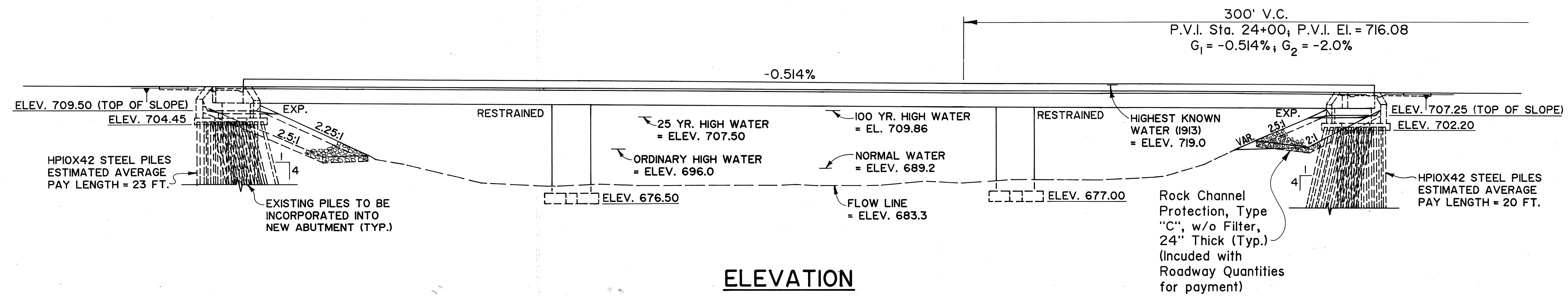


**GENERAL PLAN**



**ELEVATION**

**KOHLI & KALHER ASSOCIATES, INC.**  
CONSULTING ENGINEERS AND SURVEYORS  
LIMA, OHIO

2 / 20

**GENERAL PLAN & ELEVATION**

**BRIDGE NO. PAU-66-0828  
OVER AUGLAIZE RIVER  
PAULDING COUNTY**

|          |        |        |         |          |         |         |
|----------|--------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE    | REVISED |
| D.G.B.   | A.M.P. |        | M.A.D.  | T.H.H.   | 1-13-92 | A.M.P.  |

ESTIMATED QUANTITIES

QUANTITIES CALCULATED BY A.M.P. DATE 11-27-91  
QUANTITIES CHECKED BY R.L.M. DATE 12-5-91

| ITEM    | ITEM EXT. | TOTAL  | UNIT     | DESCRIPTION   | SUPER. | REAR ABUT. | FWD. ABUT. | PIERS | GEN'L. |
|---------|-----------|--------|----------|---|--------|------------|------------|-------|--------|
| 202     | 11002     | Lump   | Sum      | Structure Removed, Over 20 Foot Span  |        |            |            |       | Lump   |
| 503     | 11100     | Lump   | Sum      | Cofferdams, Crib and Sheeting   |        |            |            |       | Lump   |
| 503     | 21100     | 414    | Cu. Yd.  | Unclassified Excavation   |        | 101        | 91         | 222   |        |
| 505     | 11100     | Lump   | Sum      | Pile Driving Equipment Mobilization   |        | Lump       | Lump       |       |        |
| 507     | 11100     | 390    | Lin. Ft. | Steel Piles HP10 X42  |        | 184        | 120        |       | 86*    |
| 509     | 15800     | 194175 | Pounds   | Epoxy Coated Reinforcing Steel, Grade 60  | 164881 | 5989       | 5689       | 17616 |        |
| 511     | 40500     | 289    | Cu. Yd.  | Class C Concrete, Pier Above Footings   |        |            |            | 289   |        |
| 511     | 44200     | 68     | Cu. Yd.  | Class C Concrete, Abutment not including Footing  |        | 35         | 33         |       |        |
| 511     | 46500     | 160    | Cu. Yd.  | Class C Concrete, Footing   |        | 42         | 39         | 79    |        |
| SPECIAL | 51267500  | 1215   | Sq. Yd.  | Sealing of Concrete Surfaces (See Proposal Note)  | 1215   |            |            |       |        |
| SPECIAL | 51267502  | 85     | Sq. Yd.  | Sealing of Concrete Surfaces (Epoxy) (See Proposal Note)  |        | 44         | 41         |       |        |
| 513     | 12300     | 528300 | Pounds   | Structural Steel, A588 AISC Category III (See Proposal Note)  | 528300 |            |            |       |        |
| 513     | 20000     | 3360   | Each     | Welded Stud Shear Connector (7/8" X 6")   | 3360   |            |            |       |        |
| 514     | 02501     | Lump   | Sum      | Field Painting of New Structural Steel, System A, as per plan   | Lump   |            |            |       |        |
| 516     | 10901     | 117    | Lin. Ft. | Elastomeric Compression Seal, As Per Plan   |        | 59         | 58         |       |        |
| 516     | 44101     | 8      | Each     | Elastomeric Bearing with Internal Laminates and Load Plate (Neoprene), (2 1/2" X 22" X 28")                 |        |            |            | 8     |        |
| 516     | 44201     | 8      | Each     | Elastomeric Bearing with Internal Laminates and Load Plate (Neoprene), as per plan (3 1/2" X 10 1/2" X 20") |        | 4          | 4          |       |        |
| 517     | 71501     | 406    | Lin. Ft. | Railing (Concrete Parapet with Double Pipe Rail), as per plan   | 406    |            |            |       |        |
| 518     | 21200     | 67     | Cu. Yd.  | Porous Backfill with Filter Fabric  |        | 34         | 33         |       |        |
| 518     | 41100     | 130    | Lin. Ft. | 6" Perforated Helical Corrugated Steel Pipe, 707.01   |        | 66         | 64         |       |        |
| 518     | 41200     | 53     | Lin. Ft. | 6" Non-Perforated Helical Corrugated Steel Pipe, including specials, 707.01                                 |        | 27         | 26         |       |        |
| SPECIAL | 85050000  | 691    | Cu. Yd.  | Superplasticized Concrete, Superstructure (See Proposal Note)   | 691    |            |            |       |        |
| SPECIAL | 85050060  | LUMP   | SUM      | SUPERPLASTICIZED CONCRETE TRIAL MIX (SEE PROPOSAL NOTE)   | LUMP   |            |            |       |        |
| SPECIAL | 85050070  | 1349   | Sq. Yd.  | Bridge Deck Grooving (See Proposal Note)  | 1349   |            |            |       |        |

\*-See note on sheet 4/20, "EXISTING PILES TO BE REMOVED".

REVISED 9-21-92

**KOHLI & KALHER ASSOCIATES, INC.**  
CONSULTING ENGINEERS AND SURVEYORS  
LIMA, OHIO

3 / 20

**ESTIMATED QUANTITIES**  
BRIDGE NO. PAU-66-0828  
OVER AUGLAIZE RIVER  
PAULDING COUNTY

|          |        |        |         |          |         |         |
|----------|--------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE    | REVISED |
| D.G.B.   | A.M.P. |        | M.A.D.  | T.H.H.   | 1-13-92 | A.M.P.  |

# GENERAL NOTES

PAULDING COUNTY  
PAU-66-8.26

OHIO

FHWA  
REGION 5

FEDERAL  
PROJECT

22  
43

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81 DATED 11-27-81  
BR-2-82 DATED 11-1-82

AND TO SUPPLEMENTAL SPECIFICATIONS

849 DATED 12-24-85  
949 DATED 9-26-86

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS 1989, INCLUDING THE 1990 AND 1991 INTERIM SPECIFICATIONS, AND TO THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA:

DESIGN LOADING: HS 20-44, CASE II AND ALTERNATE MILITARY LOADING  
CONCRETE CLASS C: COMPRESSIVE STRENGTH 4000 P.S.I.  
CONCRETE CLASS S: COMPRESSIVE STRENGTH 4500 P.S.I.  
REINFORCING STEEL: ASTM A615, A616, A617 - GRADE 60 MINI-MUM YIELD STRENGTH 60,000 P.S.I.  
STRUCTURAL STEEL: ASTM A588 YIELD STRENGTH 50,000 P.S.I.

PARTIAL PAINTING OF STRUCTURAL STEEL: STRUCTURAL STEEL SHALL BE UNPAINTED, EXCEPT FOR A 1-FOOT LENGTH AT THE ENDS OF BEAMS ADJACENT TO FACE OF ABUTMENTS. ALL SURFACES WITHIN 3'-6" FROM THE GIRDER ENDS SHALL BE CLEANED AND SHOP PRIMED, AND ALL SURFACES NOT ENCASED IN CONCRETE WITHIN THESE LIMITS SHALL BE FIELD PAINTED WITH THE TOP COAT. PAINT SHALL BE 514, SYSTEM A. THE PRIME COAT SHALL BE 708.17. THE TOP COAT SHALL BE 708.18 EXCEPT THAT THE COLOR SHALL CLOSELY APPROACH FEDERAL STANDARD NO. 595A-20045 OR 20059 (THE COLOR OF WEATHERING STEEL).

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED. AS PER 202.03 SUITABLE WASTE MASONRY MAY BE PLACED AS BANK PROTECTION AS DIRECTED BY THE ENGINEER.

REMOVAL OVER WATER: REASONABLE CARE SHALL BE USED BY THE CONTRACTOR TO PREVENT REMOVED MATERIALS FROM FALLING INTO THE WATER. ANY DROPPED MATERIALS SHALL BE IMMEDIATELY RECOVERED AND DISPOSED OF AWAY FROM THE SITE EXCEPT FOR APPROVED MASONRY MATERIAL WHICH MAY BE USED AS BANK PROTECTION AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR UNDER ITEM 202 "STRUCTURE REMOVED, OVER 20 FOOT SPAN". REFER TO 104.06 OF THE O.D.O.T. C.M.S. FOR ADDITIONAL REQUIREMENTS.

EMBANKMENT CONSTRUCTION: THE EMBANKMENT SHALL BE CONSTRUCTED TO THE LEVEL OF THE SUBGRADE. EXCAVATION MAY THEN BE MADE FOR THE ABUTMENTS AND PILES DRIVEN.

PILING: THE DESIGN LOAD IS 34 TONS PER PILE FOR THE ABUTMENT PILING.

MONOLITHIC WEARING SURFACE: IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

UTILITY LINES: ALL EXPENSES INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNERS. THE CONTRACTOR AND OWNERS ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL, TOP AND BOTTOM MAT, SEALING OF CONCRETE SURFACES.

U.S.G.S. BENCH MARK RE-ESTABLISHMENT: O.D.O.T. SURVEY FORCES WILL TRANSFER THE U.S.G.S. BENCH ELEVATION TO A TEMPORARY BENCH MARK PRIOR TO THE DEMOLITION OF THE BRIDGE. THE CONTRACTOR SHALL REMOVE THE EXISTING BENCH DISK AND RETURN IT TO THE O.D.O.T. PROJECT ENGINEER. THE CONTRACTOR SHALL SET A NEW BENCH DISK (SUPPLIED BY O.D.O.T.) INTO THE PROPOSED ABUTMENT ACCORDING TO DIRECTION OF THE O.D.O.T. PROJECT ENGINEER. O.D.O.T. SURVEY FORCES WILL THEN ESTABLISH THE NEW SURVEY BENCH ELEVATION.

ALL WORK ASSOCIATED WITH THE ABOVE BENCH RE-ESTABLISHMENT SHALL BE CONSIDERED INCIDENTAL TO ITEM 202 "STRUCTURE REMOVED, OVER 20 FOOT SPAN" AND INCLUDED IN ITEM 202 FOR PAYMENT.

PILE INSPECTION: AFTER ABUTMENT PILES ARE EXPOSED BY CONCRETE REMOVALS, AT LEAST ONE FOOT OF ADDITIONAL PILE LENGTH BELOW ABUTMENT BOTTOM (FOR THE TWO MOST CORRODED PILES) SHALL BE CAREFULLY UNCOVERED TO PERMIT PILE INSPECTION, PHOTOGRAPHING, EVALUATION, AND APPROVAL BY THE ENGINEER. THE DIRECTOR SHALL BE NOTIFIED IF SEVERE CORROSION IS FOUND. AFTER PILE APPROVAL, ALL EXPOSED PILES SHALL BE CLEANED PRIOR TO ENCASEING THEM IN NEW ABUTMENT CONCRETE. COST OF PROVIDING PILE ACCESS AND CLEANING SHALL BE INCLUDED IN 202 FOR PAYMENT.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES: A CONCRETE SEALER SHALL BE APPLIED TO THE FOLLOWING SURFACES, SEE SHEETS [7/20] AND [10/20]. SEE THE PROPOSAL NOTE FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION PROCEDURES & RATES AND MATERIAL REQUIREMENTS.

ITEM SPECIAL - SUPERPLASTICIZED CONCRETE, SUPERSTRUCTURE: MEMBRANE CURING PER SUPPLEMENTAL SPECIFICATION 836 WILL NOT BE PERMITTED. CONCRETE SHALL BE CURED BY METHOD (A), WATER CURING.

ITEM 516 - ELASTOMERIC COMPRESSION SEAL, AS PER PLAN: THE AS PER PLAN DESIGNATION IS TO ACCOUNT FOR THE PAYMENT OF ENCAPSULATED SPONGE, SEE SHEET [8/20].

ITEM 516 - ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN: THE AS PER PLAN DESIGNATION IS TO ACCOUNT FOR THE PAYMENT OF THE LOAD PLATE AND BOLSTER, SEE SHEET [19/20].


ITEM 517 - RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL, USING SUPERPLASTICIZED CONCRETE) SHALL CONFORM TO THE PERTINENT SECTIONS OF THE PROPOSAL NOTE FOR SUPERPLASTICIZED CONCRETE AND TO 517 OF THE C.M.S. PAYMENT FOR RAILING SHALL CONFORM WITH 517.07 OF THE C.M.S.

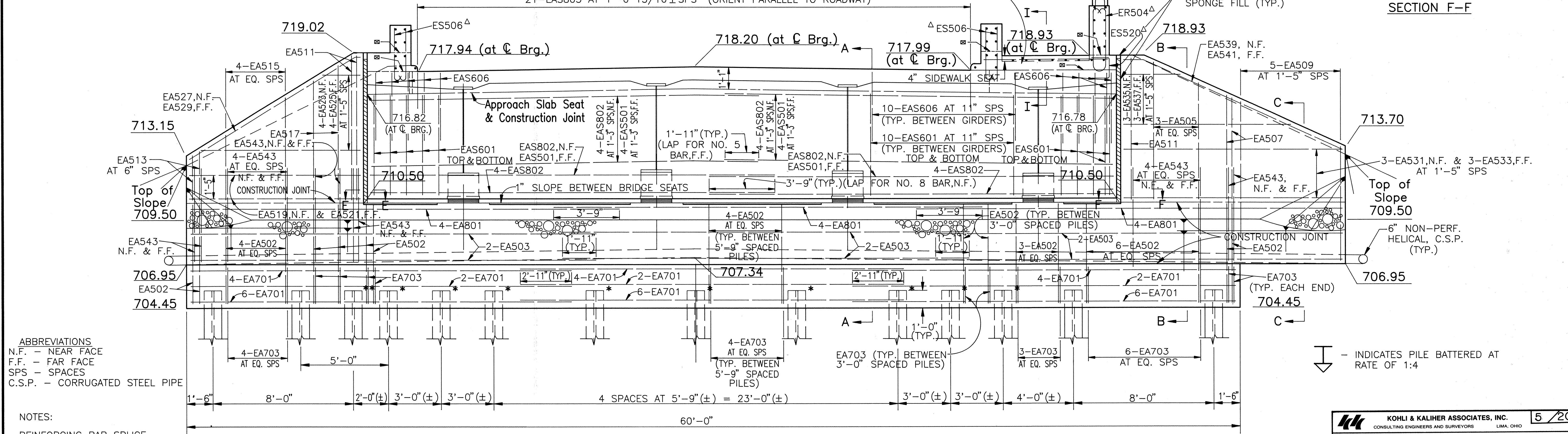
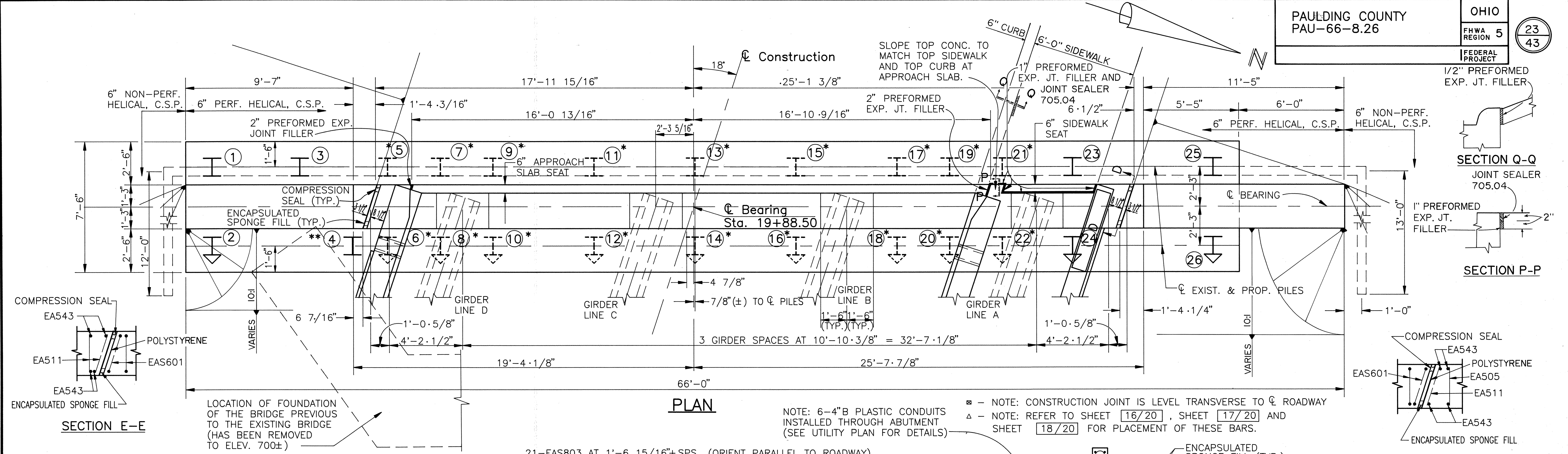
ITEM 517 - RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL), AS PER PLAN: MEMBRANE CURING PER SUPPLEMENTAL SPECIFICATION 836 WILL NOT BE PERMITTED. CONCRETE SHALL BE CURED BY METHOD (A), WATER CURING.

EXISTING PILES TO BE REUSED: CARE SHALL BE USED TO REMOVE EXISTING CONCRETE FROM AROUND THE EXISTING ABUTMENT PILES TO MINIMIZE DAMAGE TO THE PILES. AFTER THE CONCRETE HAS BEEN REMOVED AND PRIOR TO REMOVAL OF THE APPROXIMATELY 3 FEET OF PILING TO THE PROPOSED ELEVATION, THE EXISTING PILES SHALL BE DRIVEN TO A MINIMUM 34 TONS CAPACITY DETERMINED IN ACCORDANCE WITH 507.05 OF THE C.M.S. IF AN EXISTING PILE CANNOT BE DRIVEN TO SATISFACTORY BEARING, OR IF AN EXISTING PILE IS CONSIDERED UNSUITABLE FOR ANY REASON, A NEW PILE SHALL BE DRIVEN BESIDE THE EXISTING PILE, AND SHALL BE DRIVEN TO DESIGN CAPACITY. THE EXISTING PILE SHALL BE CUT OFF AT AN ELEVATION WHICH IS BELOW THE PROPOSED FOOTING REINFORCING STEEL. THE COST OF ANY NEW PILE SHALL BE INCLUDED IN ITEM 507 FOR PAYMENT\*.

THE COST OF CONCRETE REMOVAL AROUND THE EXISTING PILING, REDRIVING THE EXISTING PILING, AND ANY COST ASSOCIATED WITH ADDING AN EXTENSION TO AN EXISTING PILING, OR THE COST OF CUTTING OFF THE TOP OF THE EXISTING PILING, SHALL BE CONSIDERED INCIDENTAL TO ITEM 202 "STRUCTURE REMOVAL, OVER 20 FOOT SPAN" AND INCLUDED IN ITEM 202 FOR PAYMENT.

\*-AN ALLOWANCE OF 86 LINEAL FEET OF PILING HAS BEEN INCLUDED WITH ITEM 507 TO ACCOUNT FOR THE PROBABILITY OF SUCH REPLACEMENT PILING.

|   |        |  |         |          |
|---|--------|--|---------|----------|
|  |        | KOHLI & KALIHAR ASSOCIATES, INC.<br>CONSULTING ENGINEERS AND SURVEYORS<br>LIMA, OHIO |         | 4/20     |
| GENERAL NOTES   |        |  |         |          |
| BRIDGE NO. PAU-66-0828<br>OVER AUGLAIZE RIVER<br>PAULDING COUNTY                      |        |  |         |          |
| DESIGNED  | DRAWN  | TRACED   | CHECKED | REVIEWED |
| D.G.B.  | A.M.P. |  | M.A.D.  | T.H.H.   |
|   |        |  | DATE    | REVISED  |
|   |        |  | 1-13-92 | A.M.P.   |

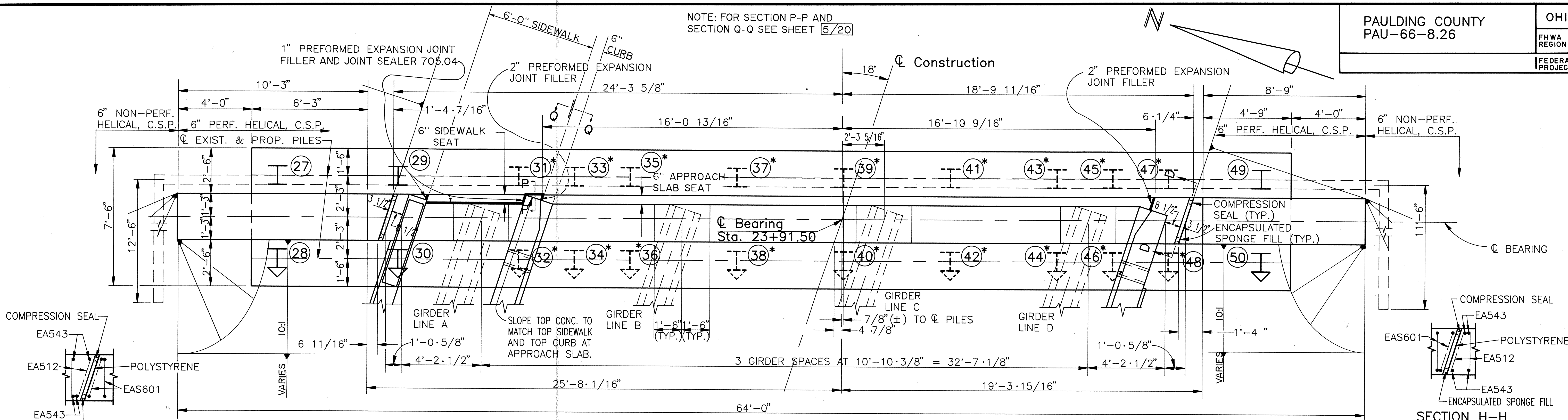


**KOHLI & KALHER ASSOCIATES, INC.**  
CONSULTING ENGINEERS AND SURVEYORS LMA, OHIO

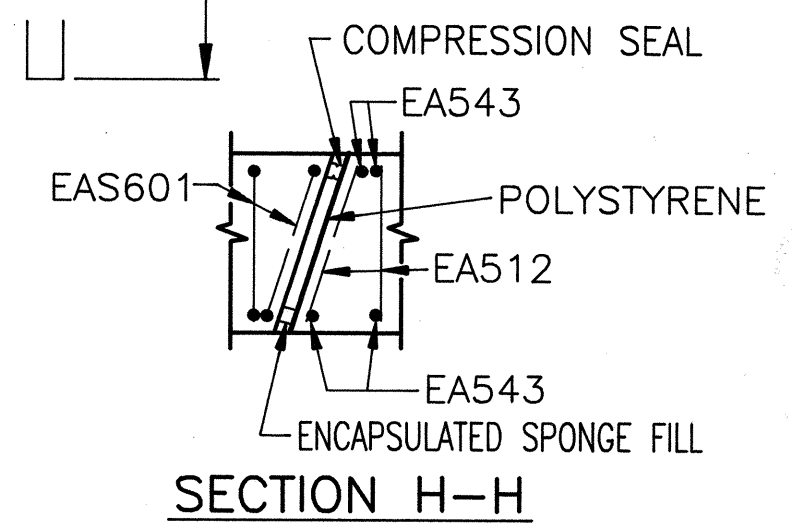
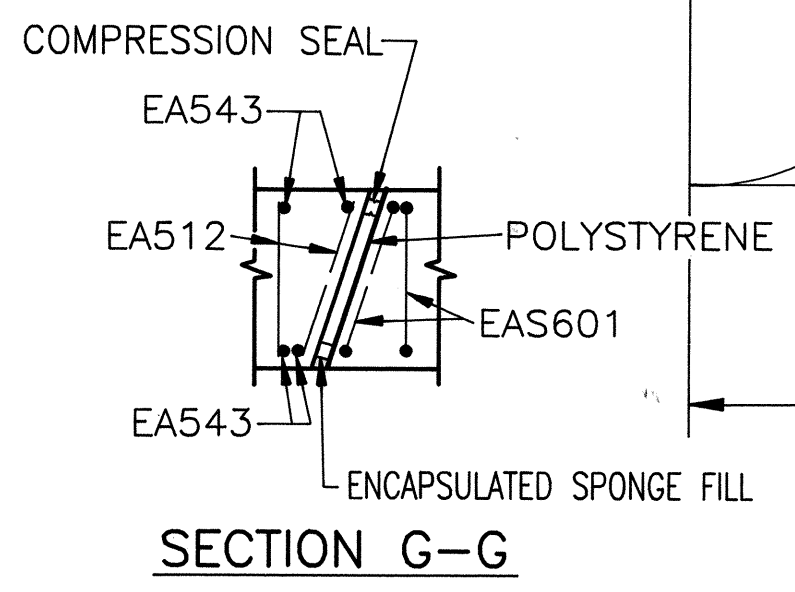
DESIGNED: D.G.B. DRAWN: C.A.T. TRACED: M.A.D. CHECKED: T.H.H. REVIEWED: 1-13-92 DATE: 1-13-92 REVISION: A.M.P.

