

 INDICATES WING NUMBER

LIVE LOAD:

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE ——— F'C = 4,000 P.S.I.
ALL OTHER ——— F'C = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 ————— $f_y = 60,000$ P.S.I.
BAR STEEL REINFORCEMENT STAINLESS, GRADE 60 — $f_y = 60,000$ P.S.I.
36W" PRESTRESSED GIRDERS, CONCRETE MASONRY — $f'_c = 8,000$ P.S.I.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 12 X 53 STEEL PILING
DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS ** PER
PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
SOUTH ABUTMENT ESTIMATED 60'-0" LONG. PILE POINTS REQUIRED.
NORTH ABUTMENT ESTIMATED 70'-0" LONG. PILE POINTS REQUIRED.

PIER TO BE SUPPORTED ON HP 12 X 53 STEEL PILING
DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS **PER
PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 65'-0" LONG. PILE POINTS REQUIRED.

- * * THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY

 $0.001 = 1765 \text{ CFS}$

VEI = 1.8 FPS

$$HW_{100} = EL. 808.71$$

WATERWAY AREA = 1,010 SQ. FT.

DRAINAGE AREA = 15.8 SQ. MI.

SCOUR CRITICAL CODE = 8

ROAD OVERTOPPING FREQUENCY = NA

2 YEAR FREQUENCY

$$Q_2 = 350 \text{ C.F.S.}$$
$$HW_2 = EL. 802.92$$

CURVE DATA

R USH 18

P.I. = A196+18.01

$$\Delta = 75^{\circ}-01'-36''$$

D = 02°-51"-53"

$$T = 1535.39'$$
$$L = 2618.92'$$

R = 2000.00'

$$P.C. = A180 + 82.62$$

TRAFFIC VOLUME

USH 18

A.D.T. = 21,100 (2037)

R.D.S. = 50 M.P.H.

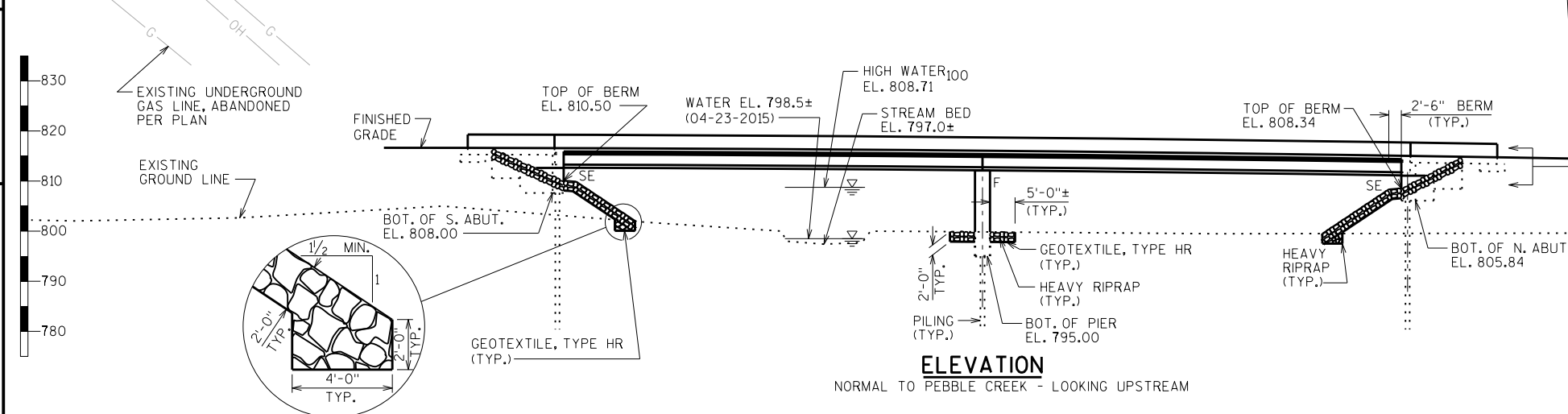
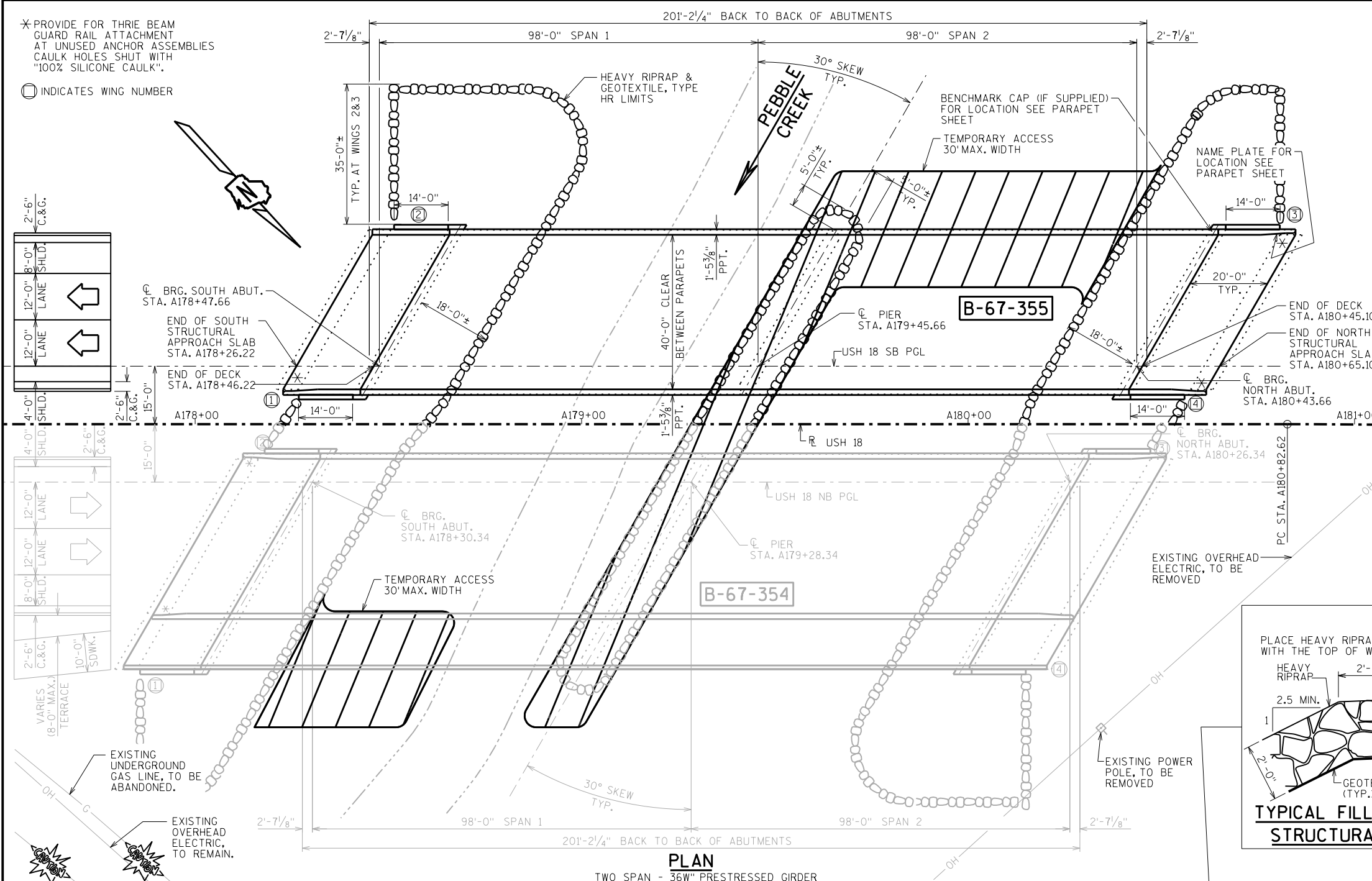
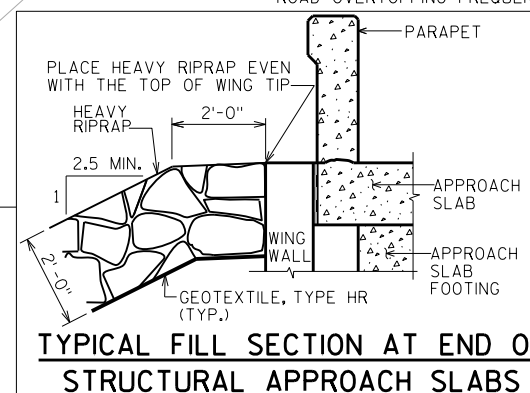
STRUCTURE DESIGN CONTACTS:

DOMINIQUE BECHLE (608) 261-8205

AARON BONK (608) 261-0261

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. PIER
9. 36W" PRESTRESSED GIRDER DETAILS 1
10. 36W" PRESTRESSED GIRDER DETAILS 2
11. STEEL DIAPHRAGM
12. SUPERSTRUCTURE
13. SUPERSTRUCTURE DIAPH. DETAILS
14. SUPERSTRUCTURE DETAILS
15. SOUTH APPROACH SLAB DETAILS
16. NORTH APPROACH SLAB DETAILS
17. SINGLE SLOPE PARAPET 32SS
W/STRUCTURAL APPROACH SLAB
18. APPROACH SLAB/PPT. REINFORCING DETAILS

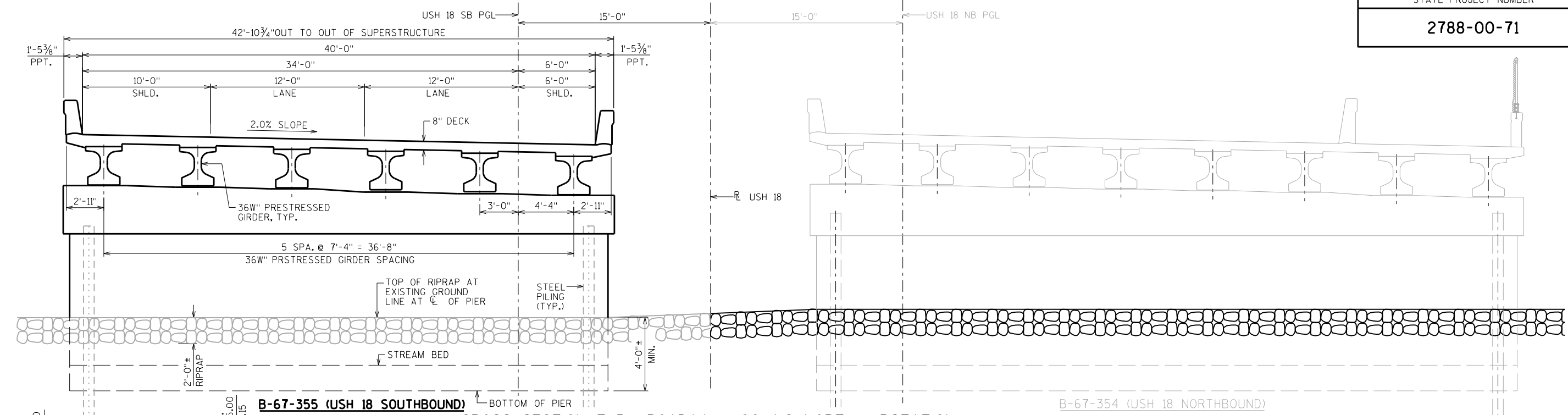


DATE		REVISION	
NO.	DATE		BY
		BUREAU OF STRUCTURES	
ACCEPTED <i>William C. Dierker</i>		6/23/17	
CHIEF		DATE	
STRUCTURES DESIGN		ENGINEER	
STRUCTURE B-67-355			
USH 18 SOUTHBOUND OVER PEBBLE CREEK			
COUNTY	WAUKESHA	TOWN	WAUKESHA
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	DMB	DRAWN BY	ABS/JPH
	CK'D.		CK'D.
GENERAL PLAN		SHEET 1 OF 18	

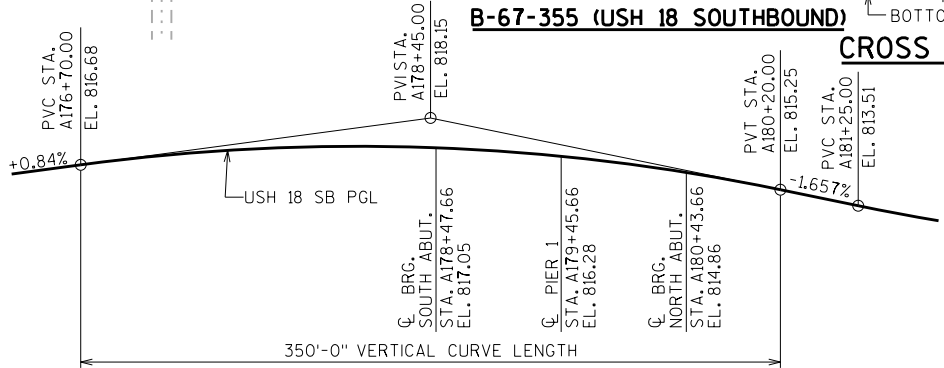
I.D. 2788-00-01F

DATE: JUNE 2017

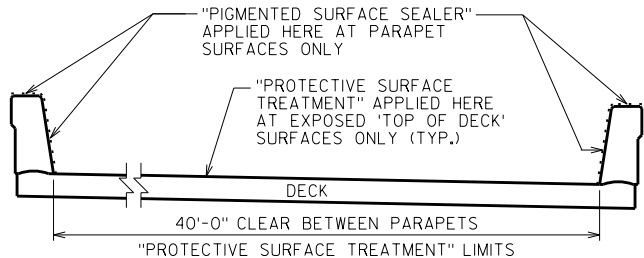
SCALE = 15.00



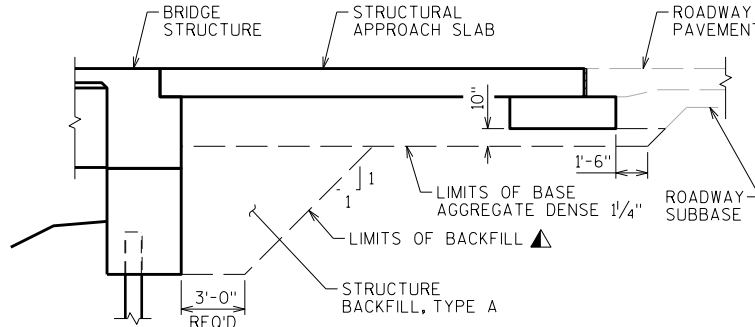
CROSS SECTION THRU ROADWAY LOOKING NORTH (UPSTATION)



PROFILE GRADE LINE - USH 18 SOUTHBOUND



SURFACE TREATMENT/SEALER LIMITS DETAIL



STRUCTURAL BACKFILL LIMITS

(TYPICAL SECTION THRU ABUTMENTS)

▲ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH APPROACH	SOUTH ABUT.	PIER 1	NORTH ABUT.	NORTH APPROACH	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-67-355	LS	—	—	—	—	—	—	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	—	—	137	—	129	—	226
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	163	—	—	—	163	326
501.1000.S	ICE HOT WEATHER CONCRETING	LB	2,520	445	390	625	390	445	4,815
502.0100	CONCRETE MASONRY BRIDGES	CY	336	60	52	83	52	60	643
502.3200	PROTECTIVE SURFACE TREATMENT	SY	884	103	—	—	—	103	1,090
502.3210	PIGMENTED SURFACE SEALER	SY	165	17	—	—	—	17	199
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	1,181	—	—	—	—	—	1,181
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	—	—	3,620	—	3,450	—	7,070
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	75,230	10,350	1,680	4,560	1,680	10,290	103,790
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,500	—	—	—	—	—	1,500
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	24	—	—	—	—	—	24
506.4000	STEEL DIAPHRAGMS B-67-355	EACH	20	—	—	—	—	—	20
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	12	—	12	—	24
550.0500	PILE POINTS	EACH	—	—	10	15	10	—	35
550.1120	PIILING STEEL HP 12-INCH X 53 LB	LF	—	—	600	975	700	—	2,275
606.0300	RIPRAP HEAVY	CY	—	—	260	50	240	—	550
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	100	—	100	—	200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	1	—	—	—	2	3
645.0120	GEOTEXTILE TYPE HR	SY	—	—	330	75	305	—	710
	NON-BID ITEMS								
	FILLER	SIZE	—	—	—	—	—	—	1/2", 3/4", 1/2"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS SHOWN ON THE STRUCTURAL BACKFILL LIMITS DETAIL.

