

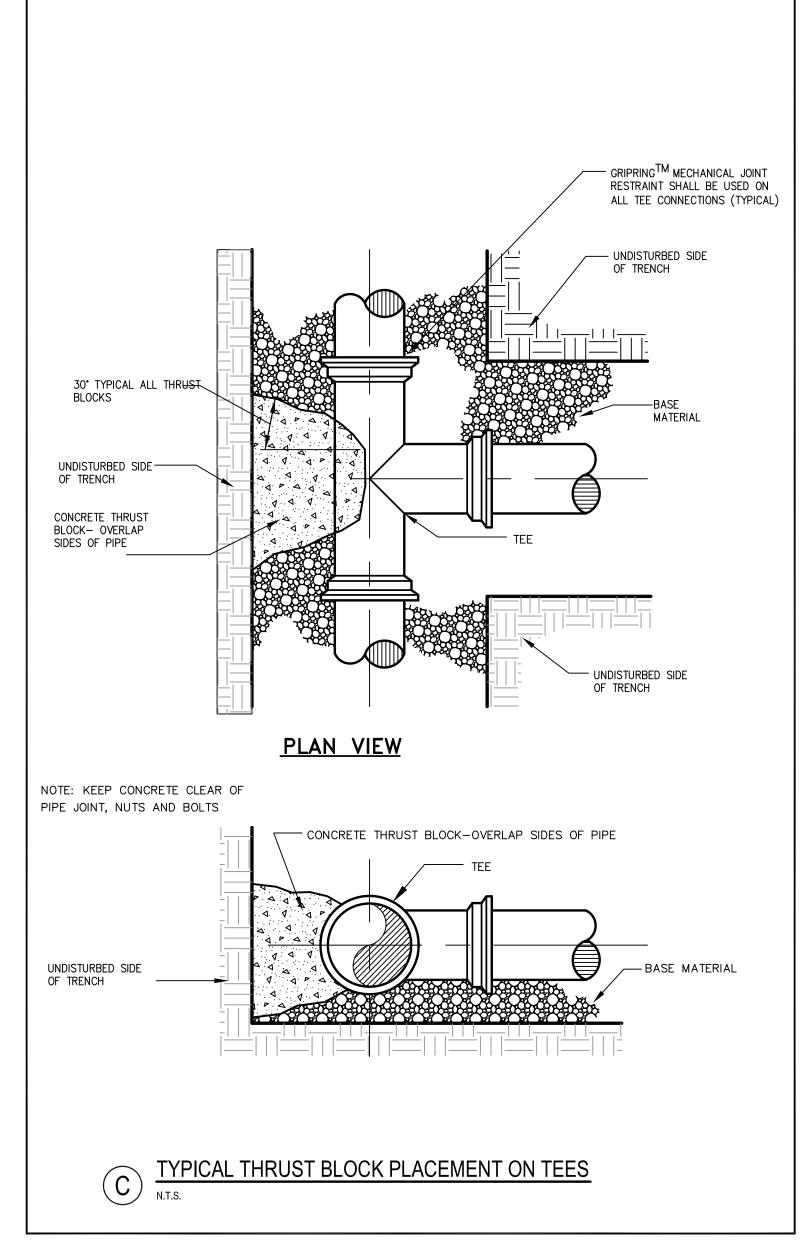
	THRUST/RETAINER GLAND SCHEDULE				
1/4 BEND	(90*)	USE POURED-IN-PLACE THRUST BLOCK WITH GRIPRING TM MECHANICAL JOINT RESTRAINT			
1/8 BEND	(45°)	THRUST BLOCK w/ GRIPRING TM			
1/16 BEND	(22 1/2°)	THRUST BLOCK w/ GRIPRING TM			
1/32 BEND	(11 1/4°)	THRUST BLOCK w/ GRIPRING TM			

