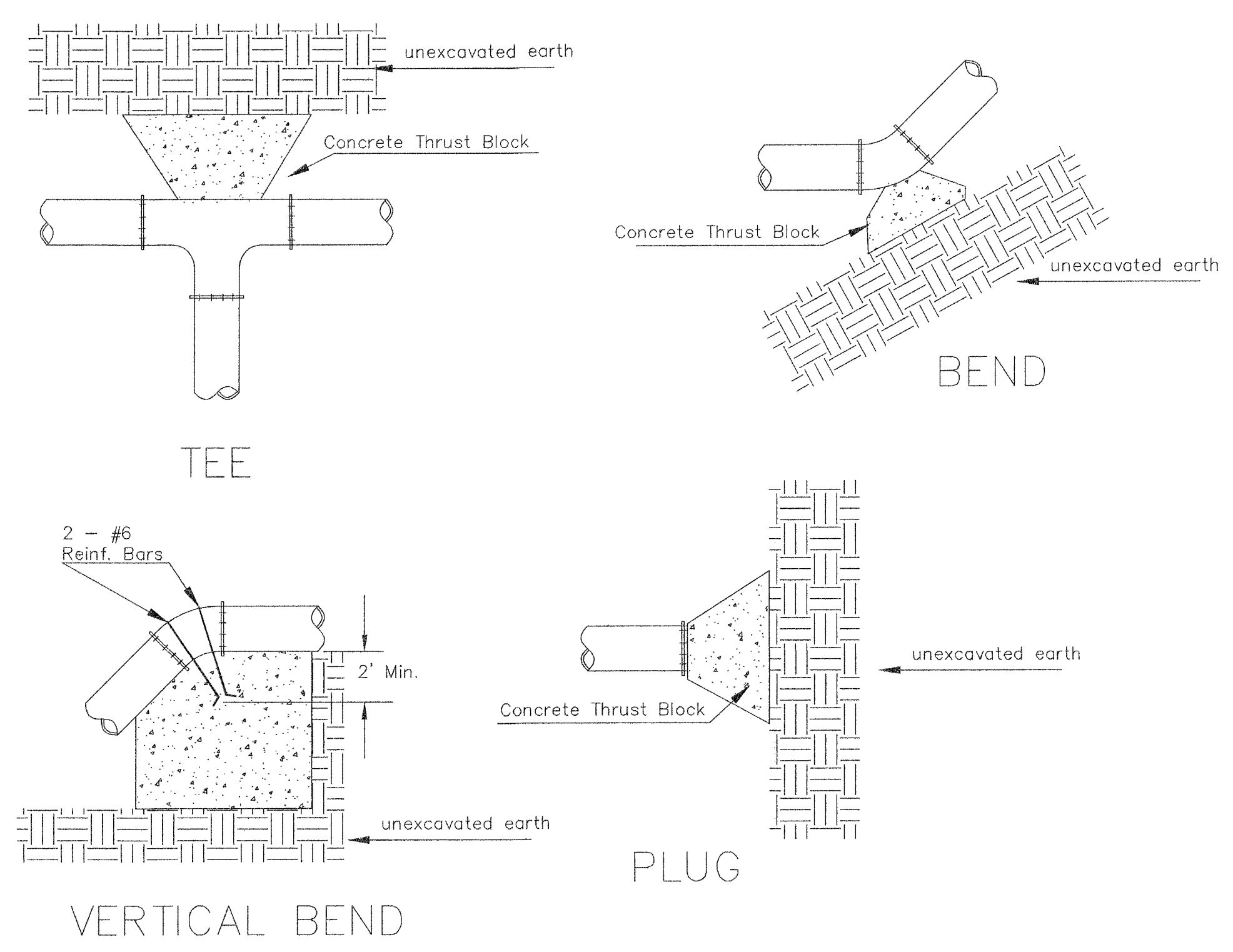
