THE LID. SEE 3/S1 FOR BM REINFORCING.
- 6" THICK CURB. SEE 6/S3 FOR REINF. DETAILS.

LEGEND

- IBOV INSIDE BOTTOM OF VAULT (TOP OF GRADE SLAB)
- ITOV INSIDE TOP OF VAULT (TOP OF WALL - BOT OF LID)
- CIP CONCRETE WALL
- CONCRETE SPREAD FOOTING
- F28x12 28" WIDE x 12" THICK FTG. SEE 1, 1A & 2/S3
- F30x12 30" WIDE x 12" THICK FTG. SEE 7/S2
- DIRECTION OF DOWNWARD SLOPE
- GRATING SPAN DIRECTION

CONSTRUCTION LOADS

THE VAULT LID HAS BEEN DESIGNED TO CARRY THE "DESIGN LOADS" ONLY AFTER VAULT CONSTRUCTION IS COMPLETE, ALL DESIGN CONCRETE AND GROUT STRENGTHS HAVE BEEN ACHIEVED, AND ALL COVER HAS BEEN PLACED OVER THE VAULT WITHIN THE LIMITS SPECIFIED ON THIS DRAWING. "BOBCAT" OR OTHER LIGHT EQUIPMENT SHALL BE USED FOR PLACEMENT OF MATERIALS OVER THE VAULT LID.

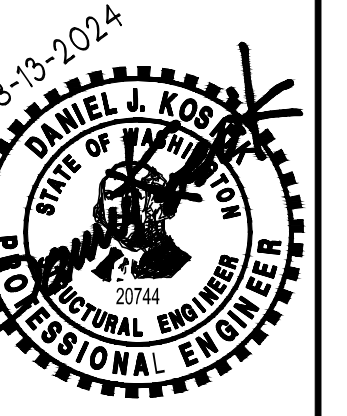
DIMENSIONS & ELEVATIONS

THE CONTRACTOR AND HIS SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THESE DRAWINGS WITH THE CURRENT PERMITTED SET OF CIVIL DRAWINGS, AND SHALL NOTIFY BOTH THE CIVIL & STRUCTURAL ENGINEERS IN WRITING OF ALL DISCREPANCIES BETWEEN THE CIVIL DWGS AND THESE DWGS PRIOR TO CONSTRUCTION.



DATE	DESCRIPTION	ISSUED FOR CONST PERMIT APPLICATION	NO
06-27-2024	ISSUED FOR CONST PERMIT APPLICATION	NA	NO
08-13-2024	INCREASE VAULT DEPTH TO 9FT	NA	NO

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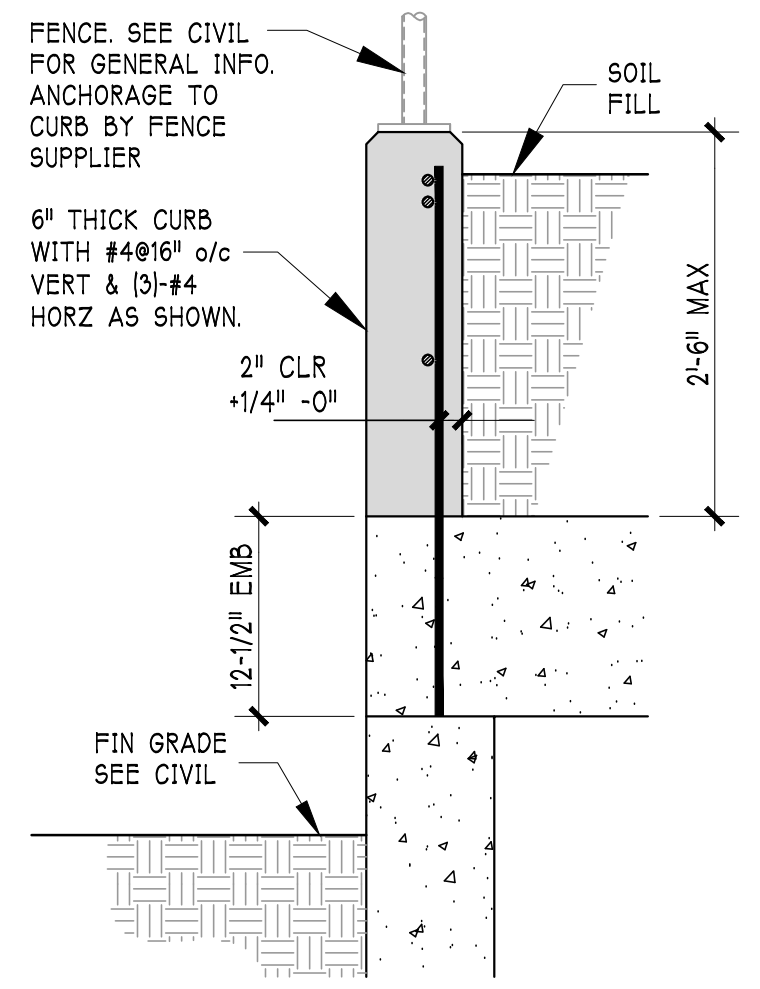
SEARS PLAT
STORM WATER DETENTION VAULT
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CITY OF MERCER ISLAND,

VAULT LID
& FOUNDATION PLANS
& DETAILS

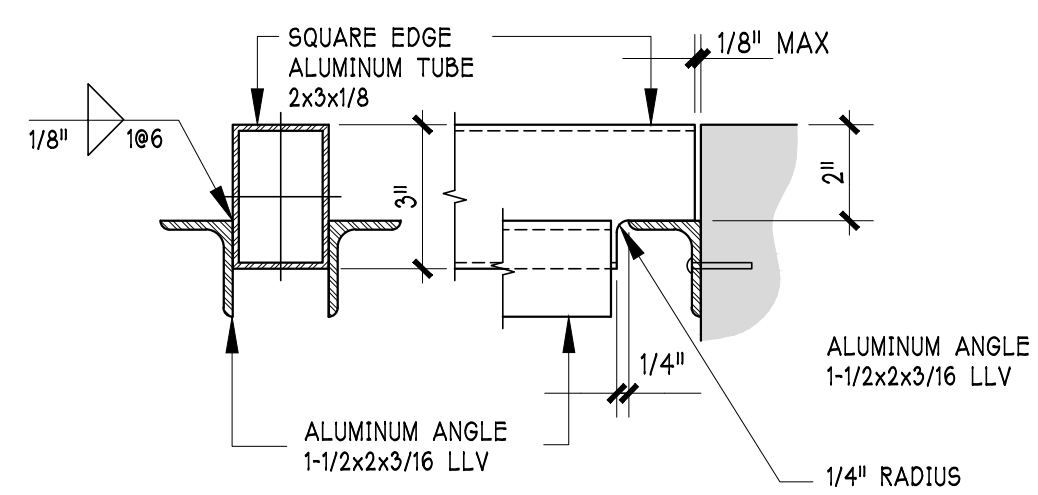
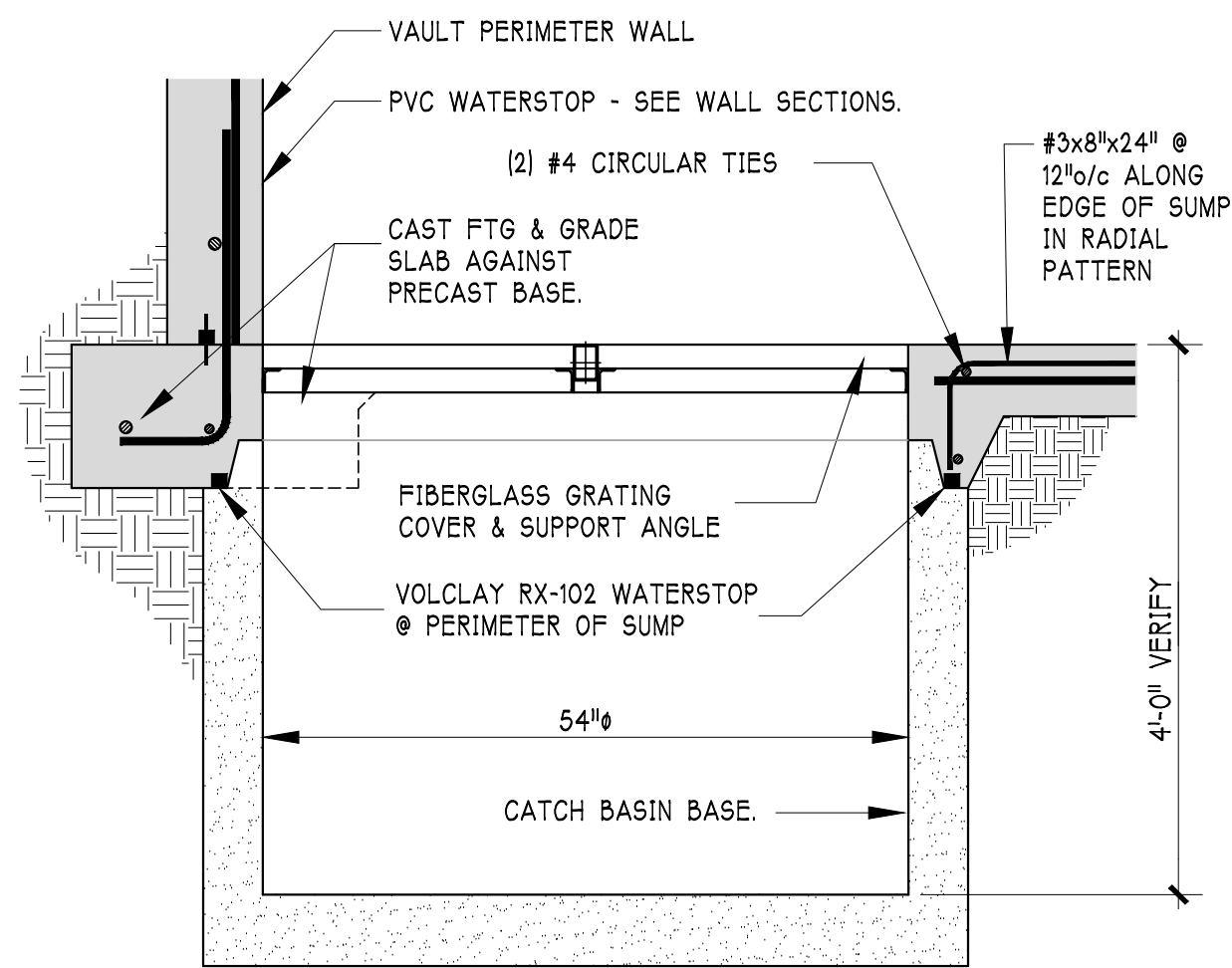
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S2 OF 3

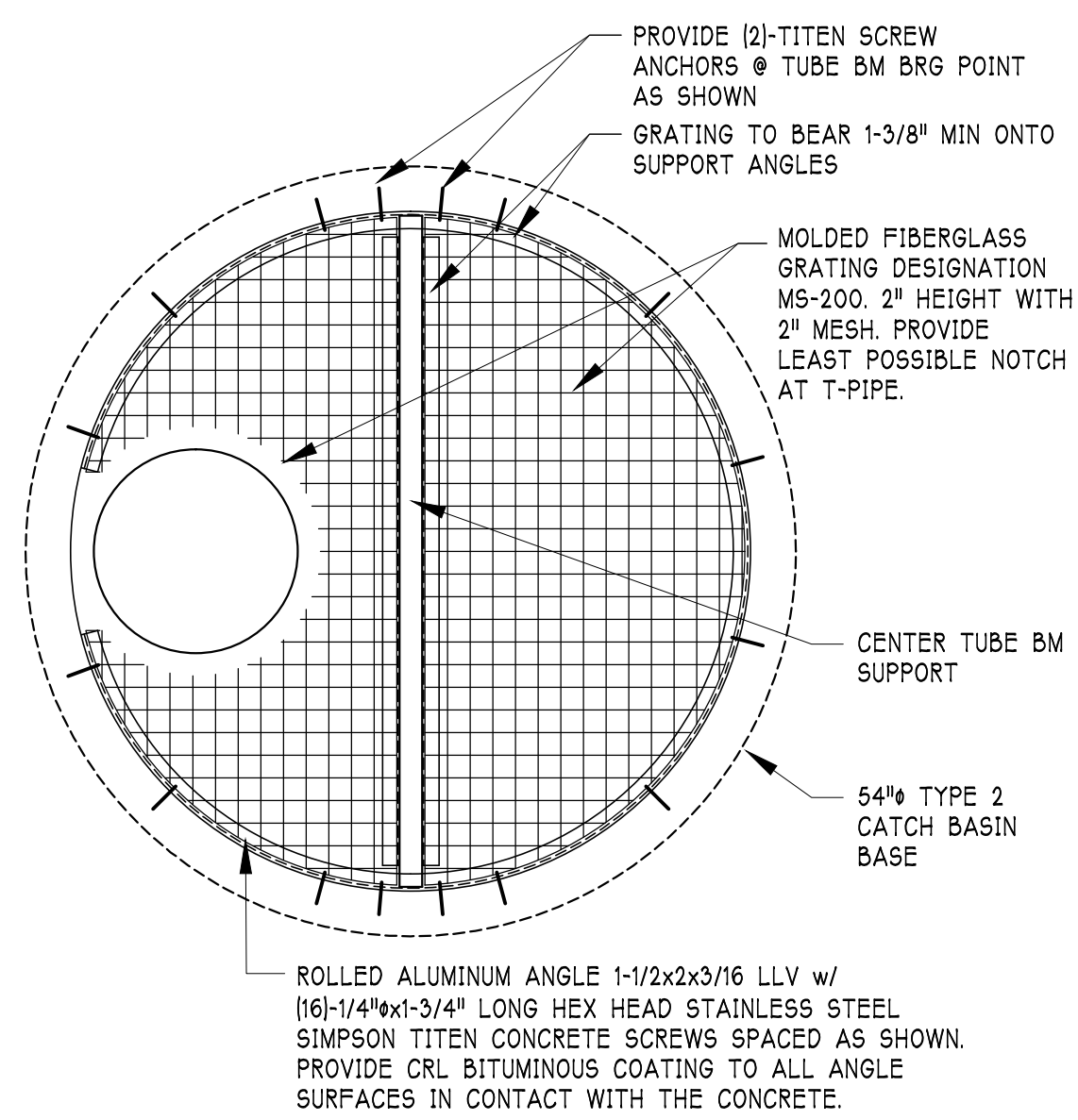
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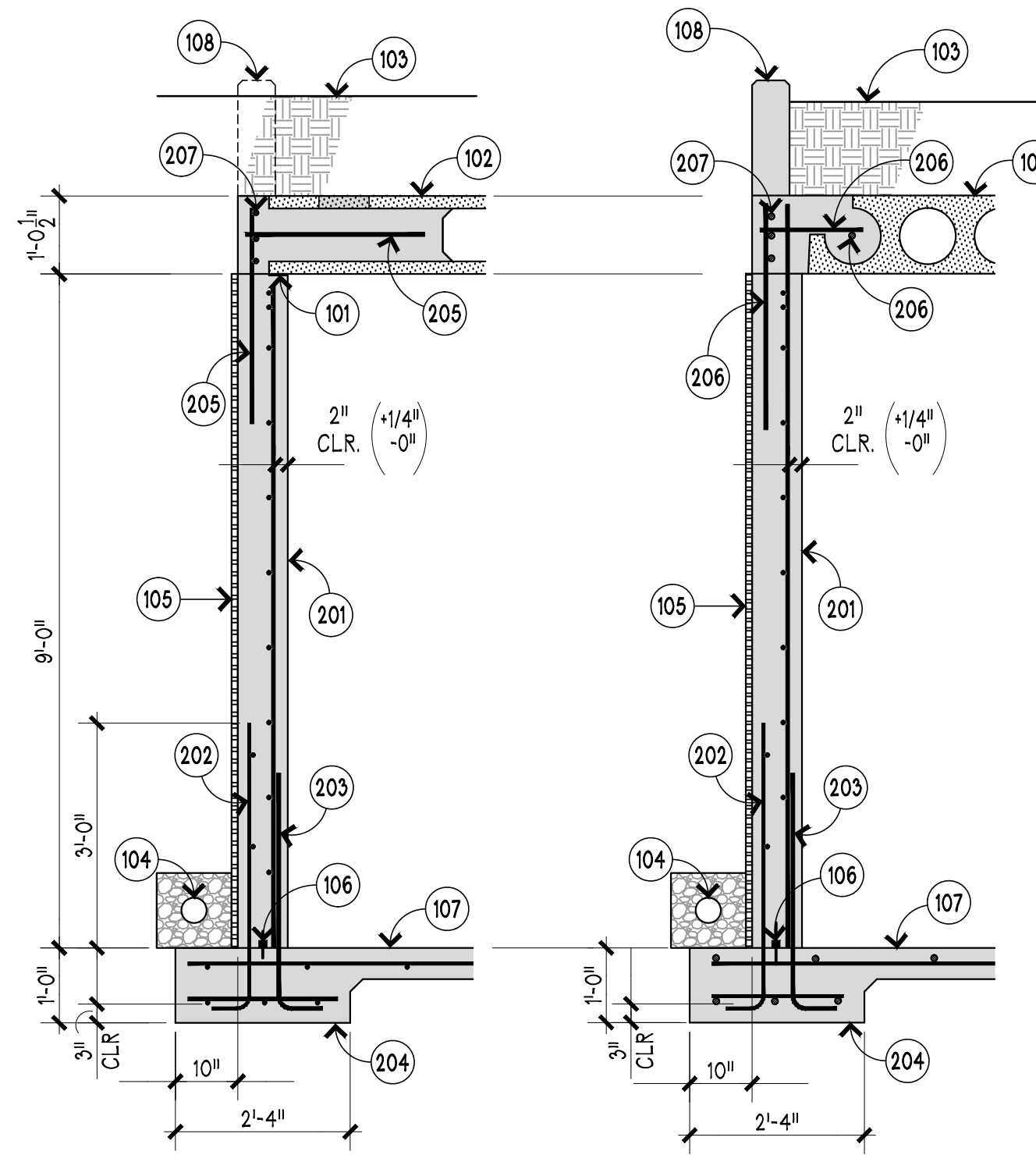
6 CURB DETAIL
SCALE 1"=1'-0"



