

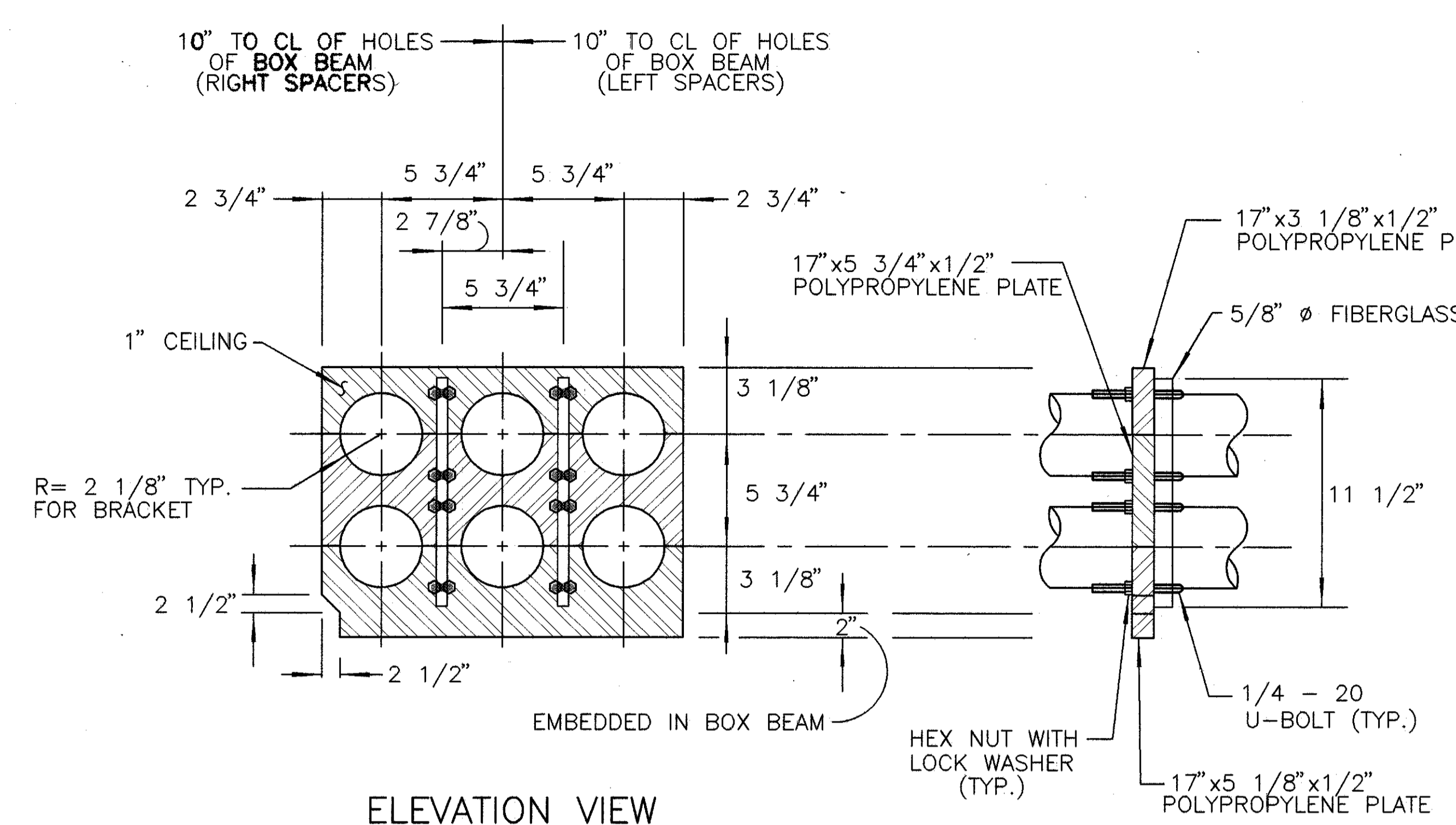
LAKE COUNTY
 LAK-283-11.65

NOTES

1. STAGGER ALL FITTINGS AND COUPLINGS, NO FITTINGS OR JOINTS ARE TO BE WITHIN 2' OF EACH OTHER OR A CONDUIT SUPPORT.
2. EXPANSION JOINTS SHALL BE USED AT FIRST CONNECTION, CONNECTING DUCT WITHIN BRIDGE LIMITS TO UNDERGROUND DUCT BANK.
3. NO FACTORY-ENDS ARE TO BE INSTALLED INTO EXPANSION JOINT. PIPE TO BE CUT AT LEAST ONE FOOT FROM FACTORY-END BEFORE INSTALLATION.
4. 4" DIAMETER F.R.E. COUPLINGS AND FITTINGS SHALL BE INSTALLED AS REQUIRED TO MATCH EXISTING DUCT BANK.
5. CONTRACTOR IS REQUIRED TO COMPLY WITH ALL NATIONALLY ACCEPTED SAFETY PRACTICES, OSHA, AND ANY OTHER SAFETY REQUIREMENTS IMPOSED BY THE OWNER, AGENCY, OR ANY OTHER PARTIES WHICH MAY HAVE JURISDICTION OVER SAFETY. THESE ITEMS MAY EXCEED THE STRUCTURAL REQUIREMENTS WHICH ARE INDICATED ON OUR PLANS AND DOCUMENTS. IN ADDITION, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE OF CONSTRUCTION, ETC. TO INSURE THE SAFETY OF HIS OR HER EMPLOYEES AT ALL TIMES.
6. ALL CONTACTING SURFACES TO HAVE FULL BEARING AND SHALL BE THOROUGHLY CLEANED TO REMOVE ANY FOREIGN MATERIAL.
7. REQUIRED PERMITS FOR WORK TO BE PERFORMED ON THE BRIDGE ARE TO BE OBTAINED BY THE INSTALLATION CONTRACTOR.

| ITEM NO. | ESTIMATED QUANTITIES * | UNIT | QUANTITY |
|----------|---|------|----------|
| 1 | F.R.E. 4.00" I.D. x 4.13" O.D. FIBERGLASS CONDUIT | FT. | 636 |
| 2 | 4.00" I.D. x 4.50" O.D. GALVANIZED THREADED CONDUIT | FT. | 264 |
| 3 | 4" FEMALE THREADED ADAPTOR (STEEL TO F.R.E. PIPE) | EACH | 24 |
| 4 | 4" F.R.E. EXPANSION JOINTS | EACH | 36 |
| 5 | 17" x 14" x 1/2" POLYPROPYLENE PLATE ASSEMBLY WITH FIBERGLASS RODS, U-BOLTS, & HEX NUTS | EACH | 12 |
| 6 | 4" DIAMETER F.R.E. COUPLINGS AND FITTINGS | EACH | 24 |

* COST OF THESE ITEMS SHALL BE INCLUDED IN THE COST OF THE BOX BEAM, AS PER PLAN
 ** QUANTITY OF FIBERGLASS ADHESIVE KITS SHALL BE DETERMINED BY THE CONTRACTOR



