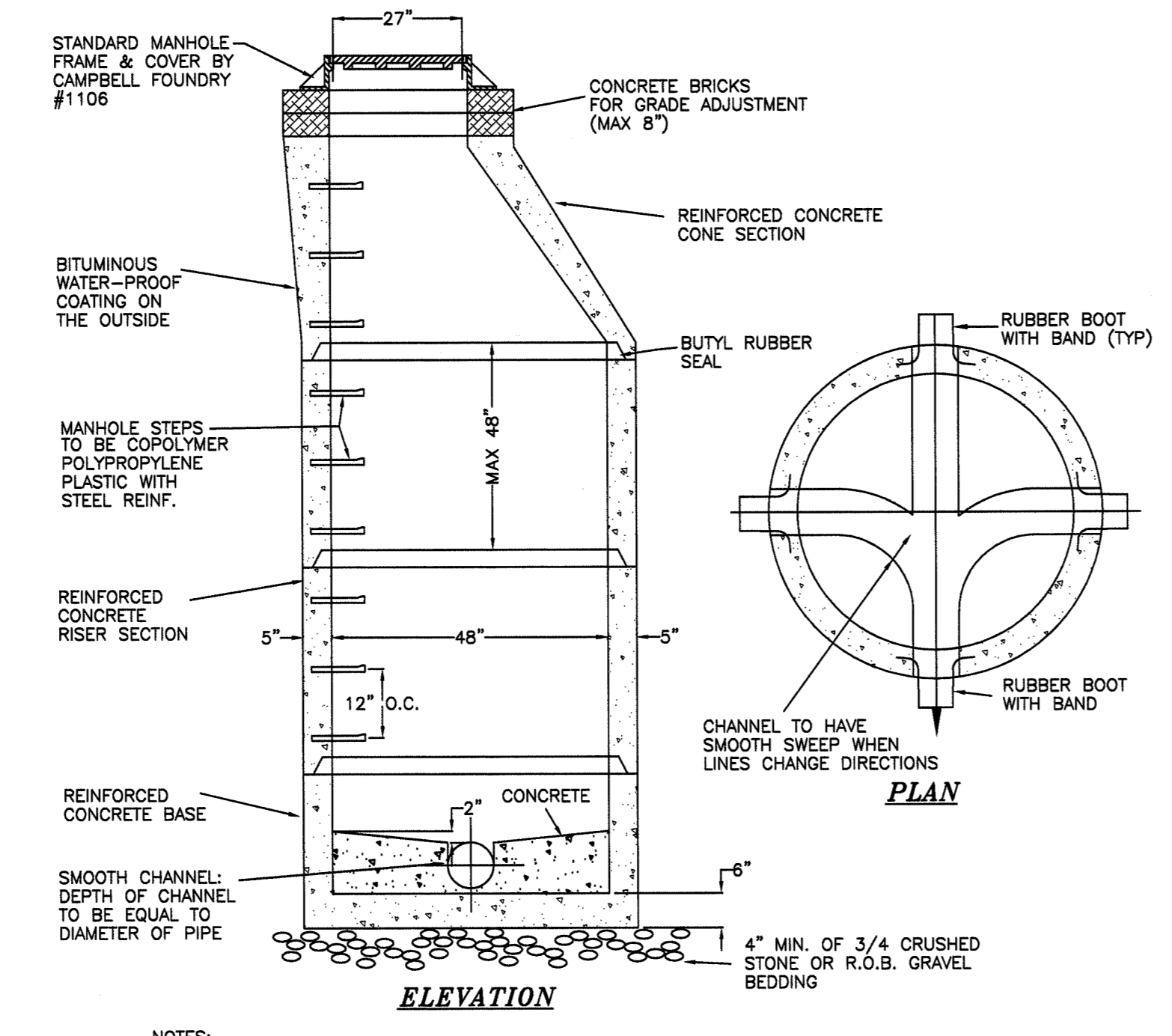


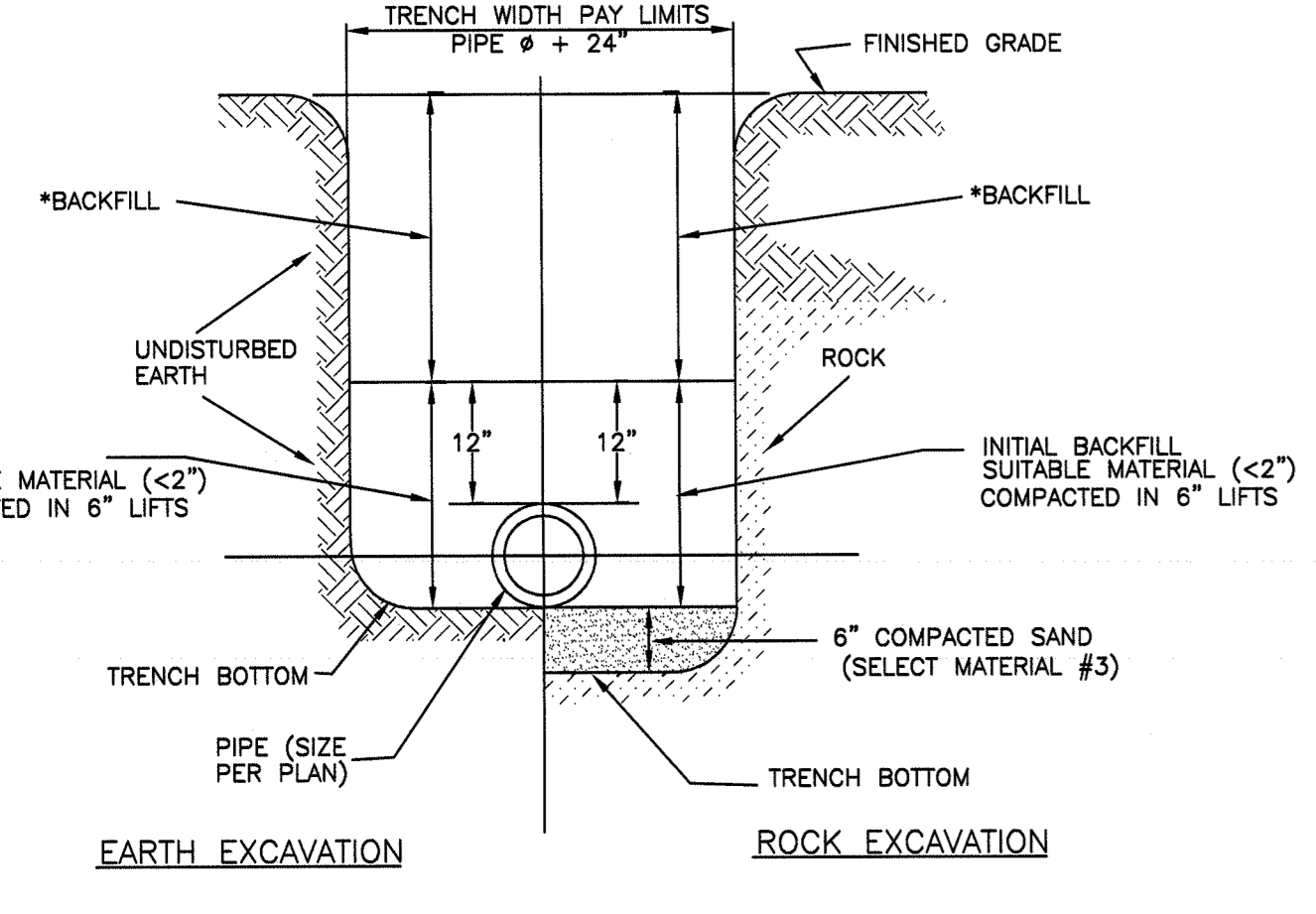
**SEWER LATERAL**  
NOT TO SCALE

- NOTES:
1. TEE-WYE LOCATION TO BE SHOWN ON AS-BUILT DRAWINGS WITH DISTANCE FROM MANHOLE AND ORIENTATION (RIGHT OR LEFT).
  2. END OF SERVICE LATERAL TO BE LOCATED ON AS-BUILT DRAWINGS WITH TWO LOCATION TIES TO PERMANENT AT OR ABOVE GROUND STRUCTURES.
  3. 2' x 4' MARKER TO EXTEND FROM INVERT TO FINISHED GRADE (MINIMUM).