CENTER TUBE SUPPORT DETAIL

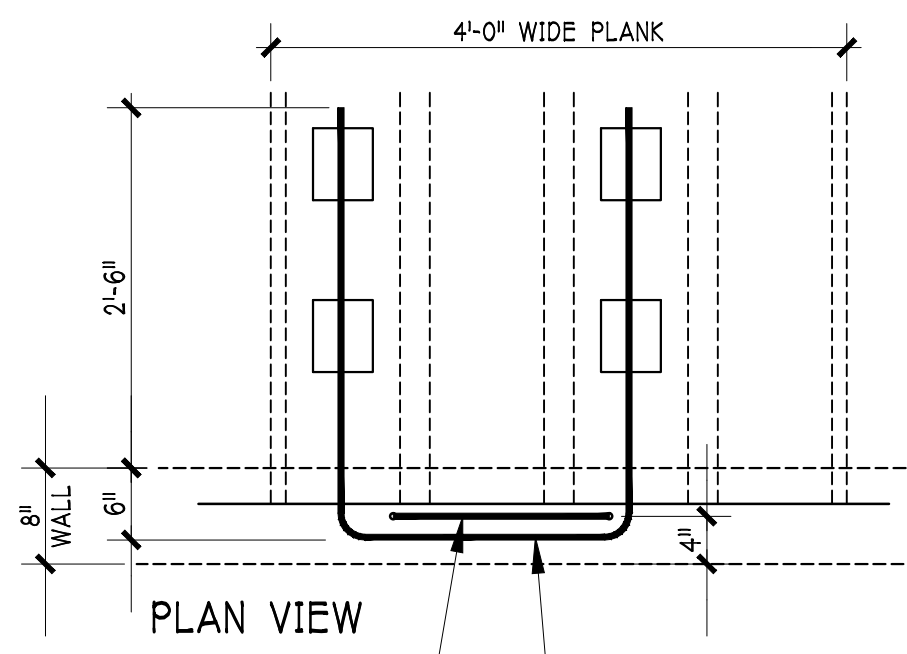


7 SUMP DETAIL
SCALE 3/4"=1'-0"



1 TYP WALL SECT
SCALE 1/2"=1'-0"

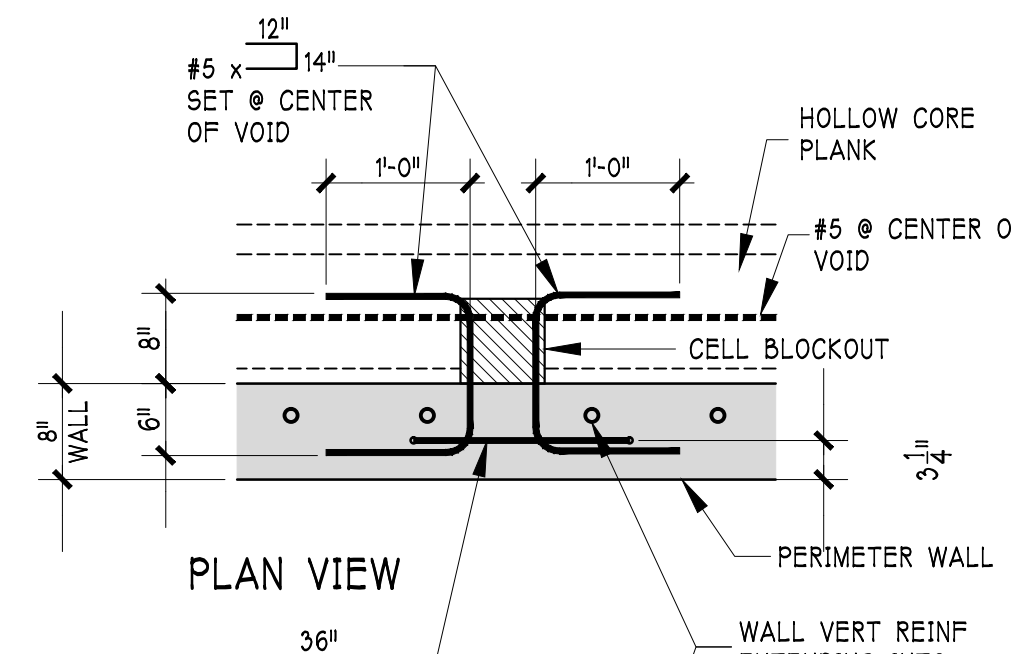
2 TYP WALL SECT
SCALE 1/2"=1'-0"



PLAN VIEW

LID & WALL TO CLOSURE DOWELS AT PLANK VOID END FILL - 8" WALL

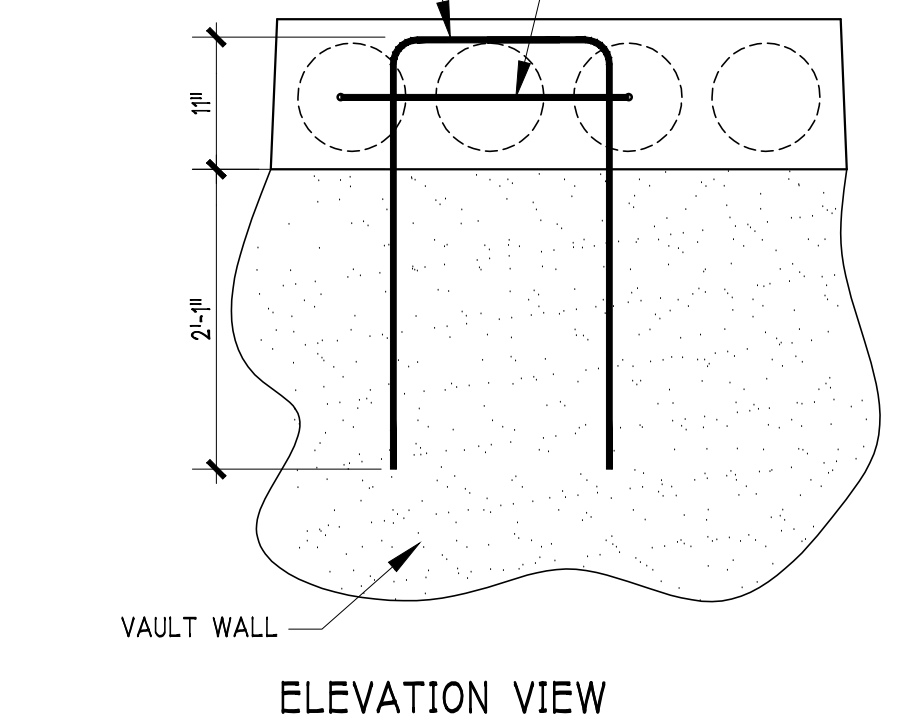
3 SCALE 3/4"=1'-0"



PLAN VIEW

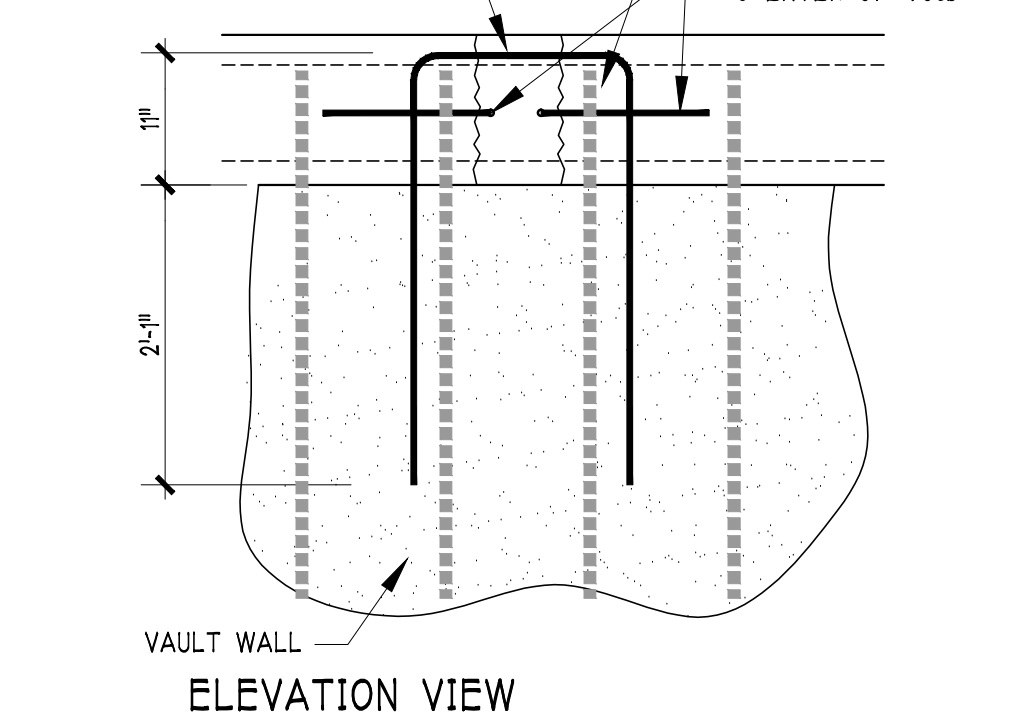
LID & WALL TO CLOSURE DOWELS AT VOID BLOCKOUTS - 8" WALL

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



ELEVATION VIEW

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



ELEVATION VIEW

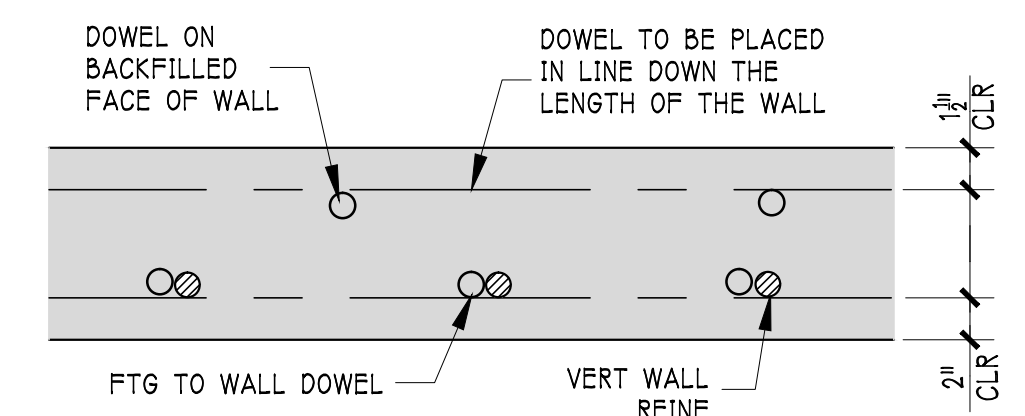
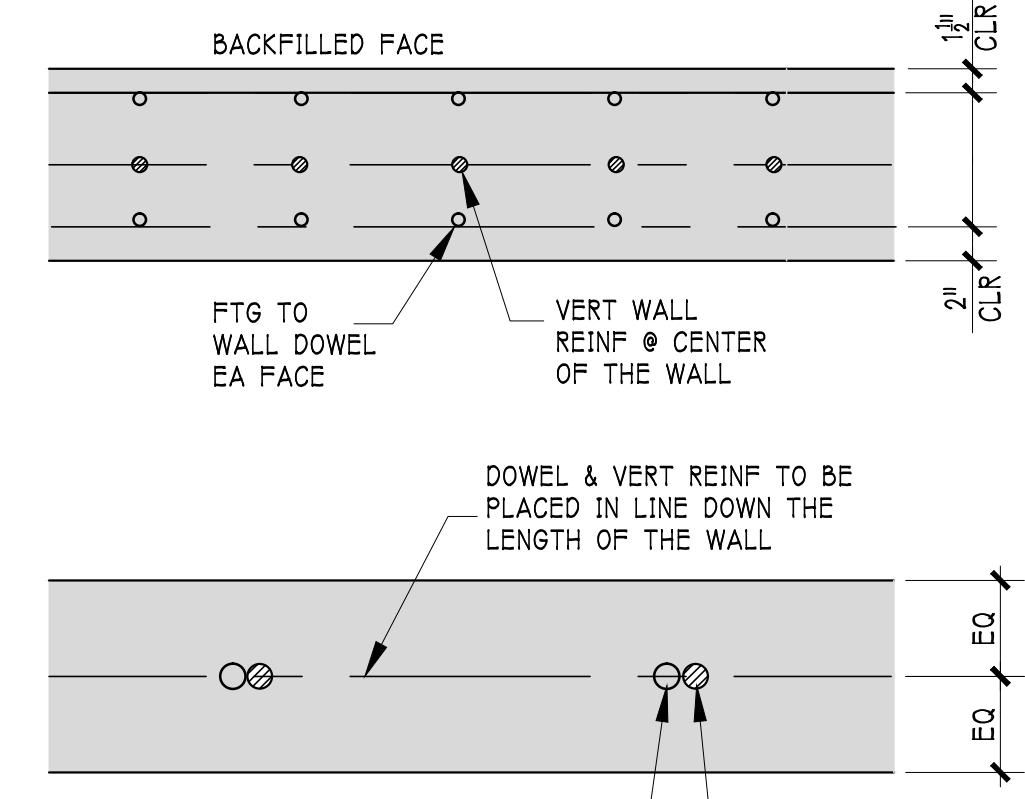
4 SCALE 3/4"=1'-0"

WALL GENERAL KEYNOTES

101. PLANK TO BEAR 3" MINIMUM ONTO THE TOP OF THE CONCRETE WALL. SEE PLANK MANUFACTURER'S DRAWINGS FOR FINAL BEARING LENGTH. INSTALL BEARING PAD AS DETAILED ON THE PRECAST PLANK PLACEMENT DRAWINGS.
102. 12-1/2" THICK PRECAST HOLLOW CORE PLANK.
103. FINISHED GRADE OVER THE LID. ELEVATION VARIES. SEE DESIGN CRITERIA ON SHEET S1 FOR APPROXIMATE SOIL DEPTHS OVER THE VAULT LID IN ADDITION TO THE CIVIL DWGS FOR FINAL GRADE ELEVATIONS.
104. 4"ø PERFORATED PVC FOOTING DRAIN SET IE 6" MAX ABOVE THE TOP OF THE FOOTING OR GRADE SLAB. SET INTO 16" SQUARE FREE DRAINING GRAVEL BED WRAPPED IN FILTER FABRIC. ROUTE DRAIN TO DISCHARGE POINT AS SHOWN ON THE CIVIL DWGS.
105. PREENGINEERED DRAINAGE MATT TO EXTEND OVER THE HEIGHT OF THE WALL AS SHOWN. SEE GEOTECHNICAL REPORT FOR MATERIAL SPECIFICATIONS.
106. 4" PVC RIBBED WATERSTOP w/ CENTER BULB AT ALL PERIMETER WALLS OF THE VAULT. INSTALL AT THE CENTER OF THE WALL, IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
107. SEE FOUNDATION PLAN FOR GRADE SLAB REINFORCING.
108. 6" THICK CAST IN PLACE CONC CURB. SEE LID PLAN FOR EXTENT. SEE 6/S3 FOR CURB REINFORCING DETAIL.