REAR ABUTMENT DETAILS  
BRIDGE NO. PAU-66-0828  
OVER AUGLAIZE RIVER  
PAULDING COUNTY

NOTE: FOR SECTION P-P AND SECTION Q-Q SEE SHEET 5/20

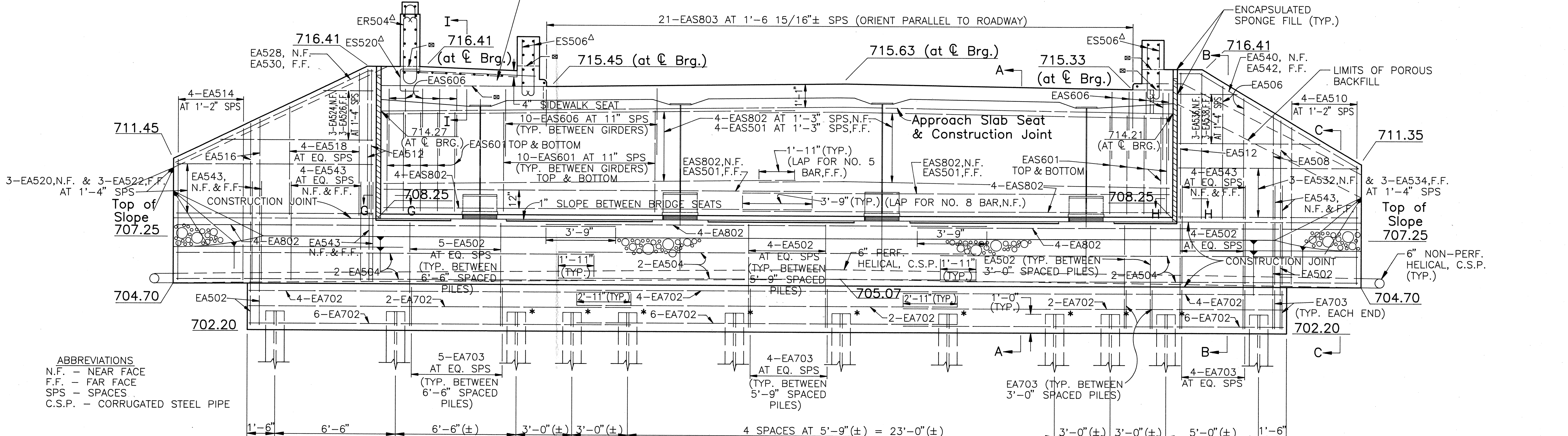


PLAN



NOTE: 6-4" B PLASTIC CONDUITS INSTALLED THROUGH ABUTMENT (SEE UTILITY PLAN FOR DETAILS)

NOTE: CONSTRUCTION JOINT IS LEVEL TRANSVERSE TO CL ROADWAY.  
NOTE: REFER TO SHEET 16/20, SHEET 17/20 AND SHEET 18/20 FOR PLACEMENT OF THESE BARS.



ELEVATION

For SECTION A-A, SECTION B-B, SECTION C-C, SECTION D-D AND SECTION I-I, See Sheet 7/20.

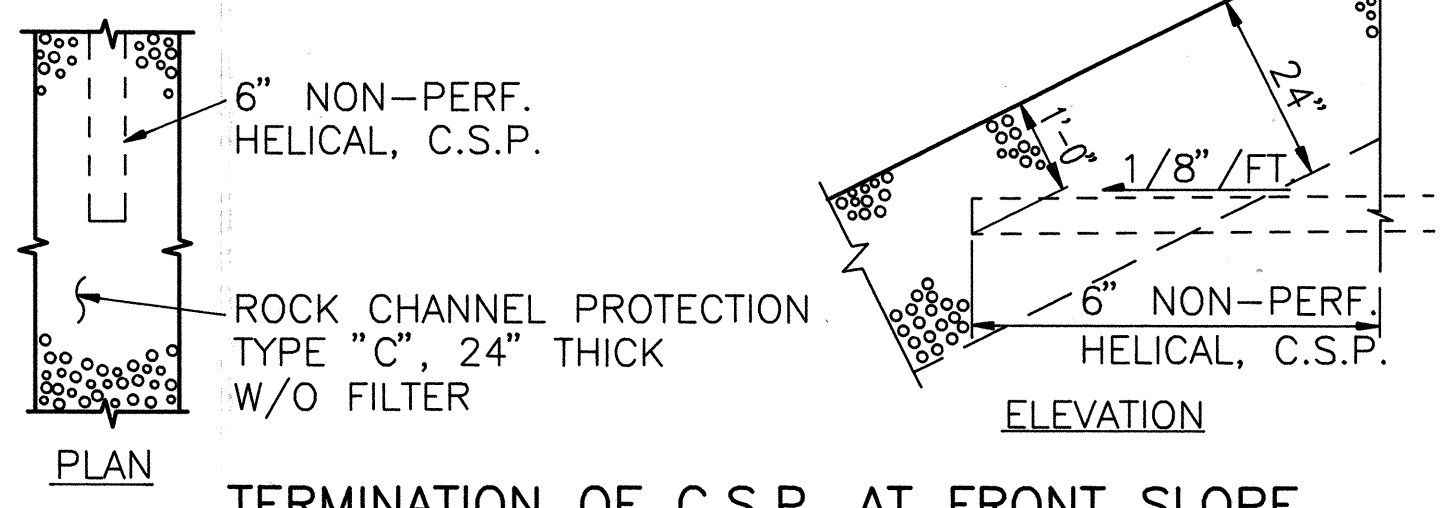
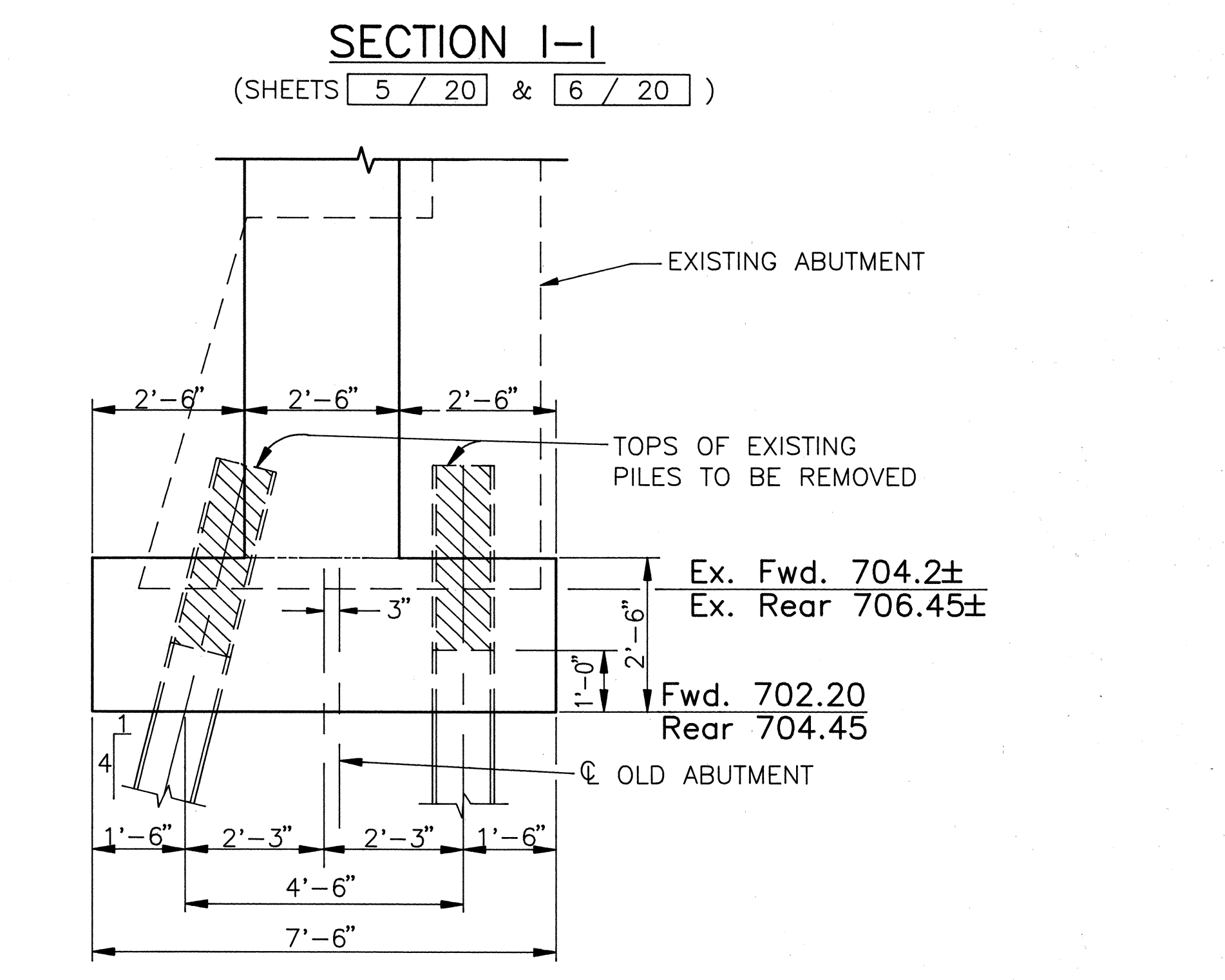
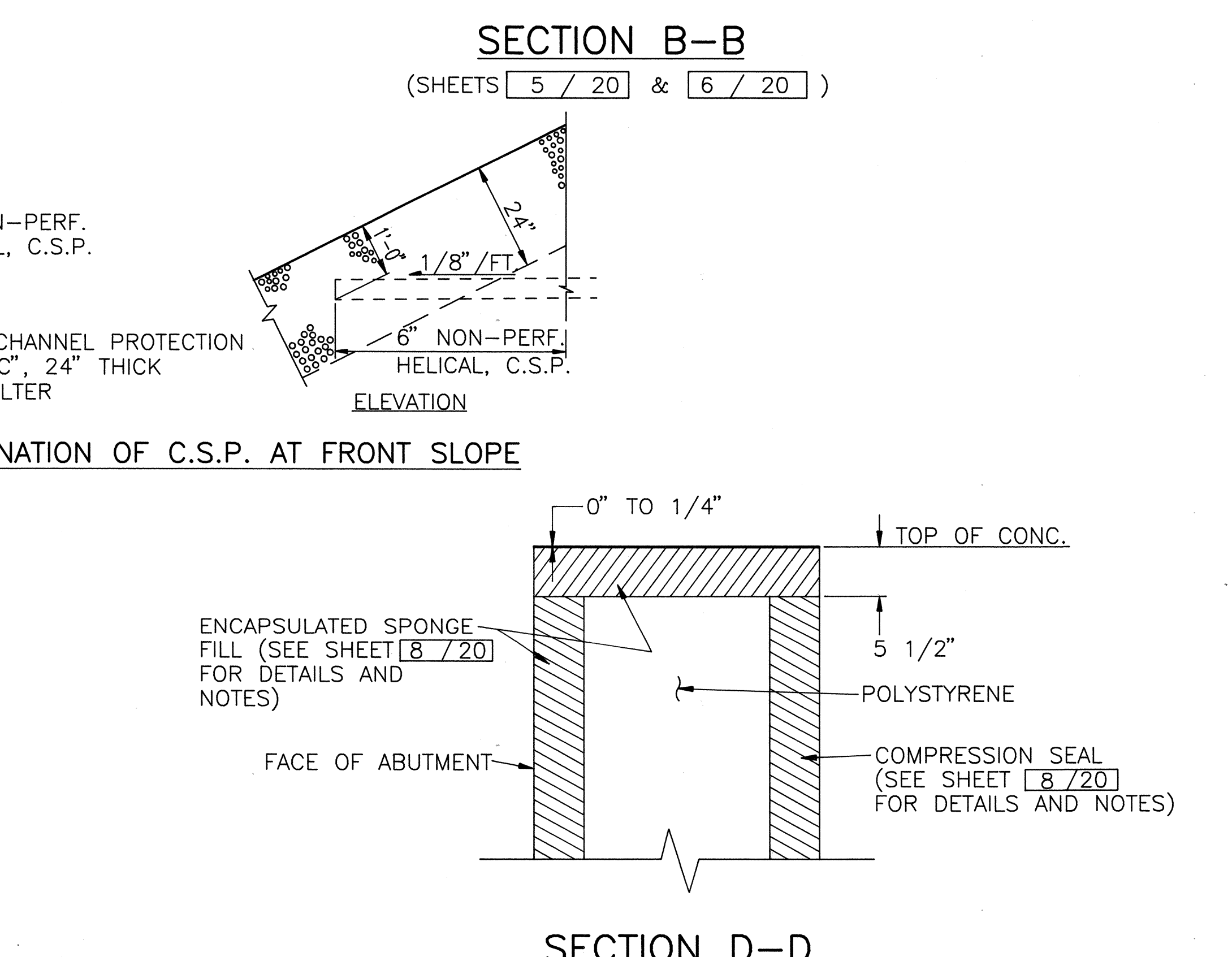
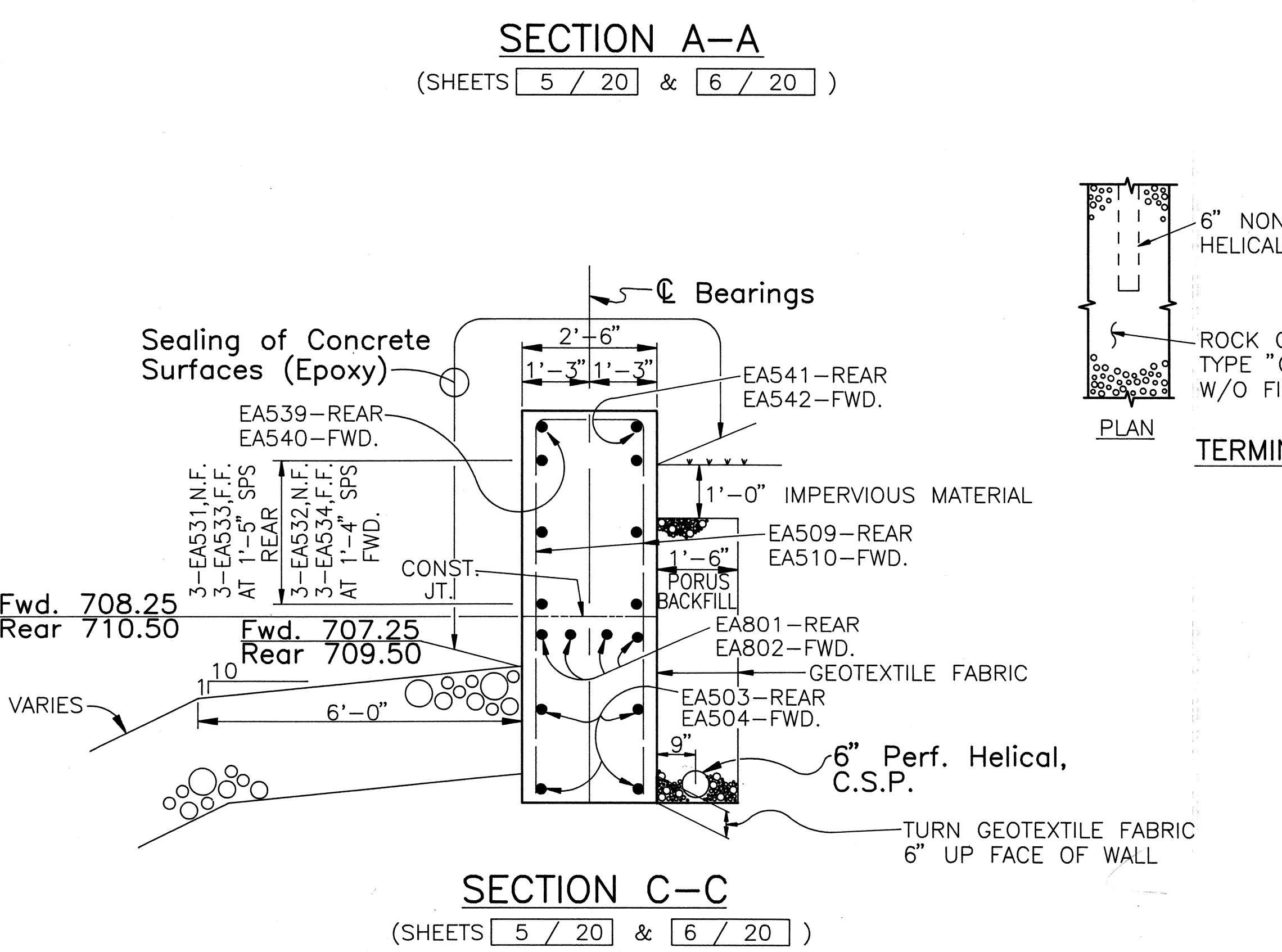
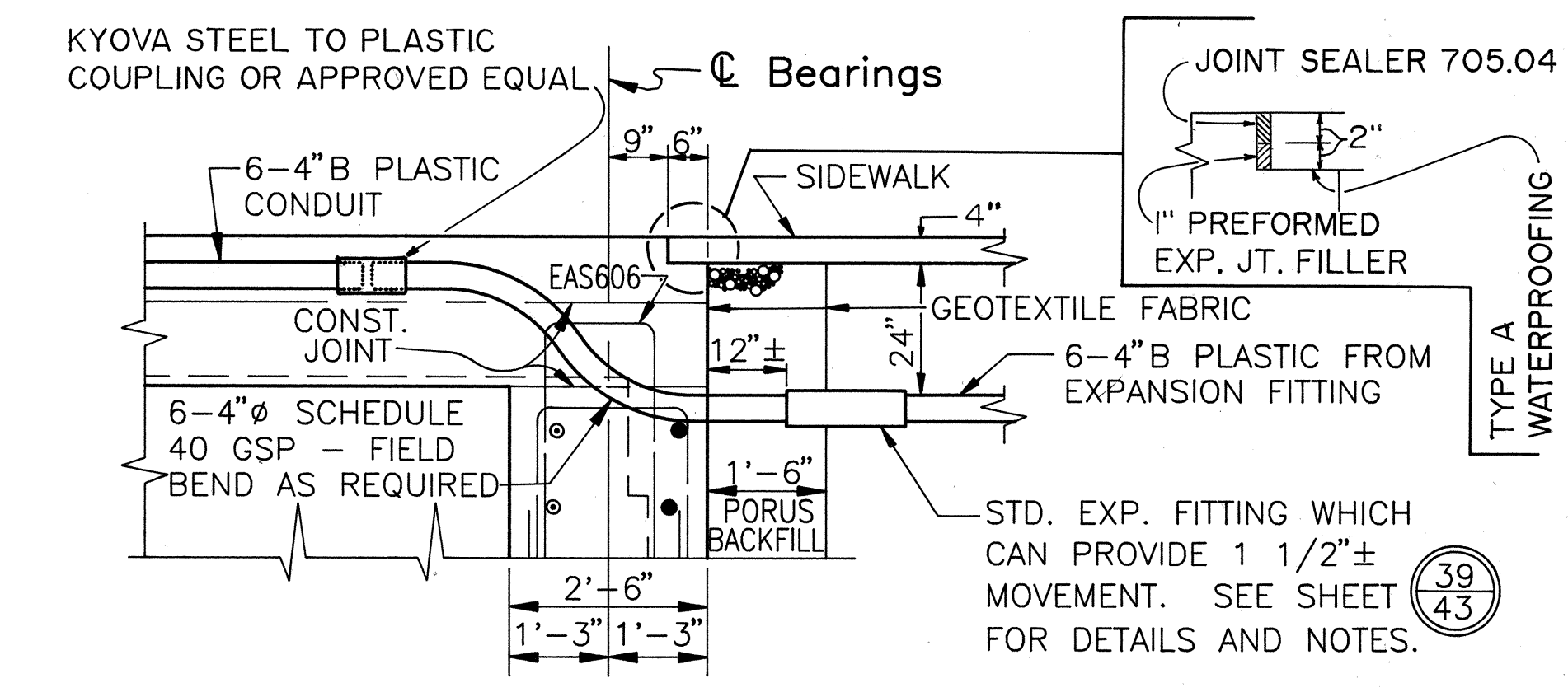
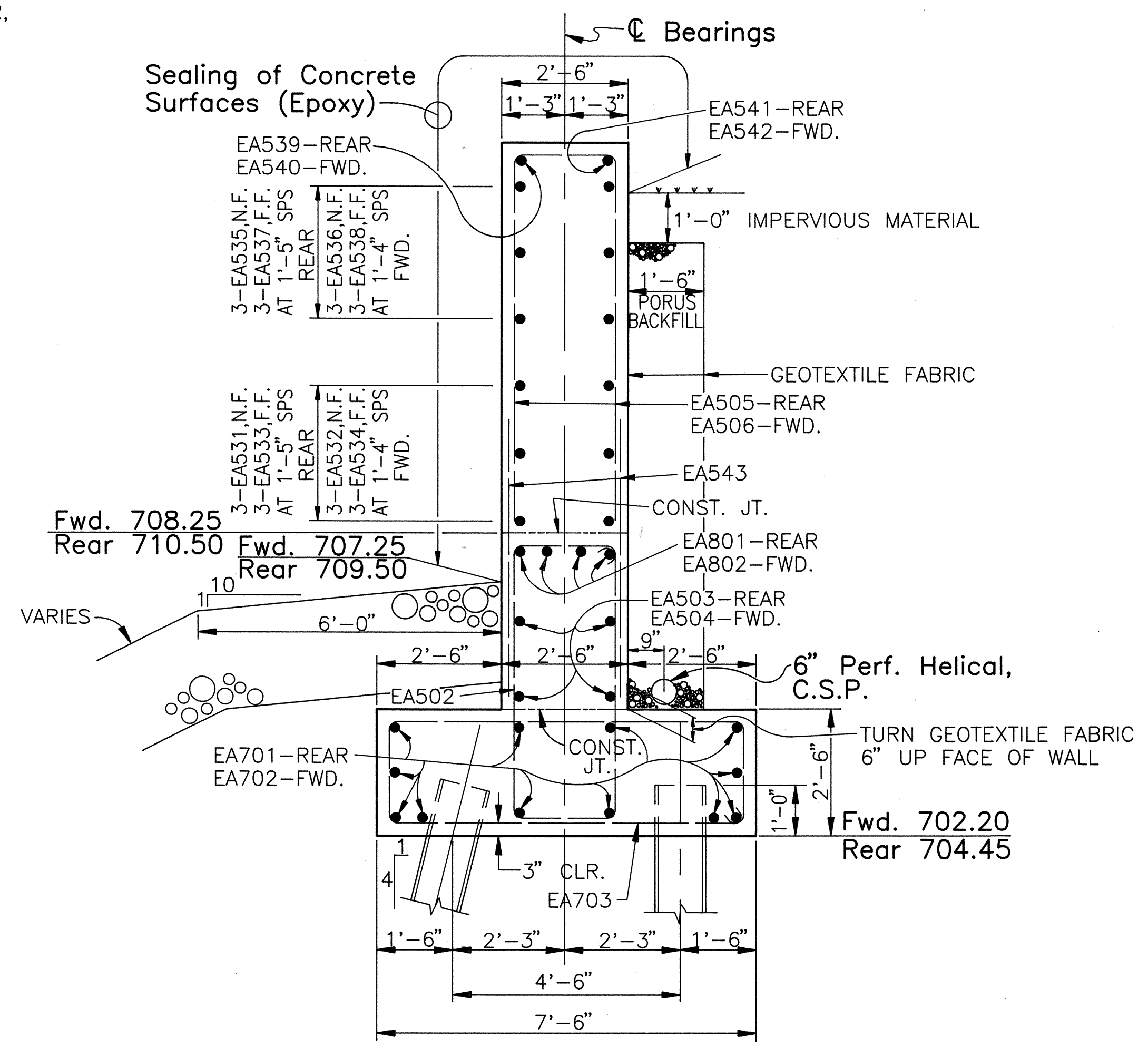
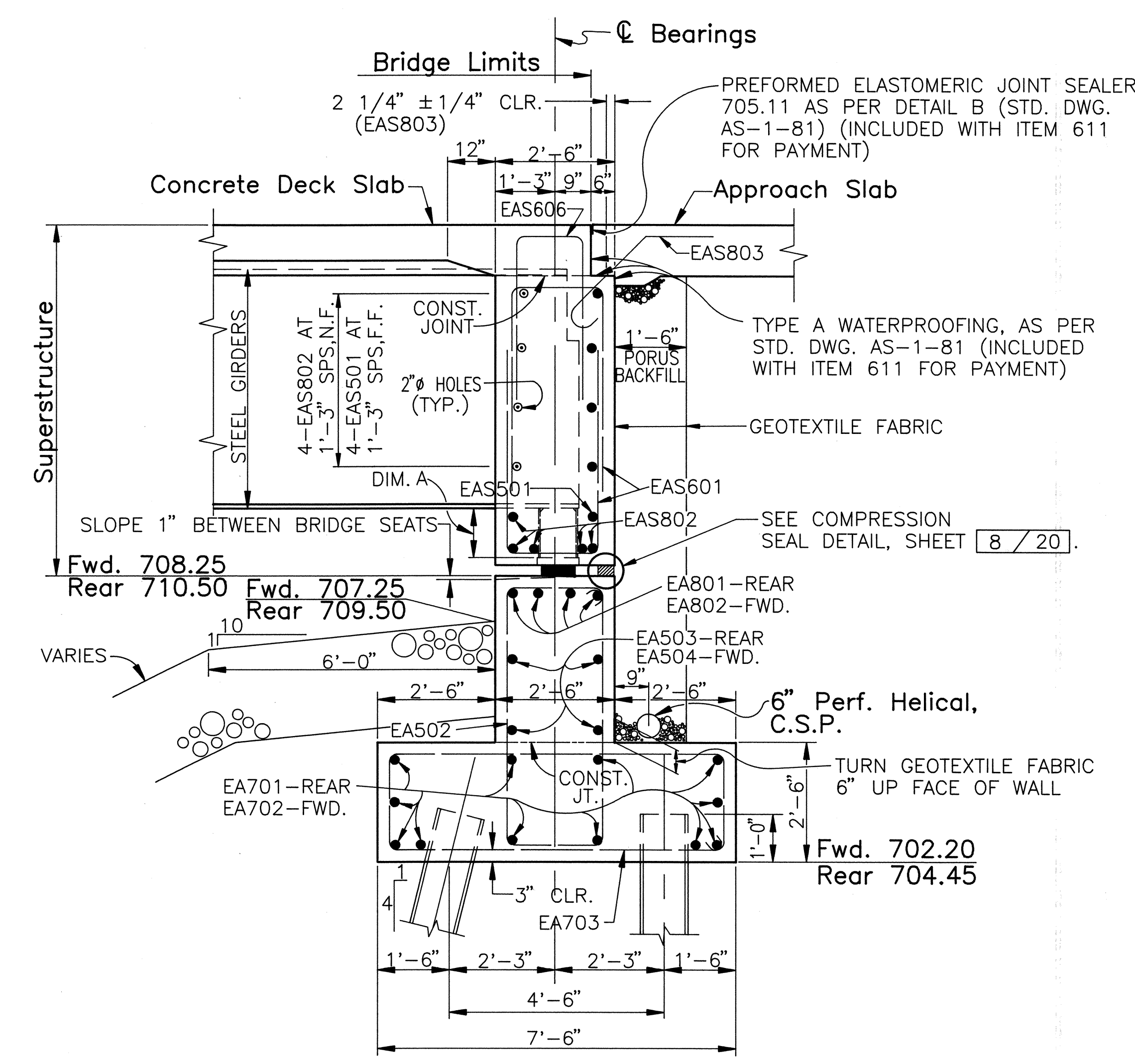
\* - Existing 12" BP 53# piles  
T - Front Row of Piles at 1:4 batter

