

* GIRDER TYPE II - IV SHOWN. GIRDER TYPE BT-72 SIMILAR EXCEPT AS SHOWN.

NOTES (GIRDER):

- 2" ϕ HOLE (INTERIOR GIRDERS) AND 1" ϕ COIL INSERT (EXTERIOR GIRDERS) ARE REQUIRED AT ϕ INTERMEDIATE DIAPHRAGM WHEN CALLED FOR IN THE PLANS.
- THIS DIMENSION MAY BE ADJUSTED TO CLEAR DRAPED STRANDS WHEN NECESSARY AND IS TYPICAL FOR ALL GIRDERS REGARDLESS OF ROADWAY CROWN.
- USE 1 (ONE) ANCHOR BOLT FOR PREFORMED SILICONE SEALED JOINT. USE 2 (TWO) ANCHOR BOLTS FOR PREFORMED NEOPRENE SEALED JOINT. OMIT ANCHOR BOLTS AT CONTINUITY ENDS.
- COIL INSERTS SHALL BE WILLIAMS TYPE C17-1x4 THIN SLAB LIFTING INSERT OR AN APPROVED EQUAL.

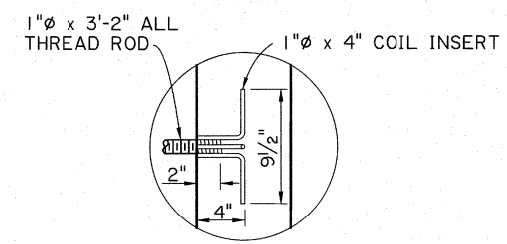
NOTES (BEARING PAD AND ASSEMBLY):

- BEARING PADS ARE TO BE AS SPECIFIED IN THE PLANS AND SPECIFICATIONS, AND SHALL BE PROVIDED AT END OF ALL GIRDERS. ALL COSTS ASSOCIATED WITH THE MANUFACTURING, TESTING, SHIPPING, AND PLACING OF BEARINGS ARE TO BE PAID FOR PER 814.06 OF THE STANDARD SPECIFICATIONS.
- BEARING ASSEMBLY (ANGLES, CAP SCREWS, WASHERS, THREADED INSERTS, AND ANCHOR BOLTS), ARE REQUIRED ONLY ON GIRDER ENDS THAT ARE BELOW DECK JOINTS AND THAT ARE SPECIFIED IN THE PLANS TO BE ANCHORED. BEARING ASSEMBLY IS NOT REQUIRED AT FIXED ENDS OF CONTINUOUS SPAN GIRDERS.
- WASHERS AND CAP SCREWS AT BEARING ASSEMBLY ARE TO BE GALVANIZED. AT THE CONTRACTOR'S OPTION, THREADED INSERTS AT BEARING ASSEMBLY MAY BE GALVANIZED OR ELECTROPLATED AND COVERED WITH GREASE. ALL STEEL CLIP ANGLES SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

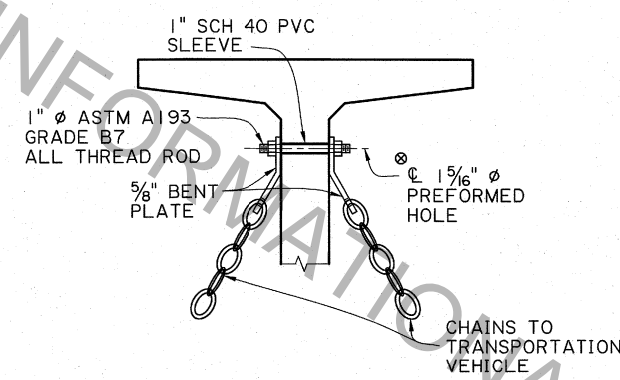
DAMAGED GALVANIZED COATS THAT ARE NOT TO BE EMBEDDED IN MORE THAN THREE INCHES OF CONCRETE SHALL BE REPAIRED WITH AN APPROVED COLD-APPLIED, ZINC-RICH, ORGANIC PAINT OR COMPOUND FROM THE DOTD APPROVED MATERIALS LIST, OR BY ANY OTHER REPAIR METHOD APPROVED BY THE ENGINEER.

NOTES (PAY QUANTITIES):

- MATERIALS TO BE INCLUDED IN PRICE BID PER LINEAR FOOT OF PRECAST-PRESTRESSED CONCRETE GIRDERS ARE LISTED ON SHEETS 2 & 3 OF 3.



DETAIL A
(EXTERIOR GIRDER AT DIAPHRAGMS)

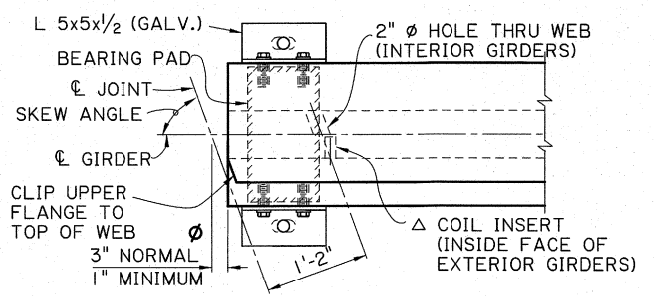
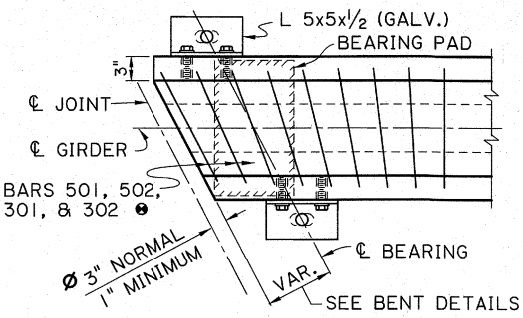


TRANSPORTATION GIRDER BT-72

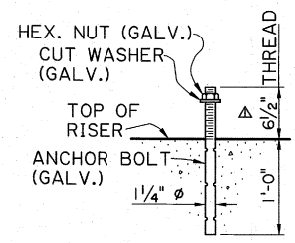
- FIELD DRILLING OF HOLES IS NOT PERMITTED.
- NUMBER & LOCATION OF HOLES TO BE SHOWN ON SHOP DRAWINGS.
- SUGGESTED METHOD SHOWN ABOVE. CONTRACTOR TO SUBMIT HIS METHOD FOR REVIEW & APPROVAL.
- AFTER TRANSPORTATION, HOLES IN GIRDER WEB SHALL BE CLEANED OF FORM MATERIAL AND FORM RELEASE MATERIAL, THEN FILLED COMPLETELY WITH A NON-SHRINK GROUT THAT MATCHES OR EXCEEDS THE GIRDER CONCRETE STRENGTH.

