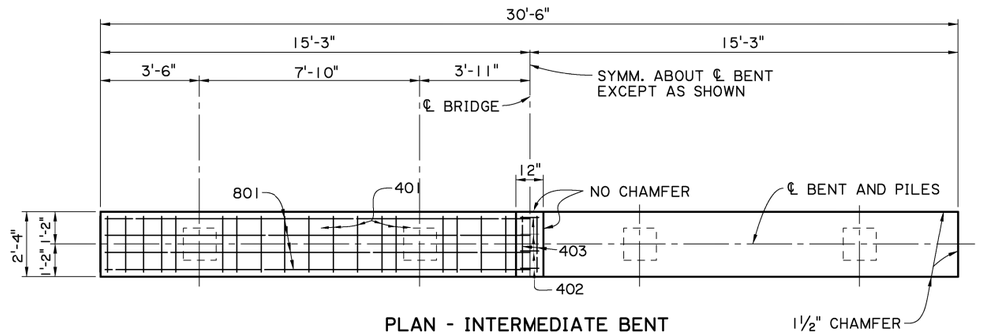
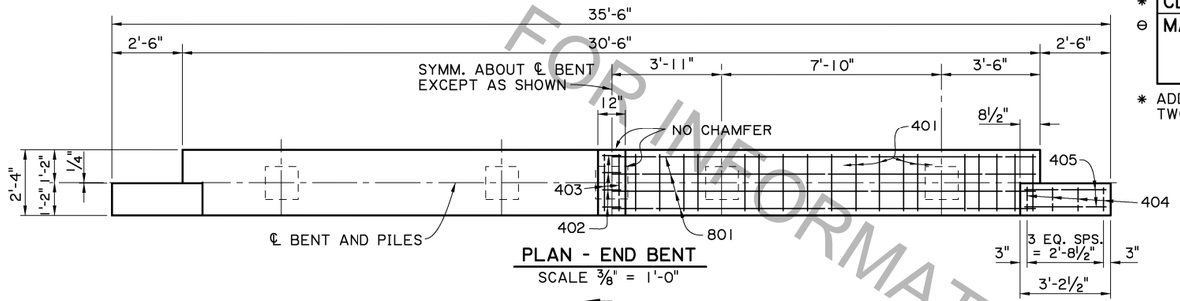
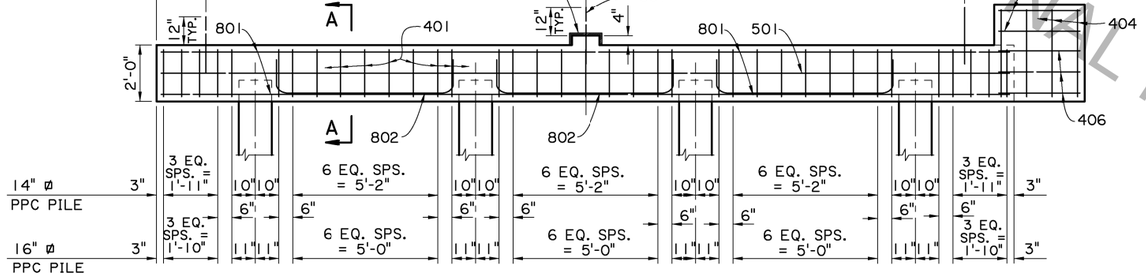


PLAN - INTERMEDIATE BENT
SCALE ⅜" = 1'-0"



PLAN - END BENT
SCALE ⅜" = 1'-0"



HALF ELEVATION - INTERMEDIATE BENT
SCALE ⅜" = 1'-0"

HALF ELEVATION - END BENT
SCALE ⅜" = 1'-0"

ESTIMATED QUANTITIES (ONE INTER. BENT)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	6	30'-2"	181'-0"	LONGIT. IN CAP
802	6	8'-8"	52'-0"	LONGIT. IN CAP BTW. PILES
TOTAL NO. 8 BARS = 233'-0" = 622 LBS.				
601	19	2'-0"	38'-0"	DOWELS
TOTAL NO. 6 BARS = 38'-0" = 57 LBS.				
501	2	30'-2"	60'-4"	LONGIT. IN CAP
TOTAL NO. 5 BARS = 60'-4" = 63 LBS.				
401	37	8'-2"	302'-2"	STIRRUPS IN CAP
402	4	3'-4"	13'-4"	STIRRUPS IN RISER
403	2	2'-0"	4'-0"	LONGIT. IN RISER
TOTAL NO. 4 BARS = 319'-6" = 213 LBS.				
DEFORMED REINFORCING STEEL = 955 LBS.				
* CLASS A1 CONCRETE = 5.10 CU. YDS.				
⊖ MAX. PILE LOAD: SERVICE DEAD LOAD = 23 TONS SERVICE LIVE LOAD = 36 TONS FACTORED TOTAL LOAD = 81 TONS				

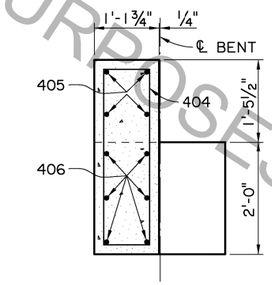
* ADD 57 LBS. OF REINFORCING STEEL (19-601 DOWELS) WHEN TWO FIXED ENDS OCCUR ON THE SAME BENT.

ESTIMATED QUANTITIES (ONE END BENT)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	6	30'-2"	181'-0"	LONGIT. IN CAP
802	6	8'-8"	52'-0"	LONGIT. IN CAP BTW. PILES
TOTAL NO. 8 BARS = 233'-0" = 622 LBS.				
601	19	2'-0"	38'-0"	DOWELS
TOTAL NO. 6 BARS = 38'-0" = 57 LBS.				
501	2	30'-2"	60'-4"	LONGIT. IN CAP
TOTAL NO. 5 BARS = 60'-4" = 64 LBS.				
401	37	8'-2"	302'-2"	STIRRUPS IN CAP
402	4	3'-4"	13'-4"	STIRRUPS IN RISER
403	2	2'-0"	4'-0"	LONGIT. IN RISER
404	8	8'-9"	70'-0"	STIRRUPS IN WINGWALL
405	8	2'-10"	22'-8"	LONGIT. IN WINGWALL
406	12	4'-0"	48'-0"	LONGIT. IN WINGWALL
TOTAL NO. 4 BARS = 460'-2" = 307 LBS.				
DEFORMED REINFORCING STEEL = 1050 LBS.				
CLASS A1 CONCRETE = 5.92 CU. YDS.				
⊖ MAX. PILE LOAD: SERVICE DEAD LOAD = 23 TONS SERVICE LIVE LOAD = 36 TONS FACTORED TOTAL LOAD = 81 TONS				

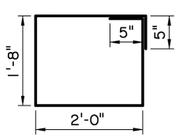
⊖16" ø PPC PILES USED FOR ESTIMATING PURPOSES ONLY. (ADD 0.04 CU. YDS. OF CLASS A1 CONCRETE PER BENT WHEN 14" ø PPC PILES ARE USED.)

SECTION A-A
SCALE: ¾" = 1'-0"

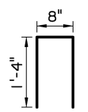
SECTION B-B
SCALE: ¾" = 1'-0"



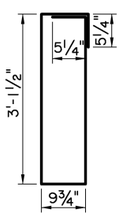
END ELEVATION
SCALE ¾" = 1'-0"



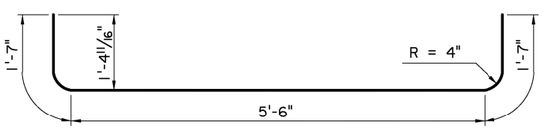
401
2" ø PIN



402
2" ø PIN



404
2" ø PIN



802
6" ø PIN

AS-DESIGNED RATING		
VEHICLE	RATING FACTOR	NOTES
HL-93 (INV)	1.417	——
HL-93 (OPR)	1.836	——
LADV-11 (INV)	1.090	MAGNIFICATION FACTOR = 1.3

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

05/17/17

NOTES:

CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th EDITION, WITH 2008 & 2009 INTERIMS.

DESIGN LOAD: LIVE LOAD IS HL-93, AND LADV-11 (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A ¾" CHAMFER UNLESS OTHERWISE NOTED. ALL EXPOSED FACES OF WINGWALLS AND ENDS OF CAPS SHALL RECEIVE A SURFACE FINISH AS PER SUBSECTION 805.08 OF THE STANDARD SPECIFICATIONS, EXCEPT WHEN SPECIFIED ELSEWHERE IN THE PLANS.

REINFORCING STEEL: ALL REINFORCING SHALL BE GRADE 60. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS, UNLESS OTHERWISE NOTED. DOWELS (601 BARS) SHALL BE PROVIDED AT ALL FIXED BEARINGS AND APPROACH SLAB BEARINGS (SEE GENERAL PLAN). ALL EXPOSED ENDS OF DOWELS SHALL BE WRAPPED WITH TWO LAYERS OF 15 LB. ASPHALT SATURATED FELT. CLOSE FITTING TUBES OF COMPRESSIBLE MATERIAL NOT LESS THAN 3⁄16" THICK MAY BE SUBSTITUTED.

PRECAST CONCRETE PILES: FOR DETAILS SEE STANDARD DETAIL BD.2.5.1.0.01 (CS-216). EXTERIOR PILES ARE TO BE BATTERED OUTWARD AT 1½ ON 12 IN THE LONGITUDINAL DIRECTION OF THE BENT, WHEN NOTED ON THE GENERAL PLAN.

BASIS OF PAYMENT: ALL MATERIALS SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS.

PREFORMED JOINT MATERIAL: PREFORMED JOINT MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 815.04 OF THE STANDARD SPECIFICATIONS.

SHEET NUMBER

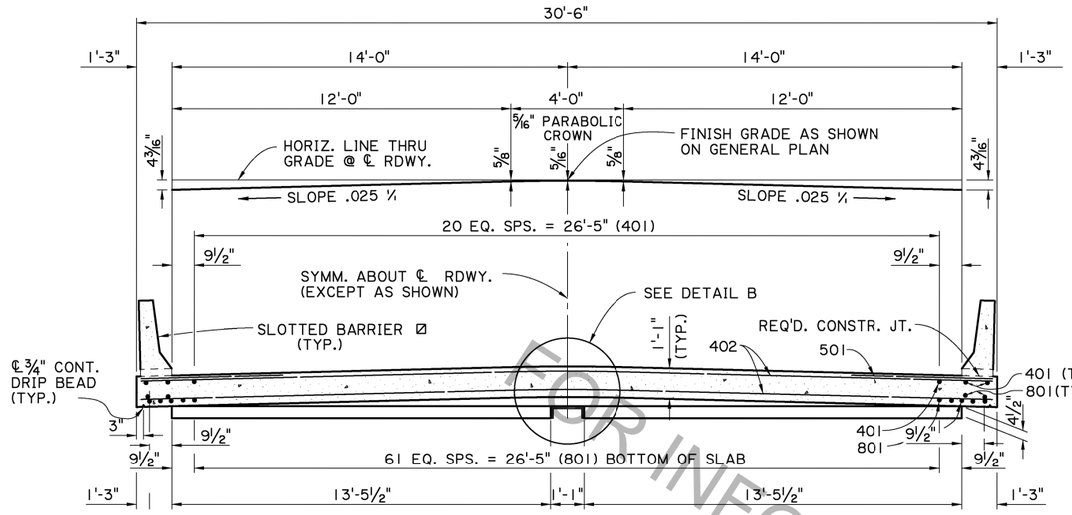
PARISH	CONTROL SECTION	STATE PROJECT
DESIGNED B. DELATTE CHECKED J. NAKHLEH	DETAILED D. HYMEL CHECKED J. NAKHLEH	REVIEWED 05/17/17 SERIES # 1 OF 11

NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

BENTS
REINFORCED CONCRETE PILE BENT
28'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

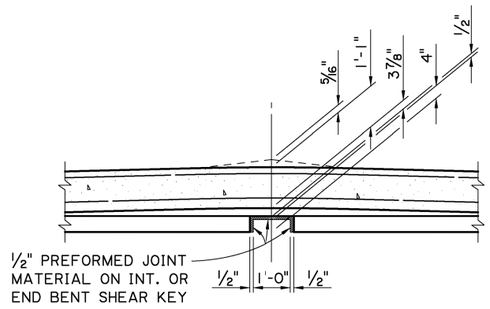
STANDARD DETAILS PSS-90-28-20SL

DOTD BRIDGE DESIGN

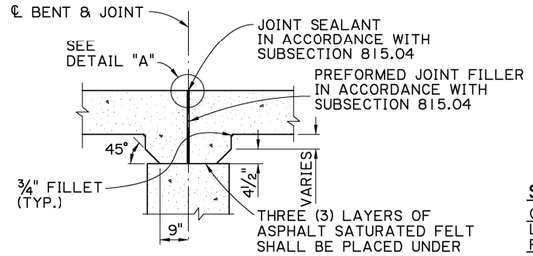


⧄ STANDARD BARRIERS ARE REQUIRED ON END SPANS.

SECTION A-A
SCALE ⅜" = 1'-0"



DETAIL B
SCALE : ½" = 1'-0"



DETAIL SHOWING TYPICAL JOINT & HAUNCH
SCALE : ½" = 1'-0"

ESTIMATED QUANTITIES (ONE SPAN)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	73	19'-7"	1429'-7"	LONGIT. BOT. OF SLAB
TOTAL NO. 8 BARS = 1429'-7" = 3817 LBS.				
501	56	5'-0"	280'-0"	TRANS. TOP OF SLAB
TOTAL NO. 5 BARS = 280'-0" = 292 LBS.				
401	25	19'-7"	489'-7"	LONGIT. TOP OF SLAB
402	56	30'-2"	1689'-4"	TRANS. TOP & BOT. OF SLAB
TOTAL NO. 4 BARS = 2178'-11" = 1456 LBS.				
TOTAL DEFORMED REINFORCING STEEL = 5565 LBS.				
CLASS A1 CONCRETE = 25.48 CU. YDS.				
CONCRETE RAILING (BARRIER TYPE) = 40.00 LIN. FT.				

AS-DESIGNED RATING		
VEHICLE	RATING FACTOR	NOTES
HL-93 (INV)	1.361	——
HL-93 (OPR)	1.764	——
LADV-11 (INV)	1.047	MAGNIFICATION FACTOR = 1.3

SPAN NOTES:

CONSTRUCTION SPECIFICATIONS:
LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th EDITION, WITH 2008 & 2009 INTERIMS.