NOTES:  
REINFORCING BAR SPLICE  
REINFORCING BAR SPLICE LENGTHS SHALL CONFORM TO THE MINIMUM LENGTHS SPECIFIED BY 509.08 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

KOHLI & KALIHAR ASSOCIATES, INC.  
CONSULTING ENGINEERS AND SURVEYORS  
LMA, OHIO

FORWARD ABUTMENT DETAILS  
BRIDGE NO. PAU-66-0828  
OVER AUGLAIZE RIVER  
PAULDING COUNTY

|                    |                 |        |                   |                    |                 |                   |
|--------------------|-----------------|--------|-------------------|--------------------|-----------------|-------------------|
| DESIGNED<br>D.G.B. | DRAWN<br>C.A.T. | TRACED | CHECKED<br>M.A.D. | REVIEWED<br>T.H.H. | DATE<br>1-13-92 | REVISED<br>A.M.P. |
|--------------------|-----------------|--------|-------------------|--------------------|-----------------|-------------------|



NOTES:  
REINFORCING BAR SPLICE LENGTHS SHALL CONFORM TO THE MINIMUM LENGTHS SPECIFIED BY 509.08 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

ABBREVIATIONS  
N.F. - NEAR FACE  
F.F. - FAR FACE  
SPS - SPACES  
C.S.P. - CORRUGATED STEEL PIPE  
G.S.P. - GALVANIZED STEEL PIPE

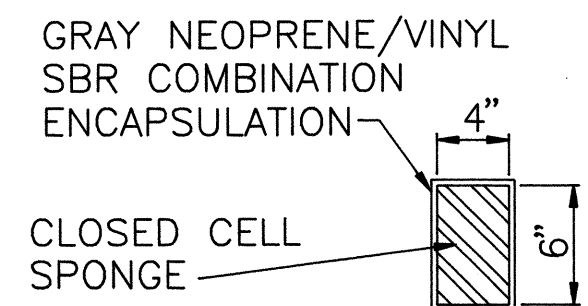
**KOHLI & KALIHAR ASSOCIATES, INC.**  
CONSULTING ENGINEERS AND SURVEYORS LMA, OHIO

7 / 20

**REAR AND FORWARD ABUTMENT DETAILS**  
BRIDGE NO. PAU-66-0828  
OVER AUGLAIZE RIVER  
PAULDING COUNTY

|          |        |        |         |          |         |         |
|----------|--------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE    | REVISED |
| D.G.B.   | A.M.P. |        | M.A.D.  | T.H.H.   | 1-13-92 | A.M.P.  |





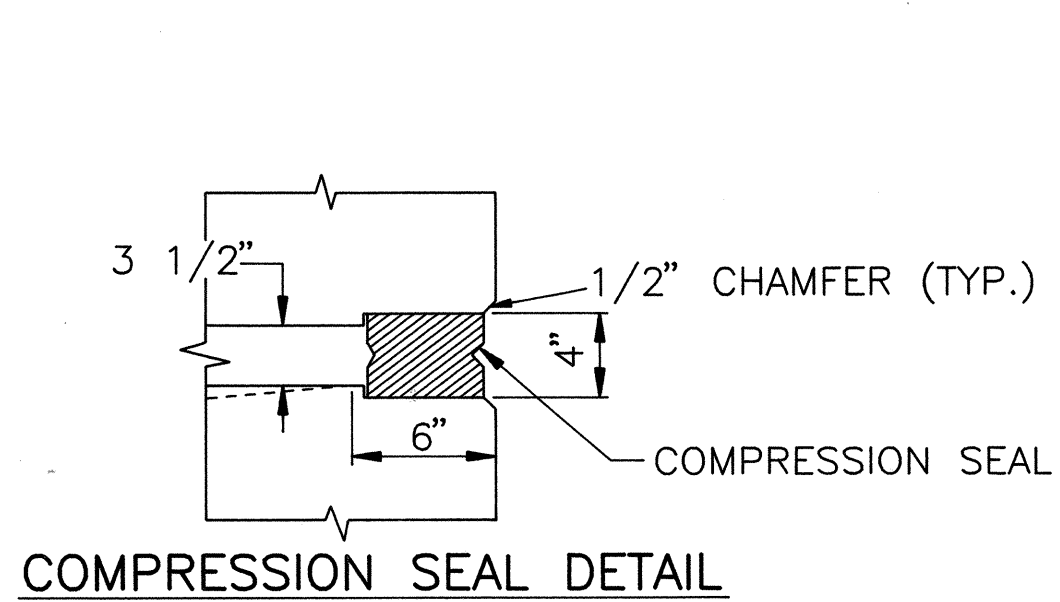
**ENCAPSULATED SPONGE SEAL**

**ENCAPSULATED SPONGE FILL:**

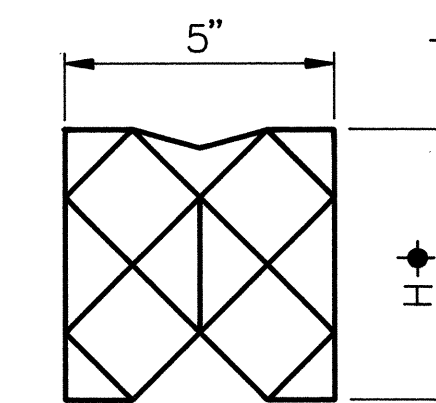
FILL EXPOSED PORTIONS OF JOINTS IN WINGWALLS WITH A CLOSED CELL SPONGE ENCAPSULATED WITH A GRAY NEOPRENE/VINYL/SBR COMBINATION. THE CONTACT SIDES OF THE SPONGE FILL SHALL BE ADHESIVELY BONDED TO THE CONCRETE USING A LUBRICANT-ADHESIVE RECOMMENDED BY THE SEAL MANUFACTURER. PRIOR TO THE APPLICATION OF THE BONDING ADHESIVE, THE CONCRETE BONDING SURFACES OF THE JOINT AND THE BONDING SURFACES OF THE SEAL SHALL BE CLEAN AND DRY. NOT MORE THAN 24 HOURS PRIOR TO SEAL INSTALLATION, THE CONCRETE BONDING SURFACES SHALL BE CLEANED WITH POTABLE WATER AND WIRE BRUSHES. THE SURFACES SHALL BE FLUSHED WITH POTABLE WATER TO REMOVE ANY DEBRIS OR DUST AFTER THE BRUSHING IS COMPLETE.

SEALS SHALL NOT BE INSTALLED UNTIL AFTER THE ENGINEER APPROVES THE JOINT PREPARATION AND THE CONDITION OF THE SEALS. SURFACE TEMPERATURES SHALL BE NOT LOWER THAN 40°F DURING SEAL INSTALLATION AND ADHESIVE CURING.

DURING INSTALLATION, THE SEAL SHALL BE COMPRESSED SUFFICIENTLY SO THAT IT CAN BE INSERTED AND ALLOWED TO EXPAND AGAINST THE ADHESIVE COATED SIDES OF THE JOINT. ALL EXCESS ADHESIVE SHALL BE CLEANED FROM THE SPONGE FILL. A POLYSTYRENE FILLER SHALL BE PLACED IN THE OPEN SPACE BETWEEN THE ELASTOMERIC COMPRESSION SEAL AND THE ENCAPSULATED SPONGE SEAL. THE COST OF THE SPONGE FILL AND POLYSTYRENE FILLER SHALL BE INCLUDED WITH ITEM 516, ELASTOMERIC COMPRESSION SEAL, AND SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE FILLING THE JOINTS.



**COMPRESSION SEAL DETAIL**



**COMPRESSION SEAL**

D.S. BROWN'S CV5000, WATSON BOWMAN & ACME'S WJ-500, OR AN APPROVED ALTERNATE

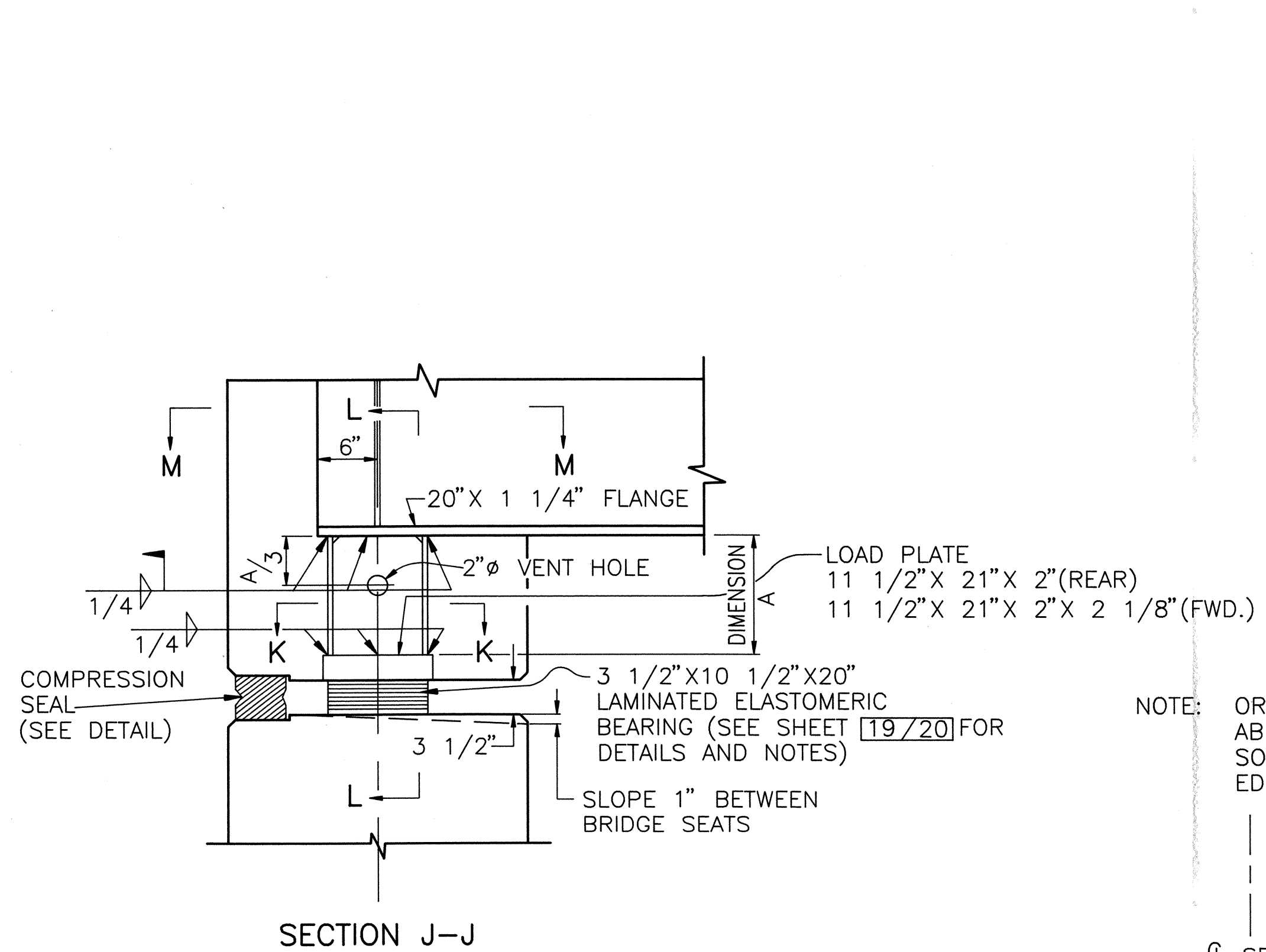
SEE MANUFACTURER'S CATALOG FOR SEAL ACTUALLY CHOSEN FOR USE.

**ELASTOMERIC COMPRESSION SEAL:**

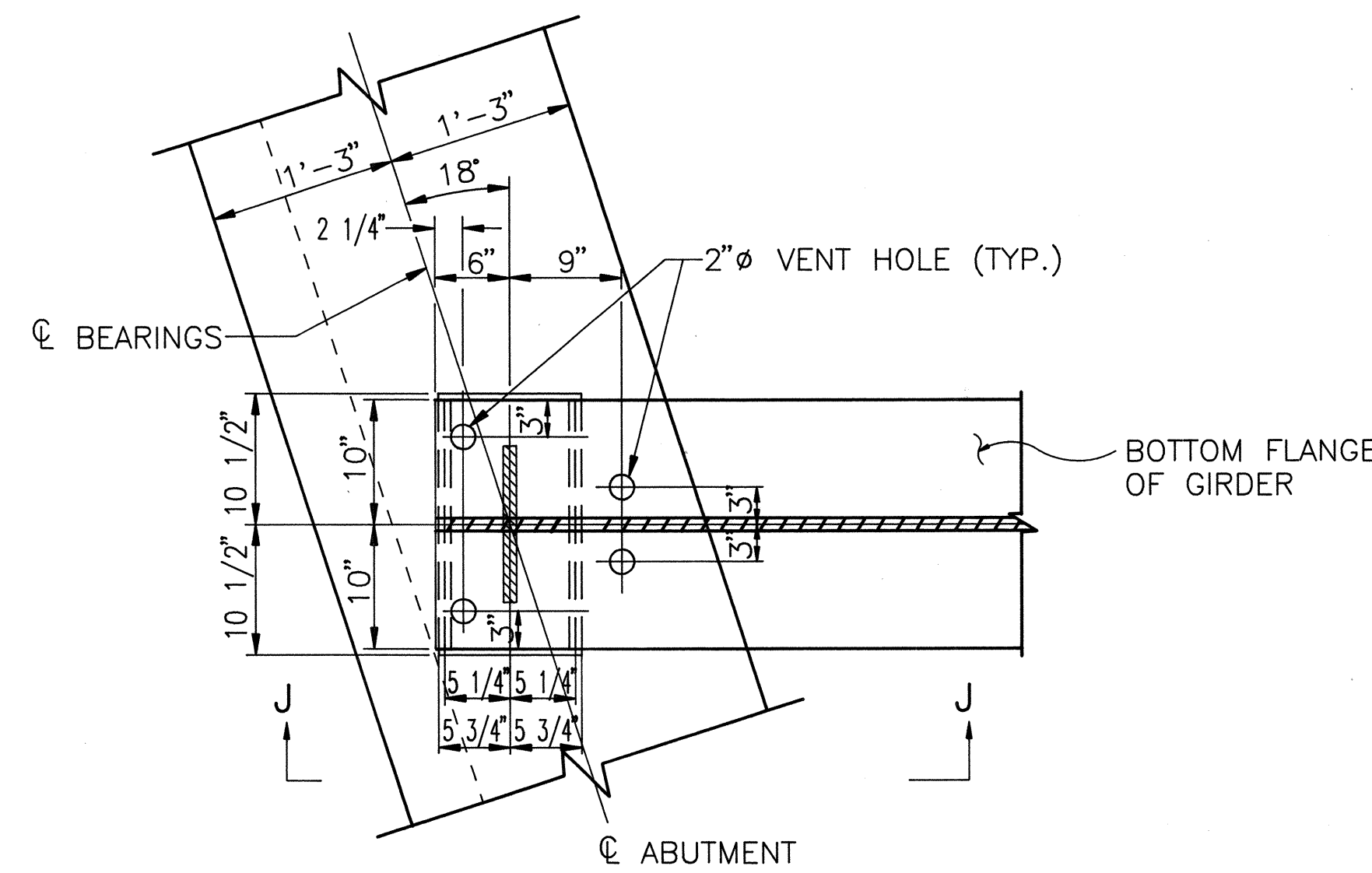
REFERENCE SHALL BE MADE TO SUPPLEMENTAL SPECIFICATION 849 AND 949 FOR INSTALLATION PROCEDURES, MATERIAL REQUIREMENTS AND MANUFACTURING CONTROL, EXCEPT AS MODIFIED HEREIN.

BOTH THE TOP AND BOTTOM SURFACES OF THE COMPRESSION SEAL SHALL BE ADHESIVELY BONDED TO THE CONCRETE USING A FLEXIBLE EPOXY ADHESIVE RECOMMENDED BY THE SEAL MANUFACTURER.

