

DESIGN DATA

LIVE LOAD:

DESIGN LOADING; HL-93
INVENTORY RATING FACTOR; RF=1.11
OPERATING RATING FACTOR; RF=1.44
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

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.
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-INCH X 53 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS * * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 40'-0" LONG PILES AT THE SOUTH ABUTMENT WITH PILE POINTS REQUIRED.
ESTIMATED 40'-0" LONG PILES AT THE NORTH ABUTMENT WITH PILE POINTS REQUIRED.

PIER TO BE SUPPORTED ON 14" DIA. X 0.5-INCH THICK CAST-IN-PLACE CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 240 TONS * * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 45'-0" LONG PILES AT THE PIER WITH 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.

TRAFFIC VOLUME

USH 18

A.A.D.T. = 17,300 (2037)
R.D.S. = 50 M.P.H.

CURVE DATA

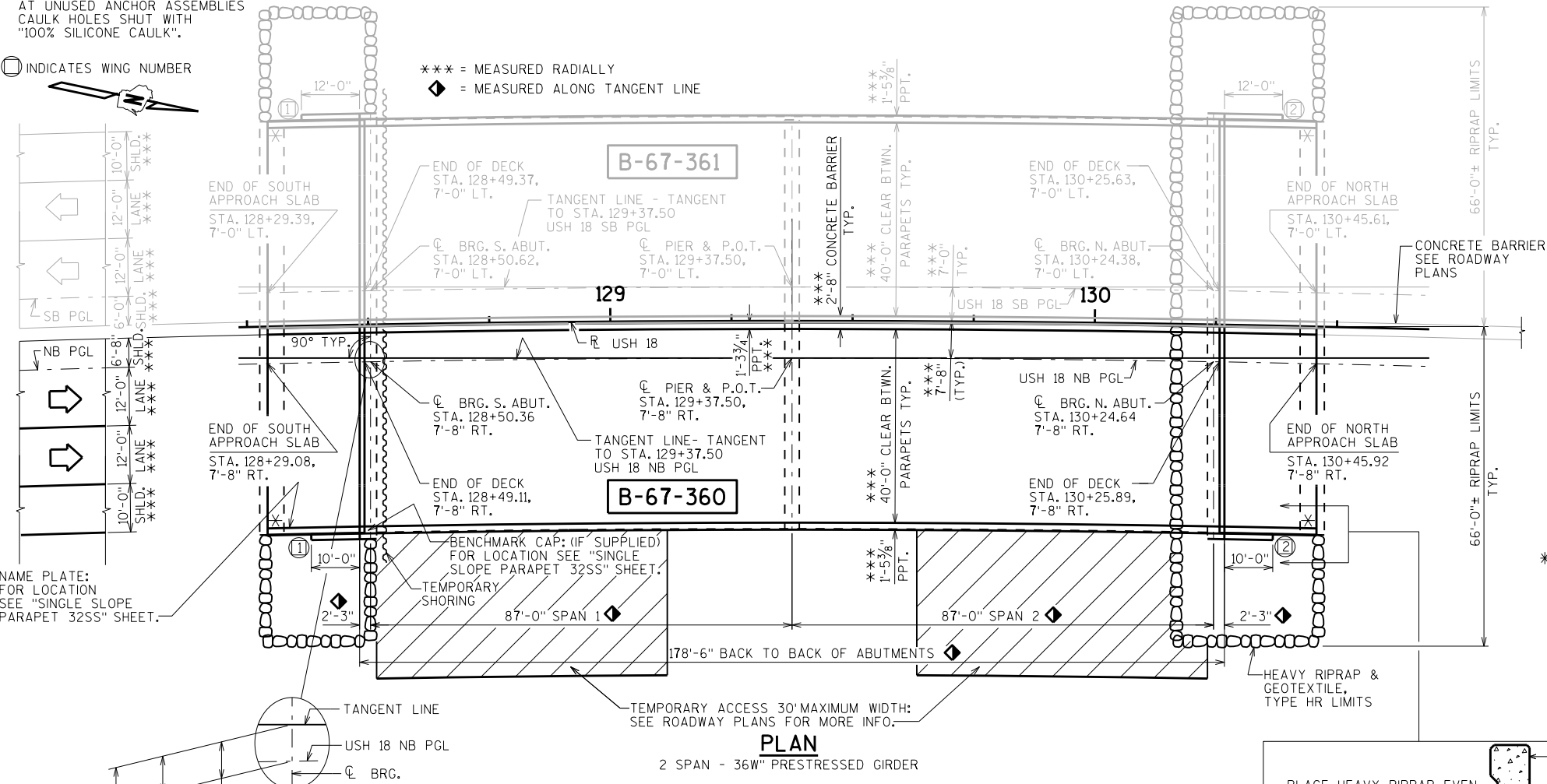
R USH 18

P.I. = 125+62.72
 Δ = 21°-44'-49" RT
D = 1°-08'-45"
T = 960.45
L = 1897.77
R = 5000
S.E. = 2.0%
P.C. = 116+02.27
P.T. = 135+00.04