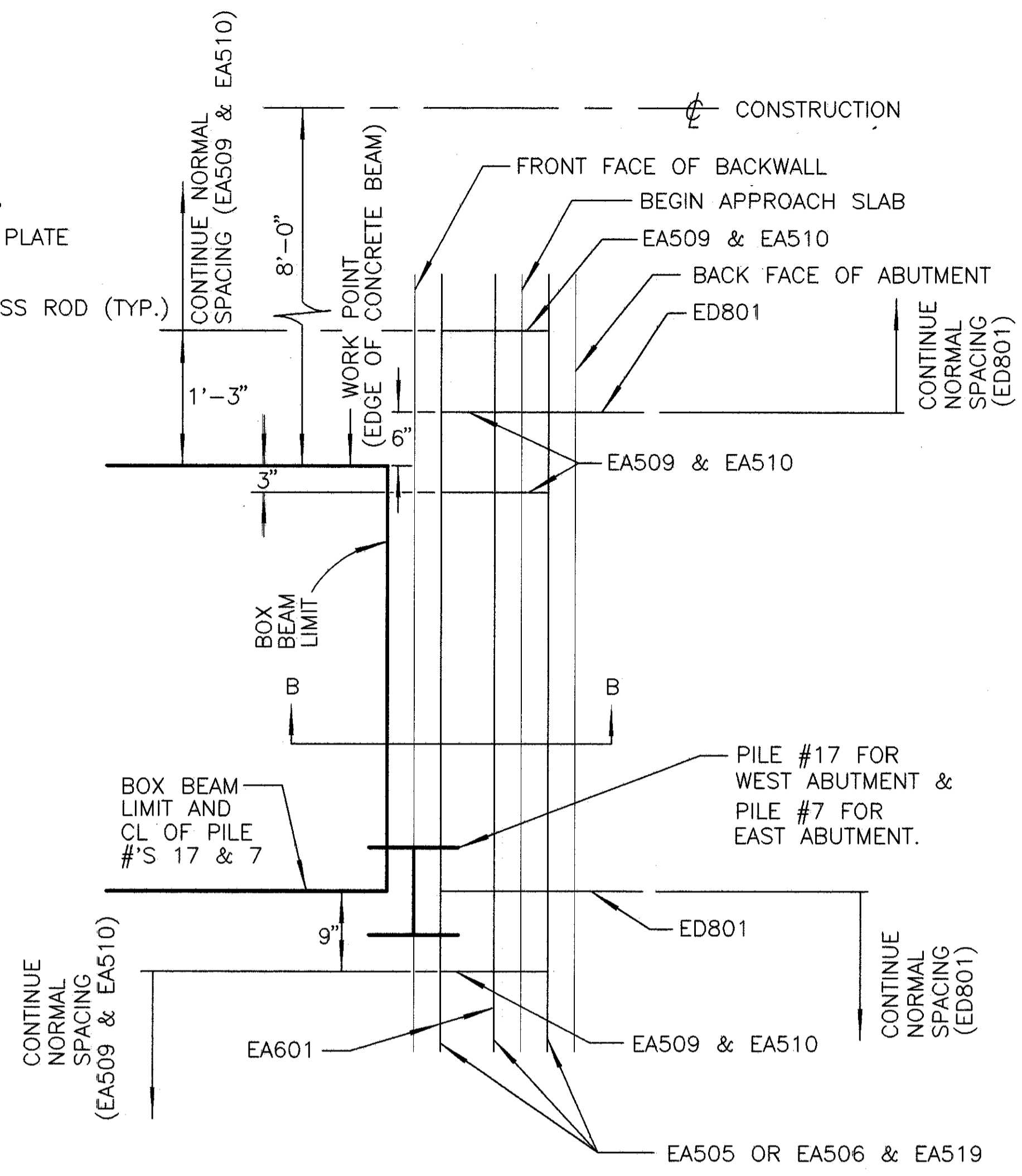
ELEVATION VIEW

SIDE VIEW

CORNER OF SPACER MODIFIED AS SHOWN OR AS NECESSARY TO FIT IN BOX BEAM.
