

CITY OF PIERCE RAW WATER INTAKE

PLAN & PROFILE

CLEARWATER COUNTY, IDAHO 83546

MAYOR
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JANEAN KIKUYAMA
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CRAIG SHANTIE

PUBLIC WORKS
ERIC MASON

PUBLIC WORKS SUPERVISOR
JAMES RICHARDS

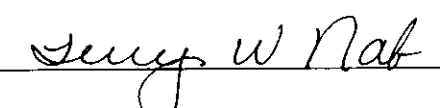
**PROGRESSIVE
ENGINEERING GROUP, INC**

 PLANNING  DESIGN  CONSTRUCTION MANAGEMENT 

1208 IDAHO STREET
LEWISTON, IDAHO 83501
PH (208) 746-5406 FAX (208) 746-9732

I, hereby certify that the PROJECT DRAWINGS were prepared by me
or under my direct supervision and that I am a duly registered Engineer
under the laws of the State of Idaho

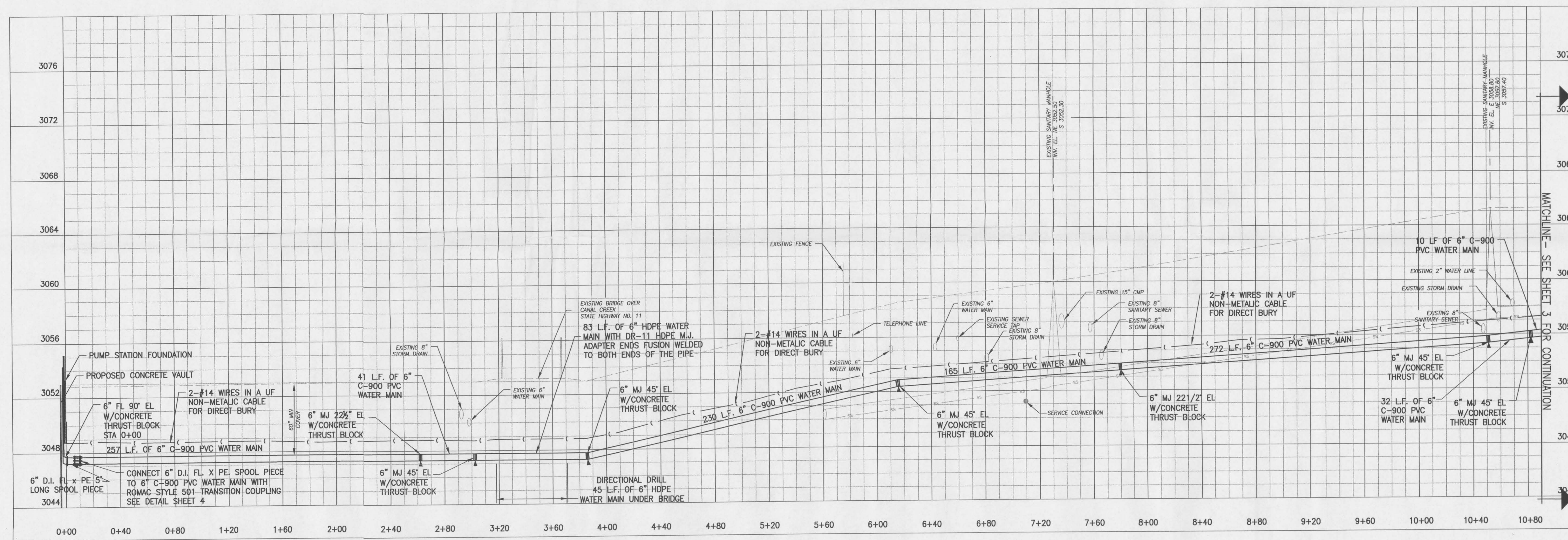
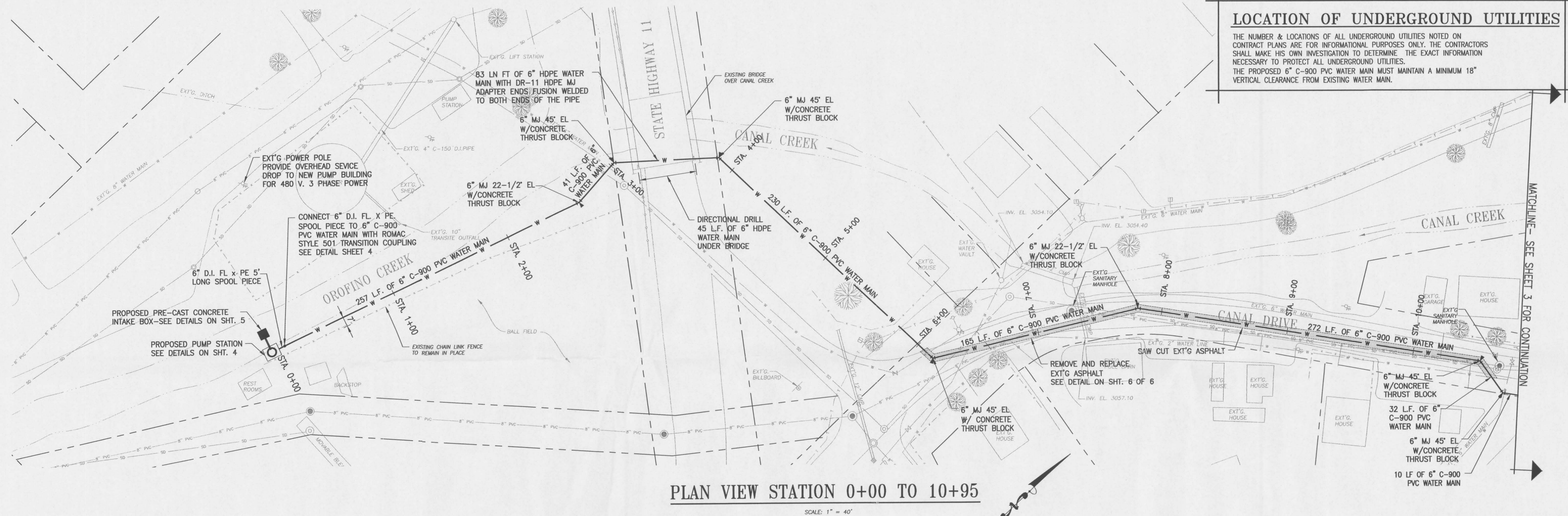
Professional Engineer's Lic #6978
Terry W. Nob, P.E.


Date Nov. 14, 2007

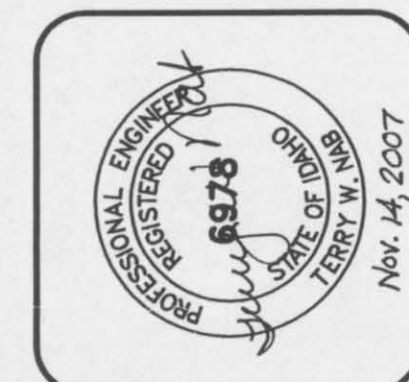
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PROJECT NO.: 07-065	
SHEET 1 OF 6	

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Owner, PROGRESS, PC3, WRW, WRW



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CITY OF PIERCE, IDAHO 83546

RAW WATER INTAKE

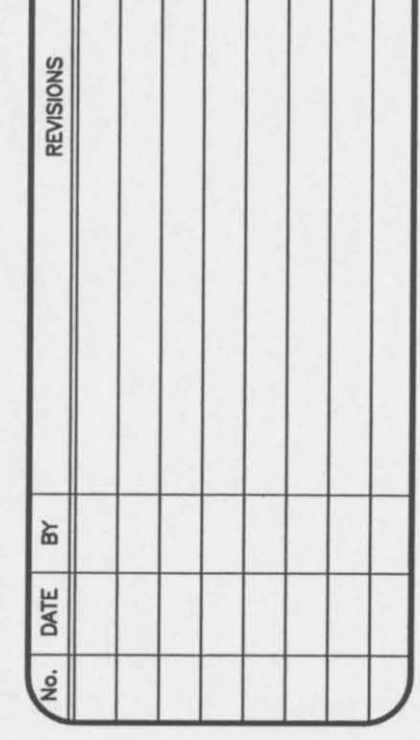
PLAN AND PROFILE

STATION 0+00 TO 10+95

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SHEET 2 OF 6	

THE NUMBER & LOCATIONS OF ALL UNDERGROUND UTILITIES NOTED ON CONTRACT PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTORS SHALL MAKE HIS OWN INVESTIGATION TO DETERMINE THE EXACT INFORMATION NECESSARY TO PROTECT ALL UNDERGROUND UTILITIES.

THE PROPOSED 6" C-900 PVC WATER MAIN MUST MAINTAIN A MINIMUM 18" VERTICAL CLEARANCE FROM EXISTING WATER MAIN.

