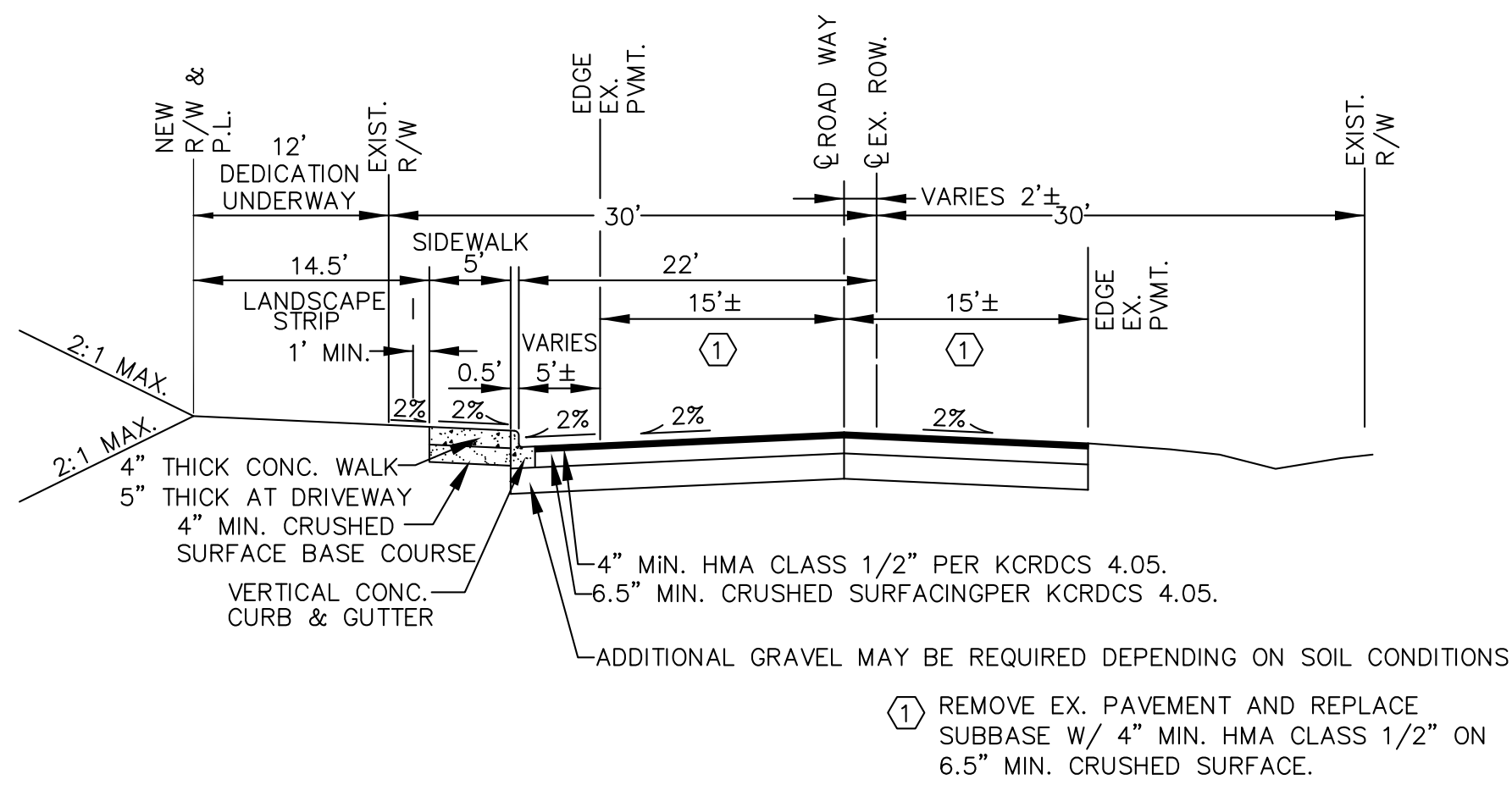


S.E. 1/4, SEC. 27, T. 21 N., R. 4 E., W.M.

