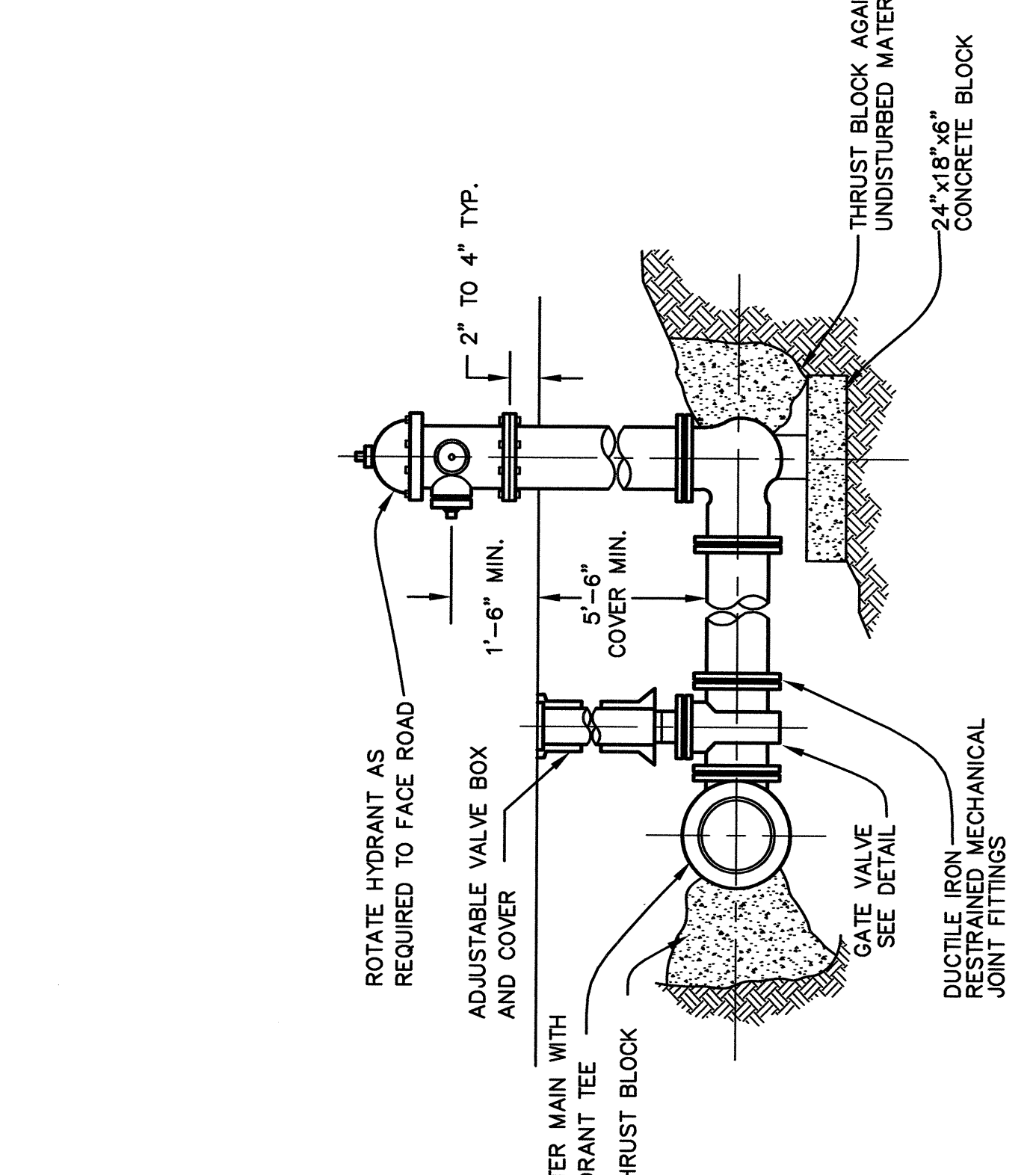
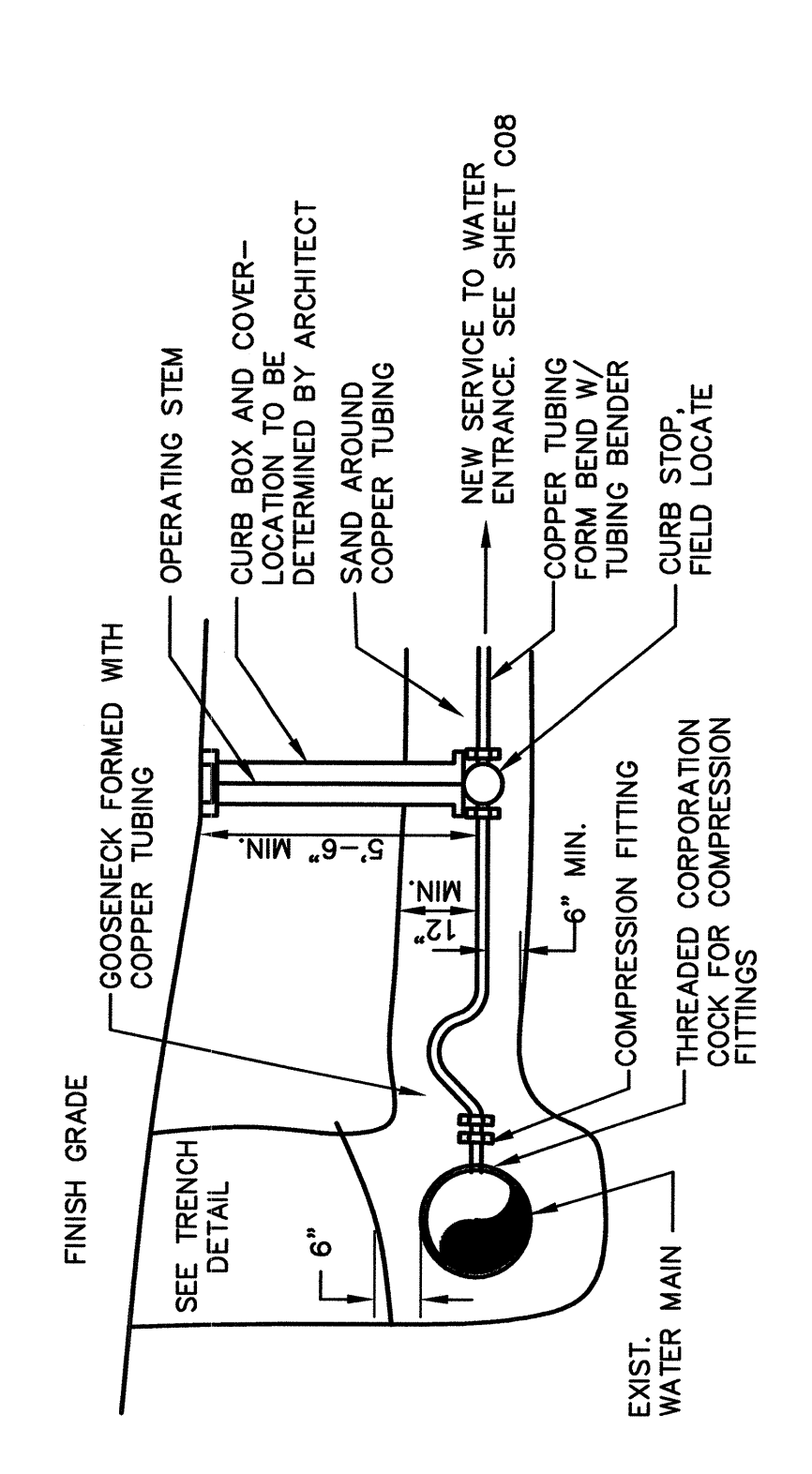


THRUST BLOCK DETAILS
NOT TO SCALE



- NOTES:
1. BARREL OF HYDRANT TO BE POLY WRAPPED FROM TOP OF SHOE TO GROUND LINE.
 2. HYDRANT SHALL MEET THE PORTLAND WATER DISTRICT STANDARDS.