NON-LAMINATED ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE QUANTITY FOR BACKFILL STRUCTURE, BID ITEM 210.1500, IS CALCULATED BASED ON THE STRUCTURAL BACKFILL LIMITS DETAIL.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK, SIDEWALK, STRUCTURAL APPROACH SLAB SURFACES, AND VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENTS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF EXTERIOR PARAPETS AND TO ALL EXPOSED SURFACES OF THE INTERIOR PARAPET, INCLUDING PARAPETS ON STRUCTURAL APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON "GENERAL PLAN" SHEET AND THE ABUTMENT DETAILS.

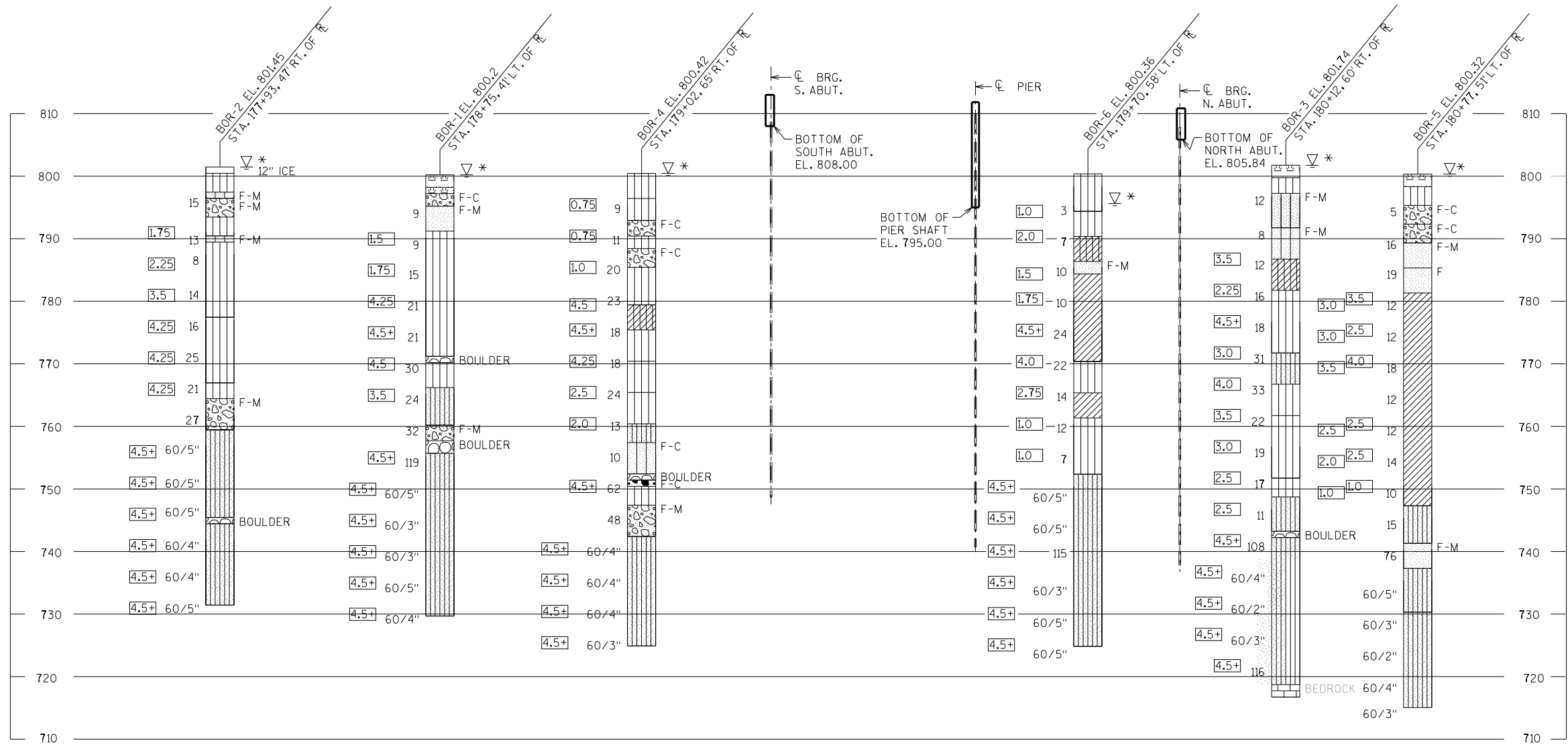
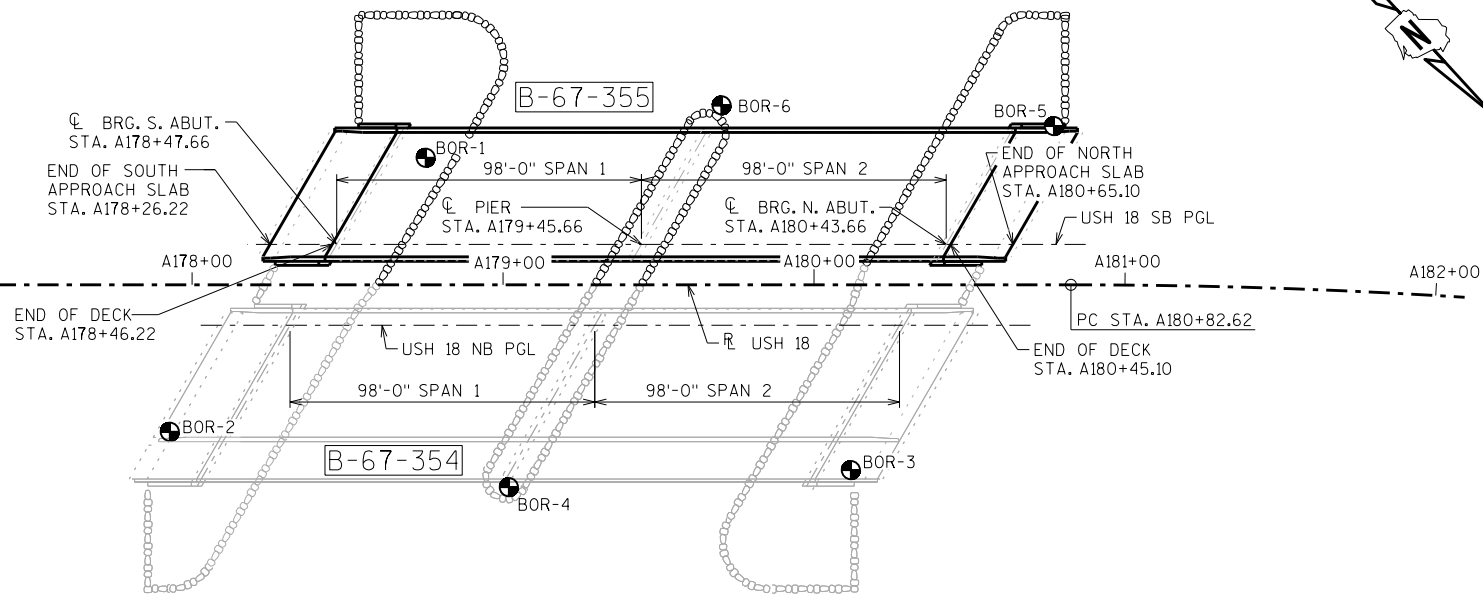
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE THE AVERAGE HAUNCH SHOWN ON THE "36W PRESTRESSED GIRDER DETAILS 2" SHEET.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-67-355" SHALL BE THE EXISTING GROUND LINE.

AT ABUTMENTS AND PIER(S), CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH STANDARD SPEC. 502.3.5.3.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
		DRAWN BY: ABS/JPH	PLANS CK'D: DMB
CROSS SECTION & QUANTITIES			SHEET 2

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	2/24/2016	154674.270	667484.398
2	2/25/2016	154683.573	667604.608
3	3/2/2016	154840.714	667451.555
4	3/8/2016	154770.409	667536.305
5	3/15/2016	154803.325	667328.643
6	3/9/2016	154726.187	667402.892
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) WAUKESHA COUNTY			



STATE PROJECT NUMBER
2788-00-71

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING

(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING
▽ END OF DRILLING
▽ AFTER DRILLING

ABBREVIATIONS

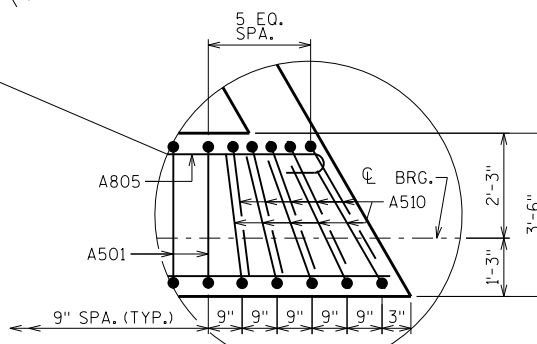
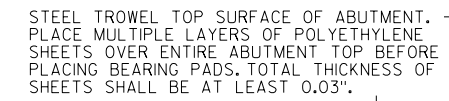
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY TLP/DDS		PLANS CKD. DMB	
SUBSURFACE EXPLORATION		SHEET 3	

SCALE = 30.00



- (A07) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 60'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQ'D.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

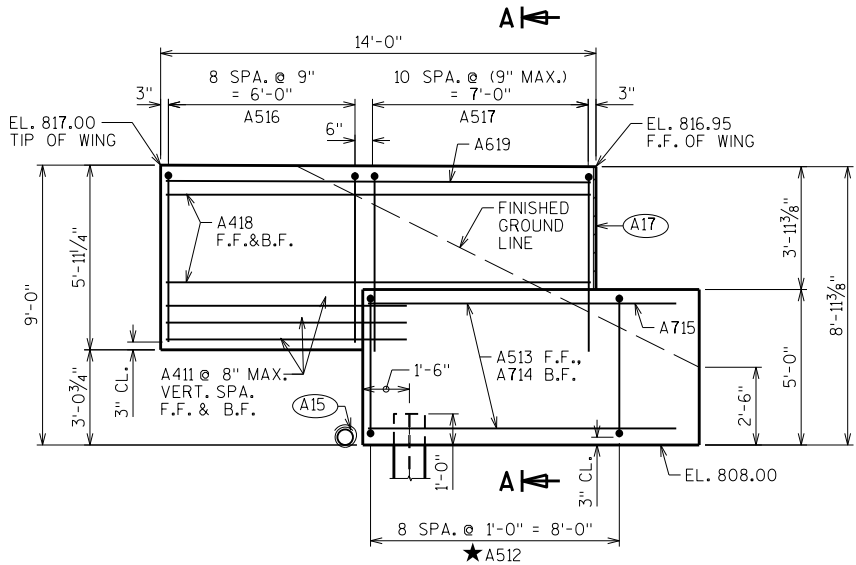


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
SOUTH ABUTMENT		SHEET 4	

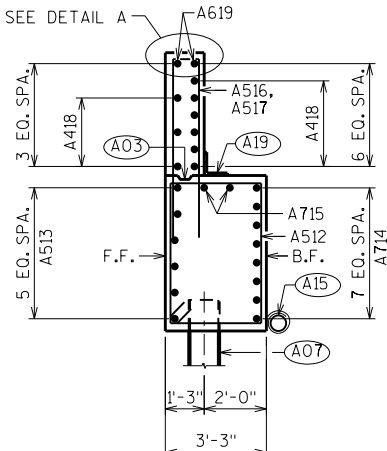
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

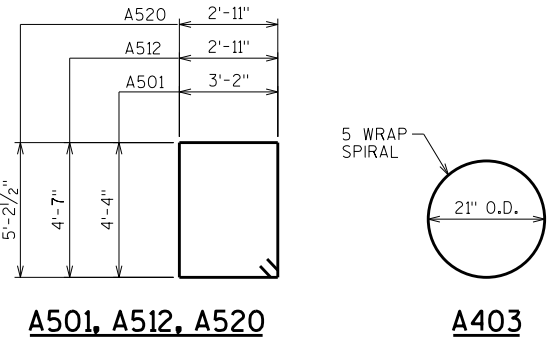
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		57	15'-8"	X		BODY - STIRRUP
A402		16	2'-3"			AT PILES - VERT. - 2 PER BODY PILE
A403		8	28'-0"	X		AT PILES - SPIRAL - 1 PER BODY PILE
A604		24	27'-5"			BODY - HORIZ.
A805		12	29'-5"	X		BODY - HORIZ. - B.F.
A506		26	6'-9"	X		BODY - VERT.
A407		5	25'-6"			BODY - HORIZ. - AT GIRDERS 1-3
A408		20	4'-3"	X		BODY - VERT. - TOP - BTWN. GIRDERS
A409		10	6'-9"			BODY - HORIZ. - TOP - BTWN. GIRDERS
A510		20	9'-11"	X		BODY - VERT. - END
A411	X	12	7'-9"			WINGS 1&2 - HORIZ. - F.F. & B.F.
A512	X	9	15'-8"	X		WING 1 - STIRRUP
A513	X	6	9'-11"			WING 1 - HORIZ. - F.F.
A714	X	8	1'-2"			WING 1 - HORIZ. - B.F.
A715	X	2	10'-7"			WING 1 - HORIZ. - TOP
A516	X	9	11'-8"	X		WING 1 - VERT.
A517	X	11	12'-4"	X		WING 1 - VERT.
A418	X	18	13'-8"			WINGS 1&2 - HORIZ. - F.F.&B.F.
A619	X	4	13'-8"			WINGS 1&2 - HORIZ. - TOP
A520	X	9	16'-11"	X		WING 2 - STIRRUP
A521	X	7	11'-1"			WING 2 - HORIZ. - F.F.
A722	X	8	9'-1"			WING 2 - HORIZ. - B.F.
A723	X	2	10'-4"			WING 2 - HORIZ. - TOP
A524	X	9	11'-10"	X		WING 2 - VERT.
A525	X	11	12'-4"	X		WING 2 - VERT.