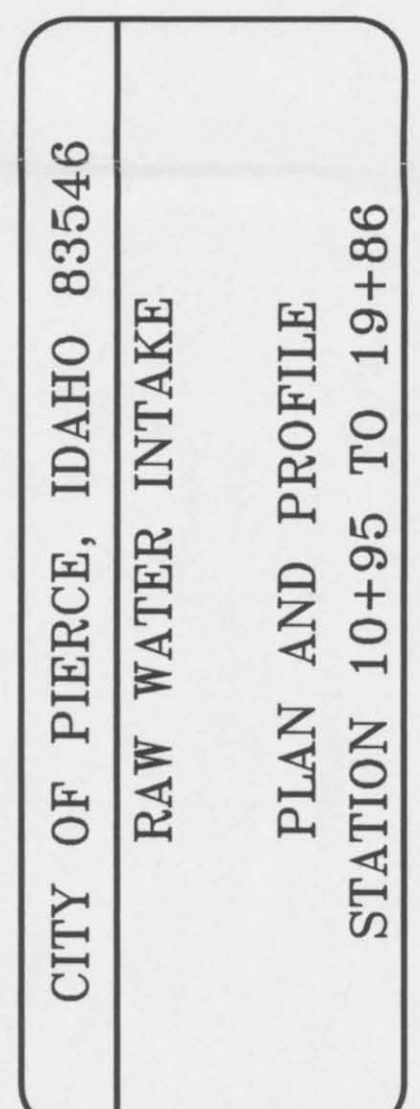


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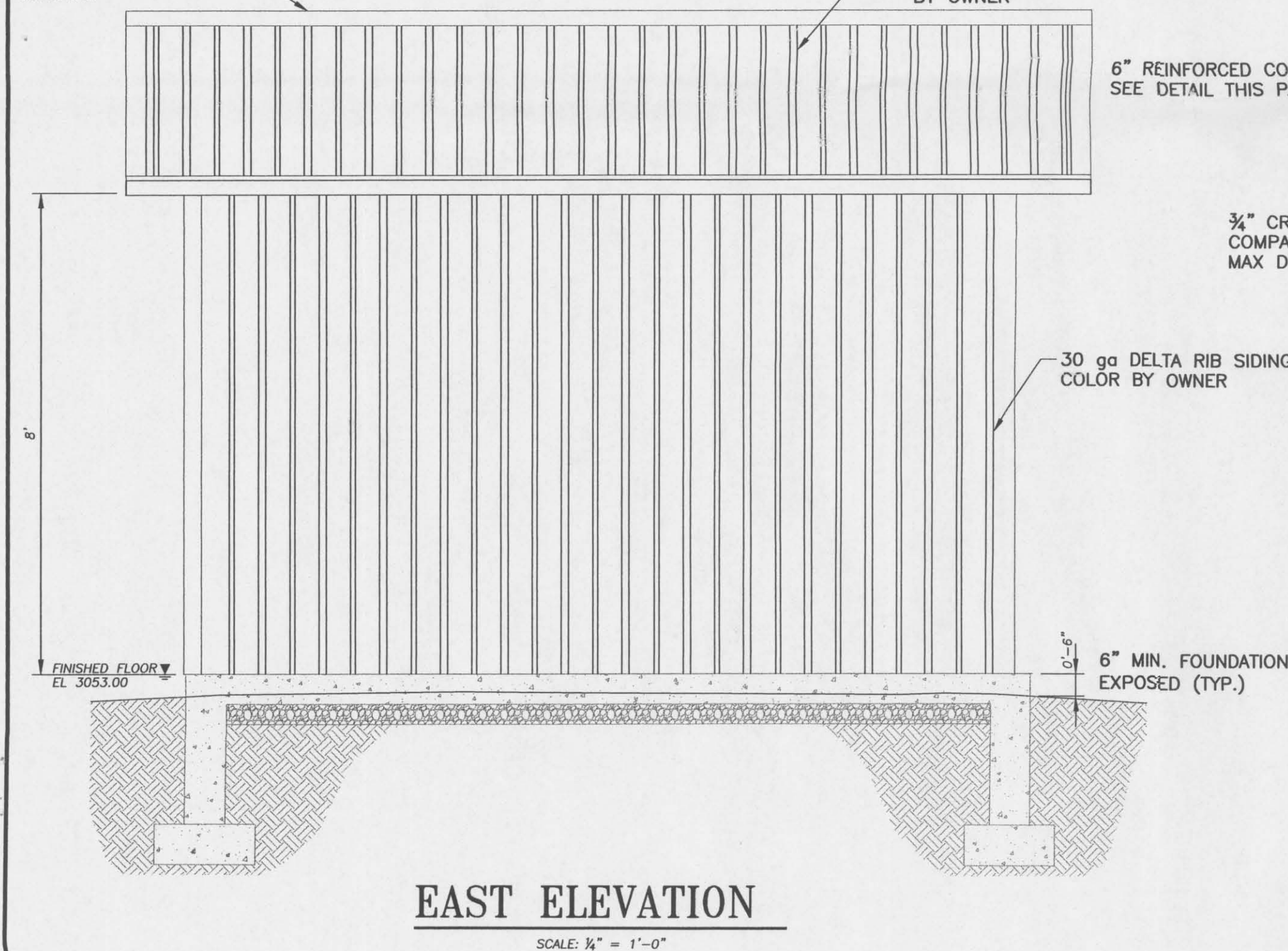