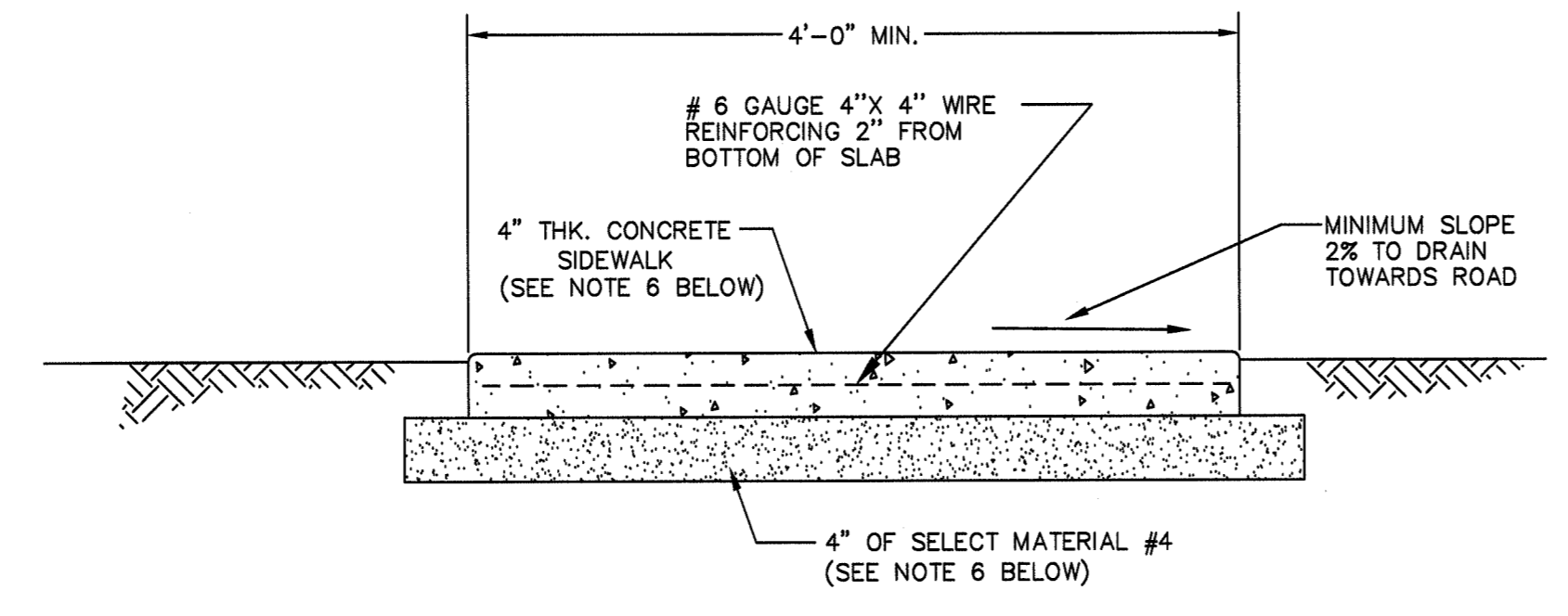
**PRE-CAST MANHOLE**  
NOT TO SCALE

- NOTES:
1. SMOOTH CHANNEL INVERT TO BE PAVED WITH CEMENT MORTAR.
  2. PIPE JOINTS SHALL BE A MINIMUM OF 2' FROM OUTSIDE WALL OF MANHOLE.
  3. SANITARY SEWER TO EXTEND INTO THE MANHOLE ONLY TO A POINT WHERE OUTSIDE OF SEWER MEETS INSIDE WALL OF MANHOLE.
  4. OPENING FOR PIPE SHALL BE PRE-CAST. CONNECTIONS TO EXISTING MANHOLES SHALL BE MACHINE CORED.
  5. MANHOLE COVERS TO BE STAMPED "SANITARY".
  6. PRECAST REINFORCED CONCRETE MANHOLE SHALL BE DESIGNED FOR H20 LIVE LOAD.