ELEVATION - WING 1

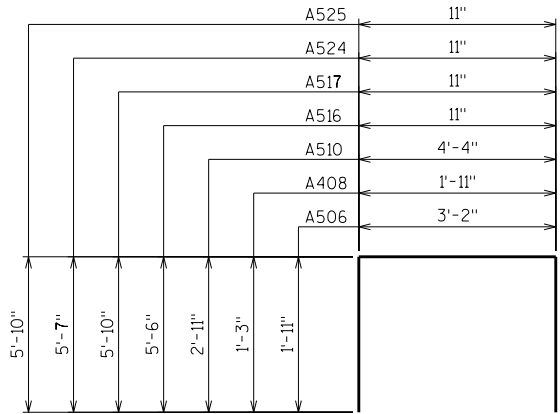


SECTION A-A

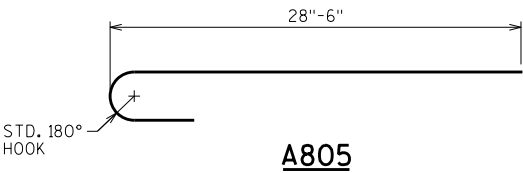


A501, A512, A520

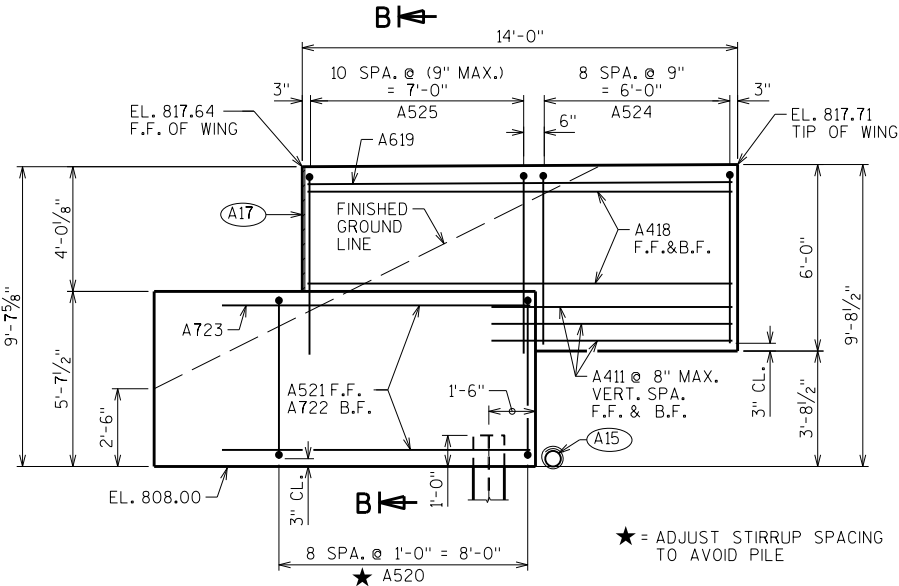
A403



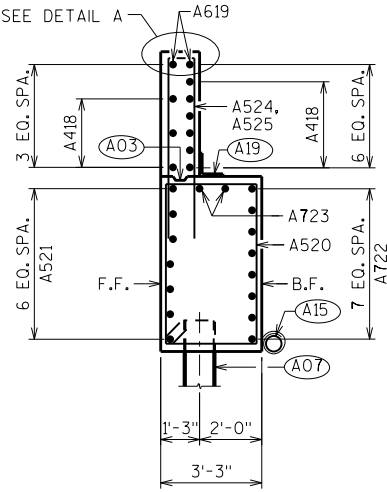
A506, A408, A510, A516, A517, A524, A525



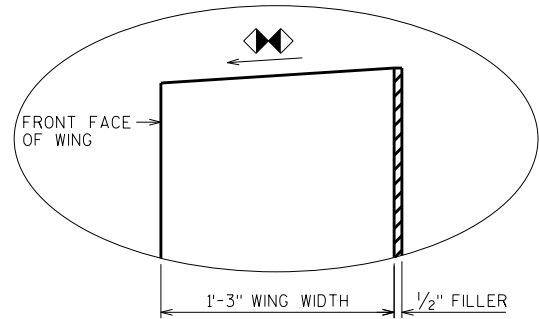
A805



ELEVATION - WING 2

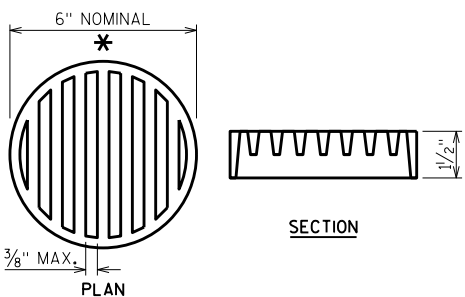


SECTION B-B



DETAIL A

◆◆ = SLOPE TOP OF WING A MIN. OF 1/8" PER FOOT AWAY FROM APPROACH SLAB.

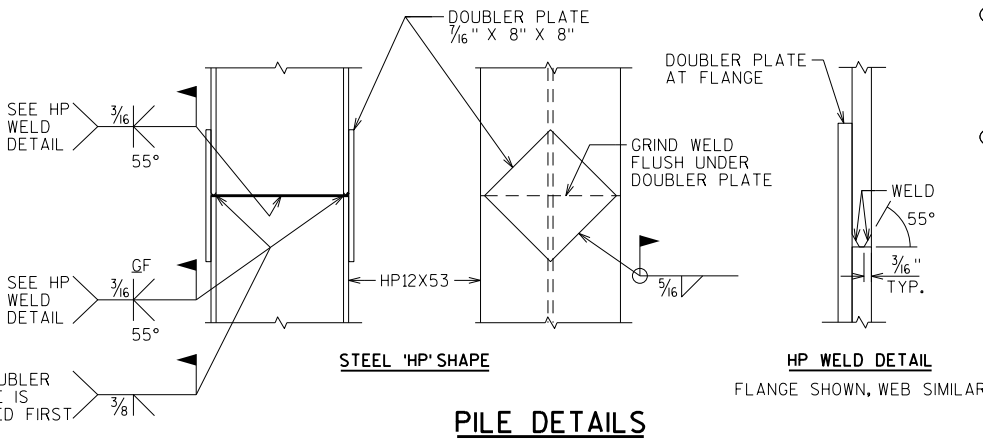


RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHEMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



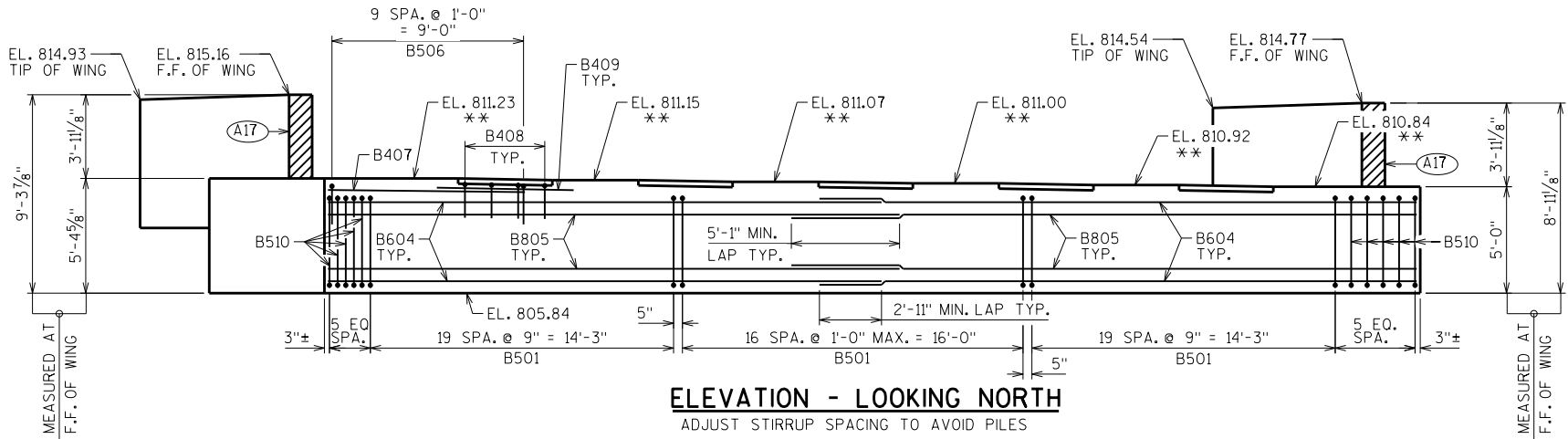
PILE DETAILS

- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A07) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 60'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQ'D.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
SOUTH ABUTMENT DETAILS		SHEET 5	

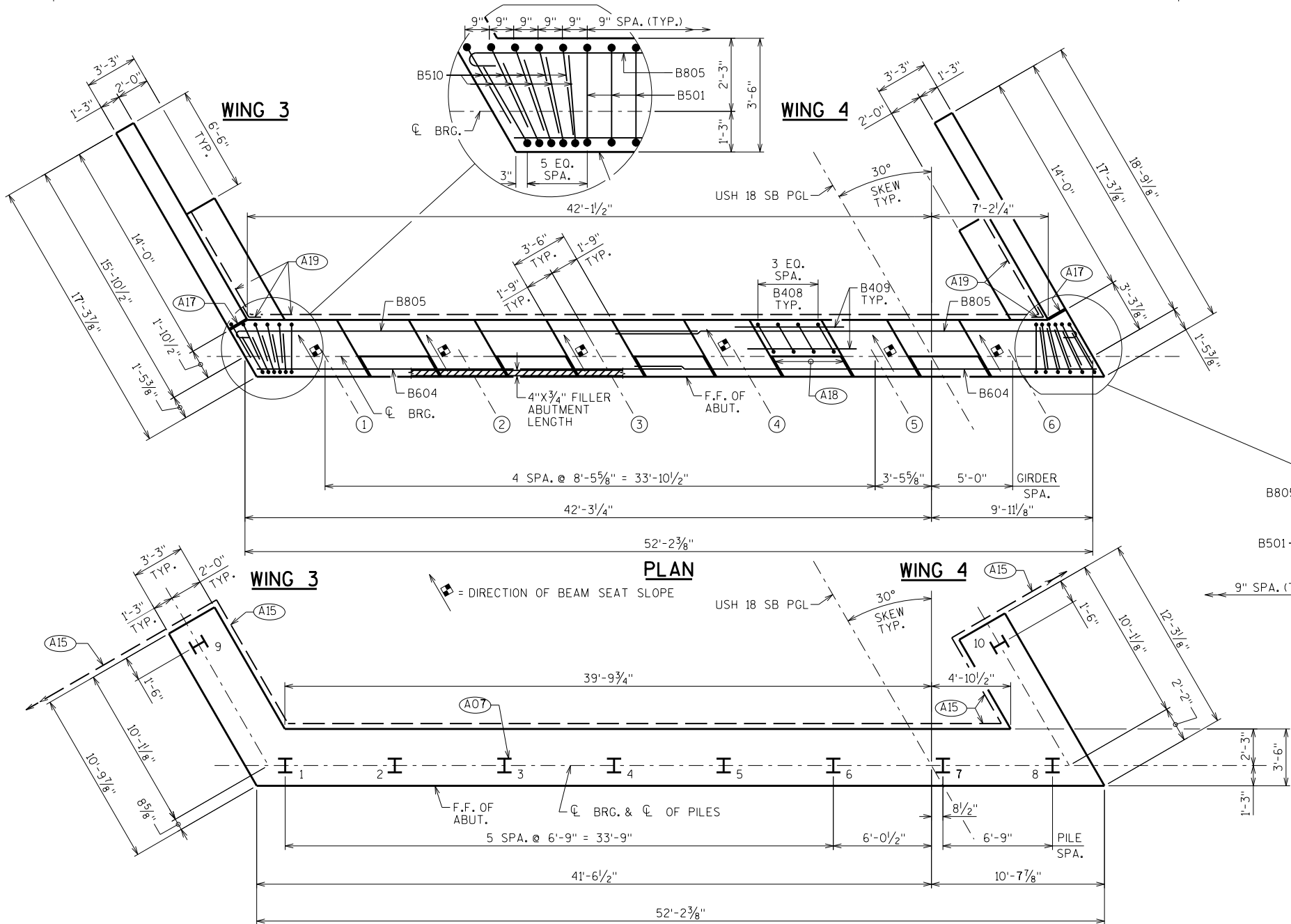
**ELEVATION TAKEN AT INTERSECTION OF C BRG. & C OF GIRDER

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".



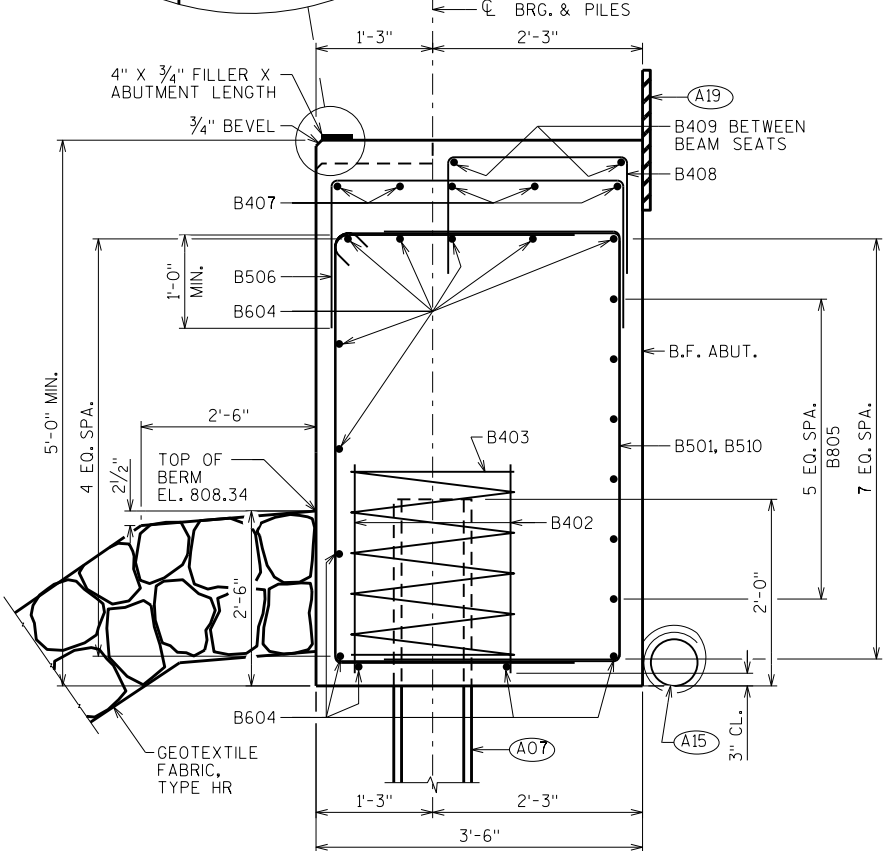
ELEVATION - LOOKING NORTH

ADJUST STIRRUP SPACING TO AVOID PILES

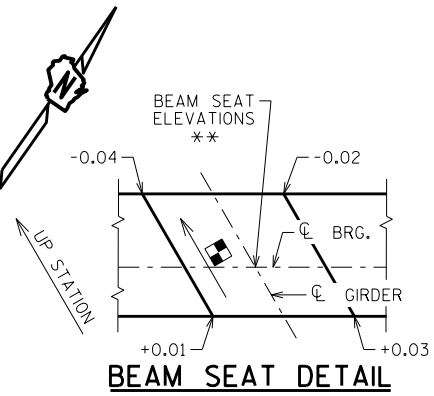
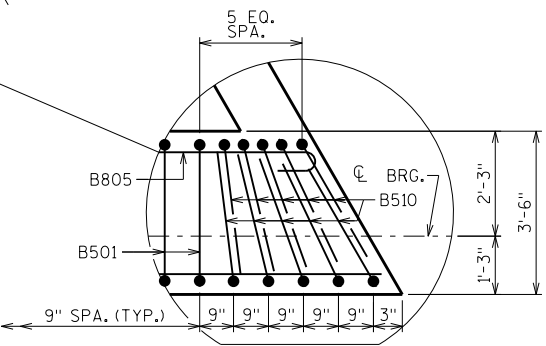


PLAN

PILE PLAN



SECTION THRU BODY



BEAM SEAT DETAIL

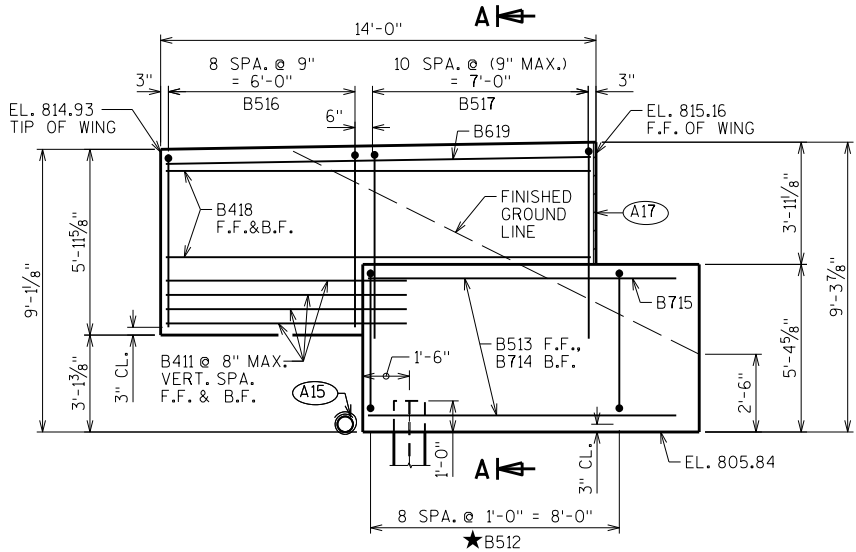
- (A07) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 70'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQ'D.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
NORTH ABUTMENT		SHEET 6	