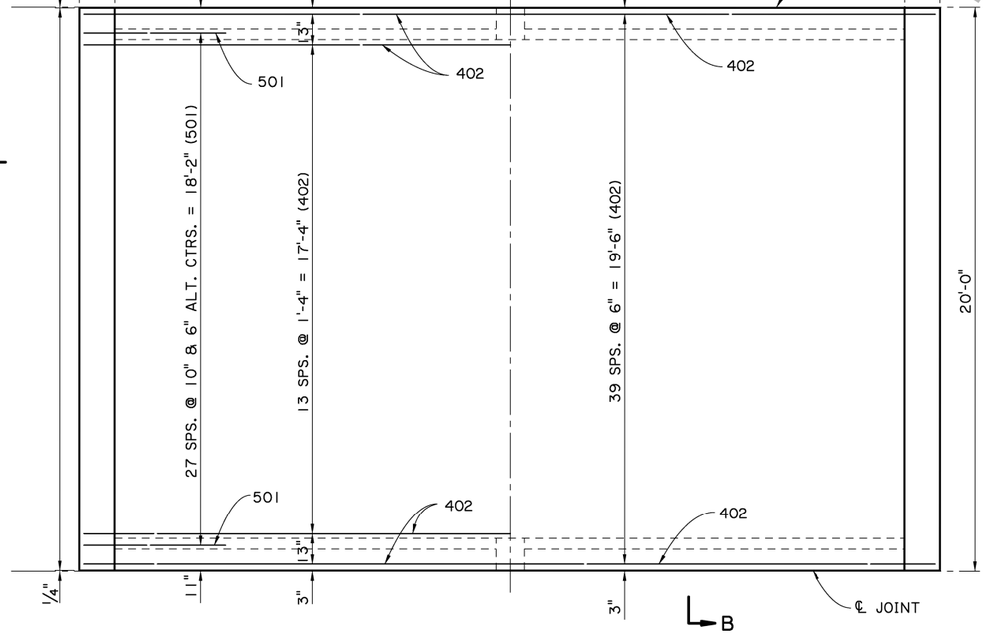
DESIGN LOADS:
THE BRIDGE DECK IS DESIGNED FOR A FUTURE WEARING COURSE OF 19 PSF. THE LIVE LOAD IS HL-93, AND LADV-11 (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).

STRUCTURAL CONCRETE:
ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A ¾" CHAMFER UNLESS OTHERWISE NOTED. ALL BARRIER RAIL SURFACES ARE TO RECEIVE A CLASS 3 SPECIAL FINISH.

REINFORCING STEEL:
ALL REINFORCING SHALL BE GRADE 60; DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS, DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED. ALL REINFORCING BARS SHALL BE PLACED TO PROVIDE A MINIMUM COVER OF ONE INCH FROM THE SURFACE OF THE DRAIN HOLES TO THE FACE OF THE BARS.

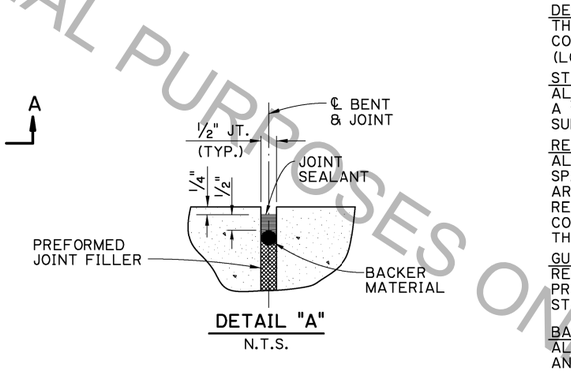
GUARD RAIL:
REFER TO THE GENERAL PLAN FOR GUARD RAIL REQUIREMENTS. PROVIDE HOLES FOR GUARD RAIL CONNECTIONS ACCORDING TO STANDARD PLAN BD.1.1.1.0.01(GR 200) ON ALL FOUR BRIDGE RAIL ENDS.

BASIS OF PAYMENT:
ALL MATERIAL SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS.

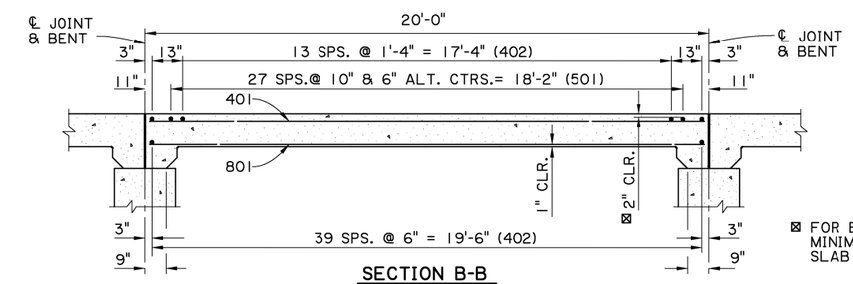


HALF SECTION
SHOWING SPACING OF TOP TRANS. REINF. STEEL
SCALE ⅜" = 1'-0"

HALF SECTION
SHOWING SPACING OF BOTTOM TRANS. REINF. STEEL
SCALE ⅜" = 1'-0"



DETAIL "A"
N.T.S.



SECTION B-B
SCALE ⅜" = 1'-0"

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
05/17/17

⊠ FOR BRIDGES IN DISTRICT 04 & 05, MINIMUM CONCRETE COVER IN TOP OF SLAB SHALL BE 2½".

SHEET NUMBER

DESIGNED	J. NAKHLEH
CHECKED	B. DELATTE
DETAILED	D. HYMEL
CHECKED	J. NAKHLEH
REVIEWED	05/17/17
SERIES #	2 OF 11

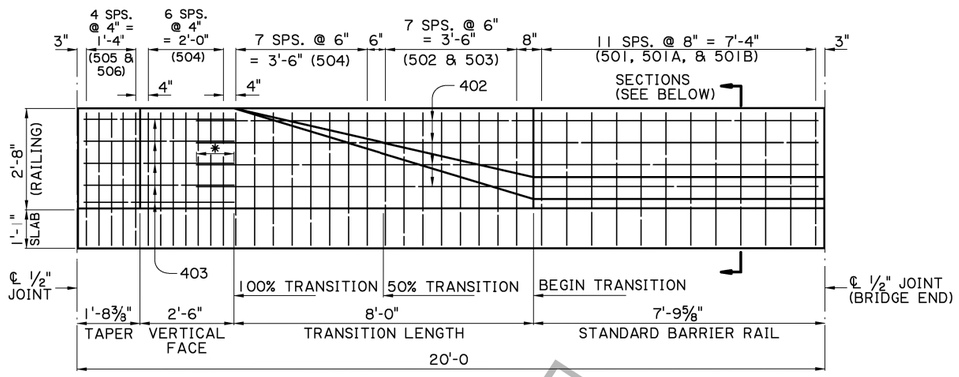
PARISH | CONTROL SECTION | STATE PROJECT

REVISION OR CHANGE ORDER DESCRIPTION | BY | NO. | DATE

SPAN (1 OF 2)
20'-0" CONCRETE SLAB SPAN
28'-0" CLEAR ROADWAY
90° CROSSING-TWO WAY TANGENT

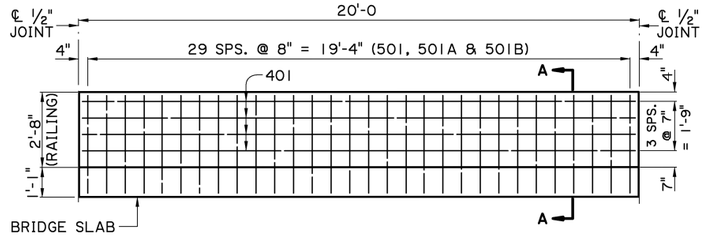
STANDARD DETAILS: PSS-90-28-20SL

DOTD BRIDGE DESIGN

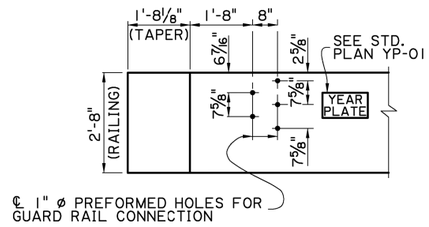


* 1'-0" (MIN.) SPLICE

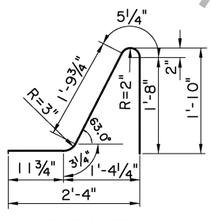
BARRIER RAILING TRANSITION ELEVATION
(SHOWING BARRIER RAILING AT END OF BRIDGE)
SCALE: ½" = 1'-0"



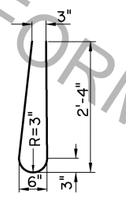
STANDARD BARRIER RAILING ELEVATION
(SHOWING BARRIER RAILING ALONG BRIDGE SLAB)
SCALE: ⅜" = 1'-0"



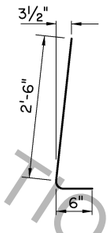
GUARD RAIL CONNECTION DETAIL
(FOR GUARD RAIL DETAILS, SEE STANDARD PLAN BD.1.1.1.0.01(GR-200)
SCALE: ½" = 1'-0"



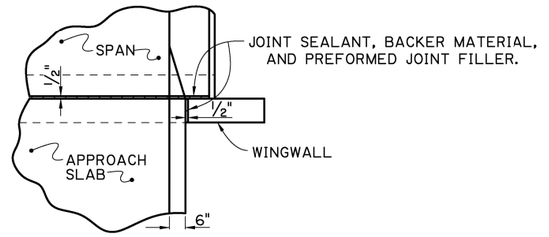
BARS 501A
(5'-2" LONG)



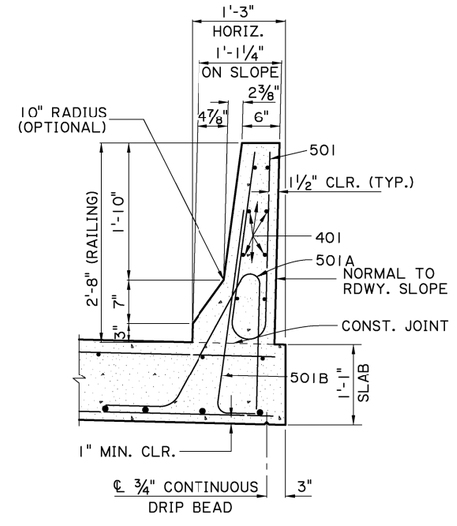
BARS 501
(4'-10" LONG)



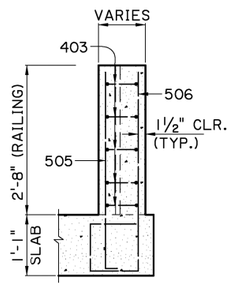
BARS 501B
(2½" ø PIN)
(3'-0" LONG)



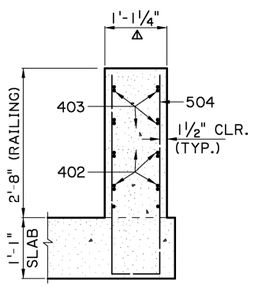
JOINT DETAIL
N.T.S.



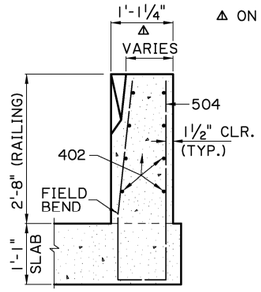
SECTION A-A
SCALE: 1" = 1'-0"



TAPER

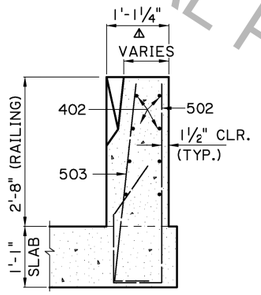


100 % TRANSITION

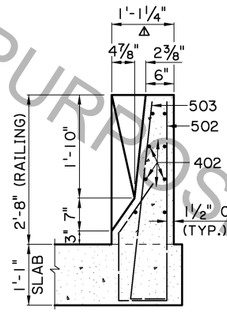


FROM 50% TO 100 % TRANSITION

⚠ ON SLOPE



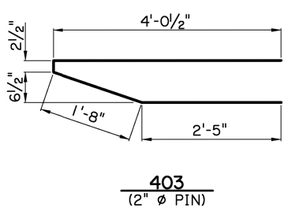
FROM BEGIN TO 50 % TRANSITION



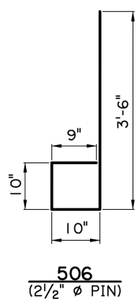
BEGIN TRANSITION

BARRIER RAILING TRANSITION SECTIONS
SCALE: ¾" = 1'-0"

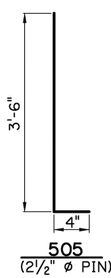
STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
05/17/17



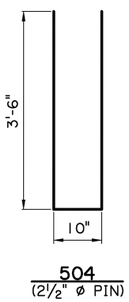
403
(2" ø PIN)



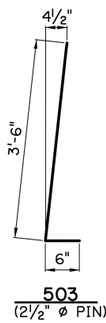
506
(2½" ø PIN)



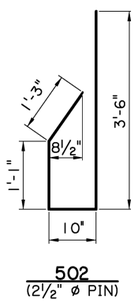
505
(2½" ø PIN)



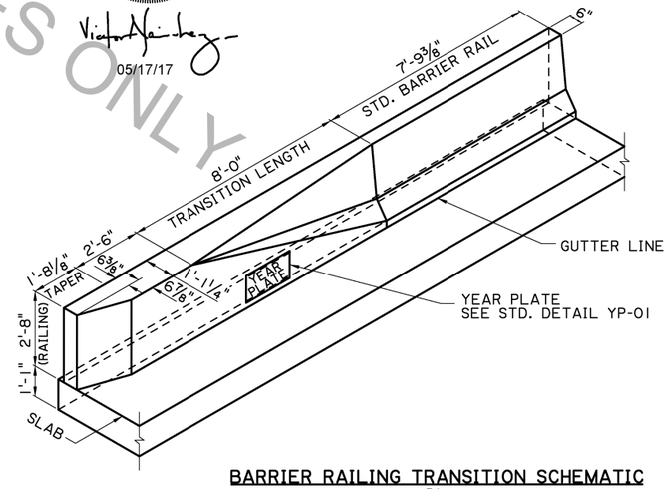
504
(2½" ø PIN)



503
(2½" ø PIN)



502
(2½" ø PIN)



