

SURFACE FINISH AS PER SUBSECTION 805.08 OF THE STANDARD

SPECIFICATIONS, EXCEPT WHEN SPECIFIED ELSEWHERE IN THE PLANS

802

6" Ø PIN

401

2" Ø PIN

ESTIMATED QUANTITIES (ONE INTER. BENT) TOTAL UNIT NO. LOCATION LENGTH|LENGTH 42'-8" 256'-0" LONGIT, IN CAP 74'-8" LONGIT. IN CAP 9'-4" TOTAL NO. 8 BARS = 330'-8" = 883 LBS. 50'-0" DOWELS TOTAL NO. 6 BARS = 50'-0" 75 LBS. 42'-8" 85'-4" LONGIT. IN CAP TOTAL NO. 5 BARS = 85'-4" 89 LBS. 8'-2" 457'-4" STIRRUPS IN CAP 14'-4" 4 3'-7" STIRRUPS IN RISER 2'-9" 5'-6" LONGIT. IN RISER 2 TOTAL NO. 4 BARS = 477'-2" = 319 LBS.

TOTAL DEFORMED REINFORCING STEEL= 1,366 LBS

CLASS AT CONCRETE = 7.23 CU. YDS. MAX. PILE LOAD: SERVICE DEAD LOAD = 25 TONS

SERVICE LIVE LOAD = 31 TONS FACTORED TOTAL LOAD = 77 TONS

* ADD 75 LBS. OF REINFORCING STEEL (25-601 DOWELS) WHEN TWO FIXED ENDS OCCUR ON THE SAME BENT.

E	ESTIMATED QUANTITIES (ONE END BENT)							
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION				
802	8	9'-4"	74'-8"	LONGIT. IN CAP				
803	4	41'-9"	167'-0"	LONGIT. IN CAP				
804	2	41'-9"	83'-6"	LONGIT. IN CAP				
TOTA	AL NO	. 8 BAR	S = 325 ¹	-2" = 868 LBS.				
601	25	2'-0"	50'-0"	DOWELS				
TOTA	AL NO	. 6 BAR	S = 50'-0	O" = 75 LBS.				
502	2	41'-9"	83'-6"	LONGIT. IN CAP				
TOT	AL NO). 5 BAR	S = 83'-	6" = 87 LBS.				
401	56	8'-2"	457'-4"	STIRRUPS IN CAP				
402	4	3'-7"	14'-4"	STIRRUPS IN RISER				
403	2	2'-9"	5'-6"	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				
TOTA	AL NO	. 4 BAR	S = 617 ¹	-10" = 413 LBS.				

TOTAL DEFORMED REINFORCING STEEL = 1.443 LBS.

CLASS AT CONCRETE = 7.89 CU. YDS. MAX. PILE LOAD: SERVICE DEAD LOAD= 25 TONS FACTORED DEAD LOAD = 31 TONS

FACTORED LIVE LOAD = 77 TONS ⊖ 16" # PPC PILES USED FOR ESTIMATING PURPOSES ONLY. (ADD 0.06 CU. YDS. OF CLASS AI CONCRETE PER BENT WHEN $14^{\prime\prime}$ Ø PPC PILES ARE USED.)



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 (GOI BARS) SHALL BE PROVIDED AT ALL FIXED BEARINGS AND APPROACH SLAB BEARINGS (SEE GENERAL PLAN). ALL EX-POSED ENDS OF DOWELS SHALL BE WRAPPED WITH TWO LAYERS OF 15 LB. ASPHALT SATURATED FELT. CLOSE FITTING TUBES OF COMPRESSIBLE MATERIAL NOT LESS THAN $\%_6$ " THICK MAY BE SUBSTITUTED.

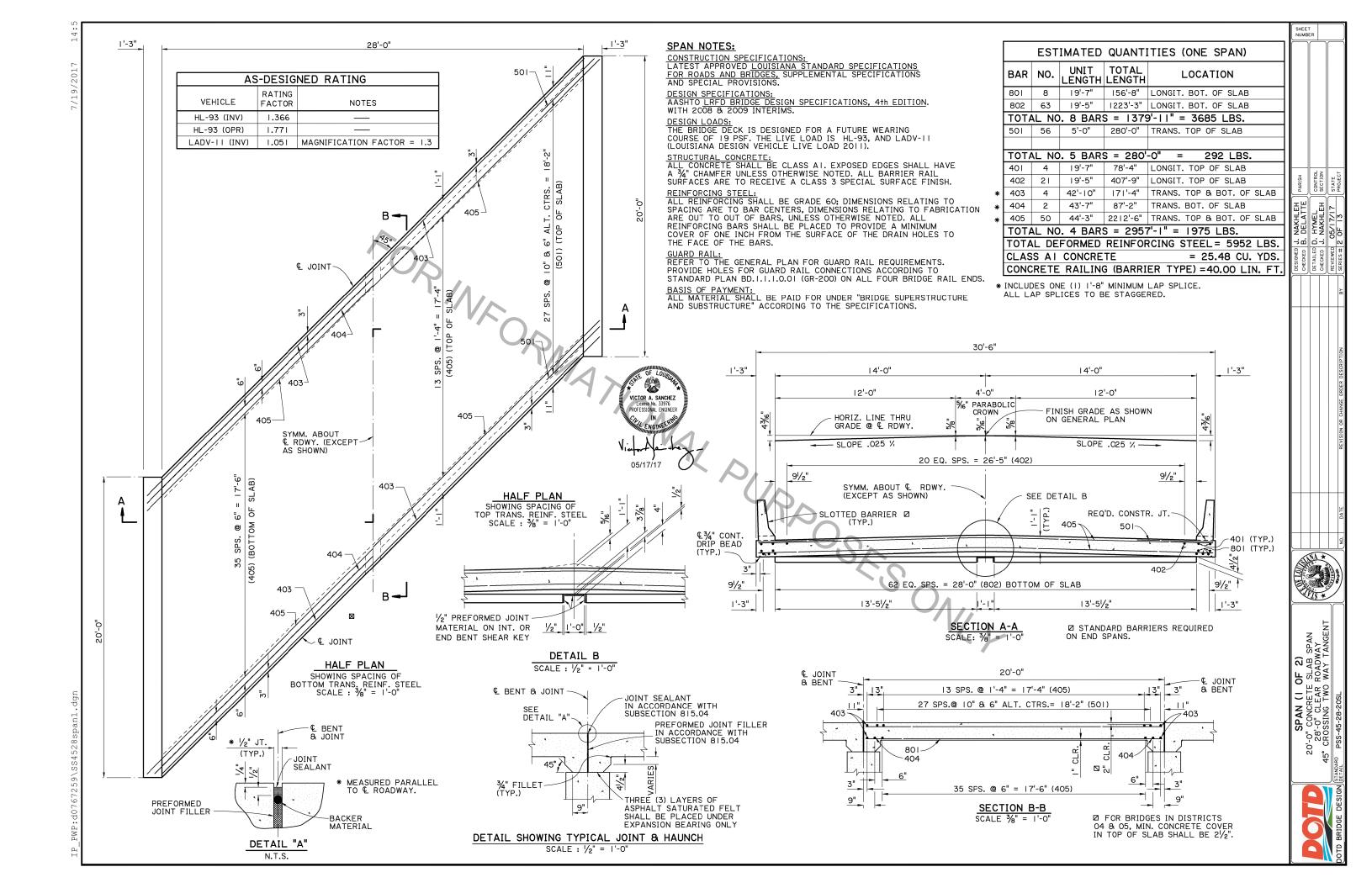
PRECAST CONCRETE PILES: FOR DETAILS SEE STANDARD DETAIL BD.2.5.I.O.OI (CS-216). EXTERIOR PILES ARE TO BE BATTERED OUTWARD AT $1\frac{1}{2}$ ON 12 IN THE LONGITUDINAL DIRECTION OF THE BENT, WHEN NOTED ON THE GENERAL