HYDRANT ASSEMBLY DETAIL
NOT TO SCALE



TYPICAL SERVICE CONNECTION DETAIL
NOT TO SCALE

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THRUST BLOCK SCHEDULE
SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL

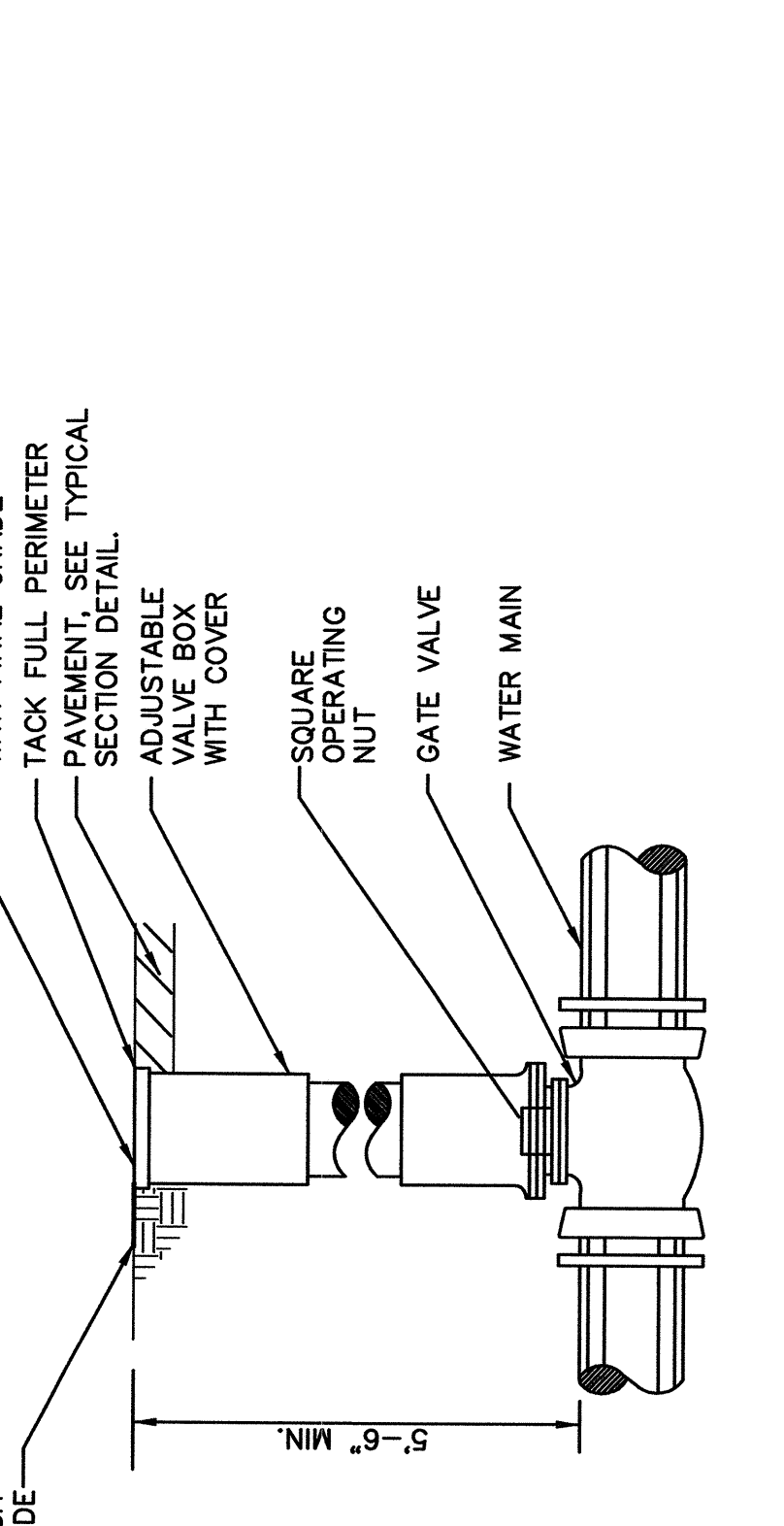
REACTION TYPE	PIPE SIZE											
	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"
A	0.89	2.19	3.92	5.57	8.62	10.91	15.41	18.02	24.08	34.64	53.83	77.39
B	0.85	1.55	2.76	4.19	6.09	8.37	10.89	13.87	17.01	24.49	38.06	54.72
C	0.48	1.19	2.12	3.01	4.66	5.91	8.34	9.71	13.02	18.75	29.13	41.88
D	0.25	0.60	1.08	1.54	2.37	3.01	4.25	4.97	6.64	9.96	14.85	21.35
E	0.13	0.30	0.54	0.77	1.19	1.52	2.12	2.51	3.33	4.79	7.45	10.71

TEST PRESSURE TO BE 200 PSI MIN. AT LOW END OF THE TEST SECTION. SQUARE FEET OF CONCRETE THRUST BLOCKING FOR OTHER TEST PRESSURES IS DIRECTLY PROPORTIONAL TO THE ABOVE TABLE. NUMBERS DOUBLE.

