

NOTICE FOR BIDS

Notice is hereby given that bids will be received at the office of the Logan County Commissioners, 117 E. Columbus Avenue, Suite 100, Bellefontaine, Ohio on this Day, July 22, 2021, at 11:00 A.M., Ohio Standard Time for the purpose of furnishing and installing a BRIDGE SUPERSTRUCTURE AND RELATED MATERIAL according to specifications on file in the Logan County Commissioners Office.

Bids shall be submitted on forms furnished by the Logan County Engineer's Office in a sealed envelope marked "**Bridge Superstructure Bid for Bridge T 166-2.44**" on the outside.

Bids will be for furnishing labor, equipment, and materials for construction of a bridge superstructure on existing abutments, and related materials. No other labor or installation is involved in this request for bids.

As specified in R.C. 153.54, a bidder must submit a bid guaranty in the form of either:

- (1) a bond for the full amount of the bid, or
- (2) a certified check, cashier's check, or letter of credit in the amount of 10% of the bid.

Bidders shall comply with the provisions of the Americans with Disabilities Act of 1990.

"Domestic steel use requirements as specified in section 153.011 of the Revised Code apply to this project. Copies of section 153.011 of the Revised Code can be obtained from any of the offices of the department of administrative services."

Base Bids will be accepted only from fabricators who are pre-qualified with ODOT at the time of award as producers of Item 515, Prestressed Concrete Bridge Members.

Alternate #1 Bids will be accepted only from contractors who are pre-qualified with ODOT at the time of award in the following Work Types: 21-Level 2 Bridge, 24-Structural Steel Erection.

Bids will be awarded to the lowest and best bidder.

The Board of Commissioners reserves the right to reject any or all bids and to waive any defects in the bids.

The Notice to Bidders is posted on the Internet and may be viewed on the Logan County Engineer's web page at: http://lceo.us/Bid_Documents/index.html

By Order of the Board of
Logan County Commissioners

De De Doss, Clerk/Administrator

Posted: July 8, 2021
Advertised: July 8, 2021
July 15, 2021

**LOGAN COUNTY COMMISSIONERS
BRIDGE SUPERSTRUCTURE AND RELATED MATERIAL**

**BASE BID FORM
PRESTRESSED CONCRETE BEAM SUPERSTRUCTURE**

Gentlemen:

The undersigned, having full knowledge of the site, plans and specifications for the following structure(s), and the conditions of the bid, hereby agrees to furnish to the Commissioners of Logan County all services, labor, materials and equipment necessary to provide and install the bridge superstructure and related material in place, according to the plans and specifications, and to accept the total price specified below as full compensation for the work on this project.

Installation shall include placement of bearing pads and PEJF, erection of beams with the proper crane, and placement/tensioning of tie rods. Dowel pins, jute packing and grouting will be by others.

Related material is to include 1" tie bars, dowel pins, tie rod studs installed with nuts and washers, Type 2 galvanized guardrail posts, deep beam guardrail with tubular backup, bearing pads, 1/8" shims, non-shrink grout additive, jute packing, and 6"x6" PEJF (around dowels). Type 2 posts and tubular backup shall not be attached to beams. Also include non-epoxy sealer (silane) according to 512.03 on outside of fascia beams, and Ipanex (or approved equal) in the concrete at the rate of 13.8 oz. per 100 lb. of cement as a concrete densifier. The addition of calcium nitrite (D.C.I.) to the concrete shall not be required.

Guardrail system with tubular backup shall consist of 75 linear feet of deep beam rail with tubular backup on each side of structure (150 L.F. total). Eight (8) galvanized W6x25 posts shall be provided for the ends of rail off of the bridge.

<i>BRIDGE NUMBER</i>	<i>BID</i>	<i>DELIVERY DATE</i>
LOG BR. T 166-2.44	\$	

Grand Total Bid (written): _____

Respectfully submitted,

Company or Individual

Address

By _____

Title _____

Phone No. _____

Federal Tax ID # _____

**LOGAN COUNTY COMMISSIONERS
BRIDGE SUPERSTRUCTURE AND RELATED MATERIAL**

**ALTERNATE #1 BID FORM
GALVANIZED STEEL BEAM SUPERSTRUCTURE**

Gentlemen:

The undersigned, having full knowledge of the site, plans and specifications for the following structure(s), and the conditions of the bid, hereby agrees to furnish to the Commissioners of Logan County all services, labor, materials and equipment necessary to provide and install the bridge superstructure and related material in place, according to the plans and specifications, and to accept the total price specified below as full compensation for the work on this project.

All terms of the Base Bid shall apply except that the superstructure type shall be an all galvanized structure consisting of steel beams with galvanized stay in place (SIP) deck forms installed, and according to a proposal subject to approval by the Logan County Engineer's Office. The proposal shall be submitted with the bid documents. See Alternate Bid #1 Specifications page for more details.

Guardrail system with tubular backup shall consist of 75 linear feet of deep beam rail with tubular backup on each side of structure (150 L.F. total). Eight (8) galvanized W6x25 posts shall be provided for ends of rail off of the bridge.

<i>BRIDGE NUMBER</i>	<i>BID</i>	<i>DELIVERY DATE</i>
LOG BR. T 166-2.44	\$	

Grand Total Bid (written): _____

Respectfully submitted,

Company or Individual

Address

By _____

Title _____

Phone No. _____

Federal Tax ID # _____

**LOGAN COUNTY COMMISSIONERS
BRIDGE SUPERSTRUCTURE AND RELATED MATERIAL**

**ALTERNATE #2 BID FORM
GALVANIZED PRESS-BRAKE-FORMED STEEL TUB SUPERSTRUCTURE**

Gentlemen:

The undersigned, having full knowledge of the site, plans and specifications for the following structure(s), and the conditions of the bid, hereby agrees to furnish to the Commissioners of Logan County all services, labor, materials and equipment necessary to provide and install the bridge superstructure and related material in place, according to the plans and specifications, and to accept the total price specified below as full compensation for the work on this project.

All terms of the Base Bid shall apply except that the superstructure type shall be an all galvanized steel press brake tub girder structure with galvanized stay in place (SIP) deck forms installed, and according to a proposal subject to approval by the Logan County Engineer's Office. The proposal shall be submitted with the bid documents. See Alternate Bid #2 Specifications next page.

Guardrail system with tubular backup shall consist of 75 linear feet of deep beam rail with tubular backup on each side of structure (150 L.F. total). Eight (8) galvanized W6x25 posts shall be provided for ends of rail off of the bridge.