SKEW JOINT AT END AND TRANSITION BENTS *

(DETAILS NOT SHOWN SIMILAR TO DETAILS SHOWN RIGHT)
 * ADJUSTMENT TO STANDARD BAR DIMENSIONS FOR 501, 502, 301, & 302 WILL BE REQUIRED IN HIGH SKEW ENDS.



* SKEW THREADED INSERTS AT GIRDER ENDS ADJACENT TO END BENT WHEN SKEW ANGLE EXCEEDS 15° FROM NORMAL.
 * PERPENDICULAR TO ϕ JOINT.

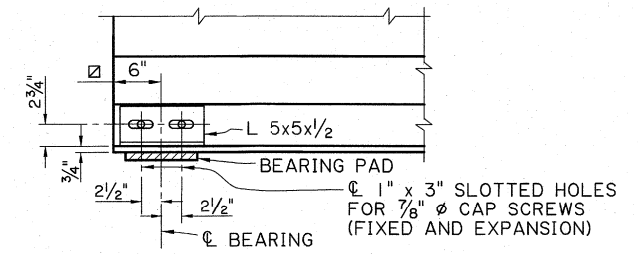
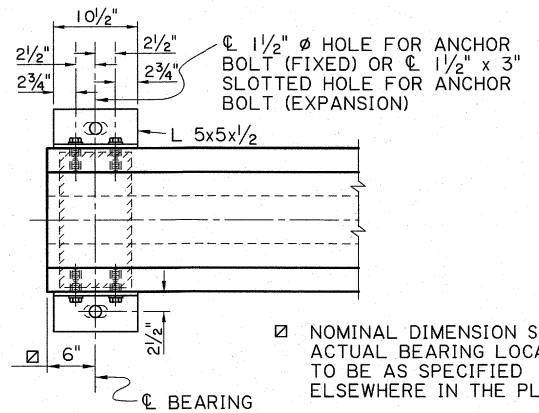


ANCHOR BOLTS TO BE SWEDGED, ASTM F1554 AND ASTM F2329, GRADE 36, GALV., UNLESS OTHERWISE NOTED, AND INCLUDED AS STRUCTURAL METALWORK IN BENT OR PIER QUANTITIES.

INSTALLING ANCHOR BOLTS BY DRILLING WILL NOT BE ALLOWED. ONE OF THE FOLLOWING ALTERNATES SHALL BE UTILIZED:

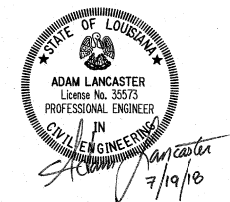
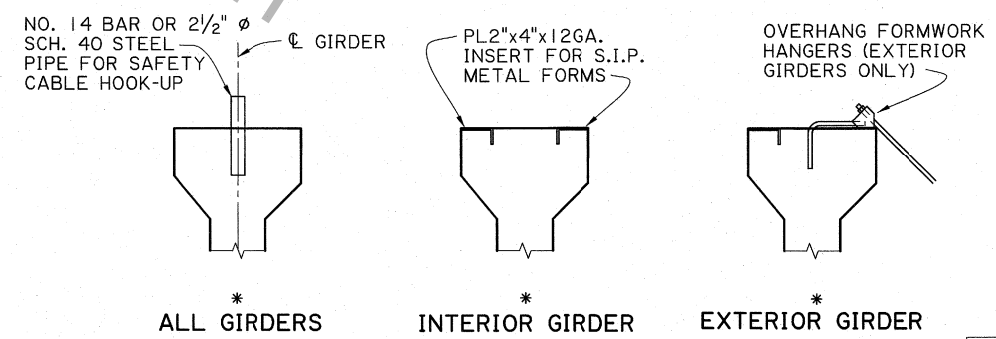
- CAST ANCHOR BOLT IN PLACE WITH CAP.
- PREFORM HOLE WITH A BLOCK-OUT AND THEN SET ANCHOR BOLT WITH A NON-SHRINK GROUT FROM THE LA DOTD APPROVED MATERIALS LIST.

* ASSUMES A MAXIMUM BEARING PAD THICKNESS OF 3". LENGTHEN ANCHOR BOLT FOR THICKER BEARING PADS.



AASHTO GIRDER DETAILS INDEX

BRIDGE STANDARD INDEX NO.	SERIES	DESCRIPTION
BD.2.2.2.0.01	1 OF 3	GIRDER HARDWARE AND BEARING PADS
BD.2.2.2.0.02	2 OF 3	MILD STEEL REINFORCEMENT
BD.2.2.2.0.03	3 OF 3	WELDED WIRE FABRIC REINFORCEMENT