**STREET WIDENING 4.03**

- WHEN AN EXISTING ASPHALT PAVED STREET IS TO BE WIDENED, THE EDGE OF THE DRIVING LANE SHALL BE SAW CUT TO PROVIDE A CLEAN, VERTICAL EDGE FOR JOINING TO THE NEW ASPHALT. THE EXISTING ASPHALT MAY REQUIRE GRINDING AND/OR REMOVAL AS DIRECTED BY THE INSPECTOR, DEPENDING ON THE CONDITION OF THE SURFACE AND AS NEEDED TO CONTROL SURFACE WATER FLOW. AFTER PLACEMENT OF THE NEW ASPHALT SECTION, THE JOINT SHALL BE SEALED AND THE STREET OVERLAP WITH A MINIMUM OF 1.5-INCH HMA, CLASS 1/2", PLUS A PRE-LEVEL COURSE, FULL WIDTH THROUGHOUT THE WIDENED AREA. ALL FAILURES AND CRACKING ON ROAD SURFACES MUST BE REPAIRED PRIOR TO THE OVERLAY, SEE SECTION 4.06. THE LIMITS OF THE OVERLAY WILL BE BASED ON THE CONDITION OF EXISTING PAVEMENT AND THE EXTENT OF REQUIRED CHANGES TO THE SURFACING AND CHANNELIZATION. WHEN THE COUNTY ROAD ENGINEER OR DEVELOPMENT ENGINEER DETERMINES THAT POTENTIAL IMPACTS FROM A DEVELOPMENT WARRANT SUBGRADE REPAIRS PRIOR TO THE OVERLAY, THE APPLICANT MUST PROVIDE A GEOTECHNICAL REPORT THAT INCLUDES RECOMMENDATIONS FOR REPAIRING THE SUBGRADE. THE EXCEPTION TO THIS REQUIREMENT MUST BE THROUGH THE ROAD VARIANCE PROCESS.
- IF ALL EXISTING SHOULDER IS PROPOSED TO BE INCORPORATED INTO A FUTURE TRAVELED WAY, A PAVEMENT EVALUATION SHALL BE PERFORMED. THIS EVALUATION SHALL ANALYZE THE STRUCTURAL CAPACITY AND DETERMINE ANY NEED FOR IMPROVEMENT. DESIGNS BASED ON THESE EVALUATIONS ARE SUBJECT TO REVIEW AND APPROVAL BY THE COUNTY ROAD ENGINEER OR DEVELOPMENT ENGINEER. THE RESPONSIBILITY FOR ANY SHOULDER MATERIAL THICKNESS IMPROVEMENT SHALL BE CONSIDERED PART OF THE REQUIREMENT FOR ROADWAY WIDENING. THE SHOULDER SHALL BE REPLACED IN WIDTH AS SPECIFIED IN SECTIONS 2.02.
- ANY WIDENING OF AN EXISTING ROADWAY, EITHER TO ADD TRAVELED WAY, OR PAVED SHOULDER, SHALL HAVE THE SAME SURFACING MATERIAL AS THE EXISTING ROADWAY.
- ANY WIDENING OR CHANNELIZATION WILL REQUIRE A FULL-WIDTH OVERLAY, SEE PARAGRAPH ONE OF THIS SECTION.



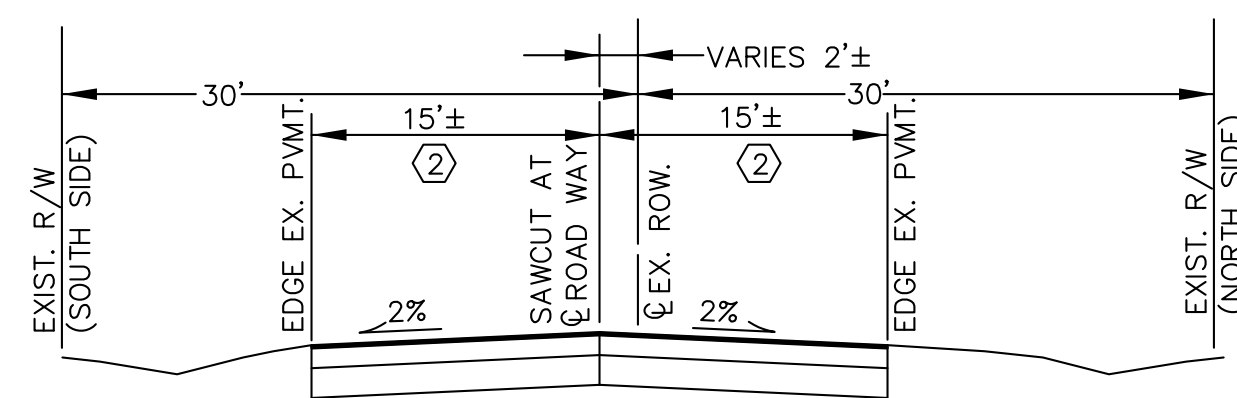
**CROSS SECTION**

**S. 360th ST. WITHIN FRONTAGE OF THE SITE (STA. 211+00 TO STA. 215+65)**

(URBAN COLLECTOR ARTERIAL)

HORIZONTAL: 1" = 10'