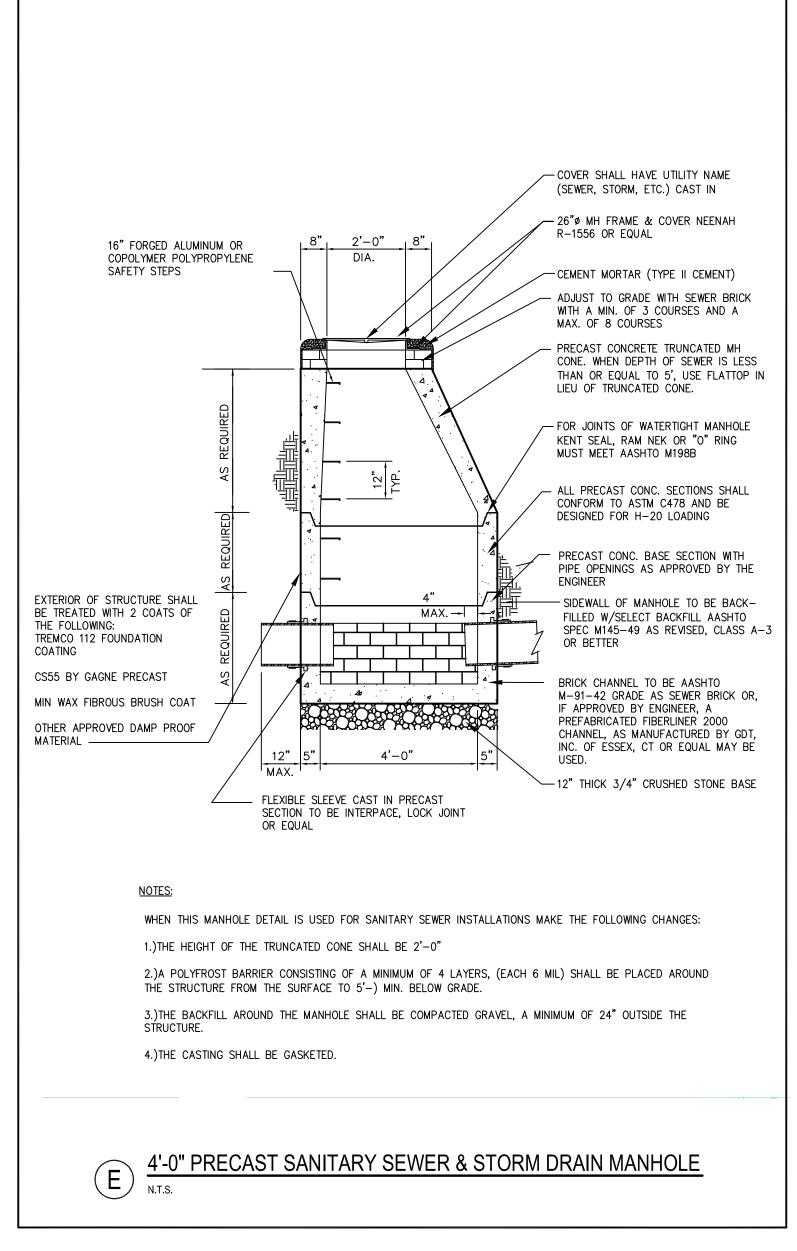
THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