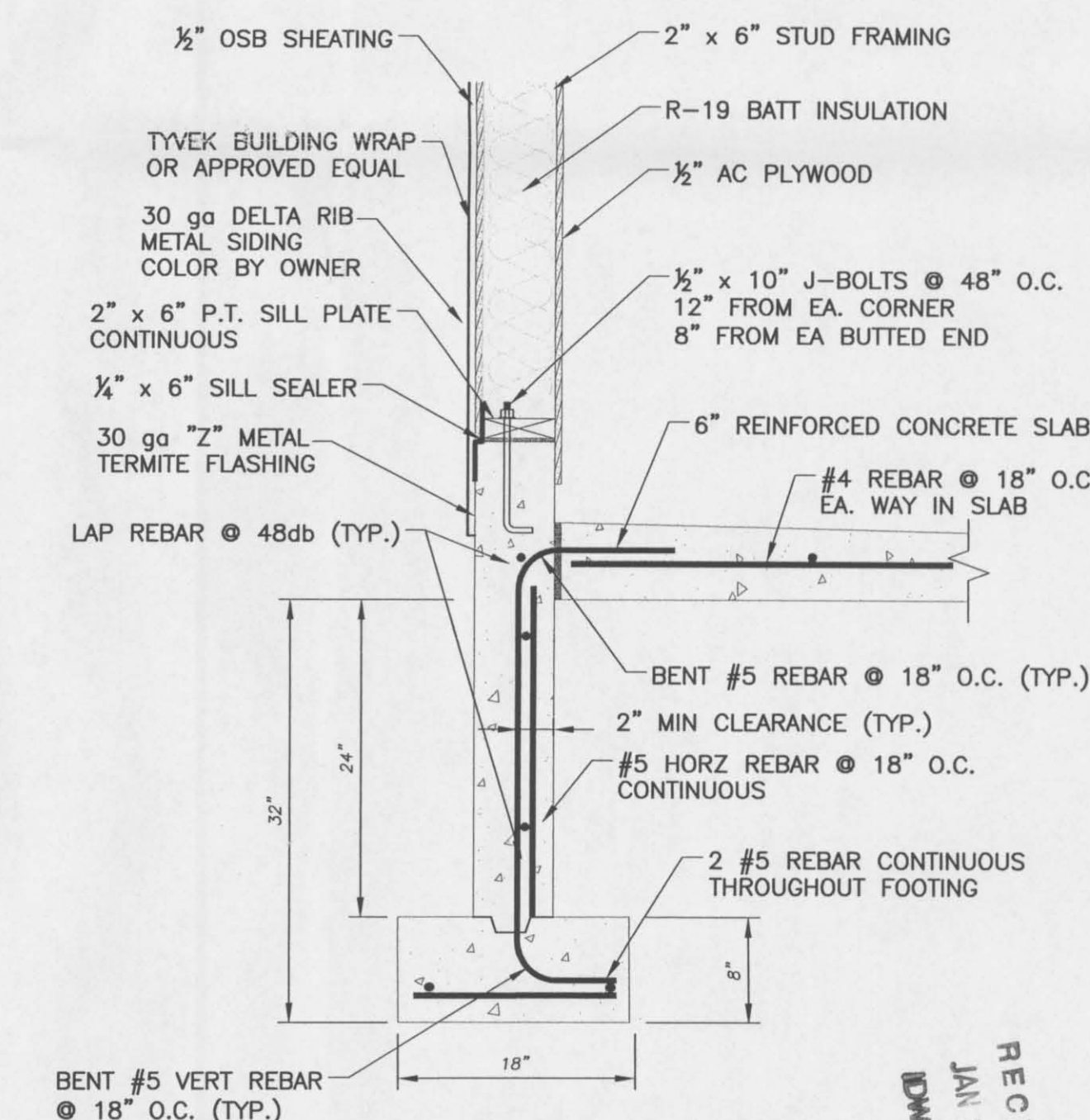
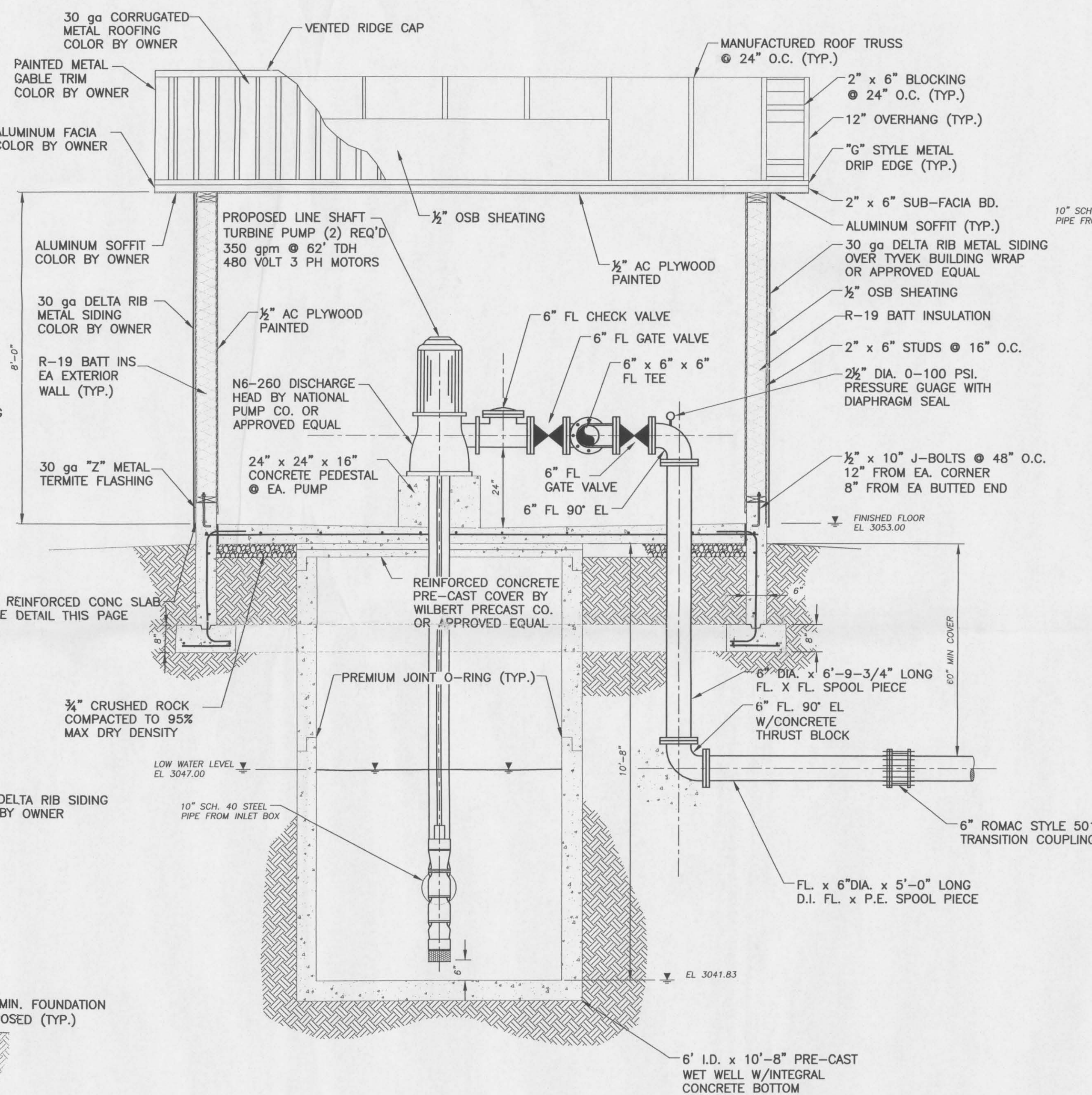
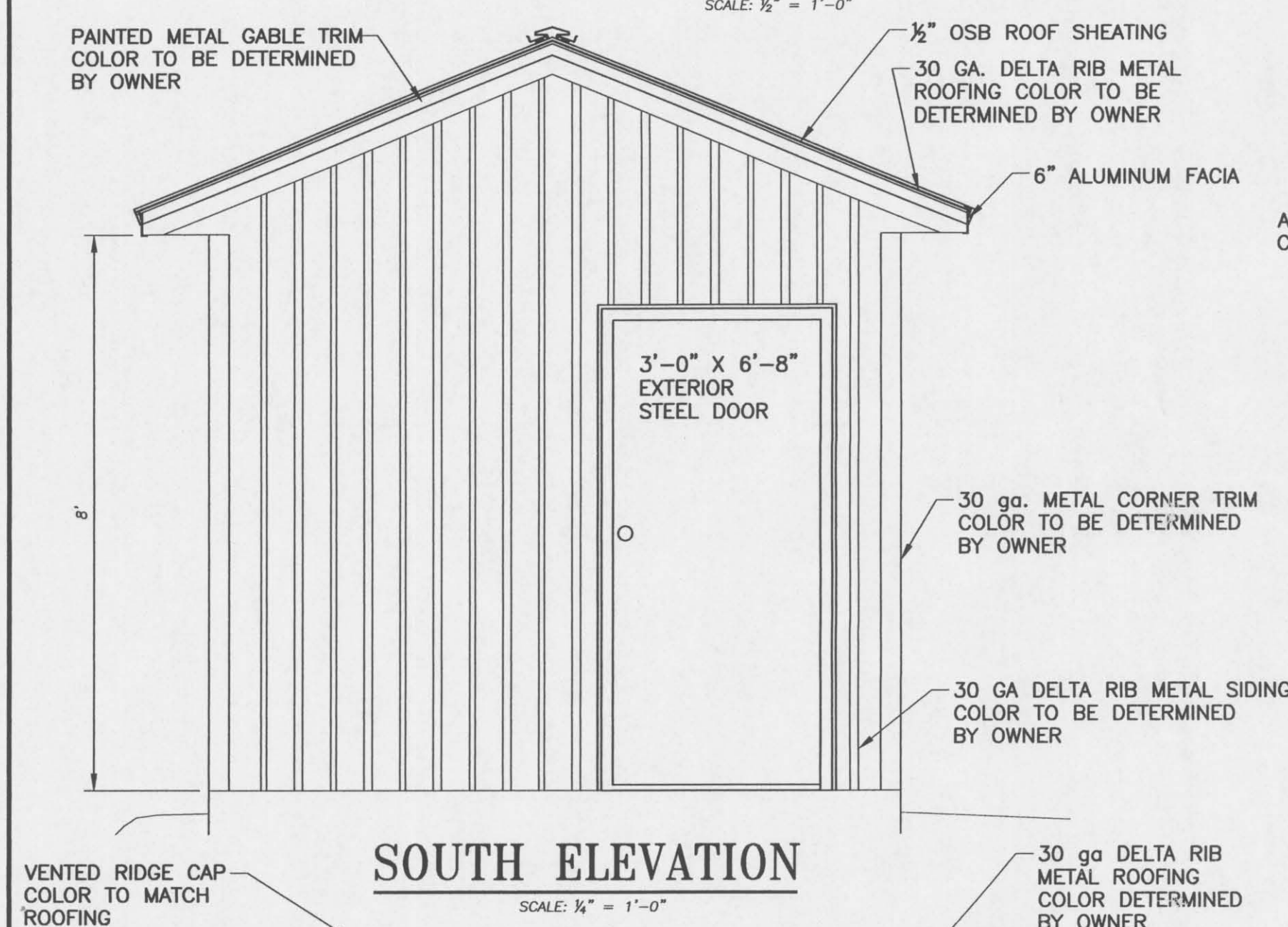