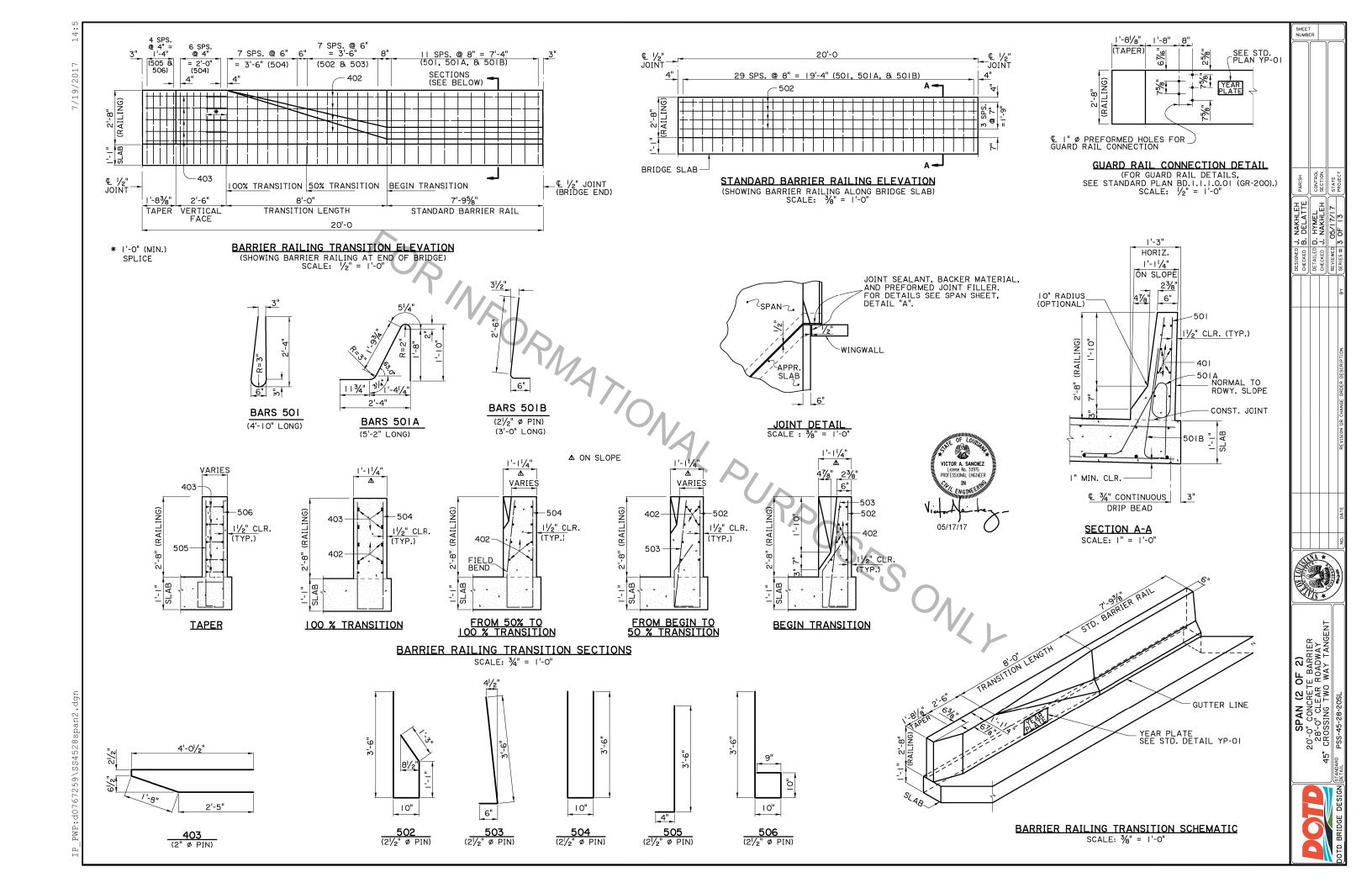
BASIS OF PAYMENT: ALL MATERIALS SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS. PREFORMED JOINT MATERIAL: PREFORMED JOINT MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 815.04 OF THE STANDARD SPECIFICATIONS.