VERTICAL: NTS



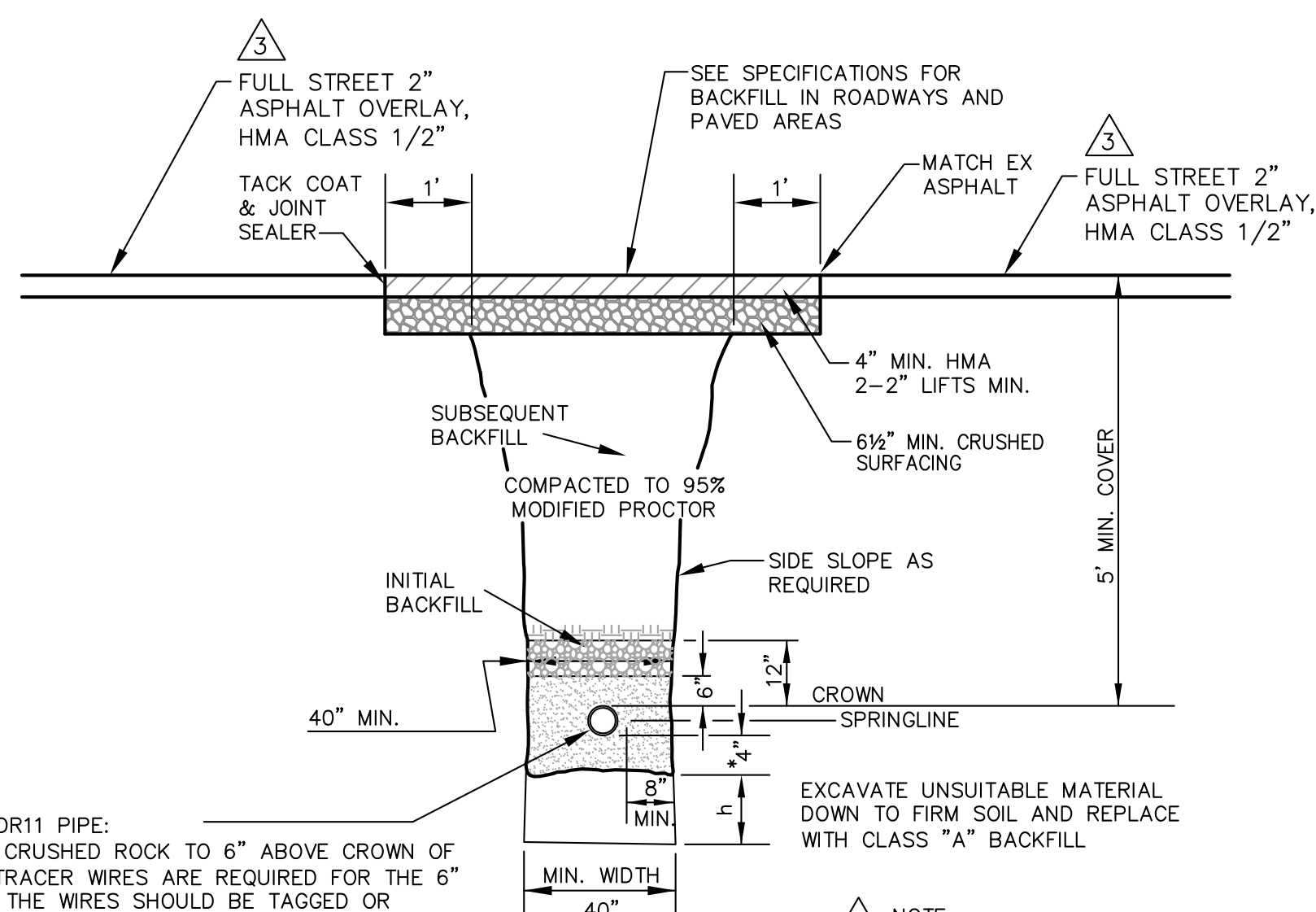
**CROSS SECTION**

**S. 360th ST. OUTSIDE FRONTAGE OF THE SITE (STA. 176+00 TO 178+50 AND 193+00 TO 198+50)**

(URBAN COLLECTOR ARTERIAL)