BARRIER RAILING TRANSITION SCHEMATIC
SCALE: ⅜" = 1'-0"

SHEET NUMBER

PARISH | CONTROL SECTION | STATE PROJECT

DESIGNED B. DELATTE
CHECKED J. NAKHLEH
DETAILED D. HYMEL
CHECKED J. NAKHLEH
REVIEWED 05/17/17
SERIES # 3 OF 11

NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

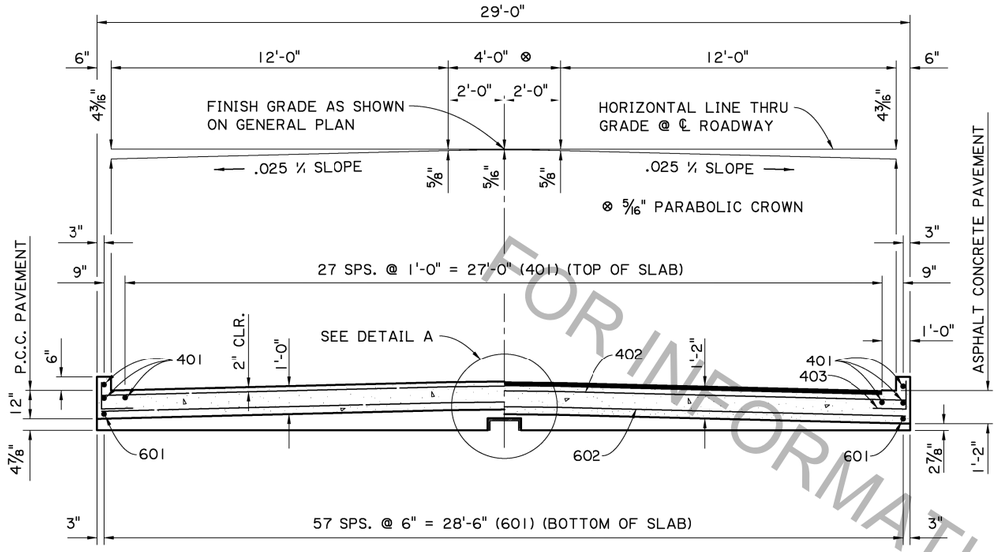
SPAN (2 OF 2)
20'-0" CONCRETE BARRIER
28'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

STANDARD SHEET NO. PSS-90-28-20SL

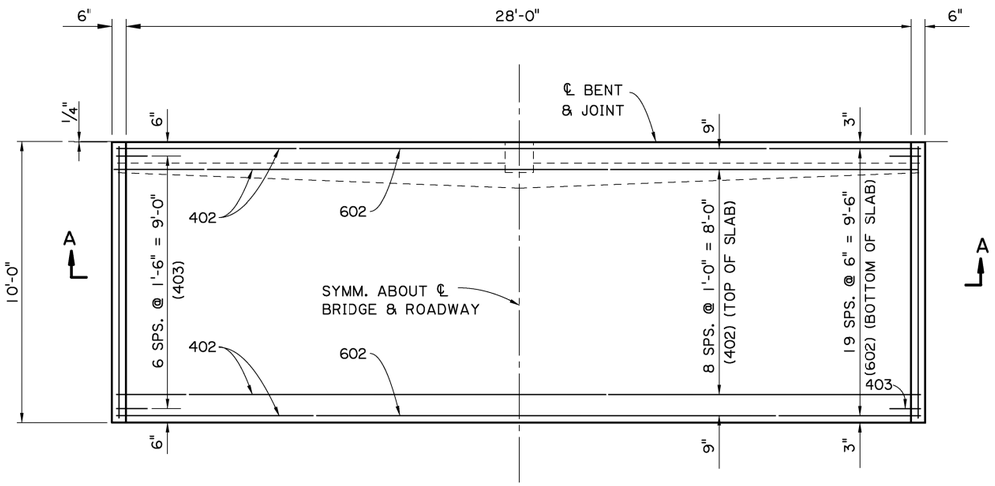
DOTD BRIDGE DESIGN

7/19/2017 09:0

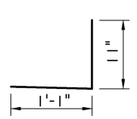
IP_PWP:d0767273\SS9028span2.dgn



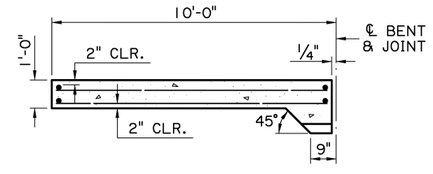
SECTION A-A
SCALE ⅜" = 1'-0"



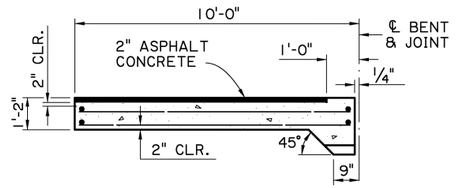
PLAN
SCALE ⅜" = 1'-0"



403
2" ø PIN

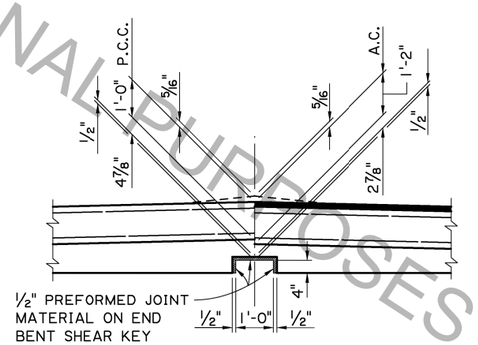


(FOR PORTLAND CEMENT CONCRETE ROADWAY PAVEMENT)

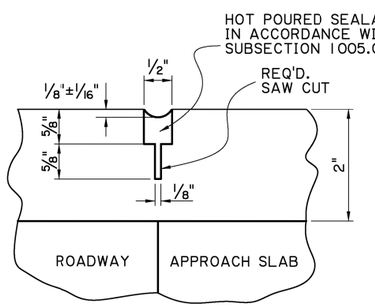


(FOR ASPHALT CONCRETE ROADWAY PAVEMENT)

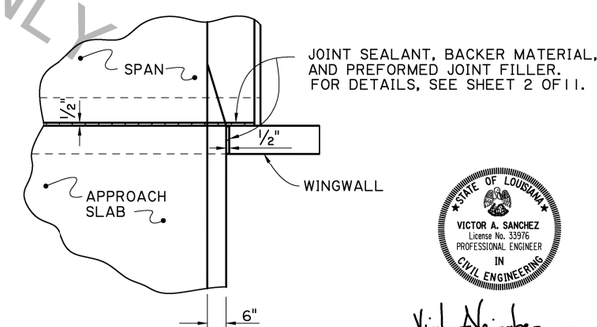
SECTION ALONG ℄ ROADWAY
SCALE: ⅜" = 1'-0"



DETAIL A
SCALE : ½" = 1'-0"



SAWING & SEALING JOINT DETAIL
N.T.S.



JOINT DETAIL
N.T.S.

ESTIMATED QUANTITIES (ONE SLAB)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
601	58	9'-7"	555'-10"	LONGIT. BOT. OF SLAB
602	20	28'-8"	573'-4"	TRANSV. BOT. OF SLAB
TOTAL NO. 6 BARS = 1,129'-2" = 1,696 LBS.				
401	32	9'-7"	306'-8"	LONGIT. TOP OF SLAB & CURB
402	11	28'-8"	315'-4"	TRANSV. TOP OF SLAB
403	14	2'-0"	28'-0"	DOWELS IN CURB
TOTAL NO. 4 BARS = 650'-0" = 434 LBS.				
⊙ TOTAL DEFORMED REINFORCING STEEL= 2,130 LBS.				
CONCRETE APPROACH SLAB = 32.22 SQ. YDS.				
⊙ ☑ ASPHALT CONCRETE = 3.0 TONS				
⊙ ☑ SAW CUT & SEAL = 27 LIN. FT.				

⊙ TO BE PAID FOR UNDER ITEM CONCRETE APPROACH SLABS.
☑ REQUIRED WHEN APPROACH SLAB IS ADJACENT TO ASPHALT CONCRETE PAVEMENT.

APPROACH SLAB NOTES:

CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 4th EDITION, WITH 2008 & 2009 INTERIMS.

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A ¾" CHAMFER, UNLESS OTHERWISE NOTED.

ASPHALT CONCRETE: TO BE THE SAME TYPE AS THE ASPHALT CONCRETE USED FOR THE APPROACH ROADWAY PAVEMENT OR OVERLAY.

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60. DIMENSIONS RELATING TO THE FABRICATION ARE OUT-TO-OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS.

BEDDING MATERIAL: FOR DETAILS OF BEDDING MATERIAL AND UNDERDRAINS. SEE STANDARD DETAIL BD.2.10.1.0.07.

SAWING & SEALING: THE ASPHALT CONCRETE SHALL BE SAW CUT AT THE END OF THE CONCRETE APPROACH SLAB THE ENTIRE ROADWAY WIDTH AND SEALED, COST TO BE INCLUDED WITH CONCRETE APPROACH SLAB.

BASIS OF PAYMENT: ALL MATERIAL SHALL BE PAID FOR UNDER 'CONCRETE APPROACH SLABS' ACCORDING TO THE SPECIFICATIONS, EXCEPT WHERE NOTED ON THIS SHEET.

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

05/17/17

SHEET NUMBER

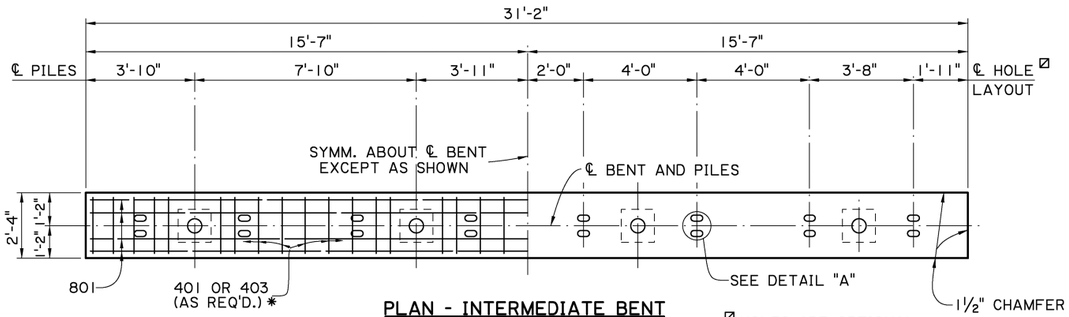
PARISH	CONTROL SECTION	STATE PROJECT

DESIGNED B. DELATTE
CHECKED J. NAKHLEH
DETAILED D. HYMEL
CHECKED J. NAKHLEH
REVIEWED 05/17/17
SERIES # 4 OF 11

NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

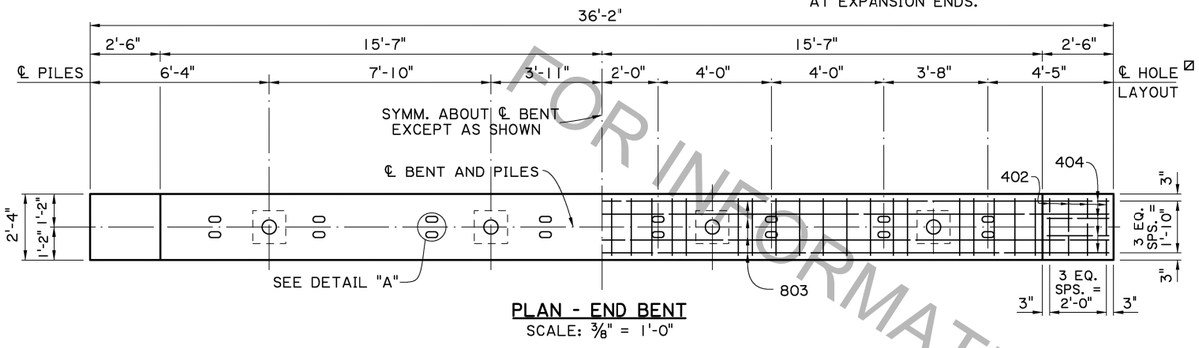
DOTD BRIDGE DESIGN STANDARD DETAIL PSS-90-28-20SL

APPROACH SLAB
10'-0" CONCRETE APPROACH SLAB
28'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

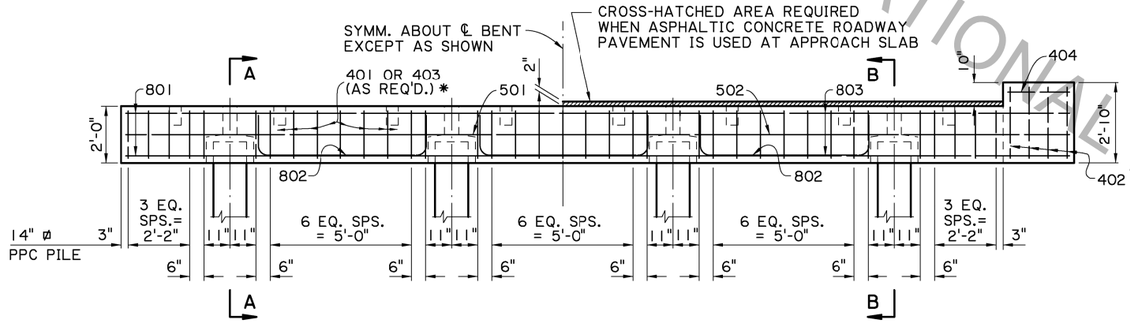


PLAN - INTERMEDIATE BENT
SCALE: ⅜" = 1'-0"

⊠ HOLES ARE OPTIONAL AT EXPANSION ENDS.