SHEET NUMBER

DESIGNED: A. LANCASTER
 CHECKED: X. WANG
 RETAILER: A. LANCASTER
 CHECKED: X. WANG
 REVIEWED: Z.Z. FU
 SERIES # 1 OF 3

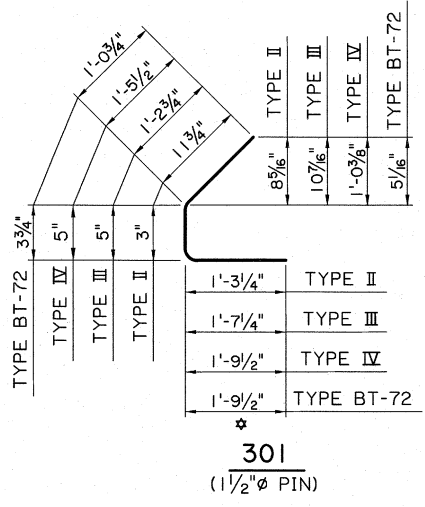
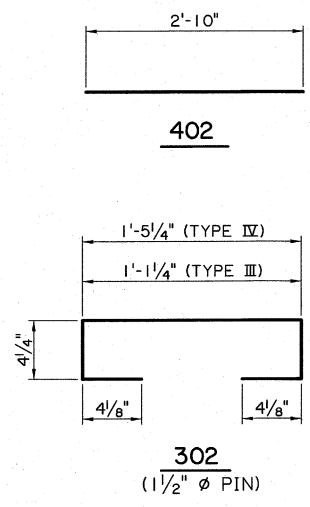
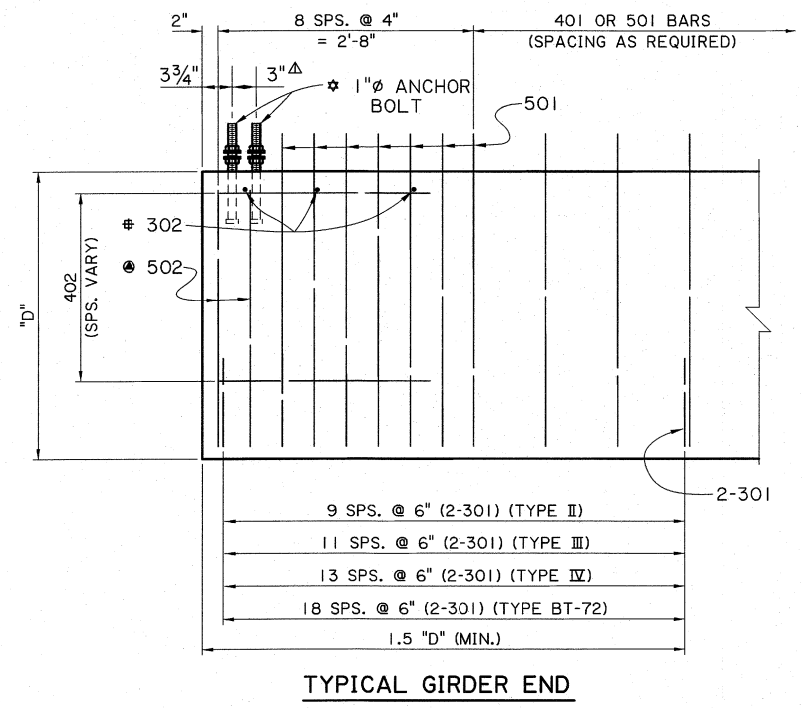
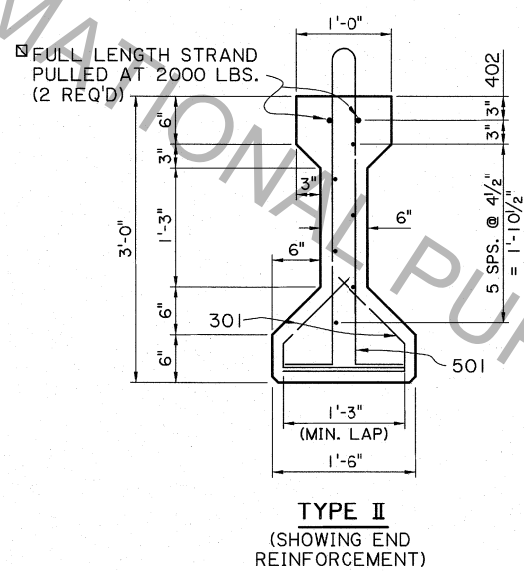
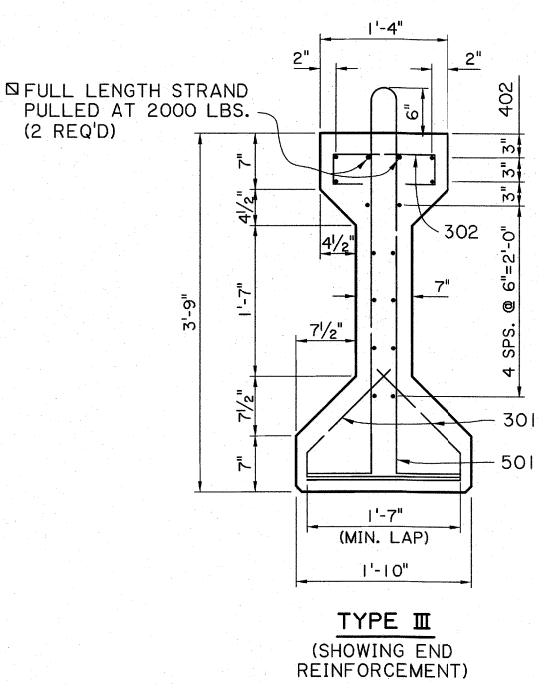
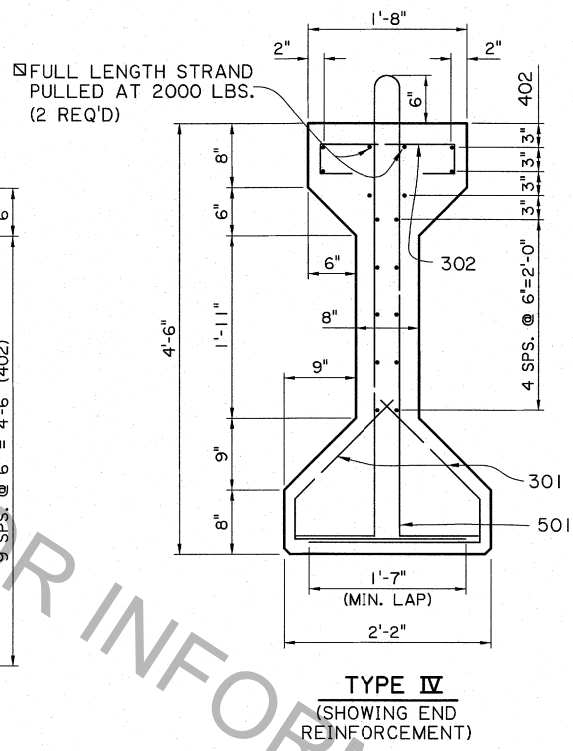
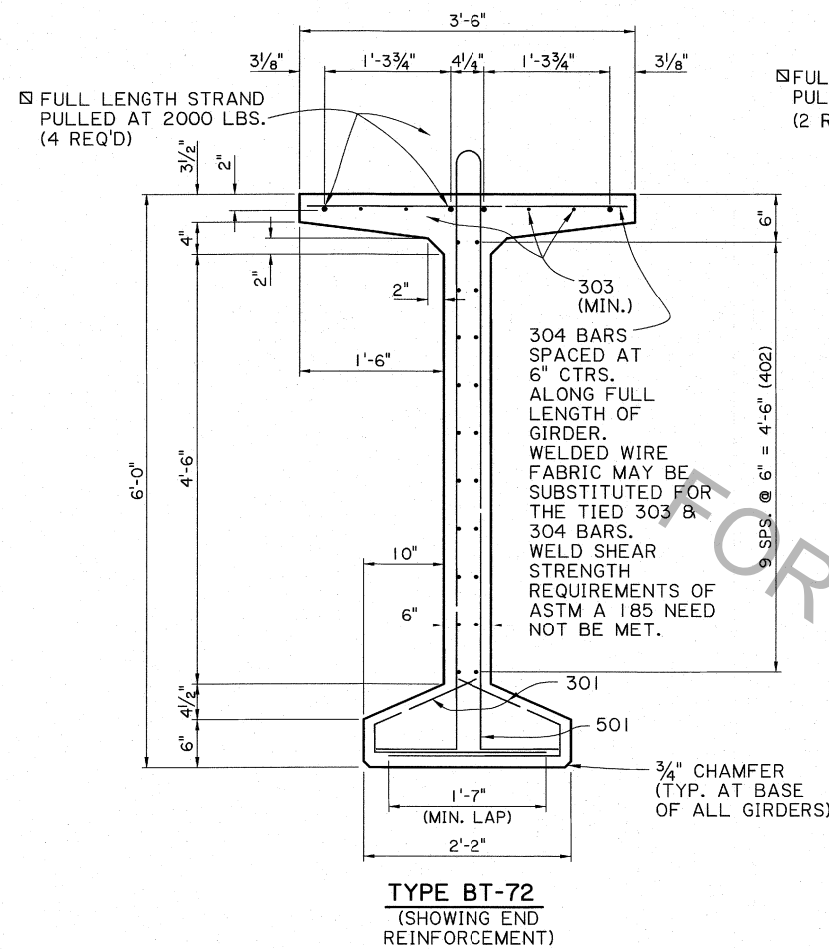
PARISH CONTROL SECTION PROJECT