<i>BRIDGE NUMBER</i>	<i>BID</i>	<i>DELIVERY DATE</i>
LOG BR. T 166-2.44	\$	

Grand Total Bid (written): _____

Respectfully submitted,

Company or Individual

Address

By _____

Title _____

Phone No. _____

Federal Tax ID # _____

ALTERNATE #1 BID SPECIFICATIONS
GALVANIZED STEEL BEAM SUPERSTRUCTURE

1. TYPE STRUCTURE: Bridge shall be a single span, all galvanized steel beam structure with galvanized stay in place (SIP) deck forms installed. It shall be erected in place on newly constructed abutments. Bridge shall have a guardrail system consisting of galvanized deep beam rail with tubular back-up. Bearing plates, anchors, and compression seal expansion joint system shall be included. The superstructure shall not exceed the superstructure depth shown in the plans.
2. DESIGN SPECIFICATION: AASHTO Standard Specification for Highway Bridges, current edition.
3. MATERIAL: All superstructure steel shall be Grade 50 (A709). All steel shall be hot-dipped galvanized after fabrication. All fasteners shall be high strength bolts, ASTM A325 Type 1 (Galv.) with ASTM A563 Grade DH or DH3 nuts and ASTM F436 washers if applicable.
4. CONSTRUCTION/FABRICATION: AASHTO Standard Specification for Highway Bridges, current edition; ODOT Construction and Material Specifications dated January 1, 2019.
5. WELDING: All welding shall be in accordance with AASHTO/AWS D1.5 Bridge Welding Code and the AASHTO Fracture Control, where applicable.

Non-destructive tests of all welds shall be performed as follows:

Fillet welds – Visual – 100%

- MT. – 10% min. per AWS D1.5

6. One (1) span 62'-6" center to center of bearings.
7. CLEAR WIDTH: 24'-0" clear and face to face of guardrail.
8. SKEW: None
9. SUBSTRUCTURE: New capped pile abutments, provided by others.
10. DESIGN LOADING: HL-93 and 60 PSF future wearing surface.
11. REMOVAL & DISPOSAL: Existing superstructure and substructure shall be removed and disposed of by others.
12. STEEL FABRICATION: All steel furnished and fabricated shall be mechanically shot blasted and cleaned prior to any fabrication to specification SSPC-SP6 Commercial Blast Cleaning.

13. **FINISH:** All steel shall be hot-dipped galvanized. Galvanizing shall comply with ASTM A123-780. The galvanizer shall provide a 35 year written warranty against corrosion. Any field welding or other surface defects shall be repaired with an approved cold galvanizing paint compound.
14. **RAILING:** Guardrail system shall consist of galvanized deep beam rail with tubular back-up per DBR-2-73, including Type 2 posts, on each side of structure except mounted directly to the fascia beams via lookouts. Diaphragms shall be provided behind each lookout. Eight (8) galvanized W6x25 posts shall be provided for ends of rail off of the bridge.
15. **FLOORING:** The bridge flooring required shall be permanent stay-in-place steel forms. Any field welding shall be kept to a minimum and shall be repaired with a cold galvanizing paint compound.
16. **WEARING SURFACE:** Reinforced concrete wearing surface to be provided by others.
17. **CERTIFICATION:** All bidders submitting proposals for the bridge replacement shall submit a current O.D.O.T. "Certification of Qualifications", that will show they are currently qualified to perform bridge work as required under Section 5525.02 to 5525.09 inclusive of Ohio Revised Code.
18. **PLAN DRAWINGS:** Three sets of detailed drawings of the proposed structure shall be submitted after the structure has been awarded. Designer of structure shall provide design reactions on abutments.
19. **PRODUCT LIABILITY INSURANCE:** Bidders shall attach a certificate of an insurance company licensed to do business in the bidder's state and acceptable to the Owner, demonstrating that the company that will fabricate the bridge to be erected has products/completed operations liability insurance coverage with limits of not less than \$3,000,000 per occurrence and \$4,000,000 in the aggregate.
20. **HOT DIPPED GALVANIZED STEEL AESTHETIC COATING STANDARDS:**
 - a. Exposed structural members shall have an overall uniform and natural galvanized appearance. This would be the generally normal appearance that is achieved in hot dipped galvanizing of structural steel members
 - b. There shall be no unnecessary painting or grinding of exposed structural members (as determined by the Logan County Engineer). Grinding should be limited to only those areas requiring repair per ASTM A123/A780. Any areas requiring repair should be blended into the surrounding coating.
 - c. Progressive/double dipping shall only be performed when necessary.
 - d. The dipping process shall be planned to minimize striations and running/streaks on the finished surface.
 - e. There should be no drips or dross on finished members.

f. Galvanizing repairs shall be completed in a manner to minimize the appearance of the repair on exposed surfaces.

g. There shall be no cracking, flaking, or delamination on the finished product. These areas shall be repaired according to ASTM A780.

ALTERNATE #2 BID SPECIFICATIONS
GALVANIZED PRESS BRAKE TUB GIRDER SUPERSTRUCTURE

1. TYPE STRUCTURE: Bridge shall be a single span, all galvanized steel press brake tub girder structure with galvanized stay in place (SIP) deck forms installed. It shall be erected in place on newly constructed abutments. Bridge shall have a guardrail system consisting of deep beam rail with tubular back-up. Bearing plates, anchors, and compression seal expansion joint system shall be included. The superstructure shall not exceed the superstructure depth shown in the plans.
2. DESIGN SPECIFICATION: Certify that the superstructure is in accordance with AASHTO Standard Specification for Highway Bridges, current edition.
3. MATERIAL: All superstructure steel shall be Grade 50 (A709). All steel shall be hot-dipped galvanized after fabrication. All fasteners shall be high strength bolts, ASTM A325 Type 1 (Galv.) with ASTM A563 Grade DH or DH3 nuts and ASTM F436 washers if applicable.
4. CONSTRUCTION/FABRICATION: AASHTO Standard Specification for Highway Bridges, current edition; ODOT Construction and Material Specifications dated January 1, 2019.
5. WELDING: All welding shall be in accordance with AASHTO/AWS D1.5 Bridge Welding Code and the AASHTO Fracture Control, where applicable.

Non-destructive tests of all welds shall be performed as follows:
 Fillet welds – Visual – 100%
 - MT. – 10% min. per AWS D1.5
6. SPAN LENGTH: One (1) span 62'-6" center to center of bearings.
7. CLEAR WIDTH: 24'-0" clear and face to face of guardrail.
8. SKEW: None
9. SUBSTRUCTURE: New capped pile abutments, provided by others.
10. DESIGN LOADING: HL-93 and 60 PSF future wearing surface.
11. REMOVAL & DISPOSAL: Existing superstructure and substructure shall be removed and disposed of by others.
12. STEEL FABRICATION: All steel furnished and fabricated shall be mechanically shot blasted and cleaned prior to any fabrication to specification SSPC-SP6 Commercial Blast Cleaning.
13. FINISH: All steel shall be hot-dipped galvanized. Galvanizing shall comply with ASTM A123-780. The galvanizer shall provide a 35 year written warranty against corrosion.

Any field welding or other surface defects shall be repaired with an approved cold galvanizing paint compound.