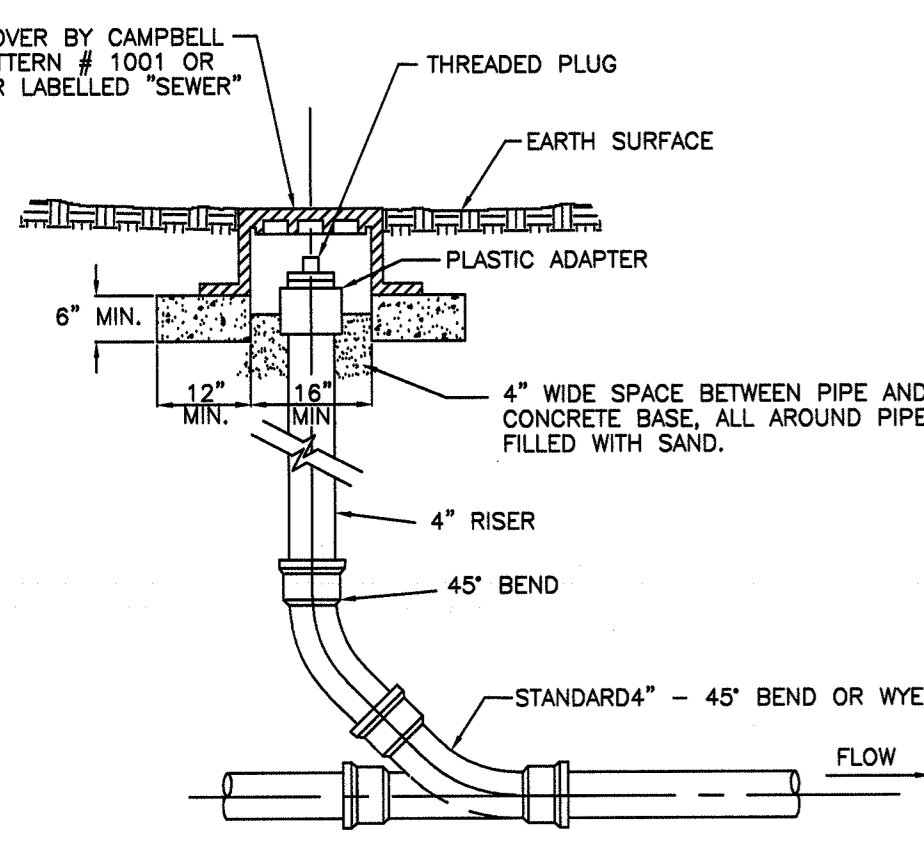
**TRENCH CROSS SECTION**  
NOT TO SCALE

- \* BACKFILL TO BE COMPACTED IN 8\"/>

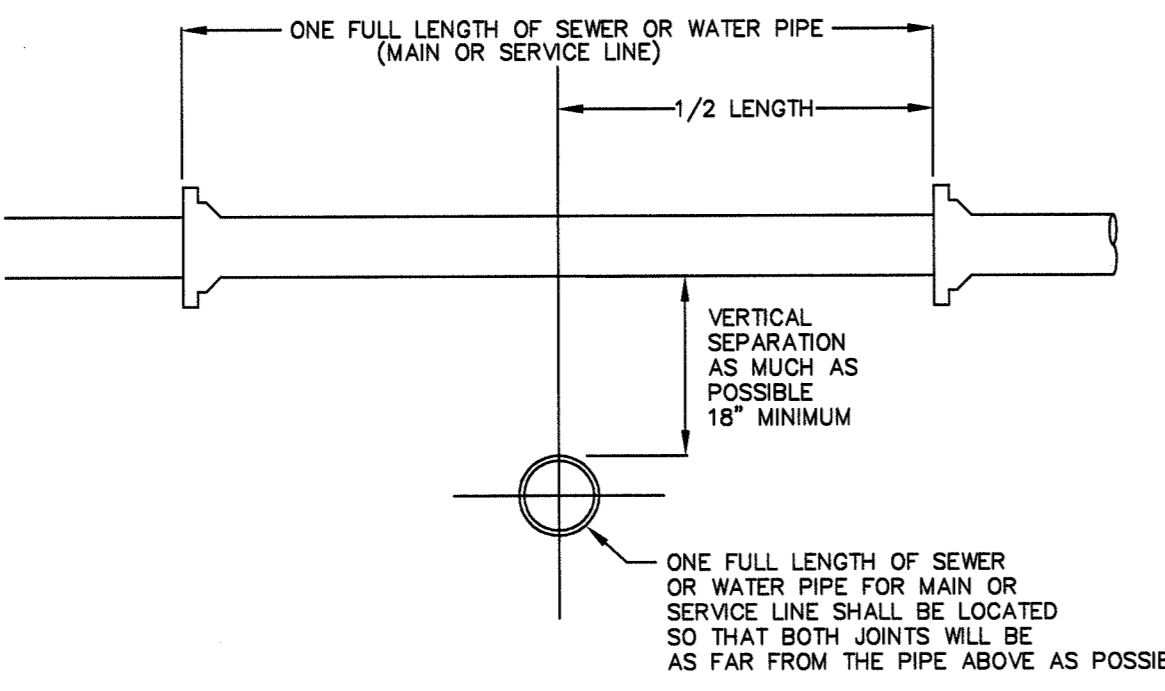


**STANDARD SIDEWALK DETAIL**  
NOT TO SCALE

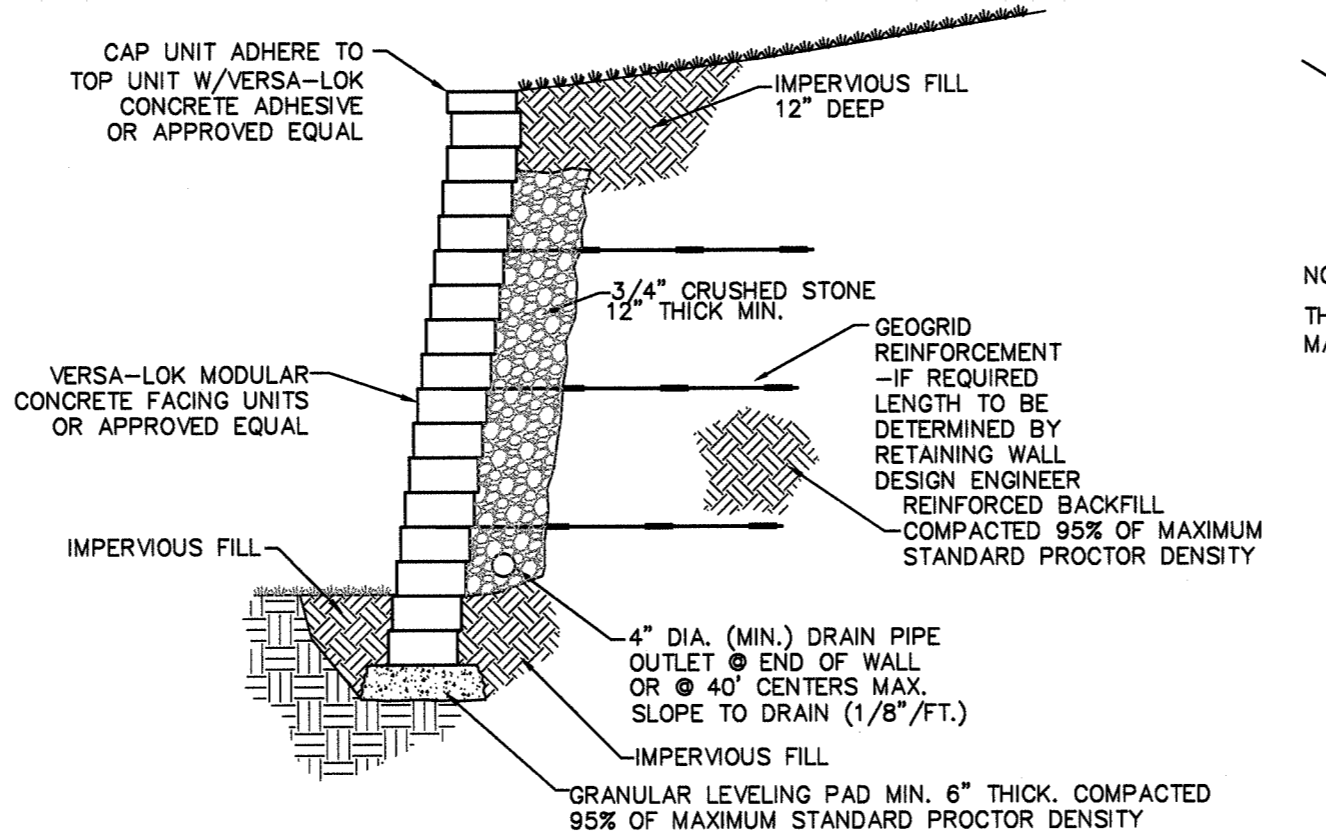
- NOTES:
1. EXPANSION JOINTS OF 3/16\"/>