BY: DATE: NO. DATE

REVISION OR CHANGE ORDER DESCRIPTION

AASHTO GIRDER DETAILS
 GIRDER HARDWARE AND BEARING PADS
 SPECIAL DETAIL
 AASHTO GIRDERS

BD.2.2.2.0.01
 BRIDGE & STRUCTURAL DESIGN



- USE 501 IN LIEU OF 502 @ CONTINUITY ENDS OF GIRDERS.
- # 3-302 REQUIRED AT EACH END OF GIRDER FOR TYPE III & IV
- * USE 1 (ONE) ANCHOR BOLT FOR PREFORMED SILICONE SEALED JOINT. USE 2 (TWO) ANCHOR BOLTS FOR PREFORMED NEOPRENE SEALED JOINT. OMIT ANCHOR BOLTS AT CONTINUITY ENDS.
- Δ 3" DIMENSION MAY BE ADJUSTED SLIGHTLY TO AVOID CONFLICT WITH STEEL REINFORCEMENT.

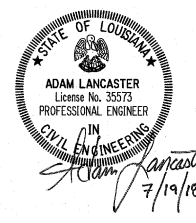
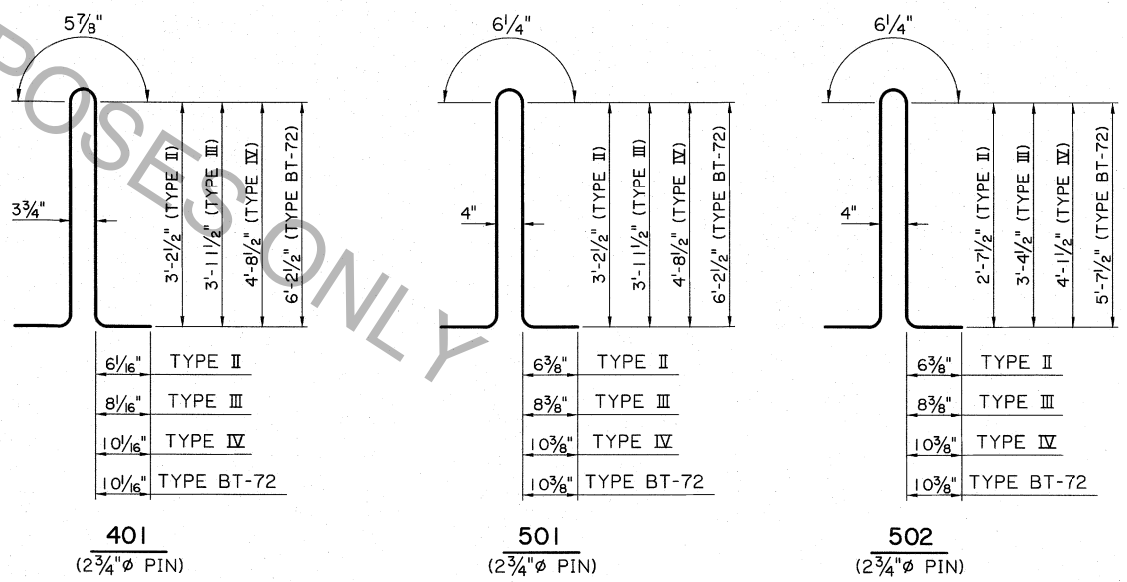
* MINIMUM LAP (SEE GIRDER SECTIONS) WILL REQUIRE ADJUSTMENT TO STANDARD BAR DIMENSIONS IN HIGH SKEW ENDS.