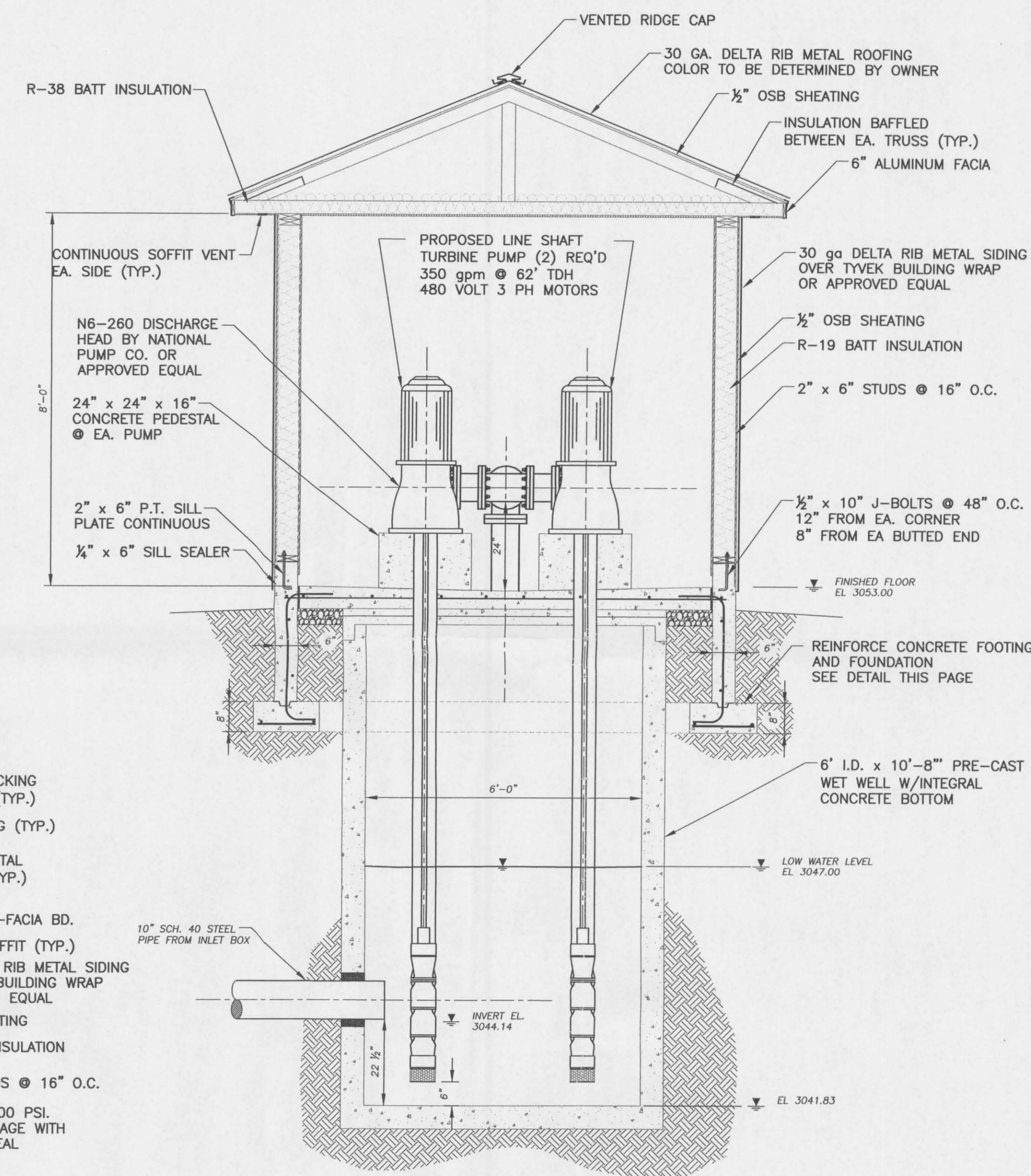
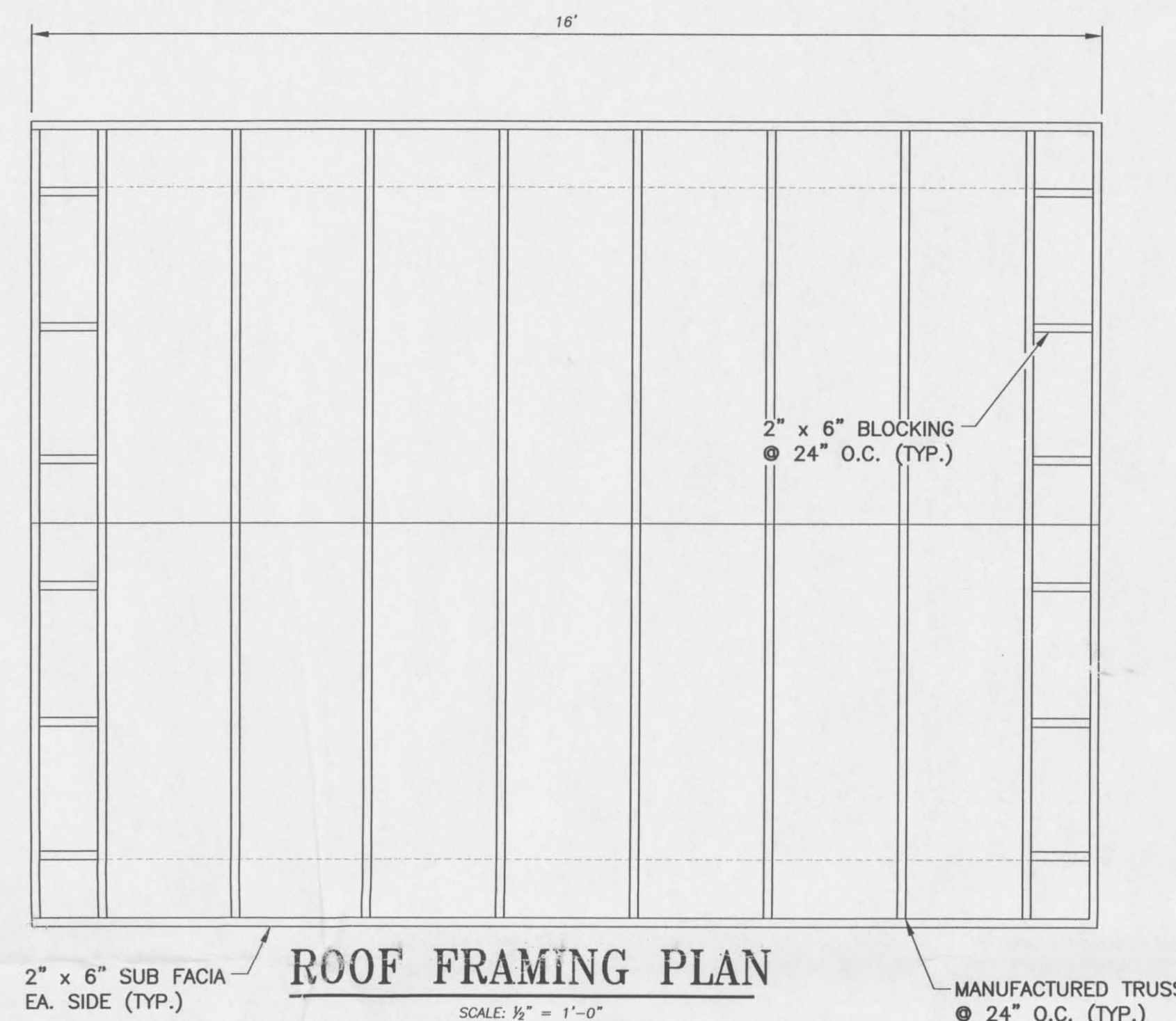
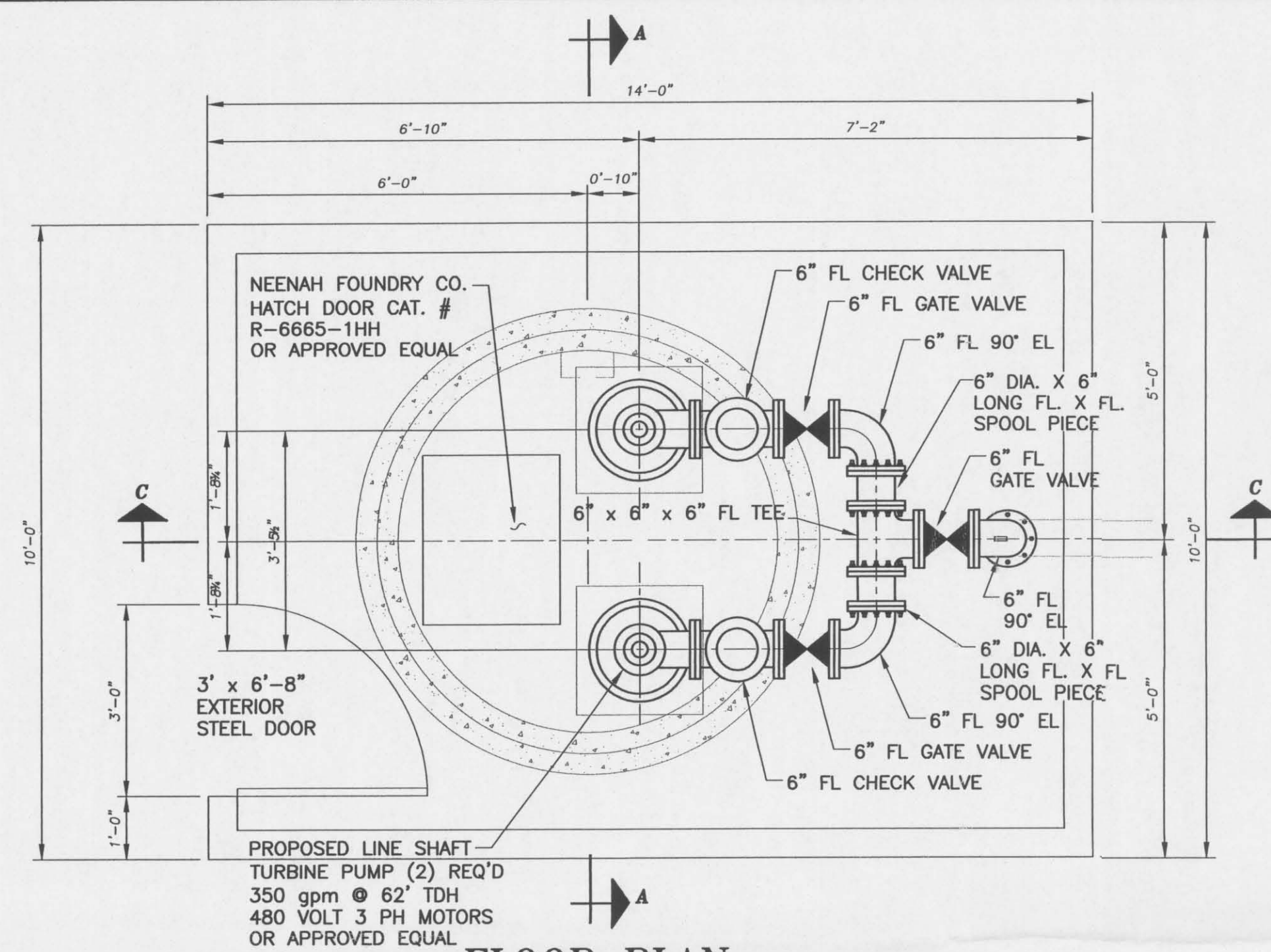
 **EQUAL
HOUSING
OPPORTUNITY**