WALL REINFORCING KEYNOTES

201. 8" THICK CONCRETE WALL REINF w/ #5@12" o/c HORIZ & #5@10" o/c VERT. PLACE VERT REINF NEAR THE INSIDE FACE OF THE WALL. PROVIDE (2)@5 CONT HORIZ BARS @ THE TOP OF THE WALL. LAP ALL HORIZ BARS 28" MIN AT SPLICE LOCATIONS.
202. #4@15" o/c WALL TO FOOTING DOWELS. EXTEND 36" INTO THE WALL AND 9" INTO THE 12" THICK FOOTING. PROVIDE STD HOOK AT END OF BAR EMBEDDED WITHIN FTG. PROVIDE (2)@4 CONT HORIZ BARS AS SHOWN. SET DOWELS 1-1/2" CLR FROM THE BACKFILLED FACE OF THE WALL.
203. #5 FOOTING TO WALL DOWELS TO MATCH WALL VERTICAL REINFORCING SPACING. PROVIDE STD HOOK @ END OF BAR CAST INTO FOOTING. DOWELS SHALL BE EMBEDDED A MINIMUM OF 8" INTO 12" THICK FTG. & SHALL EXTEND INTO THE WALL 28" MIN. SEE 5/S3 FOR DOWEL PLACEMENT REQUIREMENTS.
204. REINFORCE FTG w/ (3)@5 CONT. LONGITUDINAL & #5@15" o/c TRANSVERSE BOT.
205. LID & WALL TO CLOSURE POUR REINF @ VOID END FILL. SEE 3/S3.
206. LID & WALL TO CLOSURE POUR REINF @ VOID BLOCKOUT. SEE 4/S3.
207. (3)@6 CONT IN CLOSURE POUR. LAP 48" @ ALL SPLICE LOCATIONS.



5 TYP FTG DOWEL PLACEMENT DETAIL
SCALE 1"=1'-0"



DATE	DESCRIPTION	ISSUED FOR	CONSTR PERMIT APPLICATION	NO
06-27-2024	ISSUED FOR CONST PERMIT APPLICATION	NA	NO	
08-13-2024	INCREASE VAULT DEPTH TO 9FT	NO		

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SEARS PLAT
STORM WATER DETENTION VAULT
WASHINGTON
CITY OF MERCER ISLAND,

WALL SECTIONS & DETAILS
SHEET:
S3 OF 3
S-24-002

GENERAL CONSTRUCTION NOTES

CODE:
VAULT STRUCTURAL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF THE 2021 IBC AS ADOPTED BY THE CITY OF MERCER ISLAND, WASHINGTON.

GENERAL DETAILS:
CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

DISCREPANCIES:
THE CONTRACTOR SHALL NOTIFY ENGINEER UPON FINDING ANY DISCREPANCY OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS.

SHORING & EXCAVATION:
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES, INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES.

WALL BACKFILL:
PRIOR TO BACKFILLING VAULT WALLS THE CONTRACTOR SHALL HAVE PLACED THE LID PLANKS AND PROVIDED A MINIMUM OF 5 DAYS OF CURE ON THE PLANK VOID FILL.

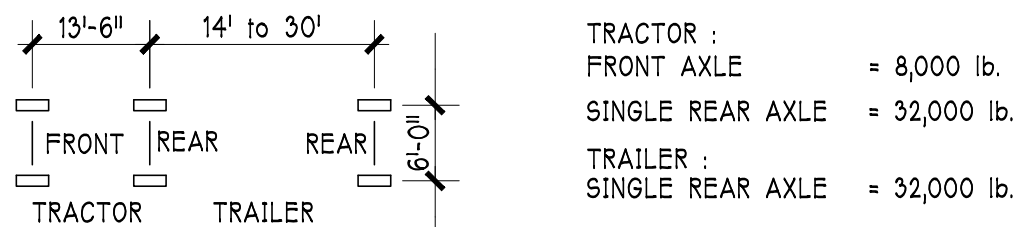
BACKFILL SOIL:
SEE THE GEOTECHNICAL REPORT FOR WALL BACKFILL MATERIAL REQUIREMENTS AND PLACEMENT AND COMPACTION REQUIREMENTS. ALL COMPACTION OCCURRING WITHIN 5' OF THE WALL SHALL BE COMPLETED USING HAND OPERATED MACHINERY.

DESIGN CRITERIA

VERTICAL LOADS ON VAULT LID:

*UNIFORM LIVE LOAD : = 150PSF

*HS20 TRUCK WHEEL LOADS :



* = DESIGN LIVE LOAD AND TRUCK WHEEL LOADS TO BE APPLIED INDEPENDENTLY AND IN COMBINATION WITH THE SOIL COVER DEAD LOAD.

IMPACT & FATIGUE:
DUE TO THE VERY LOW SPEEDS OF THE SERVICE VEHICLES AND THE SOIL COVER OVER THE LID, INCREASES IN VEHICLE LOADS TO ACCOUNT FOR IMPACT & FATIGUE ARE NOT REQUIRED.

RAISED GRATED OPENING

100PSF UNIFORM PEDESTRIAN LIVE LOAD

SOIL COVER FOR LID DESIGN:

PLANK MANUFACTURER SHALL BE RESPONSIBLE FOR DETERMINING THE SOIL COVER DEPTHS USED IN THE LID DESIGN BASED ON THE VAULT AND FINISHED GRADE ELEVATIONS AS SHOWN ON THE PERMITTED CIVIL DWGS.

SOIL COVER FOR SUBSTRUCTURE DESIGN:

THE SUBSTRUCTURE WAS DESIGNED FOR A TYPICAL SOIL COVER OF 2.0FT OVER THE ENTIRE VAULT.

FOUNDATION DESIGN:
FOUNDATION DESIGN IS BASED ON THE FOLLOWING VALUES PROVIDED BY TERRA ASSOCIATES, INC. IN THEIR GEOTECHNICAL REPORT DATED 12-15-2022.

ALLOWABLE BEARING PRESSURE: 5,000 PSF

LATERAL EARTH PRESSURES: DRAINED LEVEL BACKFILL

AT REST CONDITION: 50 PCF EPW

SEISMIC PRESSURE COMPONENT: E = 8H PSF UNIF HORZ PRESSURE

SATURATED SOIL DENSITY: 125 PCF

DEFERRED SUBMITTALS

THE FOLLOWING AREAS OF WORK SHALL BE CONSIDERED AS "DEFERRED SUBMITTALS" AS DEFINED IN THE 2021 IBC

a. PRECAST PRESTRESSED HOLLOW CORE PLANK

ALL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF WASHINGTON WHO HAS CURRENT DESIGN EXPERIENCE IN THE TYPE OF WORK REVIEWED.

THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED BY THE ENGINEER OF RECORD.

CONTRACTOR SHALL SUBMIT REVIEWED DWGS & CALCS TO THE BUILDING OFFICIAL PRIOR TO INSTALLATION.

OPEN METAL GRATING

OPEN METAL GRATING SHALL BE WELDED STEEL BAR GRATING AS SPECIFIED ON THE DRAWINGS. ALL STEEL GRATING AND GRATING COMPONENTS INCLUDING ITEMS EMBEDDED WITHIN THE CONCRETE SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

SUPPLIER SHALL PROVIDE ALL COMPONENTS NECESSARY TO INSTALL AND SECURE THE GRATING IN PLACE.

SUPPLIER SHALL PROVIDE SHOP DRAWINGS DESCRIBING ALL COMPONENTS OF THE INSTALLATION, FOR REVIEW PRIOR TO FABRICATION.

SPECIAL INSPECTION PLAN

GENERAL:
SPECIAL INSPECTION BY A QUALIFIED INSPECTOR IS REQUIRED IN ACCORDANCE WITH THE 2021 IBC.

QUALIFICATION:
THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL.

REQUIRED VERIFICATION & INSPECTION:
THE SPECIAL INSPECTOR SHALL PERFORM THE VERIFICATIONS & INSPECTIONS NOTED IN THE SCHEDULE BELOW

INSPECTION & TESTING SCHEDULE

TYPES OF WORK	FREQ.	2021 IBC SECTION
CAST IN PLACE CONC		
REINFORCING STEEL, PLACEMENT.	P	1705.3
INSTALLATION & FASTENING OF PRECAST PANELS	P	1705.3
PLACEMENT OF CONCRETE	C	1705.3
VERIFYING USE OF REQUIRED DESIGN MIX	P	1705.3
TESTING OF THE CONCRETE FOR SPECIFIED STRENGTH, AIR CONTENT AND SLUMP	C	1705.3
SOILS		
VERIFICATION OF SOIL-BEARING CAPACITY; INSTALLATION OF DRAINAGE SYSTEM.	P	1705.6
PLACEMENT & COMPACTION OF WALL BACKFILL:	P	1705.6
STRUCTURAL STEEL		
STRUCTURAL STEEL (GRATING) FABRICATION	P	1704.2.5

FREQUENCY LEGEND

C = CONTINUOUS P = PERIODIC
SEE REFERENCES AND STANDARDS LISTED WITHIN THE VERIFICATION & INSPECTION SCHEDULE FOR MEANING OF PERIODIC AND CONTINUOUS INSPECTIONS.

CERTIFICATE OF COMPLIANCE:
THE SPECIAL INSPECTION AGENCY SHALL PROVIDE A FINAL LETTER CERTIFICATE OF COMPLIANCE STATING THAT THE REVIEWED WORK WAS COMPLETED IN ACCORDANCE WITH THE PERMITTED DOCUMENTS.

SUBMITTAL OF REPORTS:
ALL SPECIAL INSPECTION REPORTS AND TESTING REPORTS SHALL BE SUBMITTED TO THE OWNER, SITE STRUCTURES AND THE BUILDING OFFICIAL BY THE AGENCY PERFORMING THE INSPECTION OR TESTING.

CONCRETE

CONCRETE REQUIREMENTS:

LOCATION	STRENGTH	MAX W/C RATIO
WALLS & CIP LID AREAS	4000PSI @ 28 DAYS	0.50
FTGS & GRADE SLAB	4000PSI @ 56 DAYS	0.50
PLANK VOID FILL	TO MEET PLANK MFG'S REQUIREMENTS*	
PLANK JOINT GROUT	TO MEET PLANK MFG'S REQUIREMENTS*	
* MINIMUM STRENGTH SHALL BE 3000PSI @ 28 DAYS.		

AIR CONTENT:
CONC. EXPOSED TO WEATHER SHALL CONTAIN 5% +/-1% ENTRAINED AIR.

MIX DESIGN:
SHALL BE BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE WITH THE SPECIFICATIONS.

SUBMITTALS:
PROVIDE MIX DESIGNS TO THE ENGINEER FOR REVIEW PRIOR TO PLACEMENT.

EXPOSURE CATEGORIES:

FREEZING THAWING	FO
SULFATE	SO
IN CONTACT w/ WATER	WI
CORROSION PROTECTION	CI

MATERIAL REQUIREMENTS:

CEMENT: ASTM C150. ADMIXTURES: ACI 301.
AGGREGATES: ASTM C33. WATER: ASTM C94.

PLACING REQUIREMENTS:

PLACING:
PLACE CONCRETE AS NEARLY AS PRACTICABLE TO ITS FINAL POSITION TO AVOID SEGREGATION.

DEBRIS:

REMOVE ALL DEBRIS FROM FORMS PRIOR TO PLACING CONCRETE.

CONSOLIDATION:
CONSOLIDATE CONCRETE BY SUITABLE MEANS. THOROUGHLY WORK CONCRETE AROUND EMBEDDED ITEMS AND INTO CORNERS OF FORMS.

CURING REQUIREMENTS:

CURING:
CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A SUITABLE PERIOD OF TIME AFTER PLACEMENT.

WEATHER CONDITIONS:
ADEQUATE PRECAUTIONS SHALL BE TAKEN DURING HOT AND COLD WEATHER IN ACCORDANCE WITH THE SPECIFICATIONS.

LID PLANK PLACEMENT:

IN NO CASE SHALL THE LID PLANKS BE PLACED BEFORE THE WALLS HAVE BEEN ALLOWED A MINIMUM OF 3 DAYS OF CURE. WHEN AVERAGE AMBIENT TEMPERATURES ARE LESS THAN 50 DEGREES FAHRENHEIT, THE CONTRACTOR MUST ALLOW A MINIMUM CURE TIME OF 7 DAYS OR PROVIDE AN ADDITIONAL SET OF CYLINDERS TO BE BROKEN AT THE TIME OF LID PLACEMENT DEMONSTRATING A MINIMUM CONCRETE STRENGTH OF 1,000 PSI HAS BEEN REACHED.

FINISH:

- CONCRETE FINISH TO BE SMOOTH WITH NO FINS, VOIDS, ROCK POCKETS OR OTHER IRREGULARITIES.
- CONCRETE FINISH TIES OR SIMILAR ARE REQUIRED AND ARE TO BE REMOVED AND SEALED AT ALL INTERIOR WALL SURFACES. NO FLAT TIES ALLOWED.

REINFORCING BAR

MATERIAL REQUIREMENT:

REINFORCING BARS:
USE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT AS NOTED ON THE DRAWINGS.

FABRICATION AND PLACING REQUIREMENTS:

BENDING:
BARS SHALL BE BENT COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS NOTED OR SHOWN OTHERWISE OR AUTHORIZED BY THE ENGINEER.

PLACING:
REINFORCEMENT SHALL BE SUPPORTED AND TIED TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR BY PLACING OF CONCRETE.

CONCRETE COVER:
MINIMUM CONCRETE COVER FOR REINF. SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

- CONCRETE CAST AGAINST EARTH: 3"
- CONCRETE CAST AGAINST FORMS AND EXPOSED TO EARTH: 2"

WET SETTINGS:
REINFORCEMENT ANCHOR BOLTS, OR ANY EMBEDDED ITEM WITHIN THE CONCRETE, MAY NOT BE SET INTO THE CONCRETE AFTER IT HAS BEEN POURED WITHIN THE FORMS.

LAP SPLICES:
LAP ALL BARS 24" MIN UNLESS SHOWN OTHERWISE ON THESE DRAWINGS.

SUBMITTALS:
PROVIDE REINFORCING BAR FABRICATION AND PLACEMENT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

STRUCTURAL STEEL

MATERIALS:

- STRUCTURAL STEEL SHAPES & PLATES SHALL CONFORM TO ASTM A36.
- HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500 GRADE B, F_y=42,000PSI.

WELDING:

CONFORM TO AWS D11 "STRUCTURAL WELDING CODE - STEEL". WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH WABO REQUIREMENTS. USE E70 ELECTRODES OF TYPE REQUIRED FOR MATERIALS TO BE WELDED.

GALVANIZING:
ALL STEEL SECTIONS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION CONFORMING TO ASTM A-123. REPAIRS SHALL CONFORM TO ASTM A-780 USING ZINC RICH PAINT. THE COATING THICKNESS FOR THE PAINT MUST BE 50% MORE THAN THE SURROUNDING COATING THICKNESS, BUT NOT GREATER THAN 4.0 MILS.

54" PRECAST CATCH BASIN BASE

SPECIFICATIONS:
PRECAST CATCH BASIN BASE SHALL MEET ASTM C478 AND THE APWA/MSDOT STANDARD SPECIFICATION FOR PRECAST CONCRETE MANHOLE SECTIONS.

MATERIALS:

- REINFORCING STEEL F_y=60KSI MINIMUM
- CONCRETE f_c=4,000PSI MIN @ 28 DAYS

MINIMUM REQUIREMENTS:

CIRCUMFERENTIAL WALL THICKNESS SHALL BE NO LESS THAN 5-1/2" THICK AND SHALL HAVE A MINIMUM OF 0.135 SQ. IN/FT OF REINFORCING STEEL HORZ AND VERT PLACED AT THE CENTER OF THE WALL.

BASE THICKNESS SHALL BE NO LESS THAN 8" THICK AND SHALL HAVE A MINIMUM OF 0.19 SQ. IN/FT OF REINFORCING STEEL IN EACH ORTHOGONAL DIRECTION PLACED AT THE CENTER OF THE SLAB.

WATERSTOP

PVC WATERSTOP
WATERSTOPS SHALL BE 4" RIBBED WITH CENTER BULB AS MANUFACTURED BY GREENSTREAK, INC - OR EQUIVALENT - AND SHALL BE FORMULATED FROM VIRGIN RAW MATERIAL AND SHALL MEET THE THE ARMY CORPS OF ENGINEERS STANDARD SPECIFICATION CRP-C 572-74. INSTALL WATERSTOP IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATION. SPLICING OF THE WATERSTOP SHALL BE ACCOMPLISHED WITH A THERMOSTATICALLY CONTROLLEDE SPLICING IRON IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTION AND RECOMMENDATIONS.

BENTONITE CLAY WATERSTOP

WATERSTOP SHALL BE RX-101 AS MANUFACTURED BY CETCO OR EQUIVALENT. INSTALL WATERSTOP IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS. WATERSTOP SHALL BE ATTACHED TO THE CONCRETE SURFACE USING A CONTINUOUS BEAD OF CETCO CETSEAL OR SHALL BE MECHANICALLY FASTENED TO THE CONCRETE SURFACE WITH CETCO REVO-FIX AS REQUIRED BY THE TECHNICAL DATA SHEET FOR WATERSTOP-RX.

WATERSTOP SHALL BE PROTECTED AGAINST EXPOSURE TO WATER FROM ANY SOURCE UNTIL THE CONCRETE ENCASES THE WATERSTOP IS PLACED AT THE JOINT.