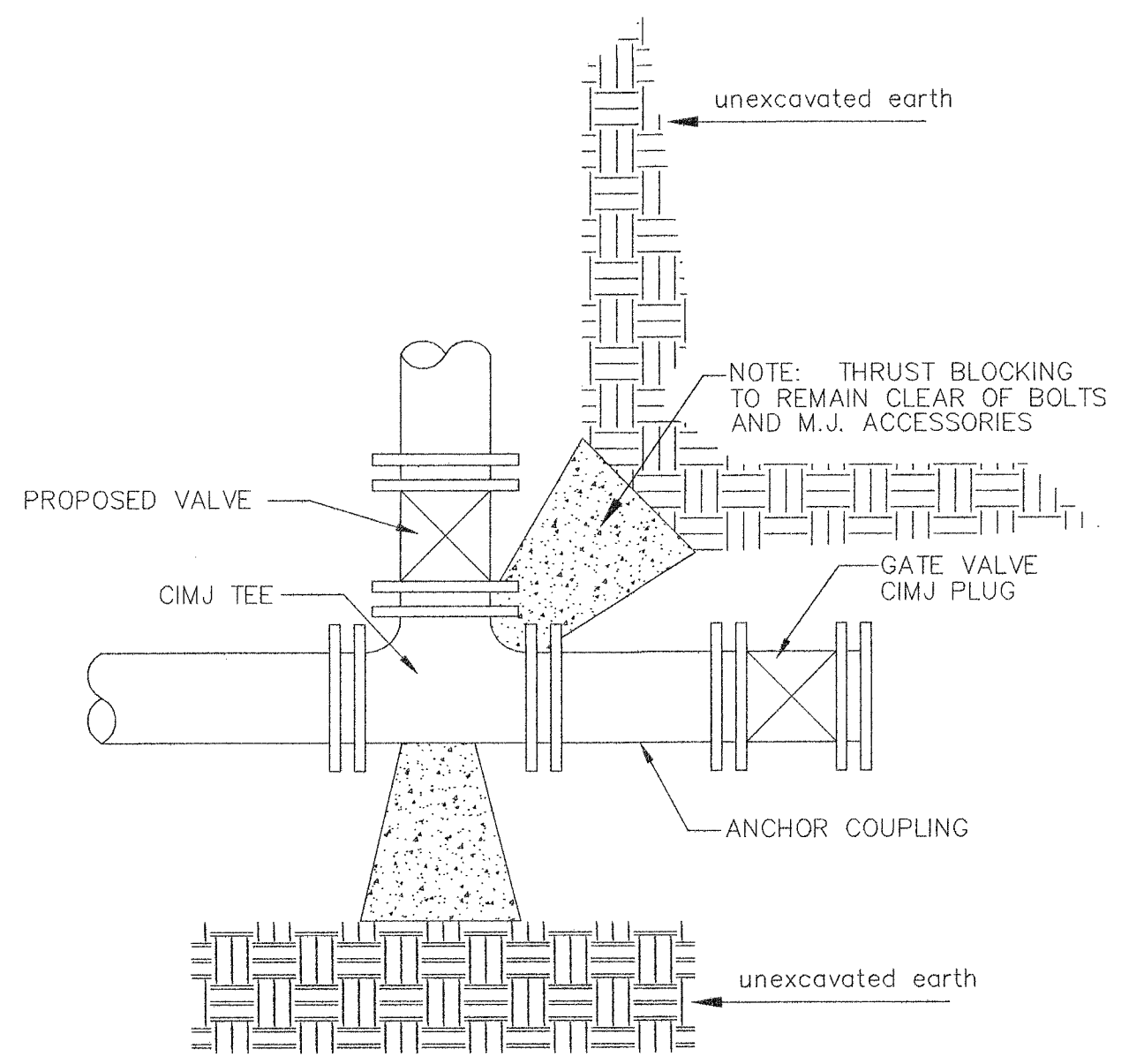