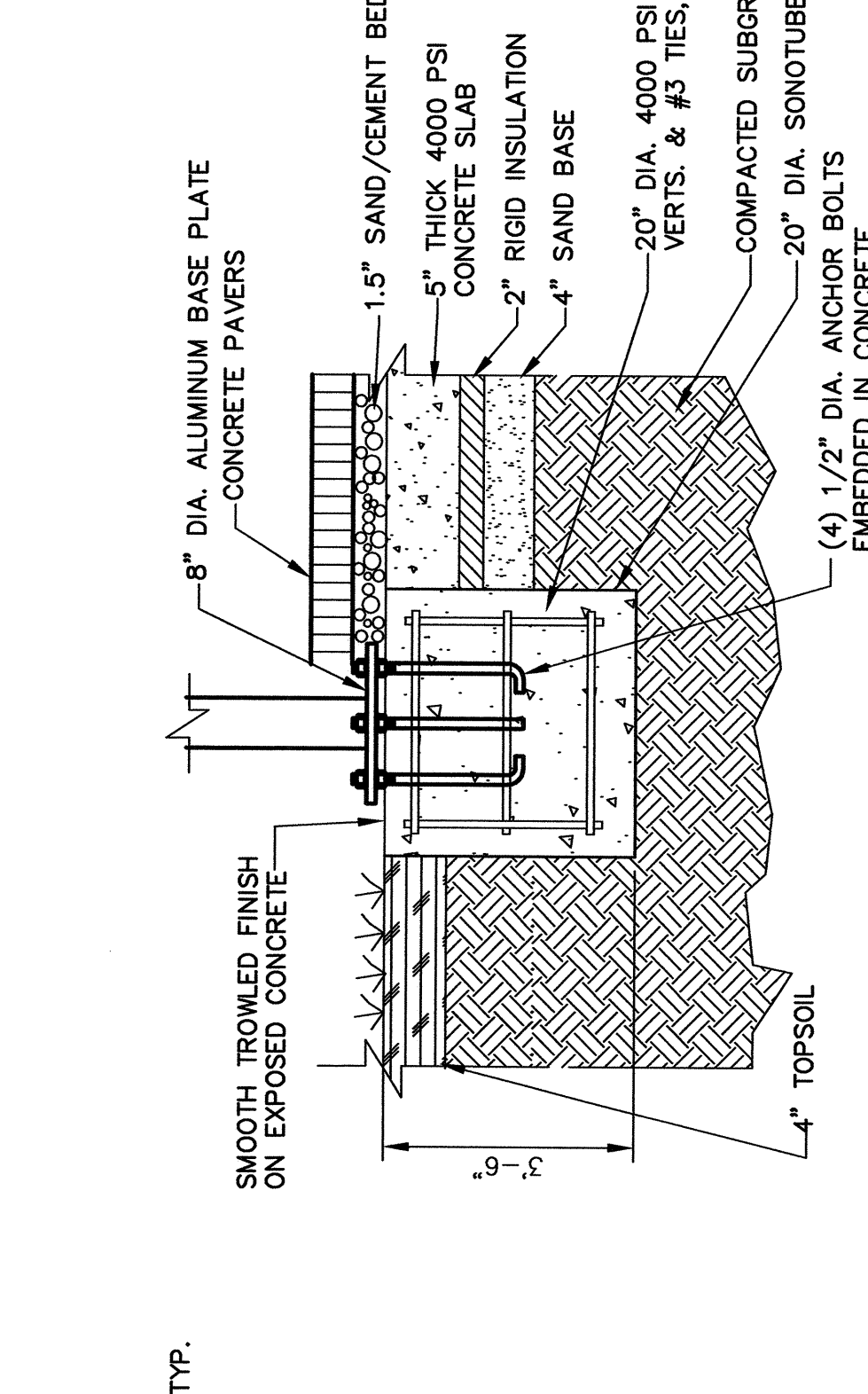
OTHER TEST PRESSURES ABOVE REACTIONS

- NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. 5" CONCRETE SLAB NO JOINTS SHALL BE COVERED WITH CONCRETE.
 2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
 3. PLACE CONCRETE PATO BLOCKS IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCK.
 4. REQUIREMENTS OF THE ABOVE TABLE PRESUME MINIMUM SOIL BEARING OF 1 TON PER SQUARE FOOT, AND MAY BE VARIED BY THE ENGINEER TO MEET OTHER CONDITIONS ENCOUNTERED.
 5. MEGA-LUG RETAINER GLANDS ARE REQUIRED FOR ALL MECHANICAL JOINTS. THESE GLANDS DO NOT REDUCE THE REQUIREMENTS FOR THRUST RESTRAINT.
 6. ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE OR BUILDING PAPER PRIOR TO INSTALLATION OF CONCRETE RESTRAINT.
 7. THREADED ROD SHALL BE ANSI A242 F750 PIPE RESTRAINT NUTS TO MATCH ANWA C111. THREADED RODS AND NUTS TO BE FIELD COATED WITH BITUMINOUS PAINT.
 8. THRUST RESTRAINT IS REQUIRED FOR ALL TEES, BENDS, REDUCERS, CAPS, PLUGS, OR GROSSES.
 9. INSTALL LIFT HOOKS INTO THRUST BLOCKS AT END CAPS AND PLUGS.
 10. ALLOW CONCRETE THRUST BLOCKS TO CURE AT LEAST TWO DAYS PRIOR TO BACK FILLING.
 11. CONCRETE FOR THRUST BLOCKS SHALL BE 3,000 PSI DESIGN MIX.