**SEWER CLEANOUT**  
NOT TO SCALE

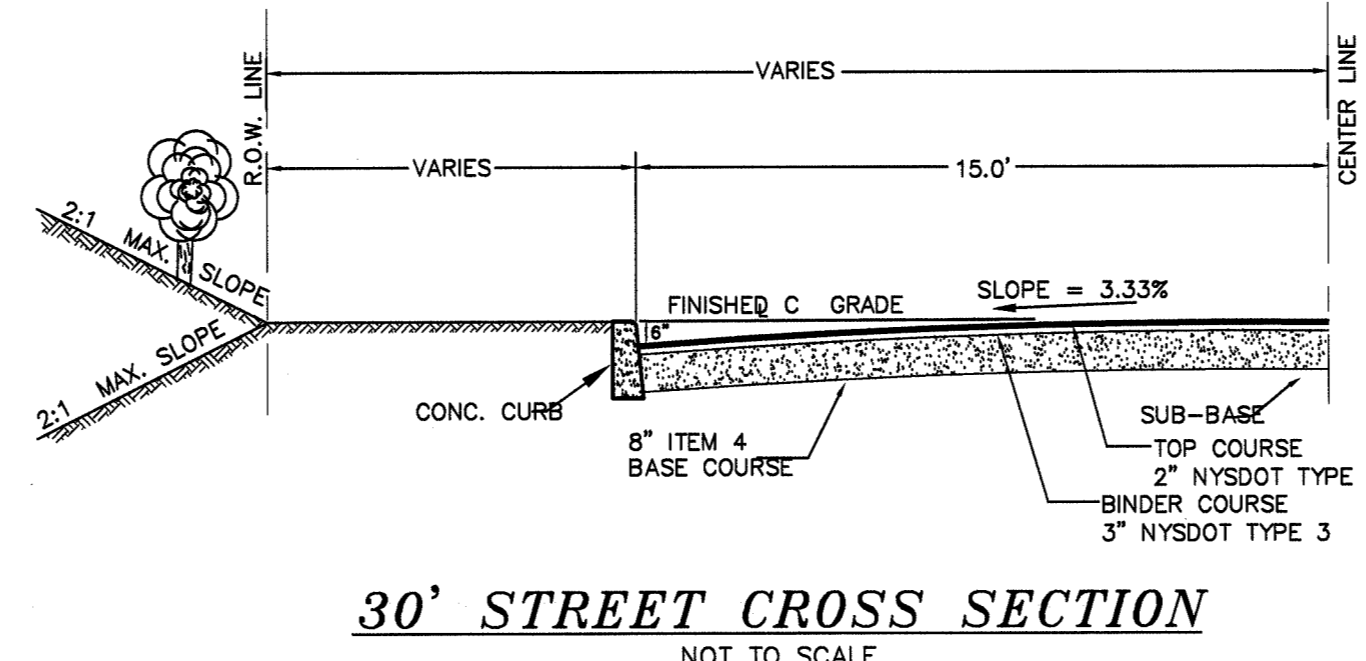


**WATER & SEWER CROSSING**  
NOT TO SCALE

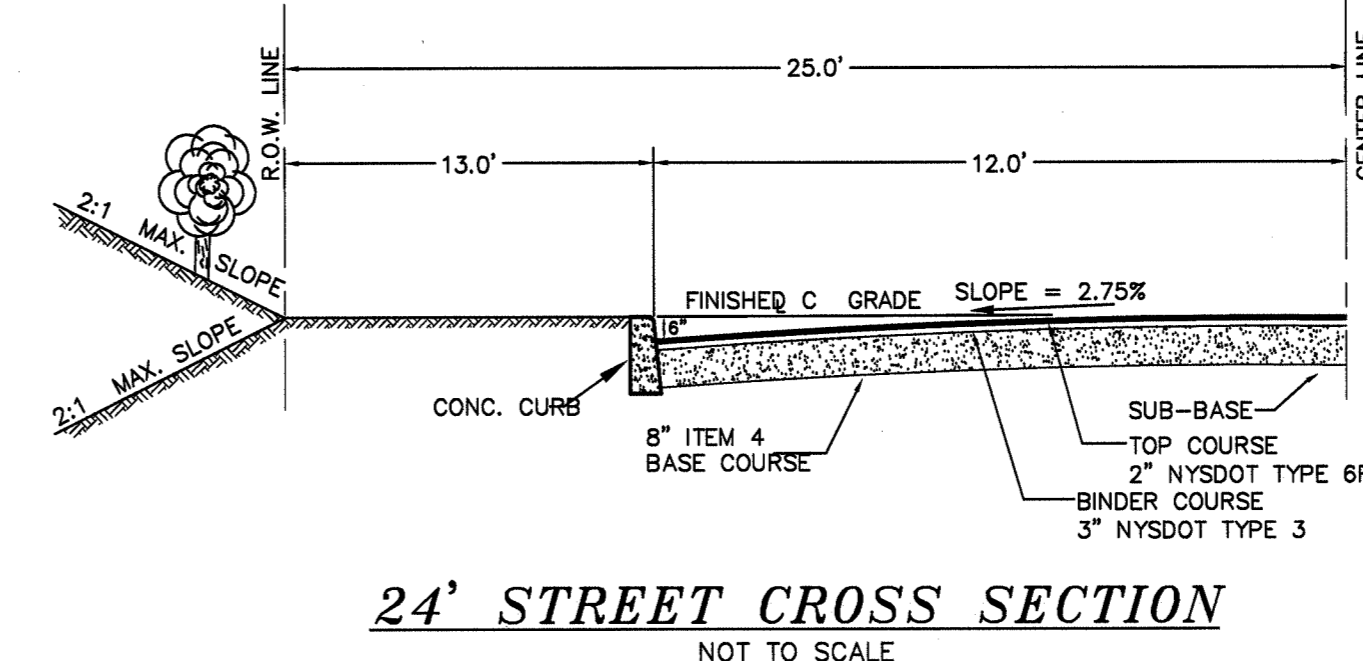


**TYPICAL SECTION-REINFORCED RETAINING WALL**  
NOT TO SCALE

- NOTE: 1. WALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.  
2. CONTRACTOR TO PROVIDE ACTUAL WALL DESIGN SIGNED AND SEALED BY NEW YORK STATE LICENSED ENGINEER FOR REVIEW AND APPROVAL PRIOR TO WALL CONSTRUCTION.



**30' STREET CROSS SECTION**  
NOT TO SCALE



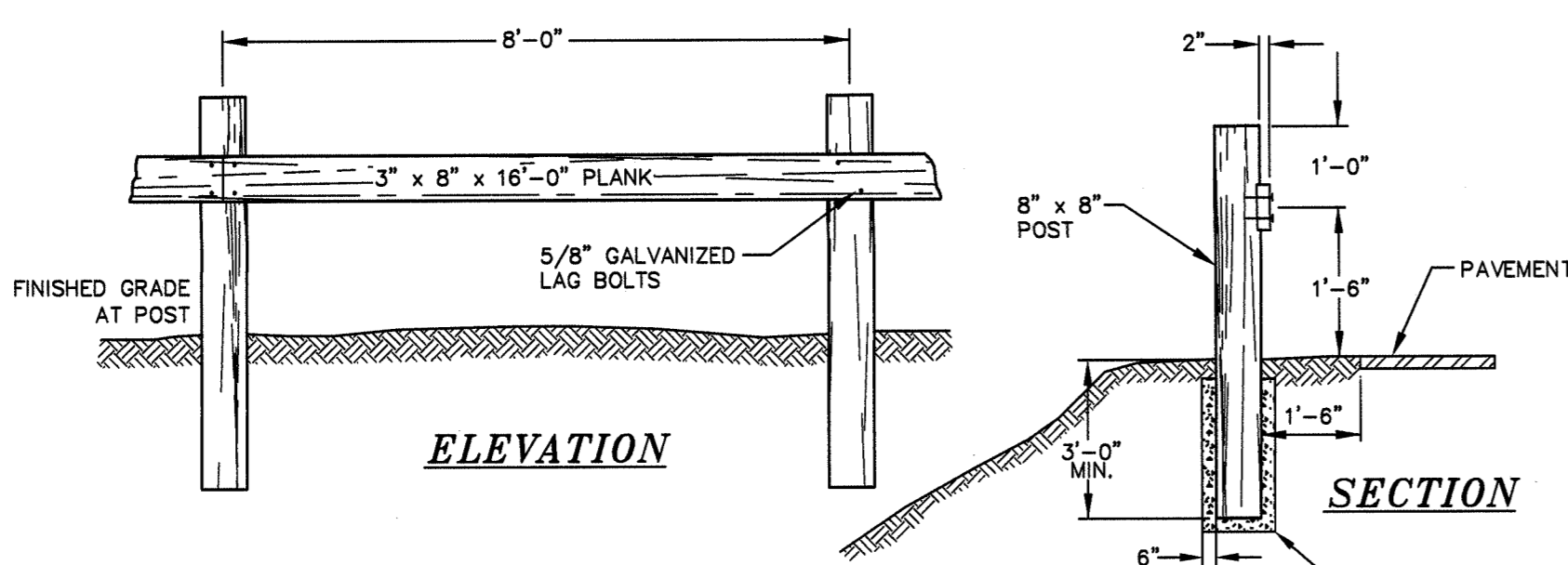
**24' STREET CROSS SECTION**  
NOT TO SCALE