PLOTTED: Thursday, September 15, 2016 @ 1:46PM  
 J:\PROJECTS\2015\10104078\_COW\_21ST & OLIVER\_XXXXX\CAD\SHS\05 CIVIL\WTR\15786CD\DWG



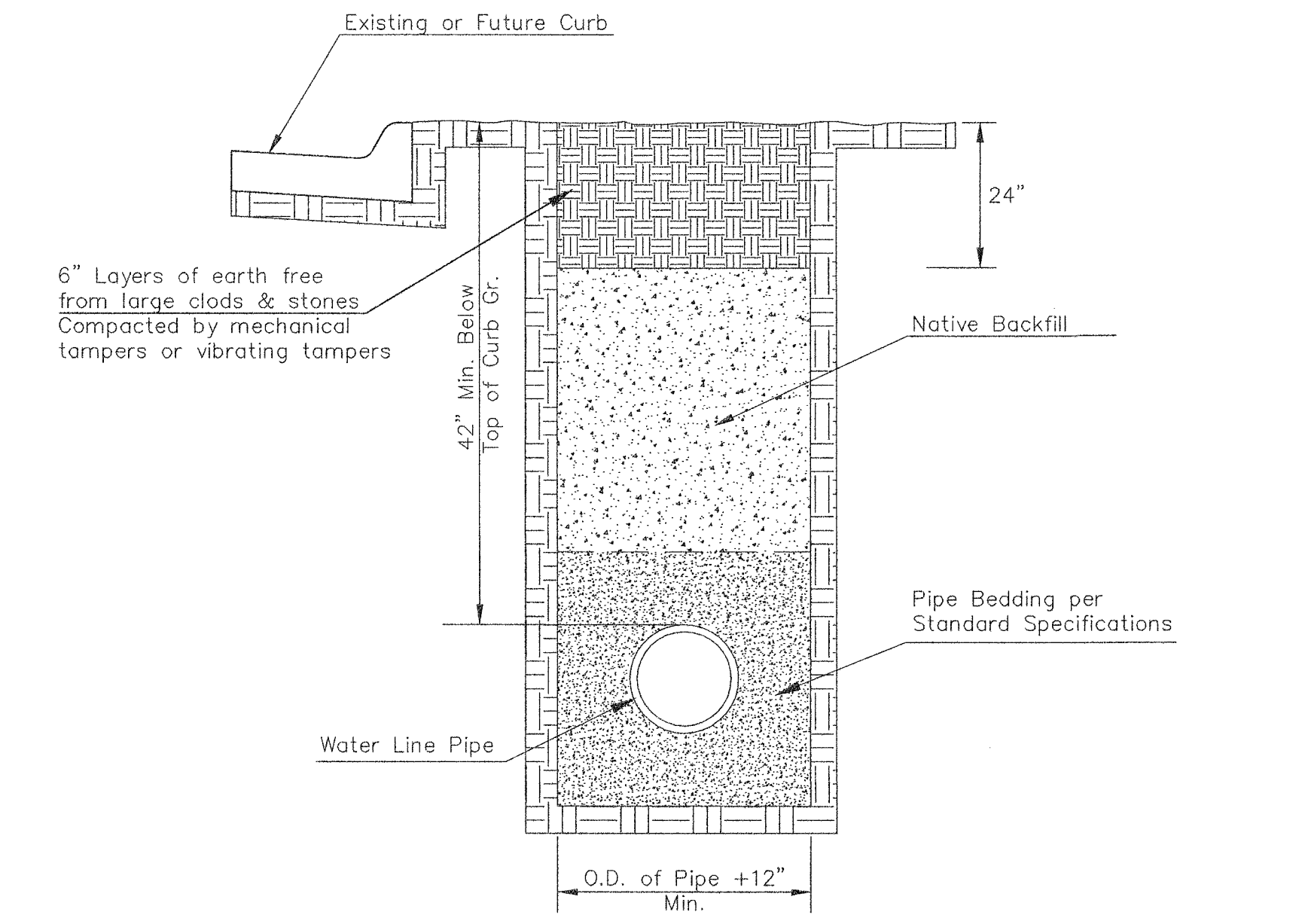
PIPE SIZE	THRUST AT FITTINGS IN TONS--AT 150#/IN <sup>2</sup> P					
	PLUG	90°	45°	22 1/2'	11 1/4'	TEE
6"	2.8	3.95	2.15	1.09	.55	2.8
8"	4.9	6.95	3.75	1.90	.96	4.9
12"	11.4	16.1	8.75	4.45	2.25	11.4
16"	20.15	28.5	15.4	7.85	3.95	20.15
20"	31.15	44.0	23.85	12.15	6.10	31.15
24"	44.55	63.0	34.1	17.4	8.75	44.55