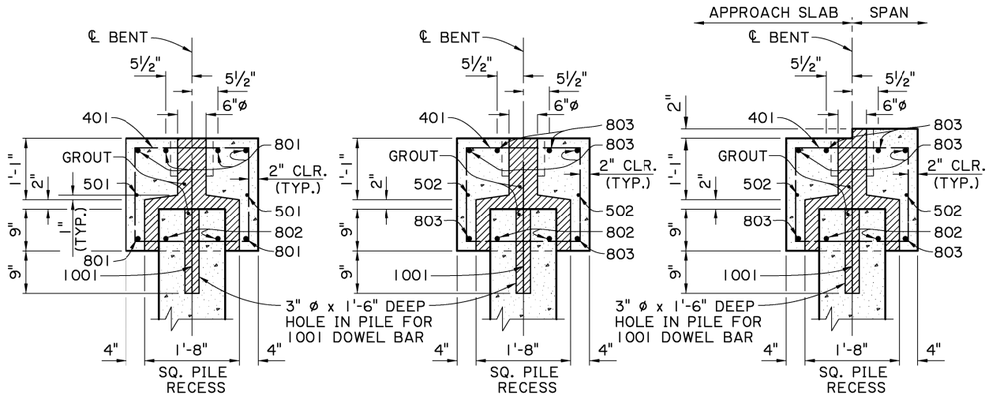


PLAN - END BENT
SCALE: ⅜" = 1'-0"



HALF ELEVATION - INTERMEDIATE BENT * USE 403 BARS AT HOLES ONLY
SCALE: ⅜" = 1'-0"

HALF ELEVATION - END BENT
SCALE: ⅜" = 1'-0"



SECTION A-A
SCALE: ¾" = 1'-0"

SECTION B-B
SCALE: ¾" = 1'-0"
(WHEN PORTLAND CEMENT CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)

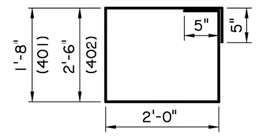
SECTION B-B
SCALE: ¾" = 1'-0"
(WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

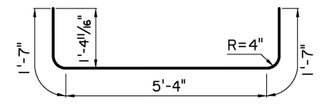
05/17/17

AS-DESIGNED RATING

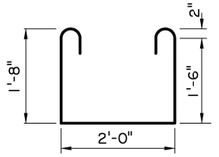
VEHICLE	RATING FACTOR	NOTES
HL-93 (INV)	1.684	——
HL-93 (OPR)	2.182	——
LADV-11 (INV)	1.295	MAGNIFICATION FACTOR = 1.3



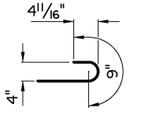
401 & 402
2" ø PIN



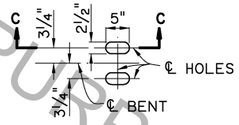
802
6" ø PIN



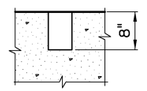
403
2" ø PIN



180° HOOK FOR 403 BARS
3" ø PIN



DETAIL A
SCALE: ¾" = 1'-0"



SECTION C-C
SCALE: ¾" = 1'-0"

ESTIMATED QUANTITIES (ONE INTER. BENT)

BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
1001	4	2'-4"	9'-4"	DOWELS IN PILES
TOTAL NO. 10 BARS =			9'-4" =	40 LBS.
801	6	30'-10"	185'-0"	LONGIT. IN CAP
802	6	8'-6"	51'-0"	LONGIT. IN CAP BTW. PILES
TOTAL NO. 8 BARS =			236'-0" =	630 LBS.
501	2	30'-10"	61'-8"	LONGIT. IN CAP
TOTAL NO. 5 BARS =			61'-8" =	64 LBS.
401	31	8'-2"	253'-2"	STIRRUPS IN CAP
403	6	6'-6"	39'-0"	STIRRUPS IN CAP
TOTAL NO. 4 BARS =			292'-2" =	195 LBS.
TOTAL DEFORMED REINFORCING STEEL =				929 LBS.
TOTAL CLASS P1 CONCRETE =				5.07 CU. YDS.
MAX. PILE LOAD: SERVICE DEAD LOAD =				19 TONS
SERVICE LIVE LOAD =				36 TONS
FACTORED TOTAL LOAD =				75 TONS
TOTAL GROUT FOR PILE RECESSES = 0.28 CU. YDS.				

ESTIMATED QUANTITIES (ONE END BENT)

BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
1001	4	2'-4"	9'-4"	DOWELS IN PILES
TOTAL NO. 10 BARS =			9'-4" =	40 LBS.
802	6	8'-6"	51'-0"	LONGIT. IN CAP BTW. PILES
803	6	35'-10"	215'-0"	LONGIT. IN CAP
TOTAL NO. 8 BARS =			266'-0" =	710 LBS.
502	2	35'-10"	71'-8"	LONGIT. IN CAP
TOTAL NO. 5 BARS =			71'-8" =	75 LBS.
401	31	8'-6"	253'-2"	STIRRUPS IN CAP
402	8	9'-10"	78'-8"	STIRRUPS IN WINGWALL
403	6	6'-6"	39'-0"	STIRRUPS IN CAP
404	8	2'-2"	17'-4"	LONGIT. IN WINGWALL
TOTAL NO. 4 BARS =			388'-2" =	259 LBS.
TOTAL DEFORMED REINFORCING STEEL =				1084 LBS.
⊗ TOTAL CLASS P1 CONCRETE =				6.29 CU. YDS.
MAX. PILE LOAD: SERVICE DEAD LOAD =				19 TONS
SERVICE LIVE LOAD =				36 TONS
FACTORED TOTAL LOAD =				75 TONS
TOTAL GROUT FOR PILE RECESSES = 0.28 CU. YDS.				

⊗ ADD 0.22 CU. YDS. OF CLASS P1 CONCRETE PER BENT WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB.

ALTERNATE BENT NOTES:

CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th EDITION, WITH 2008 & 2009 INTERIMS.
DESIGN LOAD: LIVE LOAD IS HL-93, AND LADV-11 (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).
STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS P1. STEEL SIDE FORMS AND STEEL OR CONCRETE BOTTOM FORMS SHALL BE USED FOR PRECAST COMPONENTS. EXPOSED EDGES SHALL HAVE A ¾" CHAMFER UNLESS OTHERWISE NOTED. ALL SURFACES SHALL RECEIVE A CLASS 1 ORDINARY SURFACE FINISH UPON REMOVAL OF THE FORMS. ALL EXPOSED FACES OF WINGWALLS AND ENDS OF CAPS SHALL RECEIVE A CLASS 3 SPECIAL SURFACE FINISH.
REINFORCING STEEL: ALL REINFORCING SHALL BE GRADE 60. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS, UNLESS OTHERWISE NOTED.
GROUT: THE GROUT SHALL BE AN APPROVED FLOWABLE NON-SHRINK GROUT LISTED ON AML. THE GROUT SHALL BE TESTED FOR ACCEPTANCE PRIOR TO USAGE. SURFACES SHALL BE THOROUGHLY SATURATED WITH WATER BY FLOODING THE VOID FOR APPROXIMATELY 5 MINUTES IMMEDIATELY BEFORE THE GROUT IS PLACED. ONLY POTABLE WATER SHALL BE USED FOR SATURATION AND MIXING PURPOSES.
PRECAST UNITS: THE PLANS FOR AN ONGOING OPERATION OF FABRICATING FACILITIES SHALL BE APPROVED BY THE DEPARTMENT. EACH UNIT SHALL HAVE THE FABRICATOR'S MARK AND UNIQUE NUMBER, MEETING THE APPROVAL OF THE ENGINEER, STAMPED OR SCRIBED IN THE PLASTIC CONCRETE. ALL UNITS SHALL BE HELD AT THE PLANT FOR A MINIMUM OF 10 DAYS AFTER CASTING. THE CONCRETE SHALL REACH A MINIMUM STRENGTH OF 3,000 PSI BEFORE HANDLING IS PERMITTED. THE LIFTING INSERTS SHALL BE 1" TYPE S INSERTS AS MANUFACTURED BY DAYTON-SUPERIOR CORPORATION OR AN APPROVED EQUAL. EACH INSERT SHALL HAVE A MINIMUM LOAD CAPACITY OF 10,000 POUNDS. FOUR INSERTS WITH 1" ø x 5" LONG COIL BOLTS SHALL BE PLACED IN THE TOP OF THE UNITS AND LOCATED AT A DISTANCE 21% OF ITS LENGTH (+/- 6") FROM EACH END AND 6" FROM THE EDGES. INSERT HOLES SHALL BE GROUT FILLED AFTER PLACEMENT OF THE UNIT. AT THE CONTRACTOR'S OPTION, A SLING OF SUFFICIENT CAPACITY MAY BE USED FOR LIFTING, PROVIDED THE SAME PICKUP LOCATIONS FROM THE ENDS ARE USED.
PRECAST CONCRETE PILES: PILES SHALL BE FABRICATED ACCORDING TO STANDARD DETAIL BD2.5.1.0.01(CS-216).CENTROID OF THE PILE AT CUTOFF ELEVATION SHALL NOT VARY FROM THE PLAN LOCATION BY MORE THAN 3" MEASURED EITHER PERPENDICULAR OR PARALLEL TO THE CENTERLINE OF BENT. IF THE CENTROID OF A PILE IS OUTSIDE THESE LIMITS BUT WITHIN THE ACCURACY OF DRIVING REQUIRED BY THE SPECIFICATIONS, A BENT CAP SHALL BE PROVIDED ACCORDING TO THE CAST-IN-PLACE ALTERNATE. EXTERIOR PILES ARE TO BE BATTERED OUTWARD A 1½ ON 12 IN THE LONGITUDINAL DIRECTION OF THE BENT, WHEN NOTED ON THE GENERAL PLAN.
BASIS OF PAYMENT: ALL MATERIALS SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS.

SHEET NUMBER

PARISH	CONTROL SECTION	STATE PROJECT

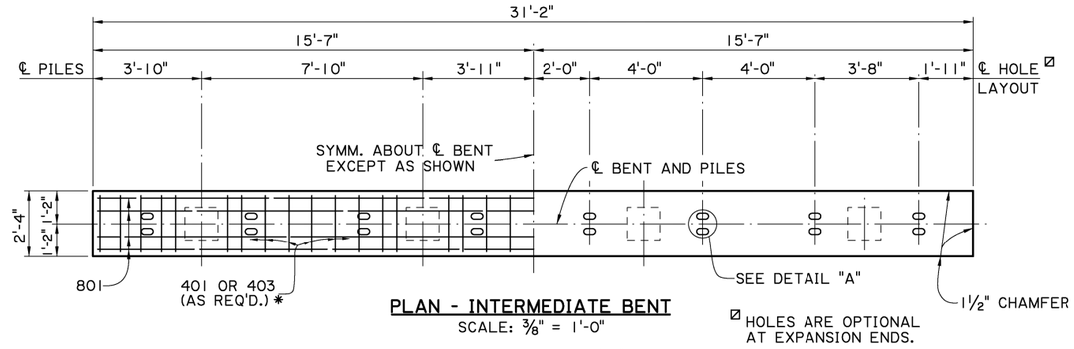
DESIGNED B. DELATTE	DETAILED D. HYMEL	REVIEWED 05/17/17
CHECKED J. NAKHLEH	CHECKED J. NAKHLEH	SERIES # 5 OF 11

NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

ALTERNATE BENTS
PRECAST CONCRETE BENT
28'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

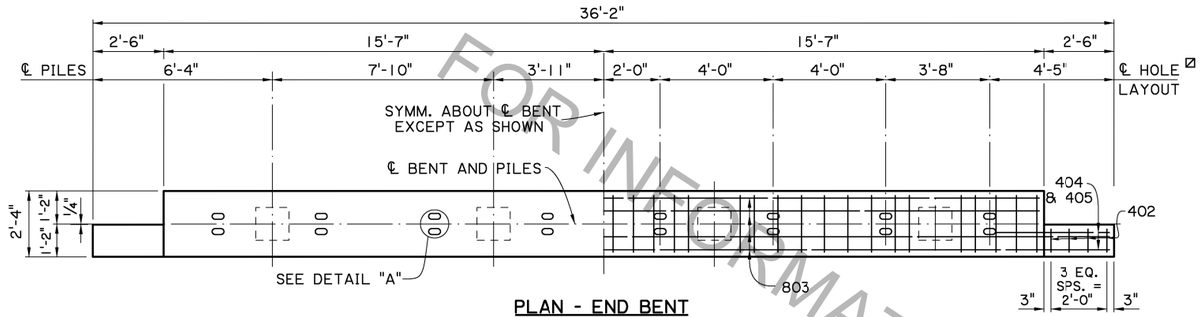
STANDARD SHEET NO. PSS-90-28-20SL

DOTD BRIDGE DESIGN

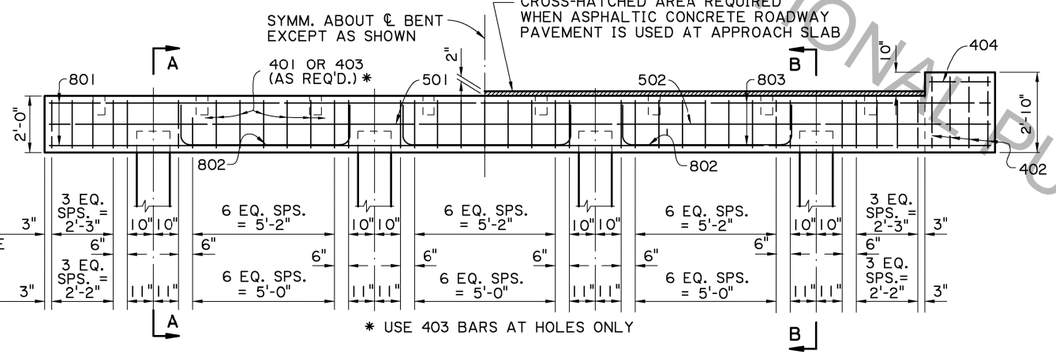


PLAN - INTERMEDIATE BENT
SCALE: ⅜" = 1'-0"

⊠ HOLES ARE OPTIONAL AT EXPANSION ENDS.