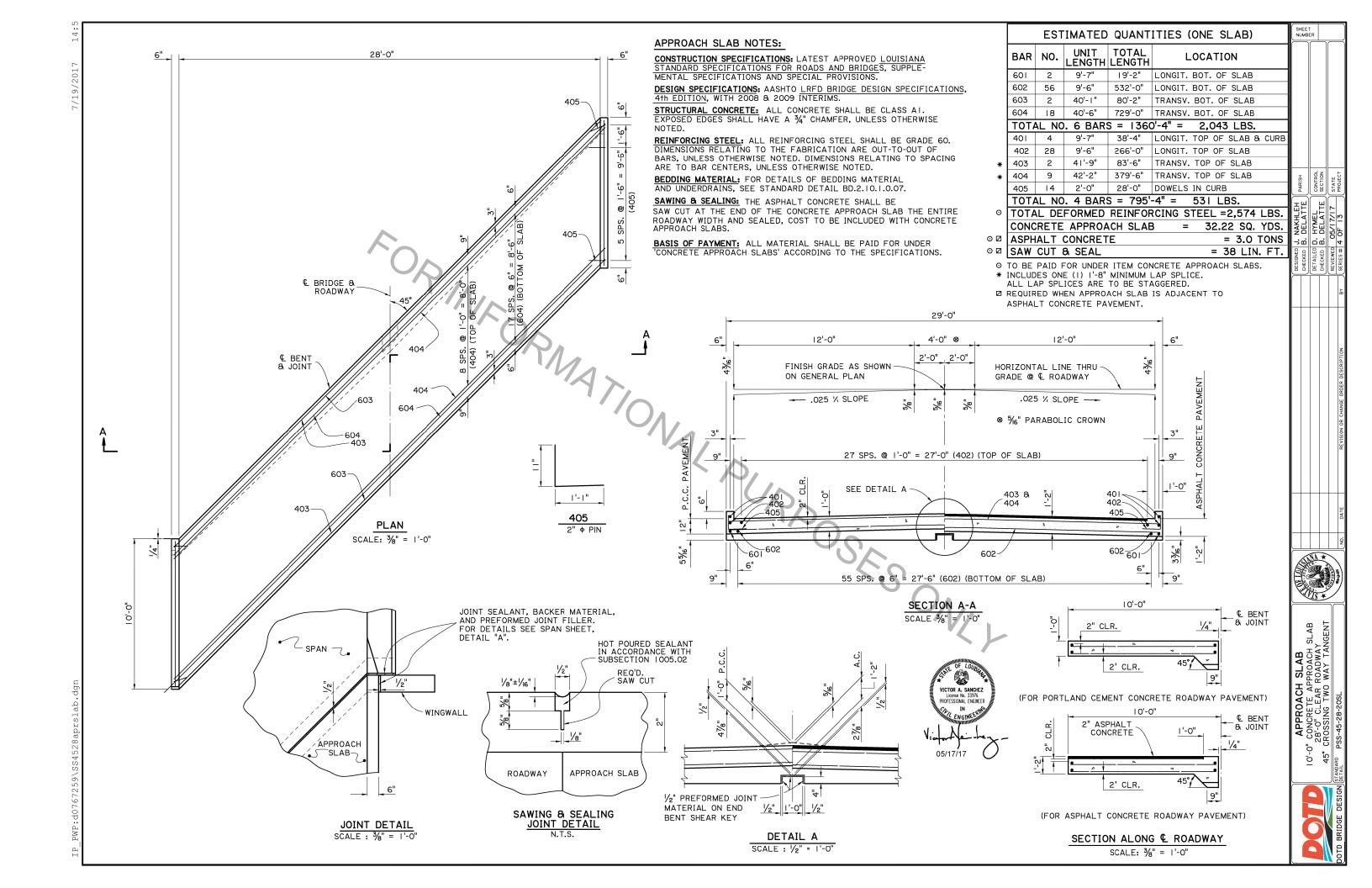


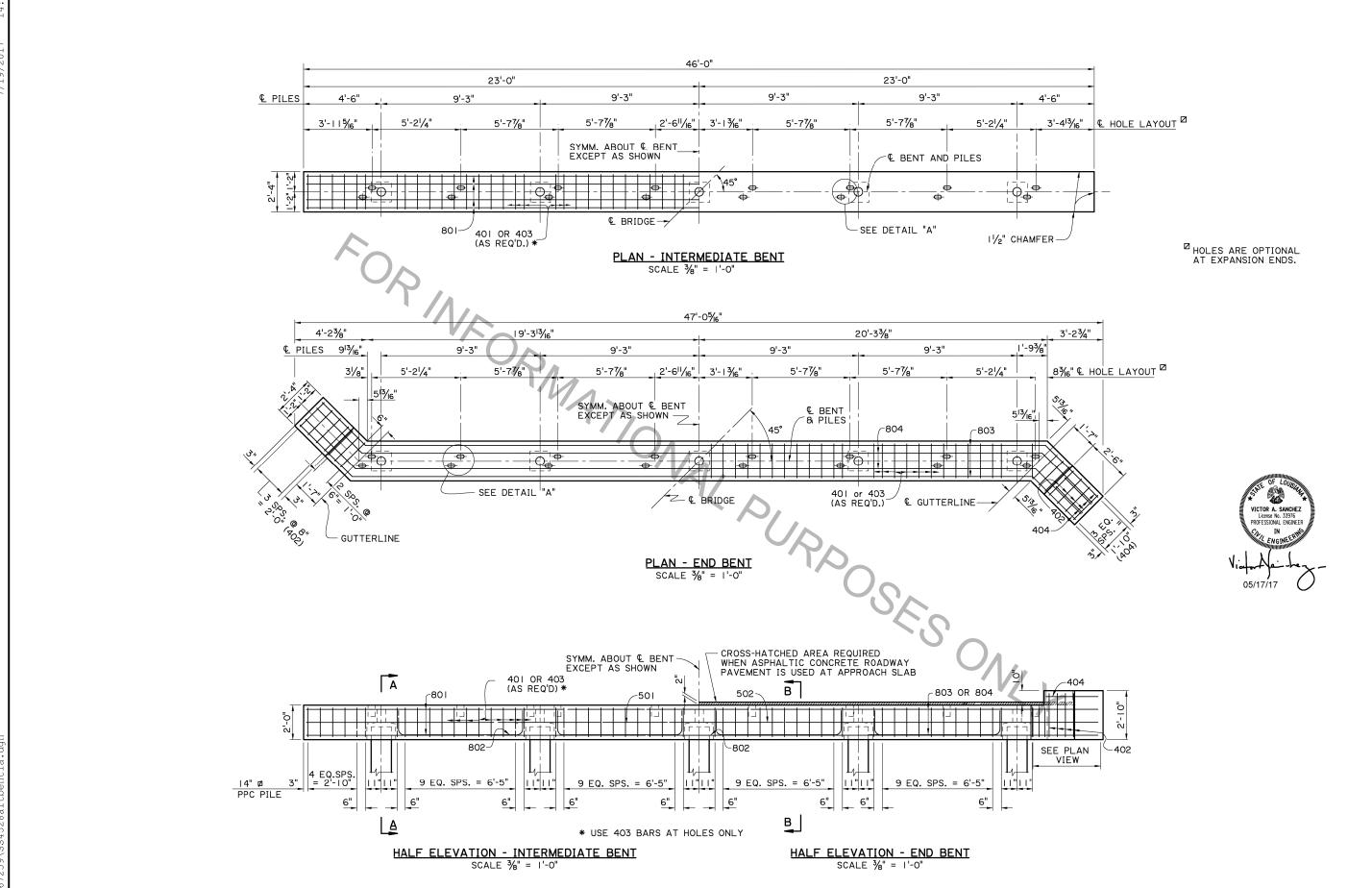
BENTS
NFORCED CONCRETE PILE BENTS
28'-O" CLEAR ROADWAY
5° CROSSING TWO WAY TANGENT
PSS-45-28-20CC BENTS

45°









CONTROL SECTION STATE PROJECT



180° HOOK FOR **403 BARS** 3" Ø PIN

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-II (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS PI. STEEL SIDE FORMS AND STEEL OR CONCRETE BOTTOM FORMS SHALL BE USED FOR PRECAST COMPONENTS. EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER UNLESS OTHERWISE NOTED. ALL SURFACES SHALL RECEIVE A CLASS I 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.

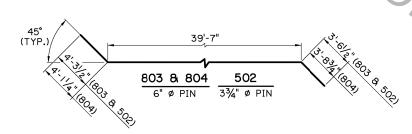
WATER SHALL BE USED FOR SATURATION AND MIXING PURPOSES.