PRIOR TO THE APPLICATION OF THE BONDING ADHESIVE, THE CONCRETE BONDING SURFACE OF THE JOINT AND THE BONDING SURFACE OF THE SEAL SHALL BE CLEAN AND DRY. NOT MORE THAN 24 HOURS PRIOR TO SEAL INSTALLATION, THE CONCRETE BONDING SURFACES OF THE EXPANSION JOINT SHALL BE ABRASIVELY CLEANED. CLEANING DEBRIS SHALL THEN BE REMOVED FROM THE JOINTS, AND THE JOINT FLUSHED WITH POTABLE WATER TO REMOVE DUST. SEALS SHALL NOT BE INSTALLED UNTIL AFTER THE ENGINEER APPROVES THE JOINT PREPARATION AND THE CONDITION OF THE SEALS. COMPRESSION SEAL HORIZONTAL TO VERTICAL JOINT SHALL BE MITERED AT 45° AND SPLICED PER SUPPLEMENTAL SPECIFICATION 949.

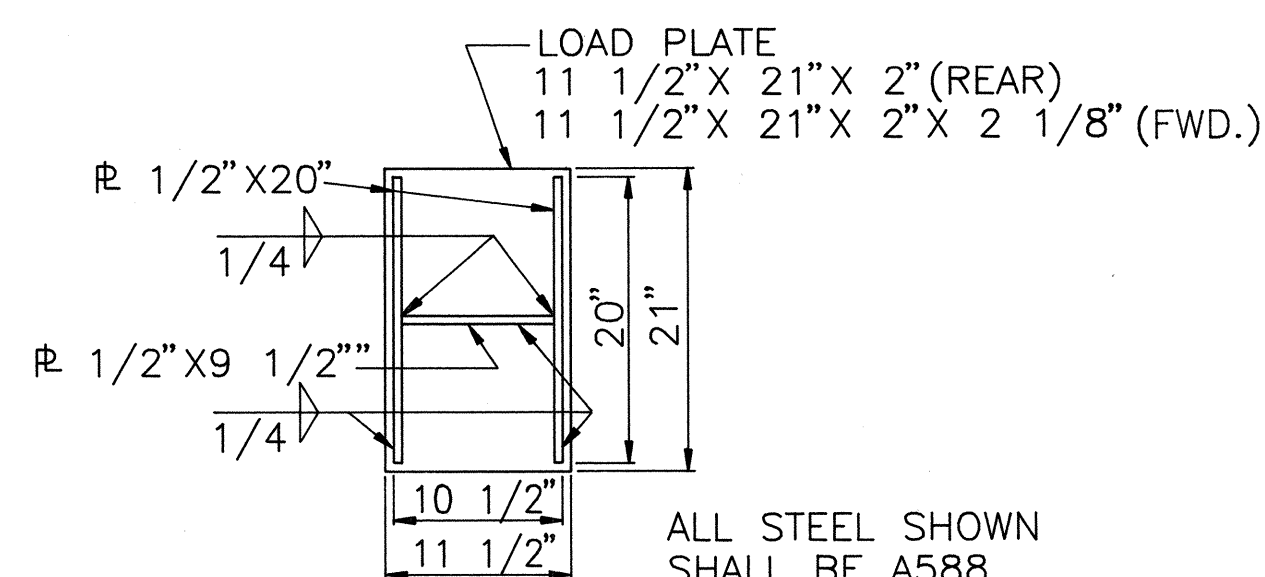
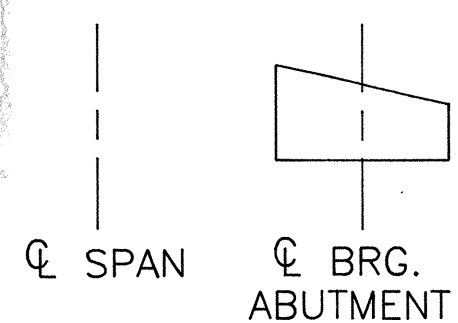


**SECTION J-J**



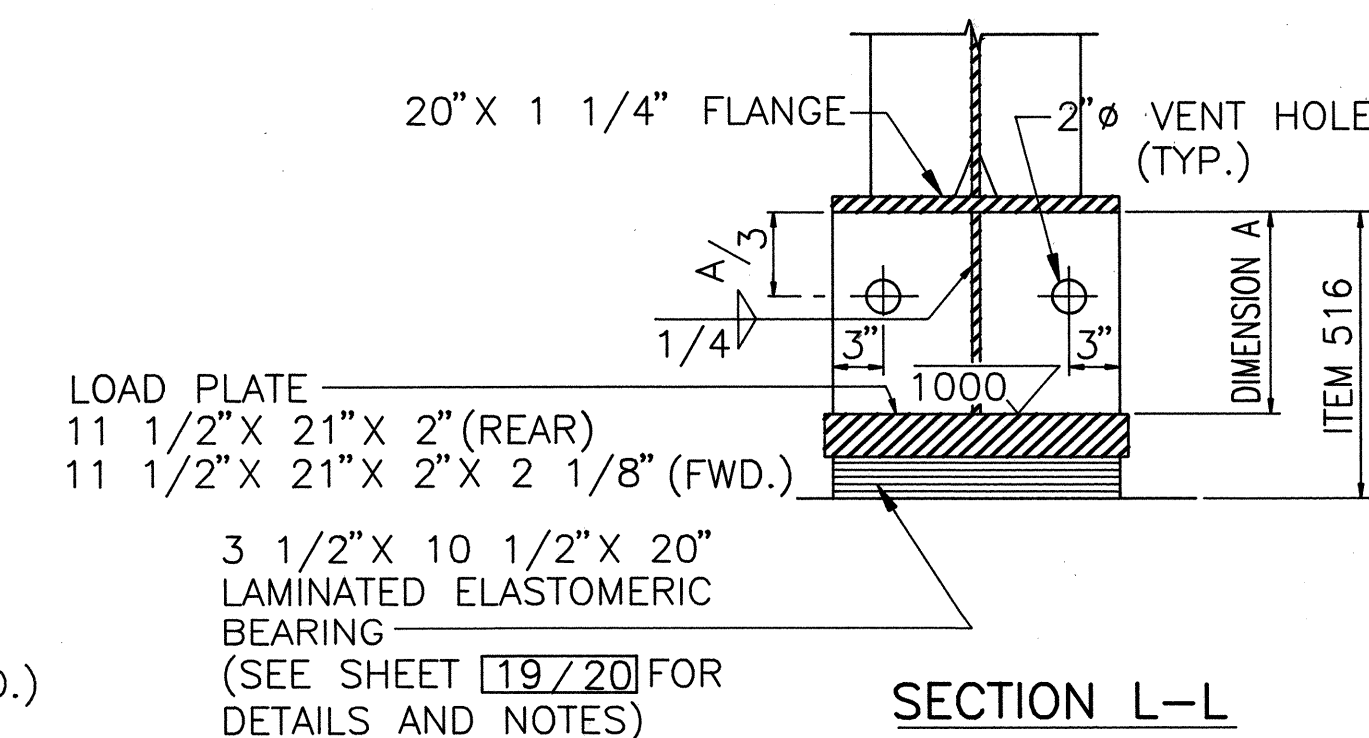
**SECTION M-M**

NOTE: ORIENT THE FORWARD ABUTMENT LOAD PLATE SO THAT THE THICKER EDGE FACES TO THE REAR.



**SECTION K-K**

ALL STEEL SHOWN SHALL BE A588



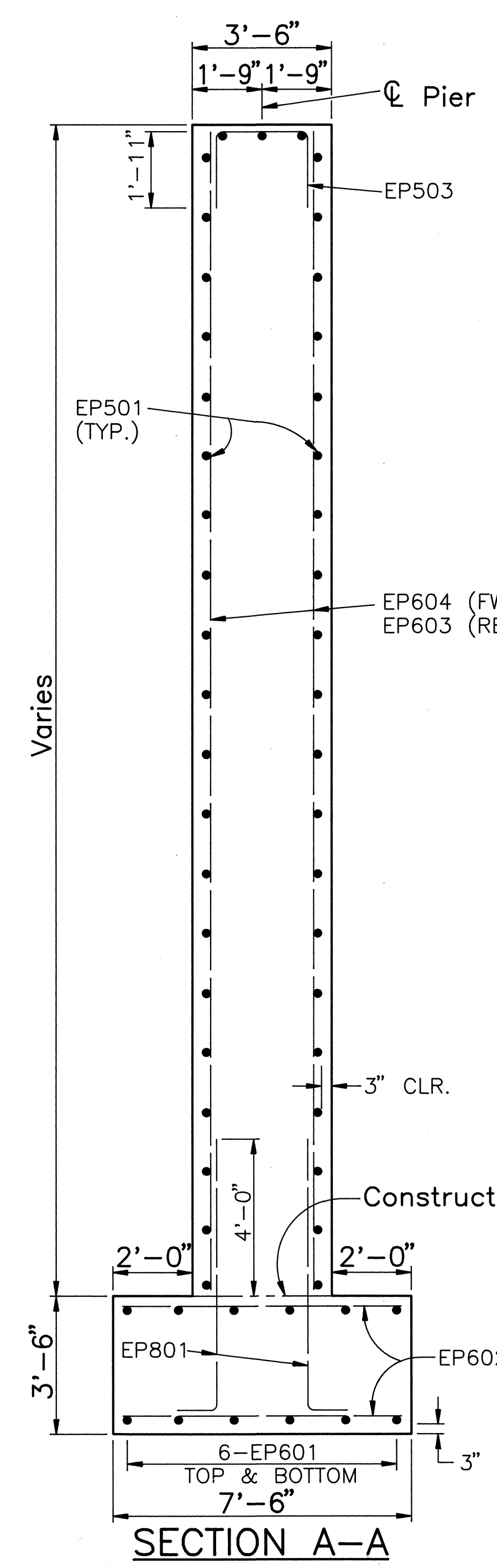
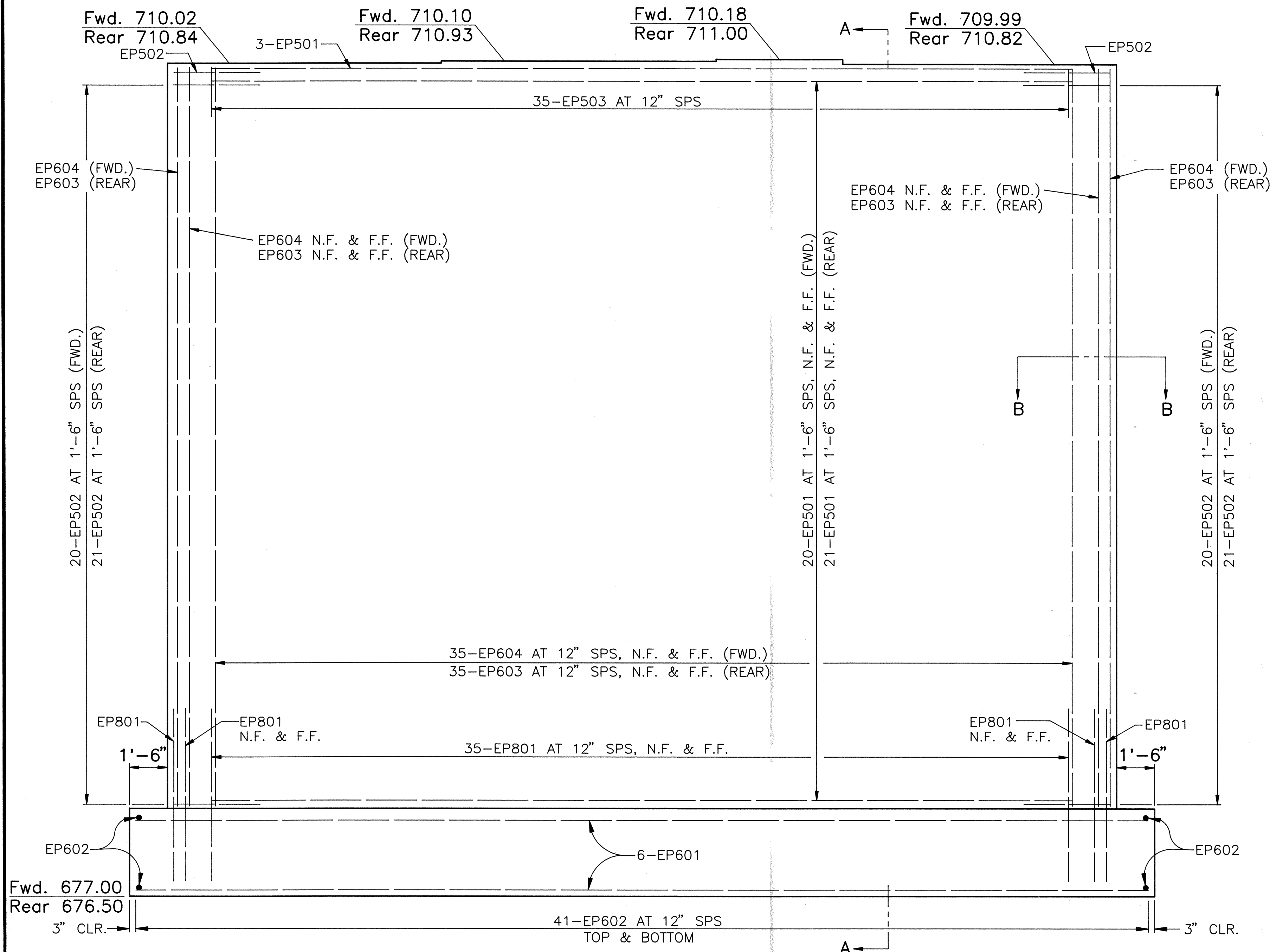
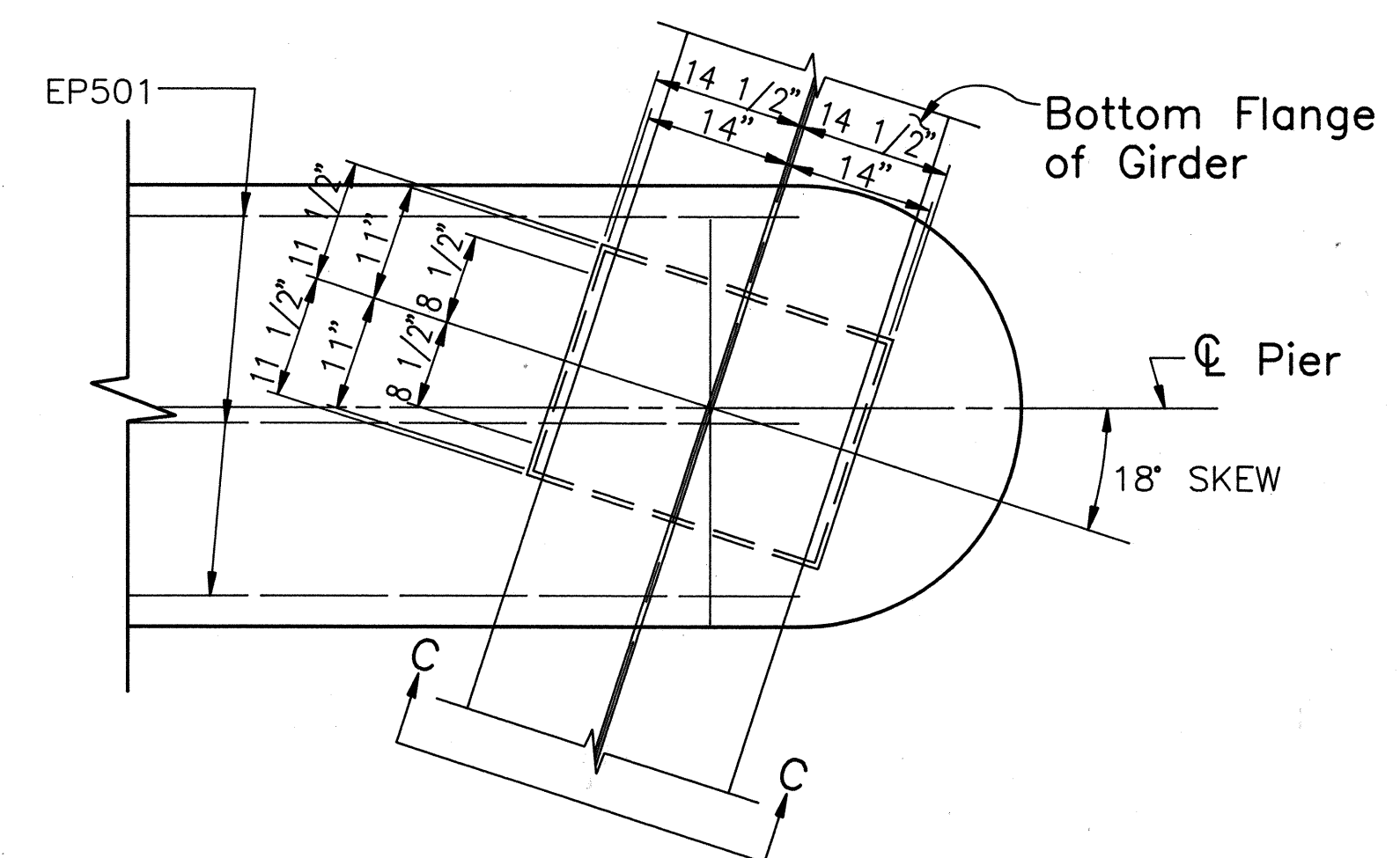
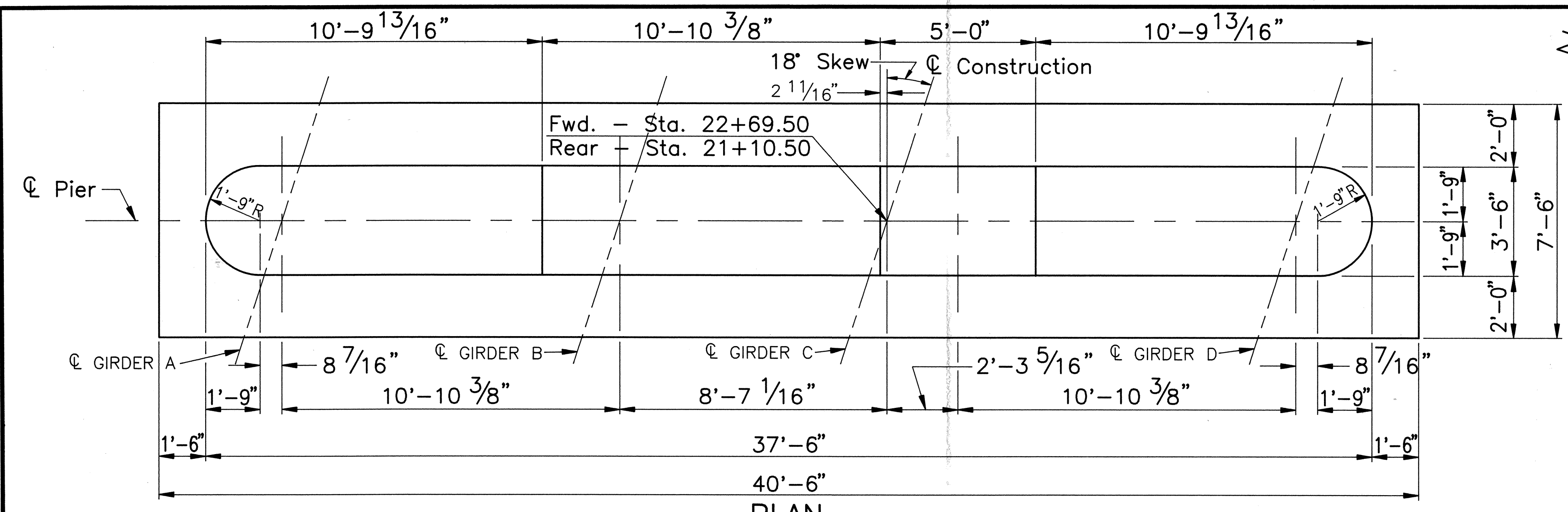
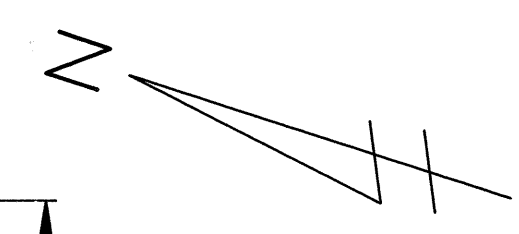
**SECTION L-L**

| BEARING SUPPORT - DIMENSION A |         |           |          |         |
|-------------------------------|---------|-----------|----------|---------|
| GIRDER LINE                   | A       | B         | C        | D       |
| Rear Abutment                 | 13 3/8" | 14 1/2"   | 15 3/8"  | 13 1/4" |
| Forward Abutment              | 10"     | 10 13/16" | 11 7/16" | 9"      |

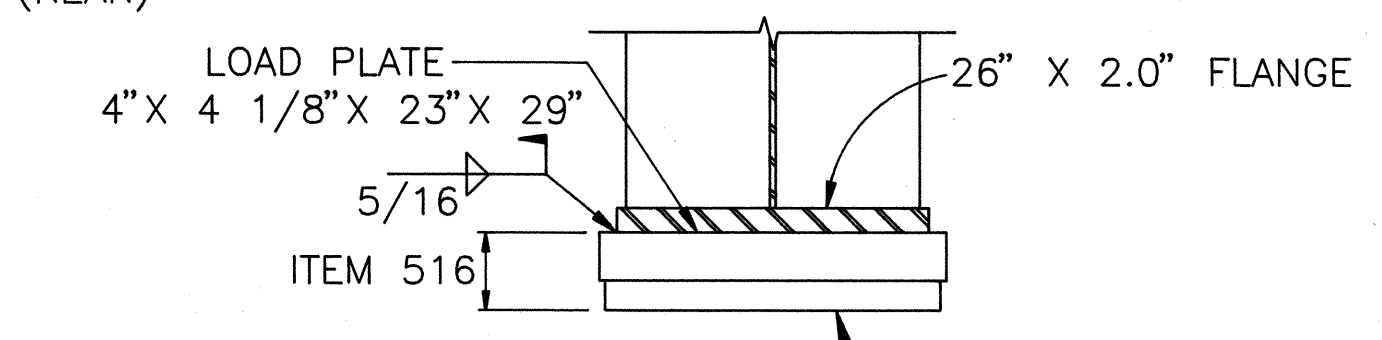
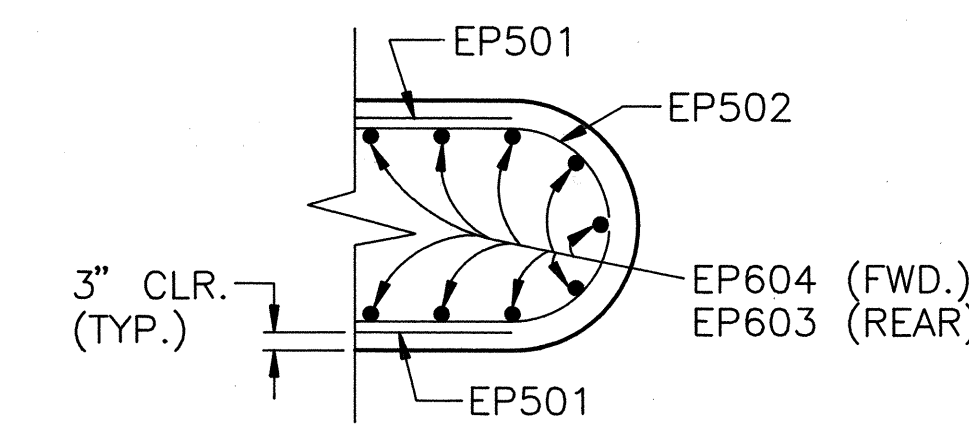
**KOHLI & KALIHAR ASSOCIATES, INC.**  
CONSULTING ENGINEERS AND SURVEYORS LMA, OHIO 8/20

