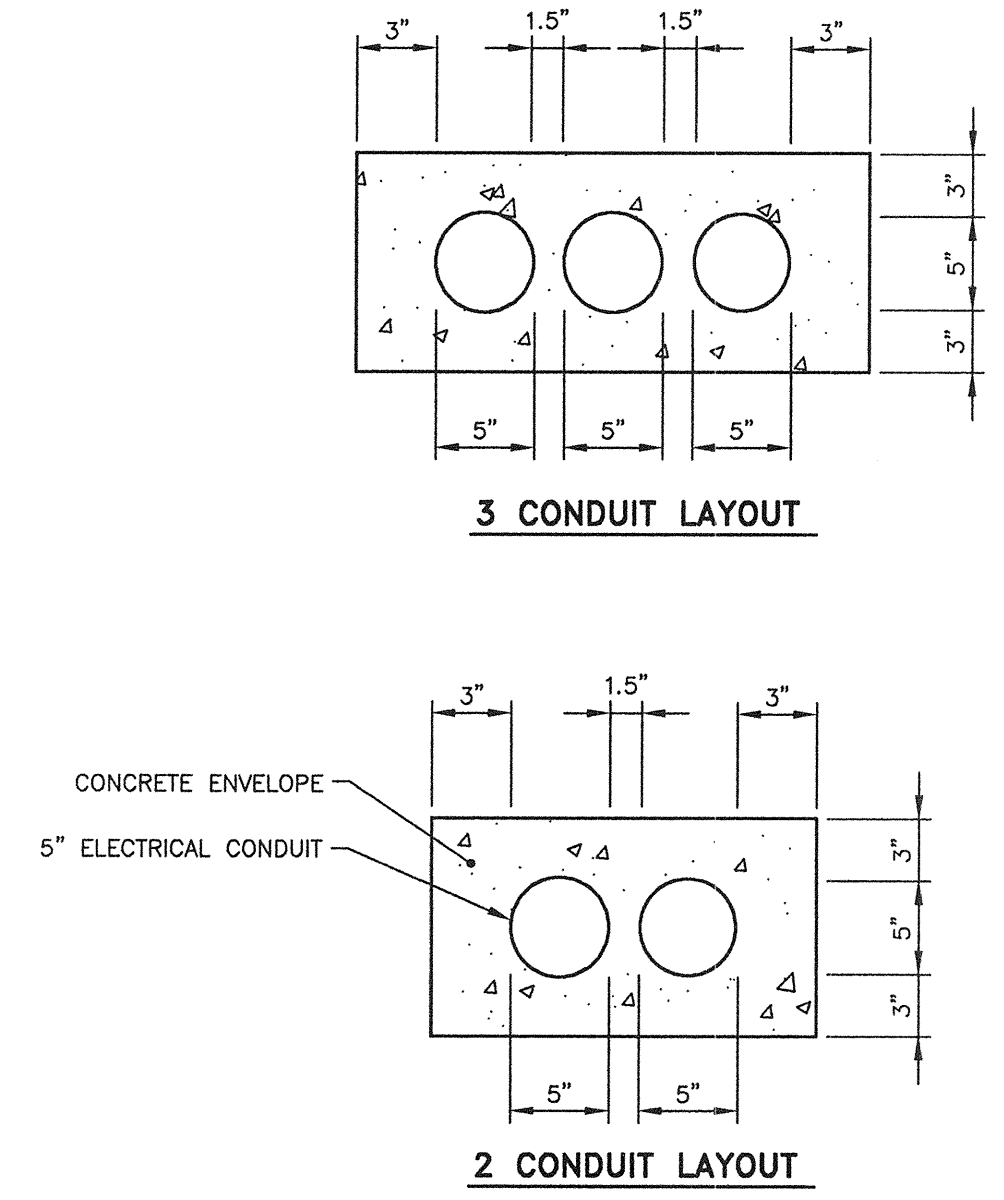