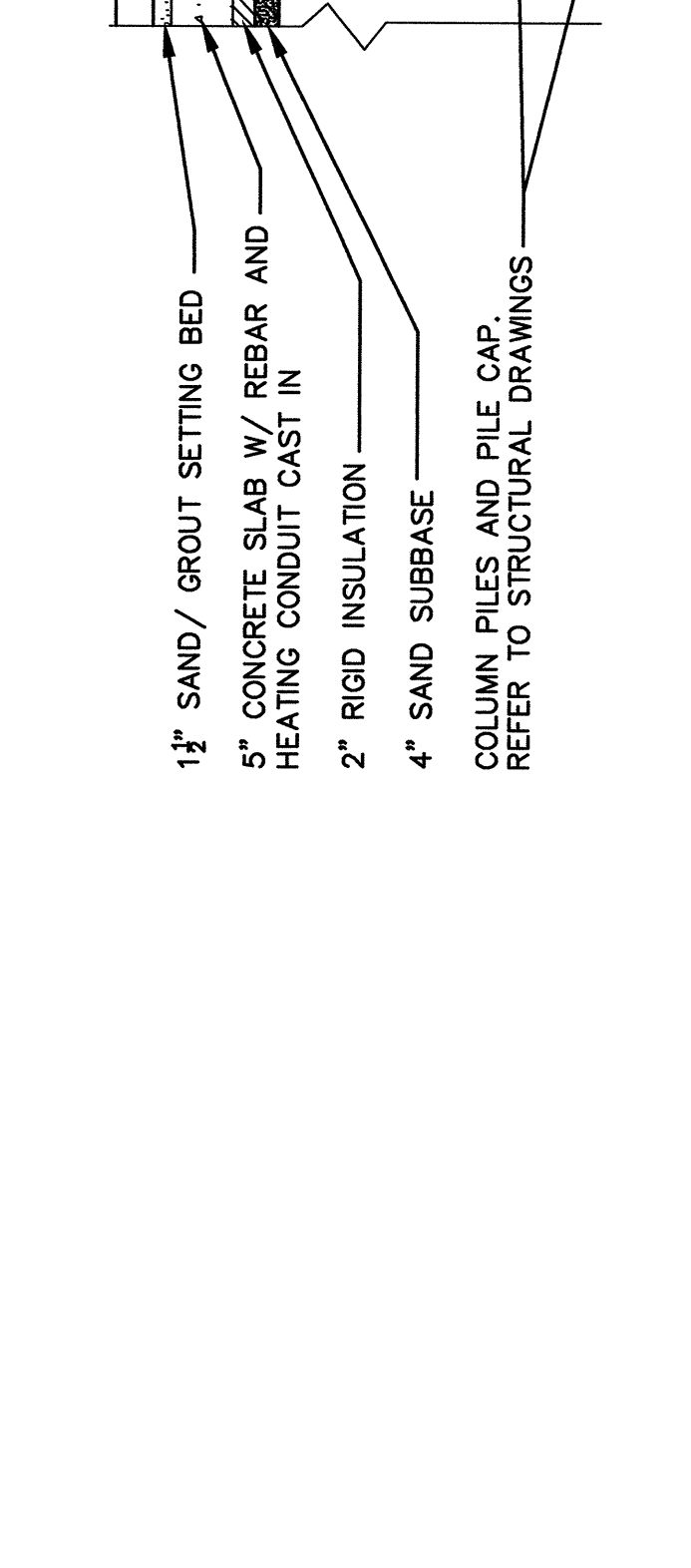
BURIED GATE VALVE DETAIL
NOT TO SCALE



CONCRETE SIGN BASE DETAIL
NOT TO SCALE



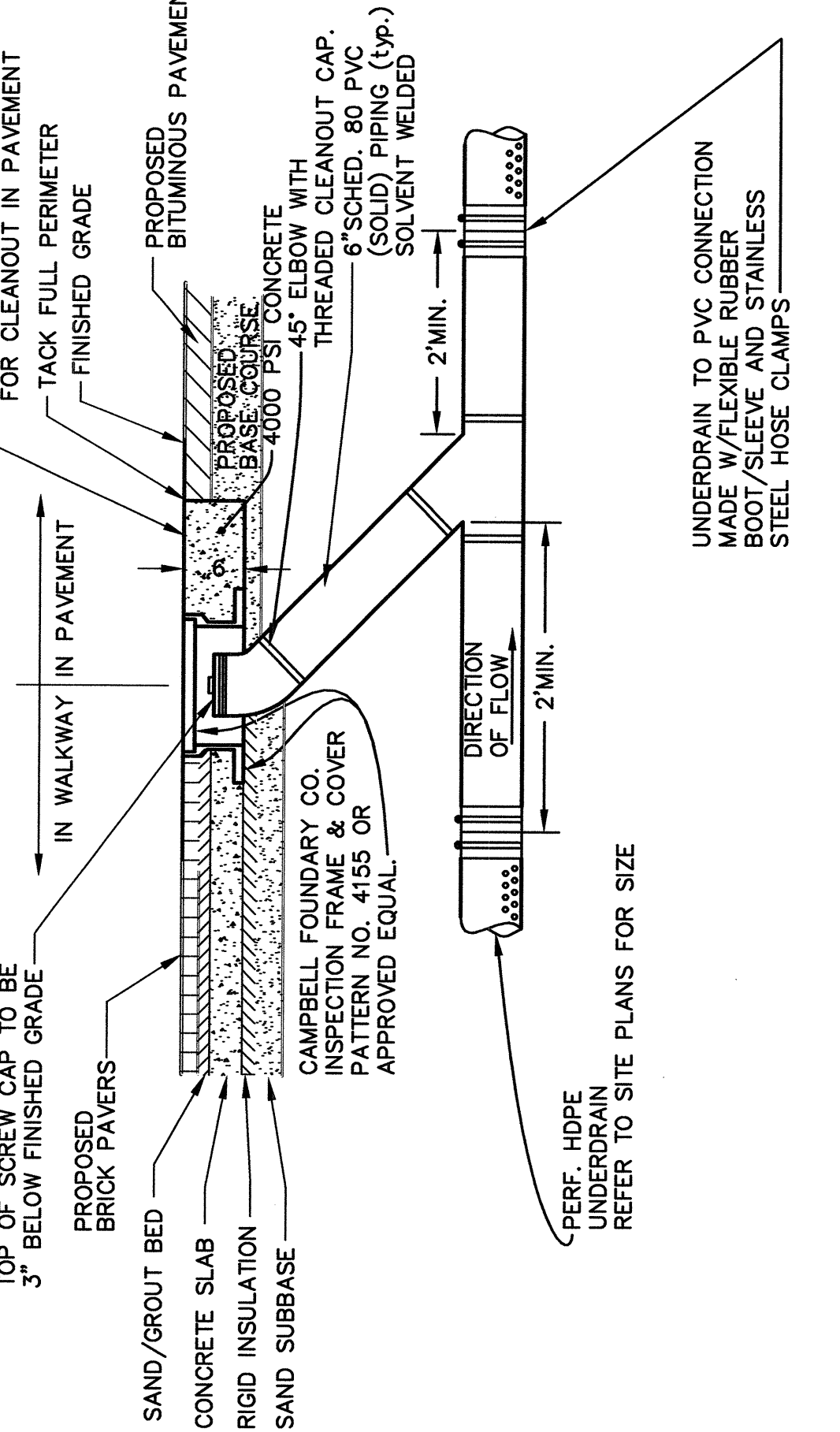
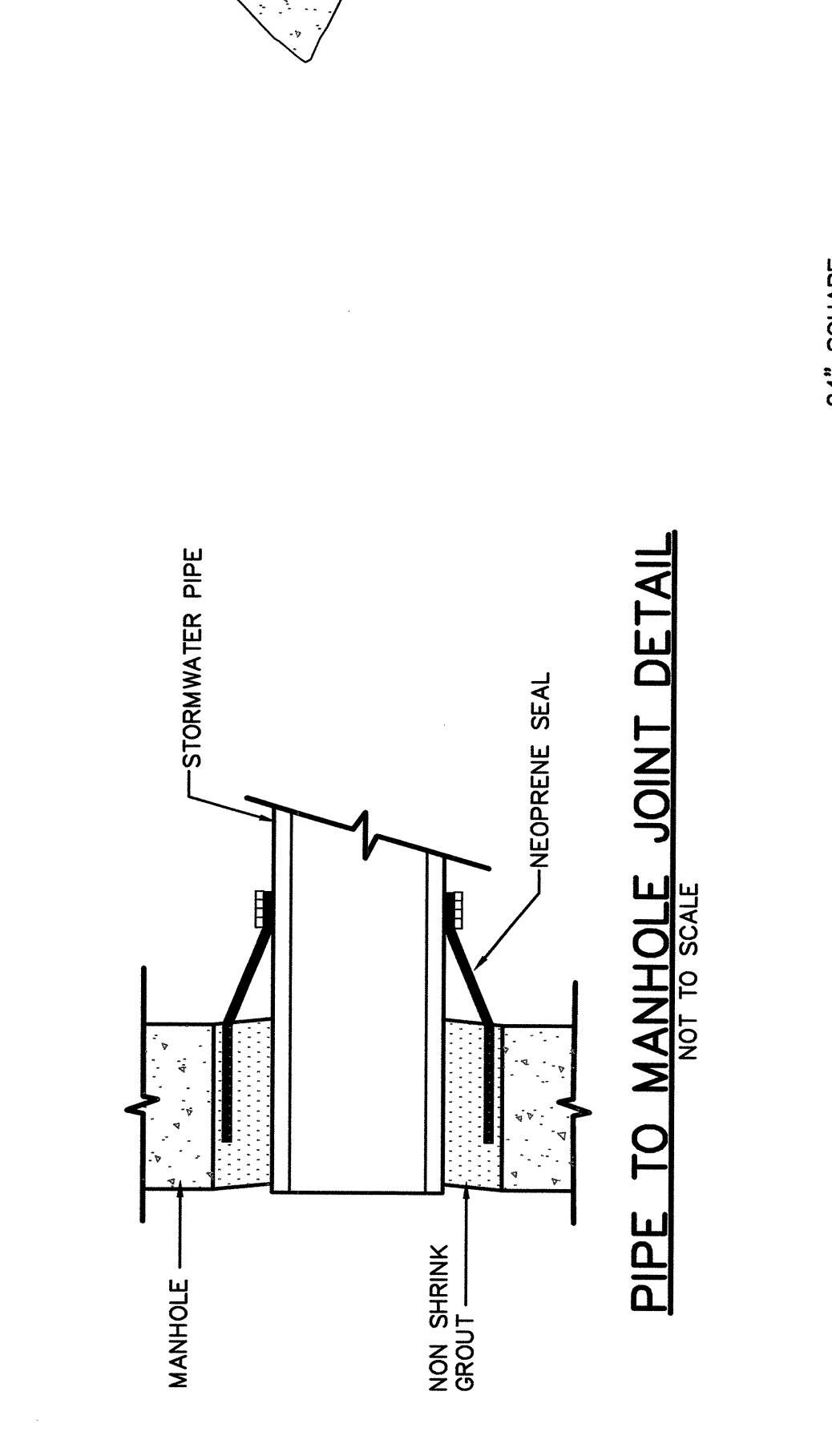
PIPE TO MANHOLE JOINT DETAIL
NOT TO SCALE