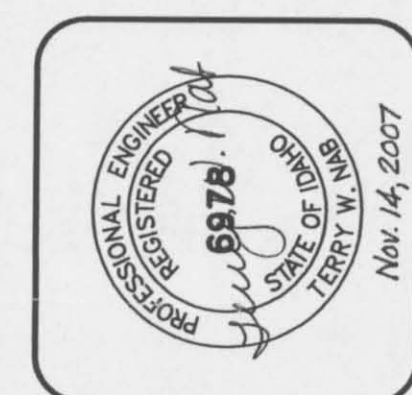
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SHEET 3 OF 6	

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CITY OF PIERCE, IDAHO 83546

RAW WATER INTAKE

PLAN, ELEVATIONS AND DETAILS

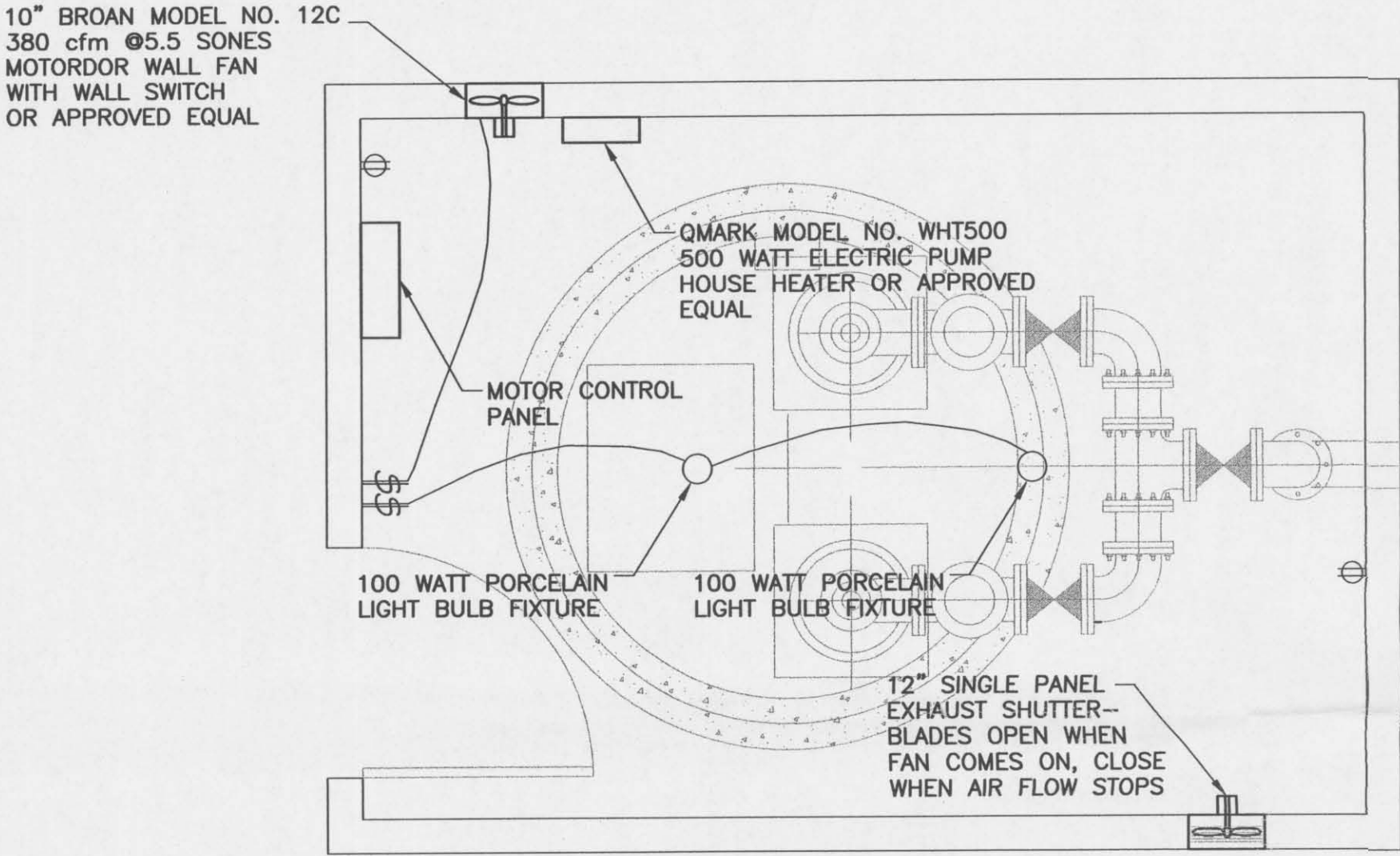
OF PUMP HOUSE & WET WELL

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ELECTRICAL NOTES:

- 1. ALL WIRING, CONDUIT, ELECTRICAL BOXES AND CONNECTIONS SHALL MEET THE NATIONAL ELECTRICAL CODE FOR SIZING, CONDITIONS AND LOCATIONS.
- 2. MOUNT RECEPTACLES 18" PLUS ABOVE FLOOR
- 3. MOUNT SWITCHES 42"= ABOVE FLOOR
- 4. PROVIDE SEPARATE 20 AMP CIRCUIT FOR UNIT HEATER.
- 5. PROVIDE SEPARATE CIRCUIT FOR RECEPTACLES.
- 6. PROVIDE SEPARATE CIRCUIT FOR LIGHT.
- 7. PROVIDE SEPARATE CIRCUIT FOR MOTOR CONTROLS.
- 8. PROVIDE ONE (1) SPARE CIRCUIT.

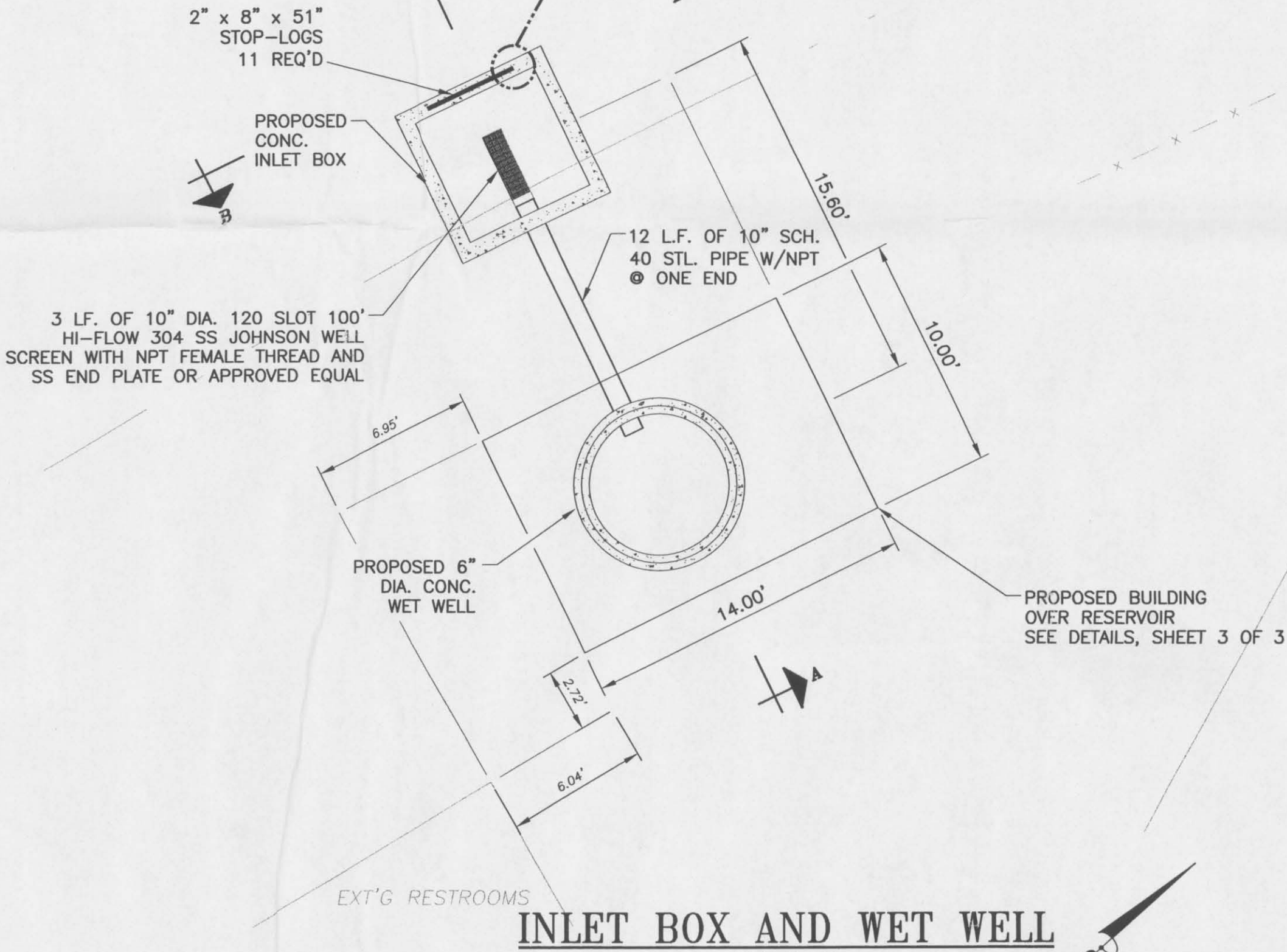


ELECTRICAL PLAN

SCALE: 3/4" = 1'

SLOT DETAIL

SCALE: 1 1/2" = 1'

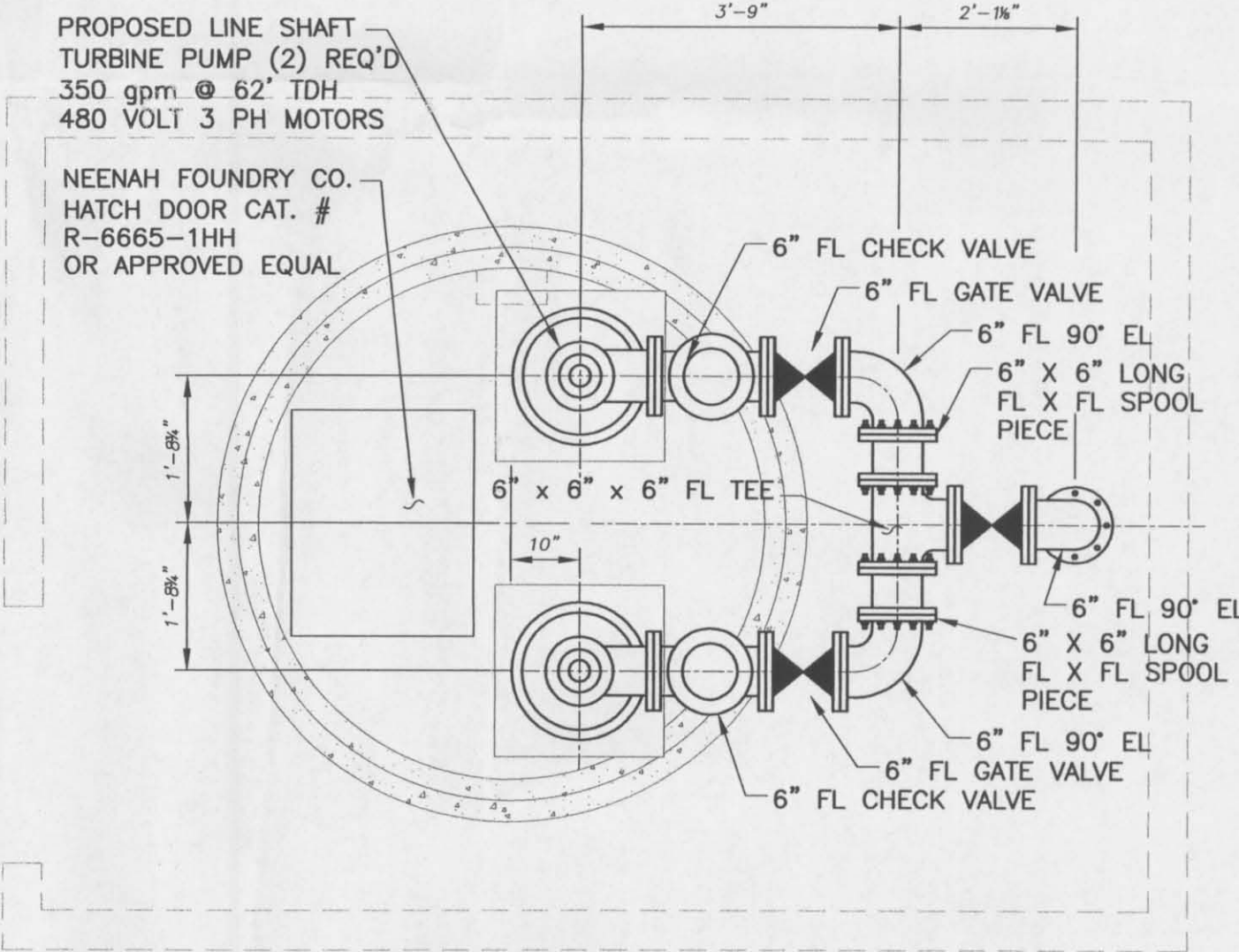


INLET BOX AND WET WELL

SCALE: 1" = 5'