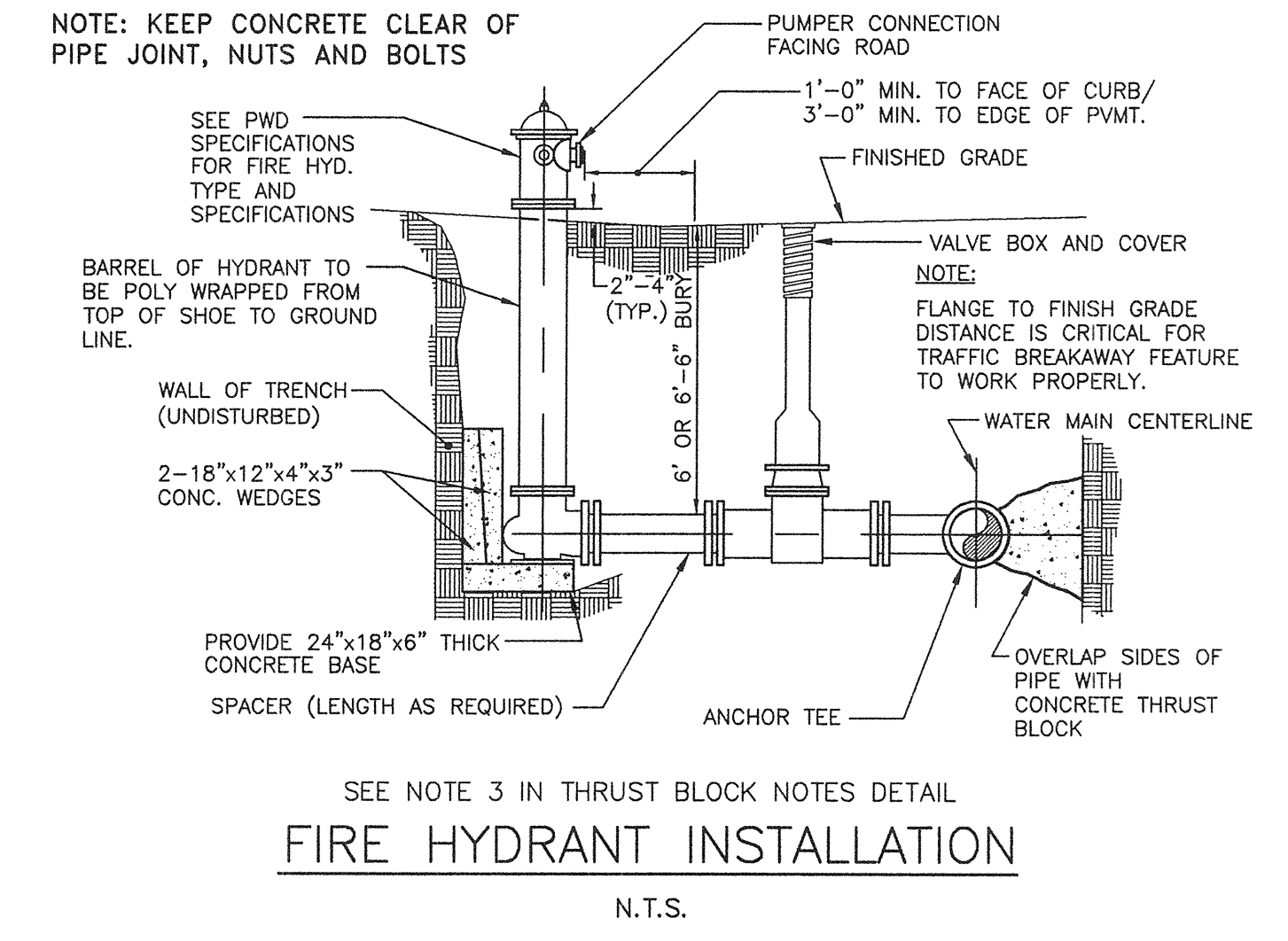