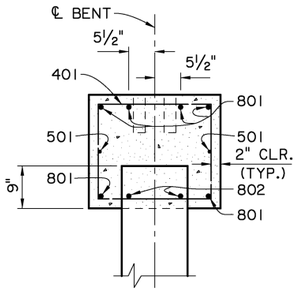


PLAN - END BENT
SCALE: ⅜" = 1'-0"

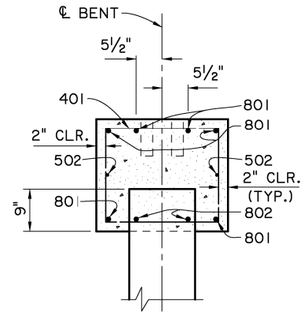


HALF ELEVATION - INTERMEDIATE BENT
SCALE: ⅜" = 1'-0"

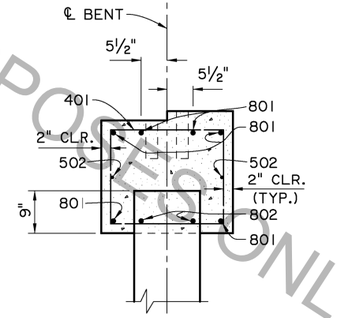
HALF ELEVATION - END BENT
SCALE: ⅜" = 1'-0"



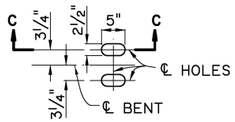
SECTION A-A
SCALE: ¾" = 1'-0"



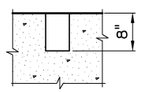
SECTION B-B
SCALE: ¾" = 1'-0"
(WHEN PORTLAND CEMENT CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)



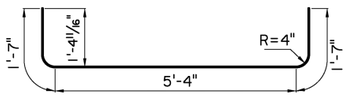
SECTION B-B
SCALE: ¾" = 1'-0"
(WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)



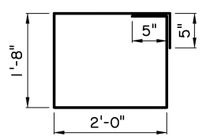
DETAIL A
SCALE: ¾" = 1'-0"



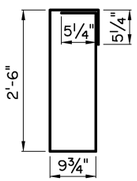
SECTION C-C
SCALE: ¾" = 1'-0"



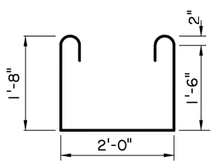
802
6" ø PIN



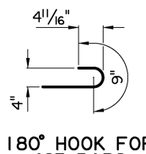
401
2" ø PIN



402
2" ø PIN



403
2" ø PIN



180° HOOK FOR 403 BARS
3" ø PIN

AS-DESIGNED RATING		
VEHICLE	RATING FACTOR	NOTES
HL-93 (INV)	1.649	——
HL-93 (OPR)	2.138	——
LADV-11 (INV)	1.268	MAGNIFICATION FACTOR = 1.3

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

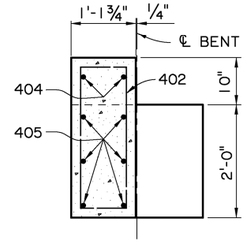
Victor A. Sanchez
05/17/17

ESTIMATED QUANTITIES (ONE INTER. BENT)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	6	30'-10"	185'-0"	LONGIT. IN CAP
802	6	8'-6"	51'-0"	LONGIT. IN CAP BTW. PILES
TOTAL NO. 8 BARS = 236'-0" = 630 LBS.				
501	2	30'-10"	61'-8"	LONGIT. IN CAP
TOTAL NO. 5 BARS = 61'-8" = 64 LBS.				
401	31	8'-2"	253'-2"	STIRRUPS IN CAP
403	6	6'-6"	39'-0"	STIRRUPS IN CAP
TOTAL NO. 4 BARS = 292'-2" = 195 LBS.				
TOTAL DEFORMED REINFORCING STEEL = 889 LBS.				
⊠ TOTAL CLASS A1 CONCRETE = 5.19 CU. YDS.				
MAX. PILE LOAD: SERVICE DEAD LOAD = 19 TONS SERVICE LIVE LOAD = 36 TONS FACTORED TOTAL LOAD = 75 TONS				

⊠ 16" ø PPC PILES USED FOR ESTIMATING PURPOSES ONLY. (ADD 0.04 CU. YDS. OF CLASS A1 CONCRETE PER BENT WHEN 14" ø PPC PILES ARE USED.)

ESTIMATED QUANTITIES (ONE END BENT)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	6	30'-10"	185'-0"	LONGIT. IN CAP
802	6	8'-6"	51'-0"	LONGIT. IN CAP BTW. PILES
TOTAL NO. 8 BARS = 236'-0" = 630 LBS.				
501	2	30'-10"	61'-8"	LONGIT. IN CAP
TOTAL NO. 5 BARS = 61'-8" = 64 LBS.				
401	31	8'-2"	253'-2"	STIRRUPS IN CAP
402	8	7'-6"	60'-0"	STIRRUPS IN WINGWALL
403	6	6'-6"	39'-0"	STIRRUPS IN CAP
404	4	2'-2"	8'-8"	LONGIT. IN WINGWALL
405	12	4'-0"	48'-0"	LONGIT. IN WINGWALL
TOTAL NO. 4 BARS = 408'-10" = 273 LBS.				
TOTAL DEFORMED REINFORCING STEEL = 967 LBS.				
⊗ TOTAL CLASS A1 CONCRETE = 5.79 CU. YDS.				
MAX. PILE LOAD: SERVICE DEAD LOAD = 19 TONS SERVICE LIVE LOAD = 36 TONS FACTORED TOTAL LOAD = 75 TONS				

⊠ 16" ø PPC PILES USED FOR ESTIMATING PURPOSES ONLY. (ADD 0.04 CU. YDS. OF CLASS A1 CONCRETE PER BENT WHEN 14" ø PPC PILES ARE USED.) ADD 0.22 CU. YDS. OF CLASS A1 CONCRETE PER BENT WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB.



END ELEVATION
SCALE: ¾" = 1'-0"

ALTERNATE BENT NOTES:

CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th EDITION, WITH 2008 & 2009 INTERIMS.

DESIGN LOAD: LIVE LOAD IS HL-93, AND LADV-11 (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A ¾" CHAMFER UNLESS OTHERWISE NOTED. ALL EXPOSED FACES OF WINGWALLS AND ENDS OF CAPS SHALL RECEIVE A SURFACE FINISH AS PER SUBSECTION 805.08 OF THE STANDARD SPECIFICATIONS, EXCEPT WHEN SPECIFIED ELSE-WHERE IN THE PLANS.

REINFORCING STEEL: ALL REINFORCING SHALL BE GRADE 60. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS, UNLESS OTHERWISE NOTED.

PRECAST CONCRETE PILES: FOR DETAILS OF PILES SEE STANDARD DETAIL BD.2.5.1.0.01(CS-216).EXTERIOR PILES ARE TO BATTERED OUTWARD AT 1½ ON 12 IN THE LONGITUDINAL DIRECTION OF THE BENT, WHEN NOTED ON THE GENERAL PLAN.

BASIS OF PAYMENT: ALL MATERIALS SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS.

SHEET NUMBER

PARISH | CONTROL SECTION | STATE PROJECT

DESIGNED B. DELATTE
CHECKED J. NAKHLEH
DETAILED D. HYMEL
CHECKED J. NAKHLEH
REVIEWED 05/17/17
SERIES # 6 OF 11

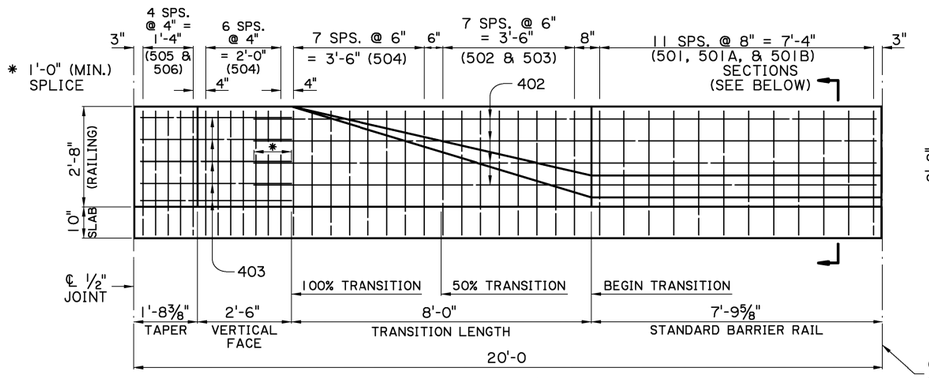
NO.	REVISION OR CHANGE ORDER DESCRIPTION	BY	DATE

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

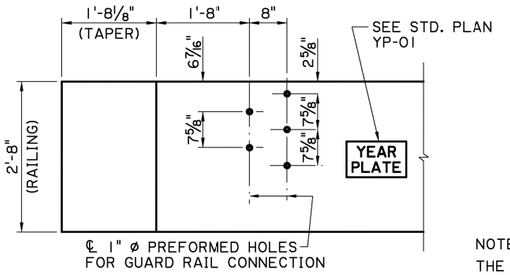
ALTERNATE BENTS
CAST-IN-PLACE CONCRETE BENT
28'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

STANDARD SHEET NO. PSS-90-28-20SL

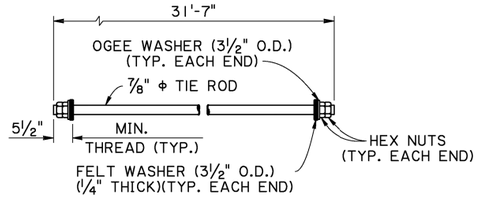
DOTD BRIDGE DESIGN



BARRIER RAILING TRANSITION ELEVATION
(SHOWING BARRIER RAILING AT END OF BRIDGE)
SCALE: ½" = 1'-0"

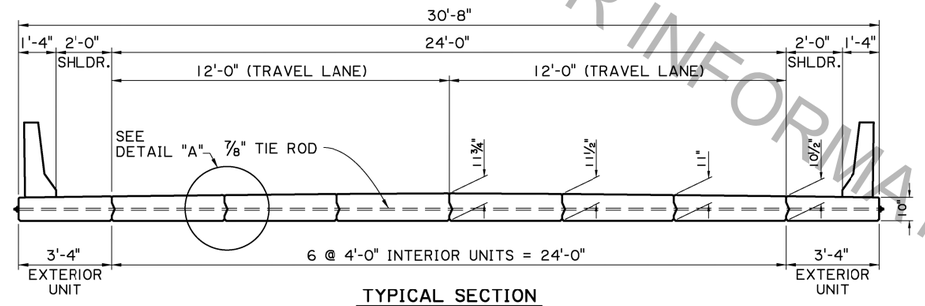


GUARD RAIL CONNECTION DETAIL
(FOR GUARD RAIL DETAILS, SEE STANDARD PLAN BD.1.1.1.0.01(GR-200)
SCALE : ¾" = 1'-0"

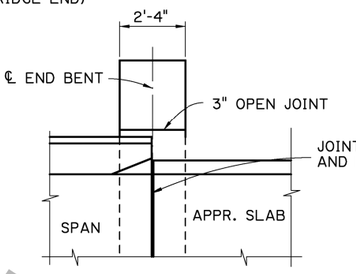


NOTE:
THE NUTS & WASHERS FOR THE TIE ROD SHALL BE ZINC COATED AND THE EXPOSED ENDS TO THE TIE RODS SHALL BE PAINTED WITH AN APPROVED COATING. AS A FINAL OPERATION THE CONTRACTOR SHALL BE REQUIRED TO TORQUE THE INSTALLED TIE ROD TO 170 FT. LBS. JUST PRIOR TO PAINTING. ALL EXPOSED ENDS SHALL BE PAINTED WITH AN APPROVED COATING AFTER STRESSING. ONE (1) MECHANICAL SPLICE MAY BE USED IN SPLICING THE ⅞" ø TIE ROD. THE SPLICE SHALL DEVELOP AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE TIE ROD IN TENSION. THE MECHANICAL SPLICE SHALL BE ZINC COATED OR PAINTED WITH AN APPROVED COLD GALVANIZING REPAIR COMPOUND FROM AML PRIOR TO PLACING THE TIE ROD IN THE STRUCTURE.

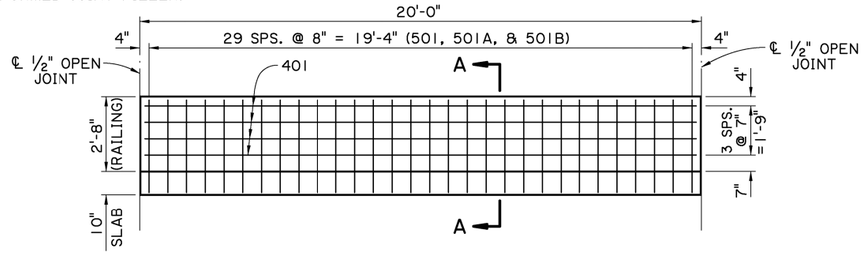
DETAILS OF TIE ROD



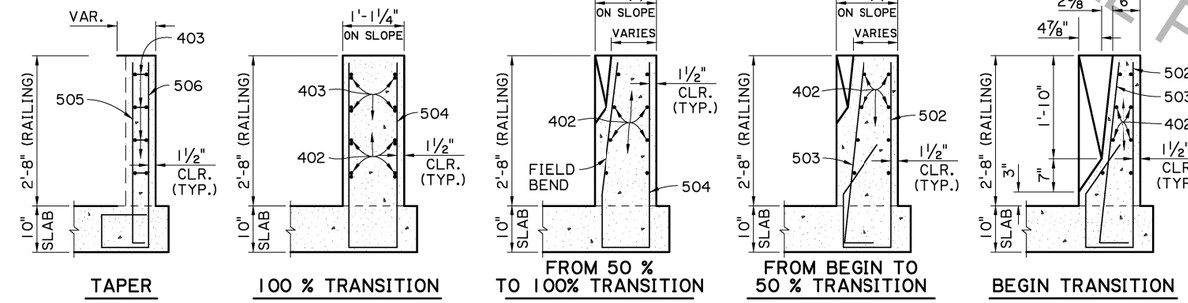
TYPICAL SECTION
SCALE : ⅜" = 1'-0"



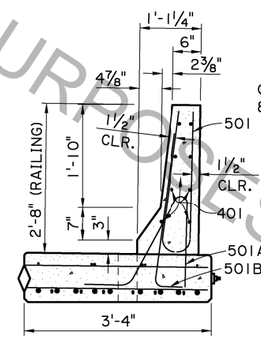
JOINT DETAIL
N.T.S.