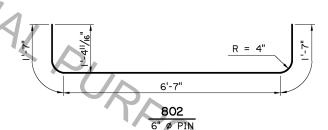
PRECAST UNITS: THE PLANS FOR AN ONGOING OPERATION OF FABRICATING FACILITIES SHALL BE APPROVED BY THE
DEPARTMENT. EACH UNIT SHALL HAVE THE FABRICATOR'S MARK AND UNIQUE NUMBER, MEETING THE APPROVAL
OF THE ENGINEER, STAMPED OR SCRIBED IN THE PLASTIC CONCRETE. ALL UNITS SHALL BE HELD AT THE PLANT FOR
A MINIMUM 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 DAYTONSUPERIOR 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 BD.2.5.1.0.01 (CS-216). THE
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

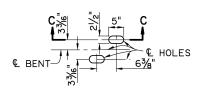
ACCORDING TO THE CAST-IN-PLACE ALTERNATE. EXTERIOR PILES ARE TO BE BATTERED OUTWARD A 1½ ON 12 IN THE LONGITUDINAL DIRECTION OF THE BENT, WHEN NOTED ON THE GENERAL PLAN.

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

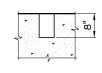
2'-6" 402 2'-0" 401 & 402 2" Ø PIN



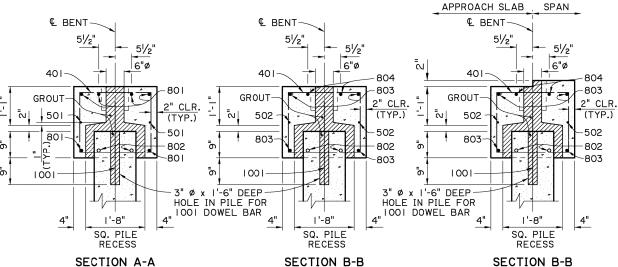




DETAIL A SCALE $\frac{3}{4}$ " = 1'-0"



SECTION C-C SCALE: 3/4" = 1'-0" SCALE $\frac{3}{4}$ " = 1'-0'



SECTION B-B SCALE: 34" = 1'-0"
(WHEN PORTLAND CEMENT CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)

SECTION B-B SCALE: 34" = 1'-0"
(WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)

ES	ESTIMATED QUANTITIES (ONE INTER. BENT)						
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	L	OCATI	ON	
1001	5	2'-4"	11'-8"	DOWELS	IN PIL	ES	
TOTA	L NO	. IO BAF	RS = 1	1'-8"	=	50	LBS.
801	6	45'-8"	274'-0"	LONGIT.	IN CAP		
802	8	9'-9"	78'-0"	LONGIT.	IN CAP	BTW.	PILES
TOTA	AL NO	. 8 BAR	S = 35	2'-0"	=	94	O LBS.
501	2	45'-8"	91-4"	LONGIT.	IN CAP		
TOTA	AL NO	. 5 BAR	S = 91	-4"	=	95	LBS.
401	52	8'-2"	424'-8"	STIRRUP	S IN CAI	Р	
403	8	6'-6"	52'-0"	STIRRUP	S IN CAI	Р	
TOTA	AL NO	. 4 BAR	S = 47	6'-8"	=	31	8 LBS.
TOTA	L DE	FORMED	REINFOF	CING S	TEEL=	140	3 LBS.
TOTA	L CL	ASS PI	CONCRET	E	= 7.3	39 CI	J. YDS.
MAX.	PILE	LOAD:	SERVICE	DEAD	LOAD	= 22	2 TONS
			SERVIC	E LIVE	LOAD	= 33	3 TONS
		FA	CTORED	TOTAL	LOAD	= 76	5 TONS
TOTA	AL GR	OUT FOR	PILE R	ECESSE	S = 0.3	36 CI	J. YDS.

	ESTIMATED QUANTITIES (ONE END BENT)							
	BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LC	CATIO	Z	
	1001	5	2'-4"	11'-8"	DOWELS I	N PILES		
	TOT	AL NO	. 10 BA	RS = II	'-8" =	= 50	LBS.	
	802	8	9'-9"	78'-0"	LONGIT. I	N CAP B	TW. PILES	
	803	4	47'-5"	189'-8"	LONGIT. I	N CAP		
	804	2	47'-5"	94'-10"	LONGIT. I	N CAP		
	TOTA	AL NO	. 8 BAR	S = 362	.'-6"	= 9	68 LBS.	
	502	2	47'-7"	94'-10"	LONGIT. I	N CAP		
	TOTA	AL NO	. 5 BA	RS = 9	4'-10"	=	99 LBS.	
	TOT 401	48	8'-2"	ARS = 9 392'-0"	4'-10" STIRRUPS		99 LBS.	
			· · · ·			IN CAP		
	401	48	8'-2"	392'-0"	STIRRUPS	IN CAP		
	401 402	48 8	8'-2" 9'-10"	392'-0" 78'-8"	STIRRUPS STIRRUPS	IN CAP IN WING	GWALL	
	401 402 403	48 8 8 8	8'-2" 9'-10" 6'-6" 2'-2"	392'-0" 78'-8" 52'-0" 17'-4"	STIRRUPS STIRRUPS STIRRUPS	IN CAP IN WING	GWALL	
	401 402 403 404	48 8 8 8 8	8'-2" 9'-10" 6'-6" 2'-2"	392'-0" 78'-8" 52'-0" 17'-4"	STIRRUPS STIRRUPS STIRRUPS LONGIT. I	IN CAP IN WING IN CAP N WINGW	GWALL VALL 361 LBS.	
8	401 402 403 404 TOTA	48 8 8 8 AL NC	8'-2" 9'-10" 6'-6" 2'-2" 0. 4 BA	392'-0" 78'-8" 52'-0" 17'-4" ARS = 5	STIRRUPS STIRRUPS STIRRUPS LONGIT. I 40'-0" CCING ST	IN CAP IN WING IN CAP N WINGW = EEL=	GWALL VALL 361 LBS.	
8	401 402 403 404 TOTA TOTA	48 8 8 8 AL NC AL DE	8'-2" 9'-10" 6'-6" 2'-2" 0. 4 BA FORMED	392'-0" 78'-8" 52'-0" 17'-4" ARS = 5	STIRRUPS STIRRUPS STIRRUPS LONGIT. I 40'-O" CCING ST	IN CAP IN WING IN CAP N WINGW = EEL= = 8.05	WALL 361 LBS. 1,478 LBS. 5 CU. YDS.	
8	401 402 403 404 TOTA TOTA	48 8 8 8 AL NC AL DE	8'-2" 9'-10" 6'-6" 2'-2" 0. 4 BA FORMED	392'-0" 78'-8" 52'-0" 17'-4" ARS = 5 REINFORCONCRET SERVICE	STIRRUPS STIRRUPS STIRRUPS LONGIT. I 40'-0" RCING ST E DEAD L	IN CAP IN WING IN CAP N WINGW = EEL= = 8.05	WALL 361 LBS. 1,478 LBS. 5 CU. YDS. = 22 TONS	

⊗ ADD 0.31 CU. YDS. OF CLASS PI CONCRETE PER BENT WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB.