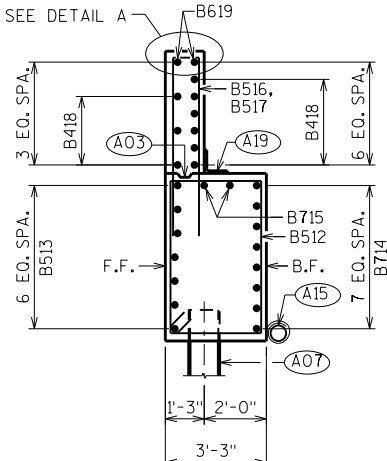
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

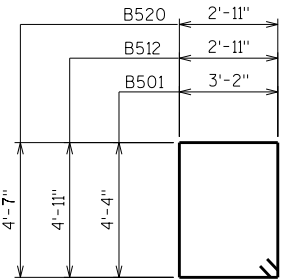
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		57	15'-8"	X		BODY - STIRRUP
B402		16	2'-3"			AT PILES - VERT. - 2 PER BODY PILE
B403		8	28'-0"	X		AT PILES - SPIRAL - 1 PER BODY PILE
B604		24	27'-5"			BODY - HORIZ.
B805		12	29'-5"	X		BODY - HORIZ. - B.F.
B506		10	6'-9"	X		BODY - VERT.
B407		5	9'-4"			BODY - HORIZ. - AT GIRDERS 1-2
B408		20	4'-3"	X		BODY - VERT. - TOP - BTWN. GIRDERS
B409		10	6'-9"			BODY - HORIZ. - TOP - BTWN. GIRDERS
B510		20	9'-11"	X		BODY - VERT. - END
B411	X	14	7'-9"			WINGS 3&4 - HORIZ. - F.F. & B.F.
B512	X	9	16'-4"	X		WING 3 - STIRRUP
B513	X	7	9'-11"			WING 3 - HORIZ. - F.F.
B714	X	8	11'-2"			WING 3 - HORIZ. - B.F.
B715	X	2	10'-7"			WING 3 - HORIZ. - TOP
B516	X	9	11'-8"	X		WING 3 - VERT.
B517	X	11	12'-2"	X		WING 3 - VERT.
B418	X	18	13'-8"			WINGS 3&4 - HORIZ. - F.F.&B.F.
B619	X	4	13'-8"			WINGS 3&4 - HORIZ. - TOP
B520	X	9	15'-8"	X		WING 4 - STIRRUP
B521	X	6	11'-1"			WING 4 - HORIZ. - F.F.
B722	X	8	9'-1"			WING 4 - HORIZ. - B.F.
B723	X	2	10'-4"			WING 4 - HORIZ. - TOP
B524	X	9	11'-2"	X		WING 4 - VERT.
B525	X	11	12'-2"	X		WING 4 - VERT.



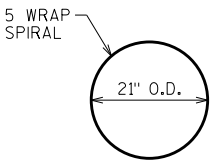
ELEVATION - WING 3



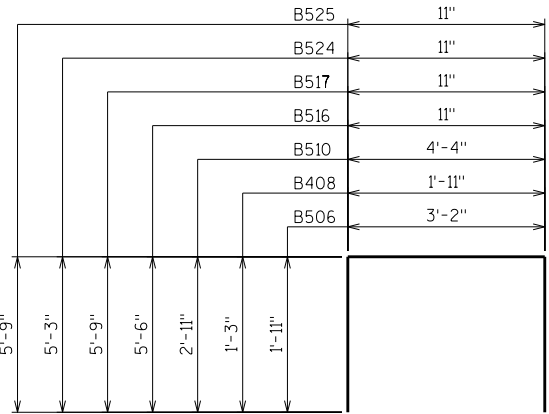
SECTION A-A



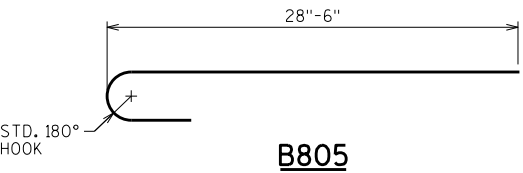
B501, B512, B520



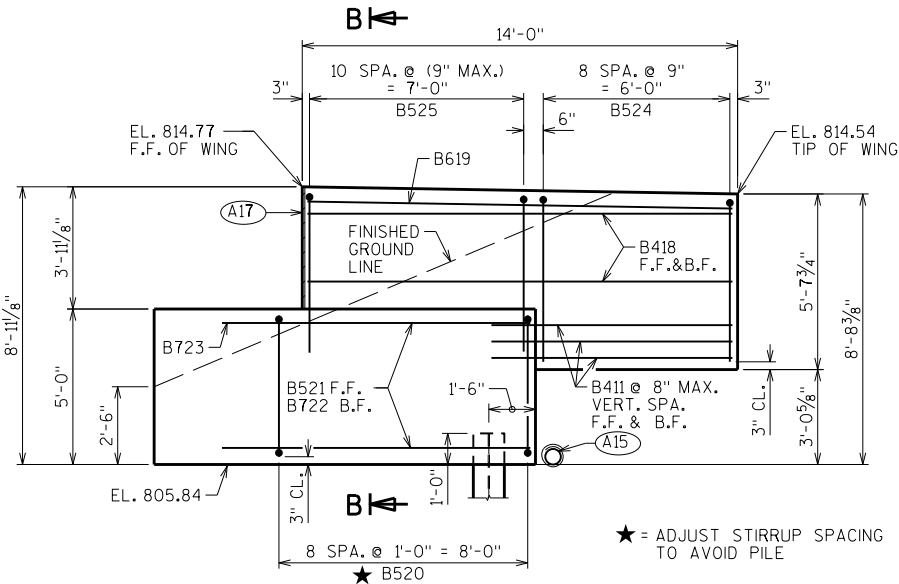
B403



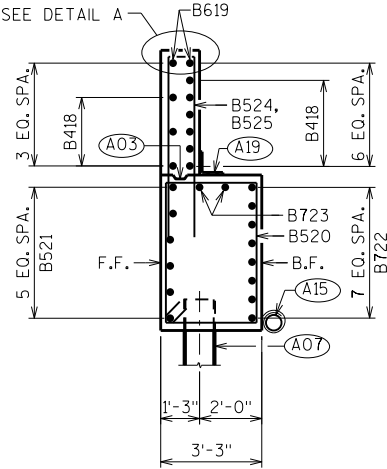
B506, B408, B510, B516, B517, B524, B525



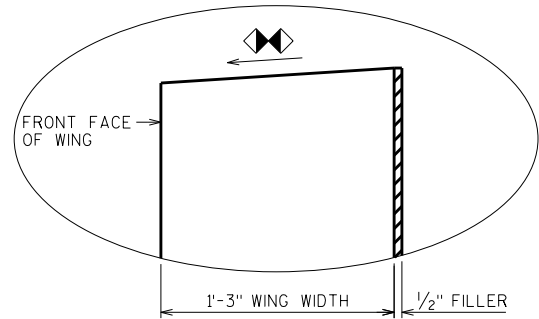
B805



ELEVATION - WING 4

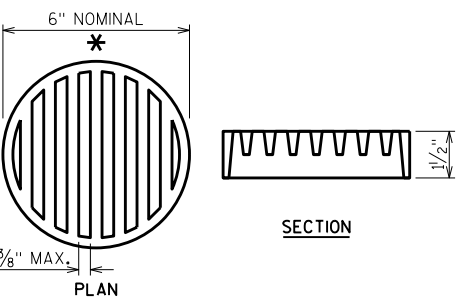


SECTION B-B



DETAIL A

◆◆ = SLOPE TOP OF WING A MIN. OF 1/8" PER FOOT AWAY FROM APPROACH SLAB.

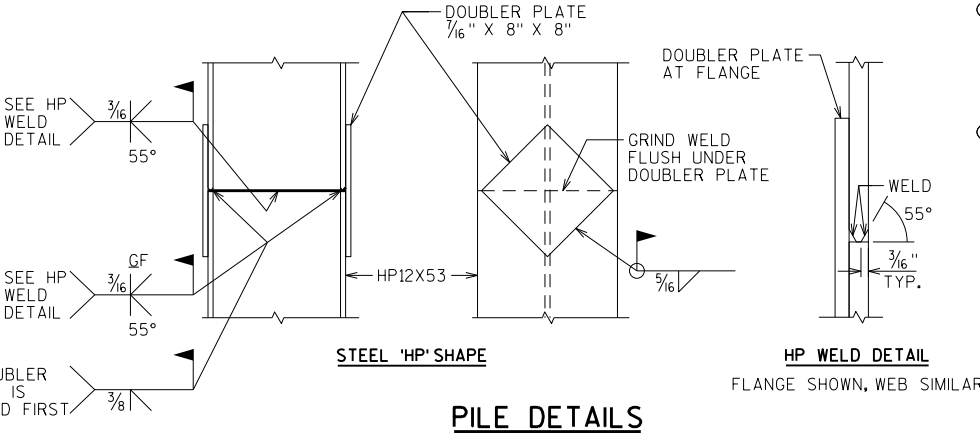


RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



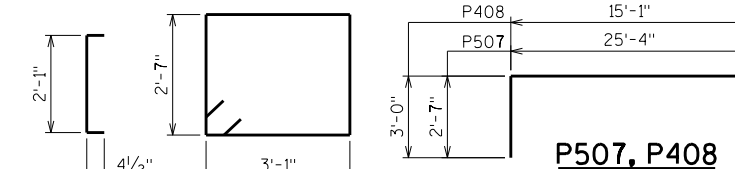
PILE DETAILS

- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A07) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 70'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQ'D.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

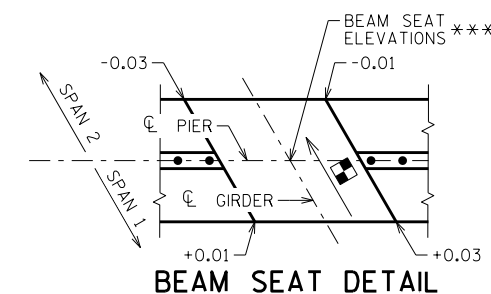
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS C&D. DMB
NORTH ABUTMENT DETAILS		SHEET 7	

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE

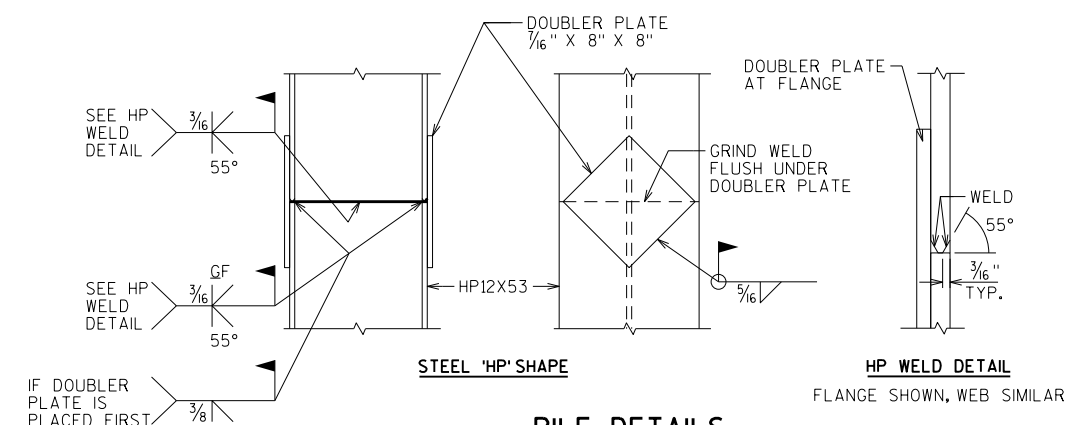
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P401	X	60	23'-5"			PIER - HORIZ.
P502	X	30	6'-10"	X		PIER - HORIZ. - ENDS
P503	X	98	16'-6"			PIER - VERT.
P404	X	225	2'-8"	X		PIER - HORIZ. - TIE BARS
P505	X	31	12'-0"	X		PIER CAP - STIRRUP
P506	X	9	8'-1"	X		PIER CAP - HORIZ. - ENDS
P507	X	8	27'-10"	X		PIER CAP - HORIZ. - TOP
P408	X	4	18'-0"	X		PIER CAP - HORIZ. - TOP
P509	X	15	6'-4"	X		PIER CAP - VERT. - TOP
P510	X	25	2'-0"			PIER CAP - DOWEL BARS
P511	X	16	25'-4"			PIER CAP - HORIZ.



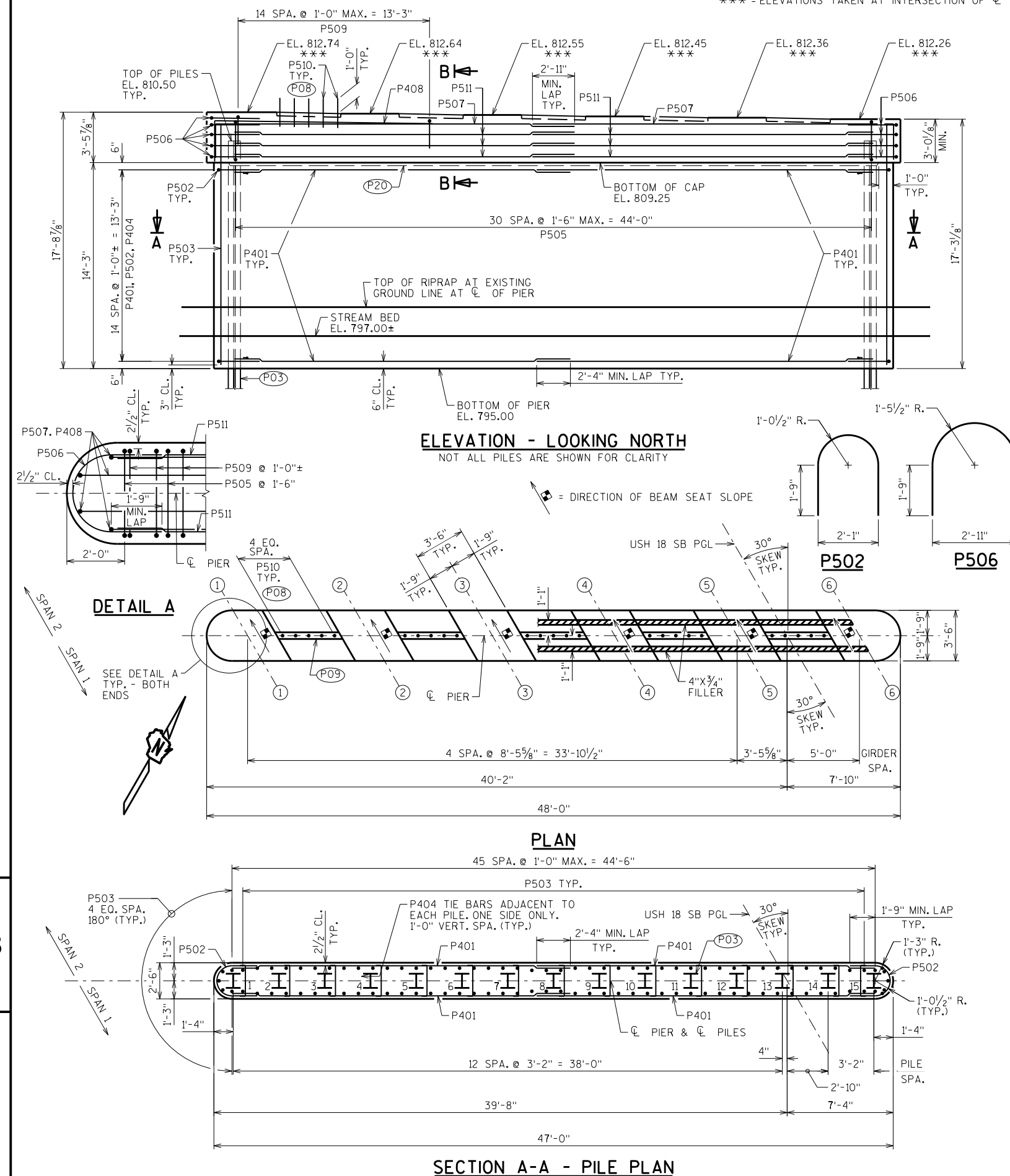
P505



SECTION B-B THRU CAP



PILE DETAILS



(P03) SUPPORT PIER ON HP 12 X 53
STEEL PILING, ESTIMATED 65'-0" LONG
WITH A REQUIRED DRIVING RESISTANCE OF
220 TONS PER PILE. PILE POINTS REQ'D.