14. **RAILING:** Guardrail system shall consist of galvanized deep beam rail with tubular back-up per DBR-2-73, including Type 2 posts, on each side of structure except mounted directly to the fascia beams via lookouts. Diaphragms shall be provided behind each lookout. Eight (8) galvanized W6x25 posts shall be provided for ends of rail off of the bridge.
15. **FLOORING:** The bridge flooring required shall be permanent stay-in-place steel forms. Any field welding shall be kept to a minimum and shall be repaired with a cold galvanizing paint compound.
16. **WEARING SURFACE:** Reinforced concrete wearing surface to be provided by others.
17. **CERTIFICATION:** All bidders submitting proposals for the bridge replacement shall submit a current O.D.O.T. "Certification of Qualifications", that will show they are currently qualified to perform bridge work as required under Section 5525.02 to 5525.09 inclusive of Ohio Revised Code.
18. **PLAN DRAWINGS:** Three sets of detailed drawings of the proposed structure shall be submitted after the structure has been awarded. Designer of structure shall provide design reactions on abutments.
19. **PRODUCT LIABILITY INSURANCE:** Bidders shall attach a certificate of an insurance company licensed to do business in the bidder's state and acceptable to the Owner, demonstrating that the company that will fabricate the bridge to be erected has products/completed operations liability insurance coverage with limits of not less than \$3,000,000 per occurrence and \$4,000,000 in the aggregate.
20. **LOAD RATINGS:** The contractor is to provide an electronic input file for the load rating that is compatible with AASHTOWare Bridge Rating 6.8.4
21. **HOT DIPPED GALVANIZED STEEL AESTHETIC COATING STANDARDS:**
 - a. Exposed structural members shall have an overall uniform and natural galvanized appearance. This would be the generally normal appearance that is achieved in hot dipped galvanizing of structural steel members
 - b. There shall be no unnecessary painting or grinding of exposed structural members (as determined by the Logan County Engineer). Grinding should be limited to only those areas requiring repair per ASTM A123/A780. Any areas requiring repair should be blended into the surrounding coating.
 - c. Progressive/double dipping shall only be performed when necessary.
 - d. The dipping process shall be planned to minimize striations and running/streaks on the finished surface.

- e. There should be no drips or dross on finished members.
- f. Galvanizing repairs shall be completed in a manner to minimize the appearance of the repair on exposed surfaces.
- g. There shall be no cracking, flaking, or delamination on the finished product. These areas shall be repaired according to ASTM A780.

GENERAL CONDITIONS

1. The **County** shall be responsible for providing abutments for the superstructure.
2. The **Contractor** shall be responsible for design of the superstructure, and shall supply the County with design calculations and shop drawings stamped by a Registered Engineer in the State of Ohio.
3. The **Contractor** shall be responsible for providing the proper size crane for the project. The Contractor is encouraged to visit the site prior to bidding to determine the size of crane due to field conditions.
4. The **Contractor** shall be responsible for installation of superstructure on existing abutments and related material, including installation of tie-rods, bearing pads, and 6” PEJF around dowels, if applicable.
5. The **Contractor** shall submit detailed bridge load rating calculations according to Section 900 of the current ODOT Bridge Design Manual, using load resistance factor rating. The load rating calculations shall be submitted with the shop drawings. Load ratings shall be provided for an HS20-44 truck for inventory and operating levels, Special Hauling Vehicles for inventory and operating levels, as well as the four Ohio Legal Loads (2F1, 3F1, 4F1, and 5C1) at operating level. The contractor shall provide the County with a printed report, stamped by a Registered Professional Engineer in the State of Ohio, as well as input and output files from the software used on cd/dvd and VIRTIS output files.
6. The **Contractor** shall submit the following documents prior to contract execution: (a) Ohio workers’ compensation certificate of coverage and (b) Certificate of Compliance with Affirmative Action Program issued by the State EEO Coordinator.

OHIO REVISED CODE

NON -COLLUSION AFFIDAVIT

In accordance with Title 23 United States Code, Section 112 and Ohio Revised Code, Chapter 1331 et. seq; and Sections 2921.11 and 2921.13, the bidder hereby states, under penalty of perjury and under other such penalties as the law provides, that he or his agents or employees have not entered either directly or indirectly into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal. Execution of this proposal on the signature portion thereof shall constitute also signature of this Non-Collusion Affidavit.

CAMPAIGN CONTRIBUTIONS AFFIDAVIT

Ohio Revised Code Section 3517.13(I) requires that no agency or department of this state or any political subdivision shall award any contract, other than one let by competitive bidding or a contract incidental to such contract or which is by force account, for the purchase of goods costing more than five hundred dollars or services costing more than five hundred dollars to any individual, partnership, association, including, without limitation, a professional association organized under Chapter 1785 of the ORC, estate, or trust if the individual has made or the individual's spouse has made, or any partner, shareholder, administrator, executor, or trustee or the spouse of any of them has made, as an individual, within the two previous calendar years, one or more contributions totaling in excess of one thousand dollars to the holder of the public office having ultimate responsibility for the award of the contract or to the public officer's campaign committee. Furthermore, Ohio Revised Code Section 3517.13(J) requires that no agency or department of this state or any political subdivision shall award any contract, other than one let by competitive bidding or a contract incidental to such contract or which is by force account, for the purchase of goods costing more than five hundred dollars or services costing more than five hundred dollars to a corporation or business trust, except a professional association organized under Chapter 1785 of the ORC, if an owner of more than twenty per cent of the corporation or business trust or the spouse of that person has made, as an individual, within the two previous calendar years, taking into consideration only owners for all of that period, one or more contributions totaling in excess of one thousand dollars to the holder of a public office having ultimate responsibility for the award of the contract or to the public officer's campaign committee. Execution of this proposal on the signature portion thereof shall constitute also signature of this Campaign Contributions Affidavit.

**COMPETITIVE BIDDER'S
PERSONAL PROPERTY TAX AFFIDAVIT
LOGAN COUNTY, OHIO (R.C. 5719.042)**

STATE OF OHIO:

: ss:

LOGAN COUNTY:

The undersigned, being duly sworn, says that he is or represents a competitive bidder doing business in, or with Logan County, Ohio, and that: (Check appropriate lines)

_____ He is a sole proprietorship doing business under his own name.

_____ He is a sole proprietorship doing business under the name
of _____

_____ He is a general partner of the partnership known as

_____ He is a duly authorized officer of the corporation named

The business address of the bidder

is _____

_____ ; Telephone _____

The undersigned further says that the bidder at the time of submitting his or its bid:

_____ Was not charged with any delinquent personal taxes in Logan County, Ohio.

_____ Was charged with delinquent personal property taxes as follows:

YEAR	AMOUNT	PENALTY	INTEREST
20_____	\$_____	\$_____	\$_____
20_____	\$_____	\$_____	\$_____
20_____	\$_____	\$_____	\$_____

Signed: _____

Title: _____

STATE OF OHIO:
: ss:
LOGAN COUNTY :

Before me, a notary, in and for said county, personally appeared

_____ (sole proprietor doing business under his own name)

(sole proprietor doing business under the name of _____)

(general partner of the Partnership known as _____)

(duly authorized officer of the Corporation name _____),

who acknowledged that he is authorized in the premises and that his signing of this instrument is the free act and deed of himself or the organization which he represents.