**REAR AND FORWARD ABUTMENT DETAILS**  
BRIDGE NO. PAU-66-0828  
OVER AUGLAIZE RIVER  
PAULDING COUNTY

|          |        |        |         |          |         |         |
|----------|--------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE    | REVISED |
| D.G.B.   | A.M.P. |        | M.A.D.  | T.H.H.   | 1-13-92 | A.M.P.  |



BEARING DETAILS



NOTES:  
REINFORCING BAR SPLICE LENGTHS SHALL CONFORM TO THE MINIMUM LENGTHS SPECIFIED BY 509.08 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

REINFORCING STEEL ABBREVIATIONS  
N.F. - NEAR FACE  
F.F. - FAR FACE  
SPS - SPACES

WELDING SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 400°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

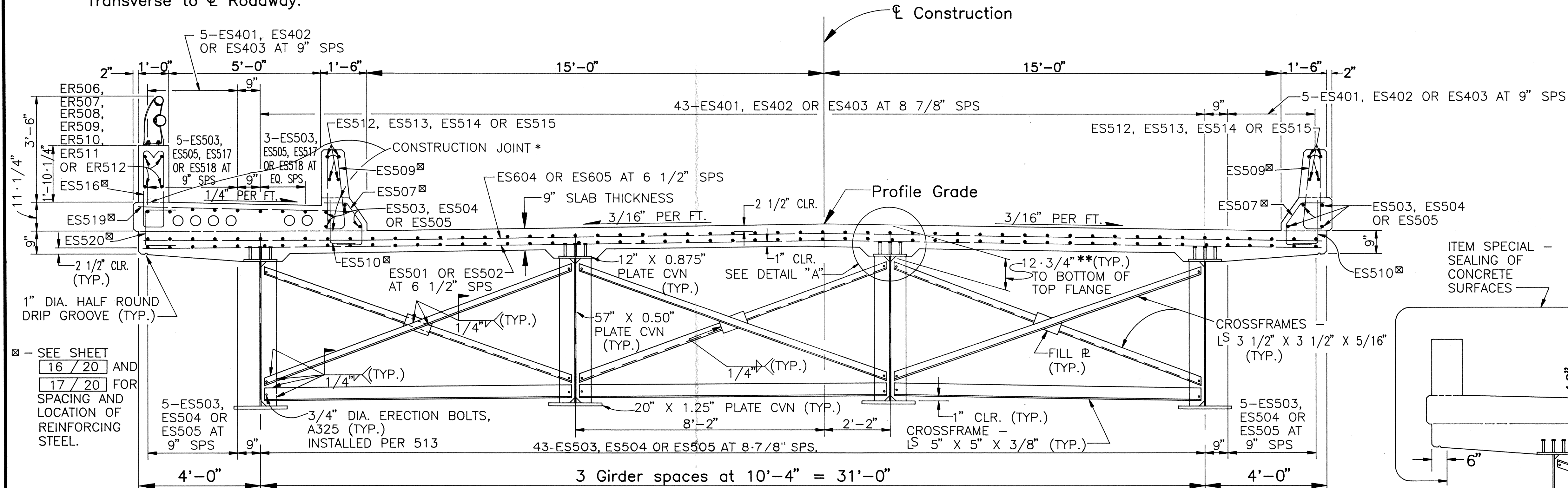
KOHLI & KALIHAR ASSOCIATES, INC.  
CONSULTING ENGINEERS AND SURVEYORS LMA, OHIO

PIER DETAILS

BRIDGE NO. PAU-66-0828  
OVER AUGLAIZE RIVER  
PAULDING, COUNTY

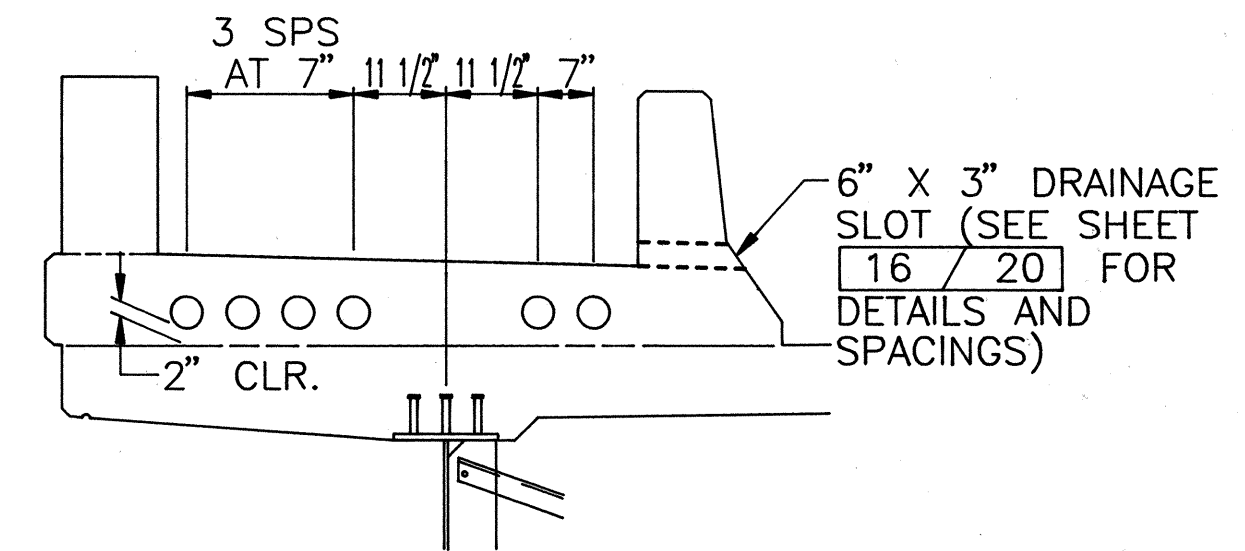
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|----------|--------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE    | REVISED |
| D.G.B.   | A.M.P. |        | M.A.D.  | T.H.H.   | 1-13-92 | A.M.P.  |

\* - NOTE: All Construction Joints are Level Transverse to  $\bar{C}$  Roadway.

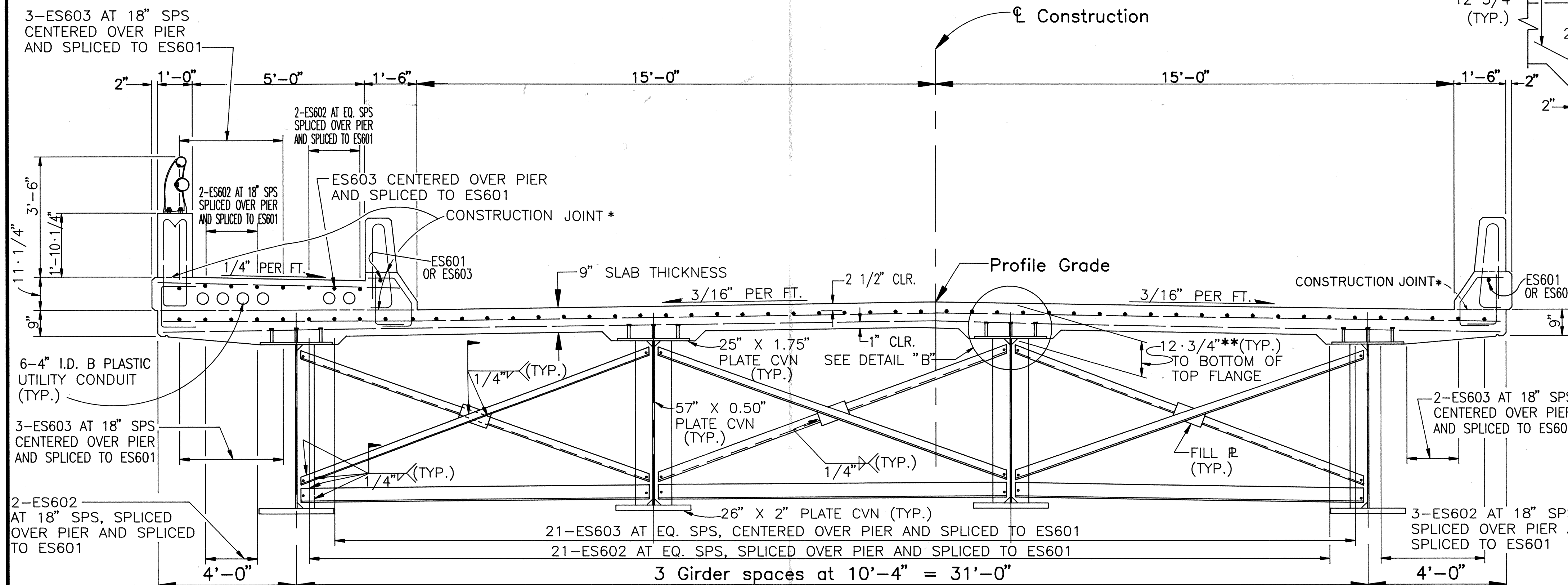
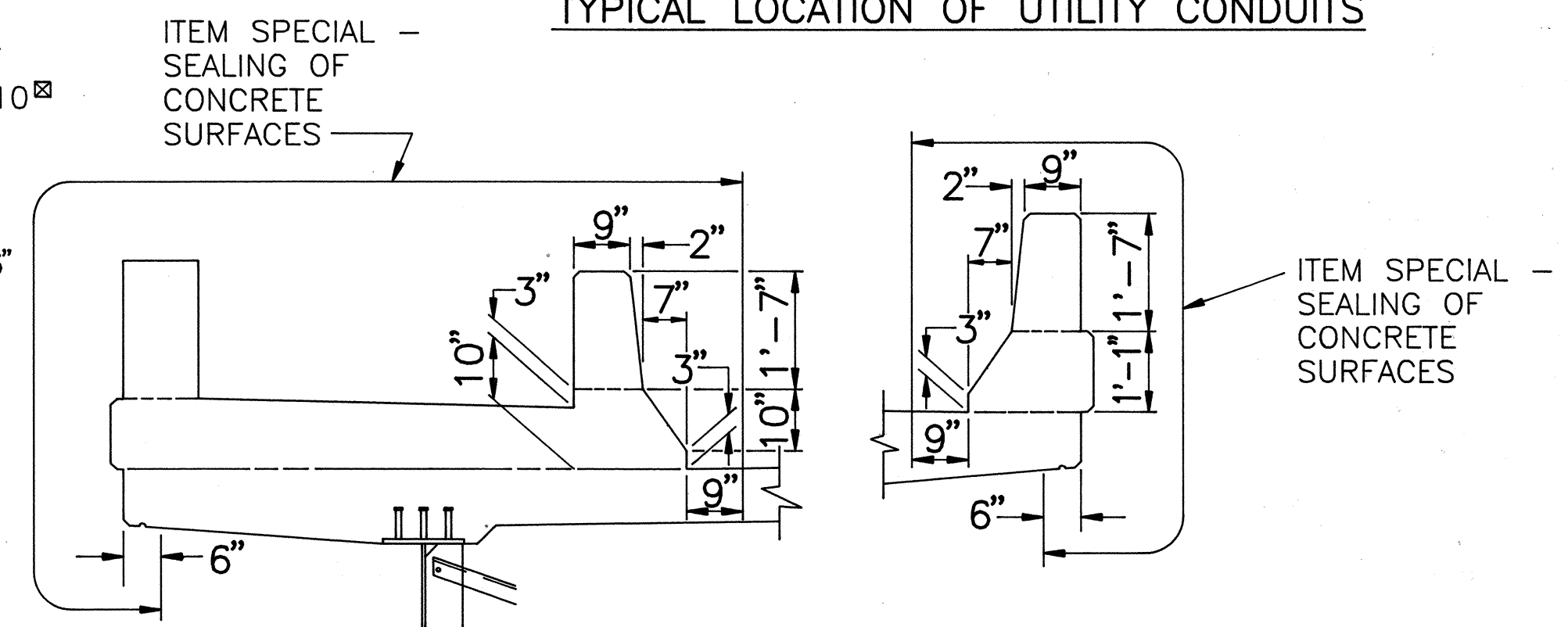


**TYPICAL CROSS SECTION - POSITIVE MOMENT ZONE**

NOTE: Longitudinal reinforcing shown extends throughout positive and negative moment zone.

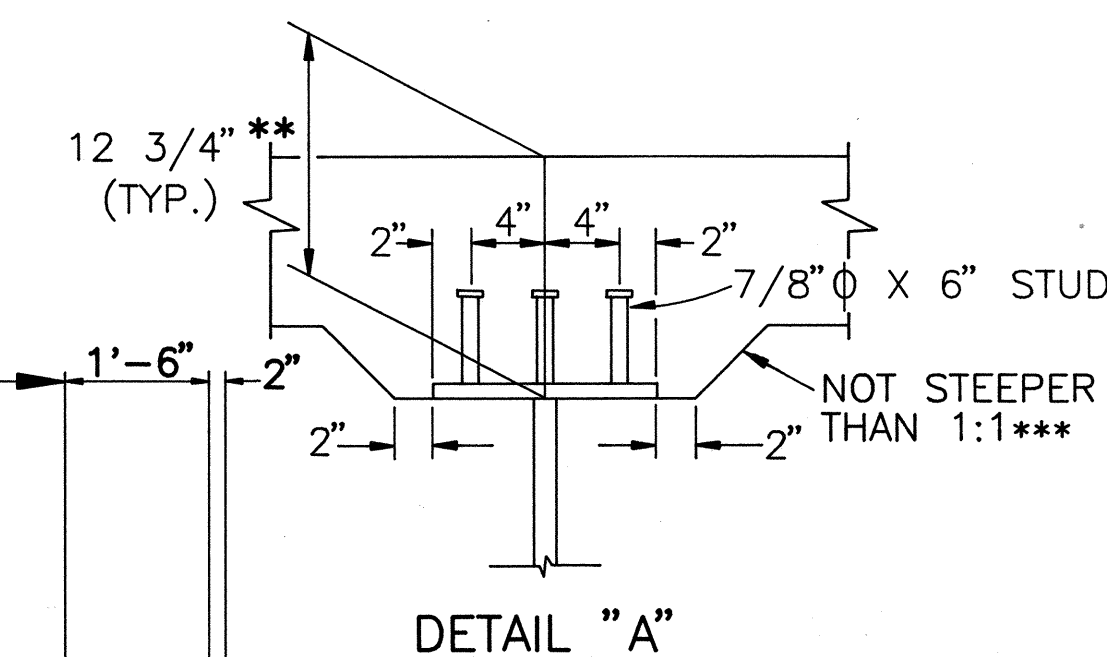


TYPICAL LOCATION OF UTILITY CONDUITS

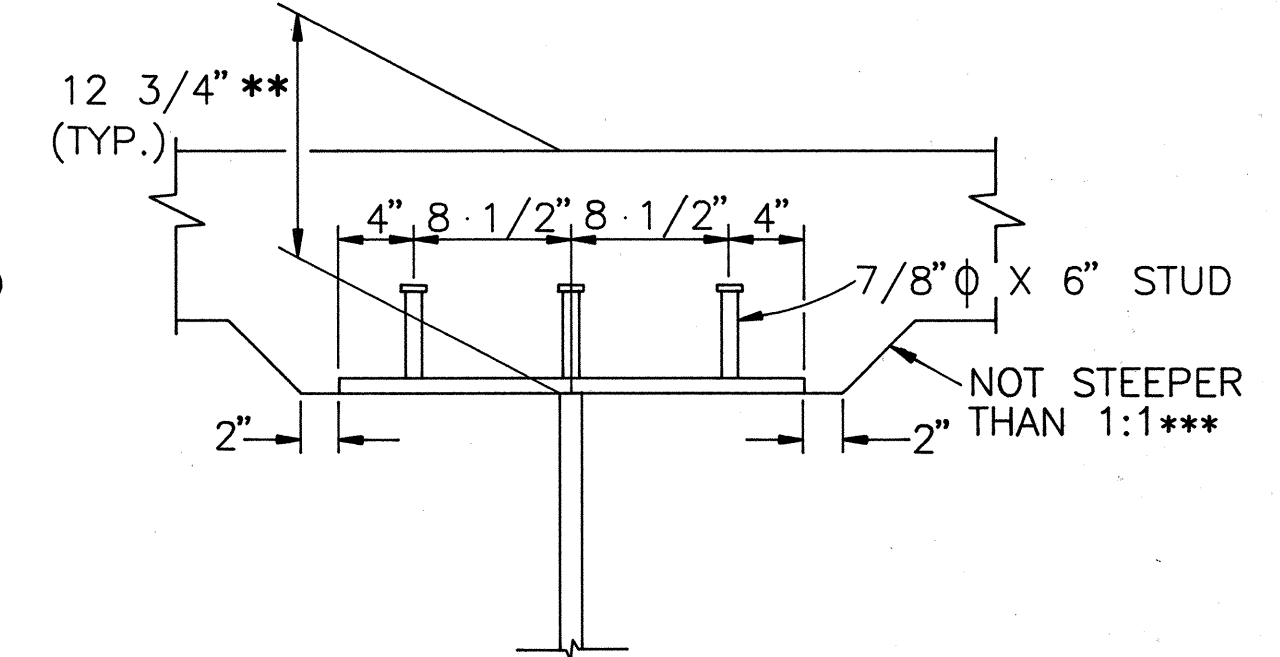


**TYPICAL CROSS SECTION - NEGATIVE MOMENT ZONE**

NOTE: Only extra longitudinal bars in negative moment zone shown.



DETAIL "A"



DETAIL "B"

NOTES:

REINFORCING BAR SPLICE LENGTHS SHALL CONFORM TO THE MINIMUM LENGTHS SPECIFIED BY 509.08 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

REINFORCING STEEL ABBREVIATIONS  
N.F. - NEAR FACE  
F.F. - FAR FACE  
SPS - SPACES

\*\* - THIS IS THE DESIGN DIMENSION. THE QUANTITY OF DECK CONCRETE SHALL BE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY, BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. NO DEDUCTION WILL BE MADE FOR THE VOLUME OF THE REINFORCING STEEL, CONDUITS OR STRUCTURAL STEEL OTHER THAN BEAM FLANGES EMBEDDED IN DECK SLABS.

\*\*\* - A HAUNCH WIDTH BASED ON A SLOPE OF 1:1 SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. THE SLOPE OF THE HAUNCH MAY BE LESS AT THE CONTRACTOR'S OPTION.

ERECTION BOLTS: HOLE DIAMETER IN THE CROSSFRAMES AND GIRDER STIFFENERS SHALL BE RESPECTIVELY 1/16" AND 1/4" LARGER THAN THE DIAMETER OF THE ERECTION BOLTS. UNLESS REPLACED BY PERMANENT HIGH STRENGTH BOLTS, ERECTION BOLTS SHALL REMAIN IN PLACE. LOCK WASHERS SHALL BE FURNISHED FOR OTHER THAN FULLY TORQUED HIGH STRENGTH ERECTION BOLTS. BOLTS SHALL BE FURNISHED AS PART OF 513.

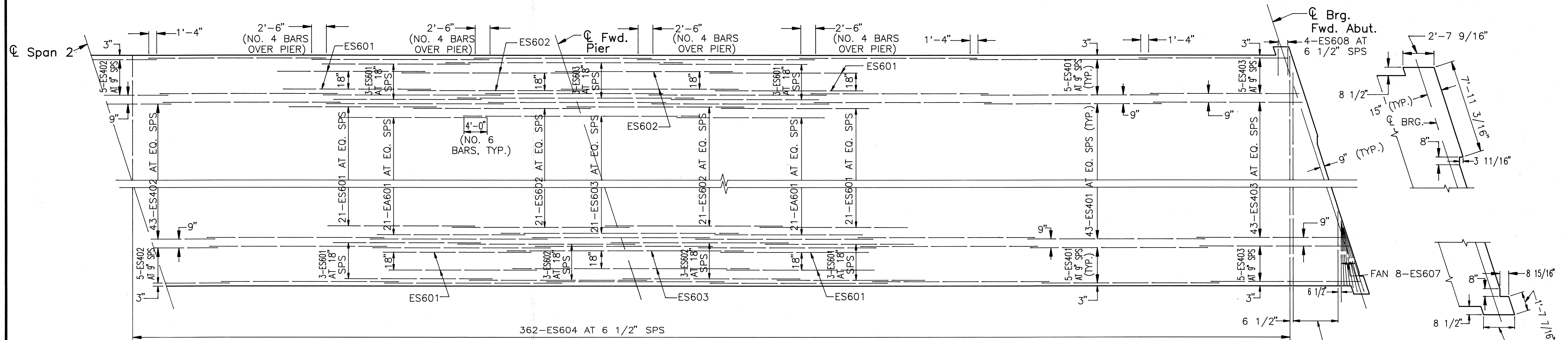
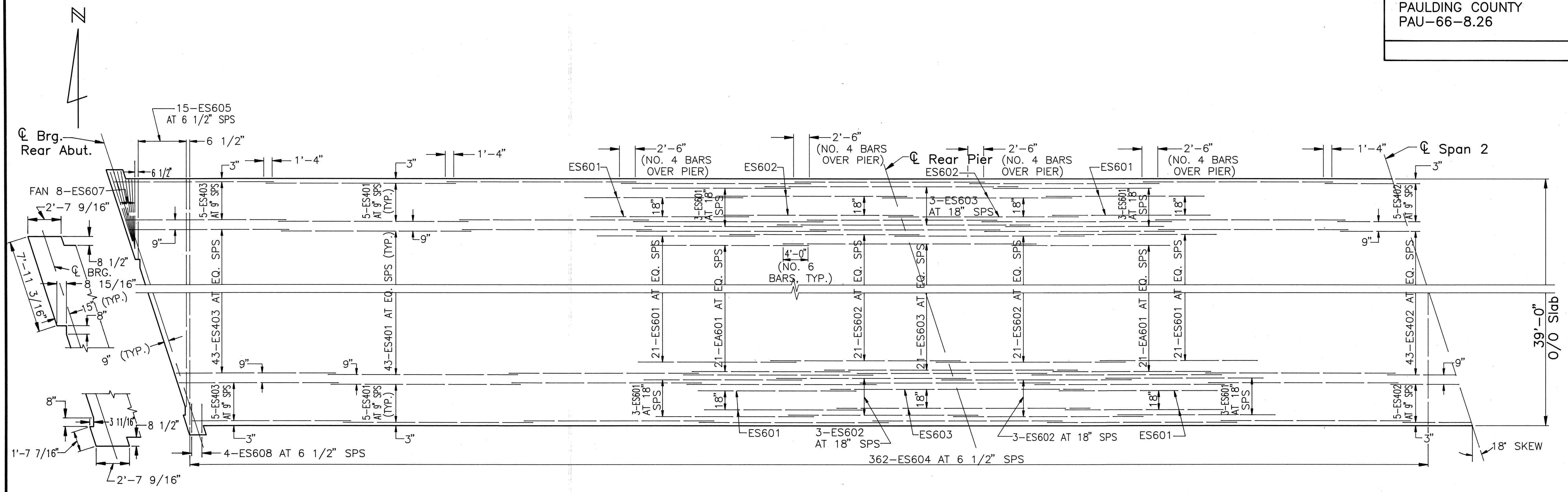
IN LIEU OF ERECTION BOLTS AND AT THE OPTION OF THE CONTRACTOR, ALTERNATE MEANS OF TEMPORARY BRACING MAY BE USED SUBJECT TO THE APPROVAL OF THE DIRECTOR (501.06).