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

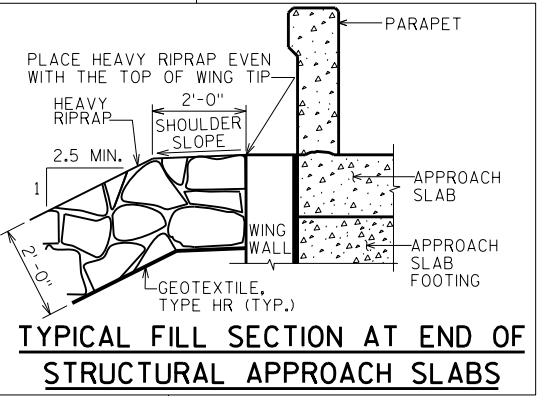
INDICATES WING NUMBER

*** = MEASURED RADIALLY
◆ = MEASURED ALONG TANGENT LINE



PLAN

2 SPAN - 36W" PRESTRESSED GIRDER



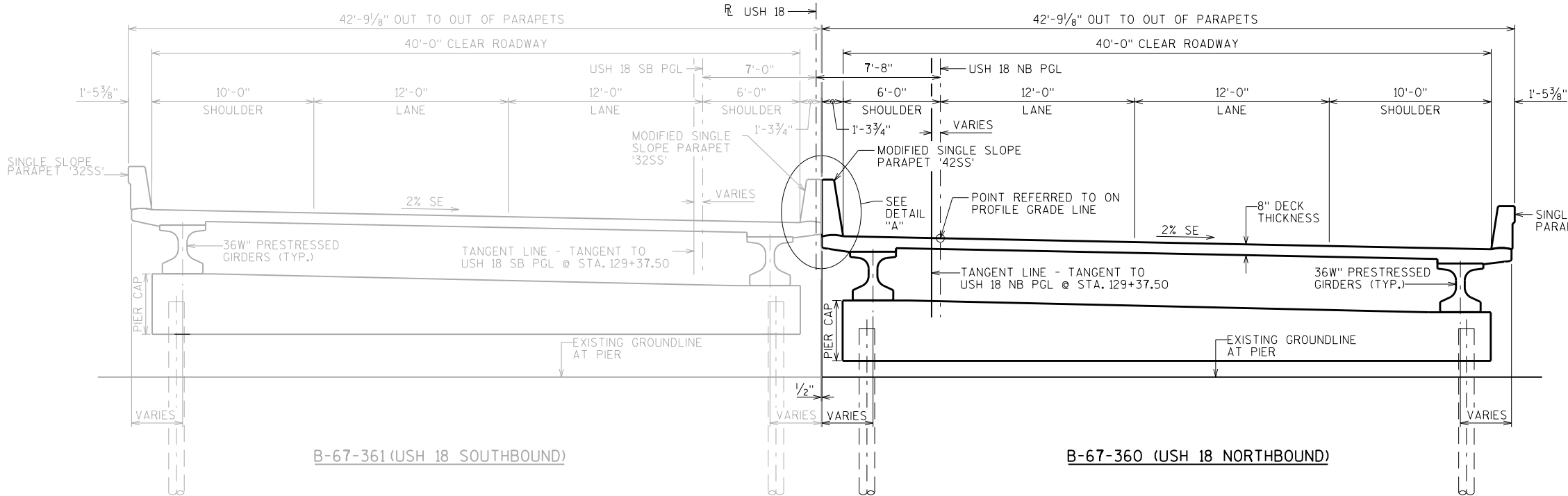
TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

STRUCTURE DESIGN CONTACT:
MATT COUPAR (608) 266-5083
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 CROSS SECTIONS
13. ABUTMENT DIAPHRAGMS
14. PIER DIAPHRAGM
15. SUPERSTRUCTURE PLAN
16. DECK LAYOUT
17. STRUCTURAL APPROACH SLAB
18. STRUCTURAL APPROACH SLAB & BAR DETAILS
19. SINGLE SLOPE PARAPET 32SS
20. MODIFIED SINGLE SLOPE PARAPET 42SS
21. SUPERSTRUCTURE BAR DETAILS

NO.	DATE	REVISION	BY
Plans Prepared By WISDOT BUREAU OF STRUCTURES ACCEPTED <i>William C. Dierker</i> 6/23/17 CHIEF STRUCTURES DESIGN ENGINEER DATE STRUCTURE B-67-360 USH 18 NORTHBOUND LANES OVER WETLANDS COUNTY WAUKESHA TOWN WAUKESHA DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS DESIGNED BY MSC CK'D. NAR BY JPH PLANS CK'D. SEW GENERAL PLAN SHEET 1 OF 21			