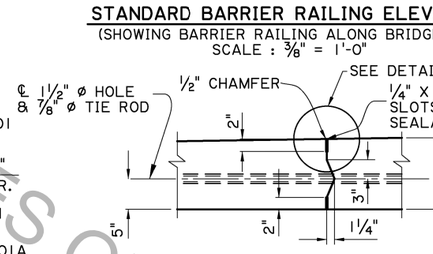
STANDARD BARRIER RAILING ELEVATION
(SHOWING BARRIER RAILING ALONG BRIDGE END)
SCALE : ⅜" = 1'-0"



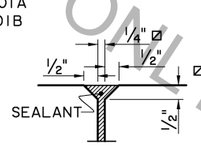
BARRIER RAILING TRANSITION SECTIONS
SCALE : ¾" = 1'-0"



SECTION A-A
SCALE : ¾" = 1'-0"

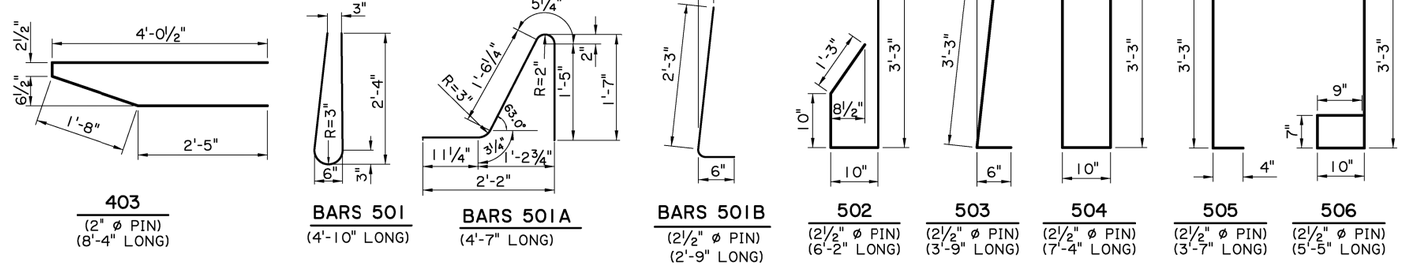


DETAIL "A"
SCALE: 1" = 1'-0"



DETAIL "B"
SCALE: 1" = 1'-0"

BARRIER RAILING TRANSITION SCHEMATIC
SCALE : ⅜" = 1'-0"



SHEET NUMBER

PARISH	CONTROL SECTION	STATE PROJECT
DESIGNED B. DELATTE	DETAILED D. HYMEL	REVIEWED 05/17/17
CHECKED J. NAKHLEH	CHECKED J. NAKHLEH	SERIES # 7 OF 11

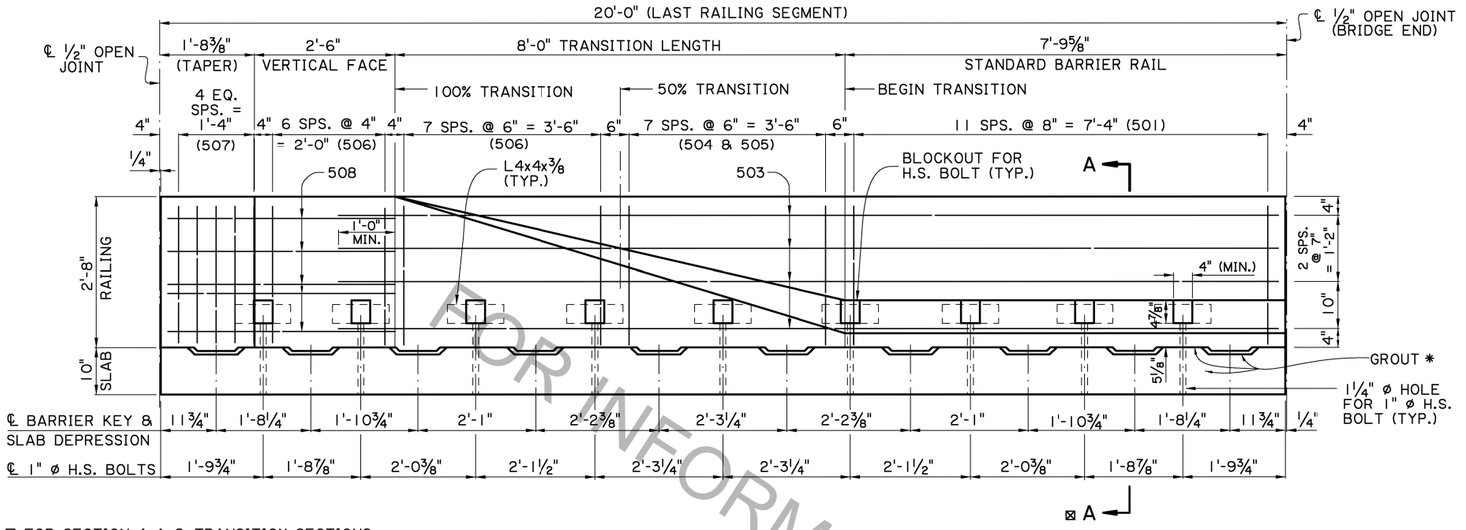
NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
05/17/17

ALTERNATE SPAN (1 OF 4)
20'-0" CONCRETE SLAB SPAN
28'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

STANDARD SHEET NO. PSS-90-28-20SL

DOTD BRIDGE DESIGN

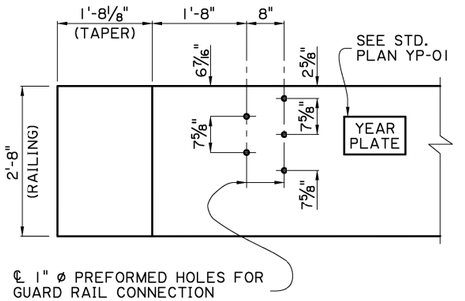


⊠ FOR SECTION A-A & TRANSITION SECTIONS SEE ALTERNATE SPAN (3 OF 4)

PRECAST BARRIER RAILING TRANSITION ELEVATION

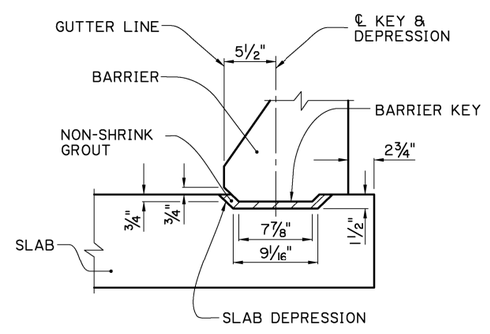
(SHOWING BARRIER RAILING AT END OF BRIDGE)
SCALE: ¾" = 1'-0"

* PLACE OR INJECT NON-SHRINK GROUT AS REQUIRED IN BETWEEN SLAB DEPRESSIONS TO FILL ALL VOIDS AND GAPS FOR FULL EVEN BEARING OF THE BARRIER ON THE SLAB. SEE NOTE 3, SHEET 9 OF 11.



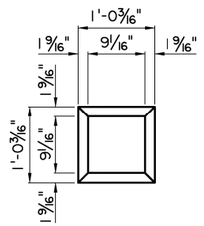
GUARD RAIL CONNECTION DETAIL

(FOR GUARD RAIL DETAILS, SEE STANDARD PLAN BD.1.1.1.0.01(GR-200)
SCALE: ¾" = 1'-0"



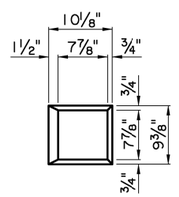
ELEVATION

SCALE: 1½" = 1'-0"



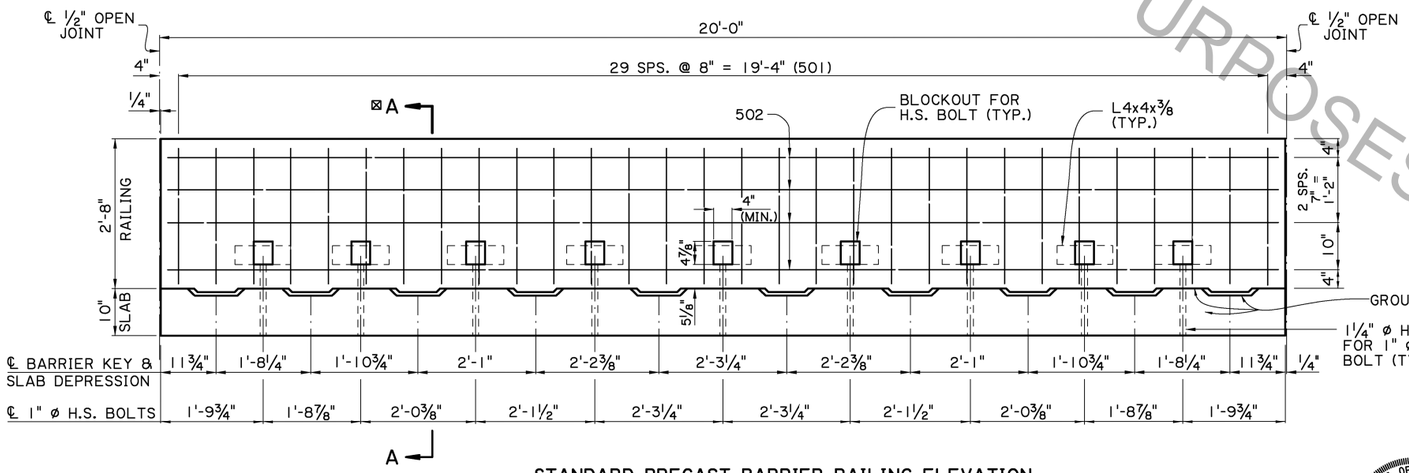
PLAN-DEPRESSION

SCALE: 1" = 1'-0"



PLAN-KEY

SCALE: 1" = 1'-0"



STANDARD PRECAST BARRIER RAILING ELEVATION

(SHOWING BARRIER RAILING ALONG BRIDGE SLAB)
SCALE: ¾" = 1'-0"

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

05/17/17

BARRIER KEY AND PANEL DEPRESSION DETAILS

SHEET NUMBER

PARISH	CONTROL SECTION	STATE PROJECT

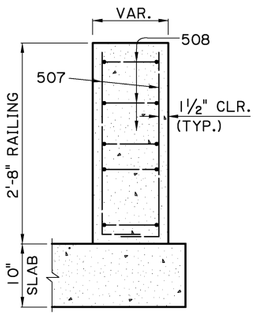
DESIGNED B. DELATTE
CHECKED J. NAKHLEH
DETAILED D. HYMEL
CHECKED J. NAKHLEH
REVIEWED 05/17/17
SERIES # 8 OF 11

NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

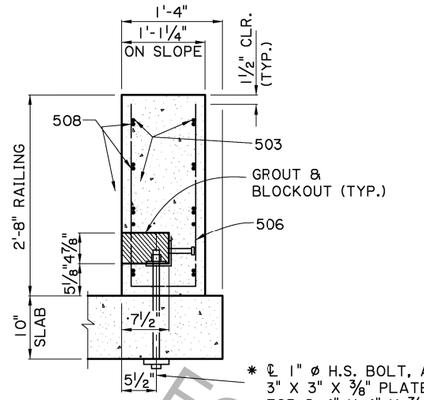
ALTERNATE SPAN (2 OF 4)
20'-0" PRECAST CONC. BARRIER
28'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

STANDARD SHEET NO. PSS-90-28-20SL

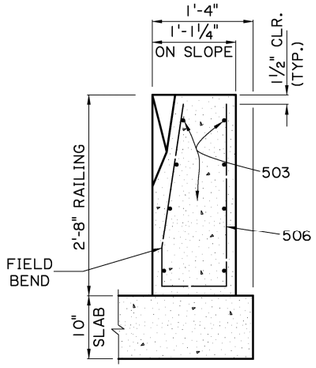
DOTD BRIDGE DESIGN



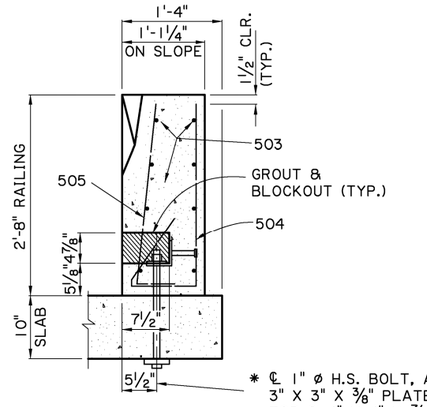
TAPER



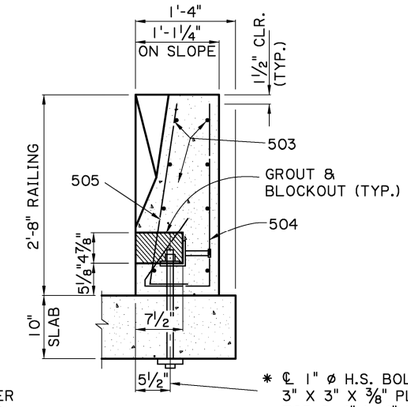
100% TRANSITION



50% TRANSITION



50% TRANSITION

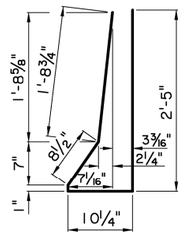


BEGIN TRANSITION

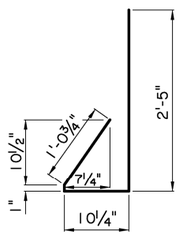
BARRIER RAILING TRANSITION SECTIONS

SCALE: 1" = 1'-0"

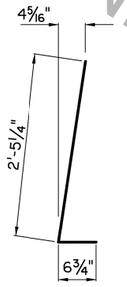
* 1" ø THREADED STUD OF EQUAL STRENGTH, WITH 2 NUTS & 2 WASHERS, MAY BE USED IN LIEU OF H.S. BOLTS.



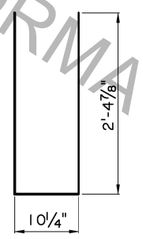
501
(2½" ø PIN)



504
(2½" ø PIN)

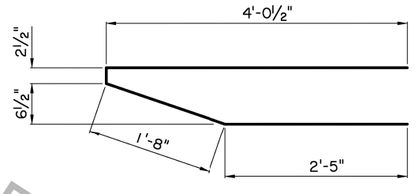


505
(2½" ø PIN)



506
(2½" ø PIN)

507
(2½" ø PIN)



508
(2½" ø PIN)

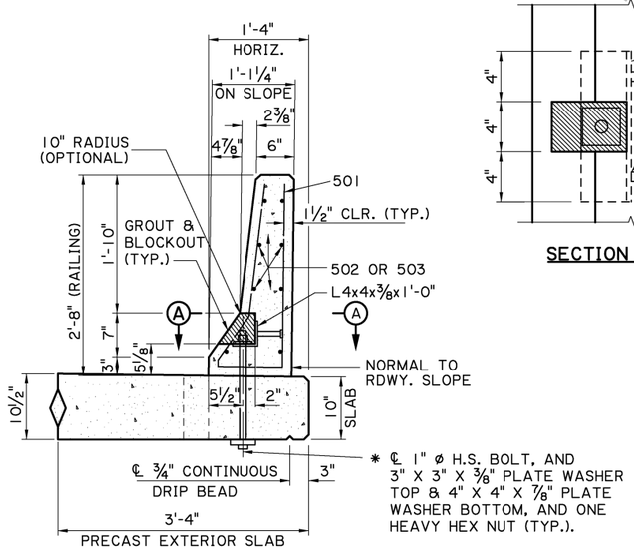
NOTES:

1) ALL BARRIER RAIL SURFACES ARE TO RECEIVE A CLASS 3 SPECIAL FINISH.