(P08) P510 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS.
MAY BE PLACED AFTER CONCRETE IS POURED
BUT BEFORE INITIAL SET HAS TAKEN PLACE.
(EMBED 1'-0" INTO CONC.)

(P09) KEYED CONST. JOINT-FORMED BY
BEVELED 2 x 6 BETWEEN BEAM SEATS.

(P20) 45'-0" x 10" x 3 1/2" DEEP KEYED CONST.
JOINT-FORMED BY BEVELED 4 x 12.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
		DRAWN BY	PLANS CK'D. DM
PIER		SHEET 8	

SCALE = 4.00

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH, AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

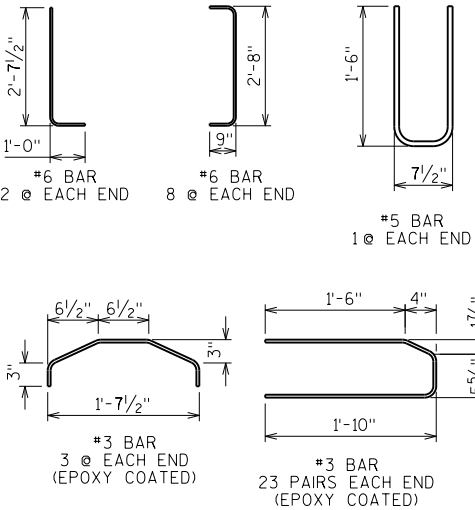
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



SIDE VIEW & TYPICAL SECTION IN SPAN

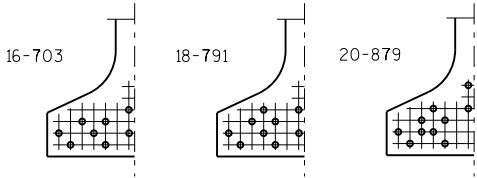
- (A) DETAIL TYP. AT EACH END
(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

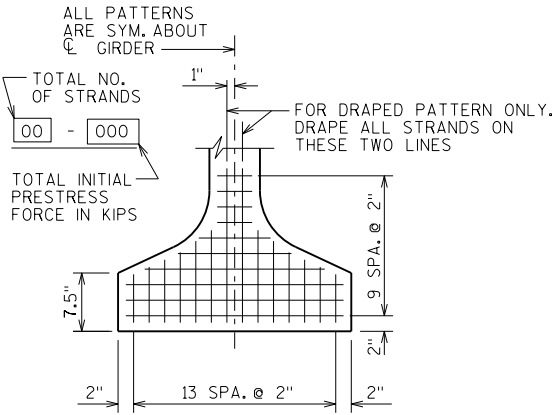
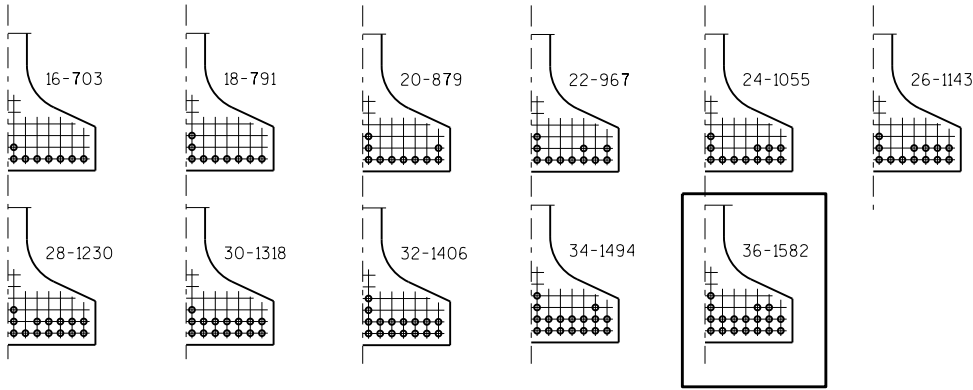
GIRDER DATA																								
SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEF. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN					UNDRAPED PATTERN		
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.)				TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
																			"A" MIN.	"B" MIN.	"B" MAX.	"C"		
1	1,6	98.375	0.8	1.6	2.1	2.5	2.6	2.5	2.1	1.5	0.8	8000	7"	7"	7"	0.6	36	6700	31	11.5	14.5	5		
1	2-5	98.375	0.9	1.7	2.3	2.7	2.8	2.6	2.3	1.6	0.9	8000	7"	7"	7"	0.6	36	6700	31	11.5	14.5	5		
2	1,6	98.375	0.8	1.5	2.1	2.5	2.6	2.5	2.1	1.6	0.8	8000	7"	7"	7"	0.6	36	6700	31	11.5	14.5	5		
2	2-5	98.375	0.9	1.6	2.2	2.7	2.8	2.7	2.3	1.7	0.9	8000	7"	7"	7"	0.6	36	6700	31	11.5	14.5	5		

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
36W" PRESTRESSED GIRDER DETAILS		SHEET 9	
1			

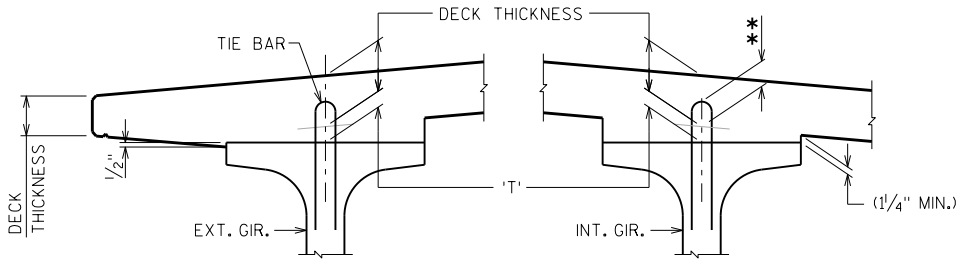


STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY
TO AVOID DRAPING OF STRANDS

0.6"Ø STRANDS



TYP. STRAND PATTERN



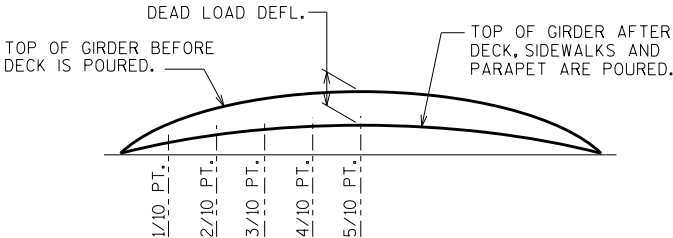
DECK HAUNCH DETAIL

IF 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR, ** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C.G. OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

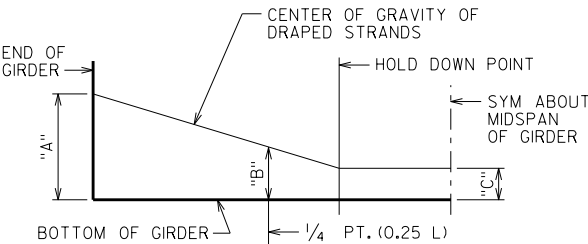
NOTE: AN AVERAGE HAUNCH ('T') OF 2.6" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

ARRANGEMENT AT C.G. SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Ø STRANDS



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	4.47
2	4.47

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'.
USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
36W" PRESTRESSED GIRDER DETAILS		SHEET 10	
2			

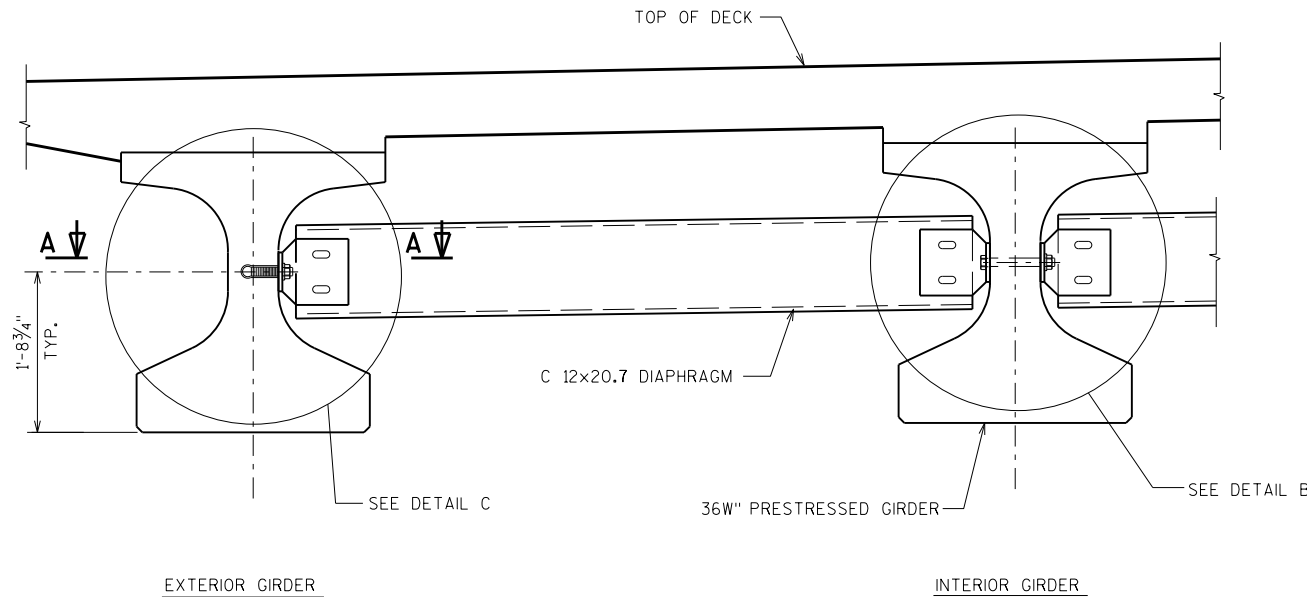
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-67-355", EACH.

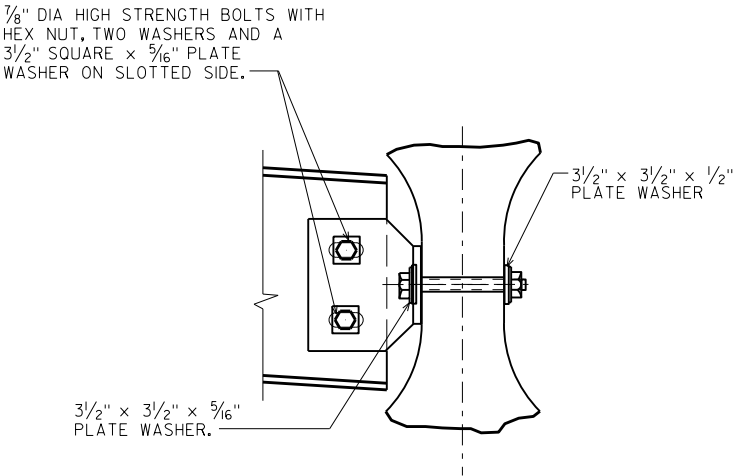
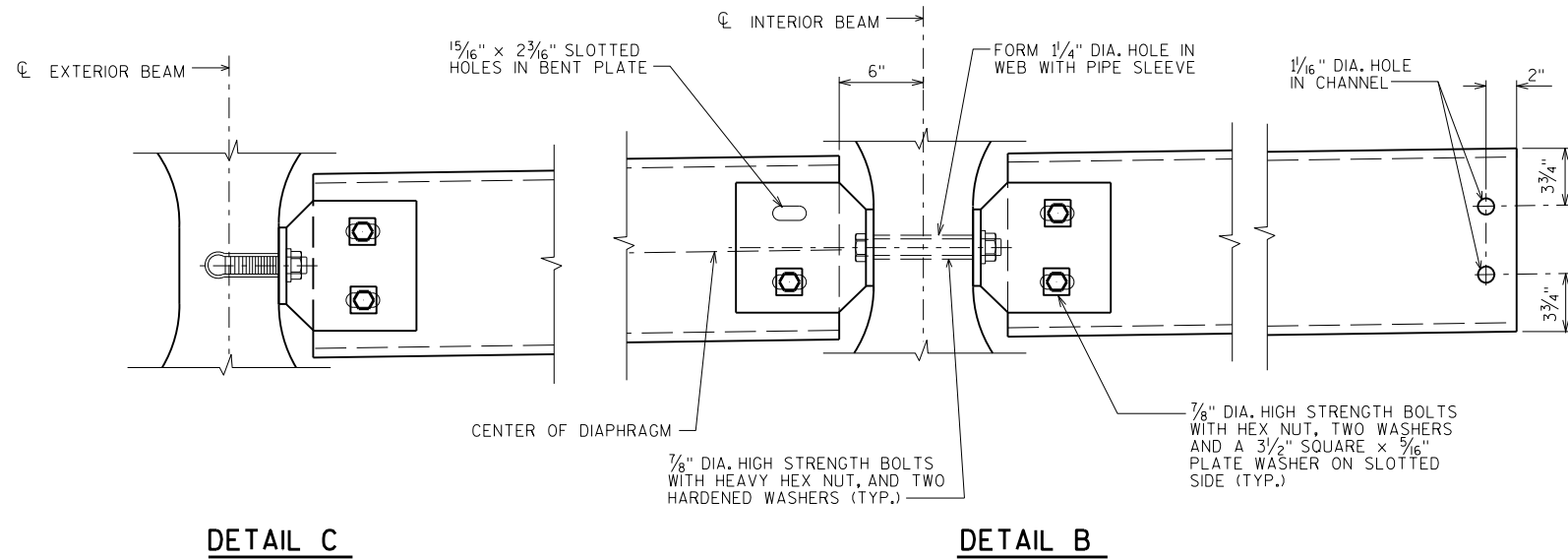
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

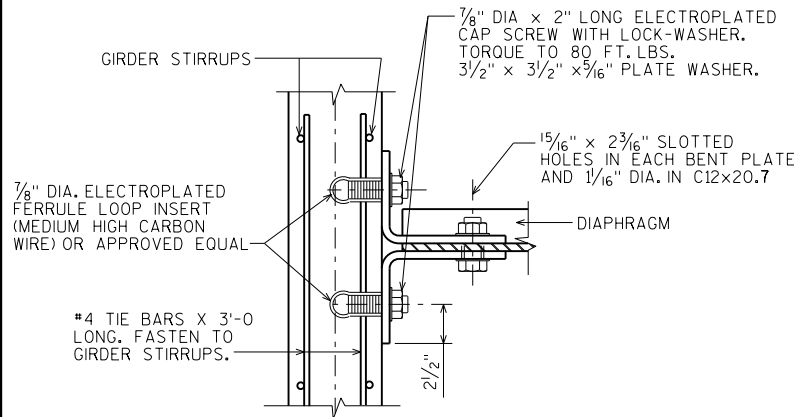
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



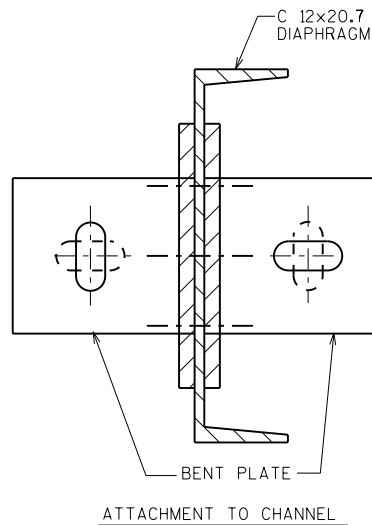
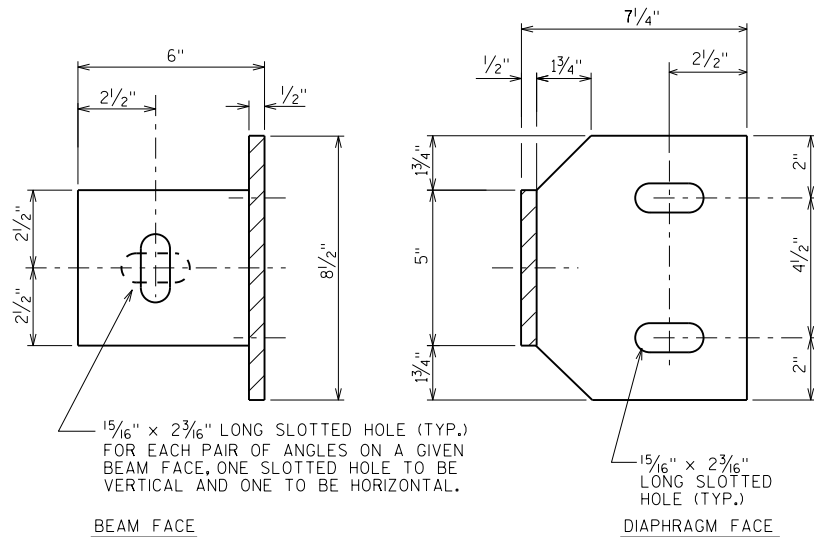
PART TRANSVERSE SECTION AT DIAPHRAGM