DETAIL SCALE: 1" = 1'-0"

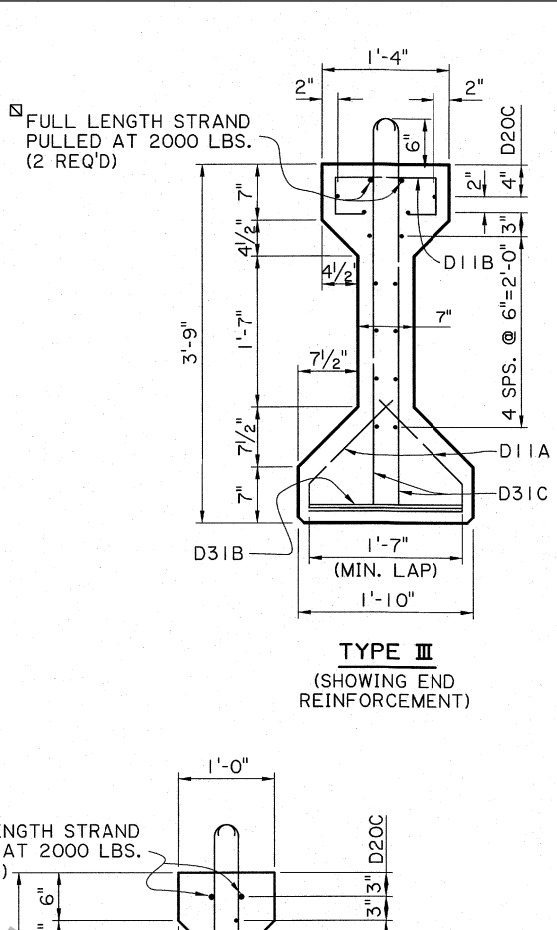
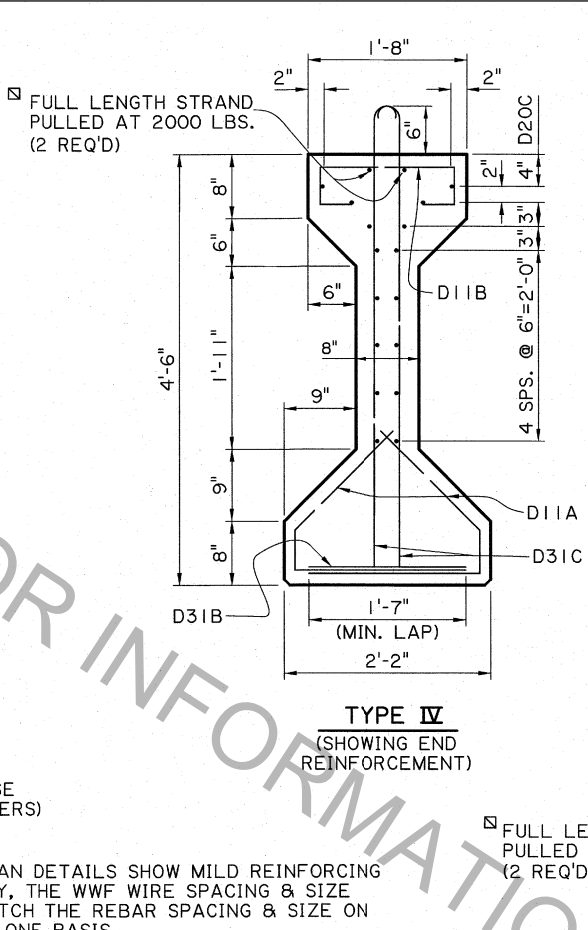
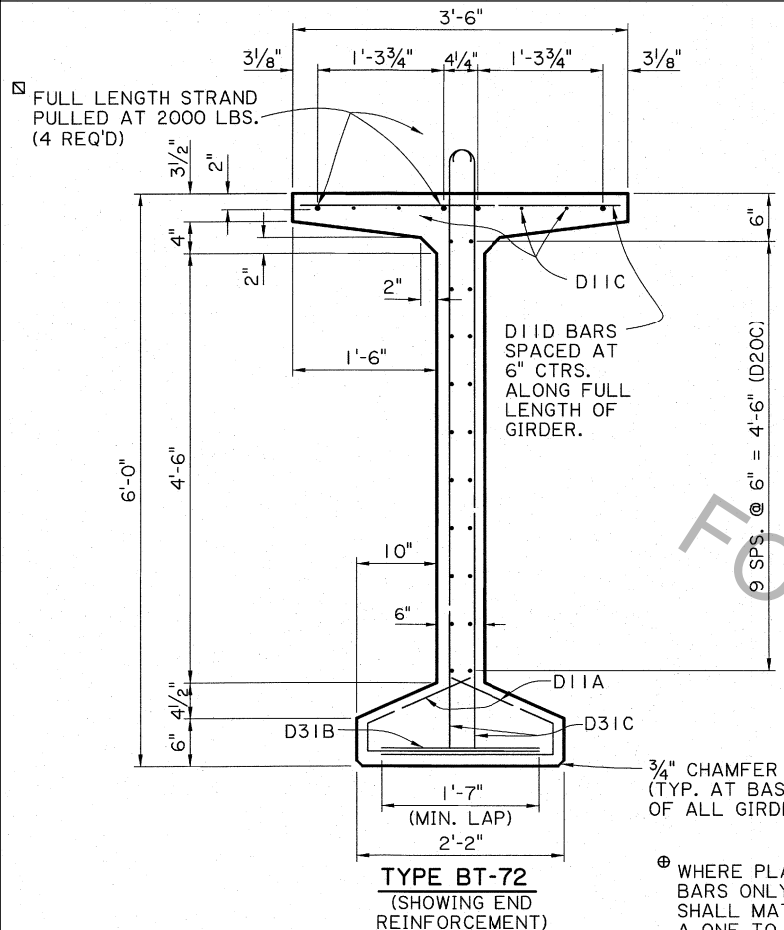
PRESTRESSED GIRDER NOTES