ROOF DRAIN CONNECTION
N.T.S.



ELECTRICAL CONDUIT PROFILES
N.T.S.



FIRE HYDRANT INSTALLATION
N.T.S.

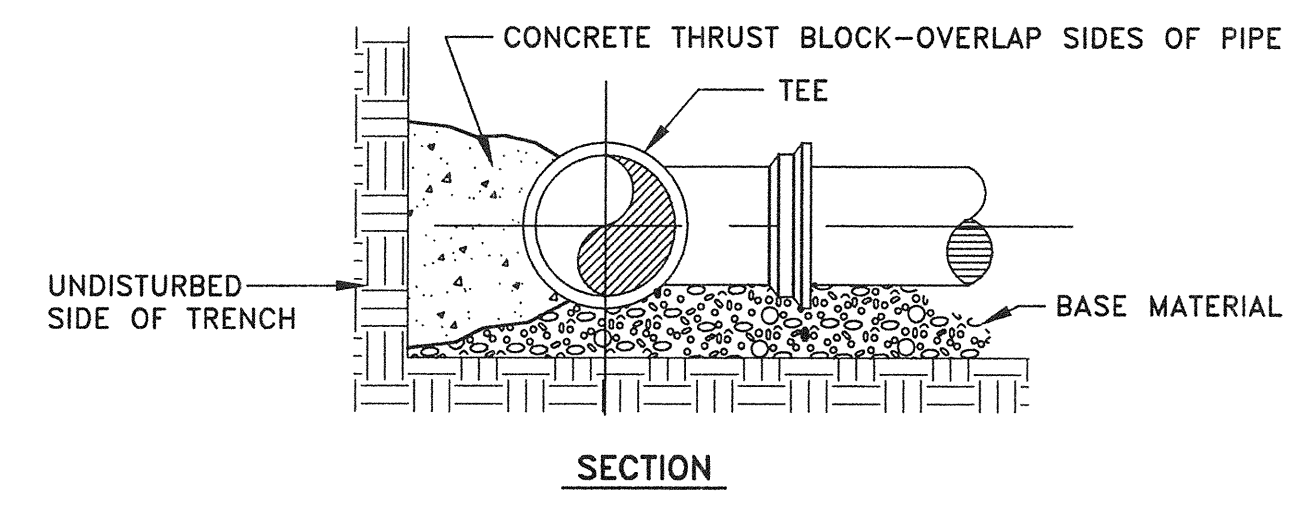
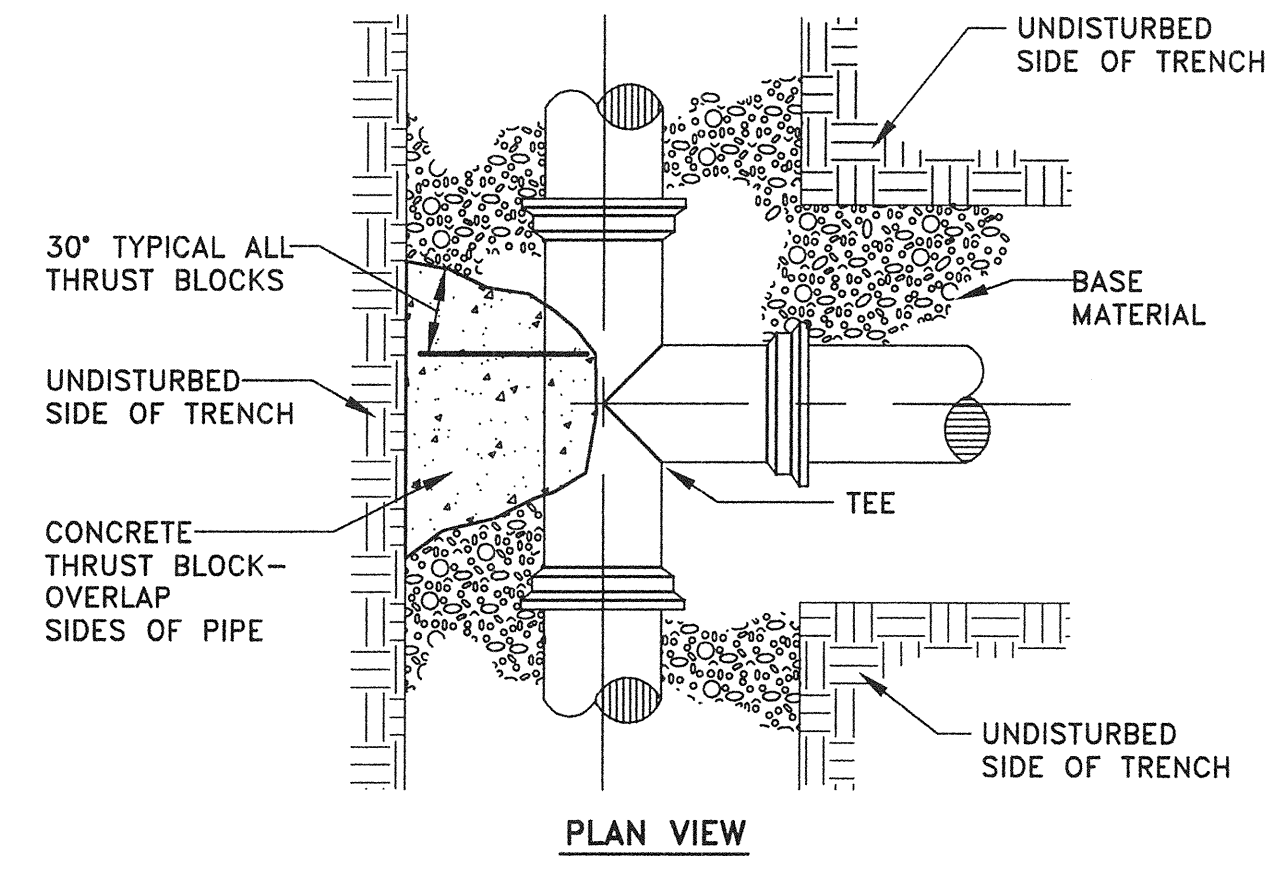
THRUST BLOCK NOTES

1. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.
2. 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

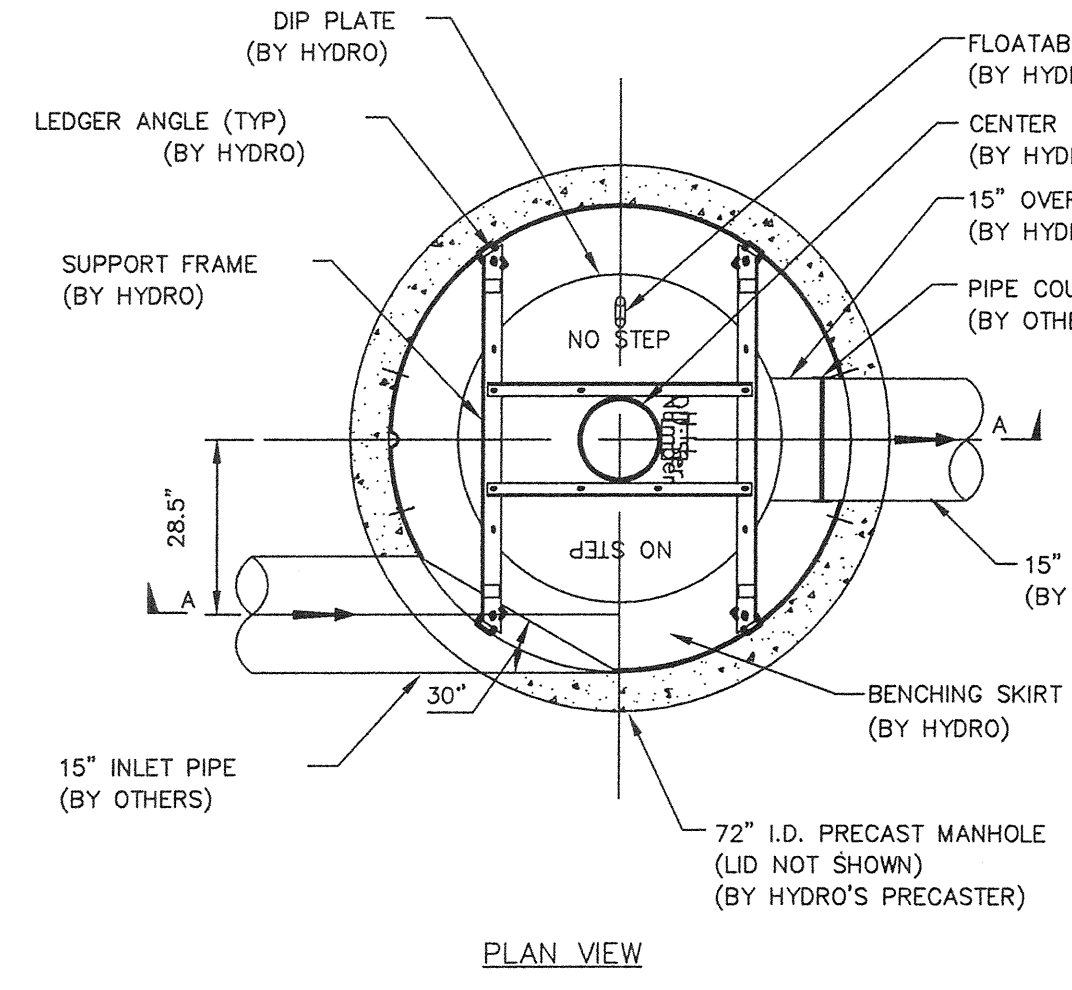
PIPE SIZE	1/32 BEND	1/16 BEND	1/8 BEND	1/4 BEND	TEES/CAPS
4"	1.8	3.6	7.0	12.8	9.1
6"	3.7	7.3	14.3	26.4	8.7
8"	6.4	12.6	24.7	45.5	32.2