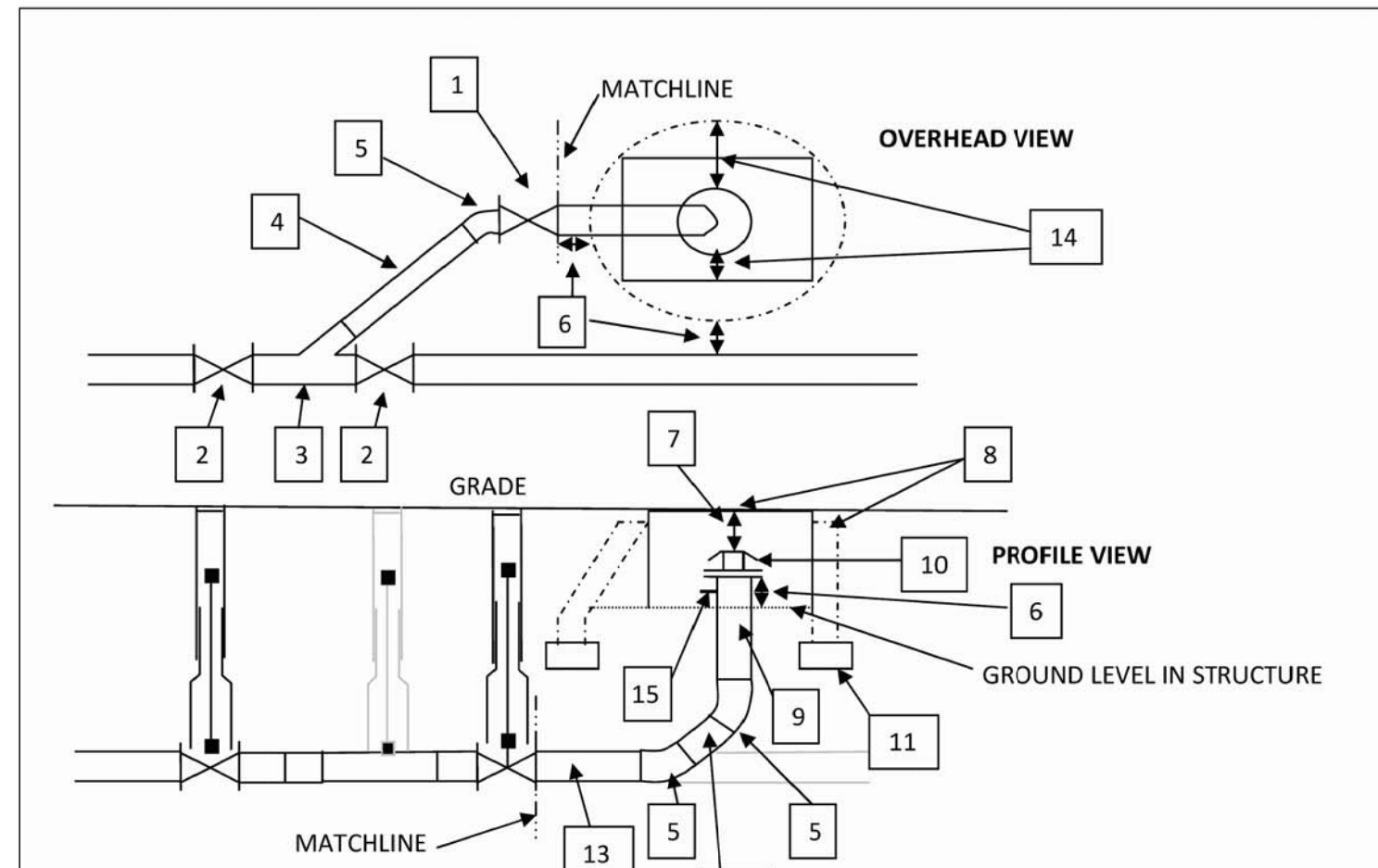
HORIZONTAL: 1" = 10'