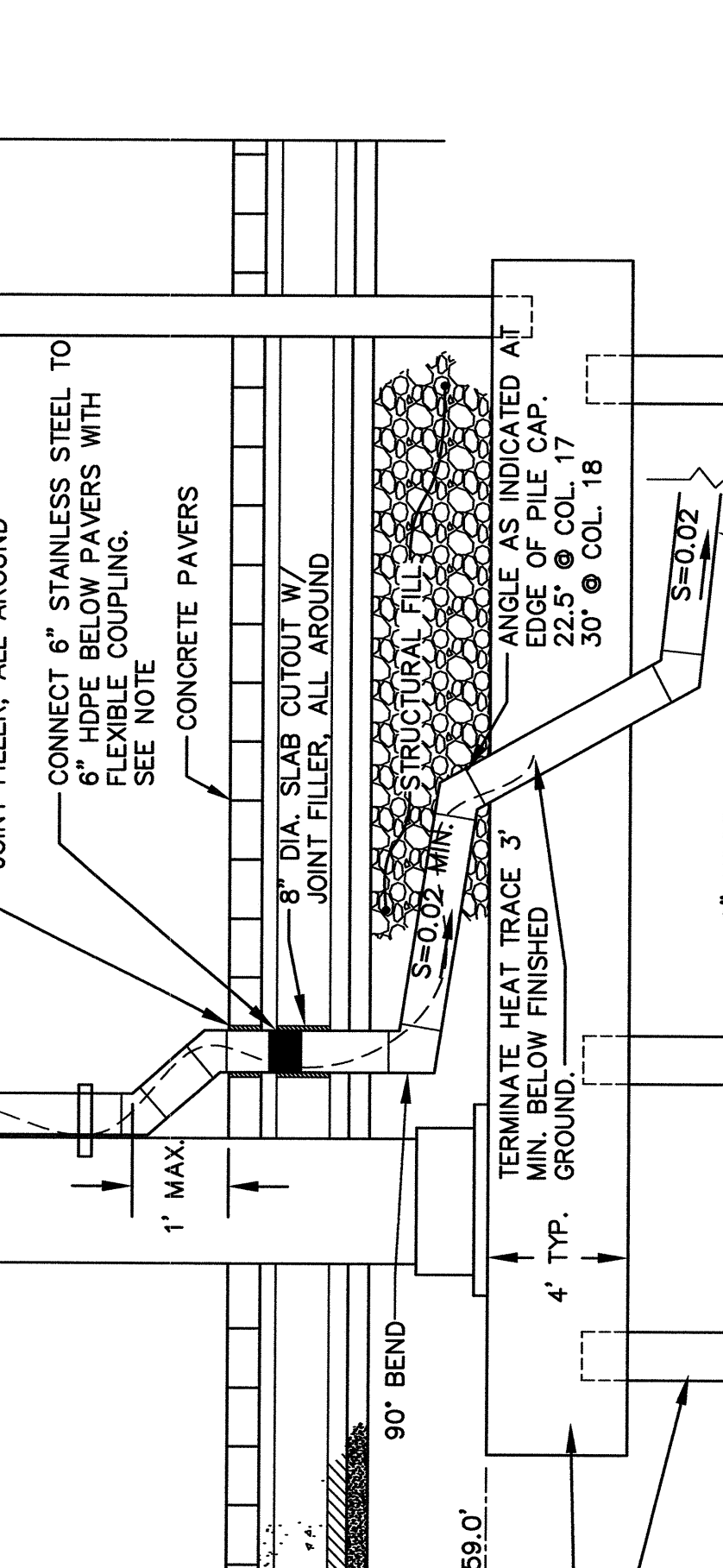
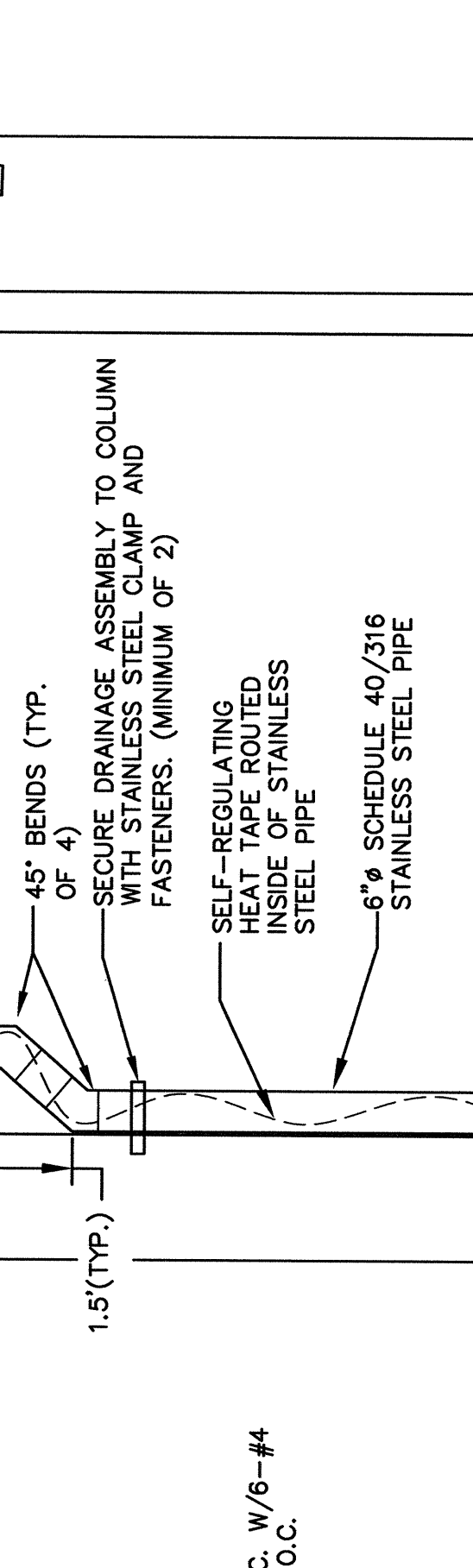
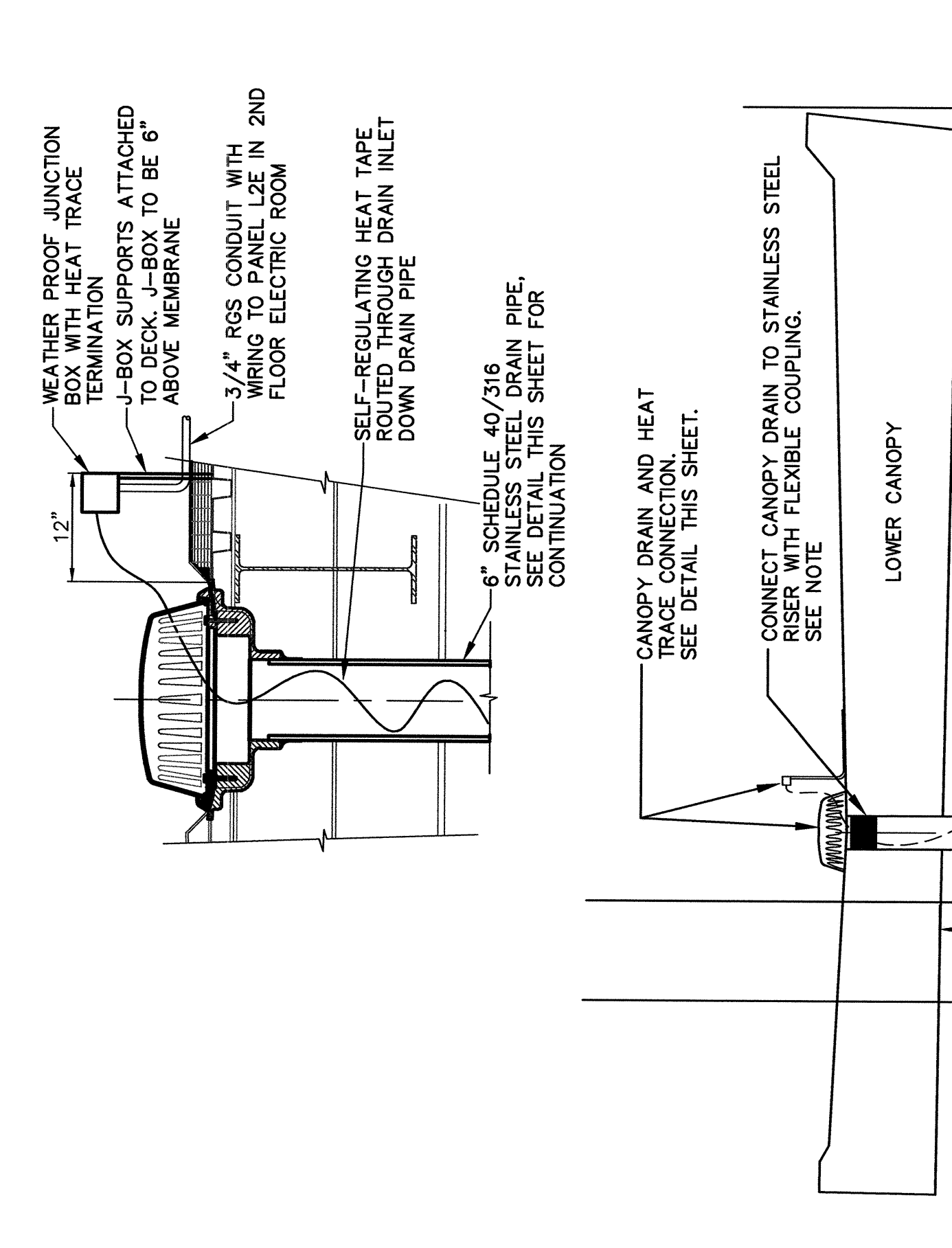
UNDERDRAIN CLEANOUT
NOT TO SCALE