KOHLI & KALIHAR ASSOCIATES, INC.  
CONSULTING ENGINEERS AND SURVEYORS LIMA, OHIO

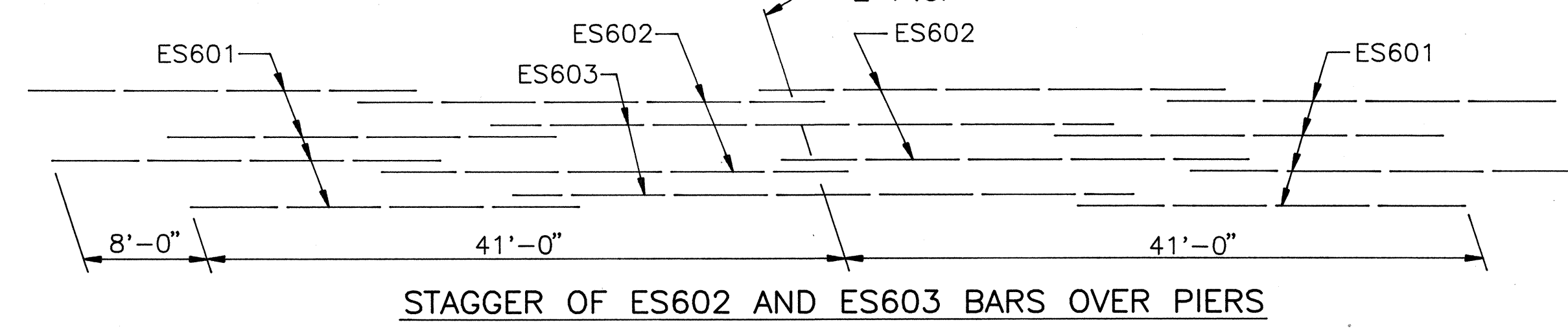
10/20

SUPERSTRUCTURE DETAILS  
BRIDGE NO. PAU-66-0828  
OVER THE AUGLAIZE RIVER  
PAULDING COUNTY

|          |        |        |         |          |         |         |
|----------|--------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN  | TRACED | CHECKED | REVIEWED | DATE    | REVISED |
| D.G.B.   | C.A.T. |        | M.A.D.  | T.H.H.   | 1-13-92 | A.M.P.  |



**DECK REINFORCEMENT (TOP)**



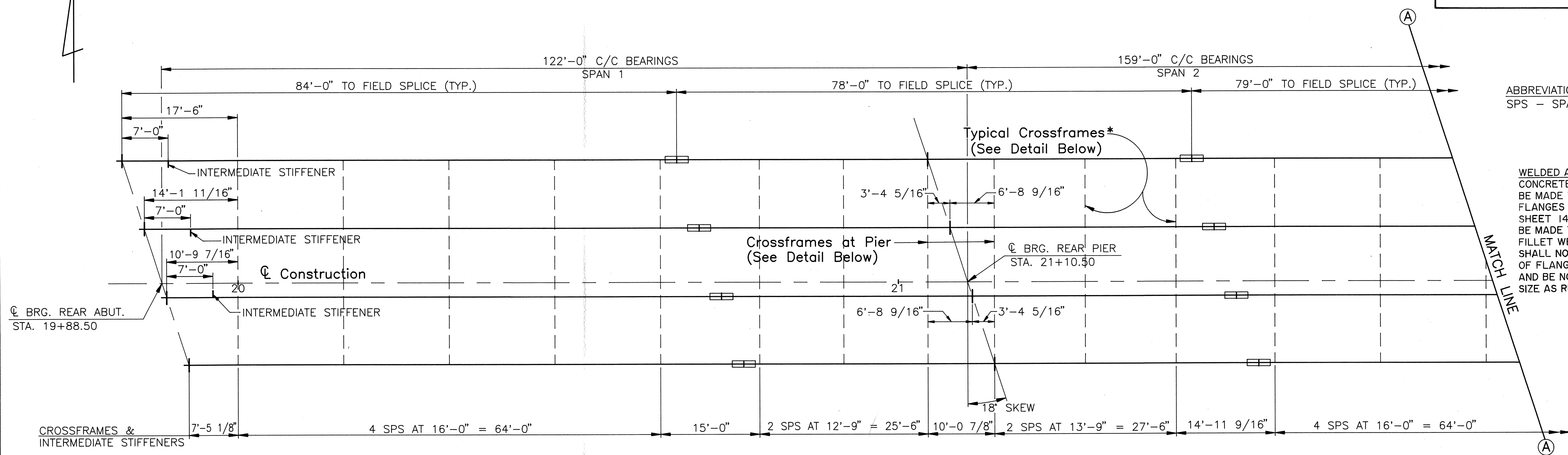
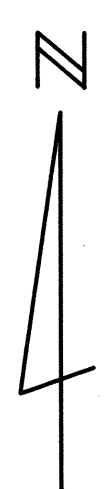
**STAGGER OF ES602 AND ES603 BARS OVER PIERS**

REINFORCING BAR SPLICE:  
REINFORCING BAR SPLICE LENGTHS SHALL CONFORM TO THE MINIMUM LENGTHS SPECIFIED BY 509.08 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

REINFORCING STEEL ABBREVIATIONS  
N.F. - NEAR FACE  
F.F. - FAR FACE  
SPS - SPACES

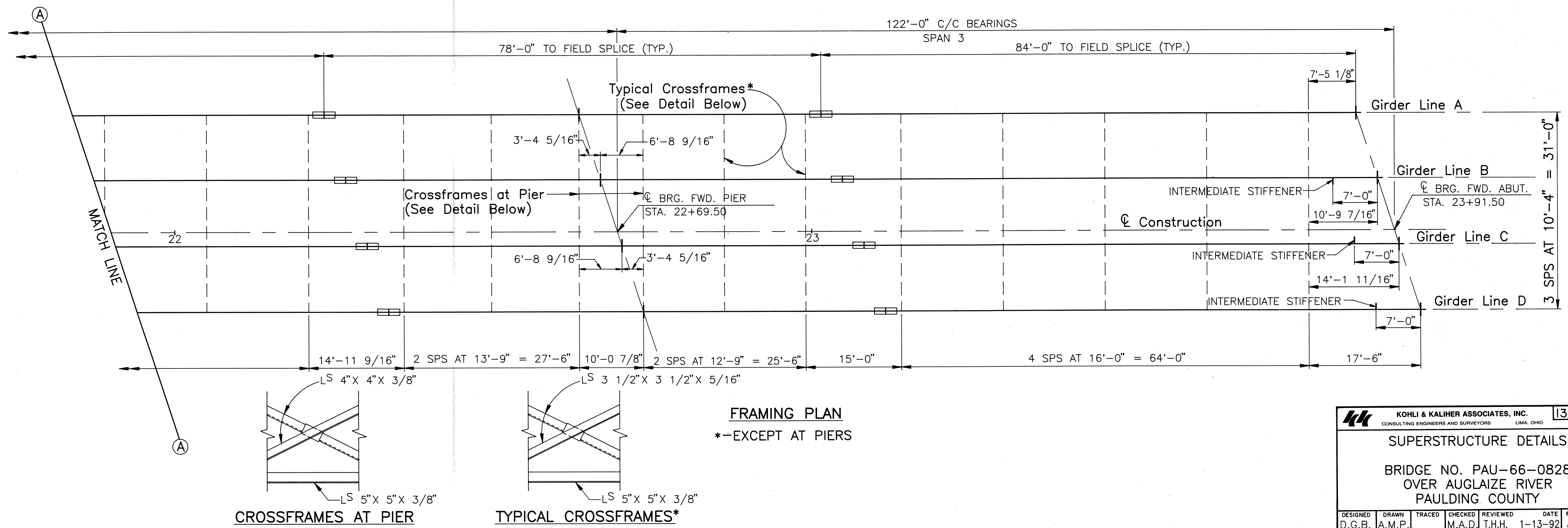
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|---|--------|--------|---------|----------|---------|---------|
|   |        |        |         |          |         |         |
| KOHLI & KALIBER ASSOCIATES, INC.<br>CONSULTING ENGINEERS AND SURVEYORS LIMA, OHIO |        |        |         |          |         |         |
| <b>SUPERSTRUCTURE DETAILS</b>   |        |        |         |          |         |         |
| BRIDGE NO. PAU-66-0828<br>OVER AUGLAIZE RIVER<br>PAULDING COUNTY                  |        |        |         |          |         |         |
| DESIGNED  | DRAWN  | TRACED | CHECKED | REVIEWED | DATE    | REVISED |
| D.G.B.  | A.M.P. |        | M.A.D.  | T.H.H.   | 1-13-92 | A.M.P.  |





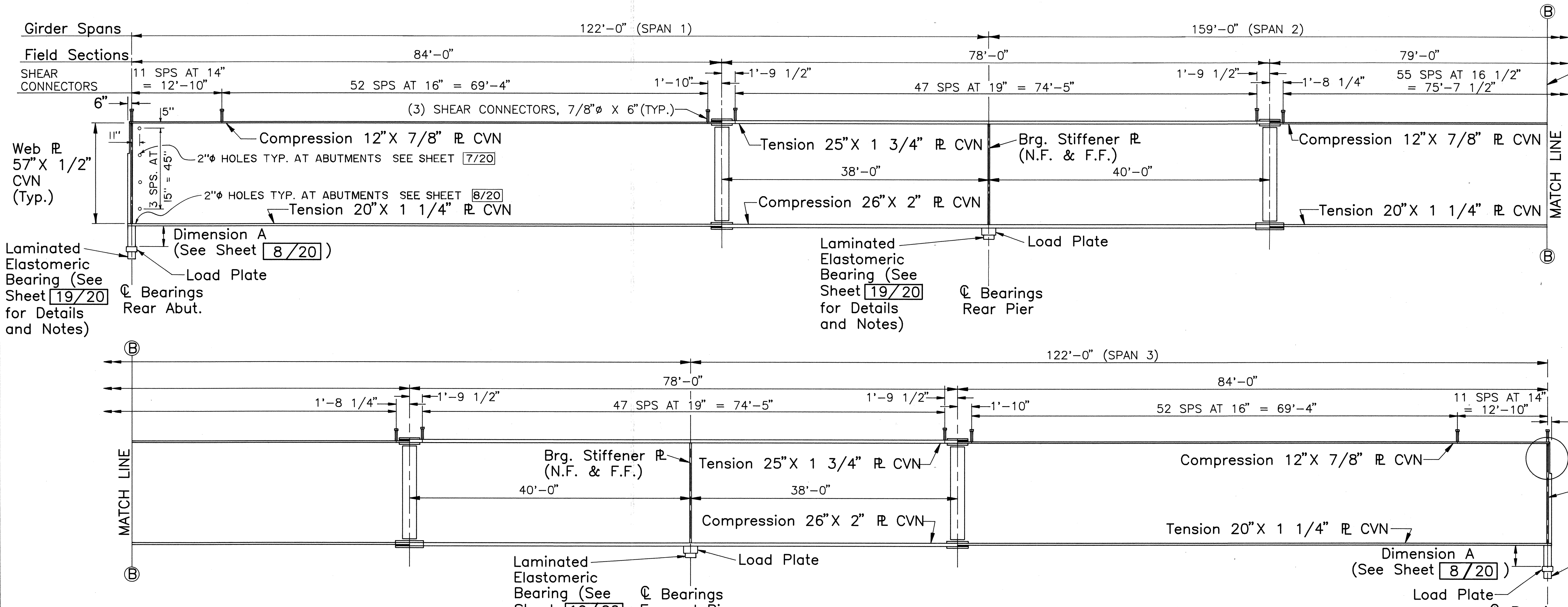
ABBREVIATIONS:  
SPS - SPACES

WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION" ON SHEET 14 / 20. ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL NOT BE CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE AS REQUIRED BY AASHTO AND AWS.



FRAMING PLAN  
\*-EXCEPT AT PIERS

|  |                    |                   |
|--|--------------------|-------------------|
| KOHLI & KALIMER ASSOCIATES, INC.<br>CONSULTING ENGINEERS AND SURVEYORS<br>LIMA, OHIO |                    | 13/20             |
| SUPERSTRUCTURE DETAILS   |                    |                   |
| BRIDGE NO. PAU-66-0828<br>OVER AUGLAIZE RIVER<br>PAULDING COUNTY                     |                    |                   |
| DESIGNED<br>D.G.B.   | DRAWN<br>A.M.P.    | TRACED<br>M.A.D.  |
| CHECKED<br>T.H.H.  | REVIEWED<br>T.H.H. | DATE<br>1-13-92   |
|  |                    | REVISED<br>A.M.P. |

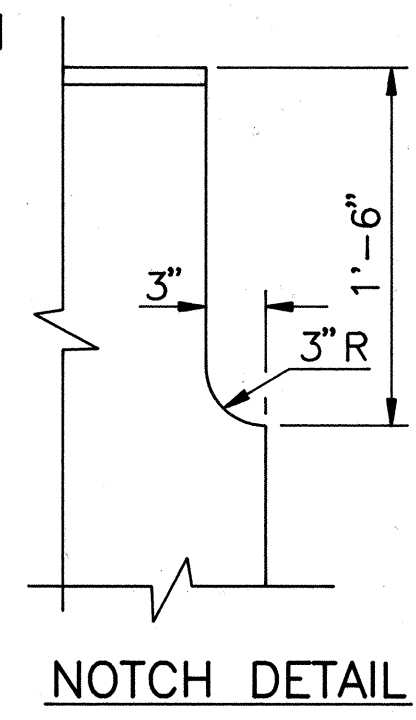
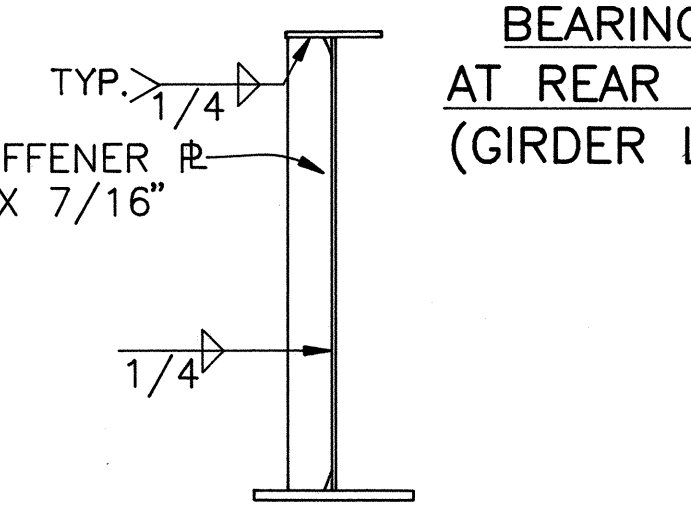
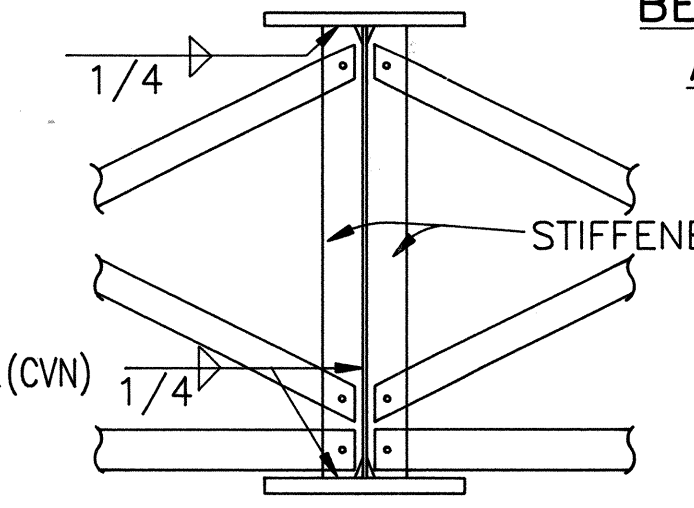
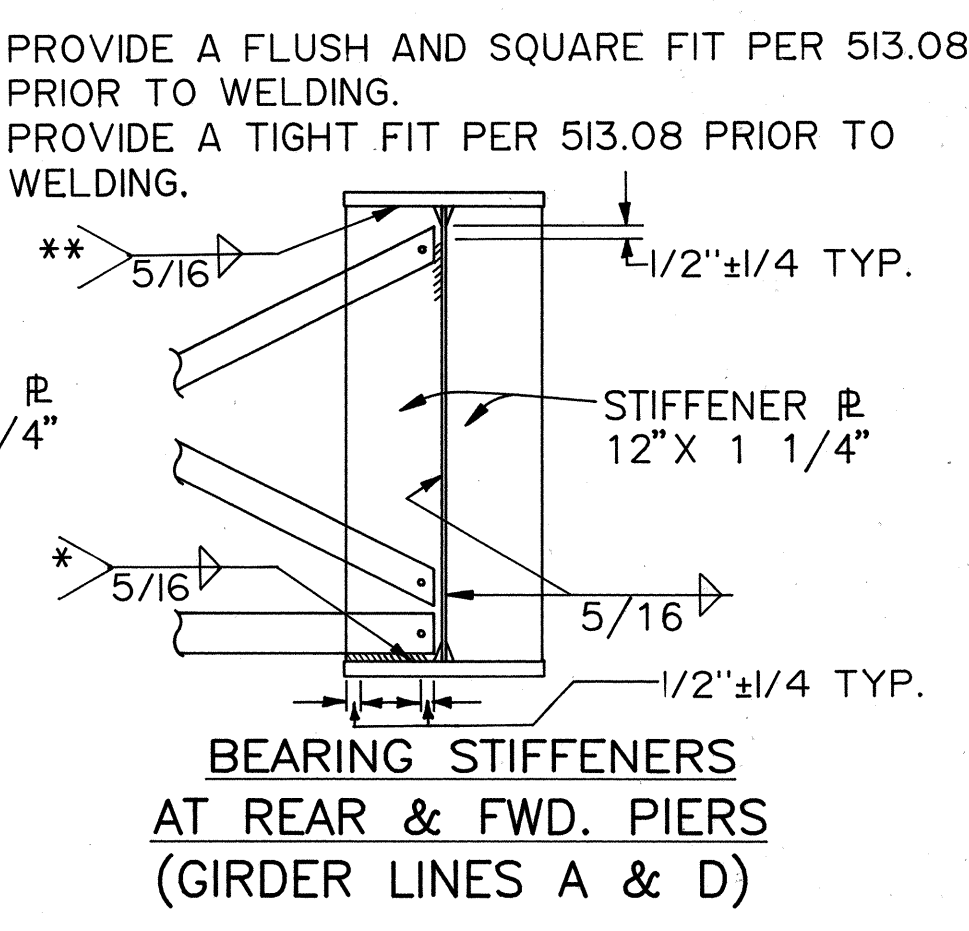
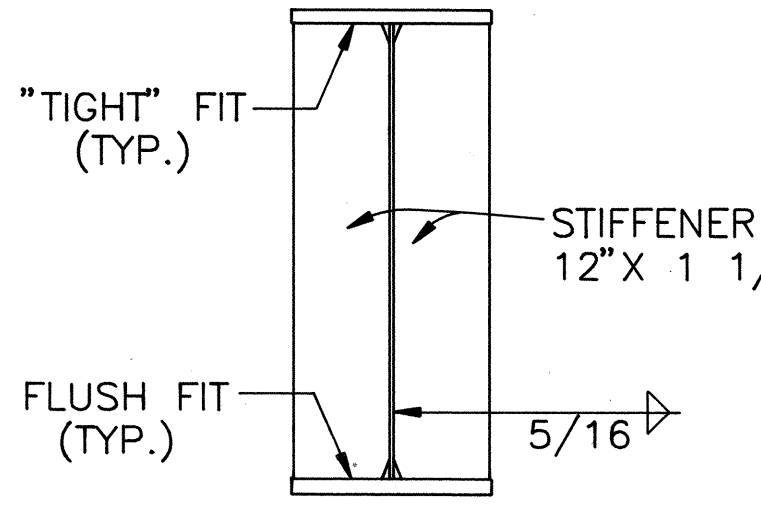
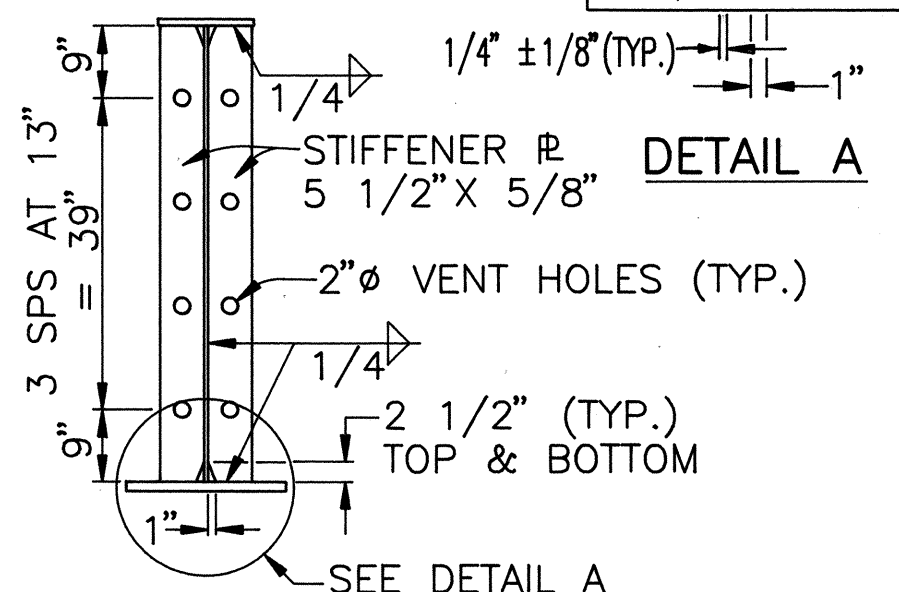
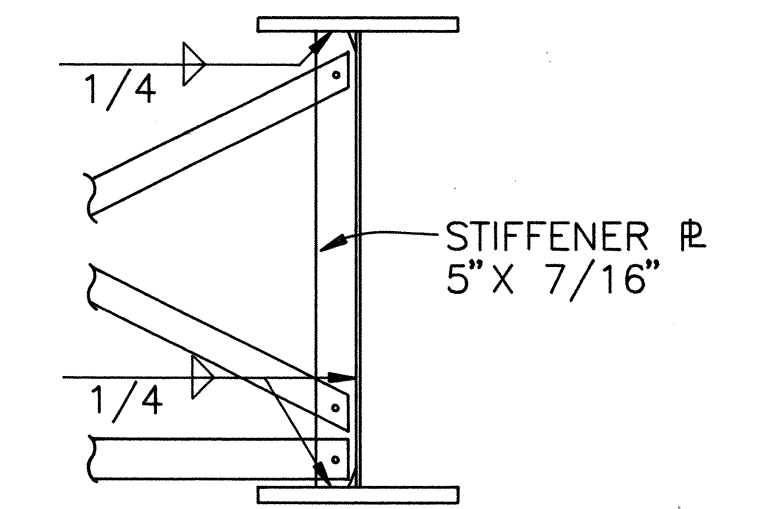
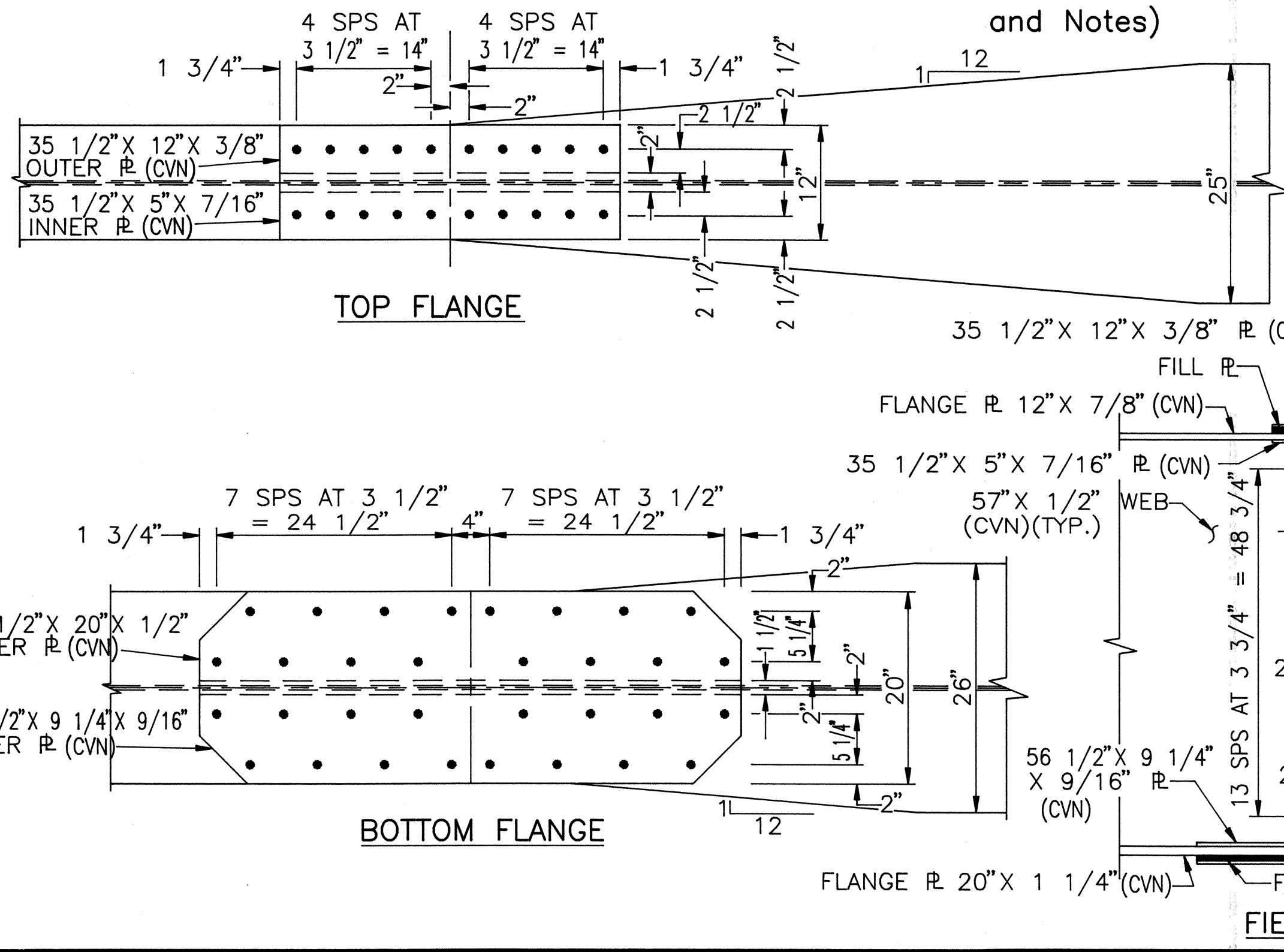