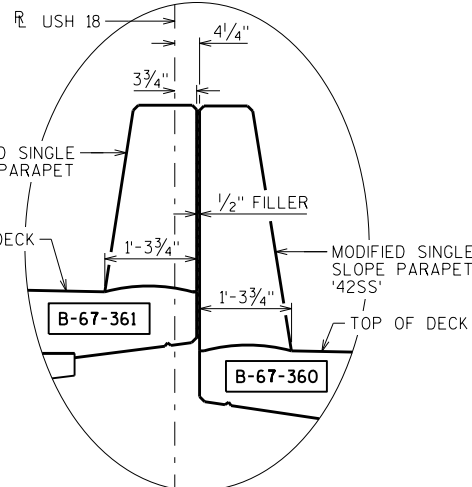


B-67-361 (USH 18 SOUTHBOUND)

B-67-360 (USH 18 NORTHBOUND)

CROSS SECTION THRU ROADWAY LOOKING NORTH (UPSTATION)

(ALL HORIZONTAL DIMENSIONS ARE MEASURED RADIALLY - NORMAL TO THE CURVED "R USH 18")



DETAIL A

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.

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 DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK & APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIER.

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 SHEET 1 AND IN THE ABUTMENT DETAILS.

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

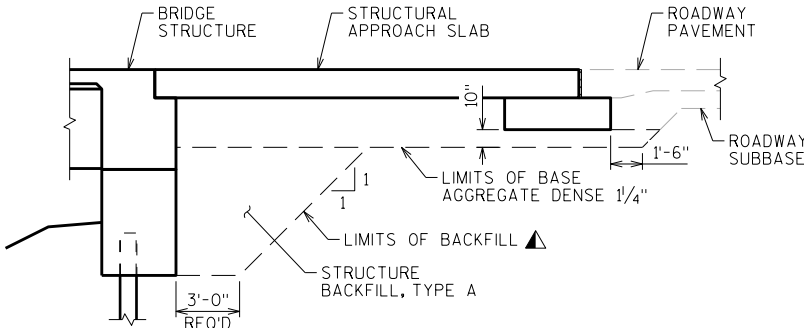
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE 'GIRDER DETAILS 2' SHEET.

★ TEMPORARY SHORING TO BE INSTALLED NO MORE THAN 1 FOOT IN FRONT OF FRONT FACE OF FINISHED SOUTH ABUTMENT. IF ADDITIONAL CLEARANCE IS NEEDED, COORDINATE THE SHORING LOCATION WITH THE FIELD ENGINEER PRIOR TO INSTALLATION.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
CROSS SECTION & QUANTITIES			SHEET 2

TOTAL ESTIMATED QUANTITIES

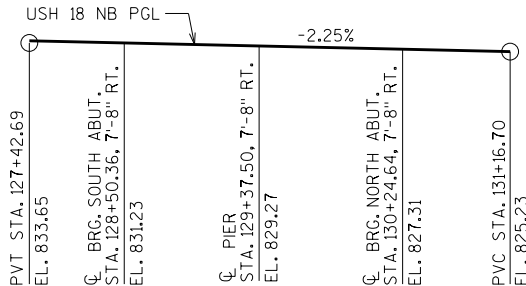
BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH APPROACH SLAB	SOUTH ABUT.	PIER	NORTH ABUT.	NORTH APPROACH SLAB	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-67-360	LS	—	—	—	—	—	—	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	—	—	190	—	110	—	300
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	134	—	—	—	134	268
501.1000.S	ICE HOT WEATHER CONCRETING	LB	2,258	442	423	127	293	442	3,985
502.0100	CONCRETE MASONRY BRIDGES	CY	301	59	56	17	39	59	531
502.3200	PROTECTIVE SURFACE TREATMENT	SY	810	90	—	—	—	90	990
502.3210	PIGMENTED SURFACE SEALER	SY	159	18	—	—	—	18	195
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	1,049	—	—	—	—	—	1,049
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	—	—	2,880	—	2,465	—	5,345
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	63,720	9,980	755	5,460	635	9,980	90,530
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,430	—	—	—	—	—	1,430
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	24	—	—	—	—	—	24
506.4000	STEEL DIAPHRAGMS B-67-360	EACH	20	—	—	—	—	—	20
★ 511.1200	TEMPORARY SHORING B-67-360	SF	—	—	125	—	—	—	125
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	11	—	11	—	22
550.0500	PILE POINTS	EACH	—	—	8	13	8	—	29
550.1120	PIILING STEEL HP 12-INCH X 53 LB	LF	—	—	320	—	320	—	640
550.2148	PIILING CIP CONCRETE 14 X 0.50-INCH	LF	—	—	—	585	—	—	585
606.0300	RIPRAP HEAVY	CY	—	—	45	—	90	—	135
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	70	—	70	—	140
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	—	—	—	—	—	2
645.0120	GEOTEXTILE TYPE HR	SY	—	—	65	—	145	—	210
NON-BID ITEMS									
	FILLER	SIZE	—	—	—	—	—	—	1/2", 3/4", 1/2"