 4" x 1 1/2" VERTICAL SPACERS WITH 1" CEILING SEPARATION AND 1 1/2" BETWEEN DUCTS

SPACERS DETAIL

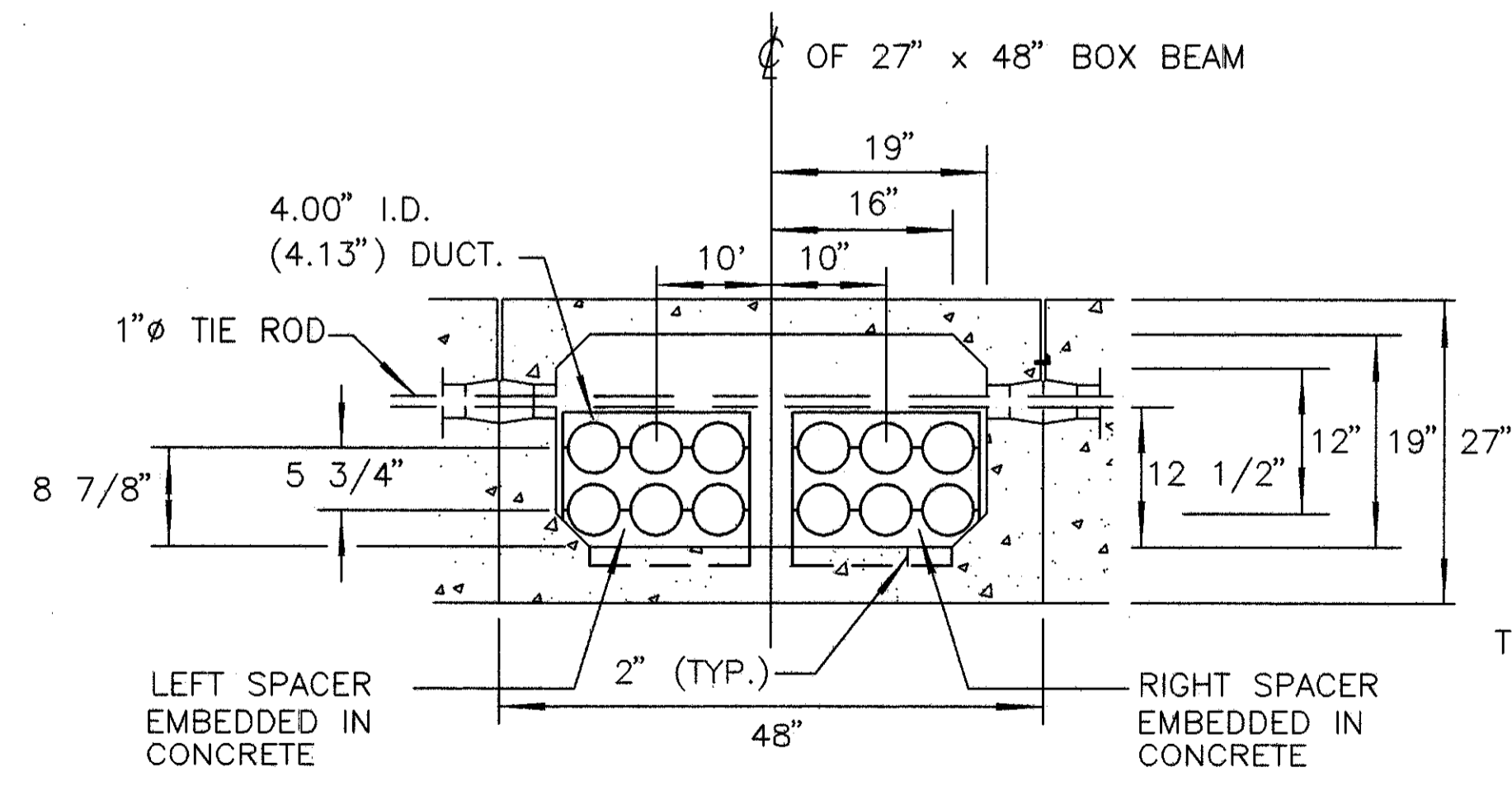
N.T.S.