**ABBREVIATIONS:**  
 N.F. - Near Face  
 F.F. - Far Face  
 SPS - Spaces

High strength bolts for girder splices shall be 1" diameter A325 unless otherwise noted.

Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of the State of Ohio Construction and Material Specifications.

**GIRDER ELEVATION (All Girder Lines)**



\* PROVIDE A FLUSH AND SQUARE FIT PER 513.08 PRIOR TO WELDING.  
 \*\* PROVIDE A TIGHT FIT PER 513.08 PRIOR TO WELDING.

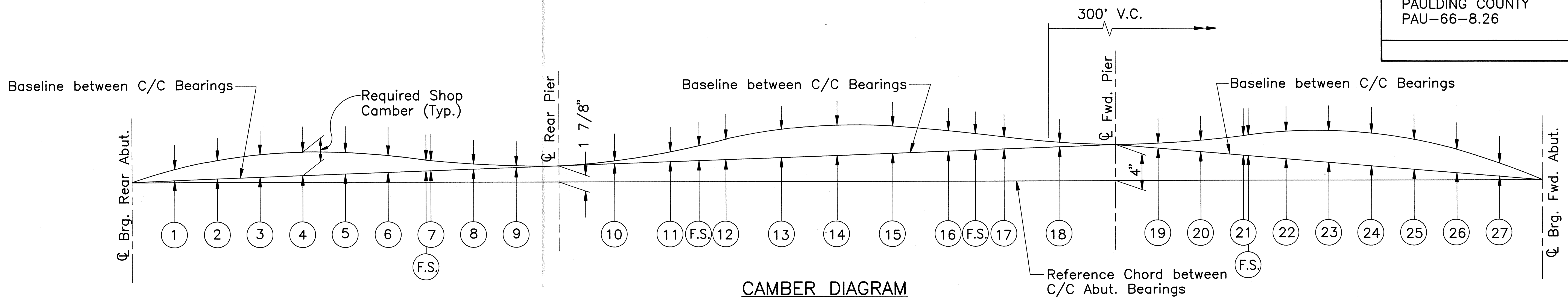
**KOHLI & KALIHAR ASSOCIATES, INC.**  
 CONSULTING ENGINEERS AND SURVEYORS  
 LIMA, OHIO

14/20

**SUPERSTRUCTURE DETAILS**

BRIDGE NO. PAU-66-0828  
 OVER AUGLAIZE RIVER  
 PAULDING COUNTY

|                    |                 |        |                   |                    |                 |                   |
|--------------------|-----------------|--------|-------------------|--------------------|-----------------|-------------------|
| DESIGNED<br>D.G.B. | DRAWN<br>A.M.P. | TRACED | CHECKED<br>M.A.D. | REVIEWED<br>T.H.H. | DATE<br>1-13-92 | REVISED<br>A.M.P. |
|--------------------|-----------------|--------|-------------------|--------------------|-----------------|-------------------|



CAMBER DIAGRAM

| SCREED ELEVATIONS* |             |           |              |           |
|--------------------|-------------|-----------|--------------|-----------|
| POINT              | LEFT SCREED |           | RIGHT SCREED |           |
|                    | STATION     | ELEVATION | STATION      | ELEVATION |
| ☉ Brg. Rear Abut.  | 19+83.63    | 717.99    | 19+93.37     | 717.94    |
| 1                  | 19+95.83    | 718.00    | 20+05.57     | 717.95    |
| 2                  | 20+08.03    | 718.00    | 20+17.77     | 717.95    |
| 3                  | 20+20.23    | 717.97    | 20+29.97     | 717.92    |
| 4                  | 20+32.43    | 717.92    | 20+42.17     | 717.87    |
| 5                  | 20+44.63    | 717.84    | 20+54.37     | 717.79    |
| 6                  | 20+56.83    | 717.74    | 20+66.57     | 717.69    |
| 7                  | 20+69.03    | 717.64    | 20+78.77     | 717.59    |
| 8                  | 20+81.23    | 717.53    | 20+90.97     | 717.48    |
| 9                  | 20+93.43    | 717.43    | 21+03.17     | 717.38    |

| SCREED ELEVATIONS* |             |           |              |           |
|--------------------|-------------|-----------|--------------|-----------|
| POINT              | LEFT SCREED |           | RIGHT SCREED |           |
|                    | STATION     | ELEVATION | STATION      | ELEVATION |
| ☉ Rear Pier        | 21+05.63    | 717.36    | 21+15.37     | 717.31    |
| 10                 | 21+21.53    | 717.30    | 21+31.27     | 717.25    |
| 11                 | 21+37.43    | 717.28    | 21+47.17     | 717.23    |
| 12                 | 21+53.33    | 717.26    | 21+63.07     | 717.21    |
| 13                 | 21+69.23    | 717.23    | 21+78.97     | 717.18    |
| 14                 | 21+85.13    | 717.17    | 21+94.87     | 717.12    |
| 15                 | 22+01.03    | 717.07    | 22+10.77     | 717.02    |
| 16                 | 22+16.93    | 716.93    | 22+26.67     | 716.88    |
| 17                 | 22+32.83    | 716.79    | 22+42.57     | 716.74    |
| 18                 | 22+48.73    | 716.65    | 22+58.47     | 716.60    |

| SCREED ELEVATIONS* |             |           |              |           |
|--------------------|-------------|-----------|--------------|-----------|
| POINT              | LEFT SCREED |           | RIGHT SCREED |           |
|                    | STATION     | ELEVATION | STATION      | ELEVATION |
| ☉ Fwd. Pier        | 22+64.63    | 716.53    | 22+74.37     | 716.48    |
| 19                 | 22+76.83    | 716.47    | 22+86.57     | 716.41    |
| 20                 | 22+89.03    | 716.42    | 22+98.77     | 716.35    |
| 21                 | 23+01.23    | 716.38    | 23+10.97     | 716.30    |
| 22                 | 23+13.43    | 716.33    | 23+23.17     | 716.24    |
| 23                 | 23+25.63    | 716.26    | 23+35.37     | 716.17    |
| 24                 | 23+37.83    | 716.16    | 23+47.57     | 716.06    |
| 25                 | 23+50.03    | 716.03    | 23+59.77     | 715.92    |
| 26                 | 23+62.23    | 715.86    | 23+71.97     | 715.76    |
| 27                 | 23+74.43    | 715.67    | 23+84.17     | 715.55    |
| ☉ Brg. Fwd. Abut.  | 23+86.63    | 715.45    | 23+96.37     | 715.33    |

\* - Top of concrete slab at toe of parapet, prior to placing concrete deck. Allowance has been made for anticipated dead load deflections at beams.

| DESCRIPTION                            | DEFLECTION AND CAMBER (INCHES) |       |        |        |        |       |       |        |      |     |
|--|--------------------------------|-------|--------|--------|--------|-------|-------|--------|------|-----|
|  | SPAN 1                         |       |        |        |        |       |       |        |      |     |
|  | 1                              | 2     | 3      | 4      | 5      | 6     | F.S.  | 7      | 8    | 9   |
| Deflection due to weight of steel      | 3/16                           | 1/4   | 3/8    | 3/8    | 5/16   | 1/4   | 1/8   | 1/8    | 1/16 | 0   |
| Deflection due to remaining dead load  | 7/8                            | 1 5/8 | 2 1/16 | 2 3/16 | 2 1/16 | 1 5/8 | 1 1/8 | 1 1/16 | 9/16 | 1/8 |
| Adjustment required for vertical curve | -                              | -     | -      | -      | -      | -     | -     | -      | -    | -   |
| Required shop camber                   | 1 1/16                         | 1 7/8 | 2 7/16 | 2 9/16 | 2 3/8  | 1 7/8 | 1 1/4 | 1 3/16 | 5/8  | 1/8 |

| DESCRIPTION                            | DEFLECTION AND CAMBER (INCHES) |         |       |        |        |       |        |        |         |        |      |
|--|--------------------------------|---------|-------|--------|--------|-------|--------|--------|---------|--------|------|
|  | SPAN 2                         |         |       |        |        |       |        |        |         |        |      |
|  | 10                             | 11      | F.S.  | 12     | 13     | 14    | 15     | 16     | F.S.    | 17     | 18   |
| Deflection due to weight of steel      | 1/8                            | 5/16    | 3/8   | 1/2    | 5/8    | 11/16 | 5/8    | 1/2    | 3/8     | 5/16   | 1/8  |
| Deflection due to remaining dead load  | 5/16                           | 1       | 1 3/8 | 1 3/4  | 2 3/8  | 2 5/8 | 2 3/8  | 1 3/4  | 1 3/8   | 1      | 5/16 |
| Adjustment required for vertical curve | -                              | -       | -     | 1/16   | 1/16   | 1/16  | 1/16   | 1/16   | 1/16    | 1/8    | 1/8  |
| Required shop camber                   | 7/16                           | 1 15/16 | 1 3/4 | 2 5/16 | 3 1/16 | 3 3/8 | 3 1/16 | 2 5/16 | 1 13/16 | 1 7/16 | 9/16 |

| DESCRIPTION                            | DEFLECTION AND CAMBER (INCHES) |       |        |       |         |        |        |        |       |        |
|--|--------------------------------|-------|--------|-------|---------|--------|--------|--------|-------|--------|
|  | SPAN 3                         |       |        |       |         |        |        |        |       |        |
|  | 19                             | 20    | 21     | F.S.  | 22      | 23     | 24     | 25     | 26    | 27     |
| Deflection due to weight of steel      | 0                              | 1/16  | 1/8    | 1/8   | 1/4     | 5/16   | 3/8    | 3/8    | 1/4   | 3/16   |
| Deflection due to remaining dead load  | 1/8                            | 9/16  | 1 1/16 | 1 1/8 | 1 5/8   | 2 1/16 | 2 3/16 | 2 1/16 | 1 5/8 | 7/8    |
| Adjustment required for vertical curve | 3/8                            | 3/4   | 15/16  | 1     | 1 1/16  | 1 1/8  | 1 1/16 | 15/16  | 3/4   | 3/8    |
| Required shop camber                   | 1/2                            | 1 3/8 | 2 1/8  | 2 1/4 | 2 15/16 | 3 1/2  | 3 5/8  | 3 3/8  | 2 5/8 | 1 7/16 |

**KOHLI & KALIMER ASSOCIATES, INC.**  
CONSULTING ENGINEERS AND SURVEYORS LMA, OHIO

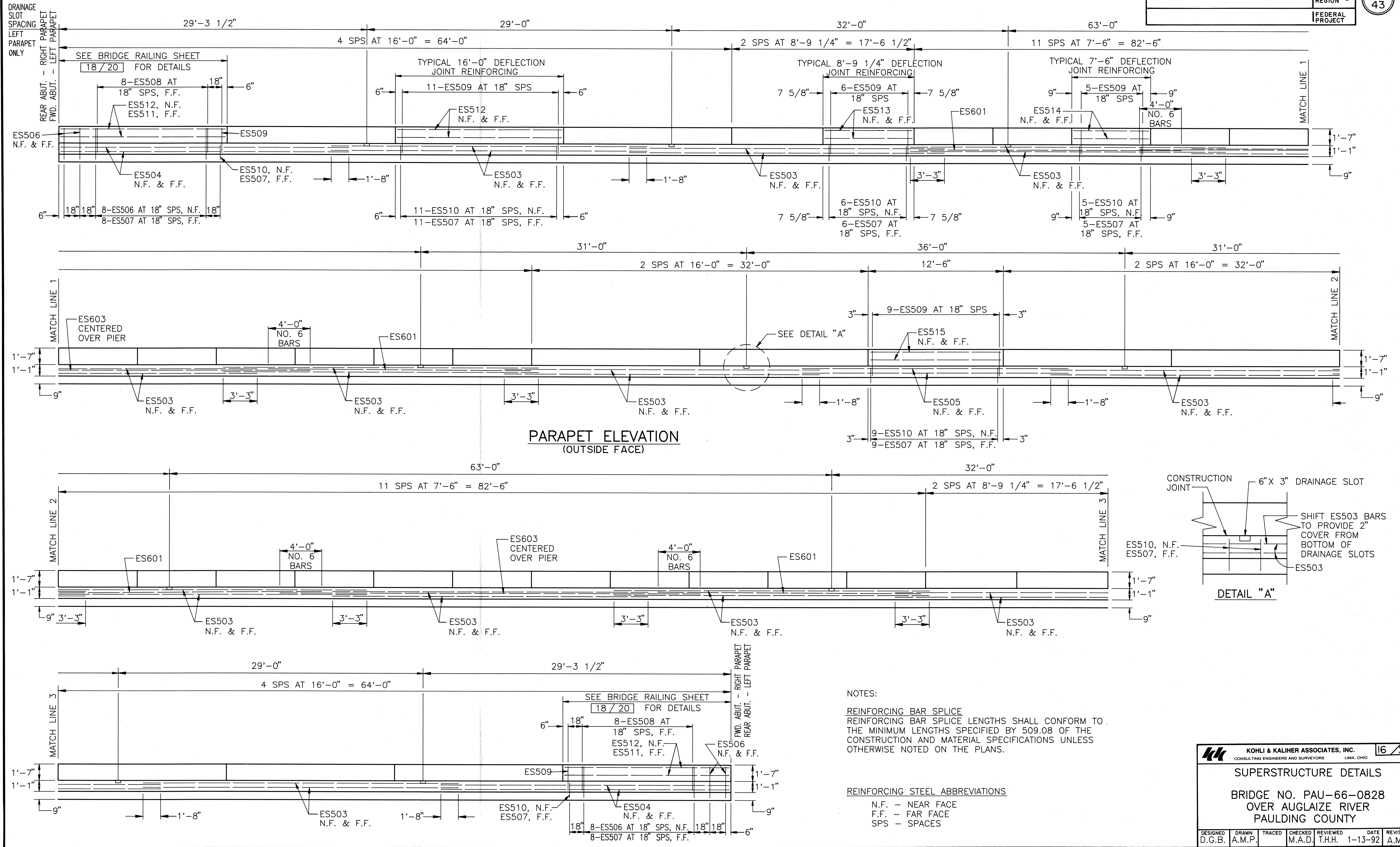
15/20

**SUPERSTRUCTURE DETAILS**

BRIDGE NO. PAU-66-0828  
OVER AUGLAIZE RIVER  
PAULDING COUNTY

|                    |                 |        |                   |                    |                 |                   |
|--------------------|-----------------|--------|-------------------|--------------------|-----------------|-------------------|
| DESIGNED<br>D.G.B. | DRAWN<br>A.M.P. | TRACED | CHECKED<br>M.A.D. | REVIEWED<br>T.H.H. | DATE<br>1-13-92 | REVISED<br>A.M.P. |
|--------------------|-----------------|--------|-------------------|--------------------|-----------------|-------------------|



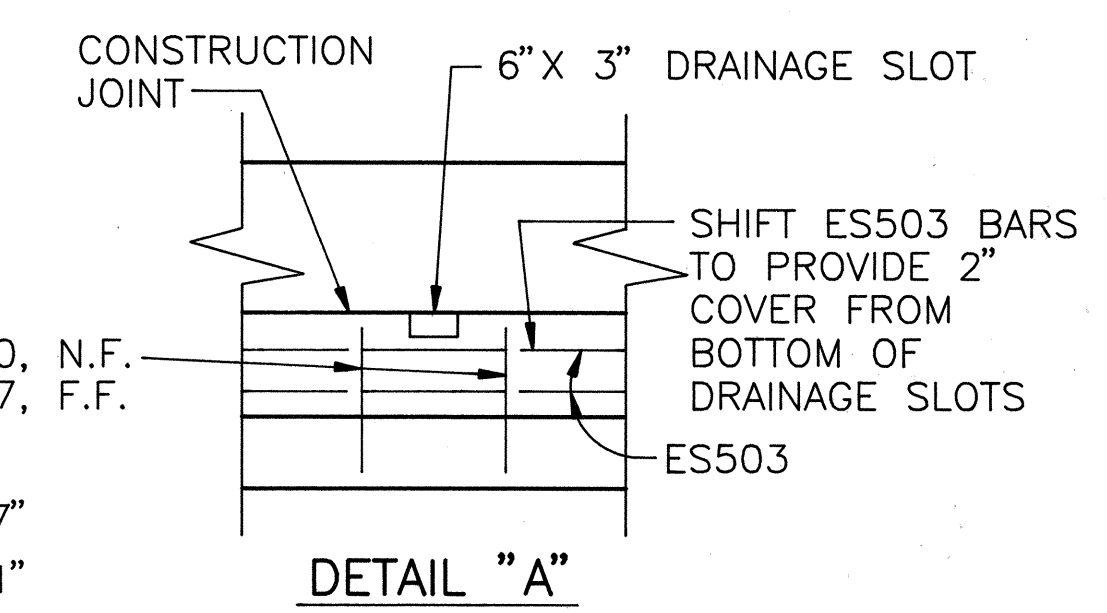


**NOTES:**

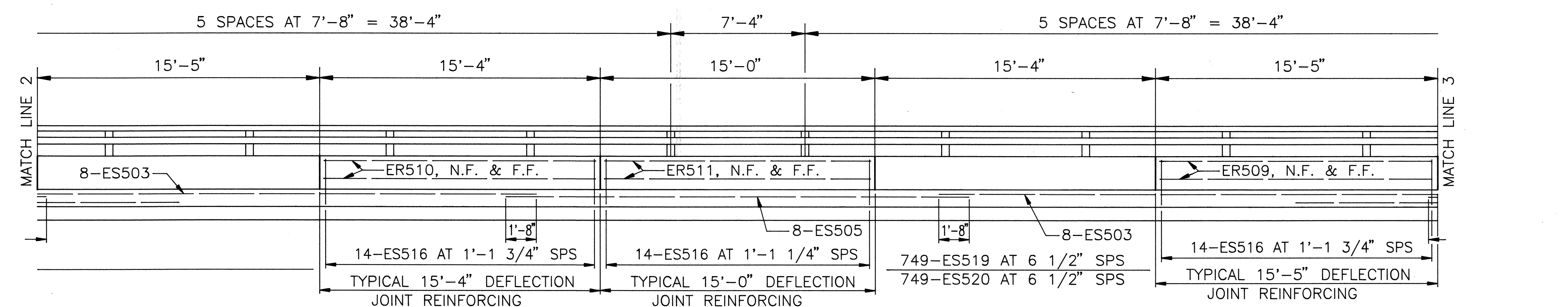
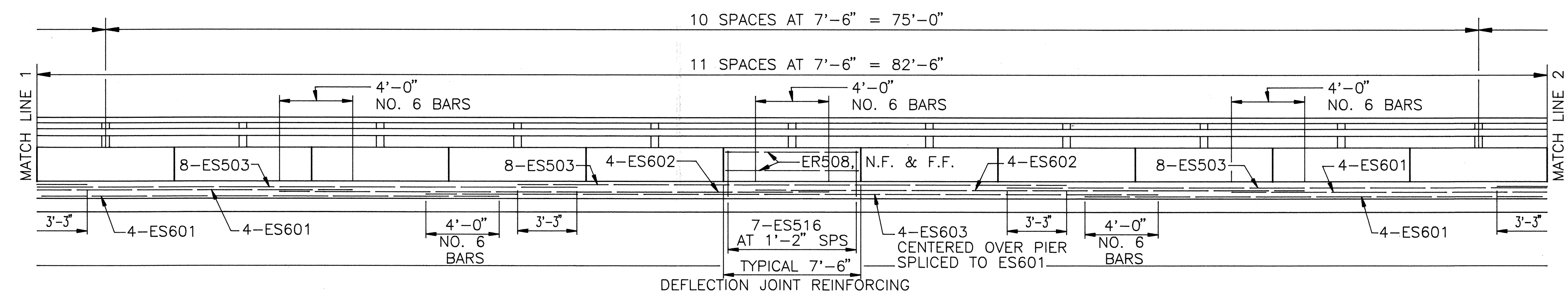
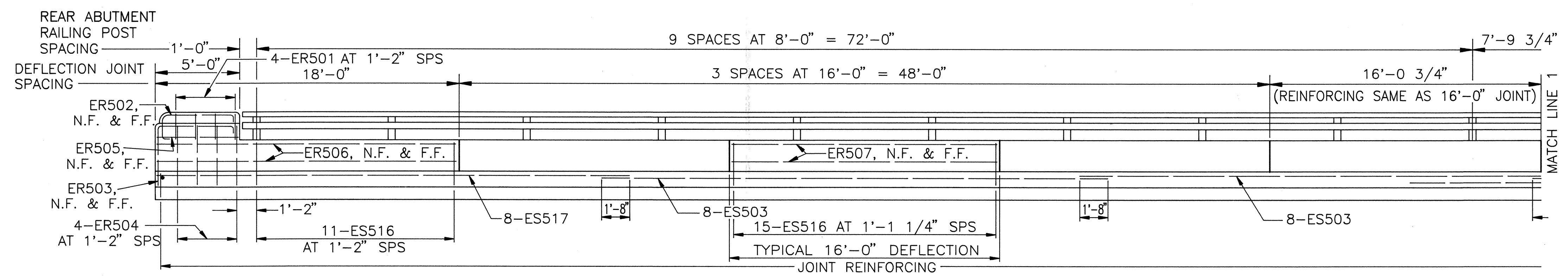
REINFORCING BAR SPLICE  
REINFORCING BAR SPLICE LENGTHS SHALL CONFORM TO THE MINIMUM LENGTHS SPECIFIED BY 509.08 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