CANOPY ROOF DRAIN RISER
NOT TO SCALE



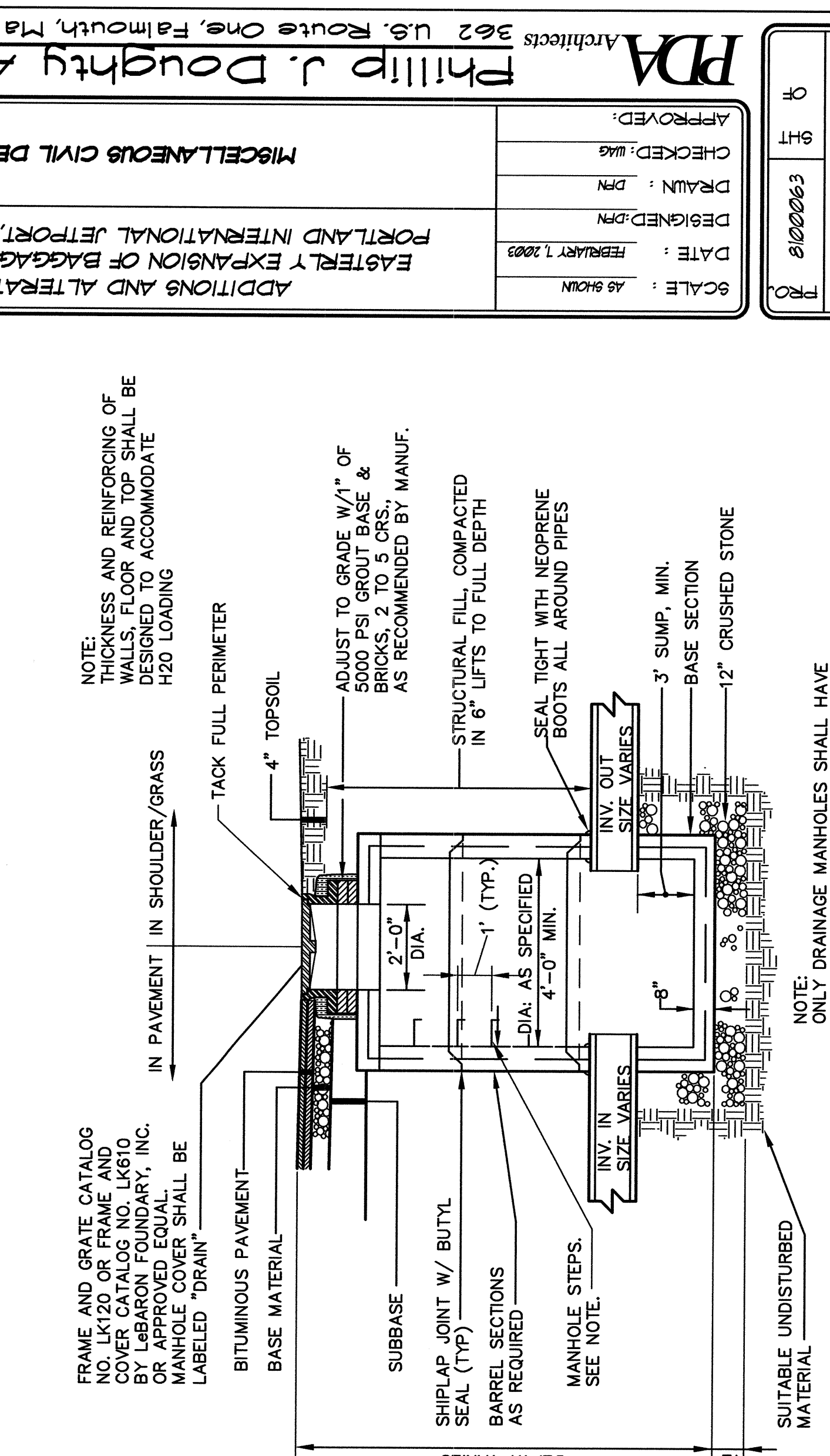
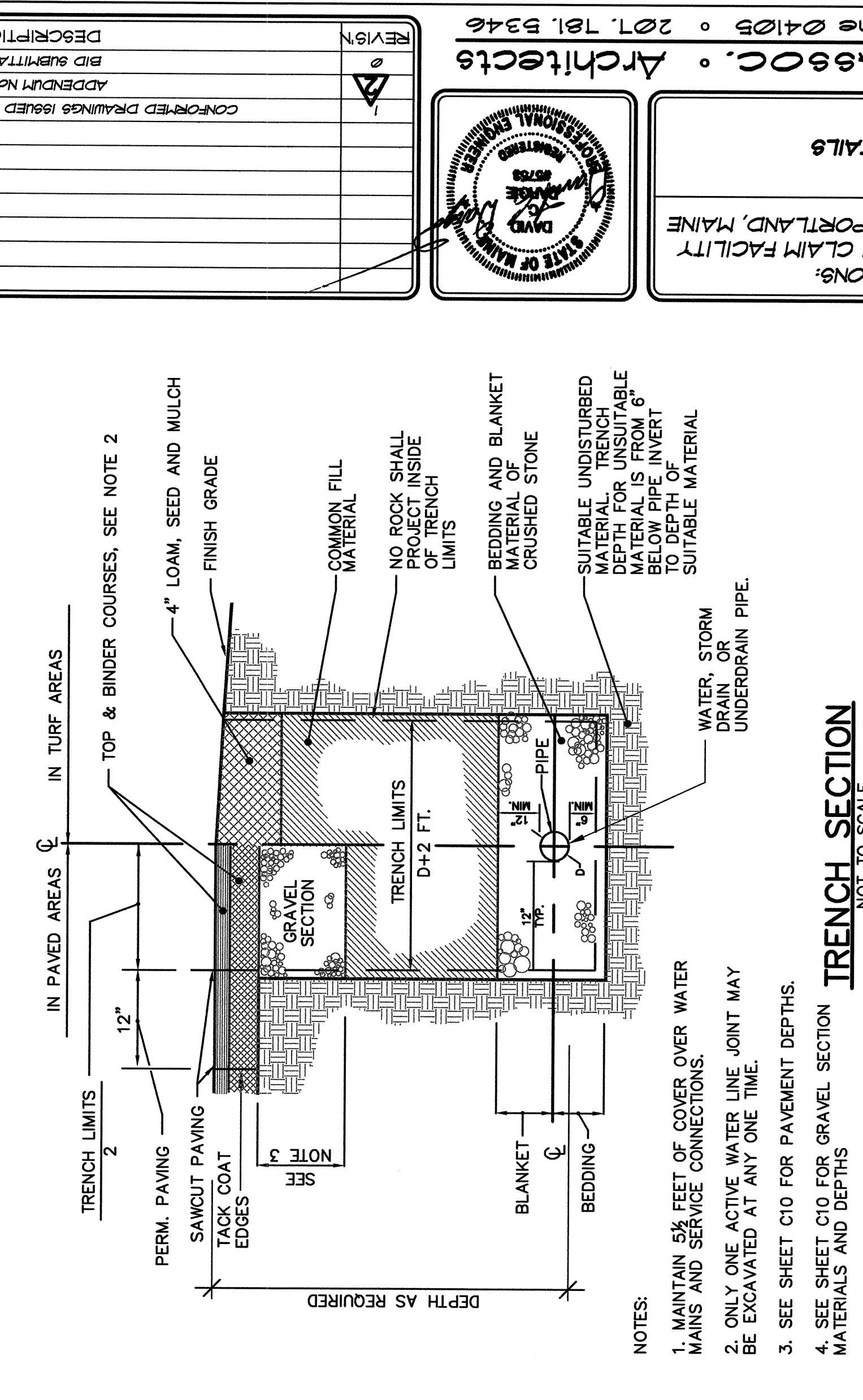