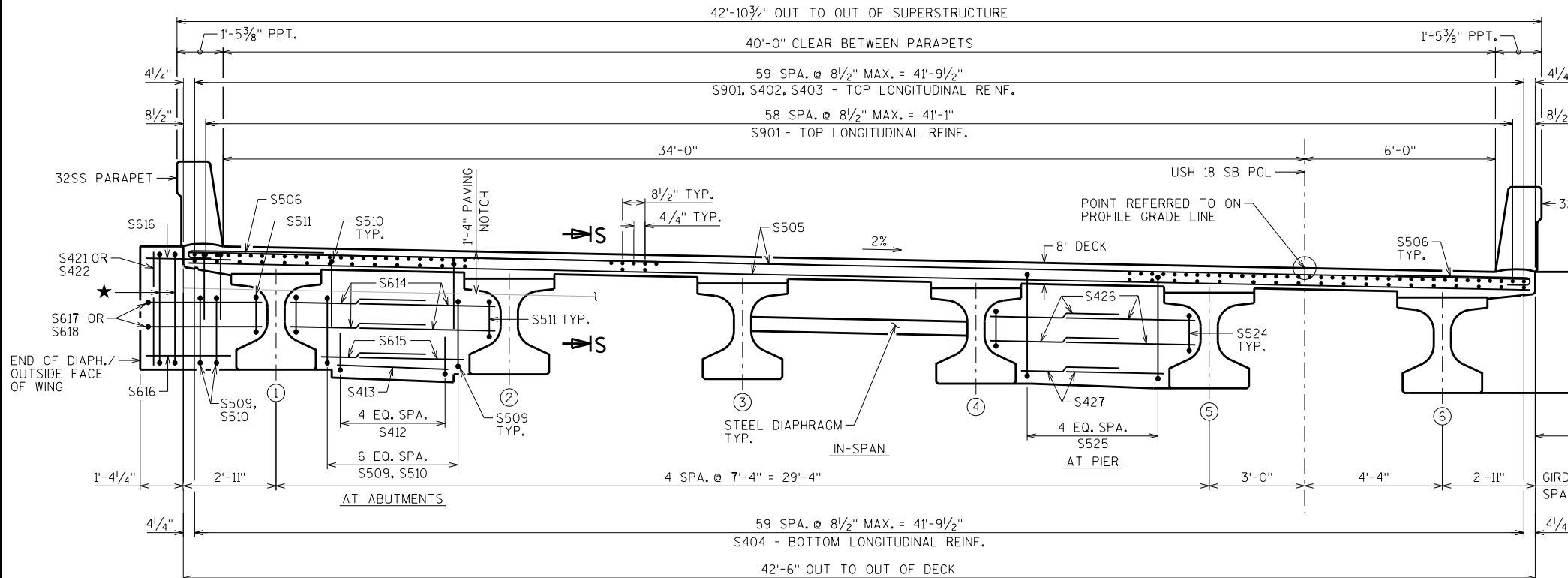
SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°



SECTION A-A
(FOR EXTERIOR ATTACHMENT)

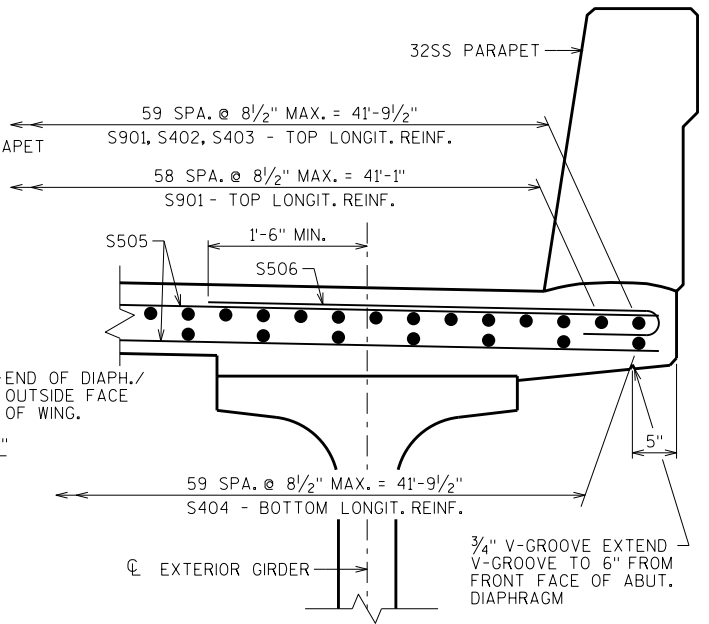


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
STEEL DIAPHRAGM		SHEET 11	



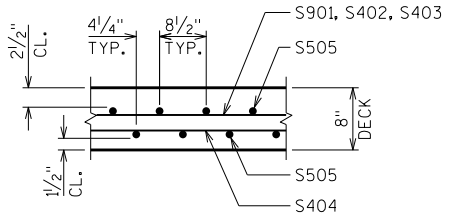
CROSS SECTION THRU ROADWAY - LOOKING NORTH

* MEASURED NORMAL TO USH 18 SB PGL



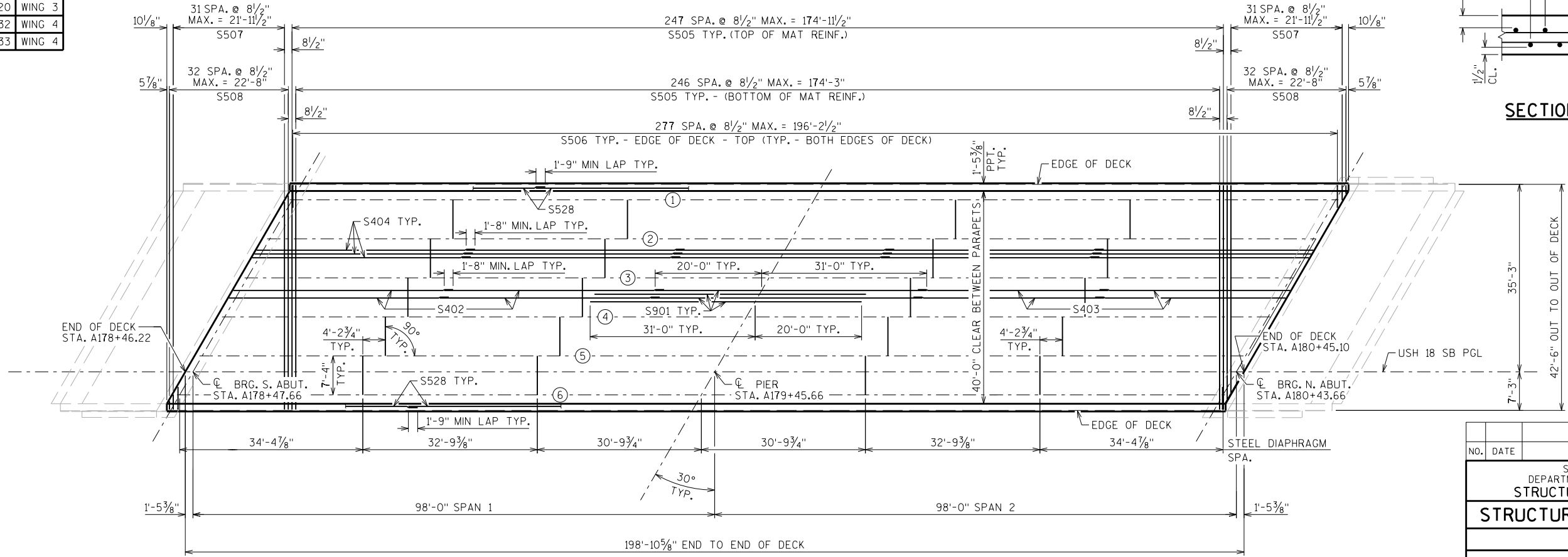
SECTION THRU EDGE OF DECK

SHOWING RIGHT EDGE OF DECK,
LEFT EDGE OF DECK SIMILAR



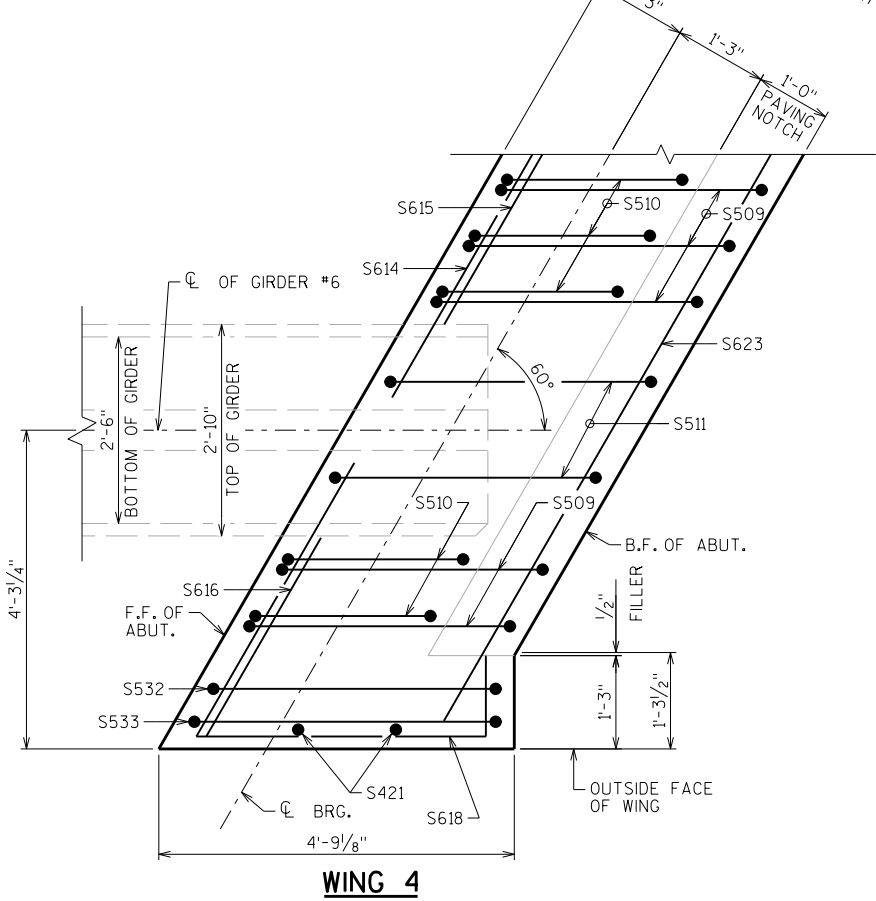
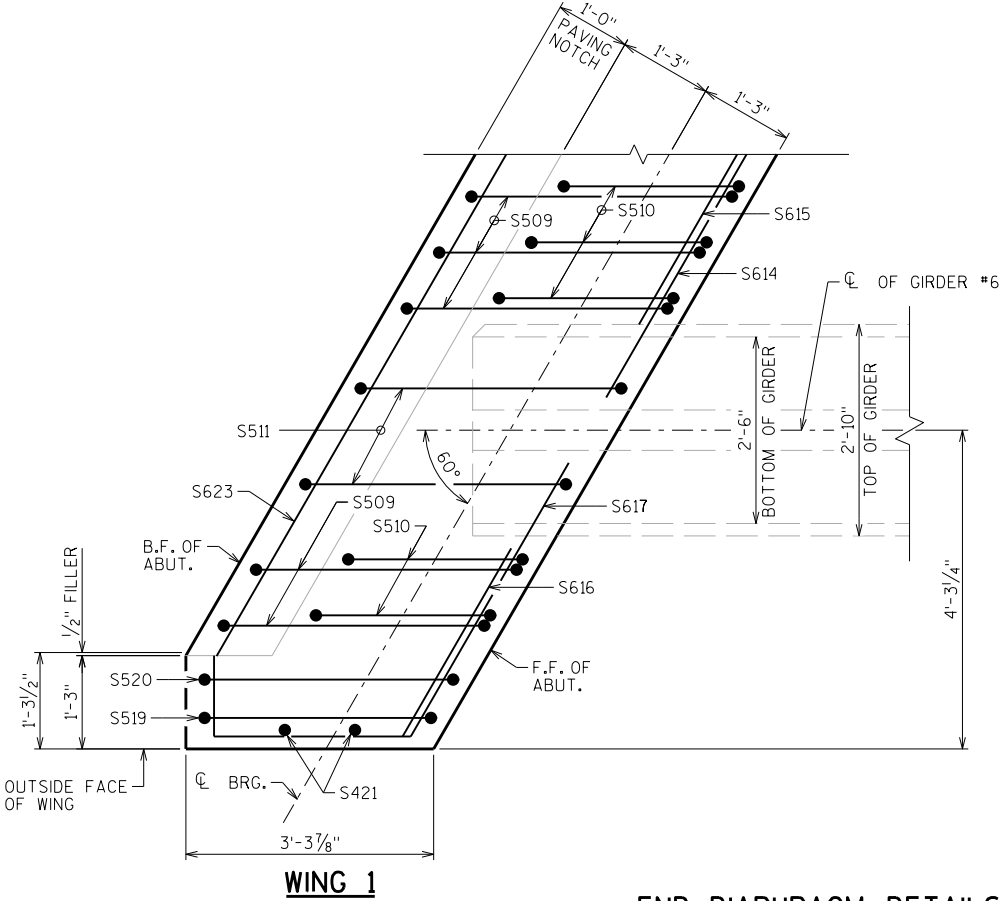
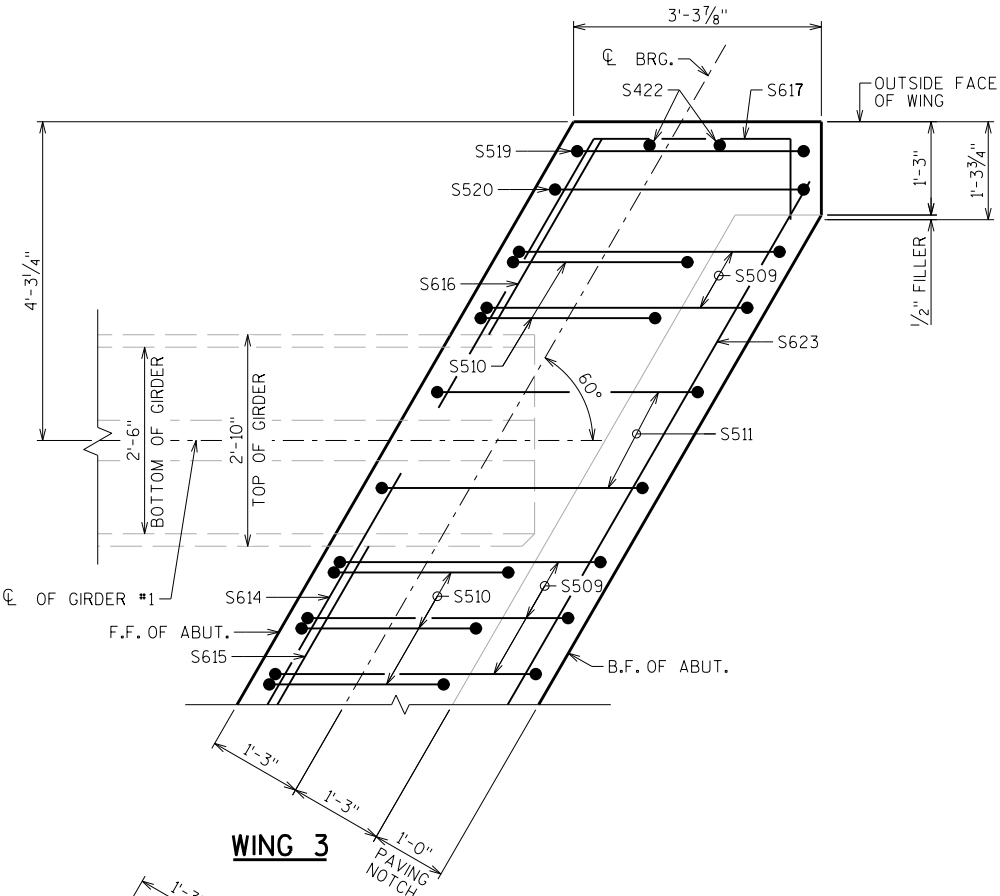
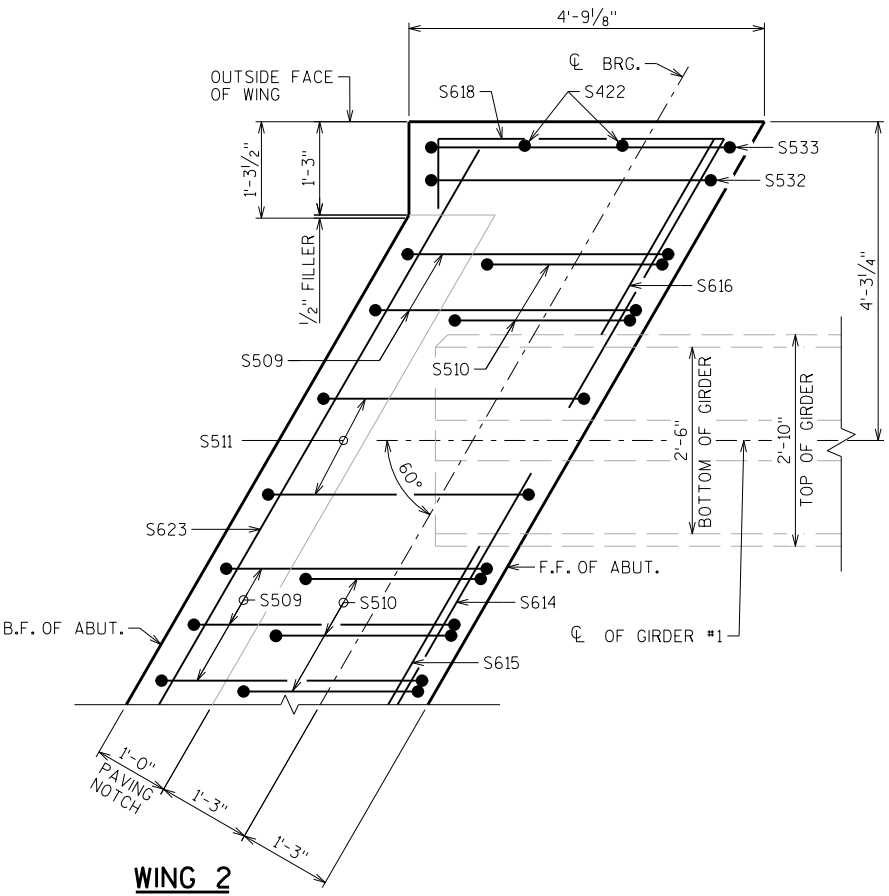
SECTION S-S