**SECTION-PARKING LOT PAVEMENT**  
NOT TO SCALE



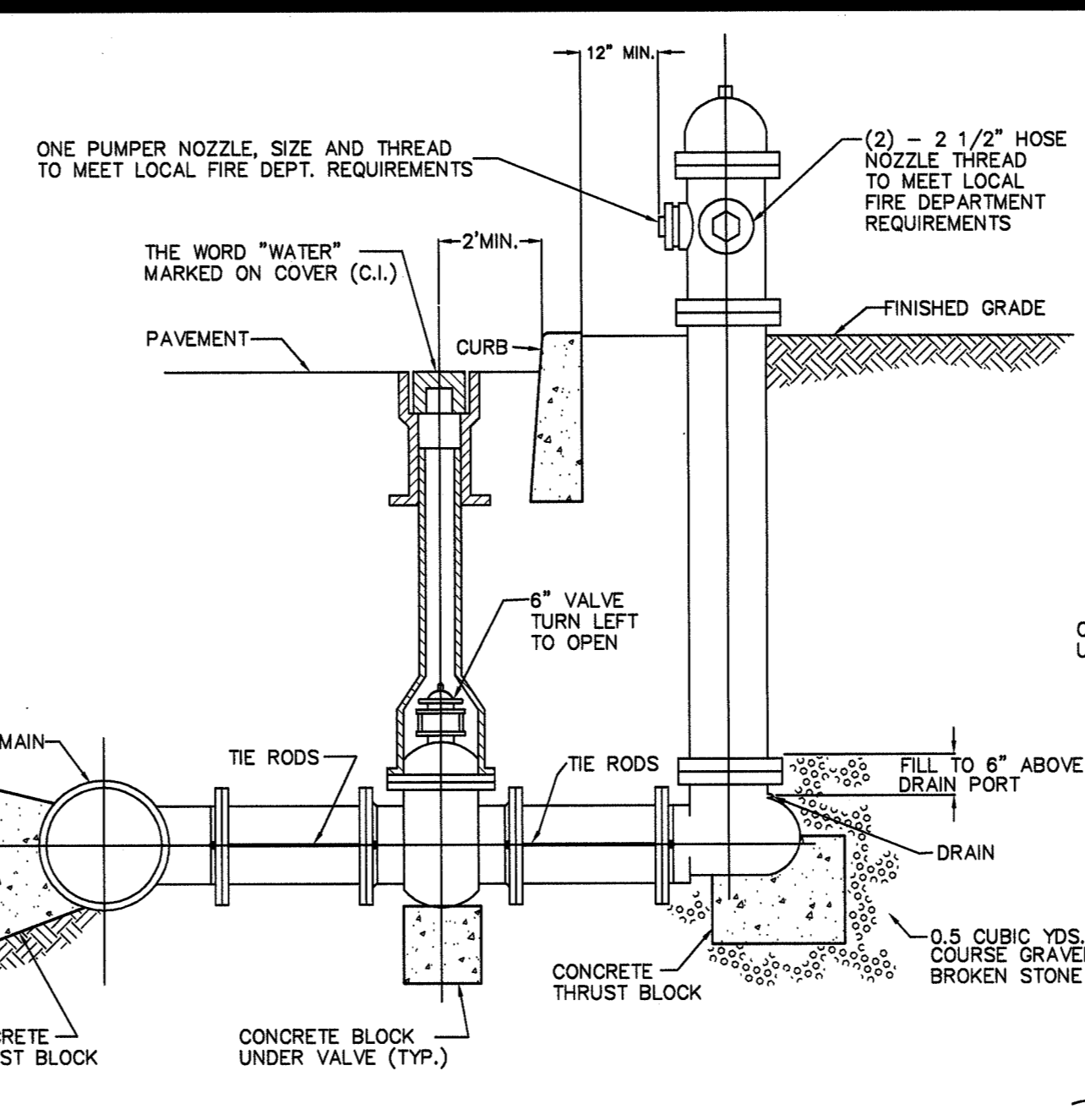
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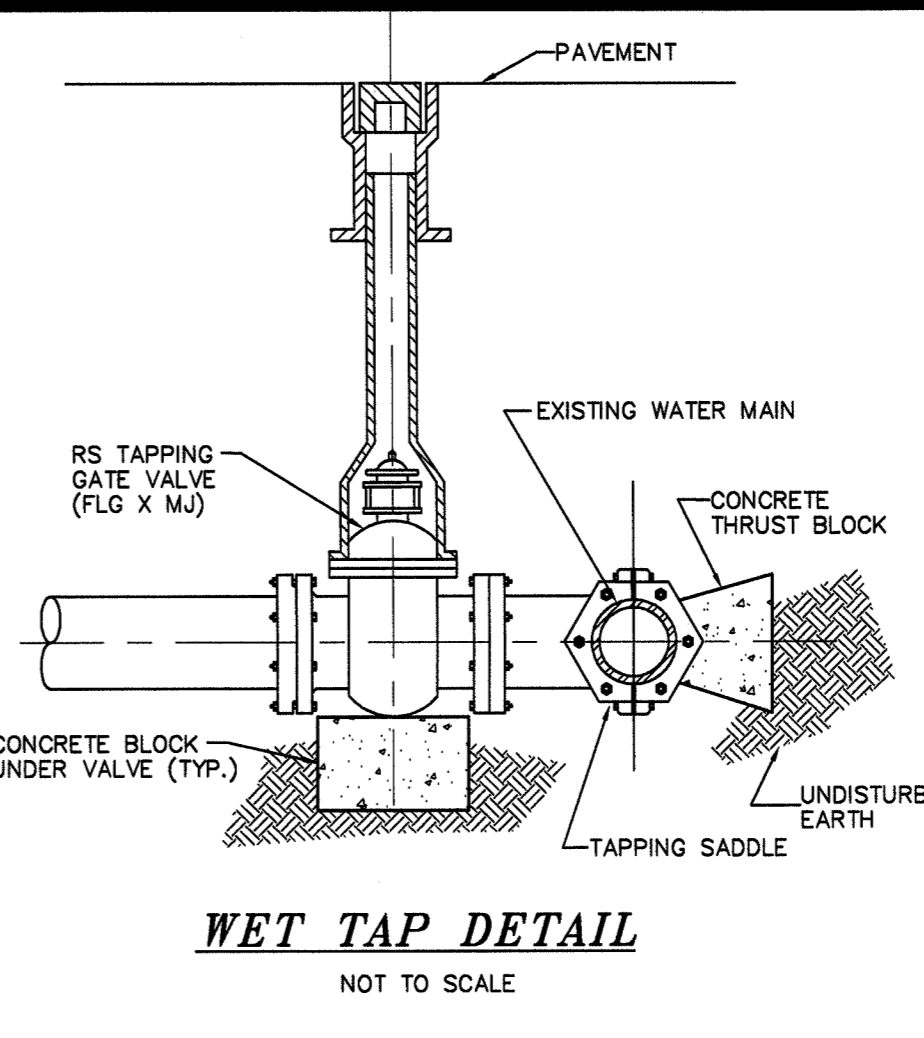


**WOOD GUIDE RAIL**  
NOT TO SCALE

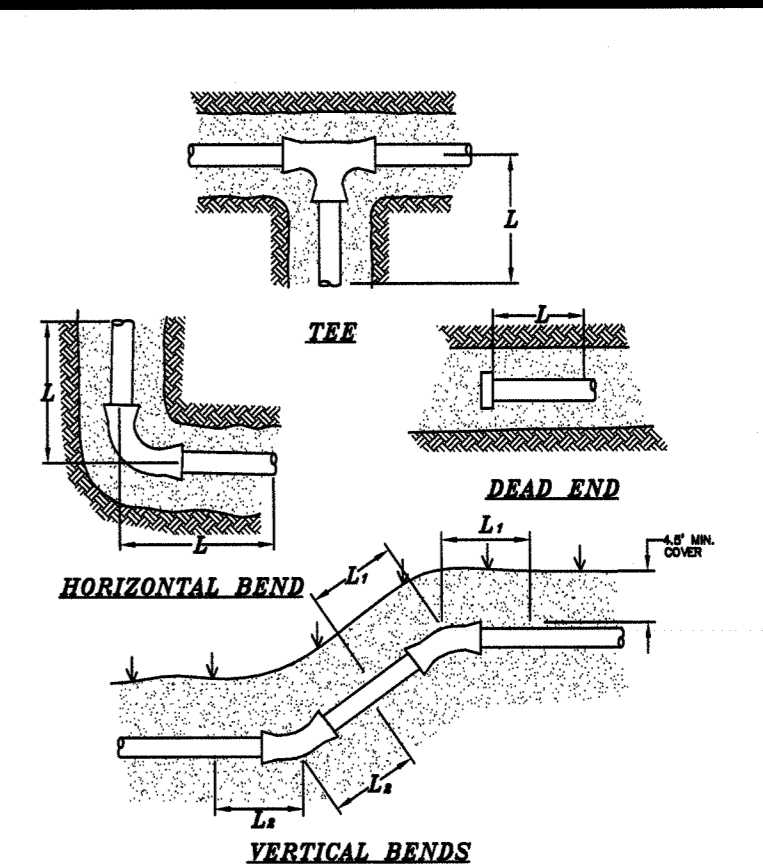
- NOTE: 1. ALL WOOD TO BE PRESSURE TREATED.