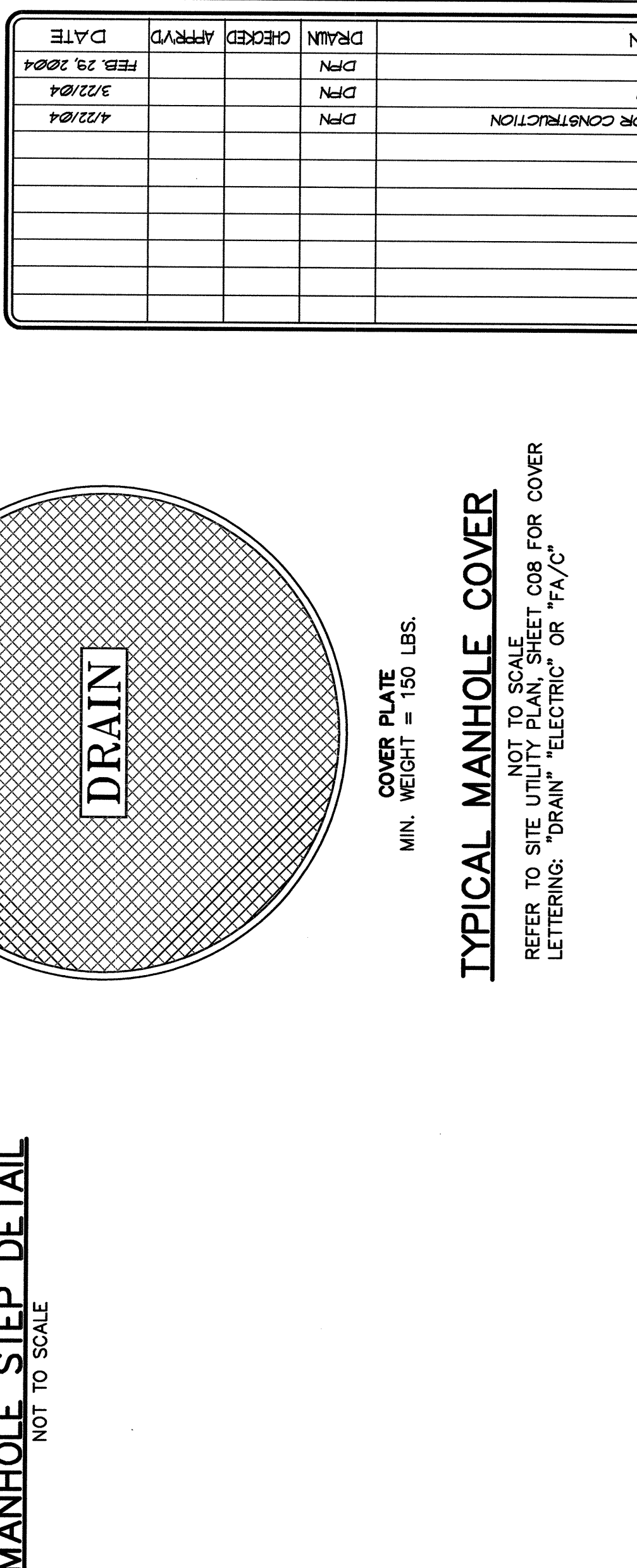
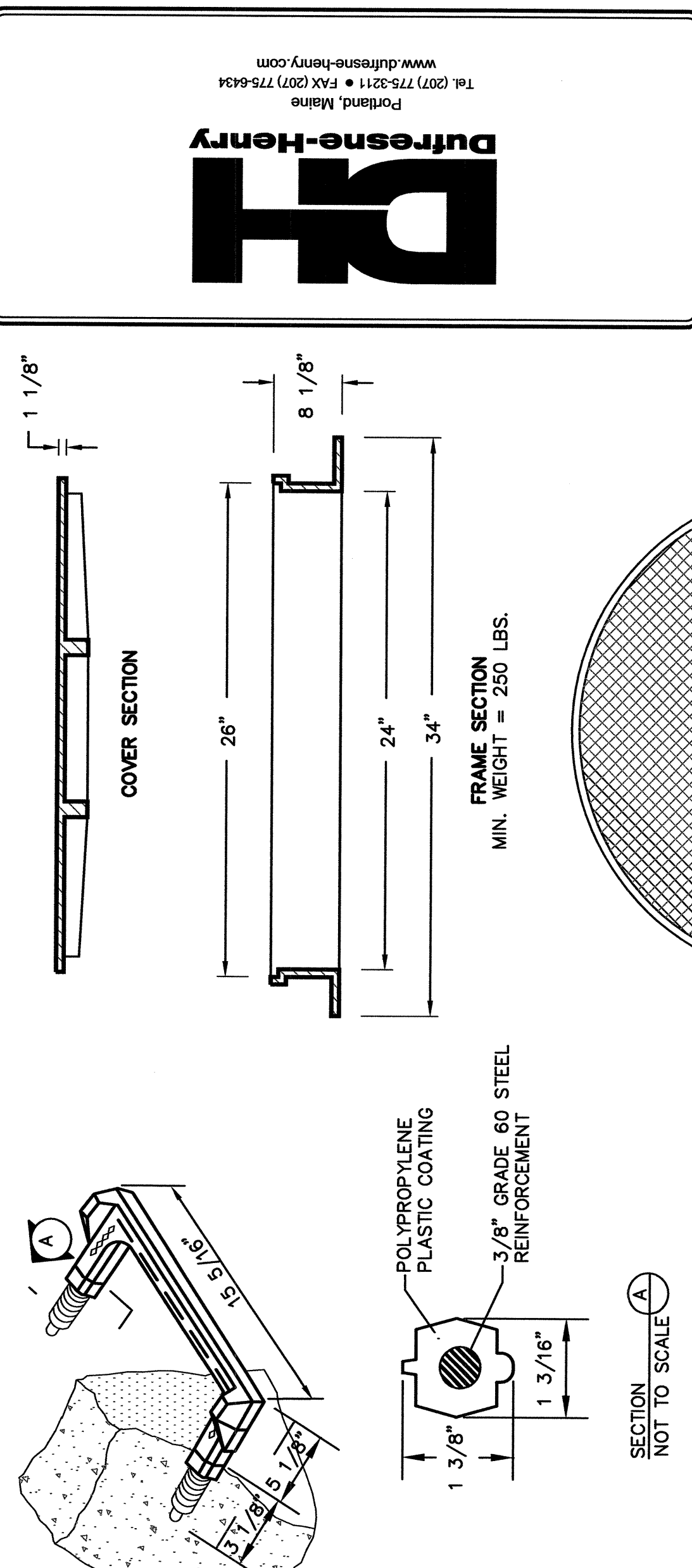
TRENCH SECTION
NOT TO SCALE