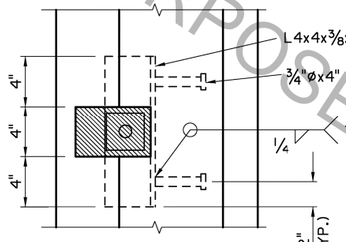
2) ALL SURFACES OF THE BLOCKOUTS EXCEPT THE BOTTOM MAY BE TAPERED AND ALL CORNERS MAY BE ROUNDED TO A RADIUS TO ALLOW FOR EASY REMOVAL OF PLUGS OR FORMS. AFTER PLACING AND TIGHTENING THE ANCHOR BOLTS, THE BLOCKOUTS SHALL BE FILLED WITH AN APPROVED NON-SHRINK GROUT FROM AML AND TROWELED TO THE REQUIRED FINISH AND TO THE SATISFACTION OF THE ENGINEER.

3) AFTER BARRIER IS PLACED AND ALIGNED, ALL GAPS UNDER BARRIER AND TOP OF SLAB SHALL BE FILLED WITH NON-SHRINK GROUT FROM AML AND ALLOWED TO SET PRIOR TO TIGHTENING OF BOLTS. IT IS IMPORTANT TO FILL ALL VOIDS AND GAPS UNDER THE BARRIER TO ENSURE EVEN BEARING ON DECK WHEN THE ANCHOR BOLTS ARE LOADED.

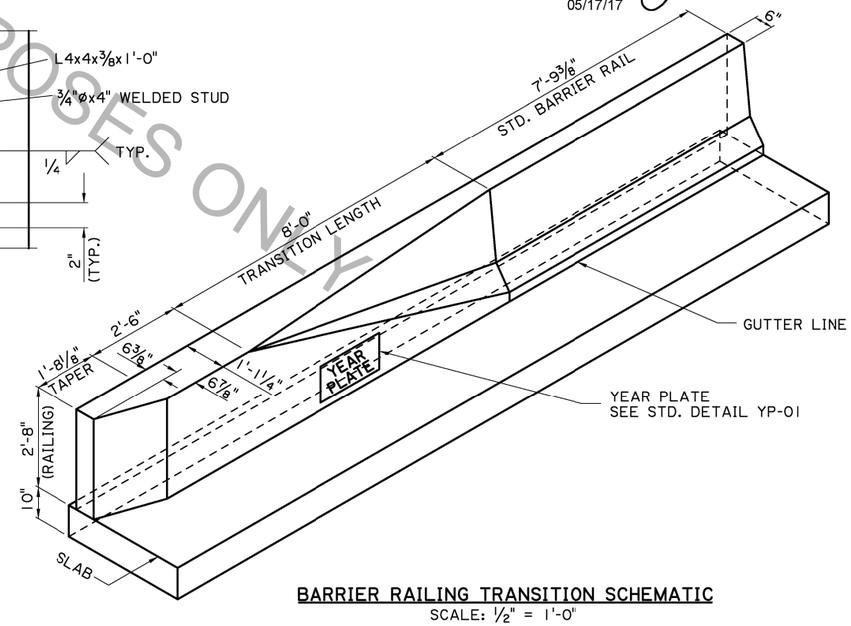
4) ALL 1" ø BOLTS SHALL BE HIGH STRENGTH A325 OR APPROVED EQUAL. BOLT, NUT & WASHER TO BE GALVANIZED AS PER ASTM A-153. BOLTS SHALL BE TENSIONED TO 36 KIPS, OR APPROXIMATELY 540 FOOT-LB. OF TORQUE (LUBRICATED CONNECTION).



SECTION A-A
SCALE: 1" = 1'-0"



SECTION A-A



BARRIER RAILING TRANSITION SCHEMATIC
SCALE: ½" = 1'-0"

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

05/17/17

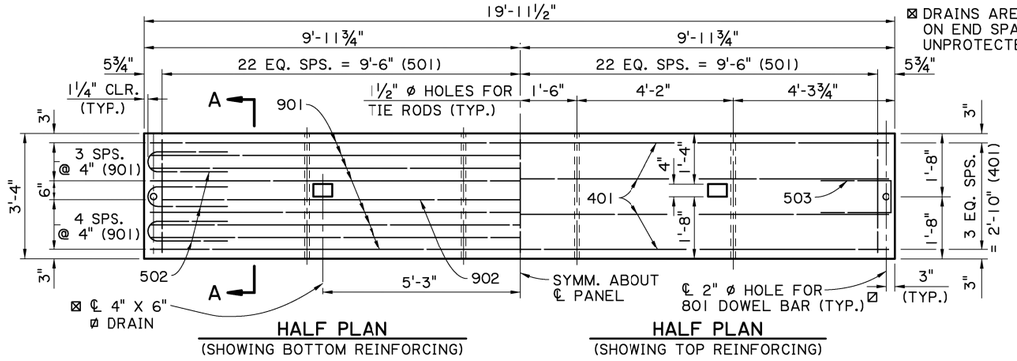
SHEET NUMBER			
PARISH	CONTROL SECTION	STATE PROJECT	
DESIGNED B. DELATTE CHECKED J. NAKHLEH	DETAILED D. HYMEL CHECKED J. NAKHLEH	REVIEWED 05/17/17 SERIES # 9 OF 11	

NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

ALTERNATE SPAN (3 OF 4)
20'-0" PRECAST CONC. BARRIER
28'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

STANDARD DETAIL PSS-90-28-20SL

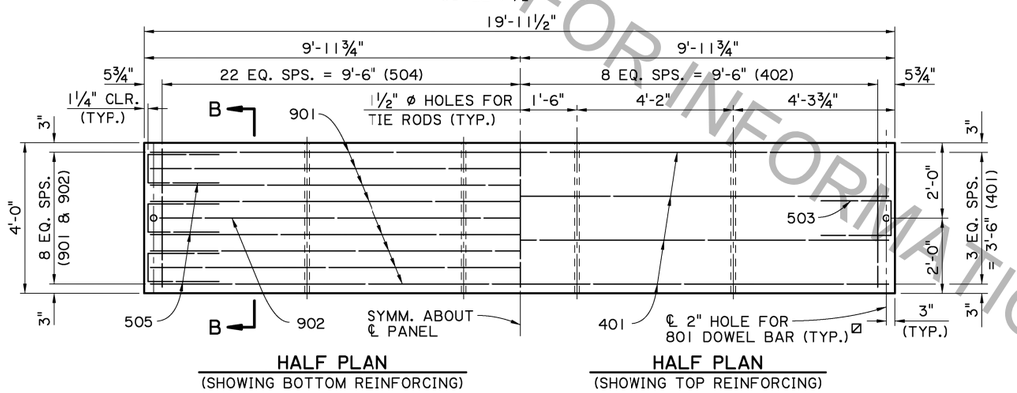
DOTD BRIDGE DESIGN



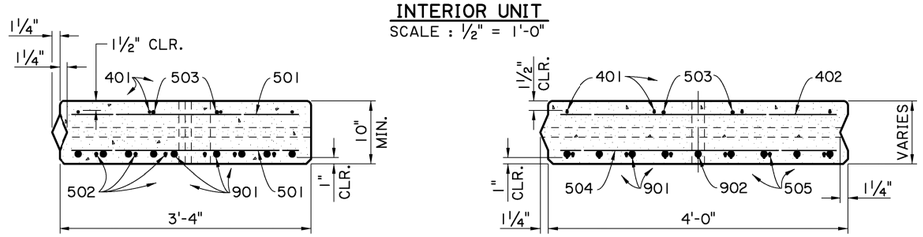
⊠ DRAINS ARE NOT REQUIRED ON END SPANS OVER UNPROTECTED SLOPES.

EXTERIOR UNIT
SCALE : ½" = 1'-0"

⊡ HOLES ARE OPTIONAL AT EXPANSION ENDS.



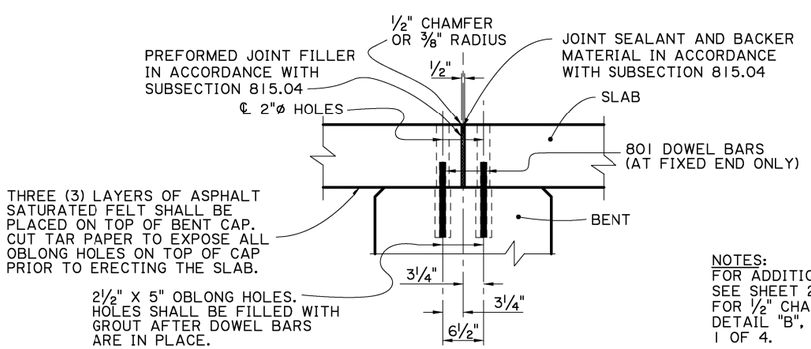
INTERIOR UNIT
SCALE : ½" = 1'-0"



SECTION A-A
EXTERIOR UNIT
SCALE : 1" = 1'-0"

NOTE:
FOR EACH SPAN. ONE EXTERIOR UNIT WILL HAVE A TONGUE AND ONE WILL HAVE A GROOVE.

SECTION B-B
INTERIOR UNIT
SCALE : 1" = 1'-0"



TYPICAL JOINT DETAIL
SCALE : 1" = 1'-0"

NOTES:
FOR ADDITIONAL JOINT DETAILS SEE SHEET 2 OF 11.
FOR ½" CHAMFER DETAIL, SEE DETAIL "B", ALTERNATE SPAN 1 OF 4.

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

05/17/17

ALTERNATE SPAN NOTES:

CONSTRUCTION SPECIFICATIONS : LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS : AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th EDITION, WITH 2008 & 2009 INTERIMS.

DESIGN LOAD : THE BRIDGE DECK IS DESIGNED FOR A FUTURE WEARING COURSE OF 19 PSF. THE LIVE LOAD IS HL-93, AND LADV-11 (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).

STRUCTURAL CONCRETE : ALL CONCRETE SHALL BE CLASS P1. THE BRIDGE RAIL CONCRETE SHALL BE CLASS A1 IF RAIL IS CAST IN PLACE. STEEL SIDE FORMS AND STEEL OR CONCRETE BOTTOM FORMS SHALL BE USED FOR PRECAST COMPONENTS. EXPOSED EDGES SHALL HAVE A ¾" CHAMFER, UNLESS OTHERWISE NOTED. ALL SURFACES SHALL RECEIVE A CLASS 1 ORDINARY SURFACE FINISH UPON REMOVAL OF THE FORMS. THE FINAL FINISH SHALL BE A TINE FINISH IN ACCORDANCE WITH SUB-SECTION 805.08.5.3 OF THE LOUISIANA STANDARD SPECIFICATIONS.

REINFORCING STEEL : ALL REINFORCING STEEL SHALL BE GRADE 60. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS, UNLESS OTHERWISE NOTED. ALL REINFORCING BARS SHALL BE PLACED TO PROVIDE A MINIMUMUM COVER OF 1" FROM THE DRAIN HOLES. REINFORCING STEEL MAY BE TACK WELDED FOR A DISTANCE OF NOT MORE THAN 4'-0" FROM EACH END OF UNIT. NO OTHER WELDING SHALL BE PERMITTED.

MISCELLANEOUS STEEL : HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM DESIGNATION A-325. PRESTRESSING STRANDS SHALL CONFORM TO ASTM DESIGNATION A-416, GRADE 270. PLATES, TIE RODS, AND DRIFT BOLTS SHALL CONFORM TO ASTM DESIGNATION A709, GRADE 36. STEEL SPECIFIED TO BE ZINC COATED SHALL BE IN CONFORMANCE WITH ASTM DESIGNATION A-123.

GROUT : THE GROUT SHALL BE AN APPROVED FLOWABLE NON-SHRINK GROUT LISTED ON AML. THE GROUT SHALL BE TESTED FOR ACCEPTANCE PRIOR TO USAGE. THE GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI PRIOR TO LOADING SLABS. SURFACES SHALL BE THOROUGHLY SATURATED WITH WATER BY FLOODING THE HOLES FOR APPROXIMATELY FIVE (5) MINUTES IMMEDIATELY BEFORE THE GROUT IS PLACED. ONLY POTABLE WATER SHALL BE USED FOR SATURATION AND MIXING PURPOSES.

PATCHING MATERIAL : THE PATCHING MATERIAL SHALL BE AN APPROVED PATCHING MATERIAL FOR PRECAST OR PRESTREESED CONCRETE PRODUCTS LISTED ON AML. SURFACE PREPARATION, MIXING AND PLACMENT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS. ONLY POTABLE WATER SHALL BE USED FOR SATURATION AND MIXING PURPOSES.

PRECAST UNITS : THE PLANS FOR AN ONGOING OPERATION OF FABRICATION FACILITIES SHALL BE APPROVED BY THE DEPARTMENT. EACH UNIT SHALL HAVE "LIVE LOAD HL-93 & LADV-11", THE FABRICATOR'S MARK, AND UNIQUE NUMBER, MEETING THE APPROVAL OF THE ENGINEER STAMPED OR INSCRIBED IN THE PLASTIC CONCRETE. PRECAST UNITS MAY BE CAST WITH OR WITHOUT CAMBER. IF CAMBER IS PROVIDED IT SHALL NOT EXCEED ¼" AT THE CENTERLINE OF SPAN. ALL UNITS SHALL BE HELD AT THE PLANT FOR A MINIMUM OF TEN(10) DAYS AFTER CASTING. THE CONCRETE SHALL REACH A MINIMUM STRENGTH OF 3,000 PSI BEFORE HANDLING IS PERMITTED. THE LIFTING INSERTS SHALL BE 1", TYPE S INSERTS AS MANUFACTURED BY DAYTON-SUPERIOR CORPORATION OR AN APPROVED EQUAL. EACH INSERT SHALL HAVE A MINIMUM LOAD CAPACITY OF 10,000 POUNDS . FOUR(4) INSERTS WITH 1" ø X 5" LONG COIL BOLTS SHALL BE PLACED IN THE TOP OF THE UNIT AND LOCATED 1'-3" FROM ITS ENDS AND 1'-0" FROM ITS EDGES. INSERT HOLES SHALL BE GROUT FILLED AFTER PLACEMENT OF UNIT. AT THE CONTRACTOR'S OPTION A SLING OF SUFFICIENT CAPACITY MAY BE USED FOR LIFTING, PROVIDED THE SAME PICKUP LOCATION FROM THE ENDS ARE USED. FABRICATION TOLERANCES SHALL BE AS FOLLOWS:

UNIT DEPTH	± 3/16"
UNIT LENGTH	+ 1/8" AND -1/2"
OVERALL SPAN WIDTH	± 2"

ALL PRECAST UNITS IN EACH BRIDGE SPAN SHALL BE MATCH CAST IN THE SAME CASTING BED TO ENSURE A PROPER FIT DURING INSTALLATION.