TOTAL GROUT FOR PILE RECESSES = 0.36 CU. YDS.

AS-DESIGNED RATING								
VEHICLE	RATING FACTOR	NOTES						
HL-93 (INV)	1.605							
HL-93 (OPR)	2.081							
LADV-II (INV)	1.235	MAGNIFICATION FACTOR = 1.3						

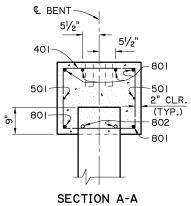




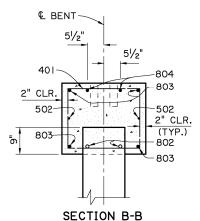
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116 OF 13

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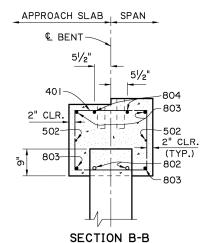




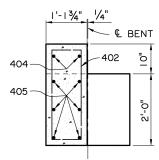
SCALE: 3/4" = 1'-0"



SCALE :3/4" = 1'-0"
(WHEN PORTLAND CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)



SCALE :3/4" = 1'-0"
(WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)



END ELEVATION SCALE: 3/4" = 1'-0"

ALTERNATE BENT NOTES:

2'-0"

9¾"

2'-0"

403 2" Ø PIN

180° HOOK FOR

403 BARS 3" Ø PIN

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

<u>DESIGN SPECIFICATIONS:</u> AASHTO <u>LRFD BRIDGE DESIGN</u> <u>SPECIFICATIONS. 4th EDITION</u>, WITH 2008 & 2009 INTERIMS. DESIGN LOAD: LIVE LOAD IS HL-93, AND LADV-II (LOUISIANA

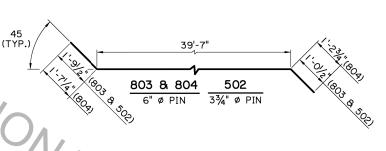
DESIGN VEHICLE LIVE LOAD 2011).

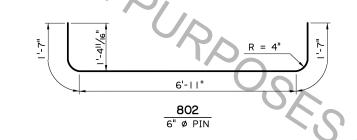
STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS AI. EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER UNLESS OTHERWISE NOTED. ALL EXPOSED FACES OF WINGWALLS AND ENDS OF CAPS SHALL RECEIVE A SURFACE FINISH AS PER SUBSECTION 805.08 OF THE STANDARD SPECIFICATIONS, EXCEPT WHEN SPECIFIED ELSE-WHERE IN THE PLANS.

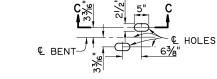
REINFORCING STEEL: ALL REINFORCING SHALL BE GRADE 60.
DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS,
UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING
ARE TO BAR CENTERS, UNLESS OTHERWISE NOTED.

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 1 $\frac{1}{2}$ ON 12 IN THE LONGITUDINAL DIRECTION OF THE BENT, WHEN NOTED ON THE GENERAL PLAN.

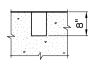
BASIS OF PAYMENT: ALL MATERIALS SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS.







DETAIL A SCALE $\frac{3}{4}$ " = 1'-0"



SECTION C-C SCALE 34" = 1'-0'

ES	TIMA	TED	QU	ANTITIE	S	(ONE	INTER.	BENT

BAR	NO.	UNIT LENGTH	TOTAL LENGTH	L	OCATI	ON	
801	6	45'-8"	274'-0"	LONGIT.	IN CAP		
802	8	10'-1"	80'-8"	LONGIT.	IN CAP	BTW.	PILES
TOTA	AL NO	. 8 BAR	S = 35	4'-8"	=	94	7 LBS.
501	2	45'-8"	91'-4"	LONGIT.	IN CAP		
TOTA	AL NO	. 5 BAR	S = 91	-4"	=	95	LBS.
401	52	8'-2"	424'-8"	STIRRUPS	IN CA	P	
403	8	6'-6"	52'-0"	STIRRUPS	IN CA	Р	
TOTA	AL NO	. 4 BAR	S = 47	6'-8"	=	318	8 LBS.
TOTA	L DE	FORMED	REINFOF	CING S	ΓEEL=	136	O LBS.

 ▼ TOTAL CLASS AI CONCRETE = 7.67 CU. YDS. MAX. PILE LOAD: SERVICE DEAD LOAD = 22 TONS SERVICE LIVE LOAD = 33 TONS

FACTORED TOTAL LOAD = 76 TONS ⊠ 16" Ø PPC PILES USED FOR ESTIMATING PURPOSES ONLY. (ADD

O.O6 CU. YDS. OF CLASS AI CONCRETE PER BENT WHEN 14" Ø PPC PILES ARE USED.)

E	ESTIMATED QUANTITIES (ONE END BENT)							
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION				
802	8	10'-1"	80'-8"	LONGIT. IN CAP BTW. PILES				
803	4	42'-5"	1 69'-8"	LONGIT. IN CAP				
804	2	42'-5"	84'-10"	LONGIT. IN CAP				
TOTA	AL NO	. 8 BAR	S = 335	5'-2" = 895 LBS.				
502	2	42-5"	84'-10"	LONGIT. IN CAP				
TOTA	AL NO). 5 BA	RS = 8	4-10" = 88 LBS.				
401	48	8'-2"	392'-0"	STIRRUPS IN CAP				
402	8	7'-6"	60'-0"	STIRRUPS IN WINGWALL				
403	8	6'-6"	52'-0"	STIRRUPS IN CAP				
404	4	2'-2"	8'-8"	LONGIT. IN WINGWALL				
405	12	3'-11"	47'-0"	LONGIT. IN WINGWALL				

TOTAL NO. 4 BARS = 559'-8" TOTAL DEFORMED REINFORCING STEEL= 1,357 LBS. TOTAL CLASS AT CONCRETE = 7.72 CU. YDS. MAX. PILE LOAD: SERVICE DEAD LOAD = 22 TONS SERVICE LIVE LOAD = 33 TONS FACTORED TOTAL LOAD = 76 TONS

⊗ 16" Ø PPC PILES USED FOR ESTIMATING PURPOSES ONLY. (ADD 0.06 CU. YDS. OF CLASS AT CONCRETE PER BENT WHEN 14" Ø PPC PILES ARE USED.) ADD 0.31 CU. YDS. OF CLASS AT CONCRETE PER BENT WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB.