**HYDRANT DETAIL**  
NOT TO SCALE



**WET TAP DETAIL**  
NOT TO SCALE



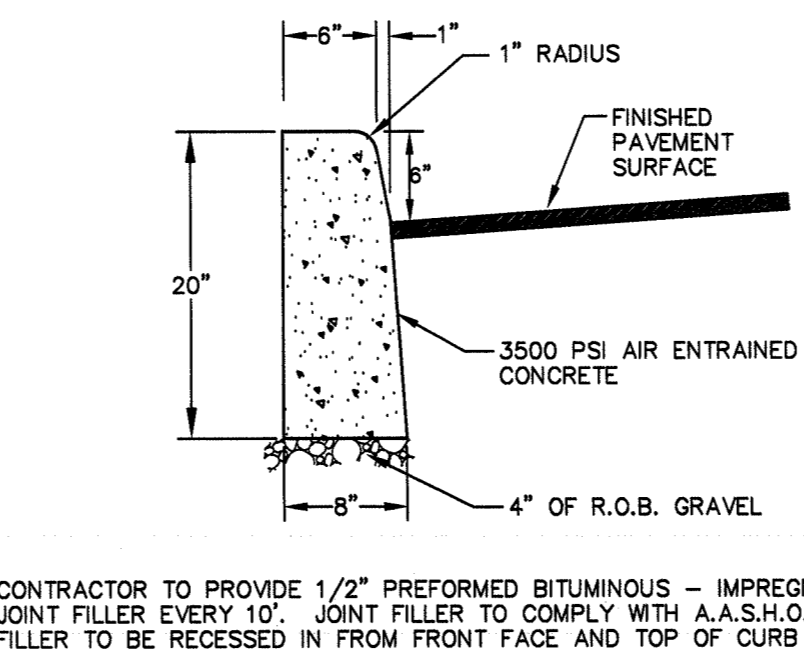
**RESTRAINED JOINT DETAILS**  
NOT TO SCALE

- NOTE: LENGTH OF RESTRAINED JOINTS BASED UPON:  
a) 4.5\"/>

RESTRAINED JOINT TABLE		
MINIMUM LENGTH REQUIRED IN LINEAR FEET		
FITTING	LENGTH IN LINEAR FEET (L)	
TEES AND DEAD ENDS		
8"	45'	
10"	47'	
12"		
14"		
16"		
90° BEND		
8"	45'	
10"		
12"	24'	
14"		
16"		
45° BEND		
8"	15'	
10"		
12"	10'	
14"		
16"		
22 1/2° BEND		
8"	10'	
10"		
12"	5'	
14"		
16"		
VERTICAL BENDS	L <sub>1</sub>	L <sub>2</sub>
8"	30'	10'
10"		
12"		
14"		
16"		

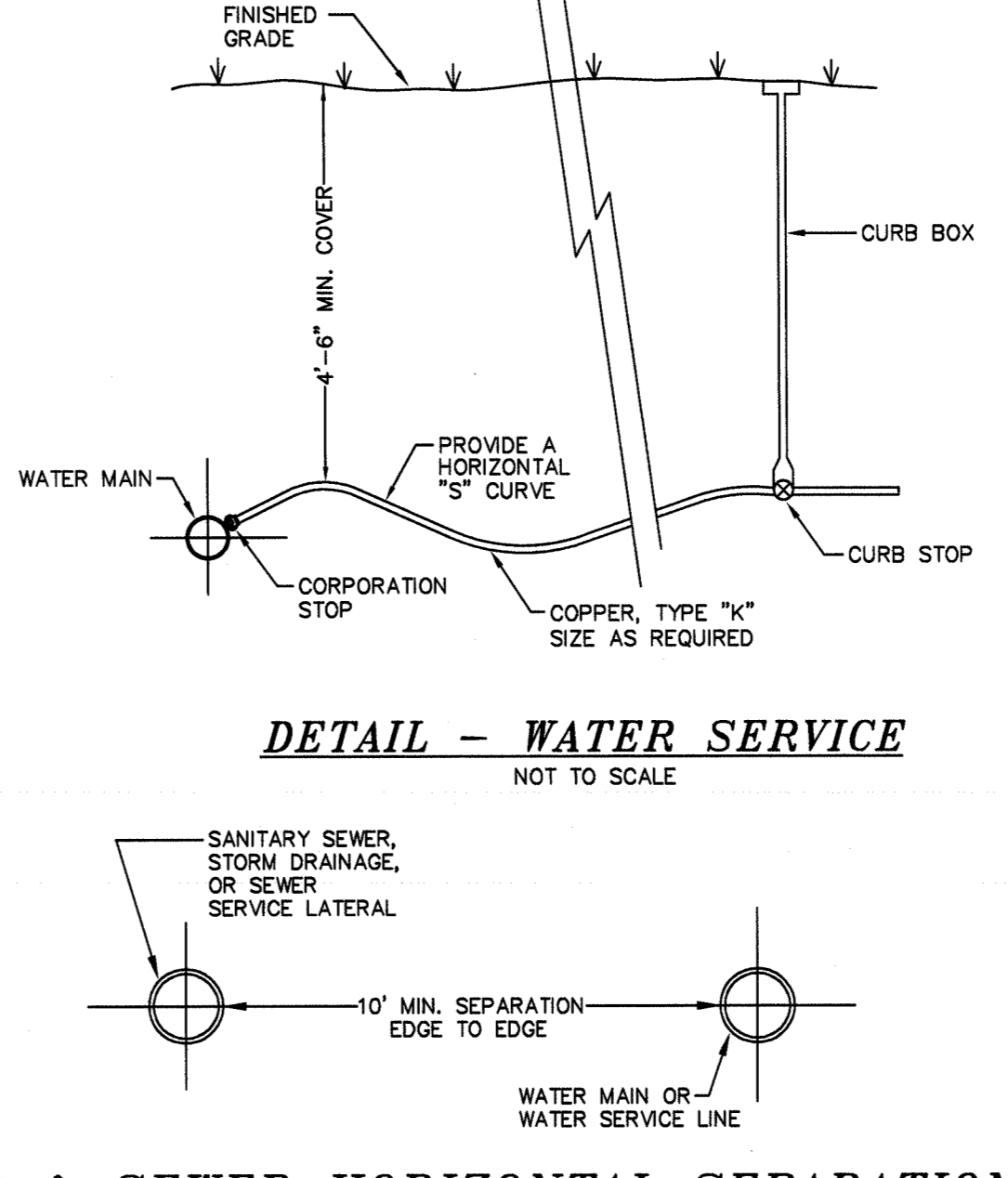
THRUST BLOCK SIZING TABLE						
BEARING AREA OF THRUST BLOCK IN SQUARE FEET						
FITTING	THRUST (POUNDS)	HARD SHALE	SAND & GRAVEL	SAND	SOFT CLAY	
TEES AND DEAD ENDS						
8"	5,700	1	2	3	5	6
10"	8,970	1	3	5	8	10
12"	16,125	2	5	8	11.5	23
14"	22,965	2.5	8	11.5	18.0	31.5
16"	31,155	3.5	10.5	13.5	20.5	40.5
18"	40,320	4.5	13.5	16.5	25.5	46.5
90° BEND						
8"	8,055	1	3	4	6	8
10"	13,950	1.5	5	7	11	14
12"	22,900	2.5	8	11.5	18.5	23
14"	32,450	3.5	11	16.5	32.5	37.5
16"	44,040	4.5	15.0	22.5	44.5	51.5
18"	57,015	6	19.5	28	57.5	66
45° BEND						
8"	4,365	1	1.5	2.5	4.5	5
10"	7,560	1	2.5	4	8	10
12"	12,960	1.5	4.5	8.5	12.5	15
14"	17,580	2	6	9	18	24
16"	23,865	2.5	8	12.0	24	31
18"	30,865	3	10.5	15	31	39
22 1/2° BEND						
8"	2,205	1	1	1.5	2.5	3
10"	3,825	1	1.5	2	4	5
12"	6,255	1.5	2.5	3.5	6.5	8.5
14"	8,910	1	3	4.5	9	12
16"	12,090	1.5	4.5	6.5	12.5	16
18"	16,545	2	6	9	16	21