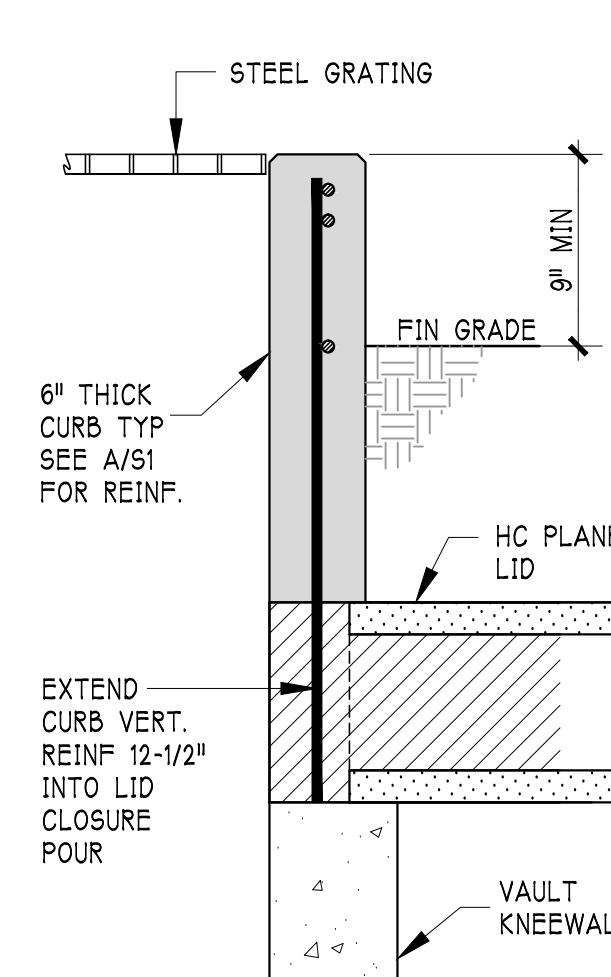
HOLLOW CORE PLANK

SCOPE OF WORK:
THE WORK INCLUDED IS THE DESIGN, MANUFACTURE AND DELIVERY OF PRECAST PRESTRESSED CONCRETE UNITS. DESIGN PLANK FOR THE MOST CRITICAL OF THE LOADING CONDITIONS AS SHOWN WITHIN THE DESIGN CRITERIA NOTE.

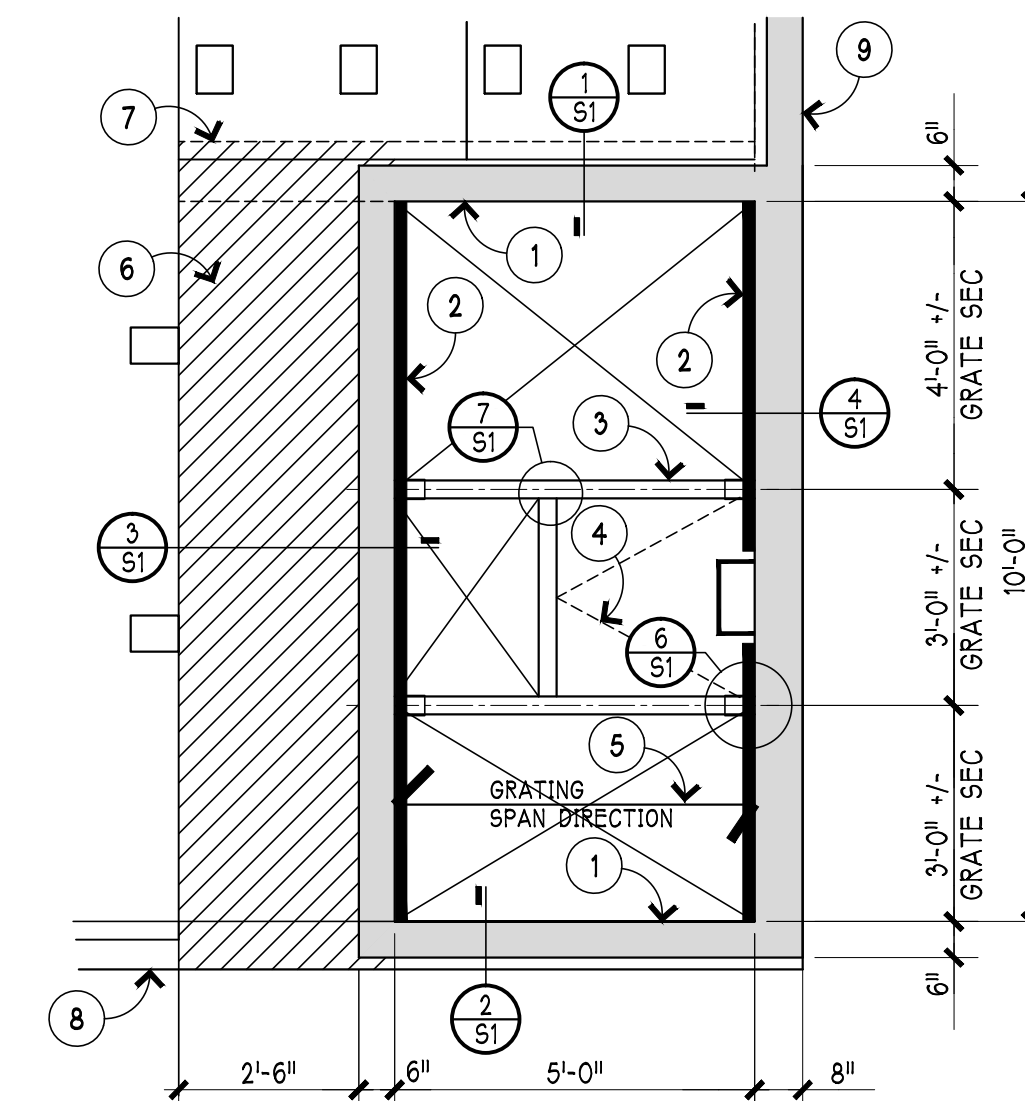
THE MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS AND PLACEMENT DRAWINGS SIGNED BY A WASHINGTON STATE REGISTERED CIVIL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

THE MANUFACTURER SHALL INSTALL ALL BLOCK OUTS REQUIRED FOR STRUCTURAL CONNECTIONS AS INDICATED ON THESE DRAWINGS. NO OTHER PENETRATIONS ARE ALLOWED WITHOUT THE PRIOR APPROVAL OF THE PLANK MANUFACTURER.

ALL HOLLOW CORE JOINTS SHALL BE GROUTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.



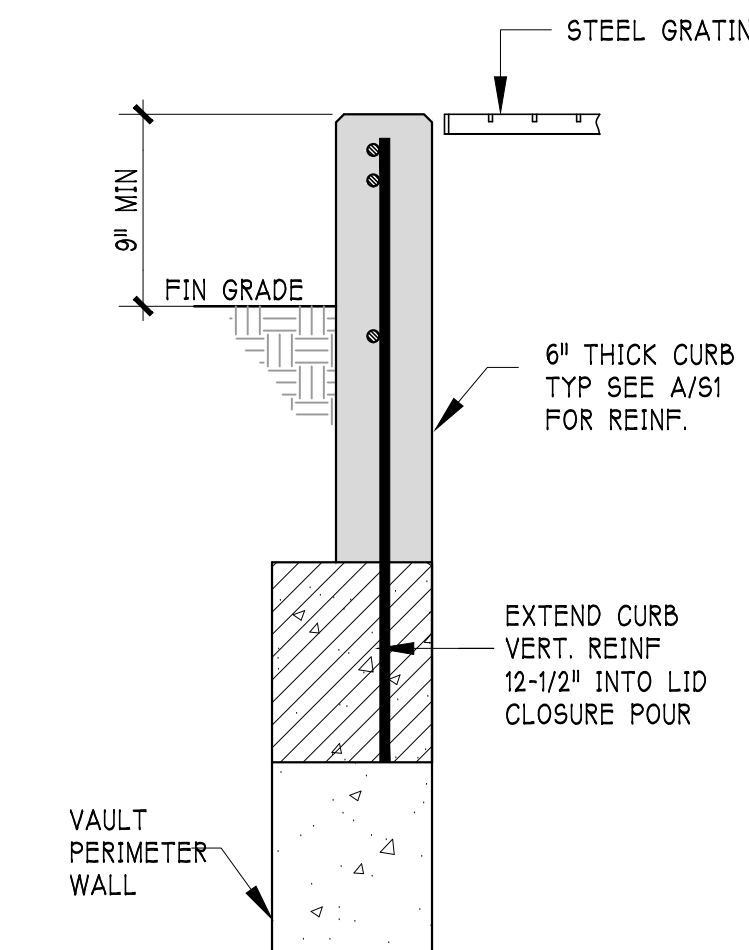
1 CURB @ OPNG
SCALE 1/4"=1'-0"



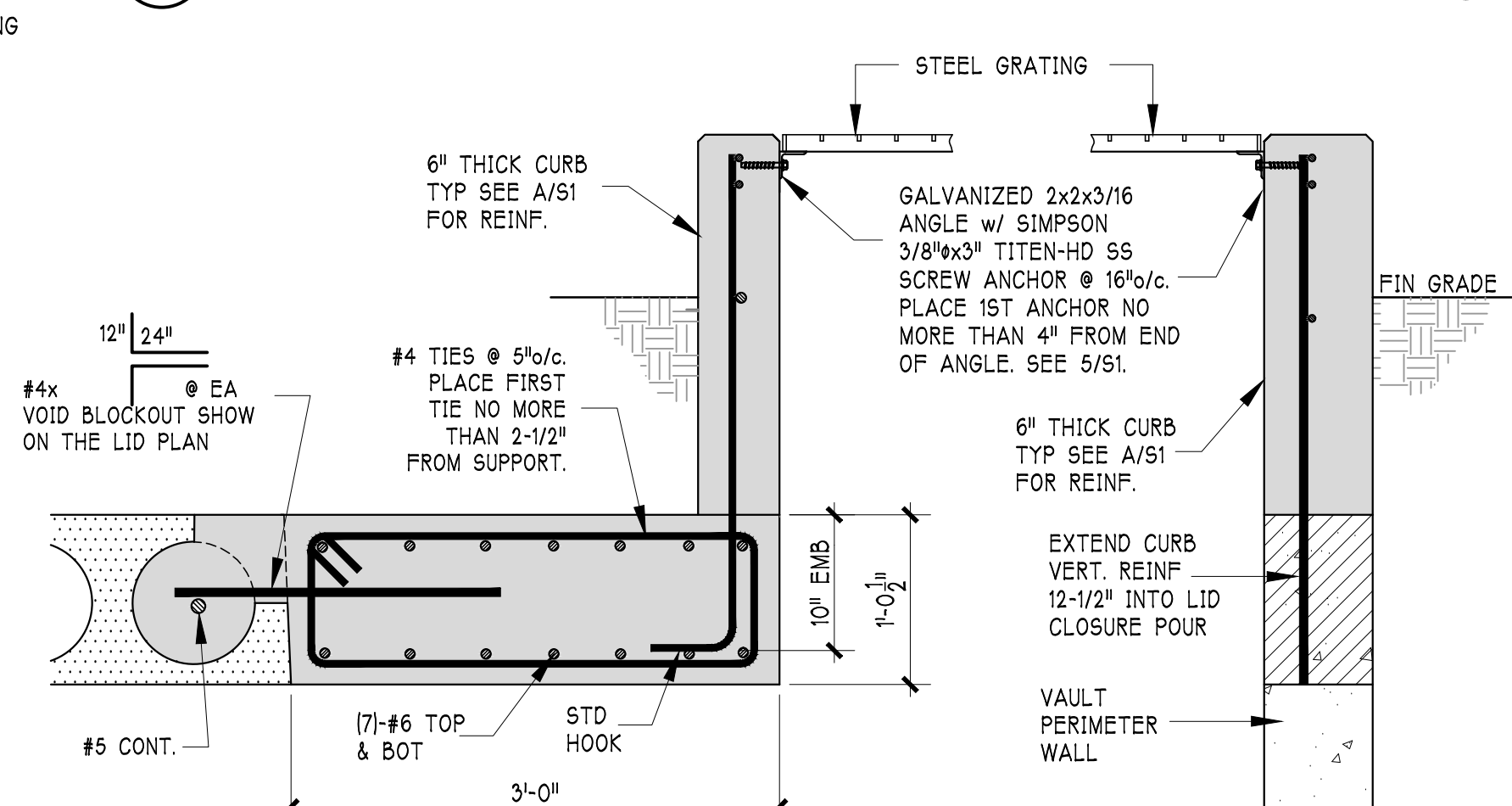
A GRATING & CURB @ 5'x10' OPNG
SCALE 3/8"=1'-0"

GRATED OPNG KEYNOTES

- 6" THICK CURB TYP @ THE PERIMETER OF THE OPENING UNO. REINF w/ #4@12"/c HORZ & VERT. PROVIDE #4x18"x18" CORNER BARS AT ALL HORZ REINF. PLACE ALL REINF AT THE CENTER OF THE CURB. THICKEN CURB TO 8" @ NORTH SIDE OF OPNG.
- GALVANIZED STEEL ANGLE SEAT 2x2-3/16. COPE HORZ LEG AT LADDER. SEE 5/S1 FOR ANCHORAGE TO CURB.
- HSS 3x3x1/8 REMOVABLE STEEL FRAME @ PERIMETER OF HINGED GRADE SECTION
- PROVIDE 36"x36" HINGED SECTION OF GRATING @ ACCESS LADDER
- GALVANIZED STEEL GRATING W-19-4 w/ 1-1/4"x3/16" BRG BARS.
- HATCHED AREA REPRESENTS EXTENT OF 36" WIDE SLAB BM. SEE 5/S1 FOR REINFORCING.
- KNEEWALL BELOW.
- VAULT PERIMETER WALL
- CURB OVER LID. SEE 6/S3

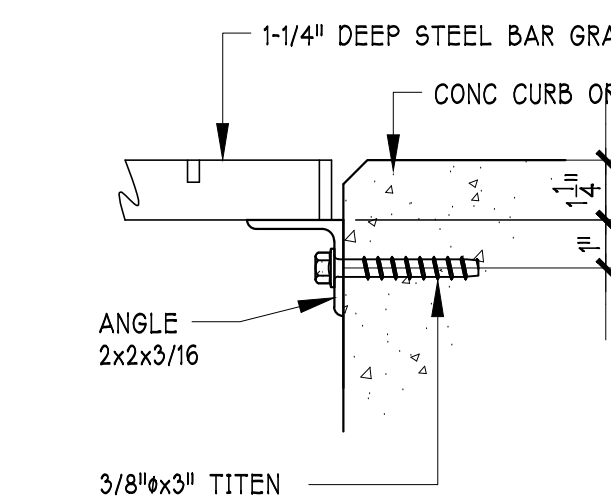


2 CURB @ OPNG
SCALE 1/4"=1'-0"

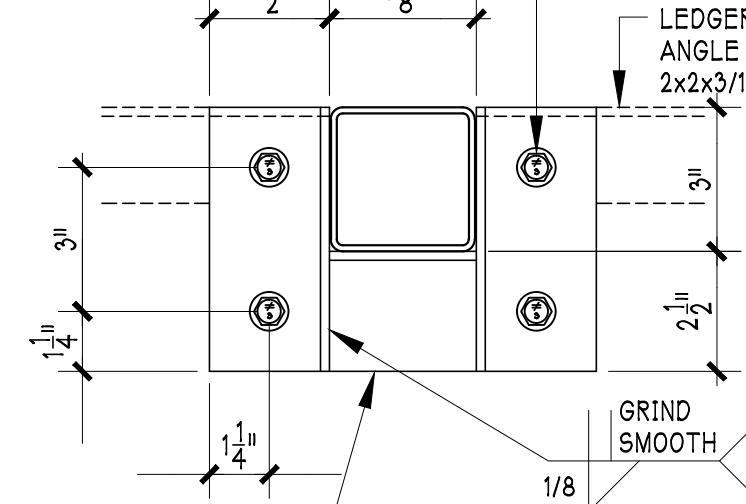


3 CURB & SLAB BM @ OPNG
SCALE 1/4"=1'-0"

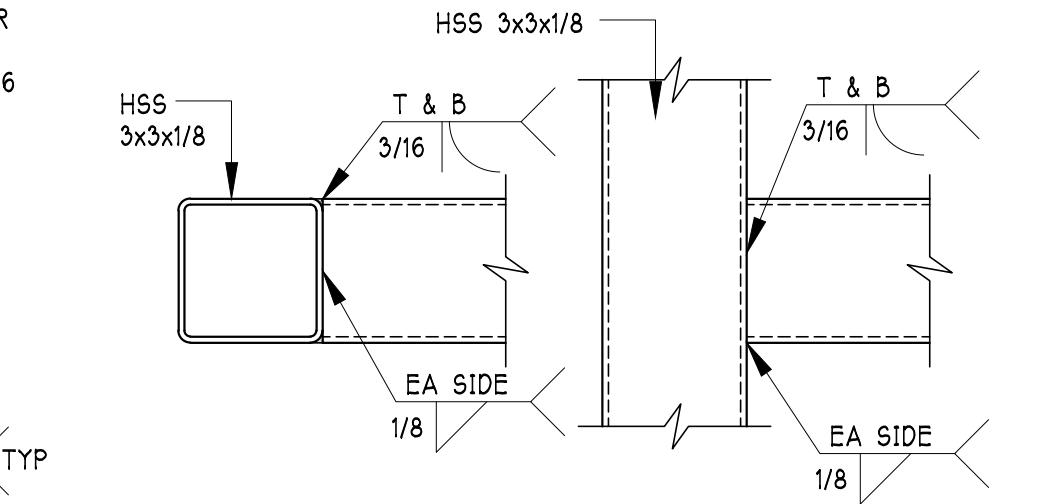
4 CURB @ OPNG
SCALE 1/4"=1'-0"