AS-DESIGNED RATING							
VEHICLE	RATING FACTOR	NOTES					
HL-93 (INV)	1.333						
HL-93 (OPR)	1.729						
LADV-II (INV)	1.026	MAGNIFICATION FACTOR = 1.3					





OF 2)
BENTS
Y
NGENT

DELATTE

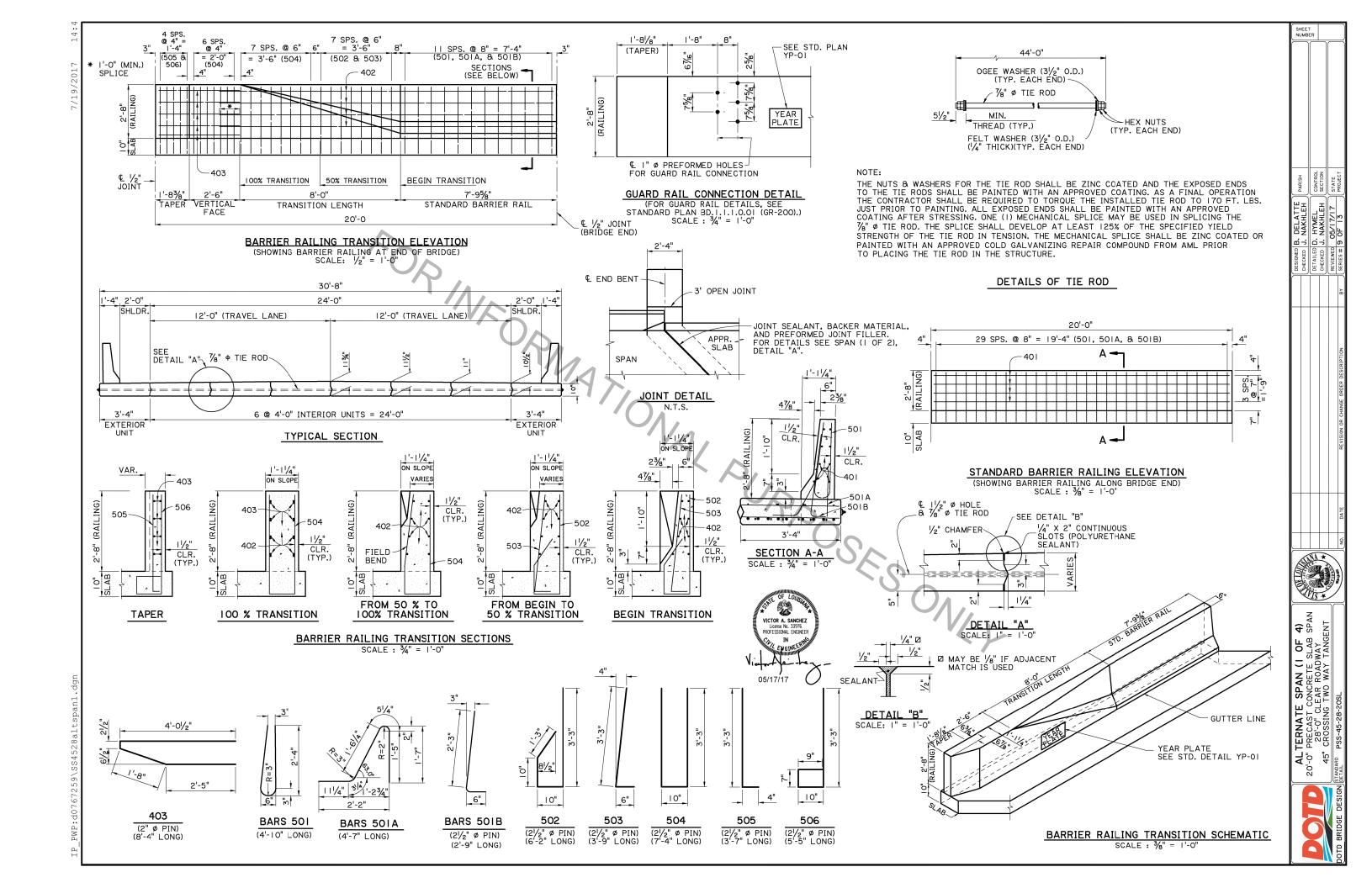
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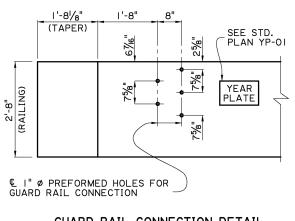
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GUARD RAIL CONNECTION DETAIL

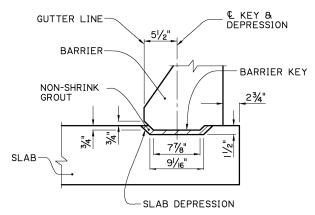
CONTROL SECTION STATE PROJECT

DESIGNED B. DELATTE PARENTE PARENTE DE TAURED D. HYMEL CHECKED J. NAKHLEH SE CHECKED J. NAKHLEH SE CHECKED D. NAKHLEH SE SERIESH 10 OF 13 FOR THE PARENTE SERIESH 10 FOR THE PARENTE SERIESH 10

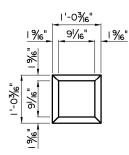
LTERNATE SPAN (2 OF 4)
O'-O" PRECAST CONC. BARRIER
28'-O" CLEAR ROADWAY
5° CROSSING TWO WAY TANGENT
PSS-45-28-20SI

ALT 20'-(45° (

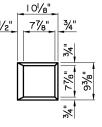
(FOR GUARD RAIL DETAILS, SEE STANDARD PLAN BD.I.I.I.O.OI (GR-200).) SCALE: $\frac{3}{4}$ " = 1'-0"



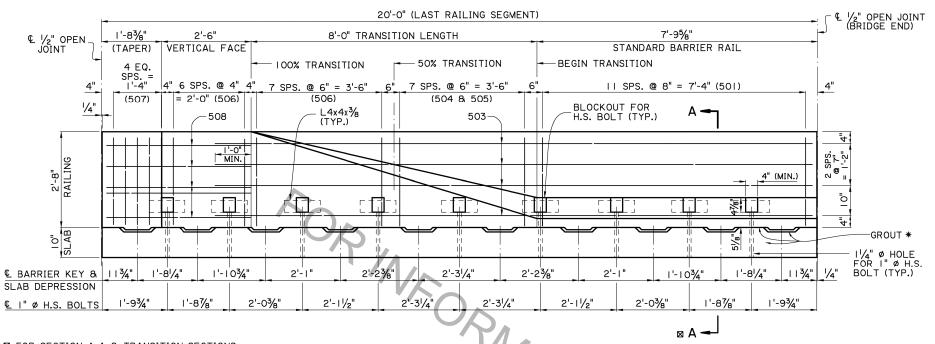
ELEVATION SCALE: $1\frac{1}{2}$ " = 1'-0"