\* THRUST AT 150 PSI OF WATER PRESSURE

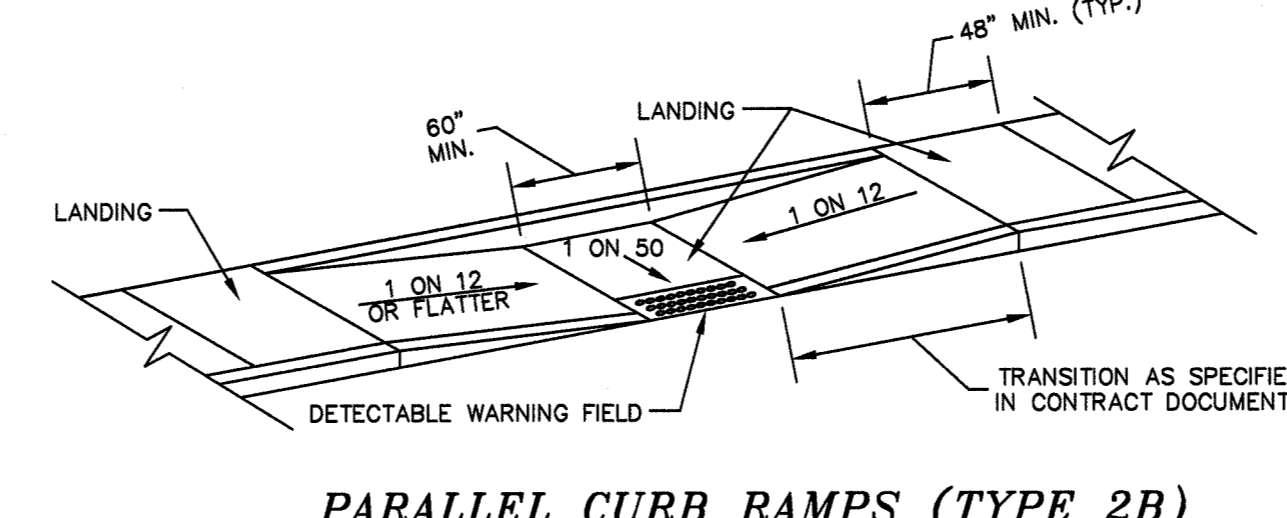


**CONCRETE CURB**  
NOT TO SCALE

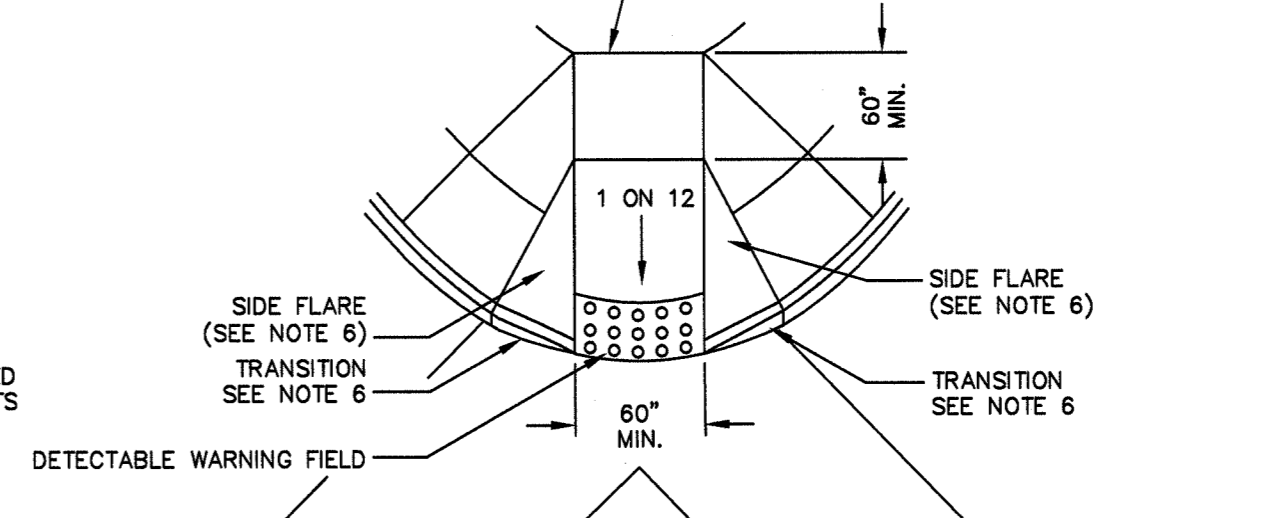
- CONTRACTOR TO PROVIDE 1/2\"/>



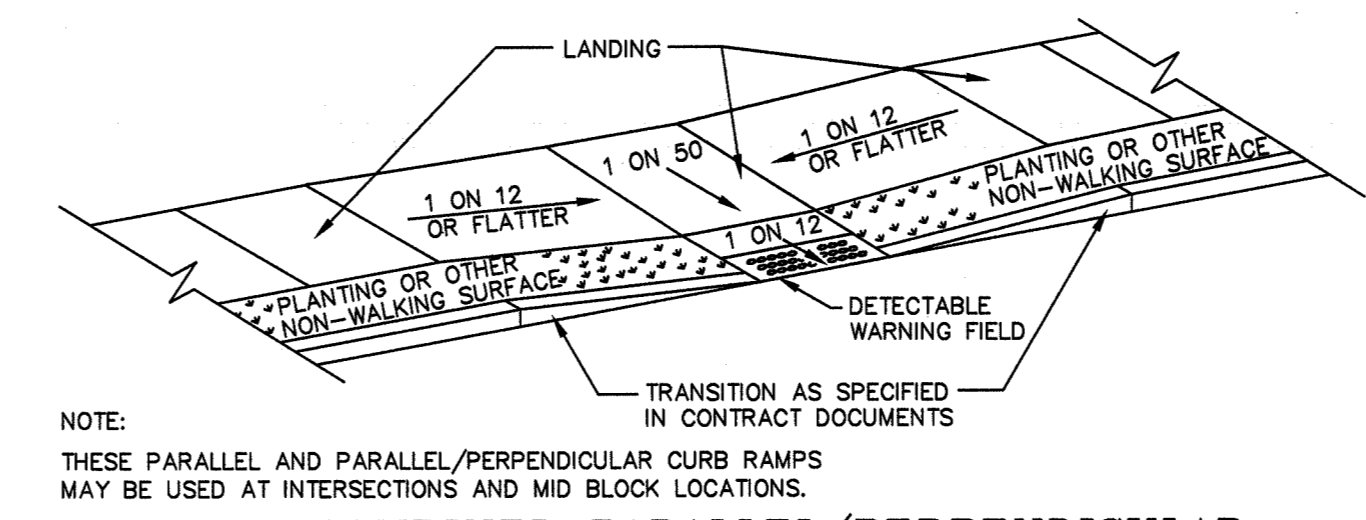
**WATER & SEWER HORIZONTAL SEPARATION**  
NOT TO SCALE



**PARALLEL CURB RAMPS (TYPE 2B)**

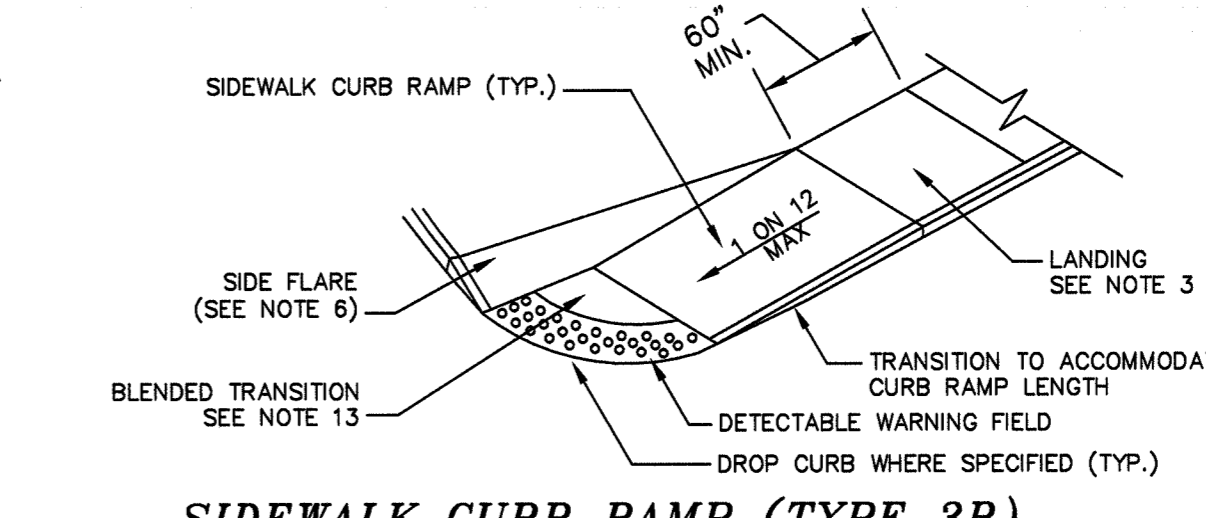


**DIAGONAL SIDEWALK CURB RAMP (TYPE 4)**

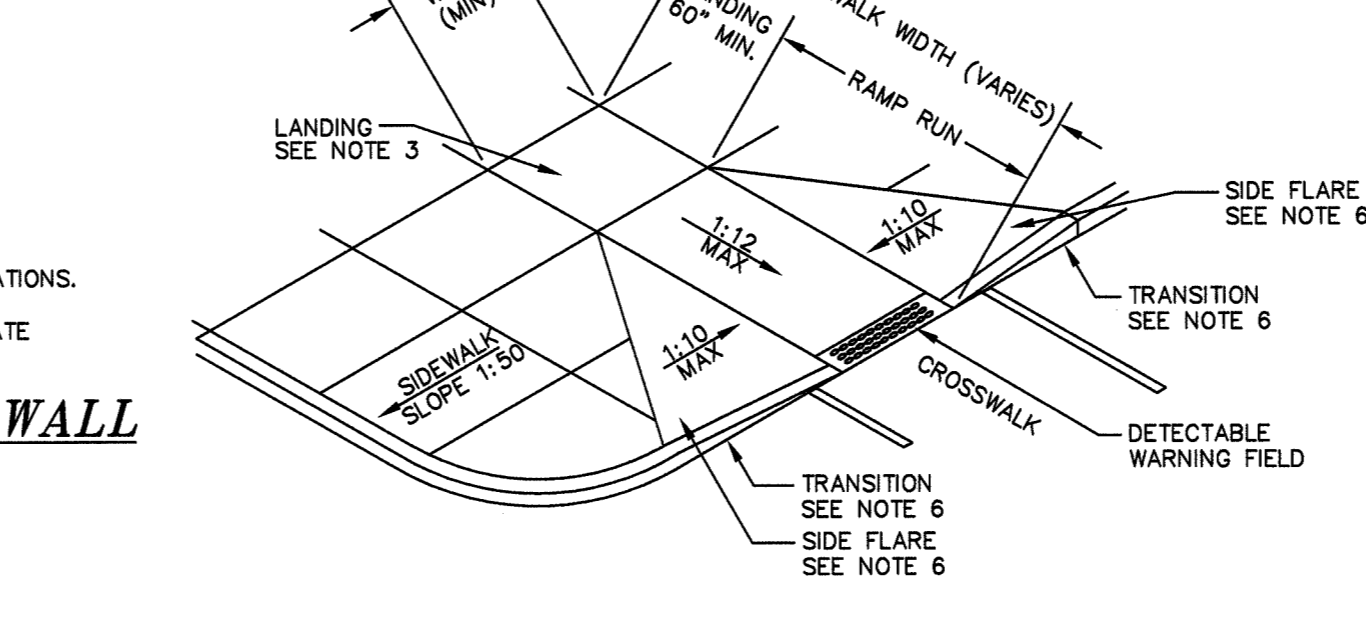


**COMBINED PARALLEL/PERPENDICULAR CURB RAMP (TYPE 2A)**

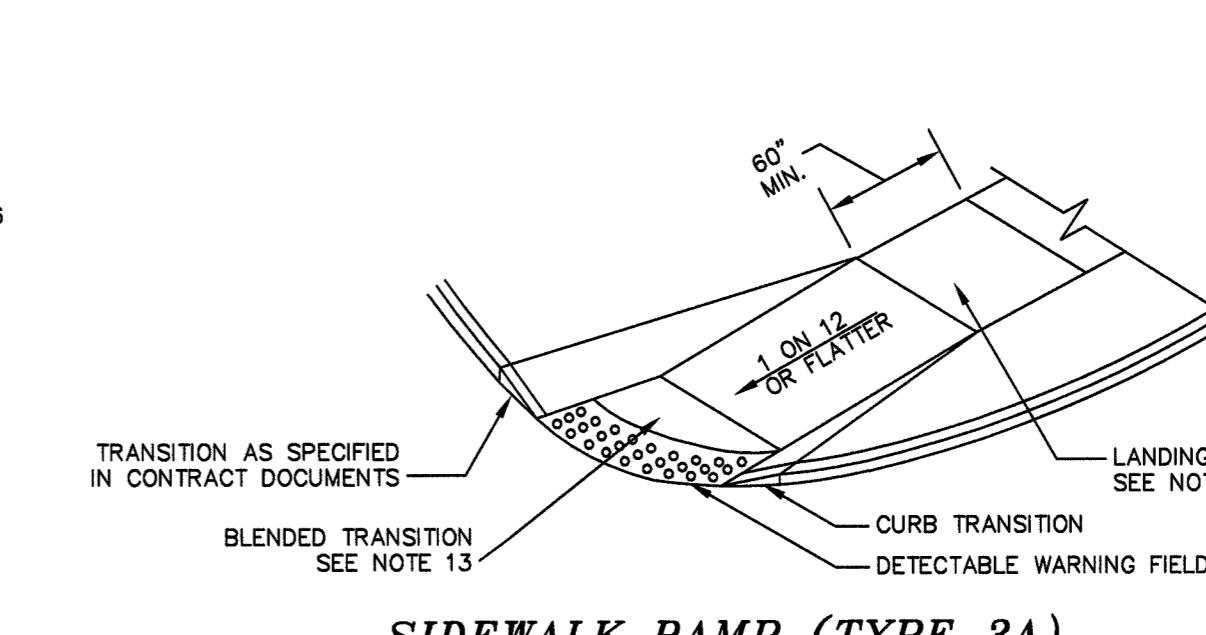
- NOTE: THESE PARALLEL AND PERPENDICULAR/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.