**REINFORCING STEEL ABBREVIATIONS**

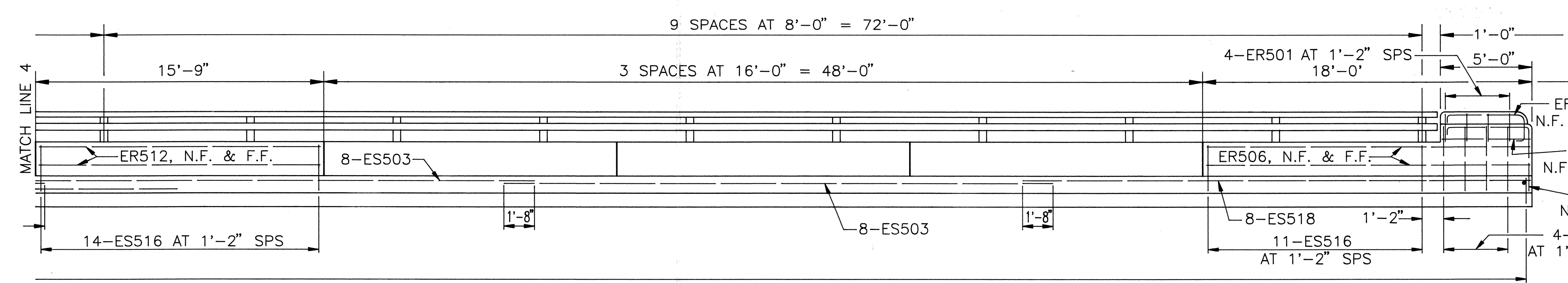
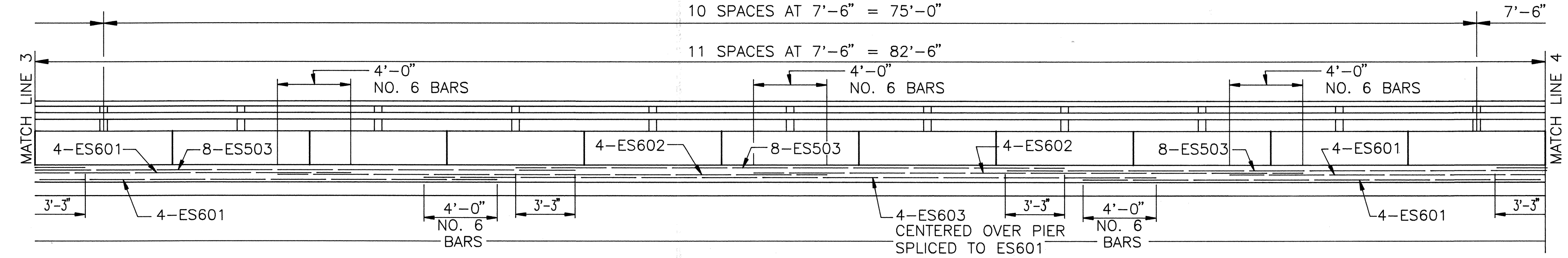
N.F. - NEAR FACE  
F.F. - FAR FACE  
SPS - SPACES



|  |        |  |         |          |         |         |
|--|--------|--|---------|----------|---------|---------|
|  |        | KOHLI & KALIHAR ASSOCIATES, INC.<br>CONSULTING ENGINEERS AND SURVEYORS<br>LIMA, OHIO |         | 16/20    |         |         |
| <b>SUPERSTRUCTURE DETAILS</b>                                    |        |  |         |          |         |         |
| BRIDGE NO. PAU-66-0828<br>OVER AUGLAIZE RIVER<br>PAULDING COUNTY |        |  |         |          |         |         |
| DESIGNED   | DRAWN  | TRACED   | CHECKED | REVIEWED | DATE    | REVISED |
| D.G.B.   | A.M.P. |  | M.A.D.  | T.H.H.   | 1-13-92 | A.M.P.  |



**BRIDGE SIDEWALK RAILING ELEVATION (OUTSIDE FACE)**



NOTES:  
REINFORCING BAR SPLICE  
REINFORCING BAR SPLICE LENGTHS SHALL CONFORM TO THE MINIMUM LENGTHS SPECIFIED BY 509.08 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

REINFORCING STEEL ABBREVIATIONS  
N.F. - NEAR FACE  
F.F. - FAR FACE  
SPS - SPACES

**KOHLI & KALIHAR ASSOCIATES, INC.** 17/20  
CONSULTING ENGINEERS AND SURVEYORS LIMA, OHIO

**SUPERSTRUCTURE DETAILS**

BRIDGE NO. PAU-66-0828  
OVER AUGLAIZE RIVER  
PAULDING COUNTY

|                    |                 |        |                   |                    |                 |                   |
|--------------------|-----------------|--------|-------------------|--------------------|-----------------|-------------------|
| DESIGNED<br>D.G.B. | DRAWN<br>A.M.P. | TRACED | CHECKED<br>M.A.D. | REVIEWED<br>T.H.H. | DATE<br>1-13-92 | REVISED<br>A.M.P. |
|--------------------|-----------------|--------|-------------------|--------------------|-----------------|-------------------|



# REINFORCING STEEL LIST

PAULDING COUNTY  
PAU-66-8.26

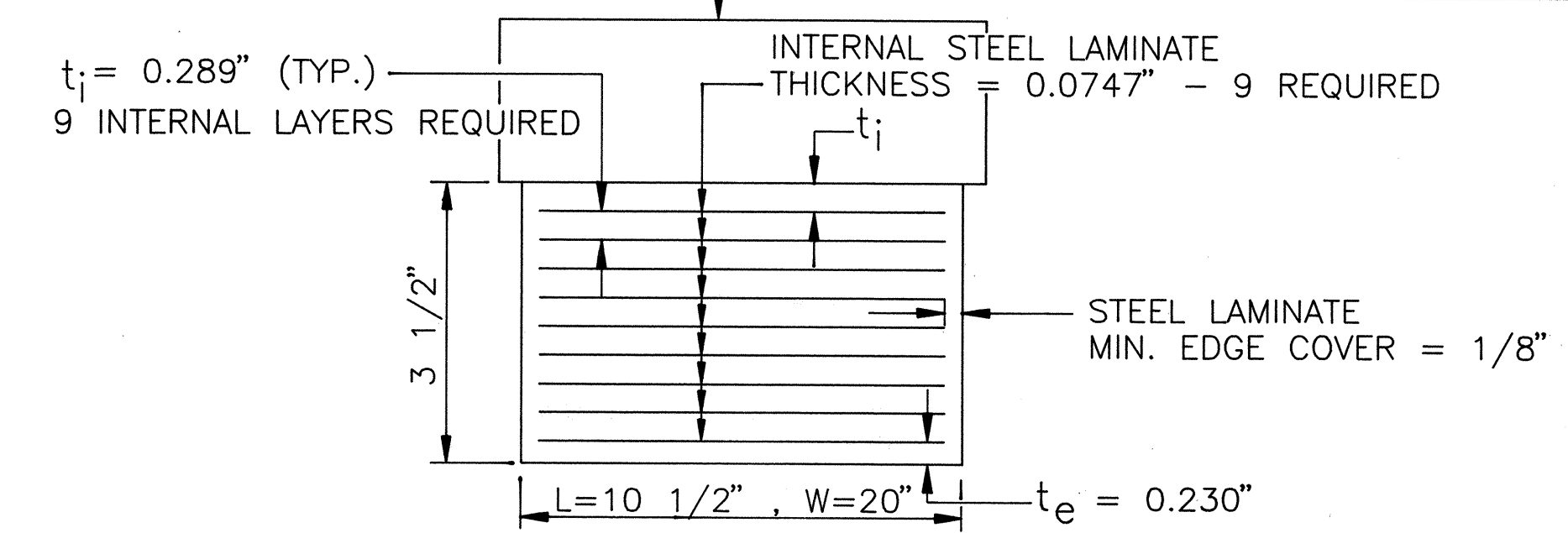
OHIO  
FHWA REGION 5

37  
43

FEDERAL PROJECT

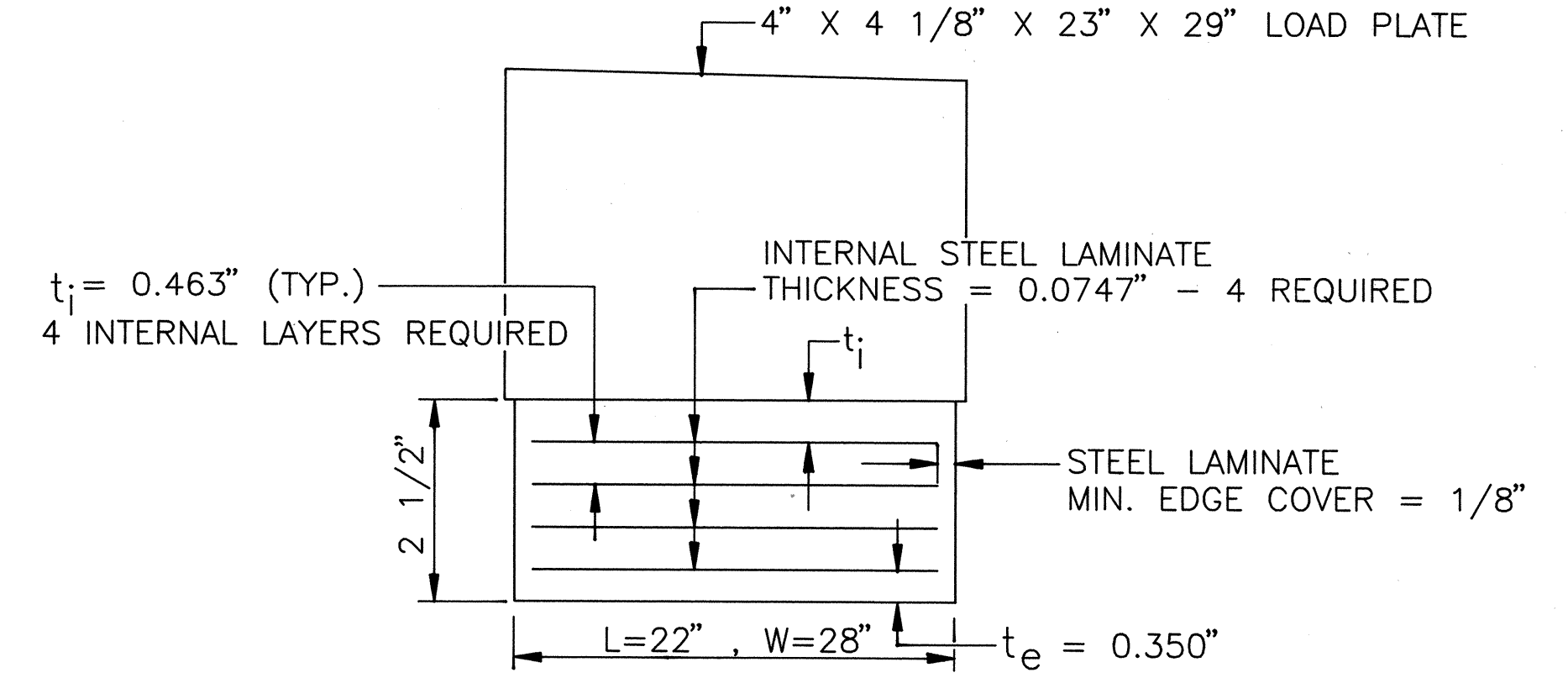
| FORWARD ABUTMENT |     |  |        |      |       |                             | REAR ABUTMENT |       |     |  |        |      |       |                             |     |
|------------------|-----|--|--------|------|-------|-----------------------------|---------------|-------|-----|--|--------|------|-------|-----------------------------|-----|
| MARK             | NO. | LENGTH   | WEIGHT | SHP. | A     | B                           | C             | MARK  | NO. | LENGTH   | WEIGHT | SHP. | A     | B                           | C   |
| EA502            | 42  | 16'-3"   | 712    | B1   | 2'-2" | 5'-8"                       |               | EA502 | 45  | 16'-3"   | 763    | B1   | 2'-2" | 5'-8"                       |     |
| EA504            | 12  | 22'-6"   | 282    | S    |       |                             |               | EA503 | 12  | 23'-2"   | 290    | S    |       |                             |     |
| EA506            | 2   | Varies from 14'-11" to 16'-5" (One Set of 2 at 18" Incr.)      | 33     | B4   | 2'-2" | Varies from 6'-6" to 7'-3"  |               | EA505 | 3   | Varies from 15'-3" to 17'-5" (One Set of 3 at 13" Incr.)     | 51     | B4   | 2'-2" | Varies from 6'-8" to 7'-9"  |     |
| EA508            | 2   | Varies from 12'-7" to 13'-1" (One Set of 2 at 6" Incr.)        | 27     | B4   | 2'-2" | Varies from 5'-4" to 5'-7"  |               | EA507 | 2   | Varies from 13'-3" to 13'-11" (One Set of 2 at 8" Incr.)     | 28     | B4   | 2'-2" | Varies from 5'-8" to 6'-0"  |     |
| EA510            | 4   | Varies from 14'-7" to 18'-9" (One Set of 4 at 16 11/16" Incr.) | 70     | B4   | 2'-2" | Varies from 6'-4" to 8'-5"  |               | EA509 | 5   | Varies from 14'-11" to 19'-11" (One Set of 5 at 15" Incr.)   | 91     | B4   | 2'-2" | Varies from 6'-6" to 9'-0"  |     |
| EA512            | 4   | 17'-7"   | 73     | B4   | 2'-2" | 7'-10"                      |               | EA511 | 3   | 17'-11"  | 56     | B4   | 2'-2" | 8'-0"                       |     |
| EA514            | 4   | Varies from 14'-9" to 18'-1" (One Set of 4 at 13 5/16" Incr.)  | 68     | B4   | 2'-2" | Varies from 6'-5" to 8'-1"  |               | EA513 | 2   | Varies from 7'-1" to 7'-7" (One Set of 2 at 6" Incr.)        | 15     | B4   | 2'-2" | Varies from 2'-7" to 2'-10" |     |
| EA516            | 2   | Varies from 11'-7" to 12'-1" (One Set of 2 at 6" Incr.)        | 25     | B4   | 2'-2" | Varies from 4'-10" to 5'-1" |               | EA515 | 4   | Varies from 9'-1" to 13'-5" (One Set of 4 at 17 5/16" Incr.) | 47     | B4   | 2'-2" | Varies from 3'-7" to 5'-9"  |     |
| EA518            | 4   | Varies from 13'-7" to 17'-3" (One Set of 4 at 14 11/16" Incr.) | 64     | B4   | 2'-2" | Varies from 5'-10" to 7'-8" |               | EA517 | 2   | Varies from 15'-3" to 17'-1" (One Set of 2 at 22" Incr.)     | 34     | B4   | 2'-2" | Varies from 6'-8" to 7'-7"  |     |
| EA520            | 3   | 10'-6"   | 33     | S    |       |                             |               | EA519 | 2   | 9'-8"  | 20     | S    |       |                             |     |
| EA522            | 3   | 11'-3"   | 35     | S    |       |                             |               | EA521 | 2   | 10'-5"   | 22     | S    |       |                             |     |
| EA524            | 3   | Varies from 2'-9" to 8'-4" (One Set of 3 at 33 1/2" Incr.)     | 17     | S    |       |                             |               | EA523 | 4   | Varies from 2'-2" to 9'-2" (One Set of 4 at 28" Incr.)       | 24     | S    |       |                             |     |
| EA526            | 3   | Varies from 3'-5" to 9'-0" (One Set of 3 at 33 1/2" Incr.)     | 19     | S    |       |                             |               | EA525 | 4   | Varies from 2'-10" to 9'-10" (One Set of 4 at 28" Incr.)     | 26     | S    |       |                             |     |
| EA528            | 1   | 11'-8"   | 12     | B2   | 0'-3" | 11'-5"                      | 26°           | EA527 | 1   | 11'-3"   | 12     | B2   | 0'-3" | 11'-0"                      | 32° |
| EA530            | 1   | 12'-5"   | 13     | B2   | 1'-0" | 11'-5"                      | 26°           | EA529 | 1   | 12'-2"   | 13     | B2   | 1'-2" | 11'-0"                      | 32° |
| EA532            | 3   | 9'-6"  | 30     | S    |       |                             |               | EA531 | 3   | 12'-5"   | 39     | S    |       |                             |     |
| EA534            | 3   | 8'-8"  | 27     | S    |       |                             |               | EA533 | 3   | 11'-7"   | 36     | S    |       |                             |     |
| EA536            | 3   | Varies from 3'-0" to 7'-5" (One Set of 3 at 26 1/2" Incr.)     | 16     | S    |       |                             |               | EA535 | 3   | Varies from 3'-0" to 9'-4" (One Set of 3 at 38" Incr.)       | 19     | S    |       |                             |     |
| EA538            | 3   | Varies from 2'-4" to 6'-9" (One Set of 3 at 26 1/2" Incr.)     | 14     | S    |       |                             |               | EA537 | 3   | Varies from 2'-4" to 8'-8" (One Set of 3 at 38" Incr.)       | 17     | S    |       |                             |     |
| EA540            | 1   | 10'-11"  | 11     | B2   | 1'-0" | 9'-11"                      | 30°           | EA539 | 1   | 13'-7"   | 14     | B2   | 1'-2" | 12'-5"                      | 25° |
| EA542            | 1   | 10'-2"   | 11     | B2   | 0'-3" | 9'-11"                      | 30°           | EA541 | 1   | 12'-8"   | 13     | B2   | 0'-3" | 12'-5"                      | 25° |
| EA543            | 28  | 5'-6"  | 161    | S    |       |                             |               | EA543 | 32  | 5'-6"  | 184    | S    |       |                             |     |
| EA702            | 36  | 20'-6"   | 1508   | S    |       |                             |               | EA701 | 36  | 21'-10"  | 1607   | S    |       |                             |     |
| EA703            | 42  | 19'-5"   | 1667   | B1   | 7'-2" | 2'-1"                       |               | EA703 | 45  | 19'-5"   | 1786   | B1   | 7'-2" | 2'-1"                       |     |
| EA802            | 12  | 23'-9"   | 761    | S    |       |                             |               | EA801 | 12  | 24'-5"   | 782    | S    |       |                             |     |
| TOTAL            |     |  | 5689   |      |       |                             |               | TOTAL |     |  | 5989   |      |       |                             |     |

11 1/2" X 21" X 2" LOAD PLATE (REAR)  
11 1/2" X 21" X 2" X 2 1/8" LOAD PLATE (FWD.)



### FORWARD AND REAR ABUTMENT

DEAD LOAD REACTION = 98.5k  
LIVE LOAD REACTION (W/O IMPACT) = 88.9k  
MAXIMUM DESIGN LOAD = 187.4k

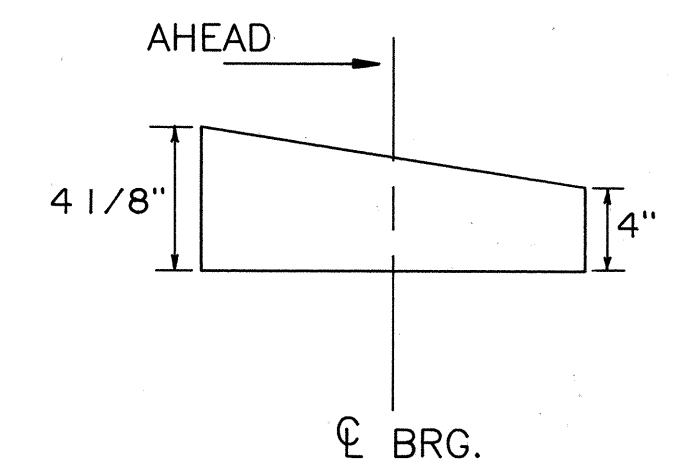


### REAR AND FORWARD PIER

DEAD LOAD REACTION = 385.1k  
LIVE LOAD REACTION (W/O IMPACT) = 206.7k  
MAXIMUM DESIGN LOAD = 591.8k

TOLERANCES:  
INDIVIDUAL ELASTOMERIC LAYER THICKNESS: ±20% OF DESIGN VALUE (NOT TO EXCEED ±1/8")  
PLAN DIMENSION -0, +1/4"  
DESIGN THICKNESS -0, +1/4"  
EDGE COVER OF EMBEDDED LAMINATES -0, +1/8"

NOTE: ORIENT THE PIER BEARINGS SO THAT THE THICKEST FACE OF THE LOAD PLATE FACES TO THE REAR.



LOAD PLATE: THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 400°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F, AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60°F ± 10°F, THE BEAMS OR GIRDERS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.

- NOTES:
- ALL DIMENSIONS ARE OUT TO OUT.
  - A "E" PREFIX IN THE "MARK" COLUMN INDICATES EPOXY COATED BARS.
  - AN "S" IN THE "SHP" COLUMN INDICATES STRAIGHT BARS.
  - REFER TO CMS SECTION 509.05 FOR STANDARD BEND DIMENSIONS.

BASIS OF PAYMENT:  
THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS EITHER RESTRAINED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).

19/20

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LIMA, OHIO

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BRIDGE NO. PAU-66-0828  
OVER AUGLAIZE RIVER  
PAULDING COUNTY

|                    |                 |        |                   |                    |                 |                   |
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