★	=	S519	WING 1
		S520	WING 1
★	=	S532	WING 2
		S533	WING 2
★	=	S519	WING 3
		S520	WING 3
★	=	S532	WING 4
		S533	WING 4



PLAN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
SUPERSTRUCTURE		SHEET 12	



END DIAPHRAGM DETAILS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
SUPERSTRUCTURE DIAPH. DETAILS		SHEET 13	

SCALE = 5.00

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR MARK	NO. REQ'D.	LENGTH
S507	2 OF 32 SERIES	2'-2" TO 40'-3"
S508	2 OF 33 SERIES	1'-7" TO 40'-10"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
SUPERSTRUCTURE DETAILS		SHEET 14	

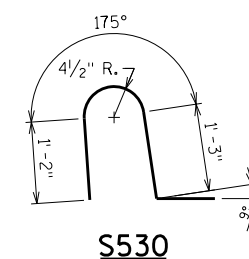
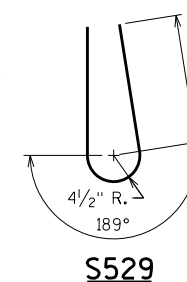
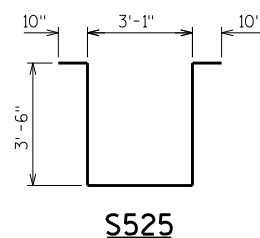
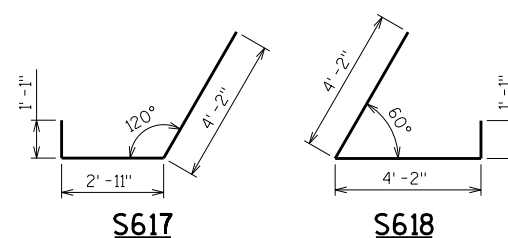
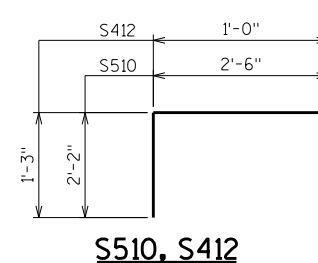
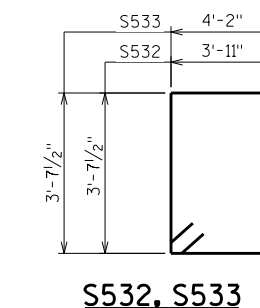
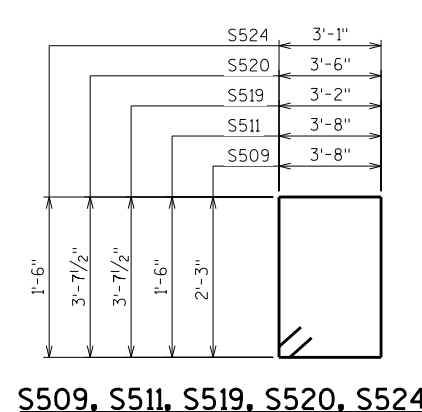
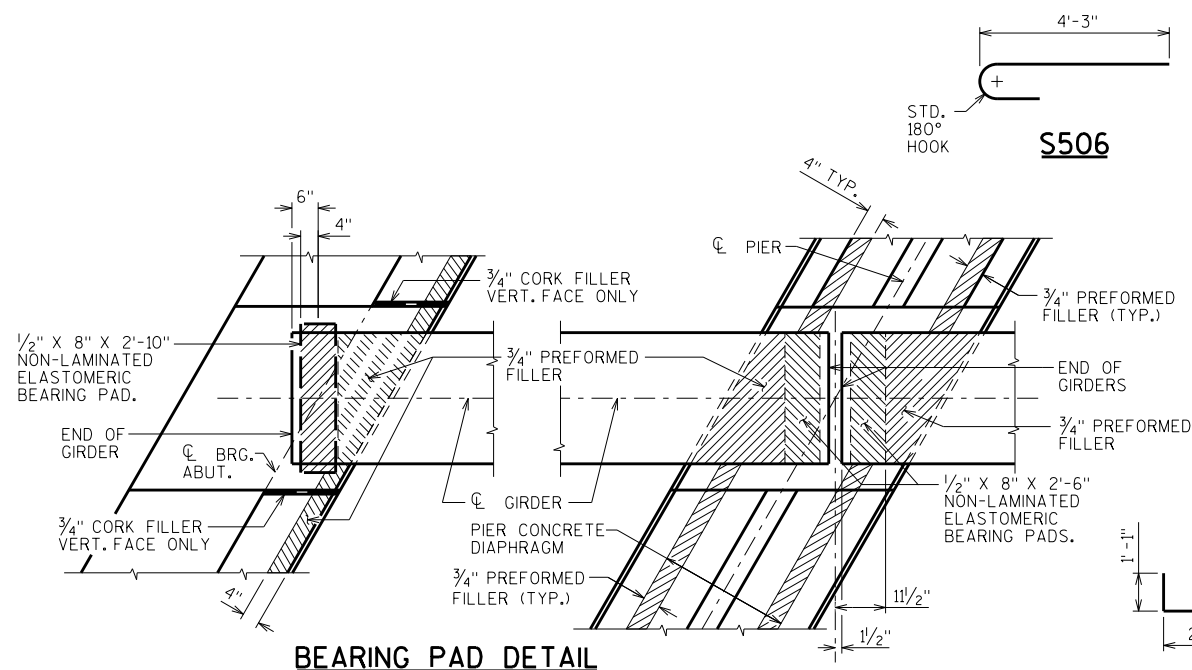


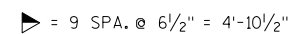
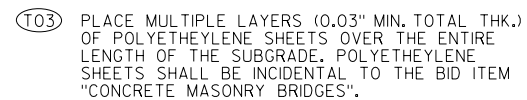
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE

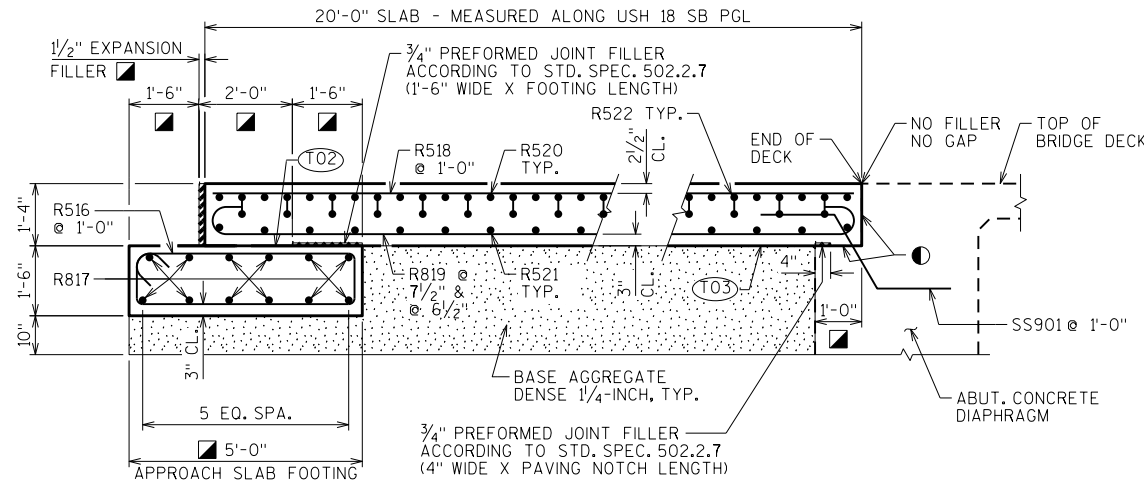
STAINL
STEEL



	℄ S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ N. ABUT
LT EOD	817.63	817.57	817.50	817.43	817.35	817.26	817.16	817.06	816.96	816.84	816.72	816.59	816.46	816.32	816.17	816.01	815.85	815.69	815.53	815.36	815.20
GIRDER 1	817.60	817.54	817.48	817.41	817.33	817.24	817.15	817.05	816.94	816.83	816.71	816.58	816.45	816.31	816.16	816.01	815.85	815.68	815.52	815.36	815.20
GIRDER 2	817.48	817.42	817.36	817.29	817.21	817.13	817.04	816.95	816.84	816.73	816.61	816.49	816.36	816.22	816.08	815.93	815.77	815.61	815.44	815.28	815.12
GIRDER 3	817.35	817.30	817.24	817.18	817.10	817.02	816.94	816.84	816.74	816.63	816.52	816.40	816.27	816.14	815.99	815.85	815.69	815.53	815.37	815.20	815.04
GIRDER 4	817.23	817.18	817.12	817.06	816.99	816.91	816.83	816.74	816.64	816.53	816.42	816.31	816.18	816.05	815.91	815.76	815.61	815.45	815.29	815.13	814.97
GIRDER 5	817.10	817.05	817.00	816.94	816.87	816.80	816.72	816.63	816.54	816.43	816.33	816.21	816.09	815.96	815.82	815.68	815.53	815.38	815.21	815.05	814.89
PGL	817.05	817.00	816.95	816.89	816.82	816.75	816.67	816.59	816.49	816.39	816.29	816.17	816.05	815.92	815.79	815.65	815.50	815.34	815.18	815.02	814.86
GIRDER 6	816.97	816.93	816.88	816.82	816.76	816.68	816.61	816.52	816.43	816.33	816.23	816.11	816.00	815.87	815.74	815.60	815.45	815.30	815.14	814.98	814.81
RT FOD	816.94	816.90	816.85	816.80	816.73	816.66	816.59	816.50	816.41	816.32	816.21	816.10	815.98	815.86	815.73	815.59	815.44	815.29	815.13	814.97	814.81

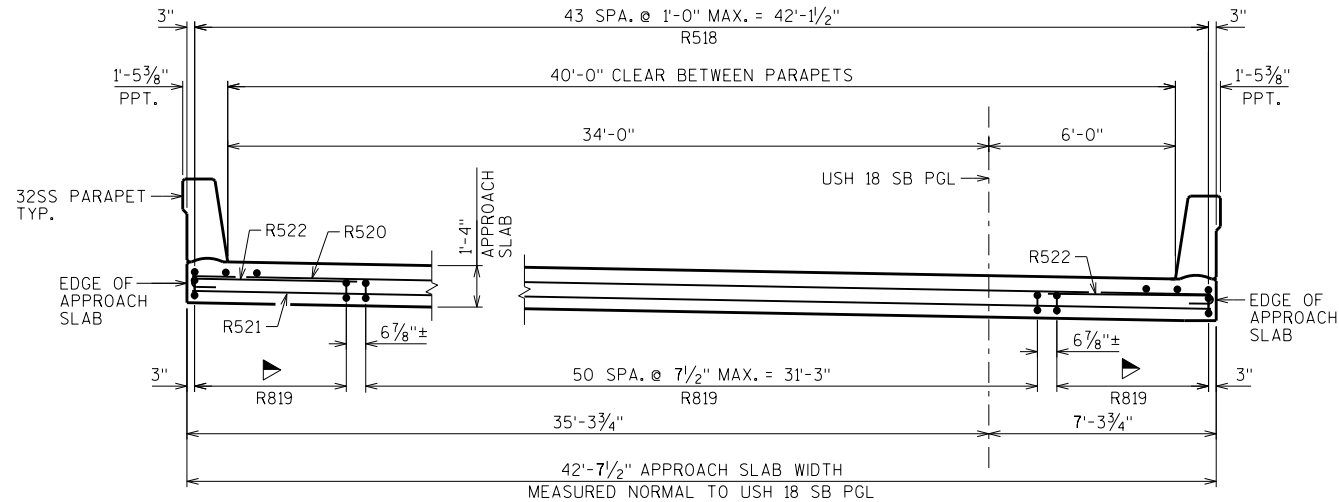


SCALE = 6.00



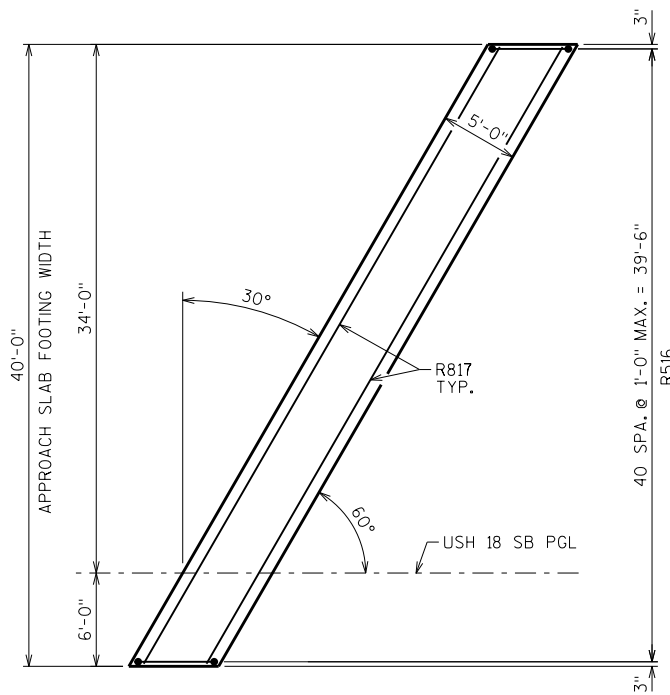
SECTION THRU APPROACH SLAB

- APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCUTRAL APPROACH SLAB.
- MEASURED NORMAL TO ABUTMENT
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING. POLYETHYLENE SHEETS SHALL BE INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE. POLYETHYLENE SHEETS SHALL BE INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