**SIDEWALK CURB RAMP (TYPE 3B)**

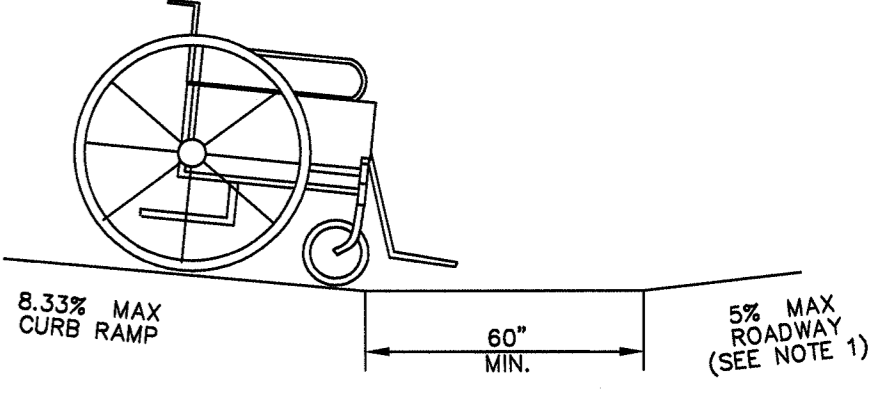


**PERPENDICULAR SIDEWALK CURB RAMP (TYPE 1)**



**SIDEWALK RAMP (TYPE 3A)**

**CURB RAMP DETAILS**  
NOT TO SCALE



**COUNTER SLOPE CONDITIONS**

- NOTE: VOID WHEEL CHAIR FOOTREST STRIKING PAVEMENT, PROVIDE 24\"/>

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CONSTRUCTION DETAILS  
PREPARED FOR  
**GLENMERE PRESERVE**  
VILLAGE OF FLORIDA  
ORANGE COUNTY, NEW YORK

Date: OCTOBER 8, 2012  
Revision: NOVEMBER 30, 2012

Drawn By: CDD  
Checked By: AS NOTED  
Scale: AS NOTED  
Tax Map No: 113-4-2.12.27.216  
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