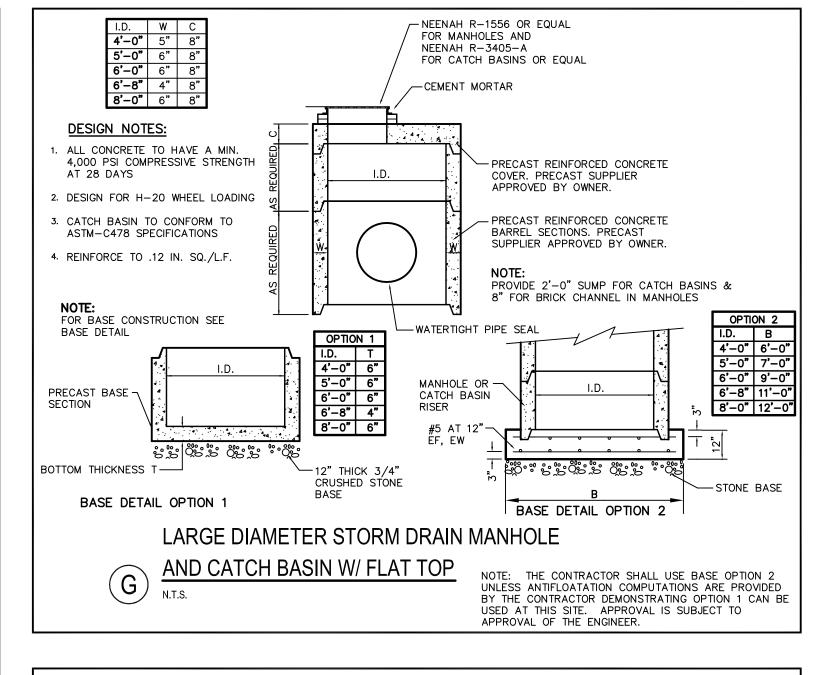
NOTES:

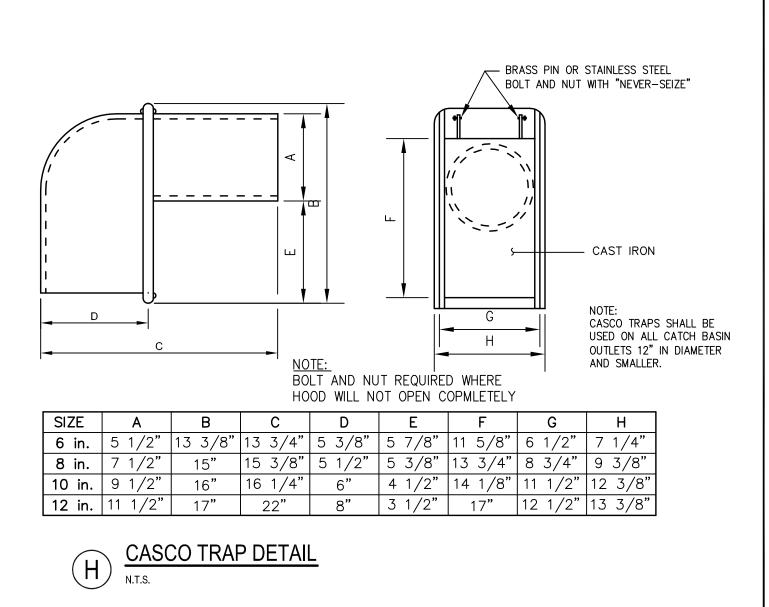
- 1.) THE PORTLAND WATER DISTRICT MAY HAVE INSPECTION FEES AND REQUIRE OBSERVATION OF ALL PIPING INSTALLATION BEFORE BURIAL. REFER TO SPECIFICATIONS.
- 2.) REFER TO PORTLAND WATER DISTRICT SPECIFICATIONS FOR TESTING AND CHLORINATION REQUIREMENTS.
- 3.) ALL HYDRANTS AND VALVES TO BE EPOXY COATED, NUTS & BOLTS TO BE STAINLESS STEEL.
- 4.) SERVICE RODS FOR DOMESTIC SERVICE OR AIR VALVES TO BE STAINLESS STEEL.













- ANY MODIFICATION TO THRUST BLOCK SIZING OR PIPE RESTRAINT REVISIONS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO IMPLEMENTATION IN THE FIELD
- 3. ANY WORK RELATING TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS
- 4. ALL RESTRAINED JOINTS MUST HAVE GRIPRING TM

BEARING SURFACE REQUIRED IN SQUARE FEET

PIPE SIZE	1/32 BEND	1/16 BEND	1/8 BEND	1/4 BEND	TEES/CAPS
6"/8"	5.0	5.0	5.0	6.5	5.0
12"	11.5	11.5	11.5	20.0	22.0

(B) THRUST BLOCK NOTES