PLAN-DEPRESSION



PLAN-KEY



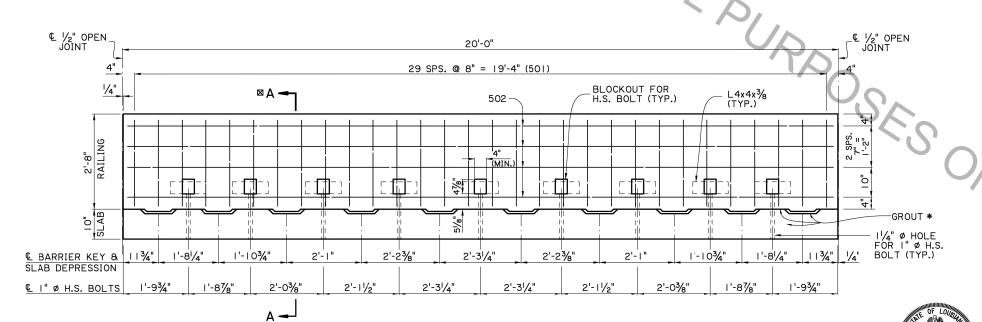
☑ FOR SECTION A-A & TRANSITION SECTIONS

SEE ALTERNATE SPAN (3 OF4)

PRECAST BARRIER RAILING TRANSITION ELEVATION (SHOWING BARRIER RAILING AT END OF BRIDGE) SCALE: $\frac{3}{4}$ " = 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.

VICTOR A. SANCHEZ

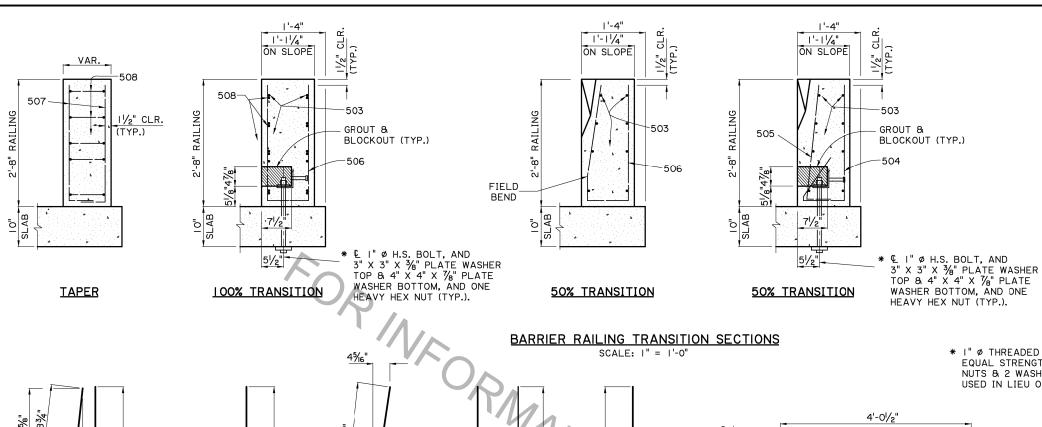


STANDARD PRECAST BARRIER RAILING ELEVATION (SHOWING BARRIER RAILING ALONG BRIDGE SLAB) SCALE: 3/4" = 1'-0"



BARRIER KEY AND PANEL DEPRESSION DETAILS





101/4"

6¾"

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

05/17/17

1'-4"

1'-11/4" ON SLOPE

505

BEGIN TRANSITION

φ

GROUT &

BLOCKOUT (TYP.)

* © I" Ø H.S. BOLT, AND 3" X 3" X 3%" PLATE WASHER TOP & 4" X 4" X 3%" PLATE

WASHER BOTTOM, AND ONE

HEAVY HEX NUT (TYP.).

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AL7 20'-45°

NOTES:

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

101/4"

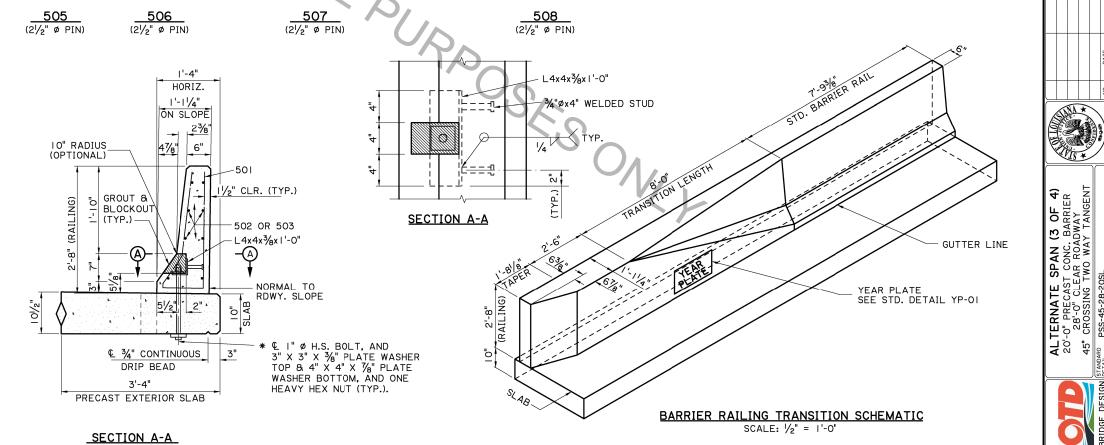
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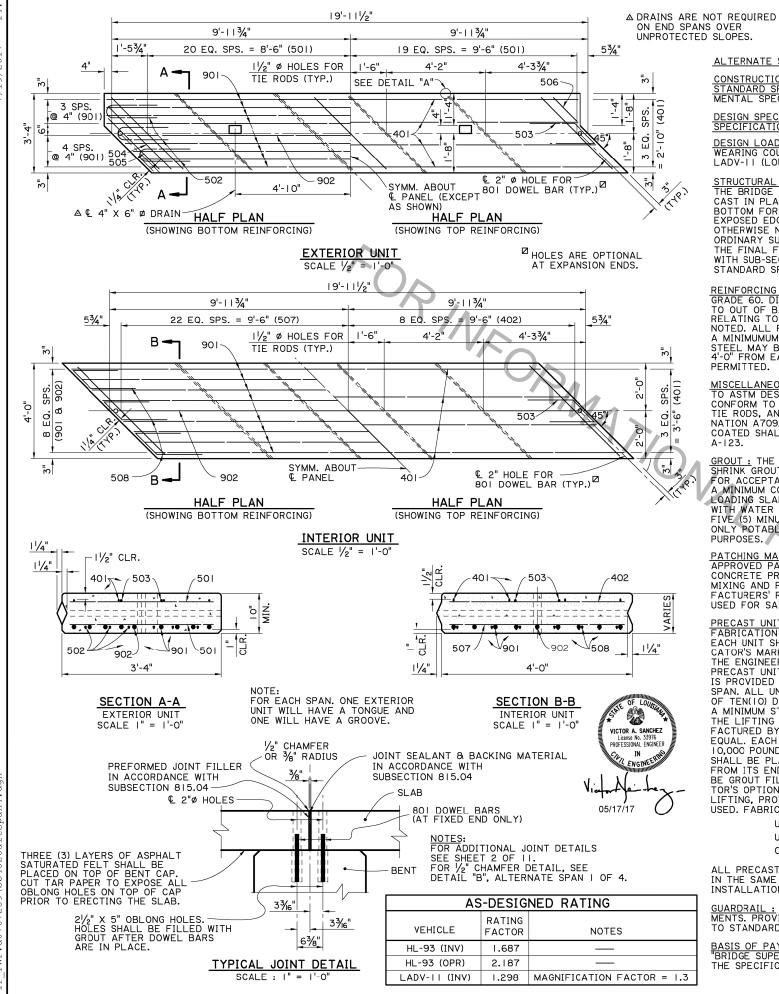
(21/2" Ø PIN)