BEARING SURFACE REQUIRED IN SQUARE FEET

NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS



TYPICAL THRUST BLOCK PLACEMENT ON TEES
N.T.S.



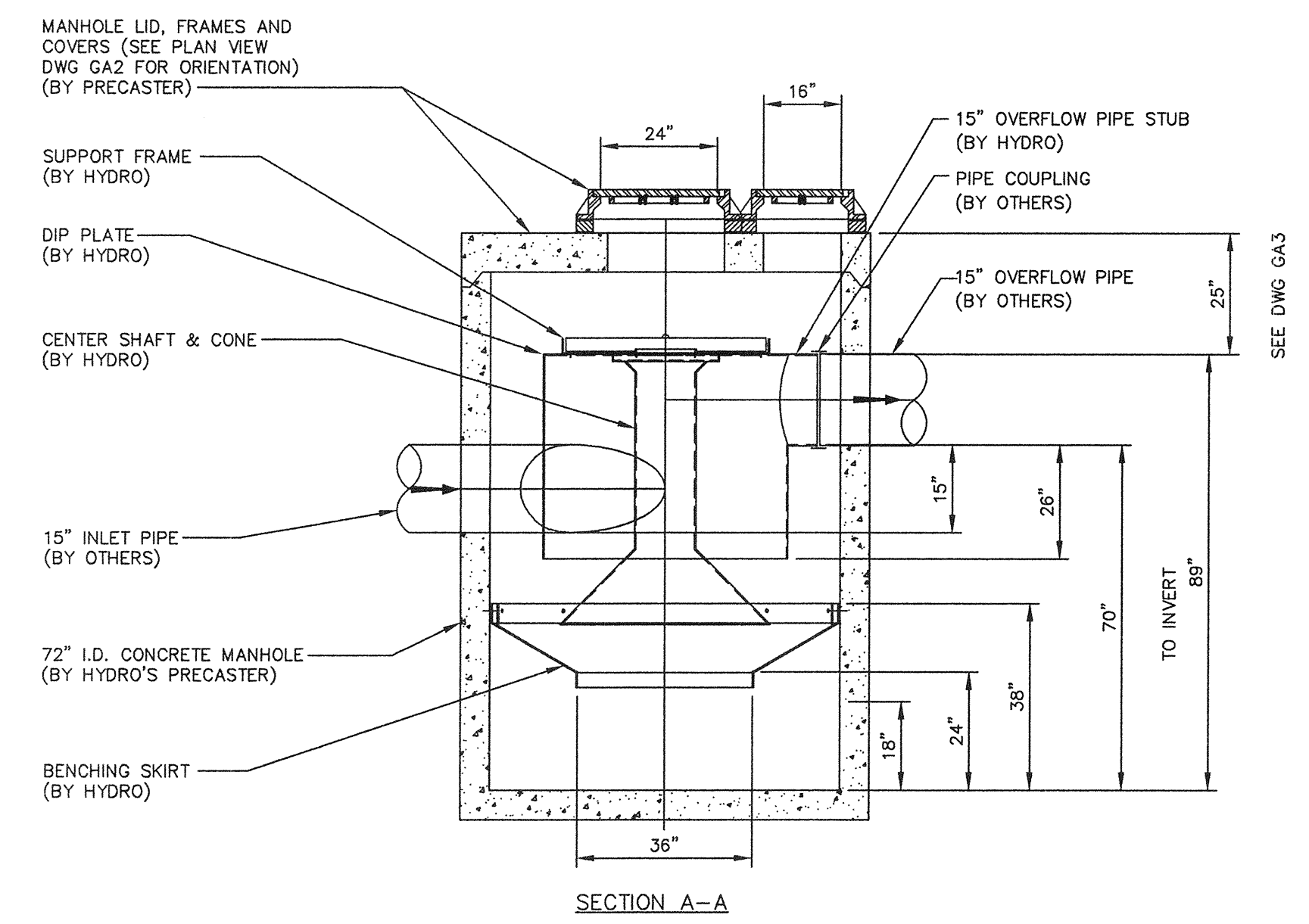
EQUIPMENT PERFORMANCE

- THE STORMWATER TREATMENT UNIT SHALL ADHERE TO THE HYDRAULIC PARAMETERS GIVEN IN THE CHART BELOW AND PROVIDE THE REMOVAL EFFICIENCIES AND STORAGE CAPACITIES AS FOLLOWS:
1. PERFORMANCE OBJECTIVES: THE STORMWATER TREATMENT DEVICE SHALL BE APPROVED BY MAINE DEP FOR A TOTAL SUSPENDED SOLIDS (TSS) REMOVAL RATING OF 60% FOR A ONE YEAR PEAK FLOW OF 3.58 CFS. ADDITIONALLY, THE TREATMENT CHAMBER MUST BE CAPABLE OF REMOVING GREATER THAN 50% OF ALL PARTICLES IN THE RANGE OF 300-425 MICRONS AT THE PEAK TREATMENT FLOW RATE LISTED BELOW.
 2. 1-1/2" STORM FLOW: 3.58 CFS
 3. PEAK TREATMENT FLOW: 8.0 CFS
 4. SEDIMENT STORAGE CAPACITY: 2.1 CU. YD.