VERTICAL: NTS



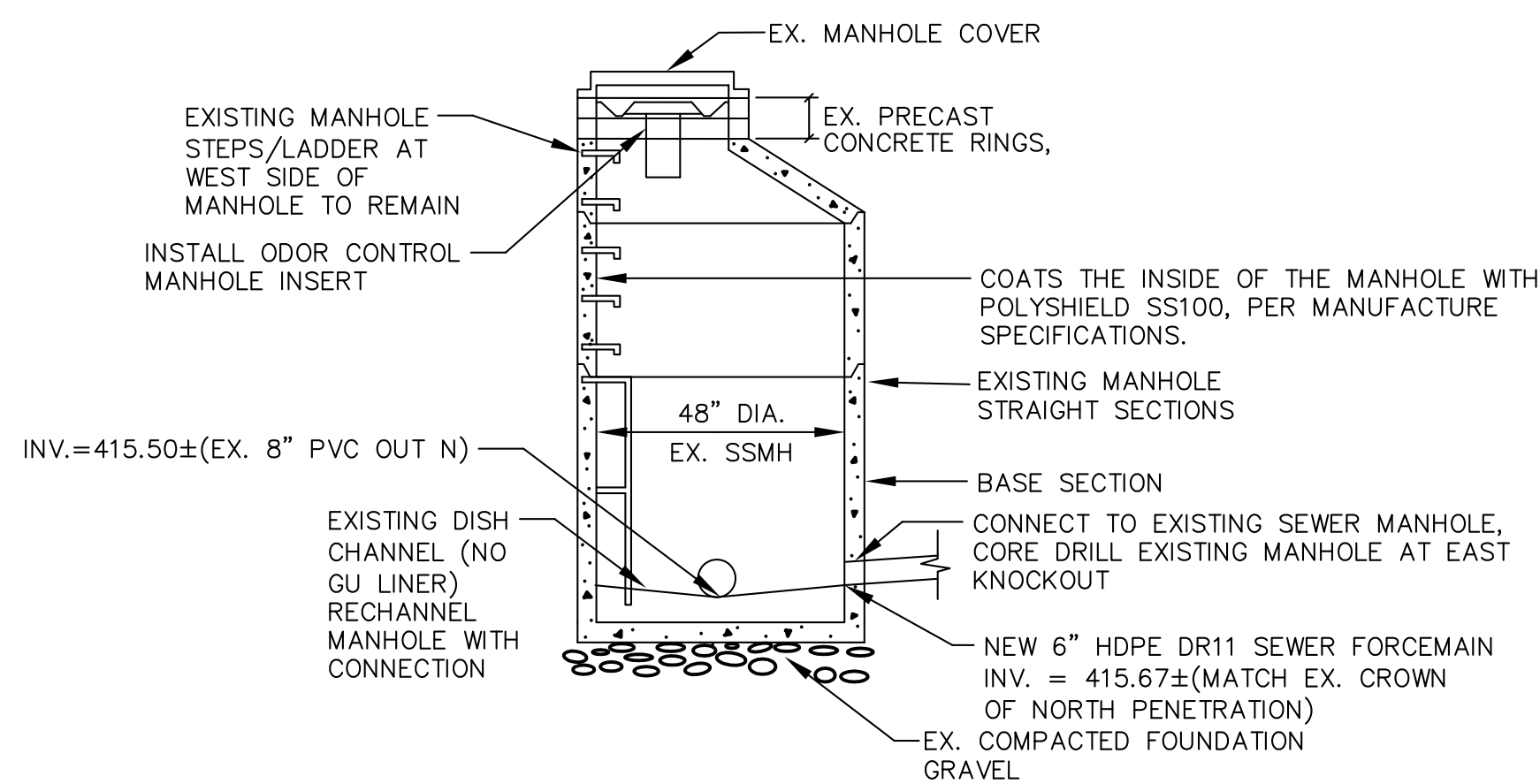
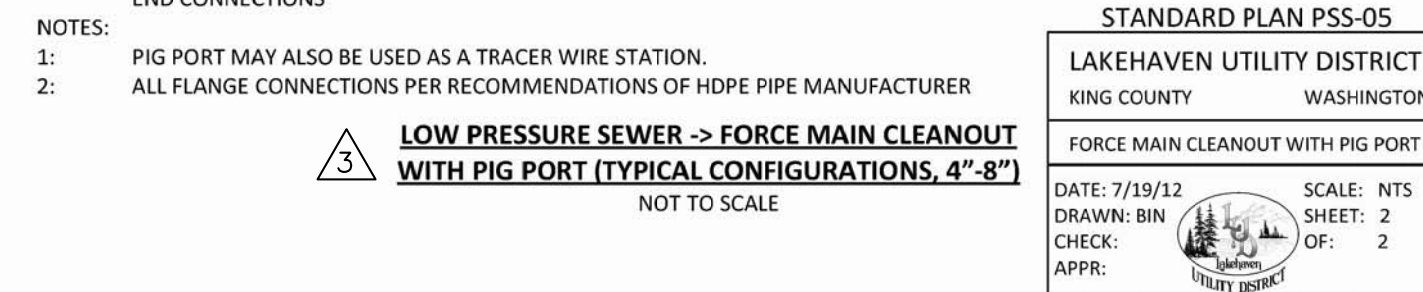
**TRENCH CROSS SECTION FOR SEWER FORCEMAINS**