In testimony whereof, I have hereunto subscribed my name and affixed my official seal at

_____, Ohio, this _____ day of _____, 2_____.

Notary Public

COMMISSIONERS:

_____ No delinquent taxes – file

_____ Delinquent taxes - sent to County Engineer

Clerk

PLAN HOLDERS LIST

BR. T 166-2.44

Prestress Services, Inc.
Attn: Barry Barger
P.O. Box 55436
5501 Briar Hill Road
Lexington, KY 40555
859-299-0461
info@prestressservices.com
bbarger@prestressservices.com

Carr Concrete
Attn: Robert E. "Burr" Stanley, Jr.
P.O. Box 265
Waverly, WV 26184-0265
800-837-8918
carrinfo@lbfoster.com

U.S. Bridge
201 Wheeling Avenue
P.O. Box 757
Cambridge, OH 43725
888-872-7434 (Phone)
gbickle@usbridge.com
Attn: Greg Bickle

Builders Exchange-Dayton
2077 Embury Park Road
Dayton, OH 45414
866-907-6300
Info@BXdayton.org

McGraw-Hill/Dodge Reports
950 Contract Street
Suite 100-A
Lexington, KY 40505
859-425-6630
construction_cust_svc@mcgraw-hill.com

Ohio Construction News
7261 Engle Road, Suite 304
Cleveland, OH 44130
800-969-4700
customercare@cmdgroup.com

Laborers-Employers Cooperation and Education Trust
P.O. Box 46217
Cincinnati, OH 45246
614-832-7134
Attn: Carmen D. Henderson

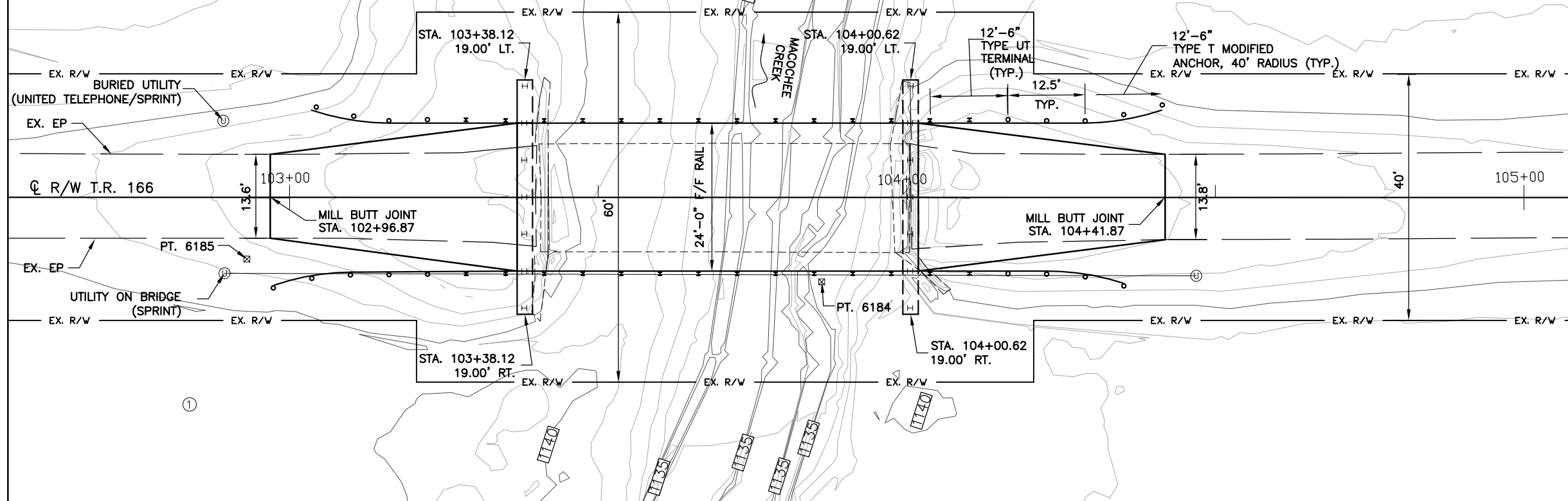
swo-lectet@cinci.rr.com

Valmont Structures
P.O. Box 358
28800 Ida Street
Valley, NE 68064
Attn: Jeff Simkins
jeff.simkins@valmont.com

Acrow
181 New Road – Suite 202
Parsippany, NJ 07054
Attn: Abbey Smith
asmith@acrow.com

ConTech Engineered Solutions LLC
212 Norwegian Cove
Eaton, OH 45320
Attn: John V. Kanzleamar
jkanzleamar@conteches.com

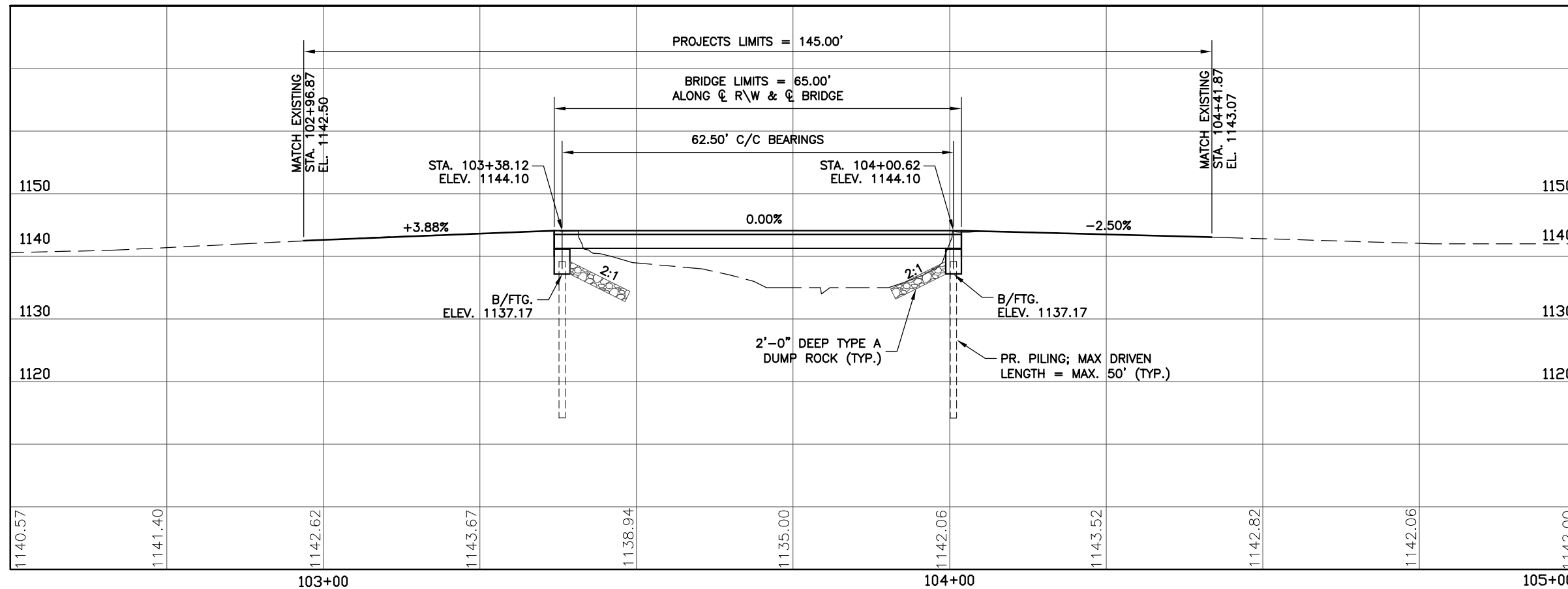
①
JEFF HARR
7711 TOWNSHIP ROAD 166
PARCEL # 30-137-00-00-062-000
130.423 AC.