GUARDRAIL : REFER TO GENERAL PLAN FOR GUARDRAIL REQUIREMENTS. PROVIDE HOLES FOR GUARDRAIL CONNECTIONS ACCORDING TO STANDARD PLAN BD.1.1.1.0.01(GR 200) ON ALL FOUR(4) BRIDGE ENDS.

BASIS OF PAYMENT : ALL MATERIALS SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS.

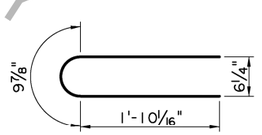
ESTIMATED QUANTITIES (ONE EXTERIOR UNIT)

BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
901	8	19'-9"	158'-0"	LONGIT. BOT. OF SLAB
902	1	19'-1"	19'-1"	LONGIT. BOT. OF SLAB
TOTAL NO. 9 BARS = 177'-1" = 602 LBS.				
801	1	1'-0"	1'-0"	DOWELS
TOTAL NO. 8 BARS = 1'-0" = 3 LBS.				
501	90	3'-0"	270'-0"	TRANS. TOP & BOT. OF SLAB
502	6	4'-6"	27'-0"	BOT. END OF SLAB
503	2	4'-8"	9'-4"	TOP END OF SLAB
TOTAL NO. 5 BARS = 306'-4" = 320 LBS.				
401	4	19'-9"	79'-0"	LONGIT. TOP OF SLAB
TOTAL NO. 4 BARS = 79'-0" = 53 LBS.				
DEFORMED REINFORCING STEEL = 977 LBS.				
⊙ CLASS P1 CONCRETE = 2.05 CU. YDS.				
CONCRETE RAILING (PER SPAN) = 40.00 LIN. FT.				

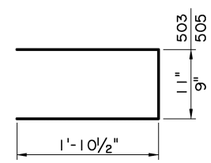
ESTIMATED QUANTITIES (ONE INTERIOR UNIT)

BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
901	8	19'-9"	158'-0"	LONGIT. BOT. OF SLAB
902	1	19'-1"	19'-1"	LONGIT. BOT. OF SLAB
TOTAL NO. 9 BARS = 177'-1" = 602 LBS.				
801	1	1'-0"	1'-0"	DOWELS
TOTAL NO. 8 BARS = 1'-0" = 3 LBS.				
503	2	4'-8"	9'-4"	TOP END OF SLAB
504	44	3'-8"	161'-4"	TRANS. BOT. OF SLAB
505	6	4'-6"	27'-0"	BOT. END OF SLAB
TOTAL NO. 5 BARS = 197'-8" = 206 LBS.				
401	4	19'-9"	79'-0"	LONGIT. TOP OF SLAB
402	17	3'-8"	62'-4"	TRANS. TOP OF SLAB
TOTAL NO. 4 BARS = 141'-4" = 94 LBS.				
DEFORMED REINFORCING STEEL = 905 LBS.				
⊙ CLASS P1 CONCRETE = 2.46 CU. YDS.				

⊙ BASED ON A 10" SLAB THICKNESS



502
2½"ø PIN



503 & 505
2½"ø PIN

AS-DESIGNED RATING

VEHICLE	RATING FACTOR	NOTES
HL-93 (INV)	1.335	——
HL-93 (OPR)	1.731	——
LADV-11 (INV)	1.027	MAGNIFICATION FACTOR = 1.3

SHEET NUMBER

PARISH | CONTROL SECTION | STATE PROJECT

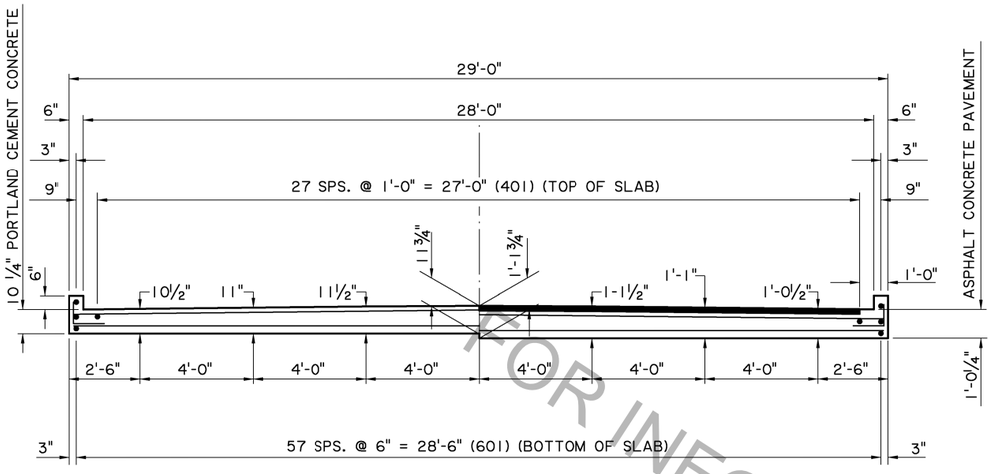
DESIGNED B. DELATTE
CHECKED J. NAKHLEH
DETAILED D. HYMEL
CHECKED J. NAKHLEH
REVIEWED 05/17/17
SERIES # 10 OF 11

NO. | DATE | REVISION OR CHANGE ORDER DESCRIPTION | BY

ALTERNATE SPAN (4 OF 4)
20'-0" PRECAST CONC. SLAB UNIT
28'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

STANDARD SHEET NO. PSS-90-28-20SL

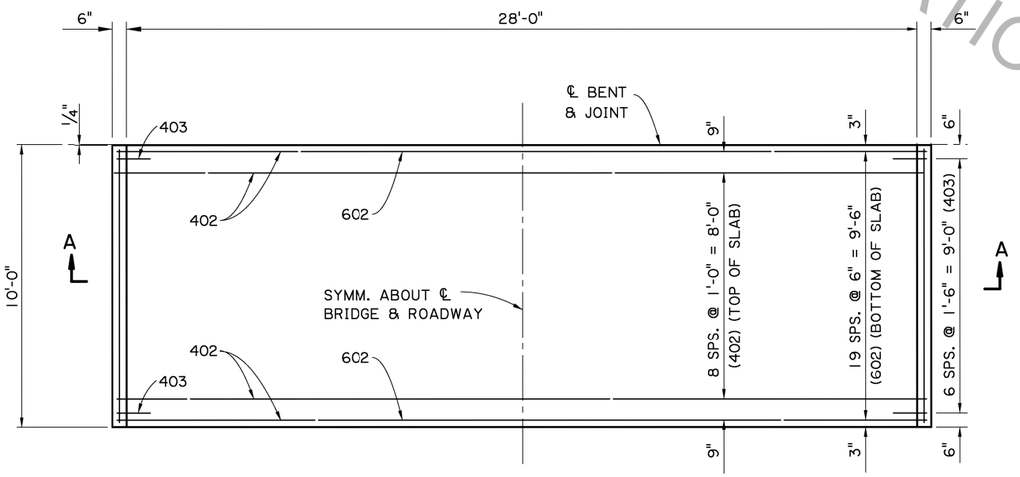
DOTD BRIDGE DESIGN



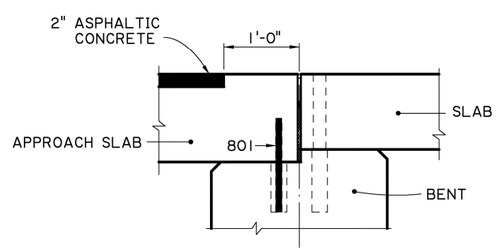
(HALF SECTION)
(PORTLAND CEMENT CONCRETE)

(HALF SECTION)
(ASPHALT CONCRETE PAVEMENT)

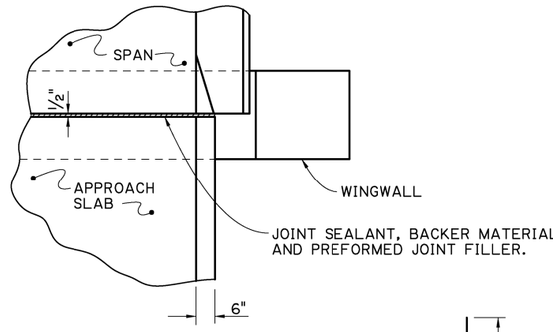
SECTION A-A
SCALE ⅜" = 1'-0"



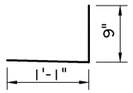
PLAN
SCALE ⅜" = 1'-0"



DETAIL A
SCALE : 1" = 1'-0"
(ASPHALT CONCRETE PAVEMENT OPTION)



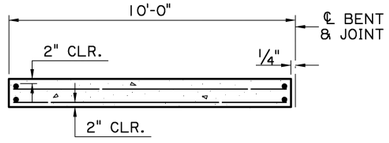
JOINT DETAIL
N.T.S.



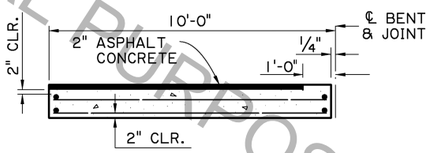
403
2" ø PIN

ESTIMATED QUANTITIES (ONE SLAB)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	8	1'-0"	8'-0"	DOWELS
TOTAL NO. 8 BARS = 8'-0" = 21 LBS.				
601	58	9'-7"	555'-10"	LONGIT. BOT. OF SLAB
602	20	28'-8"	573'-4"	TRANSV. BOT. OF SLAB
TOTAL NO. 6 BARS = 1,129'-2" = 1,696 LBS.				
401	32	9'-7"	306'-8"	LONGIT. TOP OF SLAB & CURB
402	11	28'-8"	315'-4"	TRANSV. TOP OF SLAB
403	14	1'-10"	25'-8"	DOWELS IN CURB
TOTAL NO. 4 BARS = 647'-8" = 433 LBS.				
⊙ TOTAL DEFORMED REINFORCING STEEL = 2,150 LBS.				
CONCRETE APPROACH SLAB = 32.22 SQ. YDS.				
⊙ ⧄ ASPHALT CONCRETE = 3.0 TONS				
⊙ ⧄ SAW CUT & SEAL = 27 LIN. FT.				

⊙ TO BE PAID FOR UNDER ITEM CONCRETE APPROACH SLABS.
⧄ REQUIRED WHEN APPROACH SLAB IS ADJACENT TO ASPHALT CONCRETE PAVEMENT.

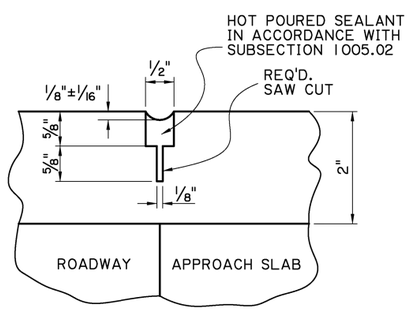


(FOR PORTLAND CEMENT CONCRETE ROADWAY PAVEMENT)

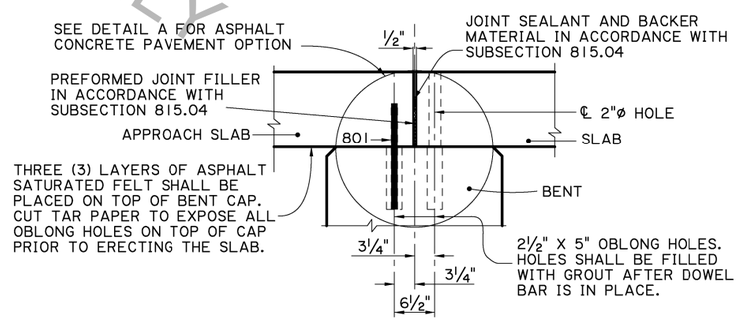


(FOR ASPHALT CONCRETE ROADWAY PAVEMENT)

SECTION ALONG ℄ ROADWAY
SCALE : ¼" = 1'-0"



SAWING & SEALING JOINT DETAIL
N.T.S.



TYPICAL JOINT DETAIL
SCALE : 1" = 1'-0"

APPROACH SLAB NOTES:

CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 4th EDITION, WITH 2008 & 2009 INTERIMS.

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A ¾" CHAMFER, UNLESS OTHERWISE NOTED.

ASPHALT CONCRETE: TO BE THE SAME TYPE AS THE ASPHALT CONCRETE USED FOR THE APPROACH ROADWAY PAVEMENT OR OVERLAY.

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60. DIMENSIONS RELATING TO THE FABRICATION ARE OUT-TO-OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS.

BEDDING MATERIAL: FOR DETAILS OF BEDDING MATERIAL AND UNDERDRAINS. SEE STANDARD DETAIL BD.2.10.1.0.07.

SAWING & SEALING: THE ASPHALT CONCRETE SHALL BE SAW CUT AT THE END OF THE CONCRETE APPROACH SLAB THE ENTIRE ROADWAY WIDTH AND SEALED, COST TO BE INCLUDED WITH CONCRETE APPROACH SLAB.

BASIS OF PAYMENT: ALL MATERIAL SHALL BE PAID FOR UNDER 'CONCRETE APPROACH SLABS' ACCORDING TO THE SPECIFICATIONS, EXCEPT WHERE NOTED ON THIS SHEET.

NOTE: FOR ADDITIONAL JOINT DETAILS SEE SHEET 2 OF 11

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
05/17/17

SHEET NUMBER

PARISH	CONTROL SECTION	STATE PROJECT

DESIGNED B. DELATTE
CHECKED J. NAKHLEH
DETAILED D. HYMEL
CHECKED J. NAKHLEH
REVIEWED 05/17/17
SERIES # 11 OF 11

NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

ALTERNATE APPROACH SLAB
10'-0" CAST-IN-PLACE APPROACH SLAB
28'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

STANDARD DETAIL PSS-90-28-20SL

DOTD BRIDGE DESIGN