NOT TO SCALE



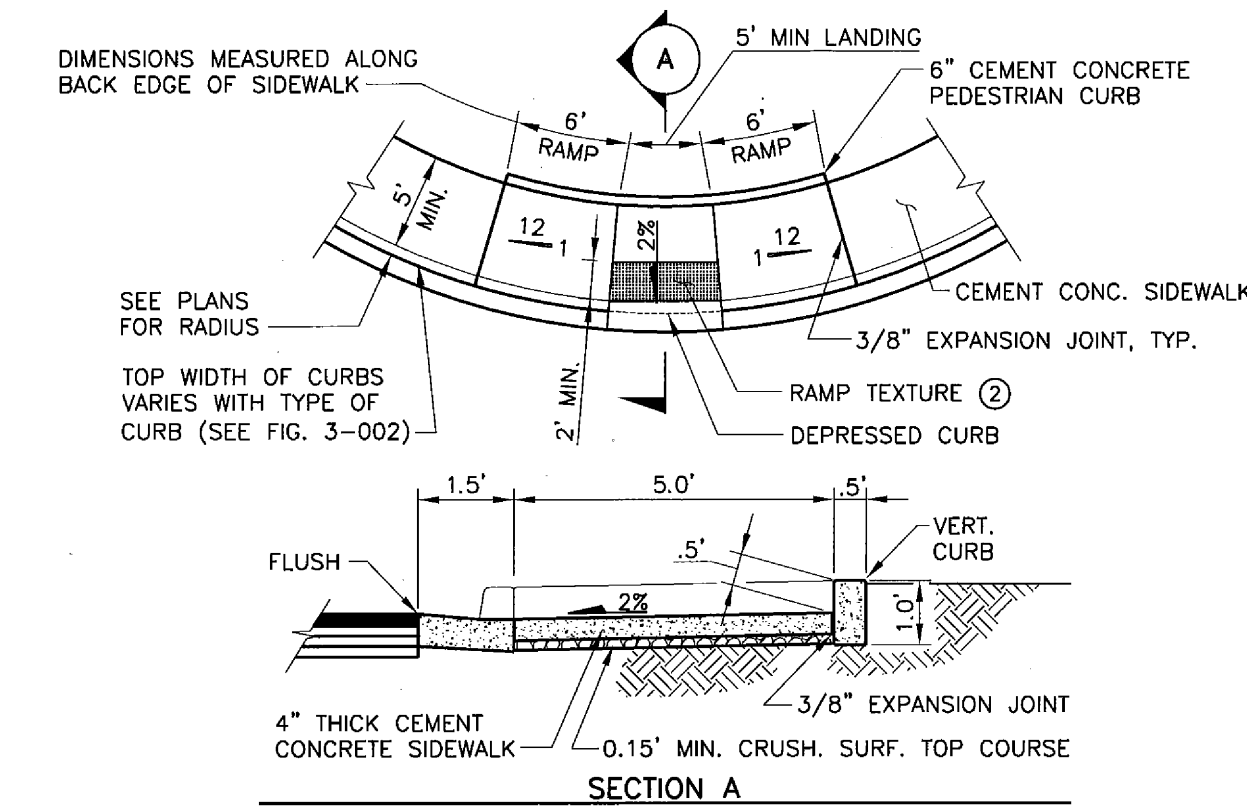
**CALL OUTS:**

- 2-FLANGE CONNECTIONS, 1-LAKEHAVEN APPROVED PLUG VALVE (FV) WITH 2" SQUARE VALVE OPERATING NUT. VALVE SIZE SHALL MATCH MAIN SIZE SHOWN ON PLANS
- 2-FLANGE CONNECTIONS, 1-ISOLATION VALVE (IV) (SEE STANDARD PLAN PSS-03 FOR DETAILS)
- HDPE WYE, MATCH MAIN SIZE, THERMAL WELD BUTT FUSED JOINTS
- HDPE PIPE, MATCH MAIN SIZE, LENGTH VARIES TO ENSURE SPACING FOR CALLOUTS #6, MINIMUM 12" LENGTH
- HDPE 45° BEND, MATCH MAIN SIZE, THERMAL WELD BUTT FUSED JOINTS
- 6" CLEARANCE
- CLEARANCE TO TOP OF BOX OR MANHOLE: 7" MIN, 4" MAX
- PAVEMENT: STANDARD DIAM. TYPE 1 48" MANHOLE CONE SECTION WITHOUT STEPS (18" MIN HT.), LAKEHAVEN STD. ID. ONE RISER RING REQUIRED BETWEEN COVER, FRAME AND MANHOLE CONE FOR GRADE ADJUSTMENT. NO MORE THAN 12" OF GRADE ADJUSTMENT RINGS ARE ALLOWED
- NON-PAVED: SAME AS PAVEMENT; OR CARSON PLASTIC METER BOX MAY BE USED (#1730 MSBCF) WITH SOLID METAL LID MARKED SEWER. METER BOX EXTENSION MAY BE REQUIRED TO MEET SEPARATIONS REQUIREMENTS IN CALLOUTS #7 & #14. METER BOX VALVE CANS AND CONCRETE PAD SET ABOVE GRADE. CONCRETE PAD TO BE A MINIMUM OF 4'x6' AND ENCOMPASS BYPASS AND ISOLATION VALVES
- HDPE PIPE, LENGTH VARIES TO SATISFY SPACING FOR CALLOUTS #7 & #14, WITH FLANGE CONNECTION
- FLANGE CONNECTION WITH ADAPTOR (IF REQUIRED), 4" STAINLESS STEEL MALE CAM LOCK, 4" FEMALE CAM LOCK PLUG
- PRECAST DONUT CONCRETE SUPPORT COLLAR (4" x 4"). MATCH DONUT INSIDE AND OUTSIDE DIAM. SIZE TO BOTTOM OF MANHOLE CONE SECTION
- HDPE PIPE, MATCH MAIN SIZE, MINIMUM LENGTH IS 12"
- HDPE PIPE, MATCH MAIN SIZE, LENGTH VARIES TO ENSURE SPACING FOR CALLOUTS #6, MINIMUM LENGTH IS 12"
- 5" MINIMUM CLEARANCE FROM EDGE OF STRUCTURE TO EDGE OF FLANGE.
- PRESSURE RELIEF PORT WITH 1/2" BALL VALVE. (MIN: 4" BELOW FLANGE, 2" ABOVE GROUND LEVEL IN STRUCTURE), THREADED END CONNECTIONS