TYPICAL THRUST BLOCKS

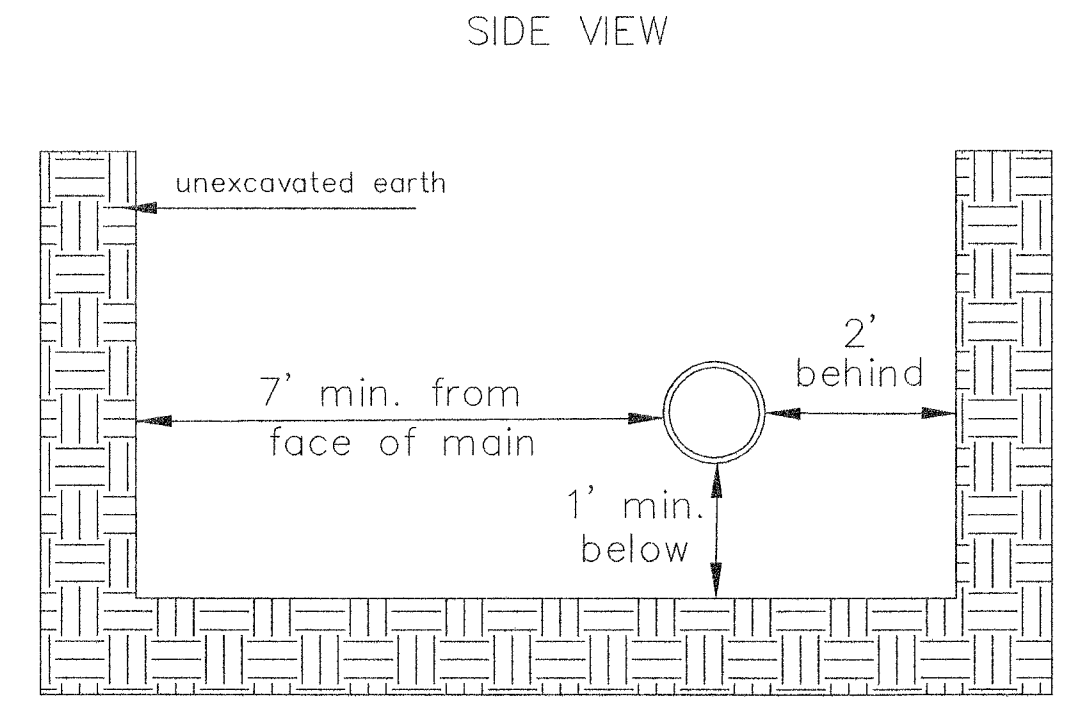


KEY BLOCK DETAIL