NOTE: REBAR SPACING ABOVE APPLIES TO TO REBAR ED801, EA510, AND EA509 AT WEST AND EAST ABUTMENTS.

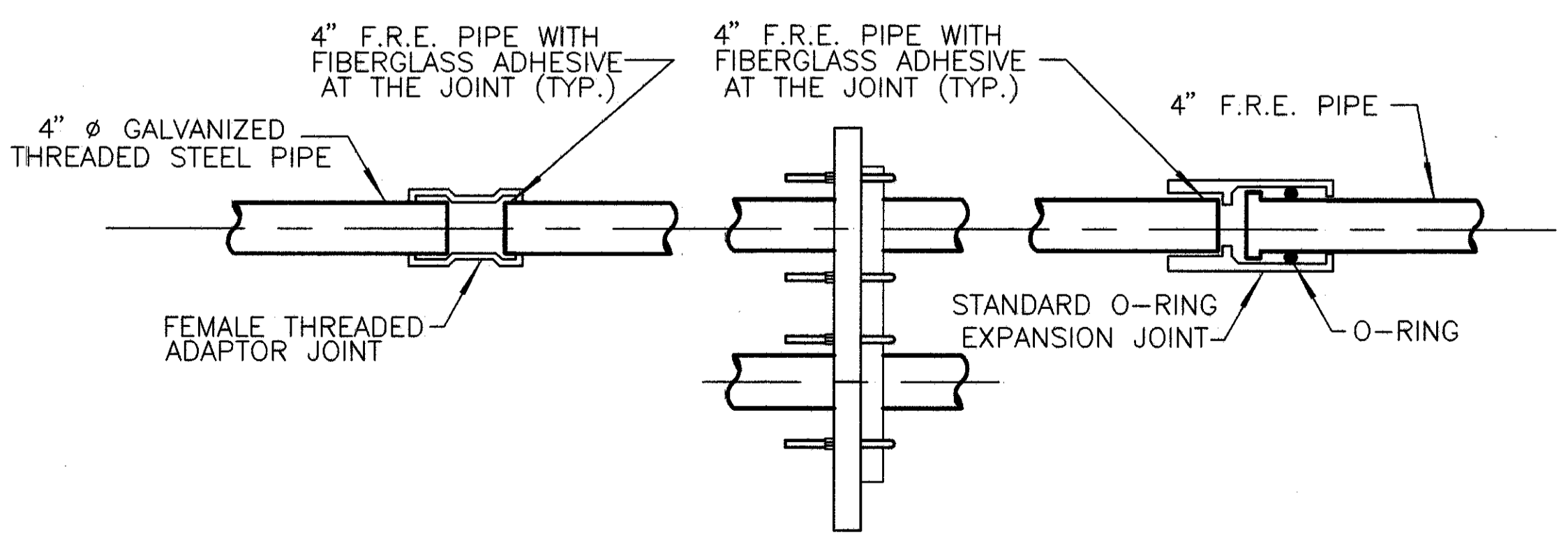
FORWARD ABUTMENT & REAR ABUTMENT DETAIL

SCALE: 1"=1'