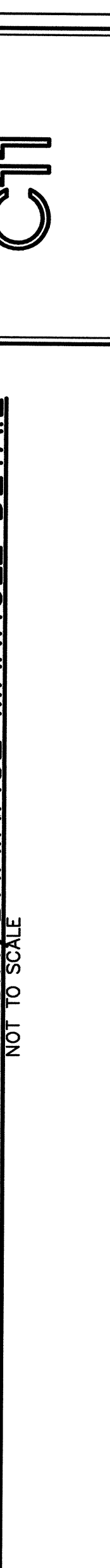
UNDERDRAIN CLEANOUT
NOT TO SCALE



CANOPY ROOF DRAIN RISER
NOT TO SCALE



PRECAST FLATTOP CATCH BASIN/DRAINAGE MANHOLE DETAIL
NOT TO SCALE



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362 U.S. ROUTE ONE, FALMOUTH, MAINE 04105 • 207.781.3348

CONCRETE DRAWINGS ISSUED FOR CONSTRUCTION

REVISION	DESCRIPTION	DATE
1	ADDITIONS AND ALTERATIONS: EASTERTY EXPANSION OF BAGGAGE CLAIM FACILITY PORTLAND INTERNATIONAL JETPORT, PORTLAND, MAINE	4/22/04
2	DESIGNED BY: JAS. GARDNER	4/22/04
3	DATE: 4/22/04	4/22/04

APPROVED: _____
CHECKED: _____
DESIGNED: _____
DATE: _____

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