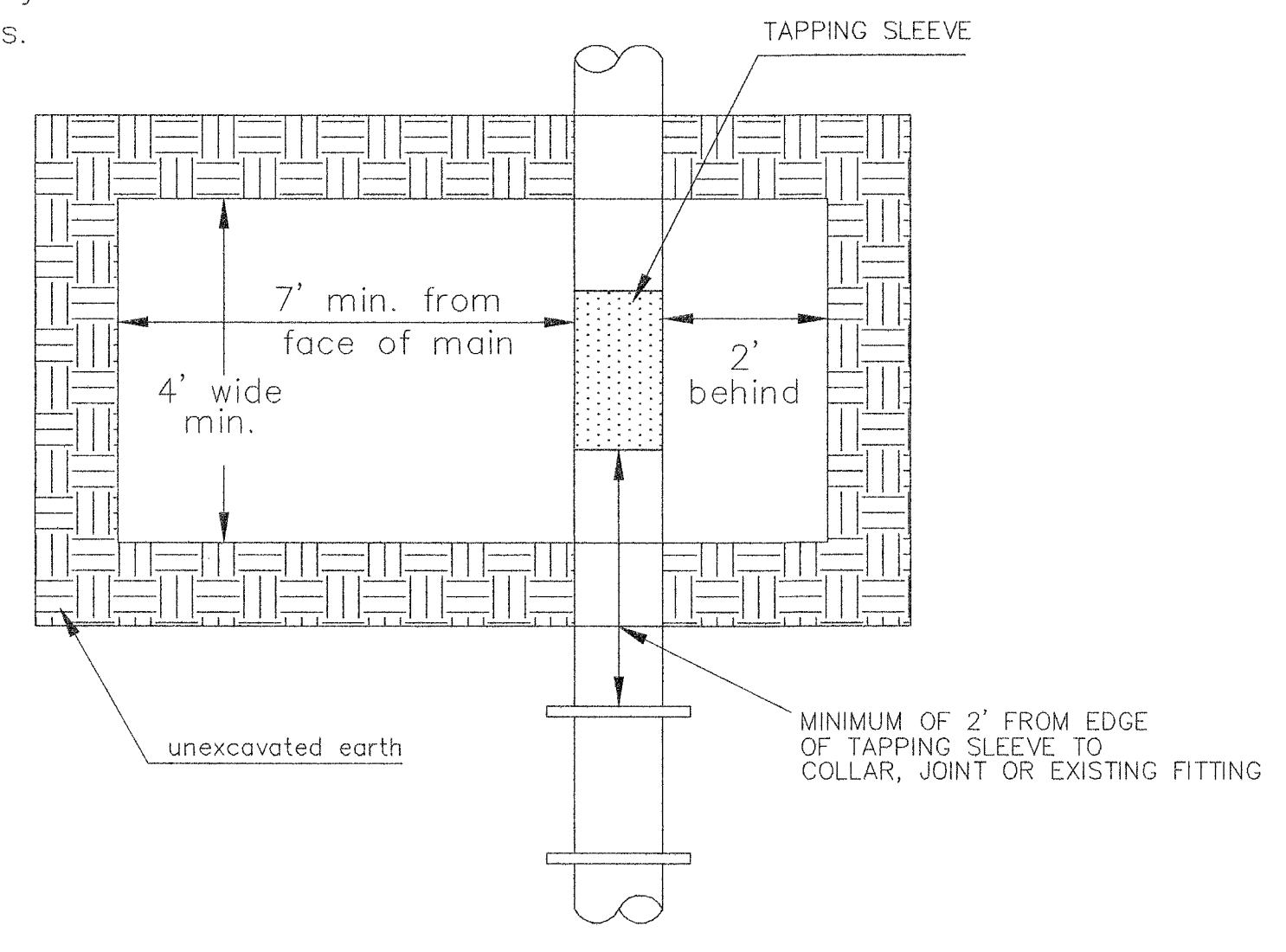
\* PLANS GOVERN  
UNLESS OTHERWISE NOTED ON PLANS