1. FABRICATE IN ACCORDANCE WITH SECTION 805 OF THE STANDARD SPECIFICATIONS.
2. UNLESS OTHERWISE NOTED IN THE PLANS, PRESTRESSING STEEL SHALL BE 0.6" Ø NOMINAL DIAMETER, UNCOATED, SEVEN-WIRE STRANDS, GRADE 270, CONFORMING TO ASTM DESIGNATION A 416M, AND SHALL BE LOW-RELAXATION WITH AN INITIAL APPLIED FORCE OF 43,950 POUNDS.
3. CONCRETE IN PRECAST-PRESTRESSED CONCRETE GIRDERS SHALL BE CLASS P2 CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 6,500 P.S.I. AT RELEASE OF STRANDS AND 8,500 P.S.I. AT 28 DAYS, OR AS CALLED FOR IN THE PLANS.
4. THE CONTRACTOR SHALL SUBMIT A METHOD OF HOLDING DRAPED STRANDS IN PLACE AND SHALL SUBMIT METHOD AND SCHEDULE FOR RELEASE OF HOLD-DOWNS AND CABLE STRAND TO THE BRIDGE DESIGN ENGINEER FOR APPROVAL. PRESTRESSED GIRDERS SHALL BE MAINTAINED IN AN UPRIGHT POSITION AT ALL TIMES DURING STORAGE AND HANDLING AND MUST BE SUPPORTED FROM POINTS WITHIN 3'-0" OF GIRDER ENDS. DISREGARDING THIS REQUIREMENT MAY LEAD TO COLLAPSE OF THE MEMBER.
5. DIMENSIONS SHOWN ON REINFORCING BAR DETAILS ARE OUT-TO-OUT OF BAR. REINFORCING STEEL FOR PRECAST-PRESTRESSED CONCRETE GIRDERS SHALL BE FABRICATED TO CLOSE DIMENSIONAL TOLERANCES TO PROVIDE ONE (1) INCH MINIMUM CLEARANCE FROM EDGE OF BAR TO FACE OF GIRDER.
6. CAMBER SHOWN ELSEWHERE IN THE PLANS IS APPROXIMATE AND ASSUMES DECK PLACEMENT 90 DAYS AFTER STRAND RELEASE. CAST GIRDERS NO MORE THAN 90 DAYS BEFORE DECK PLACEMENT. ANY ADJUSTMENTS REQUIRED DUE TO AN INCREASE IN CAMBER FROM THE VALUES SHOWN SHALL BE MADE AT NO ADDITIONAL COST OR TIME TO THE DEPARTMENT.
7. MEASUREMENT WILL BE LINEAR FOOT OF PRECAST-PRESTRESSED CONCRETE GIRDER IN PLACE. THE FOLLOWING MATERIALS WILL BE PAID FOR IN THE PRICE BID PER LINEAR FOOT OF GIRDER:

CLASS P2 CONCRETE, REINFORCING STEEL AND PRESTRESSING STRANDS, ANCHOR BOLTS, NUTS, AND WASHERS FOR END DAM ANCHORAGE, THREADED INSERTS, COIL INSERTS, WASHERS, CAP SCREWS, S.I.P. METAL FORM INSERTS, OVERHANG FORMWORK HANGERS, STEEL PIPE FOR SAFETY CABLE, AND L 5x5x1/2 AT BEARING ASSEMBLY.
8. 3/8" Ø PRESTRESSING STRANDS STRESSED TO A MAXIMUM OF 2,000 POUNDS MAY BE SUBSTITUTED FOR BARS 303.