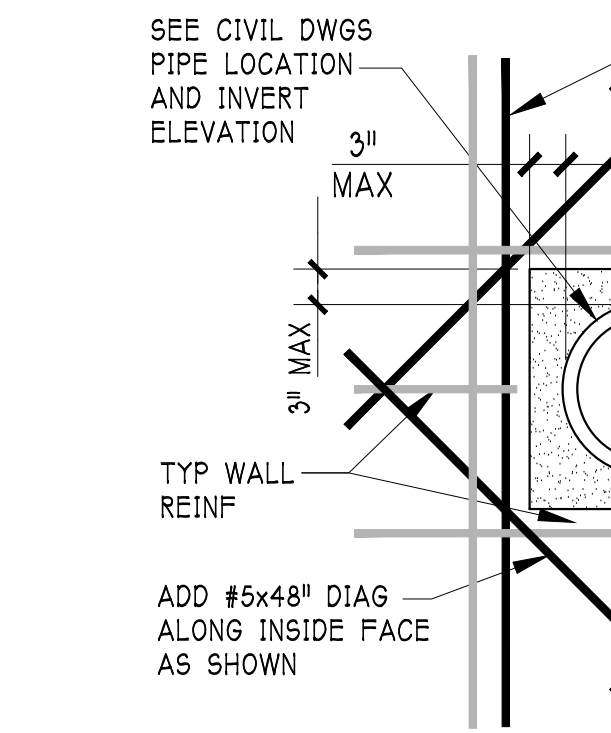
5 LEDGER ANGLE DETAILS
SCALE 3/4"=1'-0"



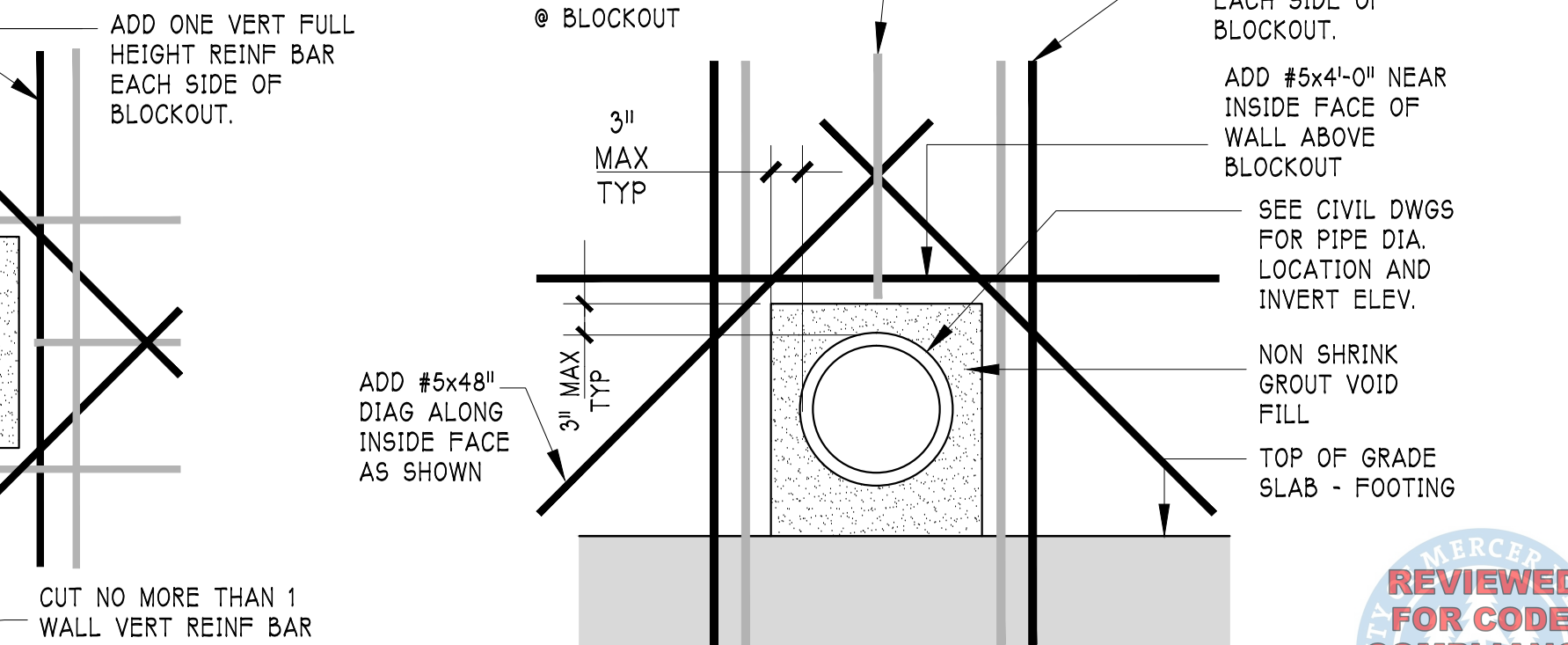
6 HSS SEAT DETAIL
SCALE 3/4"=1'-0"



7 HSS FRAME CONN DETAIL
SCALE 3/4"=1'-0"



8 WALL REINF @ PIPE PENETRATION
SCALE 3/4"=1'-0"



REVIEWED FOR CODE COMPLIANCE
September 12, 2024
SITE COPY

DATE	DESCRIPTION	ISSUED FOR	CONST PERMIT APPLICATION	NO
06-27-2024	ISSUED FOR CONST PERMIT APPLICATION	NA		
08-13-2024	INCREASE VAULT DEPTH TO 9FT	NO		

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e-mail: dan@sitestructures.com

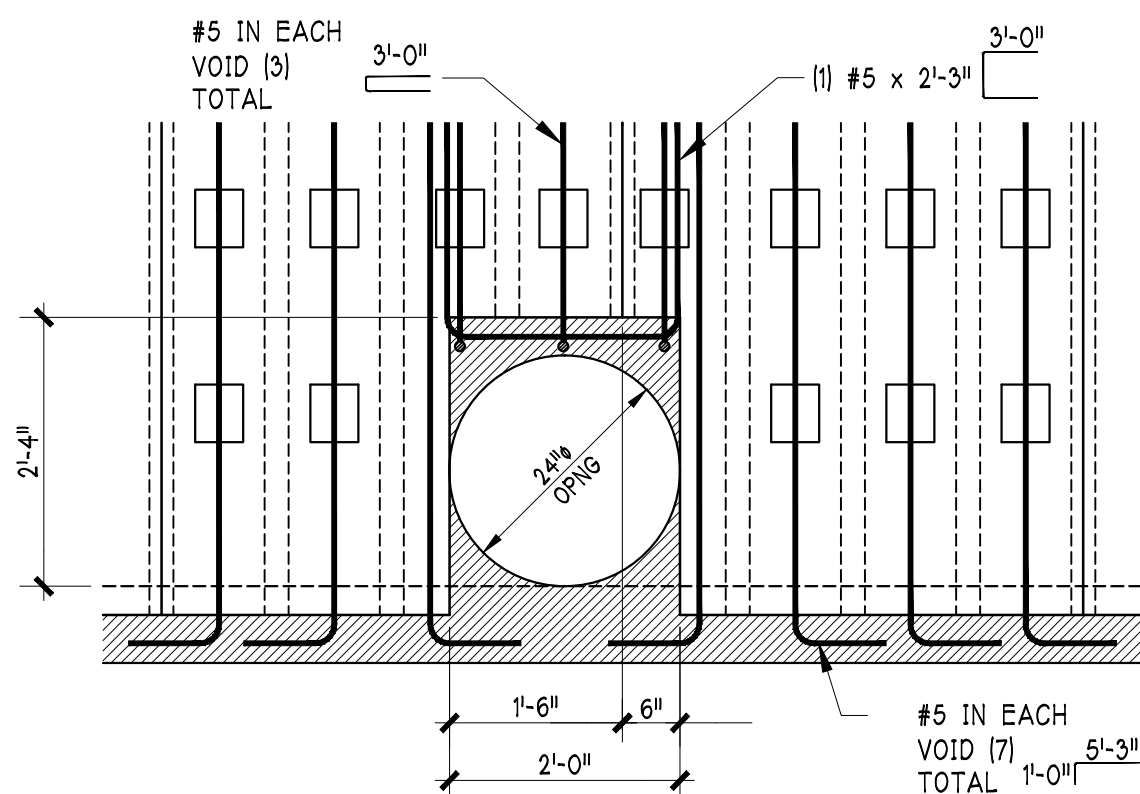
08-13-2024
DANIEL J. KOENIG
PROFESSIONAL ENGINEER
NO. 20044

SEARS PLAT
STORM WATER DETENTION VAULT
CITY OF MERCER ISLAND, WASHINGTON

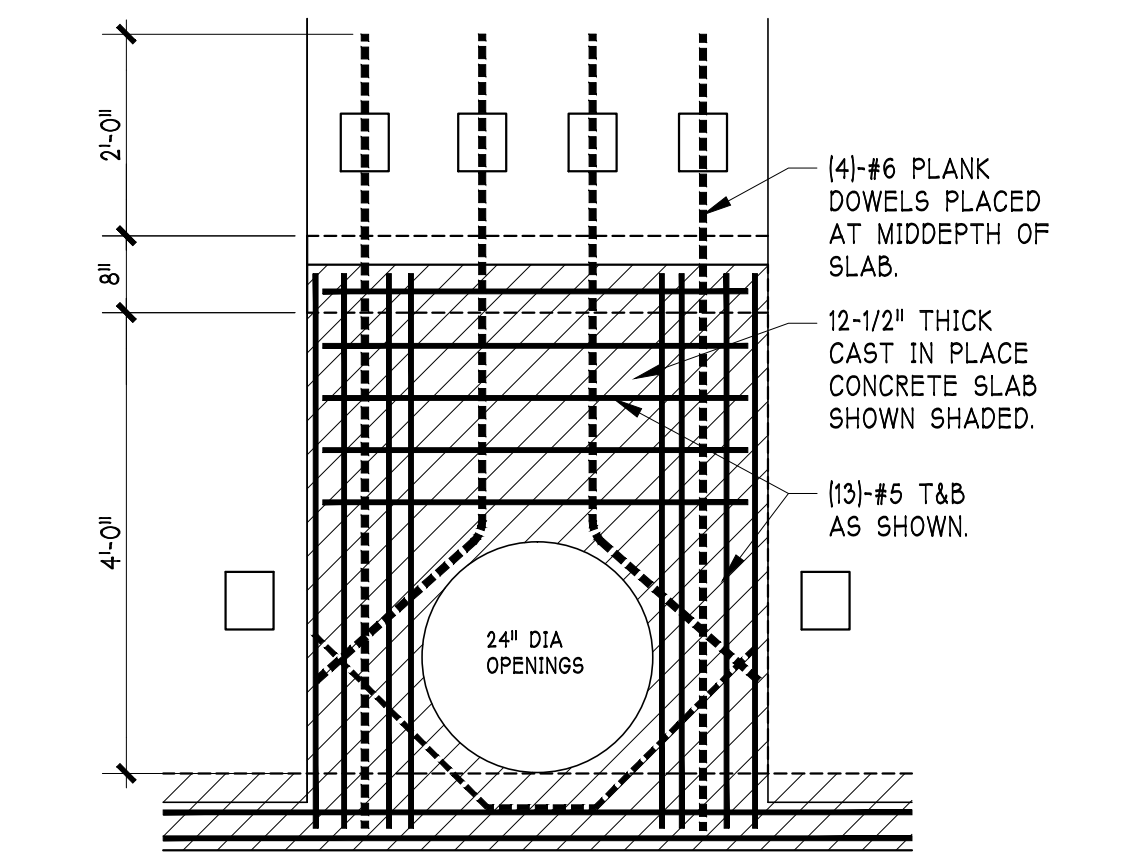
STRUCTURAL NOTES & TYPICAL DETAILS

SHEET:

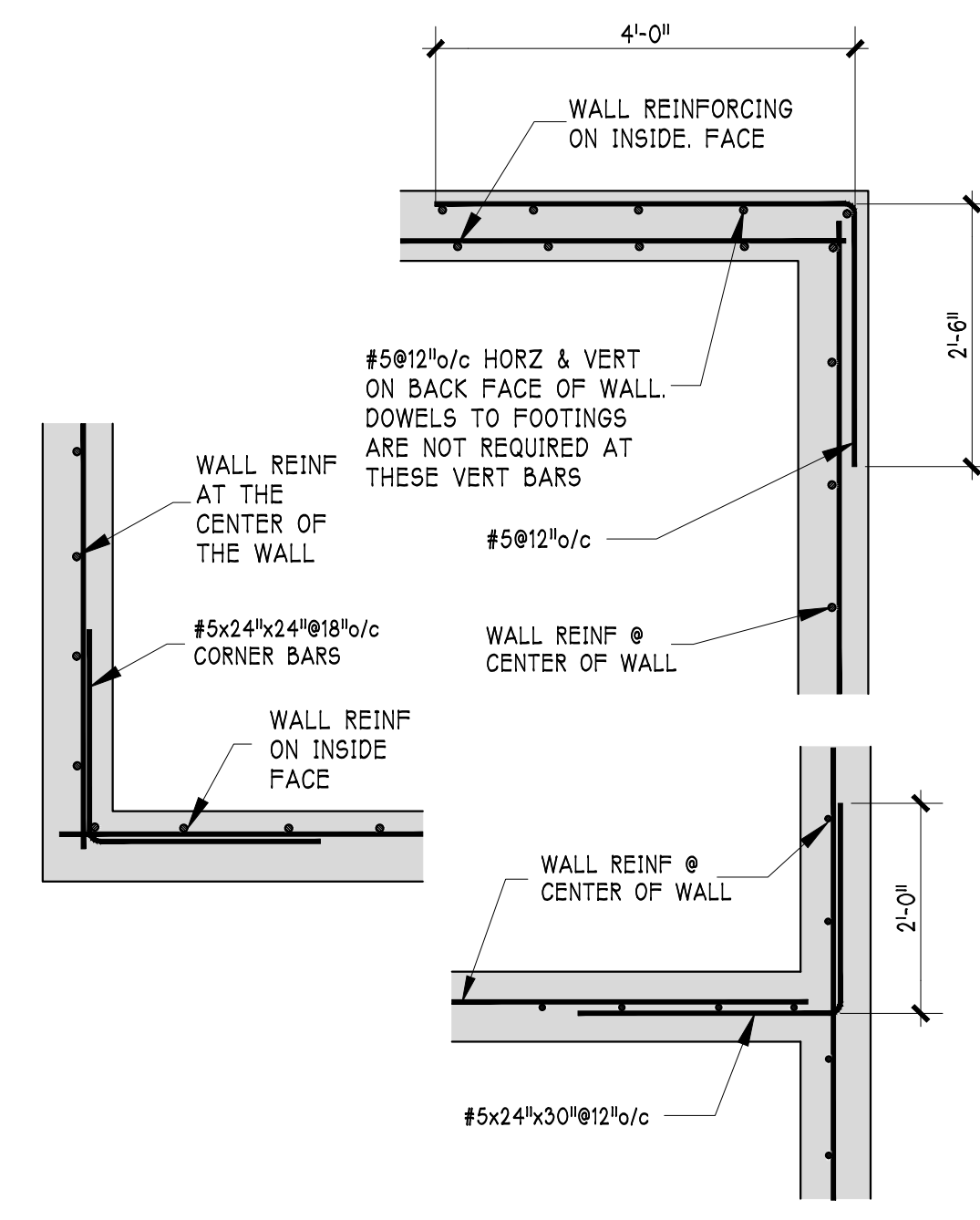
S1 OF 3
S-24-002



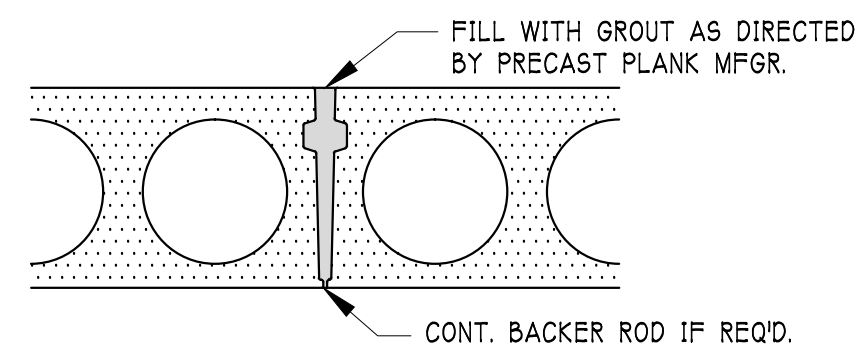
1 LID REINF @ MANHOLE
NTS



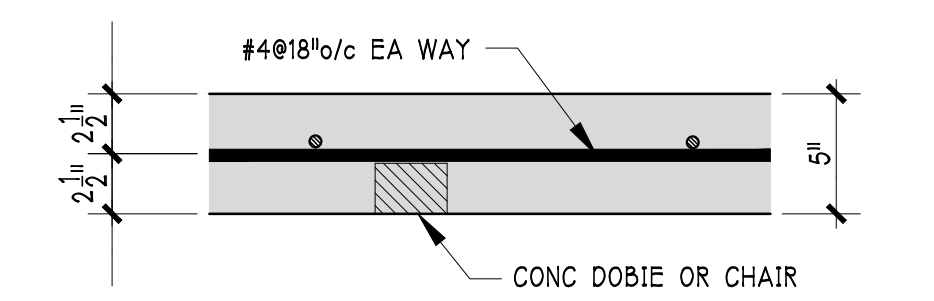
2 LID REINF @ MANHOLE w/ KNEE-WALL
SCALE NTS