 5. OIL STORAGE CAPACITY: 230 GAL.
 6. SEDIMENT SHALL BE STORED IN A ZONE THAT IS ISOLATED FROM THE MAIN FLOW PATH AND PROTECTED FROM REINTRINMENT BY A BENCHING SKIRT.

HYDRAULIC PARAMETERS

DEPTH OF FLOW IN OVERFLOW PIPE AT	cfs	INCHES
ESTIMATED HEADLOSS AT	*	INCHES

* HEADLOSS IS DEFINED AS THE DIFFERENCE BETWEEN STATIC WATER LEVEL AT THE INLET OF THE DOWNSTREAM DEFENDER TO THE FREE WATER SURFACE IN THE OVERFLOW PIPE, ASSUMING FREE DISCHARGE.



6' DIAMETER DOWNSTREAM DEFENDER OIL/WATER SEPARATOR
N.T.S.

NOTE: CONFIRM ALL DIMENSIONS WITH PRODUCT MANUFACTURER.

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Issued For: CONSTRUCTION

Revisions:
JUNE 26, 2007 - REVISED UTILITY AND ROOF DRAINAGE
JULY 17, 2007 - CONSTRUCTION DRAWINGS

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Title: UTILITY AND DRAINAGE DETAILS

Scale: NONE

North: Sheet No. **11**