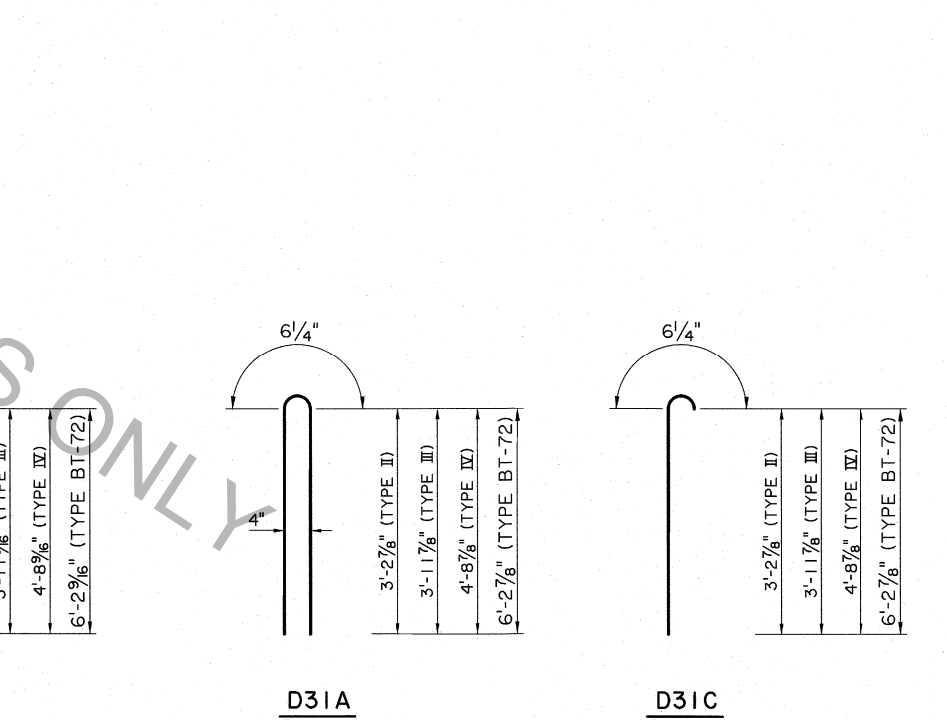
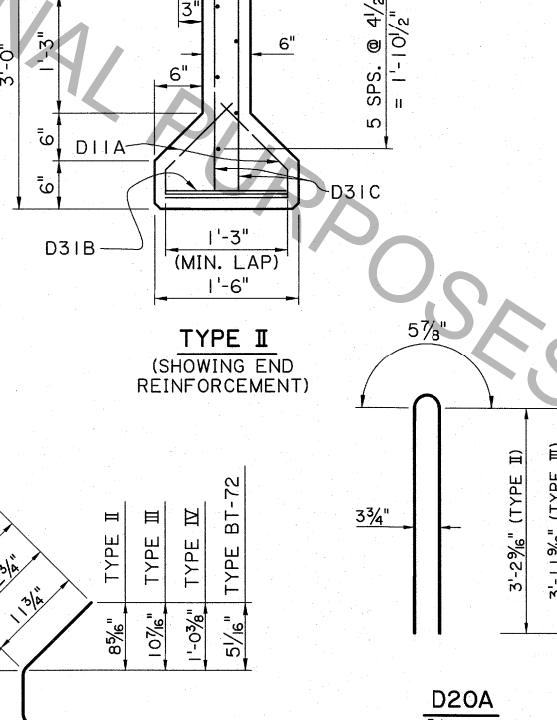
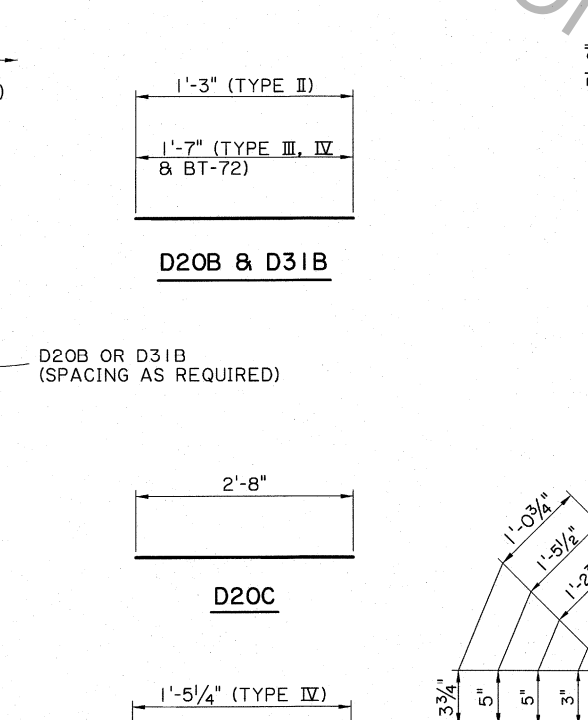
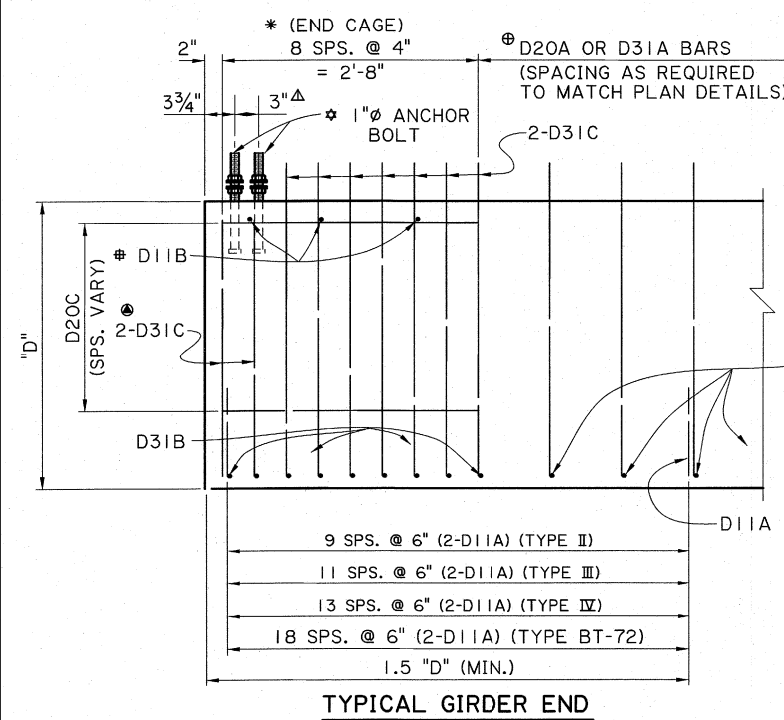


SHEET NUMBER	PARISH	CONTROL SECTION	STATE PROJECT
DESIGNED A. LANCASTER	CHECKED X. WANG	REVIEWED Z.Z. FU	SERIES # 2 OF 3
DATE	NO.	REVISION OR CHANGE ORDER DESCRIPTION	BY
AASHTO GIRDER DETAILS MILD STEEL REINFORCEMENT AASHTO GIRDERS			
BD.2.2.0.02 BRIDGE & STRUCTURAL DESIGN			