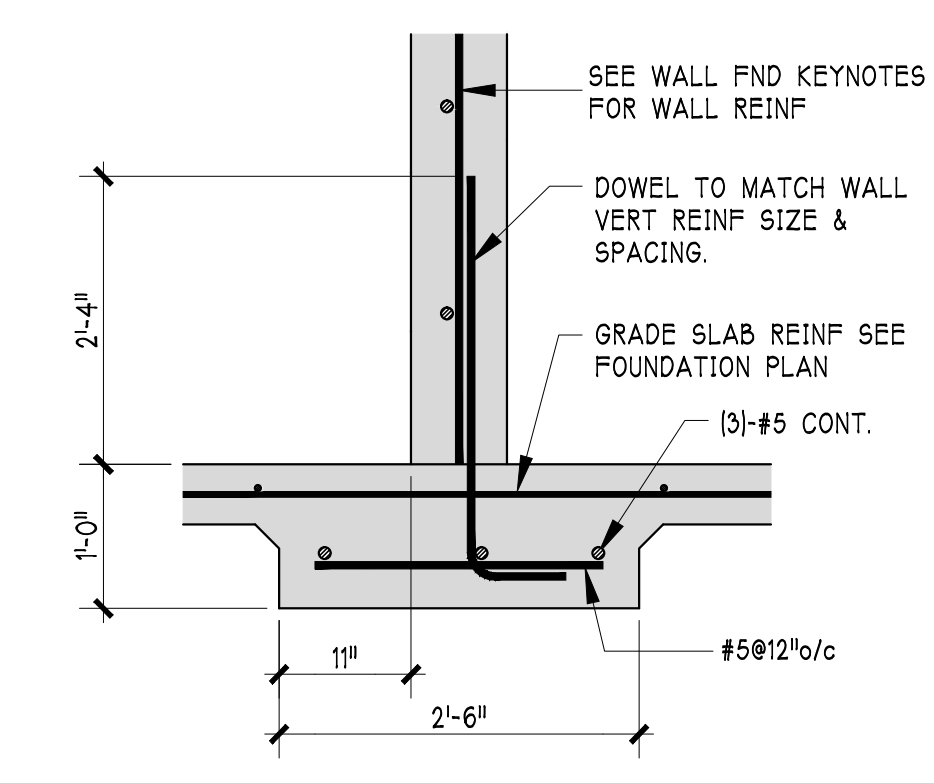
4 TYP WALL CORNER REINF.
NTS



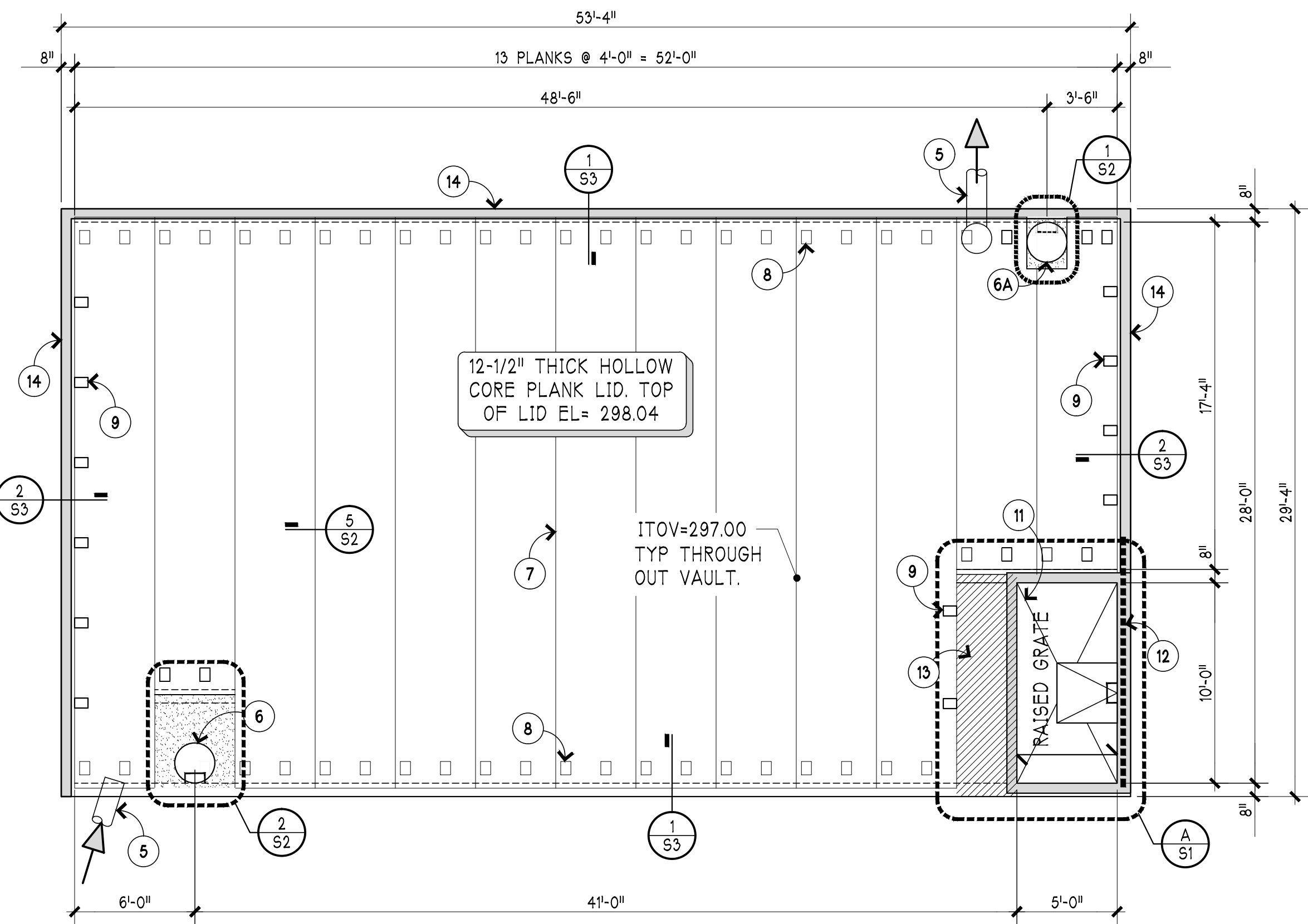
5 TYP PLANK JOINT DETAIL
SCALE 1/4"=1'-0"



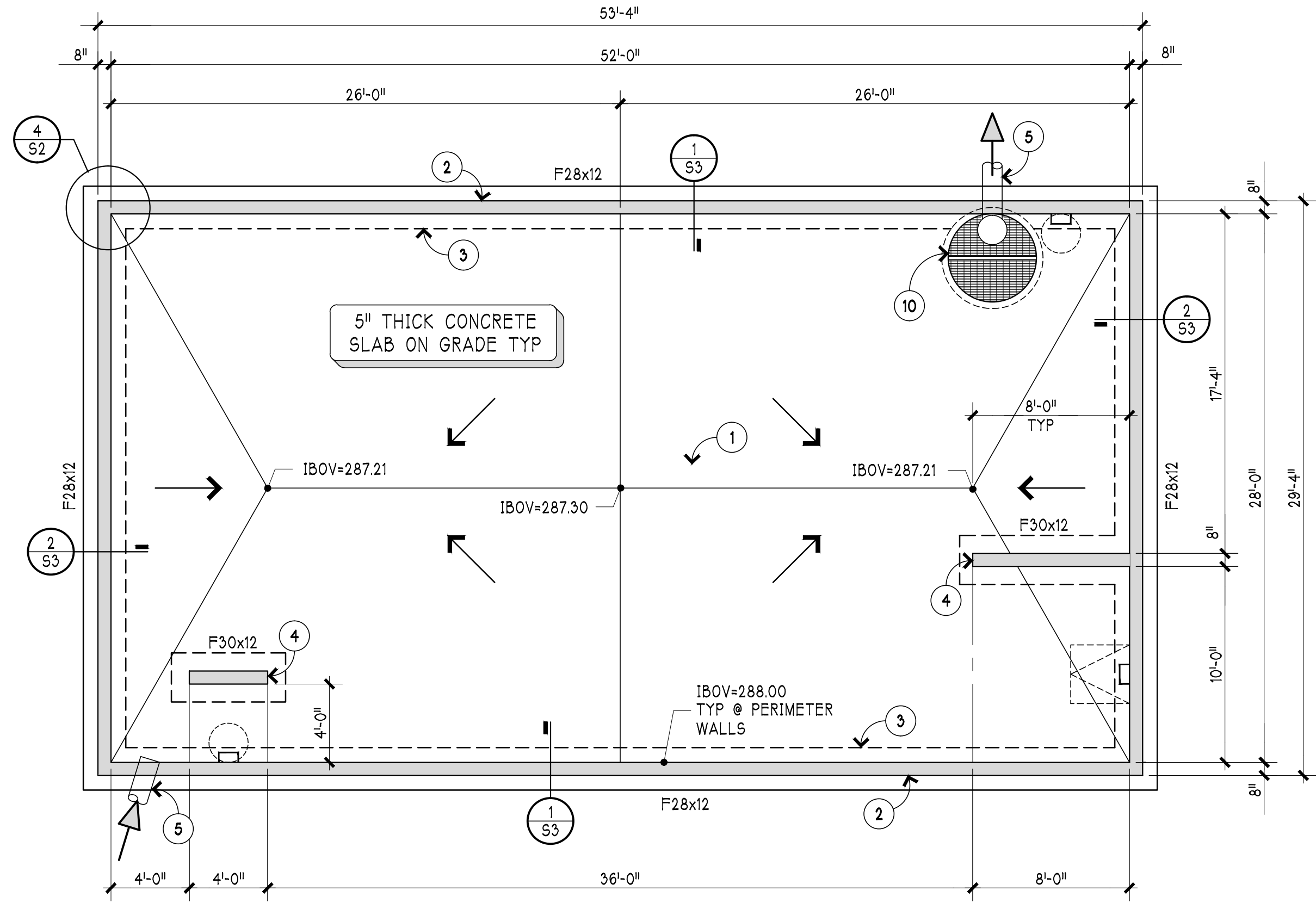
6 TYP GRADE SLAB SECTION
SCALE 1-1/2"=1'-0"



7 KNEEWALL FTG DETAIL
SCALE 3/4"=1'-0"



VAULT LID PLAN
SCALE 3/16" = 1'-0"



VAULT FOUNDATION PLAN
SCALE 3/16" = 1'-0"

PLAN KEYNOTES

- 5" THICK CONCRETE SLAB ON GRADE REINF WITH #4@18"/c EA WAY. PLACE ALL REINF AT MID-DEPTH OF THE SLAB. SEE 6/S2 FOR REINF PLACEMENT. CAST GRADE SLAB IN A SINGLE POUR.
- C.I.P. CONCRETE WALLS AT THE PERIMETER & INTERIOR OF THE VAULT. SEE WALL SECTIONS FOR THICKNESS & REINFORCING. SEE 4/S2 FOR REINF @ WALL CORNERS. SEE 8/S1 FOR WALL REINF @ PIPE PENETRATIONS.
- THICKENED SLAB FOOTINGS TO BE CAST WITH THE GRADE SLAB. SEE WALL SECTIONS FOR SIZE & REINF.
- 8" THICK KNEE-WALL. REINF w/ #5@12"/c HORIZ. AND VERT. PLACED AT THE CENTER OF THE WALL. VERTICAL BAR TO EXTEND 10" ABOVE TOP OF WALL. PROVIDE (2)-#5 HORIZ AT THE TOP OF THE WALL & (2)-#5@6"/c VERT AT FREE ENDS OF WALL. SEE 7/S2 FOR FTG SIZE & REINF. EXTEND FTG 10" BEYOND END OF WALL.
- PIPE INLET OR OUTLET TO VAULT. SEE CIVIL DWGS FOR PIPE DIAMETER, LOCATION & INVERT ELEVATION. SEE 8/S1 FOR WALL REINF @ PENETRATION. ADDITIONAL REINF IS NOT REQUIRED FOR PIPES LESS THAN 8" PROVIDED THEY ARE PLACED BETWEEN THE TYPICAL WALL REINFORCING.
- 24" DIA. OPENING THRU LID w/ KNEEWALL TO ACCEPT RISERS, LADDER, RING AND LOCKING MANHOLE COVER PER CIVIL DRAWINGS. SEE 1/S2 FOR LID REINF AT MANHOLE.
- 12-1/2" THICK PRECAST HOLLOW CORE PLANK. SEE DESIGN CRITERIA ON S1 FOR LOADING.
- POUR SLOTS IN TOP OF PLANK. MANUFACTURER TO PROVIDE A MINIMUM OF 2 SLOTS @ EACH END OF EACH PLANK. PLANK MANUFACTURER MAY REQUIRE GROUTING OF ADDITIONAL CELLS BEYOND THE MINIMUM SHOWN. THE GENERAL CONTRACTOR SHALL INCLUDE GROUTING OF THESE ADDITIONAL CELLS IN HIS BID. SEE WALL SECTIONS FOR REINF @ POUR SLOTS.
- PROVIDE BLOCKOUTS IN THE EDGE CELL OF THE PLANK PARALLEL TO THE PERIMETER VAULT WALLS & C.I.P. LID. LOCATE BLOCKOUTS APPROXIMATELY AS SHOWN ON THIS PLAN. SEE WALL SECTIONS AND DETAILS FOR REINF @ BLOCKOUTS.
- 54" CATCH BASIN BASE TO ACT AS SUMP. SEE 7/S3 FOR DETAILS.
- 5FTx10FT OPENING TO RECEIVE OPEN METAL BAR GRATING w/ INTEGRAL 36" x 36" HINGED ACCESS HATCH. SET TOP OF GRATING 9" MIN ABOVE THE HIGHEST ADJACENT FINISHED GRADE. SEE A/S1 FOR GRATING ASSEMBLY INFORMATION.
- ADD (2)-#6x15'-0" @ 3"/c WITHIN THE WALL ON THE INTERIOR FACE & AT THE TOP OF THE WALL. PLACE BAR AS SHOWN ON THE PLAN.
- HATCHED AREA REPRESENTS 36" WIDE x 12-1/2" THICK CAST IN PLACE CONCRETE SLAB BEAM WITHIN THE LID. SEE 3/S1 FOR BM REINFORCING.
- 6" THICK CURB. SEE 6/S3 FOR REINF. DETAILS.

LEGEND

- IBOV INSIDE BOTTOM OF VAULT (TOP OF GRADE SLAB)
- ITOV INSIDE TOP OF VAULT (TOP OF WALL - BOT OF LID)
- CIP CONCRETE WALL
- CONCRETE SPREAD FOOTING
- F28x12 28" WIDE x 12" THICK FTG. SEE 1, 1A & 2/S3
- F30x12 30" WIDE x 12" THICK FTG. SEE 7/S2
- DIRECTION OF DOWNWARD SLOPE
- GRATING SPAN DIRECTION

CONSTRUCTION LOADS
THE VAULT LID HAS BEEN DESIGNED TO CARRY THE "DESIGN LOADS" ONLY AFTER VAULT CONSTRUCTION IS COMPLETE, ALL DESIGN CONCRETE AND GROUT STRENGTHS HAVE BEEN ACHIEVED, AND ALL COVER HAS BEEN PLACED OVER THE VAULT WITHIN THE LIMITS SPECIFIED ON THIS DRAWING. "BOBCAT" OR OTHER LIGHT EQUIPMENT SHALL BE USED FOR PLACEMENT OF MATERIALS OVER THE VAULT LID.

DIMENSIONS & ELEVATIONS
THE CONTRACTOR AND HIS SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THESE DRAWINGS WITH THE CURRENT PERMITTED SET OF CIVIL DRAWINGS, AND SHALL NOTIFY BOTH THE CIVIL & STRUCTURAL ENGINEERS IN WRITING OF ALL DISCREPANCIES BETWEEN THE CIVIL DWGS AND THESE DWGS PRIOR TO CONSTRUCTION.