TRENCH COMPACTION IN ROAD RIGHT-OF-WAY

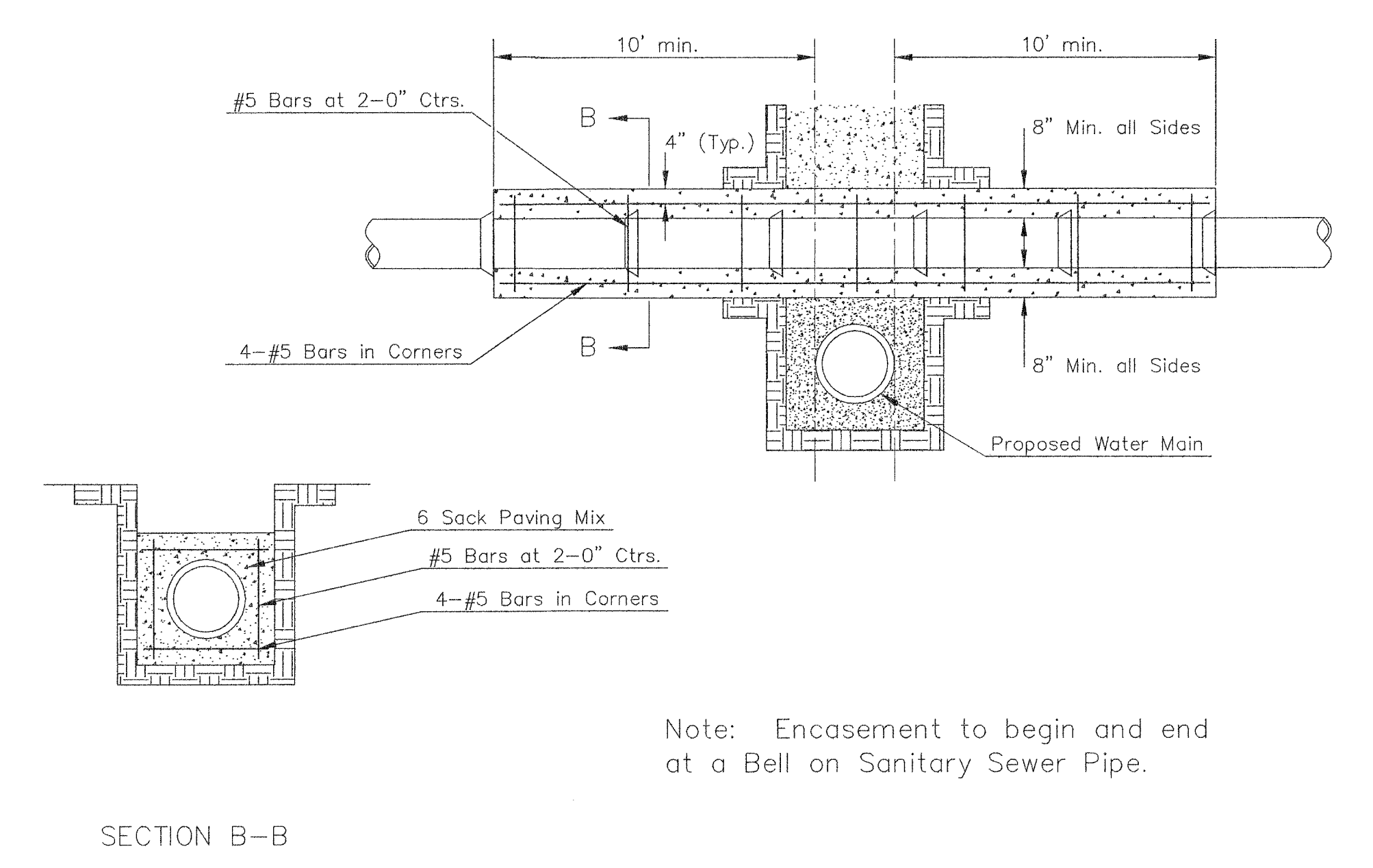


TOP VIEW



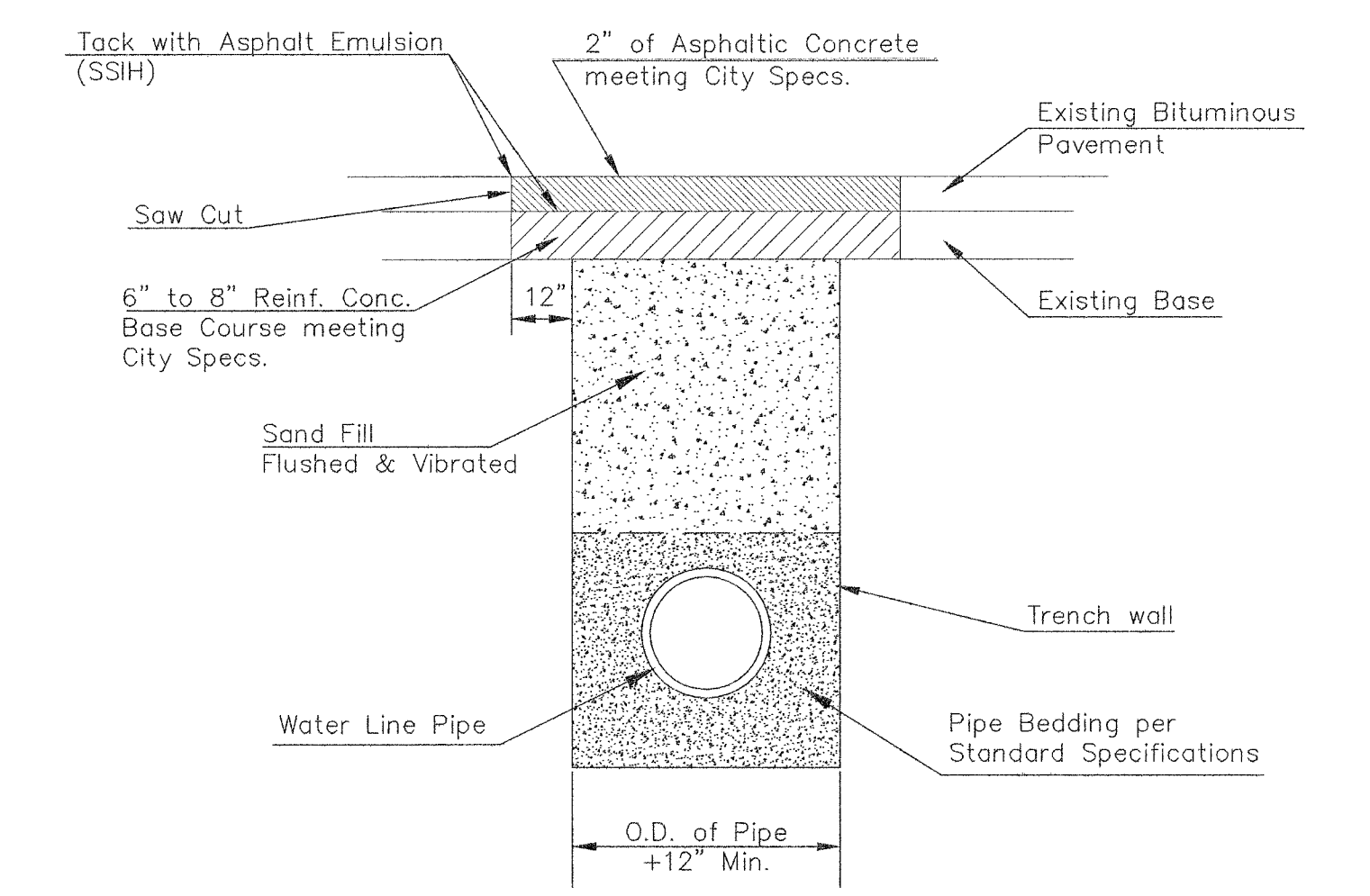
EXCAVATION FOR WET TAP

Note: When shoring is required it is to be per The City of Wichita Standard Specifications.



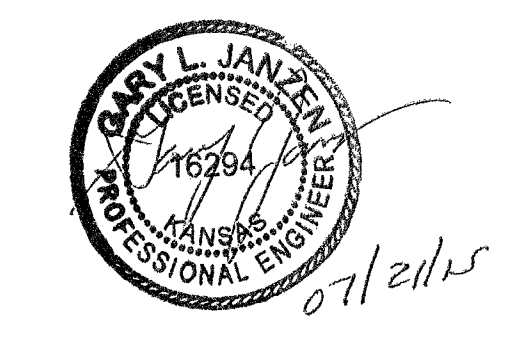
REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER

Note: Encasement to begin and end at a Bell on Sanitary Sewer Pipe.



PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS

REVISED: JULY 2015



**CITY OF WICHITA**  
 PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

MISCELLANEOUS WATER DETAILS		
CITY ENGINEER <b>GARY JANZEN, P.E.</b>		
PROJECT NUMBER 448-90740	OCA NUMBER 636349	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 64 OF 125