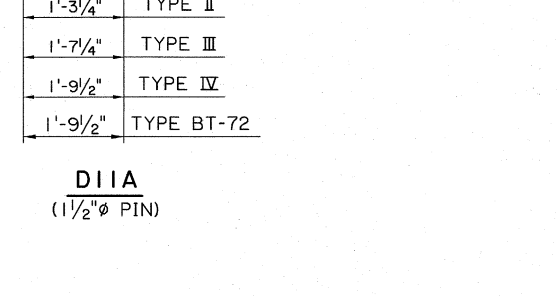
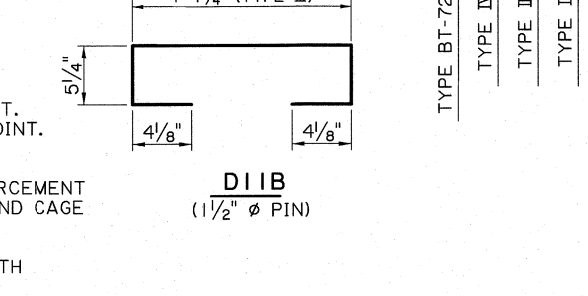


PRESTRESSED GIRDER NOTES

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- UNLESS OTHERWISE NOTED IN THE PLANS, PRESTRESSING STEEL SHALL BE 0.6" ϕ NOMINAL DIAMETER, UNCOATED, SEVEN-WIRE STRANDS, GRADE 270, CONFORMING TO ASTM DESIGNATION A 416M, AND SHALL BE LOW-RELAXATION WITH AN INITIAL APPLIED FORCE OF 43,950 POUNDS.
- CONCRETE IN PRECAST-PRESTRESSED CONCRETE GIRDERS SHALL BE CLASS P2 CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 6,500 P.S.I. AT RELEASE OF STRANDS AND 8,500 P.S.I. AT 28 DAYS, OR AS CALLED FOR IN THE PLANS.
- THE CONTRACTOR SHALL SUBMIT A METHOD OF HOLDING DRAPED STRANDS IN PLACE AND SHALL SUBMIT METHOD AND SCHEDULE FOR RELEASE OF HOLD-DOWNS AND CABLE STRAND TO THE BRIDGE DESIGN ENGINEER FOR APPROVAL. PRESTRESSED GIRDERS SHALL BE MAINTAINED IN AN UPRIGHT POSITION AT ALL TIMES DURING STORAGE AND HANDLING AND MUST BE SUPPORTED FROM POINTS WITHIN 3'-0" OF GIRDER ENDS. DISREGARDING THIS REQUIREMENT MAY LEAD TO COLLAPSE OF THE MEMBER.
- WELDED WIRE FABRIC FOR PRECAST PRE-STRESSED CONCRETE GIRDERS SHALL CONFORM TO ASTM DESIGNATIONS A496 & A497. WWF SHALL BE FABRICATED TO CLOSE DIMENSIONAL TOLERANCES TO PROVIDE ONE (1) INCH MINIMUM CLEARANCE FROM EDGE OF BAR TO FACE OF GIRDER. DIMENSIONS SHOWN ON WELDED WIRE DIMENSIONS ARE OUT-TO-OUT OF BAR.
- CAMBER SHOWN ELSEWHERE IN THE PLANS IS APPROXIMATE AND ASSUMES DECK PLACEMENT 90 DAYS AFTER STRAND RELEASE. CAST GIRDERS NO MORE THAN 90 DAYS BEFORE DECK PLACEMENT. ANY ADJUSTMENTS REQUIRED DUE TO AN INCREASE IN CAMBER FROM THE VALUES SHOWN SHALL BE MADE AT NO ADDITIONAL COST OR TIME TO THE DEPARTMENT.
- MEASUREMENT WILL BE LINEAR FOOT OF PRECAST-PRESTRESSED CONCRETE GIRDER IN PLACE. THE FOLLOWING MATERIALS WILL BE PAID FOR IN THE PRICE BID PER LINEAR FOOT OF GIRDER:
CLASS P2 CONCRETE, REINFORCING STEEL AND PRESTRESSING STRANDS, ANCHOR BOLTS, NUTS, AND WASHERS FOR END DAM ANCHORAGE, THREADED INSERTS, COIL INSERTS, WASHERS, CAP SCREWS S.I.P. METAL FORM INSERTS, OVERHANG FORMWORK HANGERS, STEEL PIPE FOR SAFETY CABLE, AND L 5x5x1/2 AT BEARING ASSEMBLY.
- 3/8" ϕ PRESTRESSING STRANDS STRESSED TO A MAXIMUM OF 2,000 POUNDS MAY BE SUBSTITUTED FOR WWF BARS D11C.



- D31C BARS SHORTENED BY 7" AT ANCHOR BOLT LOCATIONS.
- D11B BARS REQUIRED AT EACH END OF GIRDER FOR TYPE III & IV.
- USE 1 (ONE) ANCHOR BOLT FOR PREFORMED SILICONE SEALED JOINT. USE 2 (TWO) ANCHOR BOLTS FOR PREFORMED NEOPRENE SEALED JOINT. OMIT ANCHOR BOLTS AT CONTINUITY ENDS.
- AT SKEWED END BENTS & TRANSITION BENTS, MILD STEEL REINFORCEMENT IN LIEU OF WWF BARS D11A, D31B & D31C, SHALL BE USED FOR END CAGE ONLY. SEE SHEETS 2 & 3 OF 3.
- 3" DIMENSION MAY BE ADJUSTED SLIGHTLY TO AVOID CONFLICT WITH STEEL REINFORCEMENT.



STATE OF LOUISIANA
ADAM LANCASTER
License No. 35573
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
7/19/18

DETAIL SCALE: 1" = 1'-0"

SHEET NUMBER

DESIGNED A. LANCASTER
CHECKED X. WANG
PARISH CONTROL SECTION
REVIEWED Z. Z. FU
STATE PROJECT
SERIES # 3 OF 3

BY

NO.

DATE

REVISION OR CHANGE ORDER DESCRIPTION

LAUISIANA PROFESSIONAL ENGINEERS AND ARCHITECTS

AASHTO GIRDER DETAILS
WELDED WIRE FABRIC REINFORCEMENT
GENERAL DETAIL

AASHTO GIRDERS

BD.2.2.2.0.03

BRIDGE & STRUCTURAL DESIGN