PLAN



1:20 SCALE



PROFILE ALONG C/R/W & BRIDGE

SURVEY CONTROL	
PT. #6186, 1-1/4" MNS 6.35' LT. 102+08.65 ELEV. = 1139.73	PT. #6187, 1-1/4" MNS 7.12' LT. 106+28.35 ELEV. = 1142.23
PT. #6185, HUBS 10.00 RT. 102+93.08 ELEV. = 1134.93	
PT. #6184, HUBS 13.69 RT. 103+86.22 ELEV. = 1134.93	
EXISTING STRUCTURE	
TYPE: SINGLE SPAN STEEL BEAM SPAN: 59'-0"± C/C BEARINGS ROADWAY: 18'-0"± LOADING: POSTED FOR 65% OHIO LEGAL LOAD SKEW: NONE WEARING SURFACE: ASPHALT CONCRETE APPROACH SLAB: NONE DATE BUILT: 1933; UPDATED 1978 STRUCTURAL FILE NUMBER: 4645677	
PROPOSED STRUCTURE	
TYPE: PRESTRESSED COMPOSITE BOX BEAMS ON REINFORCED CONCRETE CAPPED PILE ABUTMENTS SPAN: 62'-6" C/C BEARINGS ROADWAY: 24'-0" F/F GUARDRAIL LOADING: HL-93 SKEW: NONE WEARING SURFACE: REINFORCED CONCRETE ALIGNMENT: TANGENT SUPERELEVATION: NONE APPROACH SLAB: NONE CROWN: 0.016 LATITUDE: 40°16'5.99"N LONGITUDE: 83°42'00.12"W	

DESIGN AGENCY: LOGAN COUNTY ENGINEER'S OFFICE
1991 C.R. 13, P.O. BOX 427
BELLEFONTAINE, OHIO 43311

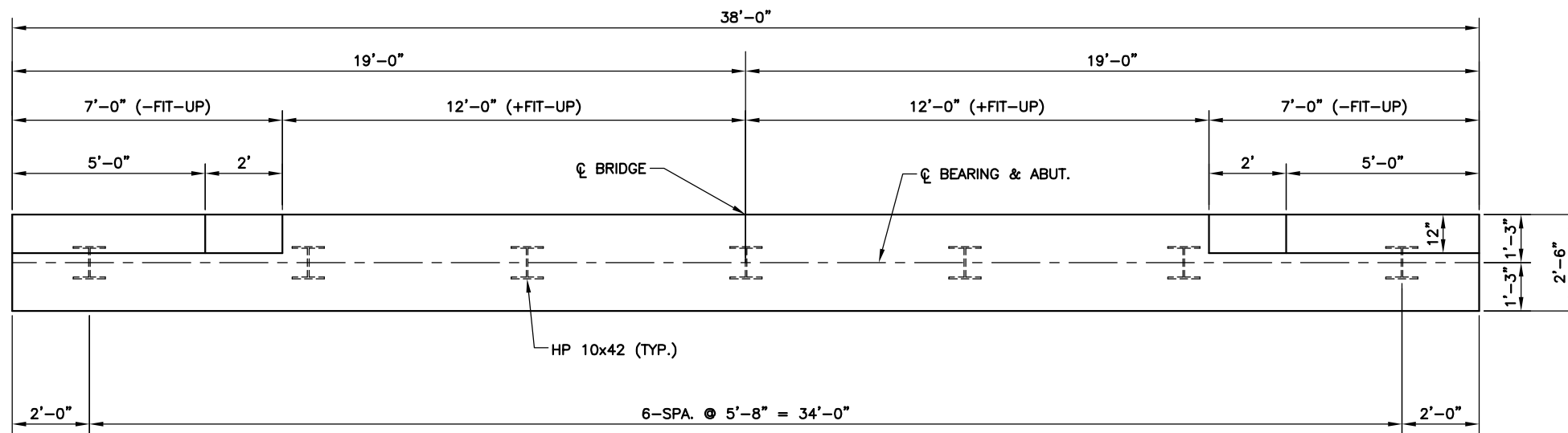
DATE: 5/17/2021
REVIEWED: WTB
DRAWN: MJK
DESIGNED: MJK
CHECKED: SCC

STRUCTURAL FILE NUMBER: 4645678

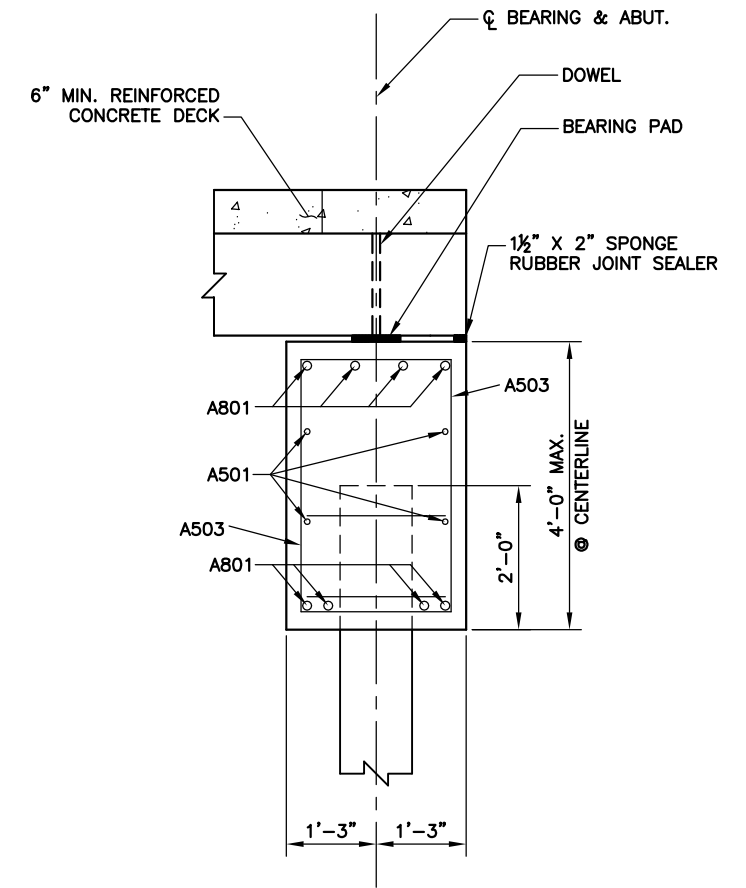
SITE PLAN
BRIDGE T 166-2.44 OVER MACOCHEE CREEK