DATE	DESCRIPTION	ISSUED FOR CONST PERMIT APPLICATION	NO
06-27-2024	ISSUED FOR CONST PERMIT APPLICATION	NA	NO
08-13-2024	INCREASE VAULT DEPTH TO 9FT	NA	NO

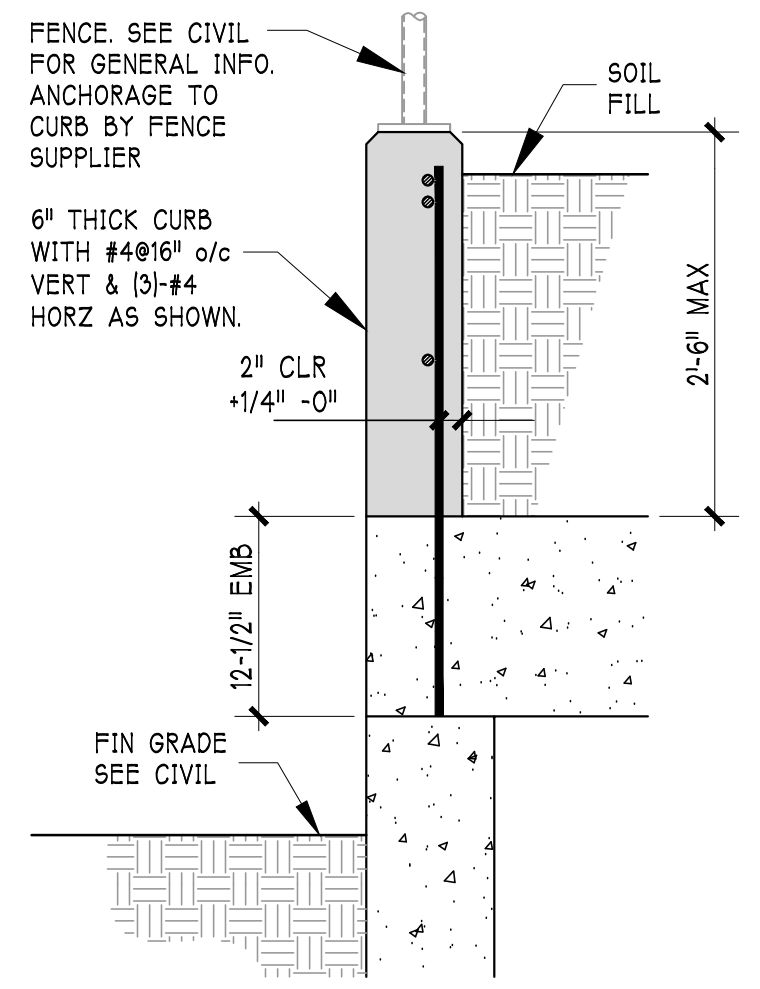
Site Structures
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08-13-2024
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TRAINEE
PROFESSIONAL ENGINEER
NO. 21204

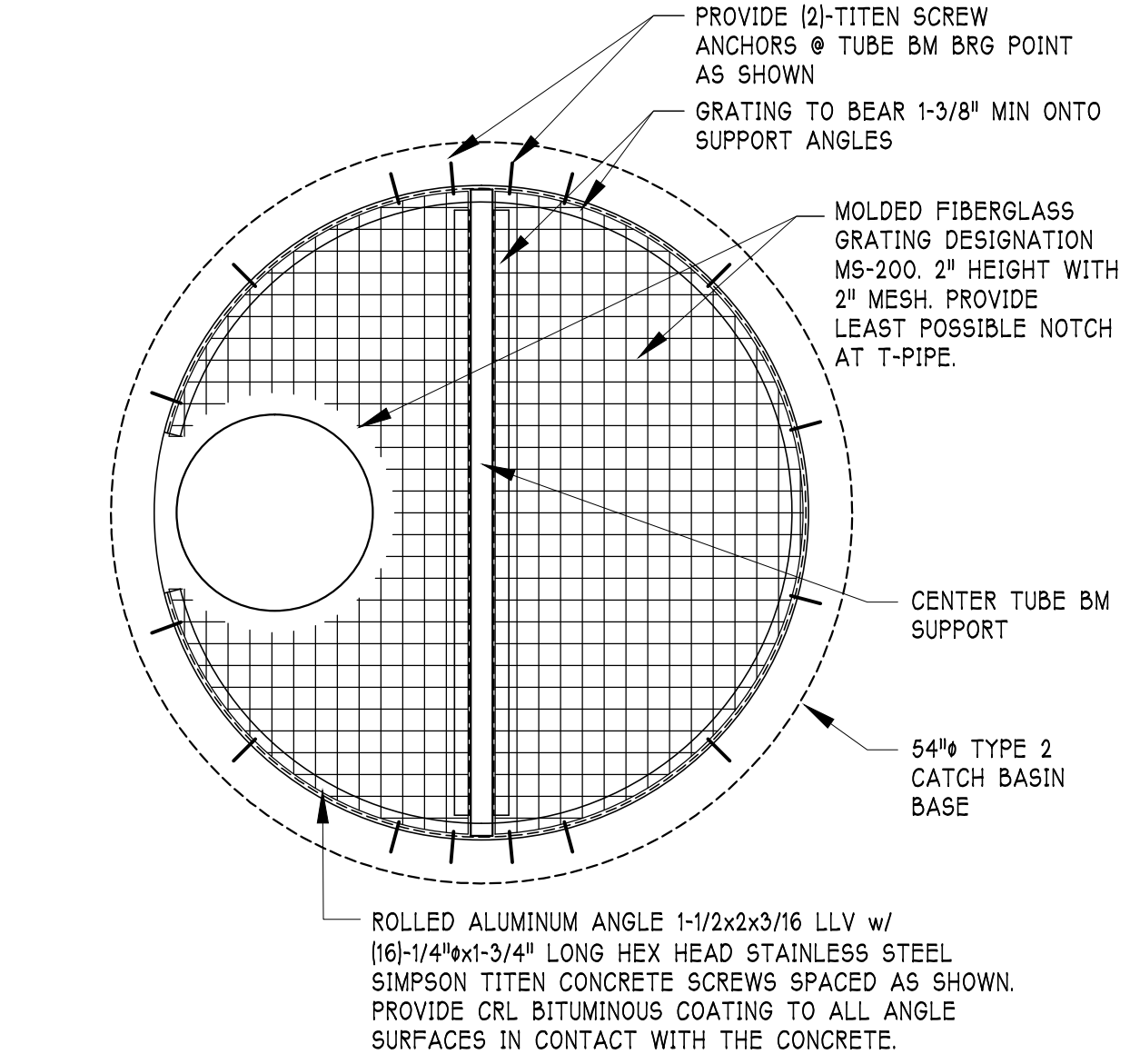
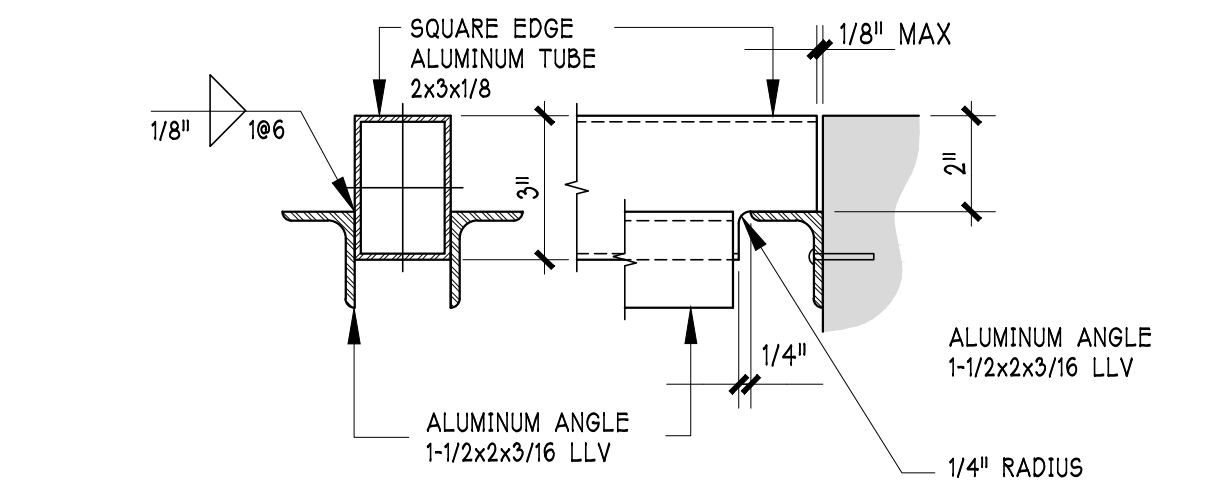
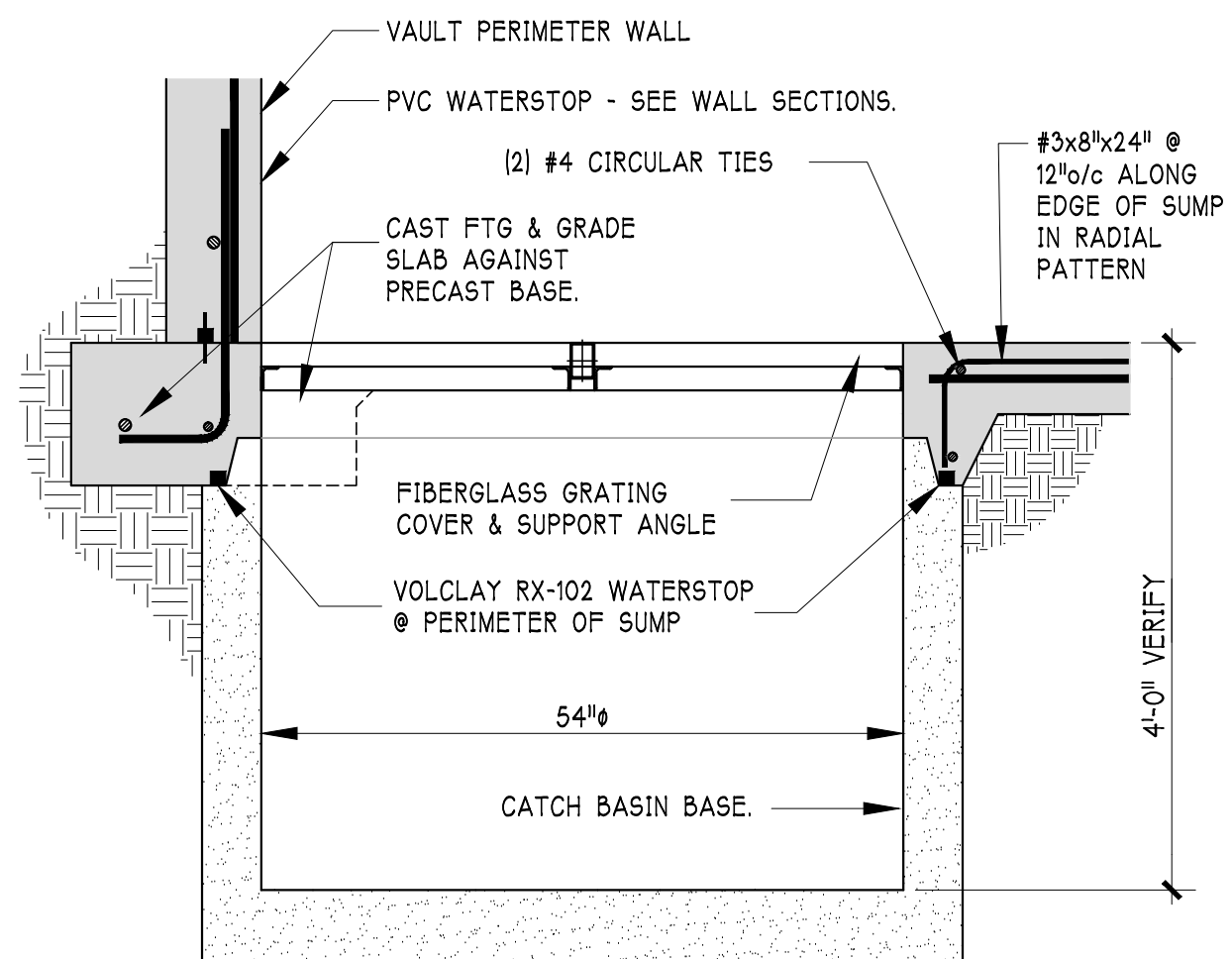
SEARS PLAT
STORM WATER DETENTION VAULT
WASHINGTON
CITY OF MERCER ISLAND,

VAULT LID
& FOUNDATION PLANS
& DETAILS

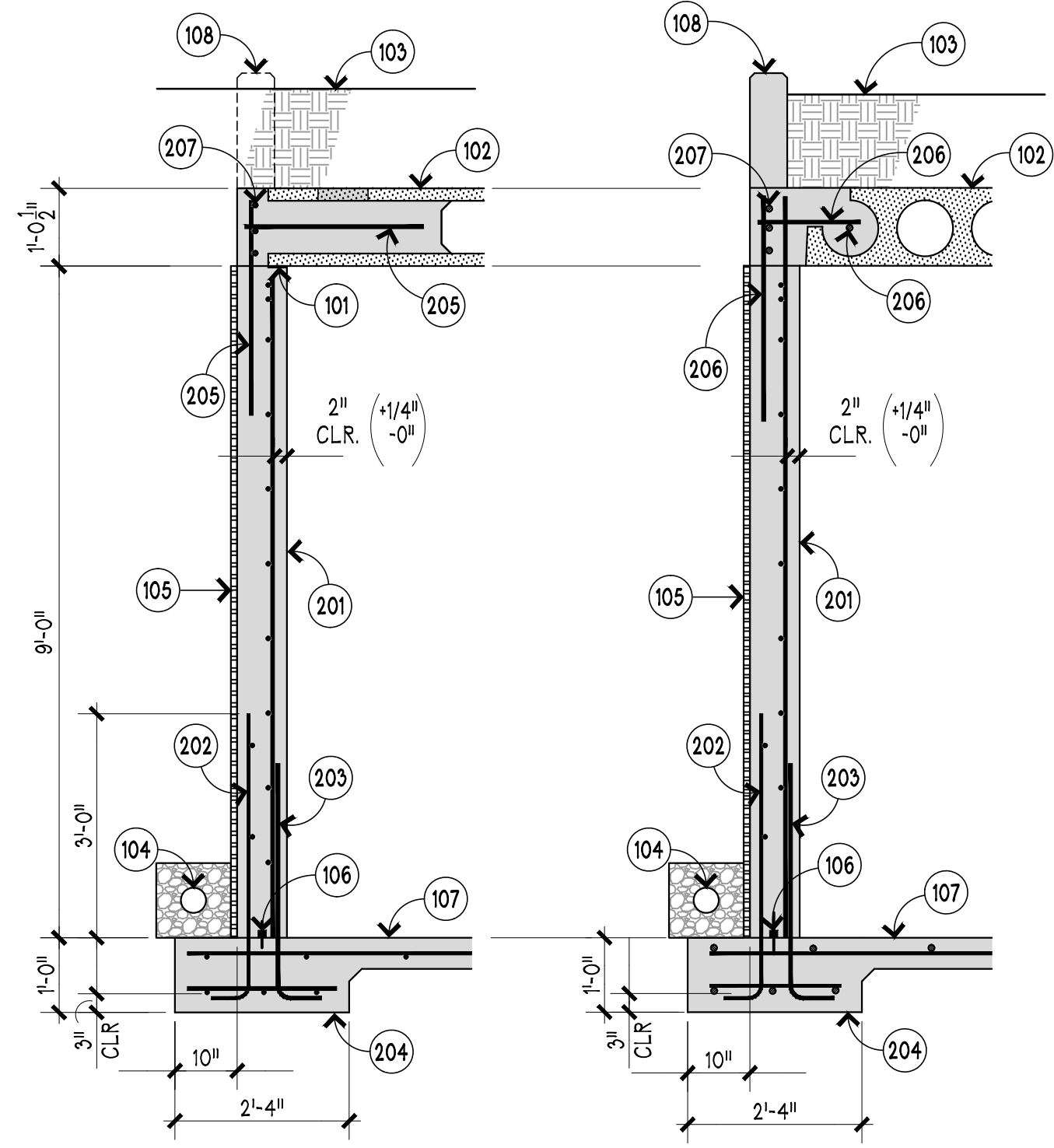
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FOR CODE
COMPLIANCE
September 12, 2024
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6 CURB DETAIL
SCALE 1"=1'-0"