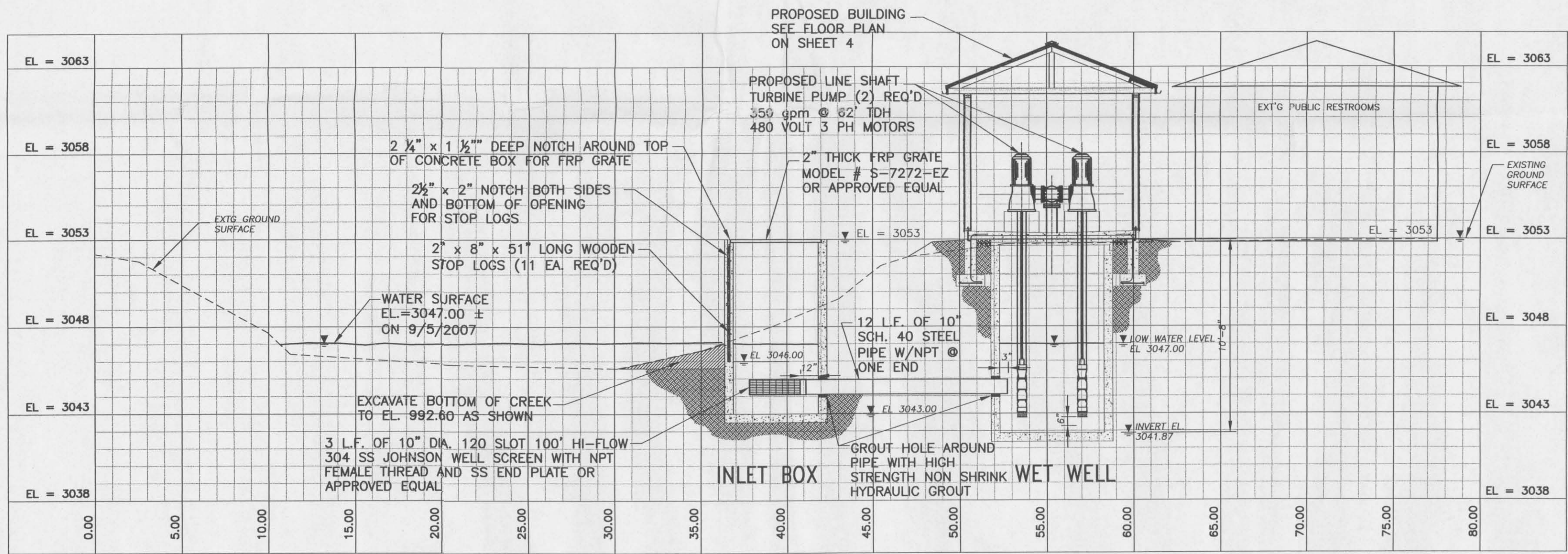
NOTES:

- 1. GRATING SHALL BE STANDARD DUTY GRATING MODEL NUMBERS: S-5252-EZ BY GRATING PACIFIC OR EQUIVALENT.
- 2. RESERVOIR VAULT & COVER BY WILBERT PRECAST CO. OR APPROVED EQUAL



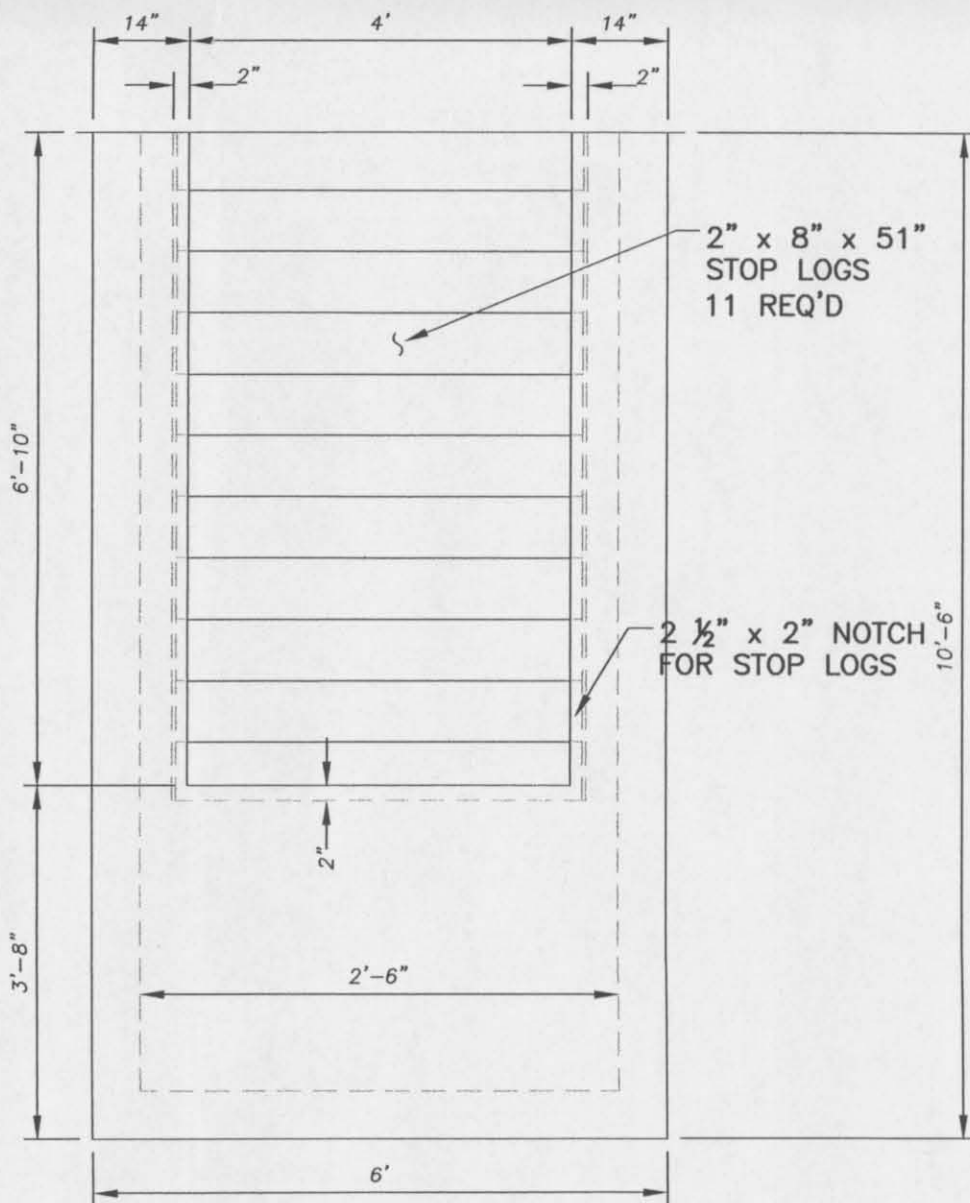
PUMP CONFIGURATION

SCALE: 3/4" = 1'



PROFILE @ SECTION A-A

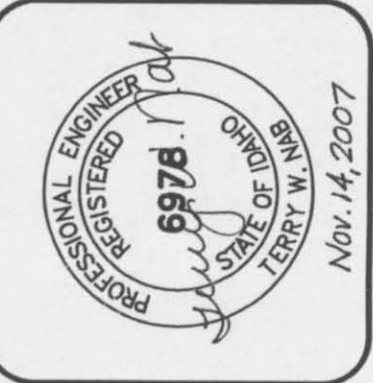
SCALE: 1" = 5'



SECTION B-B

SCALE: 1/2" = 1'

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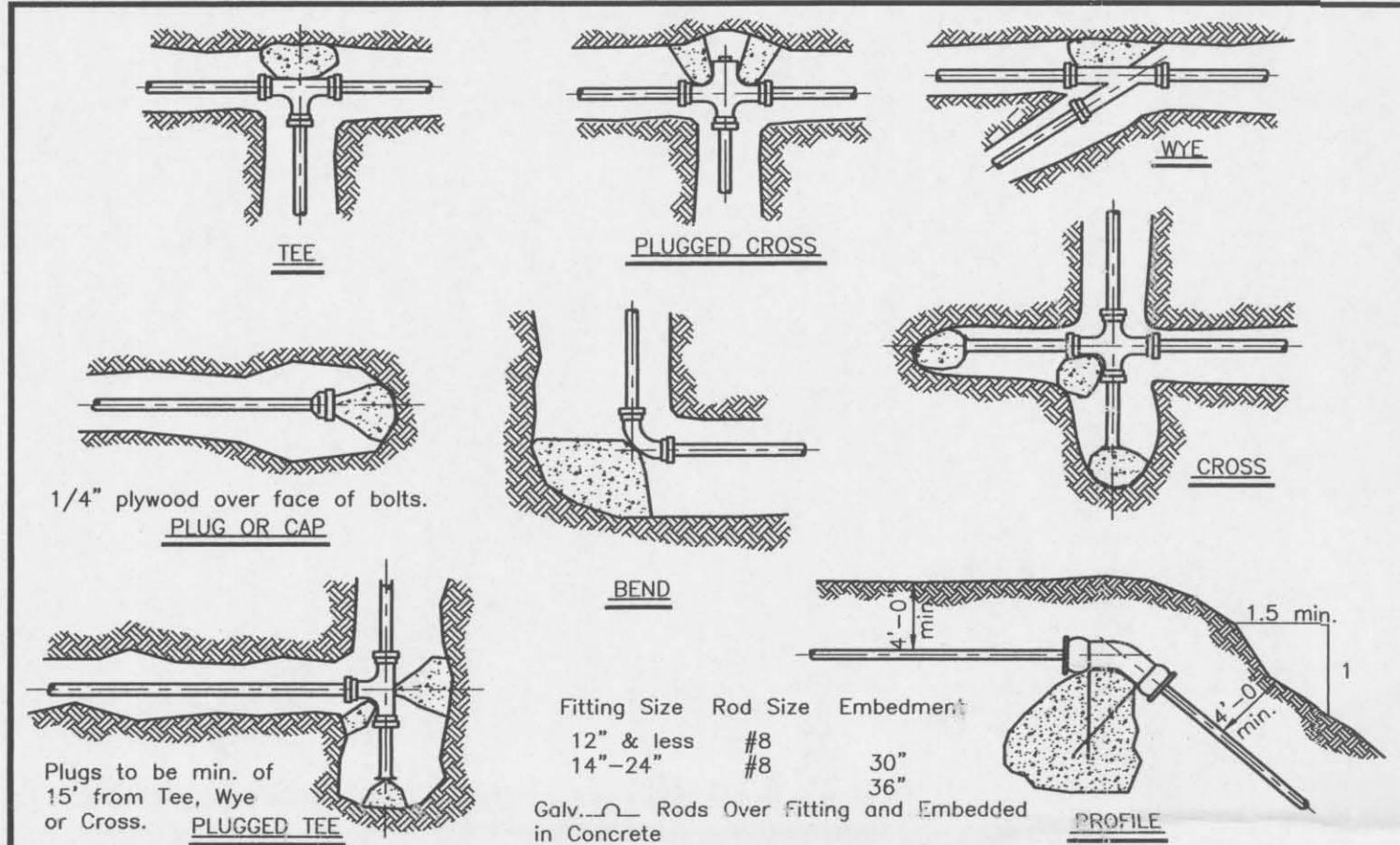
RAW WATER INTAKE