BRIDGE T 166-2.44

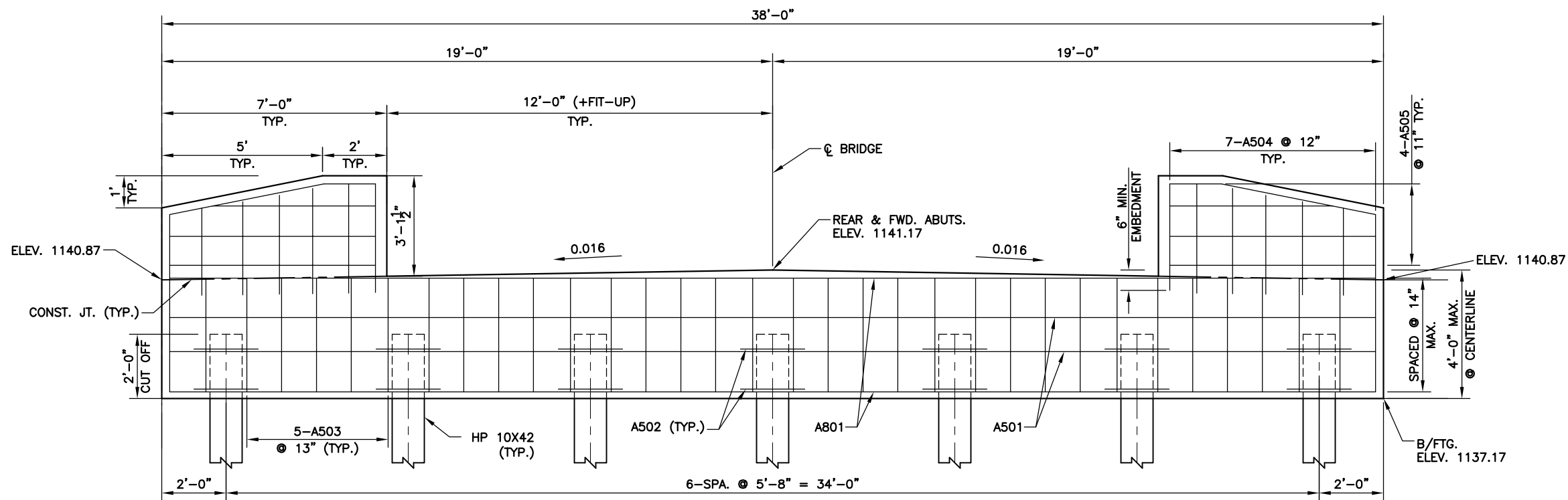
②
⑤



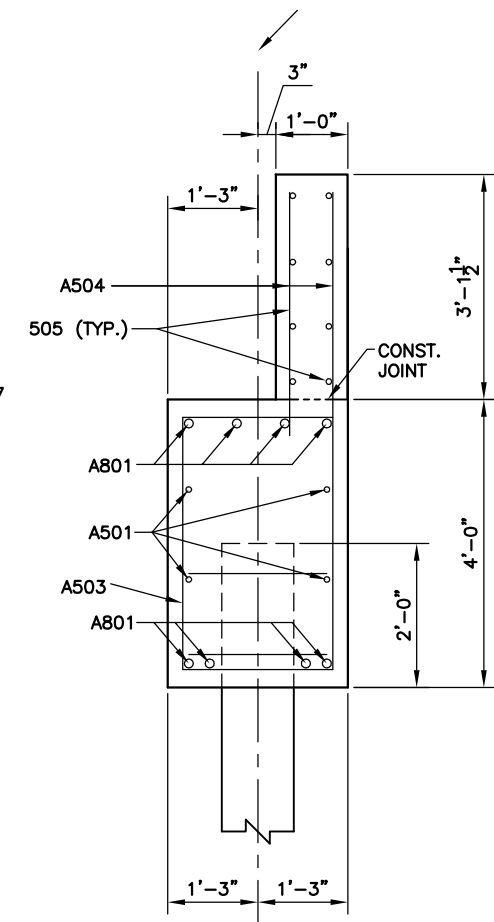
PLAN
LOOKING AT FRONT FACE
OF FORWARD ABUTMENT