101/4"

(21/2" Ø PIN)

- 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.
- 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.
- ALL I" 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).





<u>TERNATI</u>	<u> </u>	AN NO	IES:					
NSTRUCT	ION	SPEC	IFICAT	IONS	: LATE	ST AF	PPROVED	LOU
ANDARD	SPE	CIFICA	NOITA	FOR	ROADS	AND	BRIDGE	s , s i

MENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

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

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

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS PI.
THE BRIDGE RAIL CONCRETE SHALL BE CLASS AI 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 3/4" CHAMFER, UNLESS
OTHERWISE NOTED. ALL SURFACES SHALL RECEIVE A CLASS I
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 I" 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

MISCELLANEOUS STEEL: HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM DESIGNATION A-325. PRESTRESSING STRANDS SHALL CONFORM TO ASTM DESIGNATION A-325. PRESSING 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

<u>GROUT:</u> 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

PATCHING MATERIAL: THE PATCHING MATERIAL SHALL BE AN APPROVED PATCHING MATERIAL FOR PRECAST OR PRESTREESED CONCRETE PRODUCTS LISTED ON AML. SURFACE PREPARATION, MIXING AND PLACEMENT 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 AND LADV-II", THE FABRICATOR'S MARK, AND UNIQUE NUMBER, MEETING THE APPROVAL OF THE ENGINEER STAMPED OR INSCRIBED IN THE PLASTIC CONCRETE. 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 1/4" 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. FACTURED BY DAYTON-SUPERIOR CORPORATION OR AN APPROVED EQUAL. EACH INSERT SHALL HAVE A MINIMUM LOAD CAPACITY OF 10,000 POUNDS . FOUR(4) INSERTS WITH I" \emptyset X 5" LONG COIL BOLTS SHALL BE PLACED IN THE TOP OF THE UNIT AND LOCATED I'-3" FROM ITS ENDS AND I'-O" FROM ITS EDGES. INSERT HOLES SHALL BE GROUT FILLED AFTER PLACEMENT OF UNIT. AT THE CONTRAC-TOR'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 ± 3/6' UNIT LENGTH + 1/8" AND -1/2" OVERALL SPAN WIDTH ± 2"

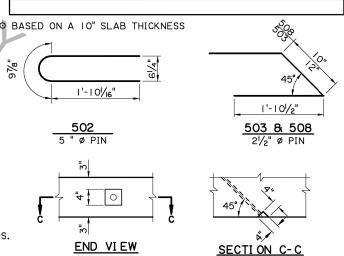
ALL PRECAST UNITS IN EACH BRIDGE SPAN SHALL BE MATCH CAST IN THE SAME CASTING BED TO ENSURE A PROPER FIT DURING

<u>GUARDRAIL :</u> REFER TO GENERAL PLAN FOR GUARDRAIL REQUIRE-MENTS. PROVIDE HOLES FOR GUARDRAIL CONNECTIONS ACCORDING TO STANDARD PLAN BD.I.I.I.O.OI (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 U					
	BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
	901	8	19'-7"	156'-8"	LONGIT. BOT. OF SLAB	
	902	I	18'-11"	18'-11"	LONGIT. BOT. OF SLAB	
	TOTA	L NO	. 9 BARS	S = 175'-	-7" = 597 LBS.	
	801	_	1'-0"	1'-0"	DOWELS	
	TOT	AL NO). 8 BAR	S = 1'-0'	' = 3 LBS.	
	501	80	4'-2"	333'-4"	TRANS. TOP & BOT. OF SLAB	
	502	6	4'-6"	27'-0"	TOP & BOT. END OF SLAB	
	503	2	4'-9"	9'-6"	TOP & BOT. END OF SLAB	
	504	2	3'-9"	7'-6"	TOP & BOT. END OF SLAB	
	505	2	3'-0"	6'-0"	TOP & BOT. END OF SLAB	
	506	2	1'-4"	2'-8"	TOP & BOT. END OF SLAB	
	TOTA	L NO	. 5 BARS	S = 386'-	-0" = 403 LBS.	
	401	4	19'-7"	78'-4"	LONGIT. TOP OF SLAB	
	TOTA	AL NO	. 4 BAR	s = 78'-4	1" = 52 LBS.	
	DEFC	RMED	REINFO	RCING S	TEEL = 1055 LBS.	
0	CLAS	SPI	CONCRE	TE	= 2.05 CU. YDS.	
	CONC	RETE	RAILING	G (PER S	PAN) = 40.00 LIN. FT.	

BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION				
901	8	19'-7"	156'-8"	LONGIT. BOT. OF SLAB				
902	I	18'-11"	18'-11"	LONGIT. BOT. OF SLAB				
TOTAL NO. 9 BARS = 175'-7" = 597 LBS.								
801	I	1'-0"	1'-0"	DOWELS				
TOT	AL NO	. 8 BAR	S = 1'-0"	= 3 LBS.				
503	2	4'-9"	9'-6"	TOP END OF SLAB				
507	45	5'-2"	232'-6"	TRANS. BOT. OF SLAB				
508	6	4'-7"	27'-6"	BOT. END OF SLAB				
TOT	AL NO	. 5 BAR	S = 269 ¹	-6" = 282 LBS.				
401	4	19'-7"	78'-4"	LONGIT. TOP OF SLAB				
402	17	4'-2"	70'-10"	TRANS. TOP OF SLAB				
	TOTAL NO. 4 BARS = 149'-2" = 100 LBS.							



○ CLASS PI CONCRETE

DETAIL "A" TYP. EXTERIOUR EDGE ONLY SCALE I" = 1'-0"



= 2.46 CU. YDS.

ROL 10N

3. DELATTE
3. DELATTE
5. HYMEL
1. NAKHLEH
65/17/17

REV REV

-: ei||c: -:||

4 N OF LAB AN (4 CRETE SL ROADWA TERNATE SPA
PRECAST CONCR
28'-0" CLEAR F
CROSSING TWO