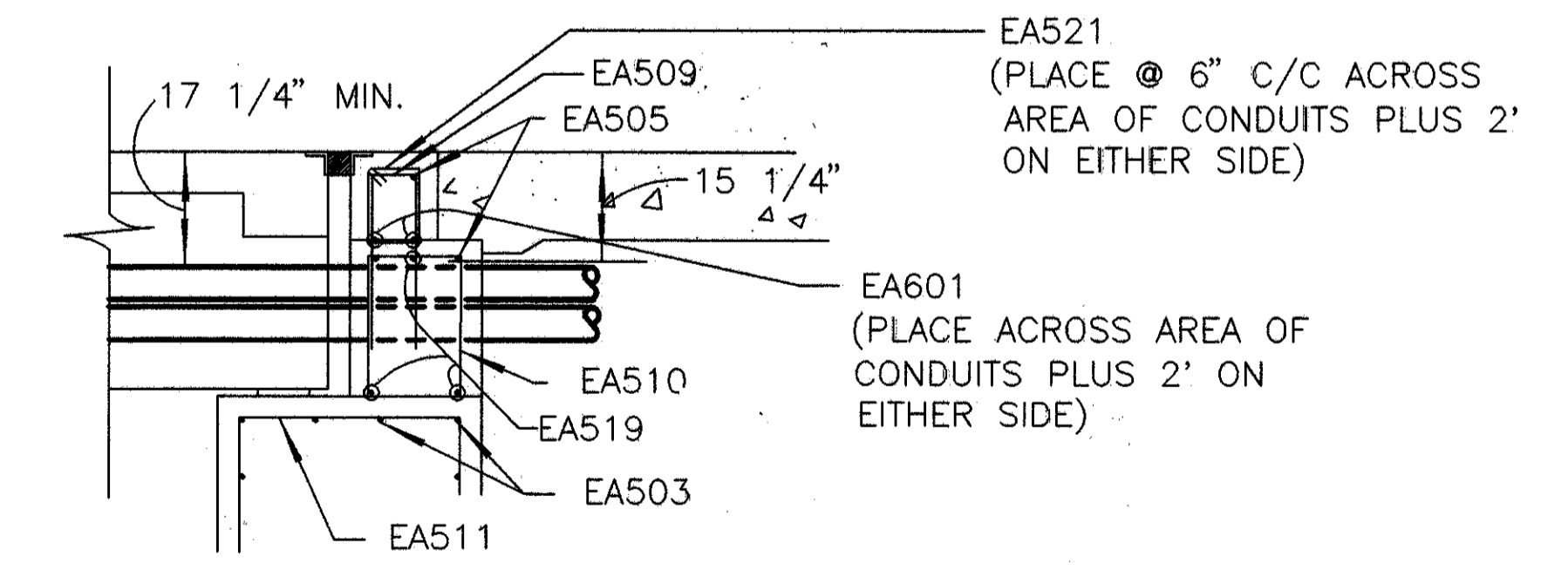
SECTION A-A

N.T.S.



SECTION C-C

N.T.S.



SECTION B-B
 EAST AND WEST ABUTMENT DETAIL

N.T.S.

Western Reserve Engineering & Surveying Co.
 DIVISION OF W.R.E.S. CORPORATION
 5533 CANAL ROAD / CLEVELAND, OHIO 44125 / 216/524-0008

JOHN E. FOSTER AND ASSOCIATES, INC. 11/11
 2999 PAYNE AVE., CLEVELAND, OHIO 44114

CONDUIT SPACER AND ABUTMENT DETAILS

BRIDGE No. LAK-283-1165
 SR 283 OVER MENTOR MARSH
 LAKE COUNTY STA. 5+89.50
 STA. 6+54.50

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISION |
|----------|--------|--------|---------|----------|------|----------|
| R.A.C. | R.A.C. | - | S.S.D. | V.J.D. | 6/94 | |