SECTION @ ABUTMENT

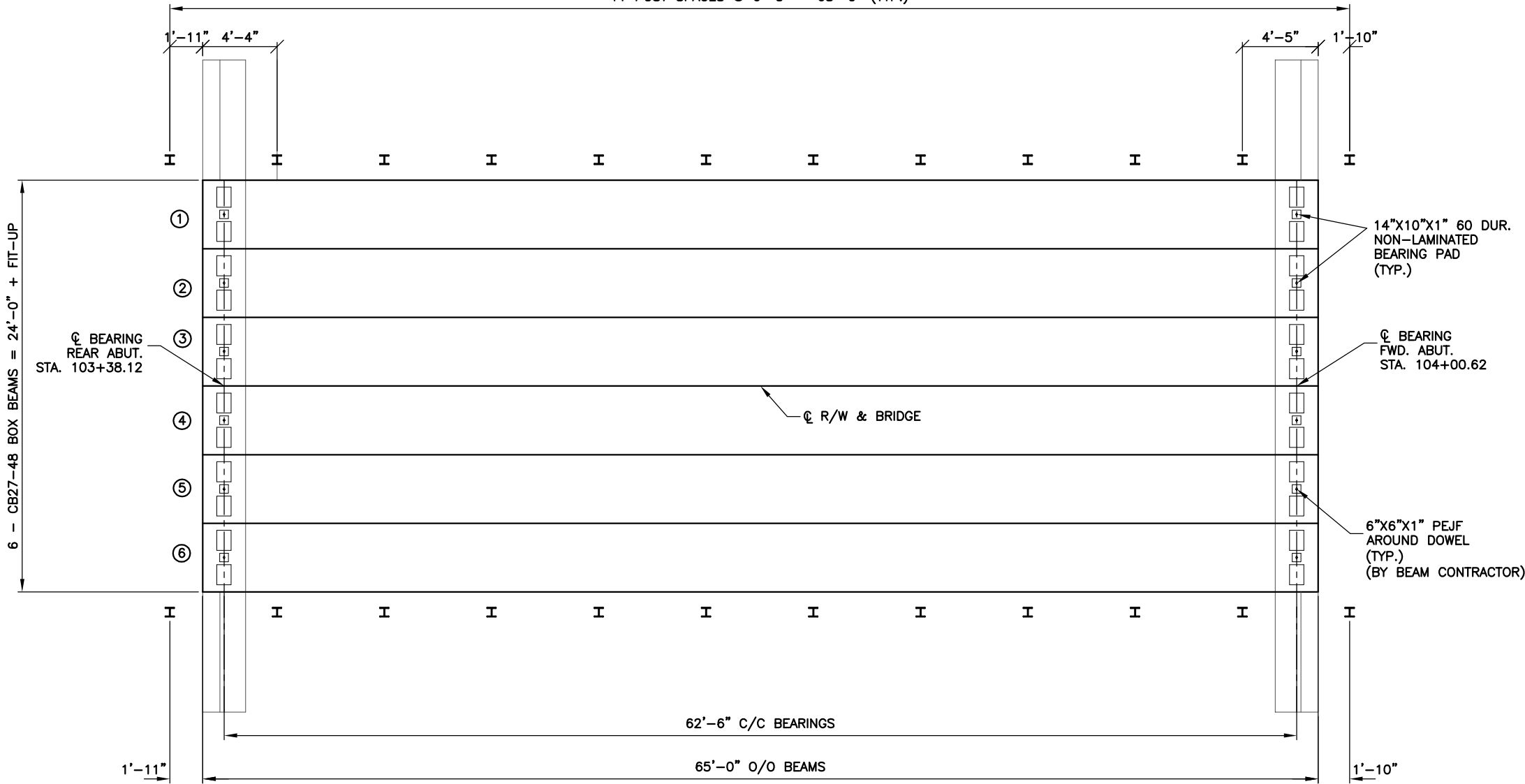


ELEVATION
LOOKING AT FRONT FACE
OF FRONT & REAR ABUTMENTS



SECTION @ WINGWALL

11 POST SPACES @ 6'-3" = 68'-9" (TYP.)

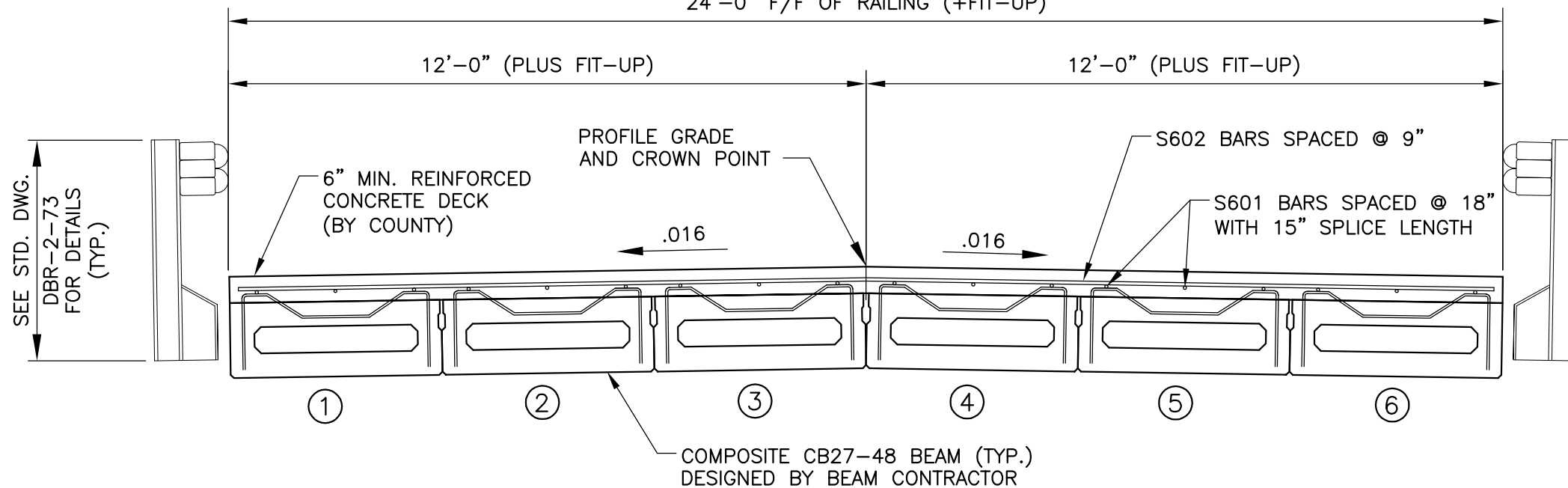


DECK FRAMING PLAN

SUPERSTRUCTURE NOTES:

1. DESIGN LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE. INCLUDE LOAD RATINGS FOR OHIO LEGAL TRUCKS (2F1, 3F1, 4F1 & 5C1); SPECIAL HAULING VEHICLES (SU4, SU5, SU6 & SU7); AND EMERGENCY VEHICLES (EV2 & EV3)
2. REINFORCING STEEL: GRADE 60 MIN. YIELD STRENGTH = 60 KSI
3. ALL REINFORCING STEEL SHALL HAVE 3" MIN. CLEAR COVER
4. ABUTMENT CONCRETE TO BE QC1, ESTIMATED TO BE 14 CY PER ABUTMENT
5. DECK CONCRETE TO BE QC2 WITH IPANEX, ESTIMATED TO BE 35 CY
6. WINGWALL CONCRETE TO BE QC2, ESTIMATED TO BE 1 CY EA, 4 CY TOTAL
7. BURLAP NEEDED: 1560 SF
8. SILANE SEALER TO BE APPLIED PER ODOT BDM 302.1.4.3 AND 303.1

24'-0" F/F OF RAILING (+FIT-UP)