PLAN, PROFILE AND DETAILS OF

PUMP HOUSE AND INTAKE BOX

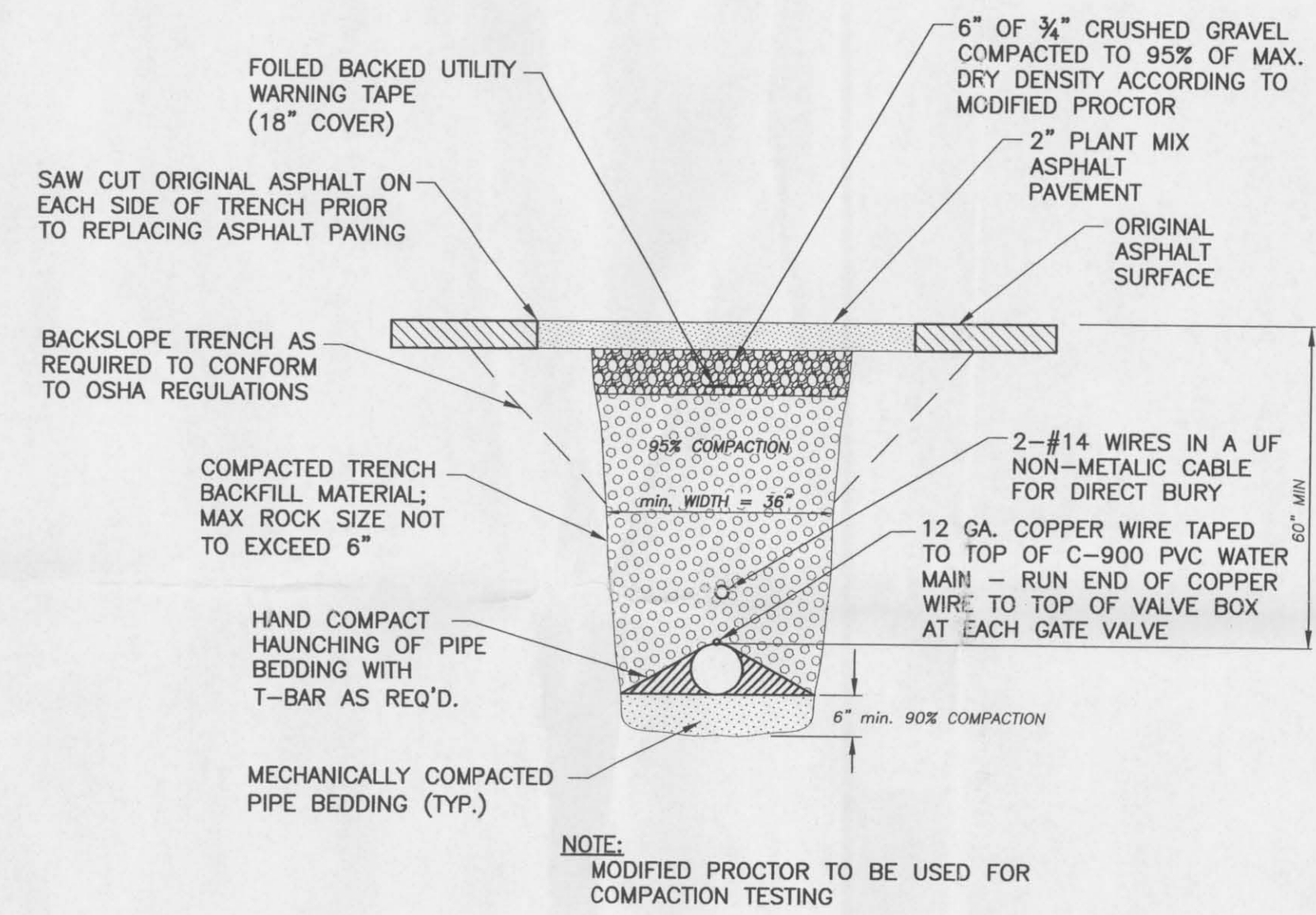
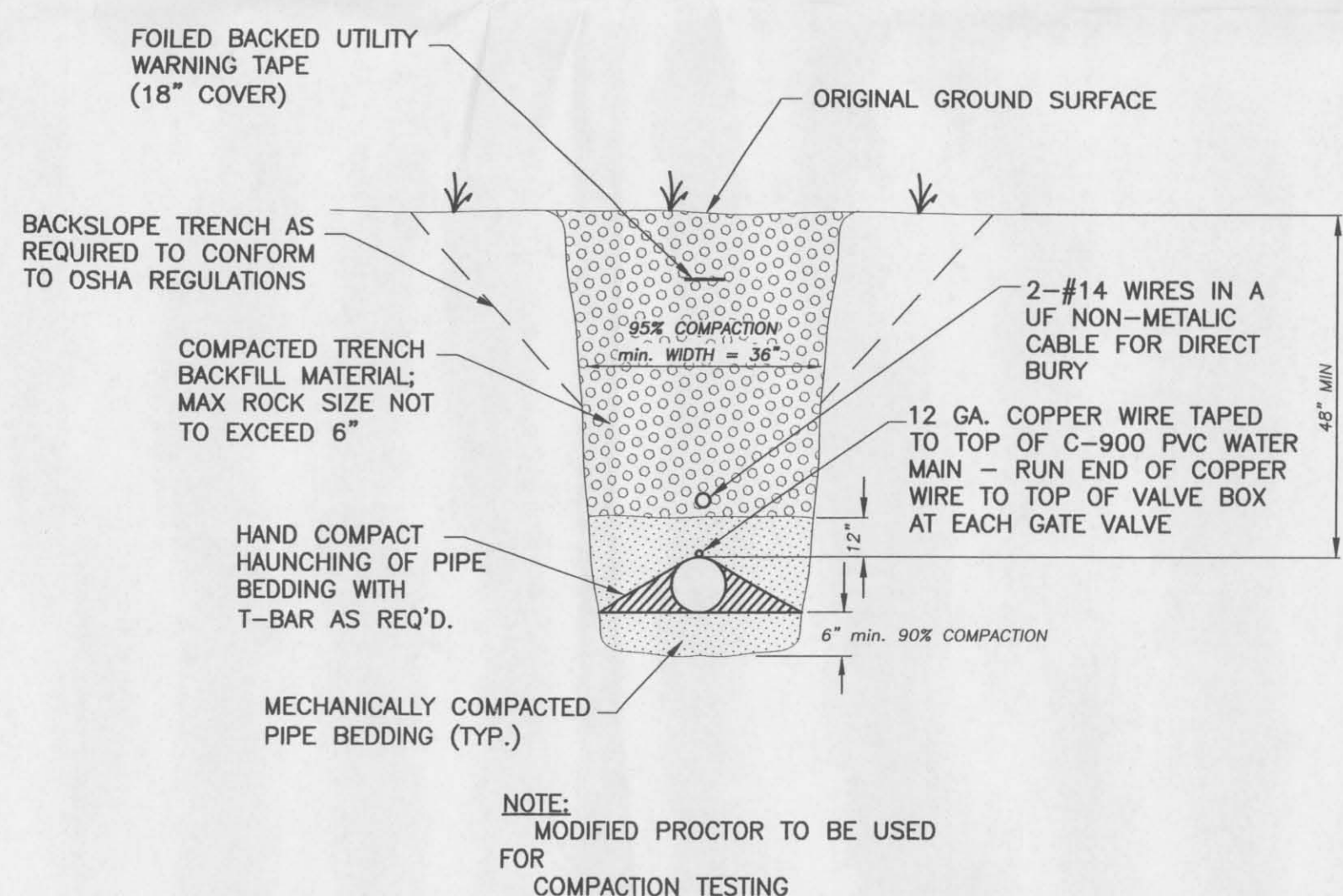
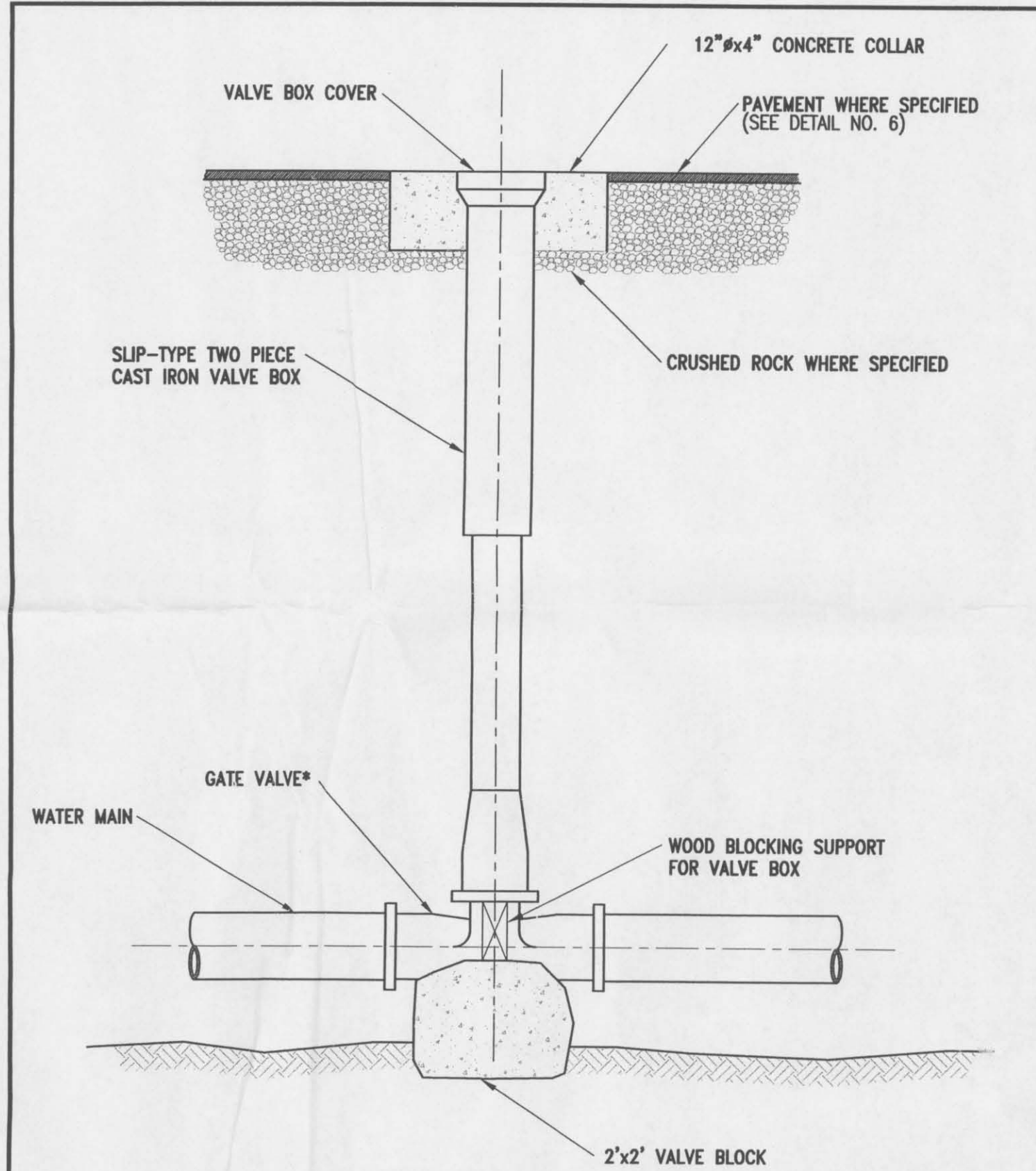
INTAKE BOX AND WET WELL HOUSE