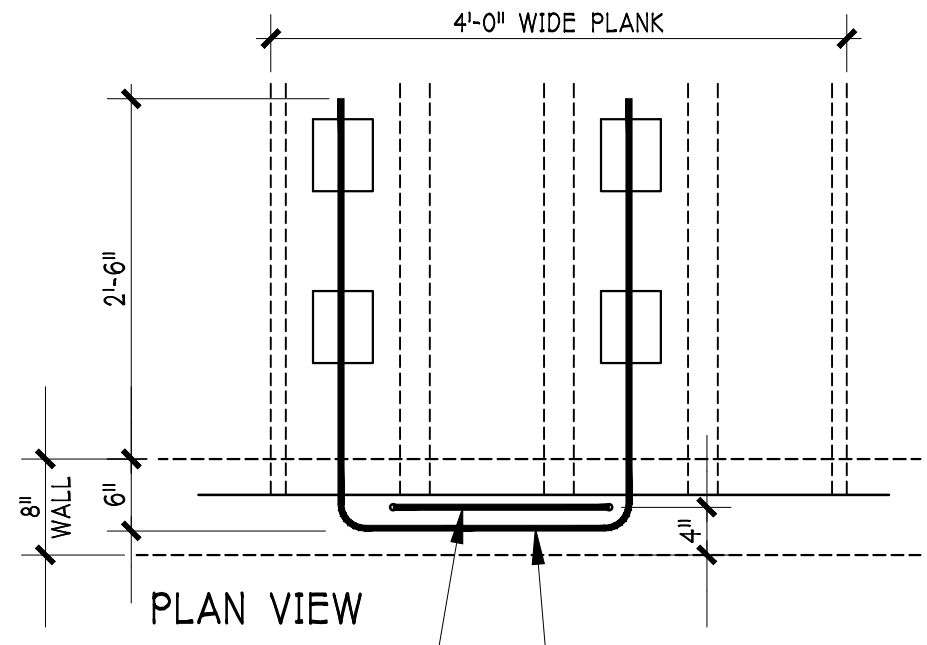


7 SUMP DETAIL
SCALE 3/4"=1'-0"

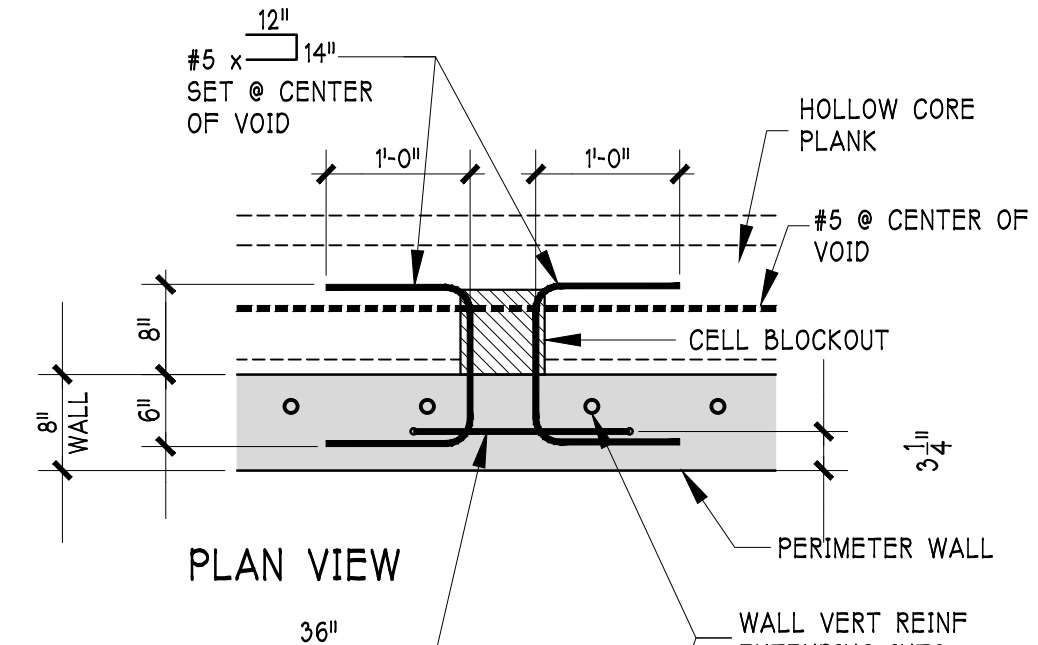


1 TYP WALL SECT
SCALE 1/2"=1'-0"

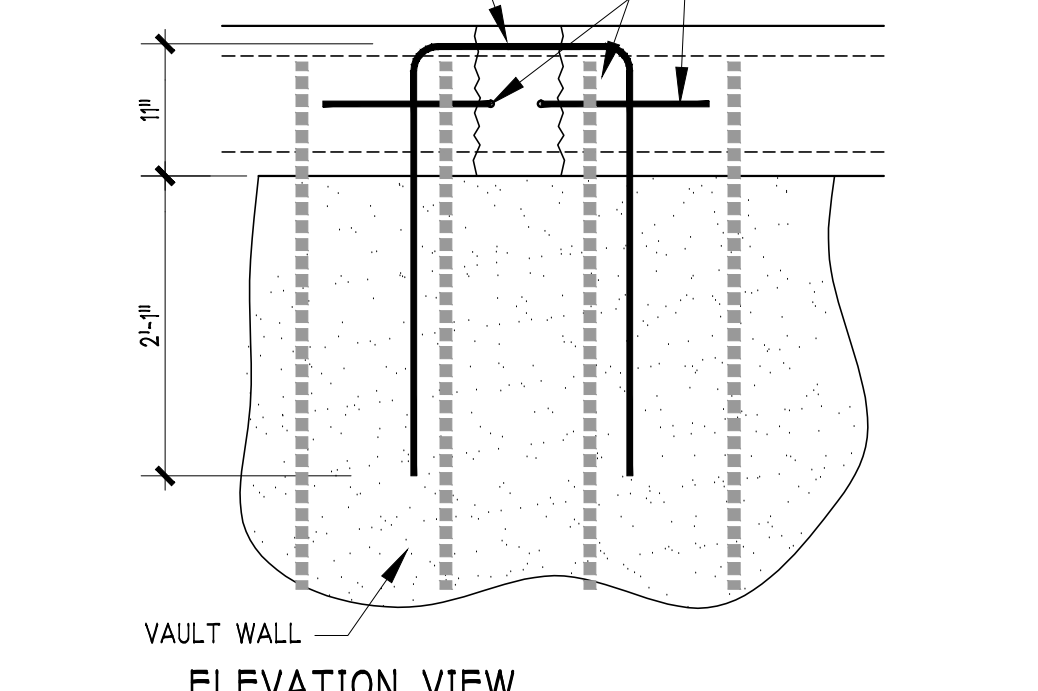
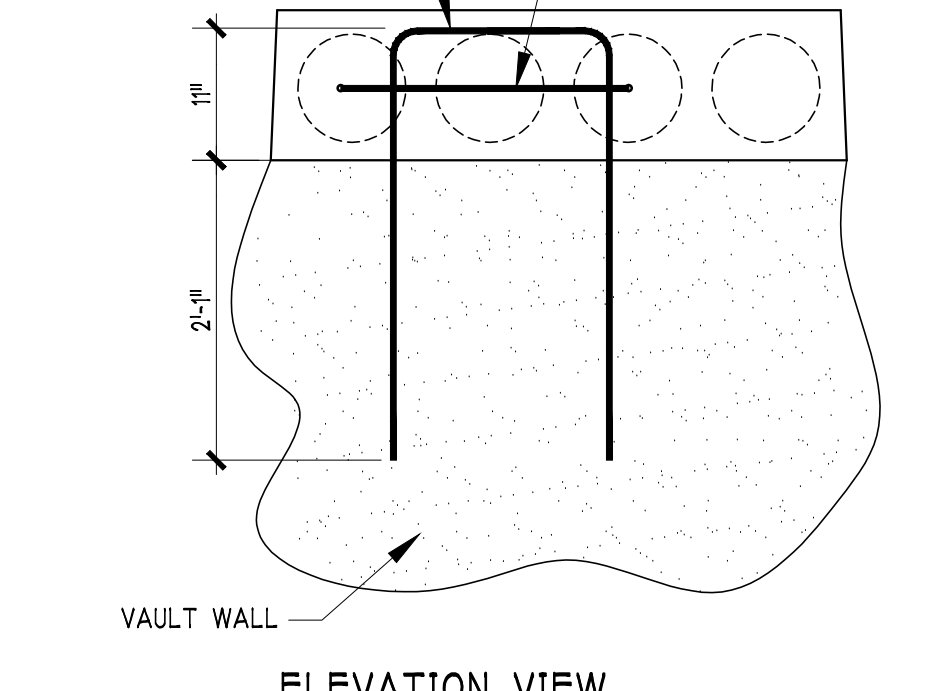
2 TYP WALL SECT
SCALE 1/2"=1'-0"



3 LID & WALL TO CLOSURE DOWELS AT PLANK VOID END FILL - 8" WALL
SCALE 3/4"=1'-0"



4 LID & WALL TO CLOSURE DOWELS AT VOID BLOCKOUTS - 8" WALL
SCALE 3/4"=1'-0"

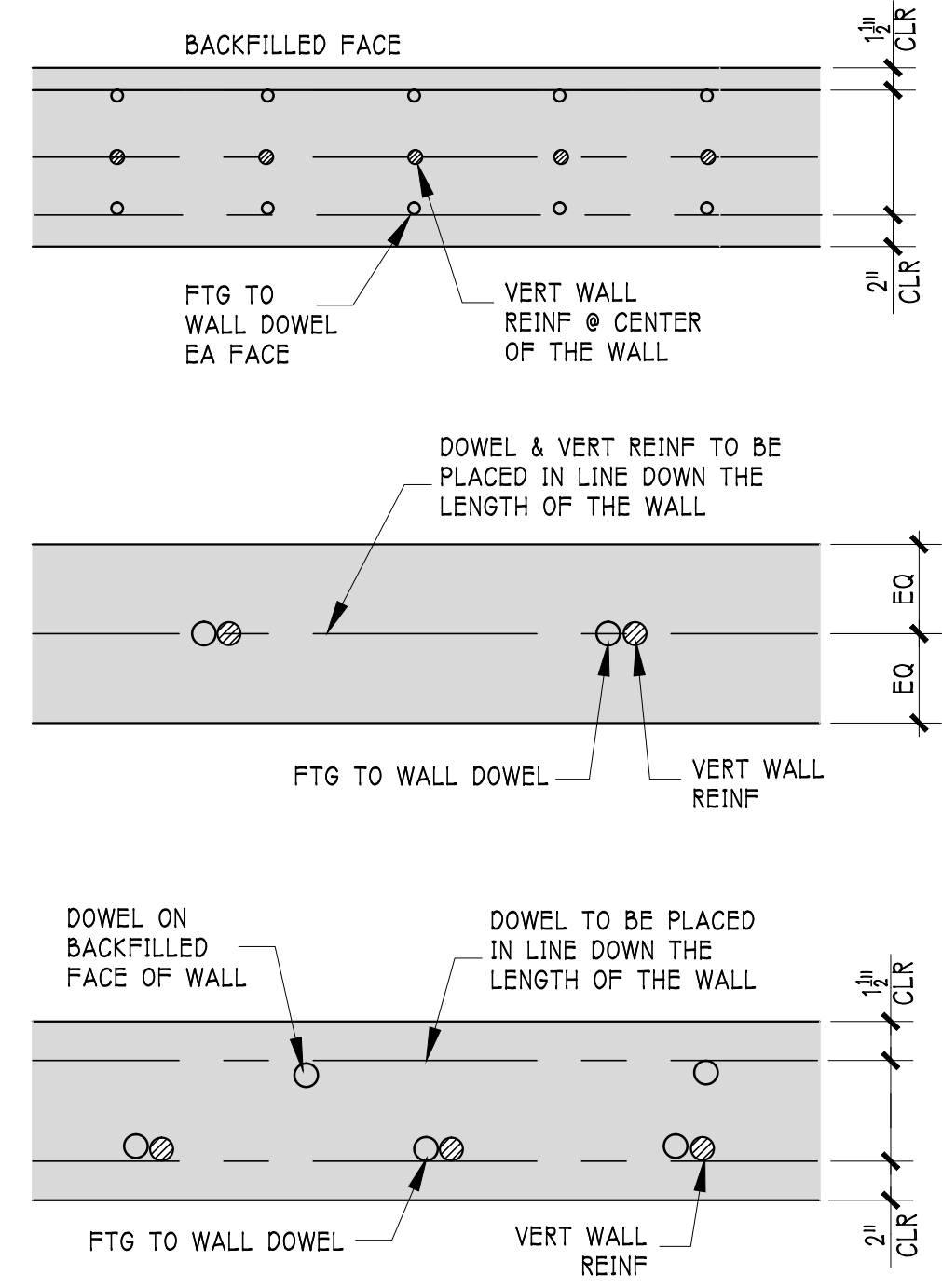


WALL GENERAL KEYNOTES

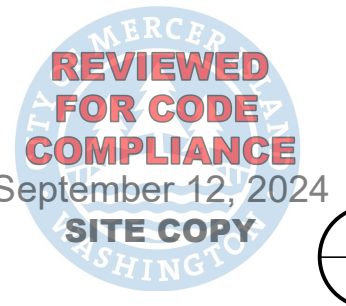
101. PLANK TO BEAR 3" MINIMUM ONTO THE TOP OF THE CONCRETE WALL. SEE PLANK MANUFACTURER'S DRAWINGS FOR FINAL BEARING LENGTH. INSTALL BEARING PAD AS DETAILED ON THE PRECAST PLANK PLACEMENT DRAWINGS.
102. 12-1/2" THICK PRECAST HOLLOW CORE PLANK.
103. FINISHED GRADE OVER THE LID. ELEVATION VARIES. SEE DESIGN CRITERIA ON SHEET S1 FOR APPROXIMATE SOIL DEPTHS OVER THE VAULT LID IN ADDITION TO THE CIVIL DWGS FOR FINAL GRADE ELEVATIONS.
104. 4" PERFORATED PVC FOOTING DRAIN SET 1/2" MAX ABOVE THE TOP OF THE FOOTING OR GRADE SLAB. SET INTO 16" SQUARE FREE DRAINING GRAVEL BED WRAPPED IN FILTER FABRIC. ROUTE DRAIN TO DISCHARGE POINT AS SHOWN ON THE CIVIL DWGS.
105. PREENGINEERED DRAINAGE MATT TO EXTEND OVER THE HEIGHT OF THE WALL AS SHOWN. SEE GEOTECHNICAL REPORT FOR MATERIAL SPECIFICATIONS.
106. 4" PVC RIBBED WATERSTOP w/ CENTER BULB AT ALL PERIMETER WALLS OF THE VAULT. INSTALL AT THE CENTER OF THE WALL, IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
107. SEE FOUNDATION PLAN FOR GRADE SLAB REINFORCING.
108. 6" THICK CAST IN PLACE CONC CURB. SEE LID PLAN FOR EXTENT. SEE 6/S3 FOR CURB REINFORCING DETAIL.

WALL REINFORCING KEYNOTES

201. 8" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & #5@10"o/c VERT. PLACE VERT REINF NEAR THE INSIDE FACE OF THE WALL. PROVIDE (2)#5 CONT HORZ BARS @ THE TOP OF THE WALL. LAP ALL HORZ BARS 28" MIN AT SPLICE LOCATIONS.
202. #4@15"o/c WALL TO FOOTING DOWELS. EXTEND 36" INTO THE WALL AND 9" INTO THE 12" THICK FOOTING. PROVIDE STD HOOK AT END OF BAR EMBEDDED WITHIN FTG. PROVIDE (2)#4 CONT HORZ. BARS AS SHOWN. SET DOWELS 1-1/2" CLR FROM THE BACKFILLED FACE OF THE WALL.
203. #5 FOOTING TO WALL DOWELS TO MATCH WALL VERTICAL REINFORCING SPACING. PROVIDE STD HOOK @ END OF BAR CAST INTO FOOTING. DOWELS SHALL BE EMBEDDED A MINIMUM OF 8" INTO 12" THICK FTG. & SHALL EXTEND INTO THE WALL 28" MIN. SEE 5/S3 FOR DOWEL PLACEMENT REQUIREMENTS.
204. REINFORCE FTG w/ (3)#5 CONT. LONGITUDINAL & #5@15"o/c TRANSVERSE BOT.
205. LID & WALL TO CLOSURE POUR REINF @ VOID END FILL. SEE 3/S3.
206. LID & WALL TO CLOSURE POUR REINF @ VOID BLOCKOUT. SEE 4/S3.
207. (3)#6 CONT IN CLOSURE POUR. LAP 48" @ ALL SPLICE LOCATIONS.

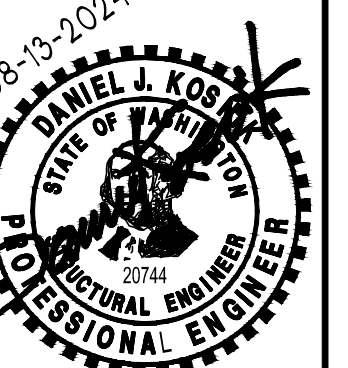


5 TYP FTG DOWEL PLACEMENT DETAIL
SCALE 1"=1'-0"



DATE:	06-27-2024	ISSUED FOR CONST PERMIT APPLICATION	NO
DATE:	08-13-2024	INCREASE VAULT DEPTH TO 9FT	NO
DESCRIPTION:	CLOUDED	NA	NO

Site Structures
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SEARS PLAT
STORM WATER DETENTION VAULT
WASHINGTON
CITY OF MERCER ISLAND,

WALL SECTIONS & DETAILS

SHEET:

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