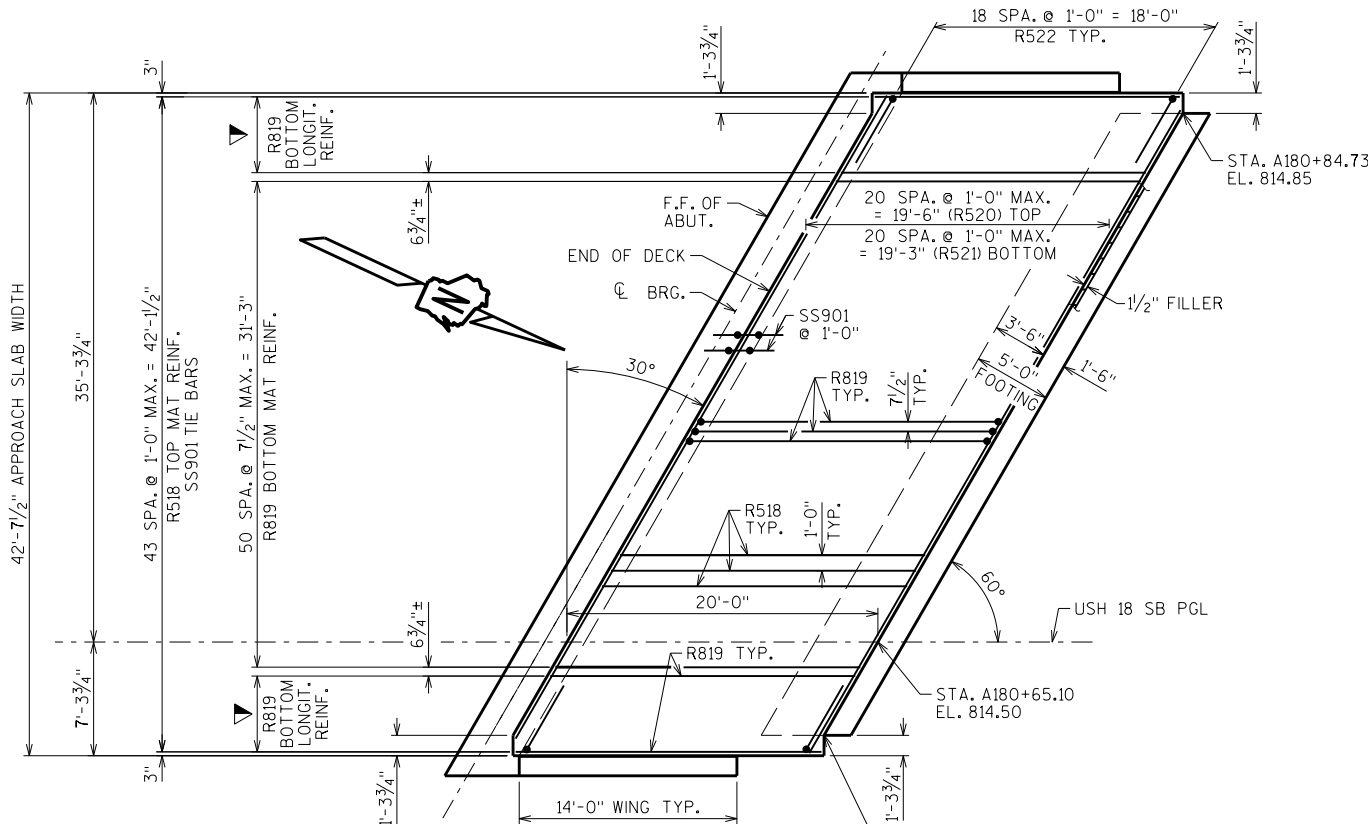


SECTION THRU APPROACH SLAB

LOOKING NORTH



PLAN VIEW - APPROACH SLAB FOOTING

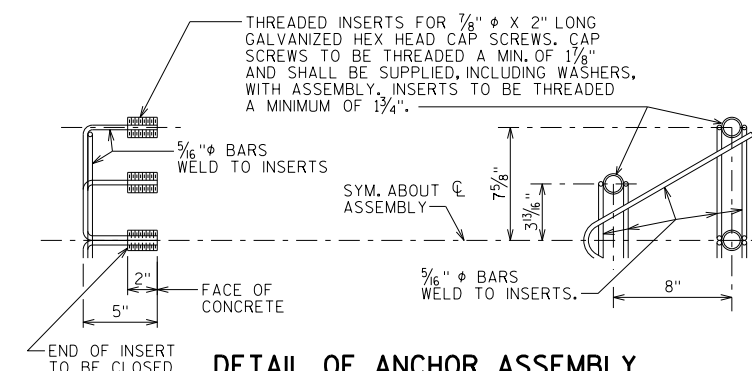
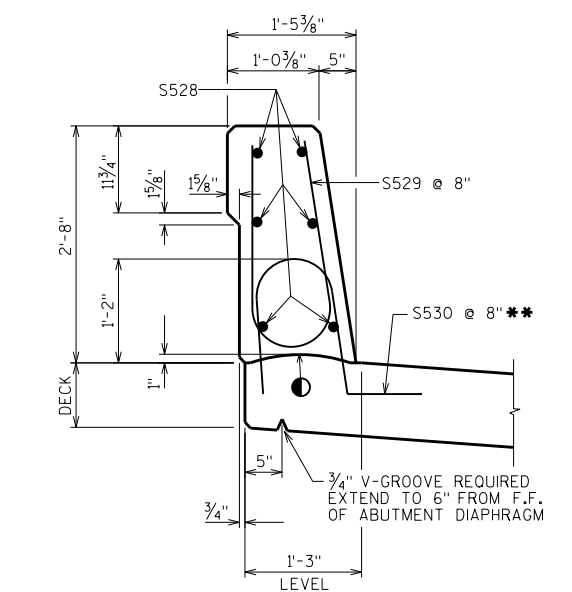
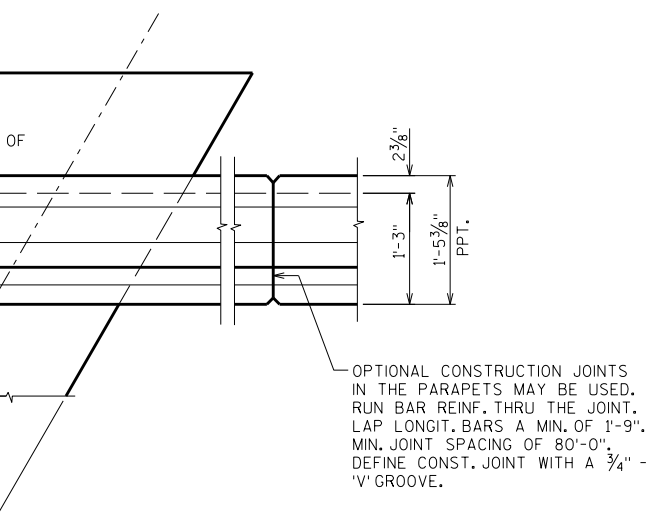
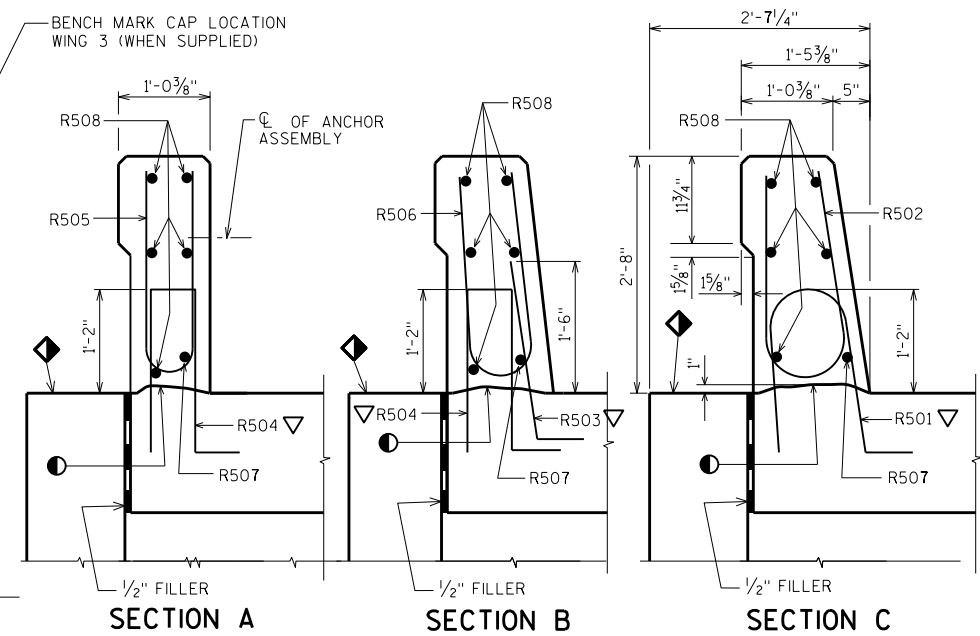


PLAN VIEW - APPROACH SLAB

9 SPA. @ 6 1/2" = 4'-10 1/2"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
NORTH APPROACH SLAB DETAILS		SHEET 16	

SCALE = 6.00



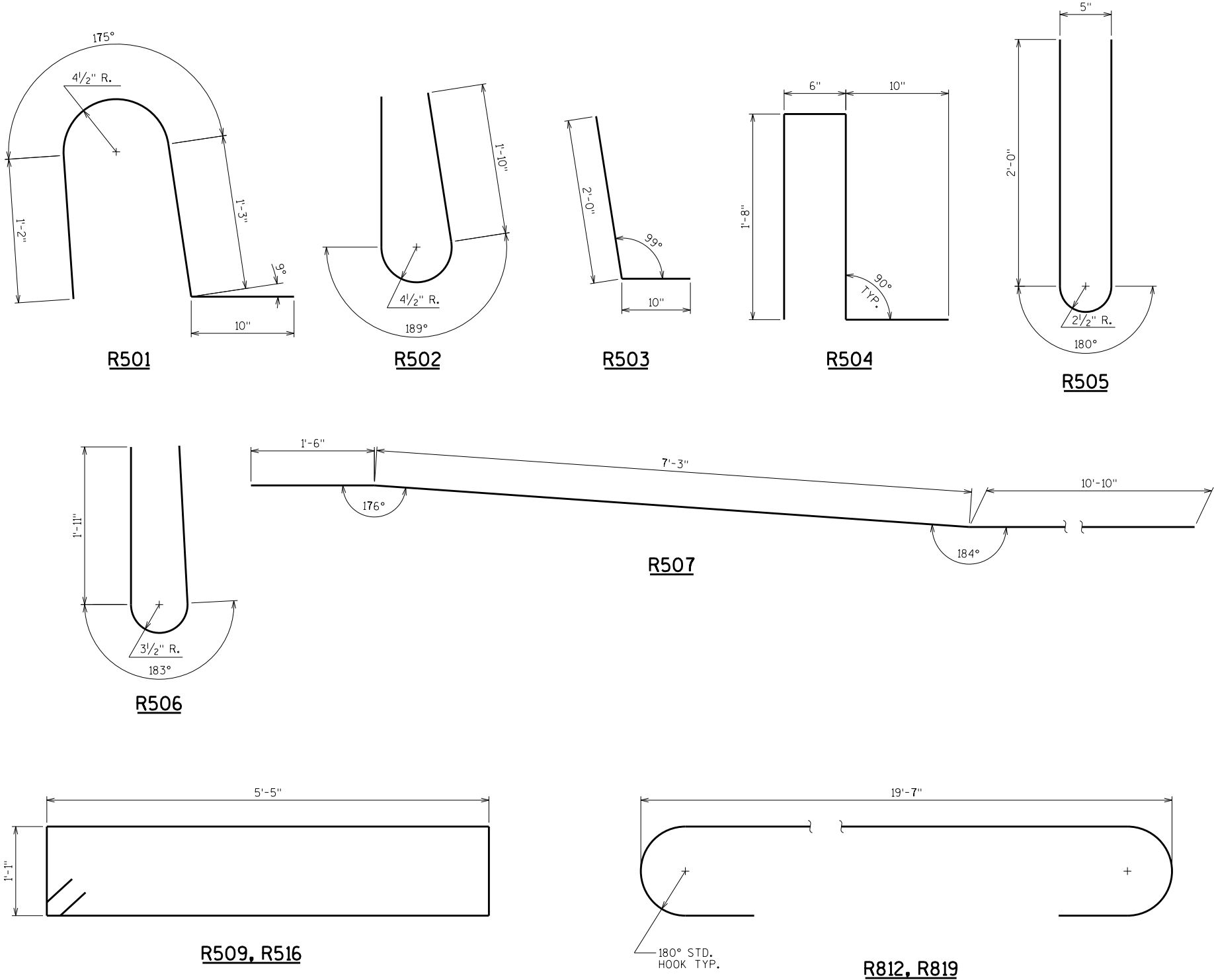
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

- | | | | |
|---|----------|----------|------------------------|
| | | | |
| NO. | DATE | REVISION | BY |
| STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION | | | |
| STRUCTURE B-67-355 | | | |
| | DRAWN BY | DSD | PLANS CK'D. DMB |
| SINGLE SLOPE 32SS
W/STRUCTURAL
APPROACH SLAB | | SHEET 17 | |

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	S. APPR. SLAB	N. APPR. SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4-5	X		PARAPET 32SS - VERT.
R502	X	34	34	5-0	X		PARAPET 32SS - VERT.
R503	X	24	24	2-9	X		PARAPET 32SS - VERT.
R504	X	34	34	4-4	X		PARAPET 32SS - VERT.
R505	X	22	22	4-9	X		PARAPET 32SS - VERT.
R506	X	12	12	4-10	X		PARAPET 32SS - VERT.
R507	X	2	2	19-7	X		PARAPET 32SS - HORIZ.
R508	X	10	10	19-7			PARAPET 32SS - HORIZ.
R509	X	42		13-8	X		S. APPR. SLAB FOOTING - STIRRUP
R810	X	12		47-3			S. APPR. SLAB FOOTING - HORIZ.
R511	X	44		19-7			S. APPR. SLAB - LONGITUDINAL - TOP
R812	X	71		21-5	X		S. APPR. SLAB - LONGITUDINAL - BOTTOM
R513	X	21		48-10			S. APPR. SLAB - TRANSVERSE - TOP
R514	X	21		48-10			S. APPR. SLAB - TRANSVERSE - BOTTOM
R515	X	38		4-1	X		S. APPR. SLAB - TRANSVERSE - ENDS
R516	X		41	13-8	X		N. APPR. SLAB FOOTING - STIRRUP
R817	X		12	45-10			N. APPR. SLAB FOOTING - HORIZ.
R518	X		44	19-7			N. APPR. SLAB - LONGITUDINAL - TOP
R819	X		71	21-5	X		N. APPR. SLAB - LONGITUDINAL - BOTTOM
R520	X		21	48-10			N. APPR. SLAB - TRANSVERSE - TOP
R521	X		21	48-10			N. APPR. SLAB - TRANSVERSE - BOTTOM
R522	X		38	4-1	X		N. APPR. SLAB - TRANSVERSE - ENDS



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-355			
DRAWN BY		DDS	PLANS CK'D. DMB
APPROACH SLAB/ PPT. REINFORCING DETAILS		SHEET 18	