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SHEET 5	OF 6



FITTING SIZE	BEARING AREA OF THRUST BLOCKS IN SQ. FT.						VOLUME OF THRUST BLOCK IN CU. YD.		
	TEES, WYES & PLUGGED CROSS	90° CROSS BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	45° BEND DOWN	22 1/2° BEND DOWN	11 1/4° BEND DOWN	
4	1.0	2.0	1.4	1.0	1.0	1/3 CU.YD.	1/4 CU.YD.	1/4 CU.YD.	
6	2.5	3.0	2.5	2.0	1.0	1/2 CU.YD.	1/3 CU.YD.	1/4 CU.YD.	
8	4.0	6.0	5.3	3.0	2.0	3/4 CU.YD.	1/2 CU.YD.	1/3 CU.YD.	
10	6.0	9.0	8.4	5.0	3.0	1 CU.YD.	3/4 CU.YD.	1/2 CU.YD.	
12	9.0	12.0	12.0	6.6	4.0	1 1/2 CU.YD.	1 CU.YD.	1 CU.YD.	
14	12.0	17.0	16.3	8.9	5.0	2 1/4 CU.YD.	1 3/4 CU.YD.	1 1/2 CU.YD.	
16	16.0	22.0	21.3	11.6	7.0	3 CU.YD.	2 1/2 CU.YD.	2 CU.YD.	

- NOTES:
- BEARING AREAS BASED ON TEST PRESSURE OF 150 p.s.i. & A SOIL BEARING STRESS OF 2,000 LBS. PER SQ.FT. TO AREAS FOR DIFFERENT TEST PRESSURE & SOIL BEARING STRESSES, FOLLOWING EQUATION:
BEARING AREA = (TEST PRESSURE/150)(2000/SOIL BEARING STRESS)(TABLE VALUE).
 - CONCRETE THRUST BLOCKING TO BE PLACED AGAINST UNDISTURBED EARTH.
 - ALL JOINTS & FITTINGS SHALL BE PROTECTED FROM DIRECT CONTACT WITH CONCRETE BY COVERING WITH A THIN SHEET OF POLYETHYLENE OR EQUAL.
 - UNLESS NOTED OTHERWISE, REQUIRED BEARING AREAS AT FITTINGS SHALL BE AS INDICATED ABOVE.
 - BEARING AREAS & SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS & BLOCKING DETAILS SHOWN ON THIS STANDARD DETAIL.
 - CONCRETE COMPRESSIVE STRENGTH SHALL BE 2500 p.s.i. MIN.
 - CONCRETE CURE/SET TIME FOR TYPE III CEMENT CONCRETE SHALL BE 48 HOURS. CURE/SET TIME SHALL BE 168 HOURS FOR ALL OTHER CONCRETE.
 - THRUST BLOCKS FOR VERTICAL UP-BENDS SHALL BE THE SAME AS FOR HORIZONTAL BENDS.



- ASPHALT SURFACING/PATCHING NOTES:**
- AFTER BACKFILLING TRENCH, REMOVE ALL BROKEN OR LOOSE ASPHALT BEYOND THE ORIGINAL TRENCH.
 - ON EACH SIDE OF TRENCH, CUT A SMOOTH, CONTINUOUS, VERTICAL LINE, 6" OR MORE, FROM THE EDGE OF THE TRENCH AND CLEAN ALL SURFACES.
 - TACK EDGE OF EXISTING ASPHALT BEFORE PLACING NEW ASPHALT SURFACING/PATCH.
 - COMPLETED SURFACING/PATCH SHALL BE FLUSH AND SMOOTH WITH EXISTING ASPHALT SURFACES.

ASPHALT SURFACING/PATCHING DETAIL
NOT TO SCALE

PUMP ELECTRICAL AND CONTROL SYSTEM NOTES:

- ALL WIRING, CONDUIT, ELECTRICAL BOXES AND CONNECTIONS SHALL MEET THE NATIONAL ELECTRICAL CODE FOR SIZING, CONDITIONS AND LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SERVICE DROP FOR 480 VOLT, 3 PHASE POWER FROM EXISTING POWER POLE LOCATED DIRECTLY ACROSS ORFINO CREEK NEAR THE EXISTING CLARIFIER.
- INSTALL 2-#14 WIRES IN A UF NON-METALIC CABLE DESIGNED FOR DIRECT BURIAL FROM THE EXISTING WATER TREATMENT PLANT TO THE NEW PUMP CONTROL PANEL LOCATED IN THE NEW PUMP HOUSE. INSTALL NEW CABLE IN SAME TRENCH WITH NEW WATER PIPE.
- CONNECT NEW WIRE (FROM ITEM NO. 3 ABOVE) TO EXISTING CONTROLS LOCATED IN THE EXISTING WATER TREATMENT PLANT SO THAT THE NEW PUMPS WILL TURN ON AND OFF WHEN THE EXISTING WATER TREATMENT EQUIPMENT TURNS ON AND OFF. INSTALL A 120V RELAY AT THE WATER TREATMENT PLANT TO PROVIDE SUFFICIENT POWER TO ACTIVATE THE PUMP CONTROLS AT THE NEW PUMP HOUSE.
- FURNISH AN H-O-A SWITCH FOR EACH PUMP. FURNISH RED AND GREEN INDICATOR LIGHTS WITH EACH PUMP TO INDICATE IF PUMP IS "ON" OF "OFF". PROVIDE ALTERNATING SWITCH TO ALTERNATE THE OPERATION OF EACH PUMP WITH EACH RUN CYCLE.
- FURNISH A VARIABLE FREQUENCY DRIVE (VFD) CONTROLLER WITH EACH PUMP TO ALLOW THE SYSTEM OPERATOR TO CONTROL THE HYDRAULIC OUTPUT OF EACH PUMP. PROVIDE A MANUAL DIAL TO ALLOW THE OPERATOR TO SELECT 0-100% FOR EACH PUMP.
- AFTER COMPLETION OF THE SYSTEM, THE CONTRACTOR SHALL SUPPLY TO THE OWNER THREE (3) COPIES OF A USER'S MANUAL THAT CONTAINS THE FOLLOWING AS MINIMUM:
 - DIAGRAMS OF ALL SYSTEM COMPONENTS AND THEIR LOCATIONS.
 - SPECIFICATIONS FOR ALL ELECTRICAL AND MECHANICAL COMPONENTS.
 - OPERATION AND MAINTENANCE INFORMATION FOR ALL ELECTRICAL AND MECHANICAL COMPONENTS.

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CITY OF PIERCE, IDAHO 83546

RAW WATER INTAKE

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JAN 28 2008
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DETAILS

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SHEET 6 OF 6	

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