**CONNECT TO EXISTING SANITARY SEWER MANHOLES #3, SHEET C5.20, LAKELAND ELEMENTARY SCHOOL, LUD PROJECT NUMBER 6309007, RECORD DRAWING S1725**

NOT TO SCALE

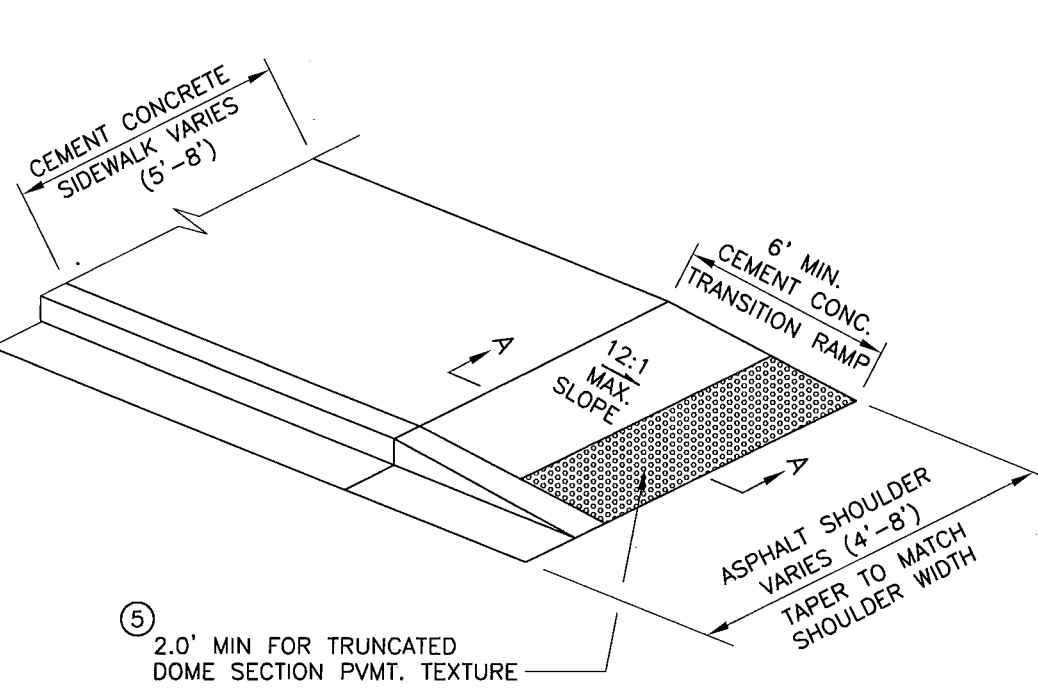


**NOTES:**

- PLACEMENT OF GRATINGS, ACCESS COVERS AND OTHER APPURTENANCES SHALL NOT BE LOCATED ON CURB RAMPS, LANDINGS AND GUTTERS WITHIN THE PEDESTRIAN ACCESS ROUTE.
- RAMPS SHALL BE TEXTURED USING TRUNCATED DOME PATTERN (SEE FIGURE 3-011). DETECTABLE WARNING PATTERN SHALL BE YELLOW IN COMPLIANCE WITH WSDOT STANDARD SPECIFICATION 8-14.3(3)
- RAMP CENTER LINE SHALL BE PERPENDICULAR TO OR RADIAL TO CURB RETURNS UNLESS OTHERWISE APPROVED BY THE COUNTY ROAD ENGINEER.
- RAMPS SHALL BE CONSTRUCTED AT CORRESPONDING SIDEWALK LOCATIONS ON OPPOSITE SIDE OF STREETS WHEN RAMPS ARE CONSTRUCTED ON ONE SIDE OF STREET. SEE FIG. 3-010.
- THIS DETAIL APPLIES TO BOTH ROLLED AND VERTICAL CURB ROADWAYS.
- SEE FIGURE 3-001 FOR CURB AND SIDEWALK JOINT PLACEMENT.