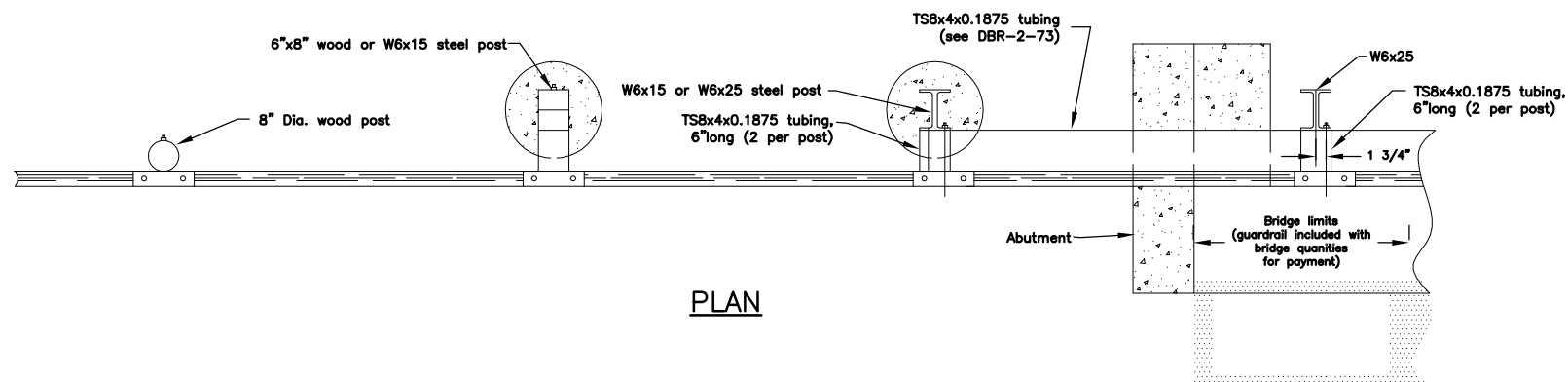
TRANSVERSE SECTION

LOGAN COUNTY ENGINEER'S OFFICE
1991 C.R. 13, P.O. BOX 427
BELLEFONTAINE, OHIO 43311

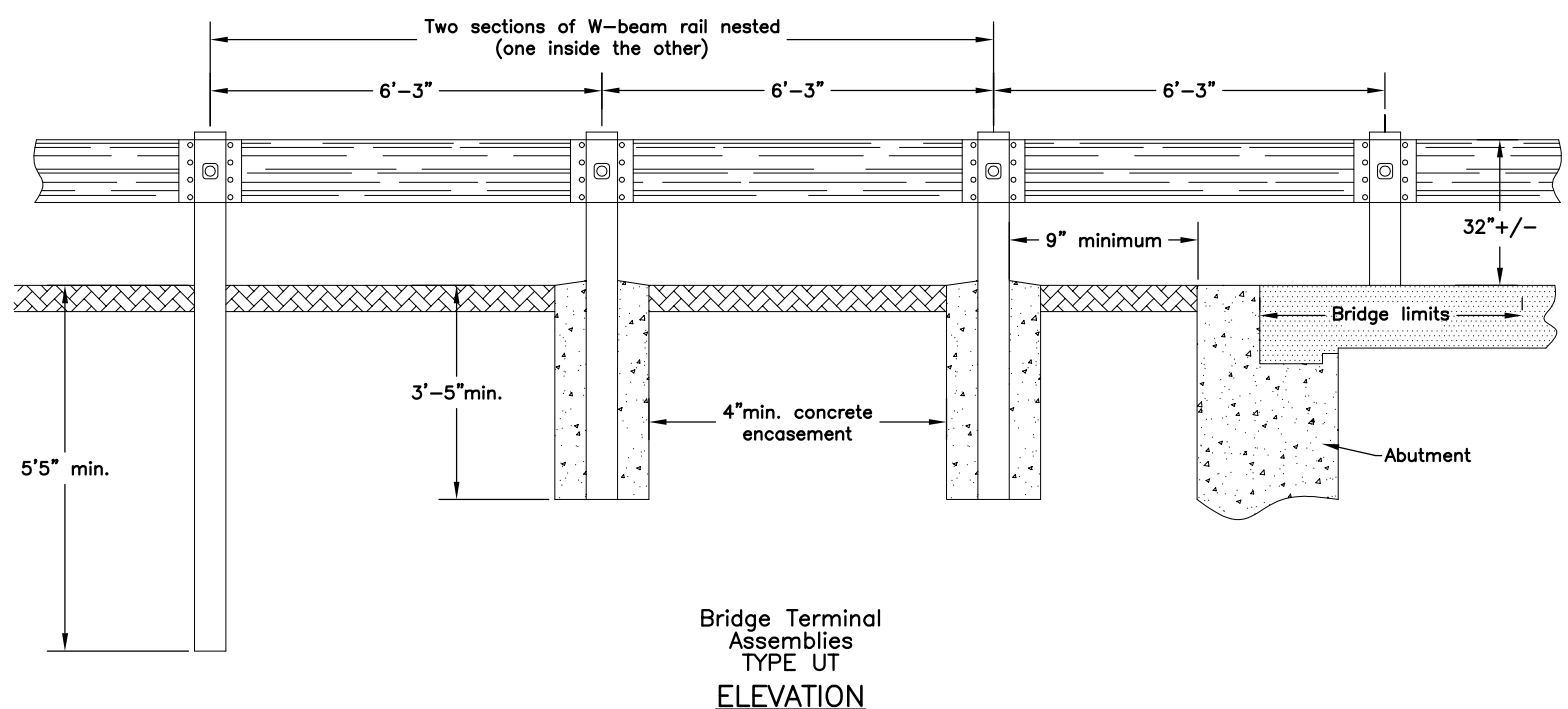
DESIGNED	MJK	CHECKED	SCC
DRAWN	MJK	REVIS	.
REVIEWED	WTB	DATE	5/17/2021
STRUCTURAL FILE NUMBER	4645678		

SUPERSTRUCTURE DETAILS

BRIDGE T 166-2.44



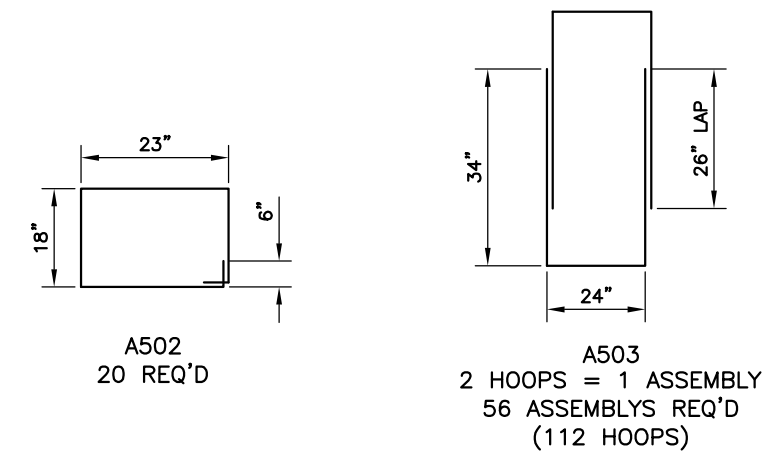
PLAN



Bridge Terminal Assemblies
TYPE UT
ELEVATION

REINFORCING STEEL LIST						
MARK	NUMBER PER ABUT/DECK	LENGTH EACH PIECE	LENGTH PER ABUT/DECK	TOTAL LENGTH	WEIGHT PER FT.	TOTAL WEIGHT
BENT STEEL						
A502	14	7'-10"	110	220	1.043	230
A503	34	15'-4"	522	1044	1.043	1089
STRAIGHT STEEL						
A501	4	37'-6"	150	300	1.043	280
A504	28	3'-6"	98	196	1.043	205
A505	16	6'-6"	104	208	1.043	217
A801	8	37'-6"	300	600	2.67	1602
S601	36	33'-0"	1188	1188	1.502	1785
S602	87	23'-6"	2045	2045	1.502	3072
TOTAL WEIGHTS: #5 BENT:1317 #5 SRT:700 #8 SRT:1602 #6 SRT:4857						

- S601 AND S602 BARS SHALL BE HOT-DIPPED GALVANIZED AND SHALL USE GALVANIZED TIES AND GALVANIZED CHAIRS
- A501, A801, S601 & S602 TO BE PRE-CUT AND LABELED
- USE 6" TIES ON SUPERSTRUCTURE. TOTAL WEIGHT OF SUPERSTRUCTURE STEEL = 4793 POUNDS THUS NEED APPROXIMATELY 840 TIES
- USE 8" TIES ON ABUTMENT. TOTAL WEIGHT OF ABUTMENT STEEL = 2985 POUNDS THUS NEED APPROXIMATELY 635 TIES



BAR BENDING DIAGRAMS