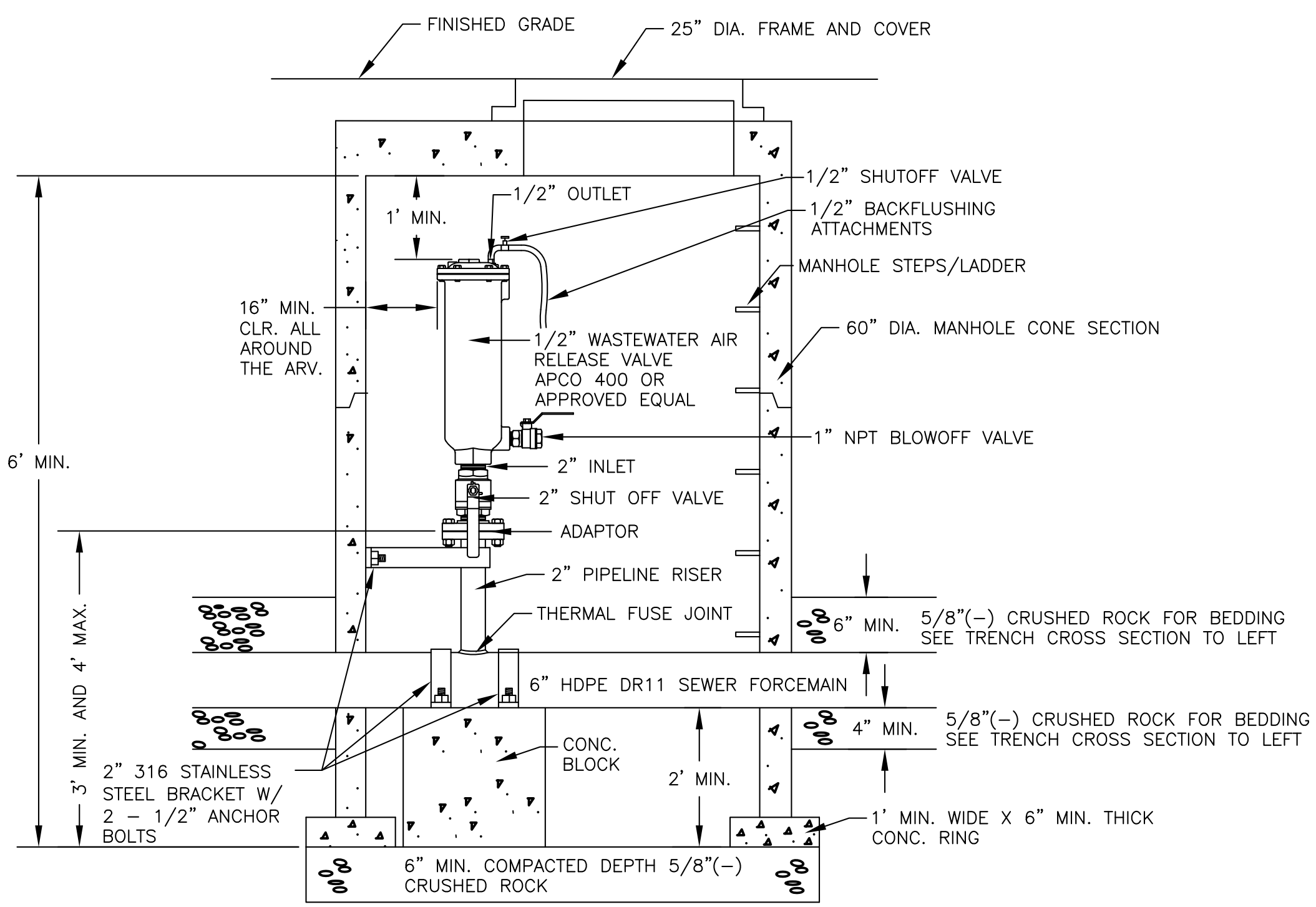
**3 CURB RAMP TYPE 2A**

NOT TO SCALE



**3 CEMENT CONCRETE SIDEWALK TRANSITION TO ASPHALT SHOULDER**

NOT TO SCALE



**3 1/2 WASTEWATER AIR RELEASE VALVE**

NOT TO SCALE

**LAKEHAVEN UTILITY DISTRICT**

Water Plan \_\_\_\_\_ Sewer Plan \_\_\_\_\_

Dated \_\_\_\_\_

**APPROVED FOR CONSTRUCTION**  
**SUBJECT TO CHANGES NOTED**

The District's review is not a check of any dimension or quantities and will not relieve the Developer from responsibility for errors of any sort. No changes shall be made in the plans except by the consent of the District.

General Manager/District Engineer \_\_\_\_\_ Date \_\_\_\_\_

This construction plan will expire one year from plan approval date, if construction has not commenced.



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FAX: (206) 388-1648  
WEB SITE: PACENG.COM

**Pacific Engineering Design, LLC**  
Civil Engineering and Planning Consultants

**LAKEHAVEN UTILITY DISTRICT PROJECT No. 6308021**  
**RAM NIWAS CHURCH**  
KING COUNTY, WA  
FOR: SARGAR HOLDINGS, LLC, 2000 66TH AVENUE SOUTH, AUBURN, WA 98001

PROJECT NO.: 10021  
DRAWN BY: JF  
ISSUE DATE: 8-31-2011  
SHEET REV.: 08-01-2012

**SANITARY SEWER DETAILS AND S 360TH STREET CROSS SECTIONS**

05052D102.DWG  
**SS08**