TYPICAL SECTION THRU ABUTMENT

(A1 ABUTMENT WITH STRUCTURAL APPROACH)

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



PROFILE GRADE LINE - USH 18 NB

INDICATES WING NUMBER

BOR-1

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	9/13/2016	150854.2197	670605.2228
2	9/19/2016	150908.0028	670665.4867
3	9/22/2016	150981.1957	670588.148
4	9/26/2016	151050.5727	670557.3566
5	9/27/2016	150996.7965	670482.3018

BORINGS COMPLETED BY: WISDOT
REPORT COMPLETED BY: WISDOT
ALL COORDINATES REFERENCED TO WCCS NAD 83(9) WAUKESHA COUNTY



BOR-5

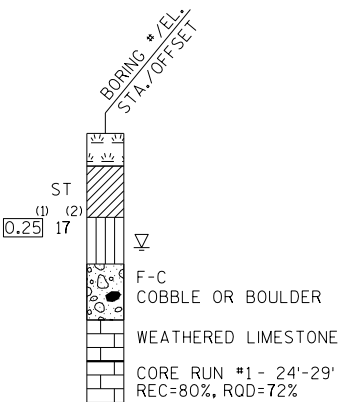
STATE PROJECT NUMBER

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

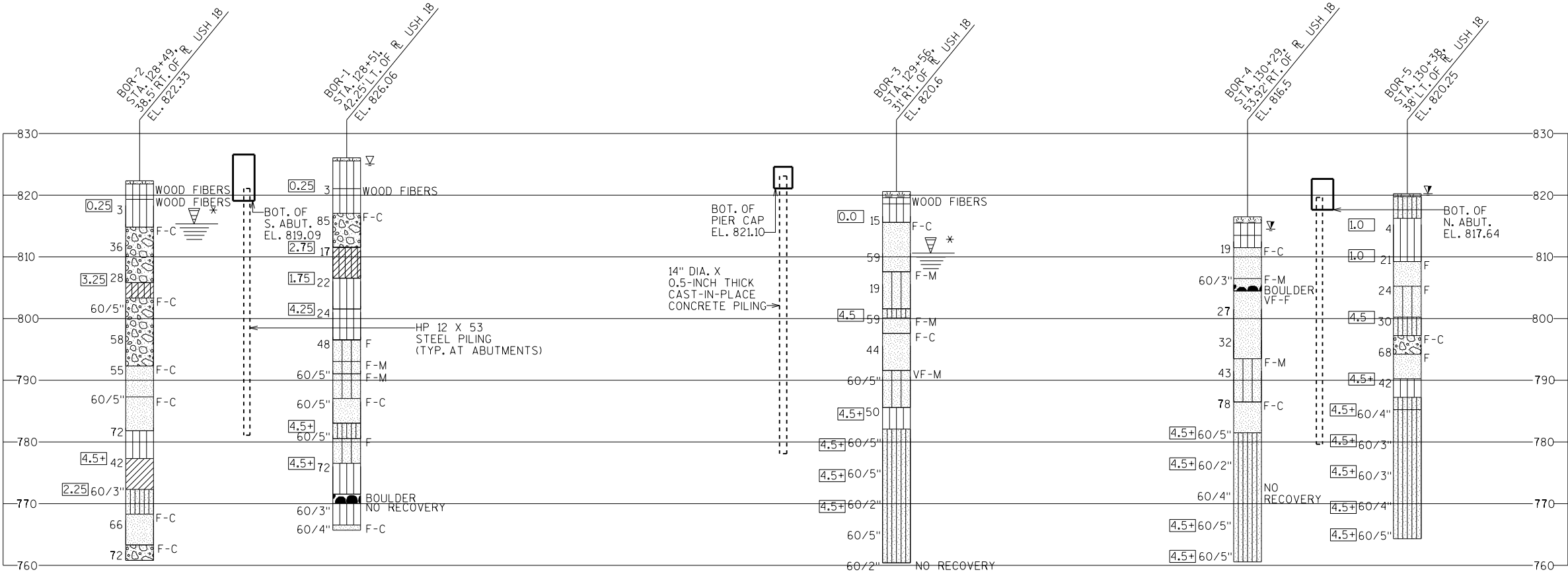
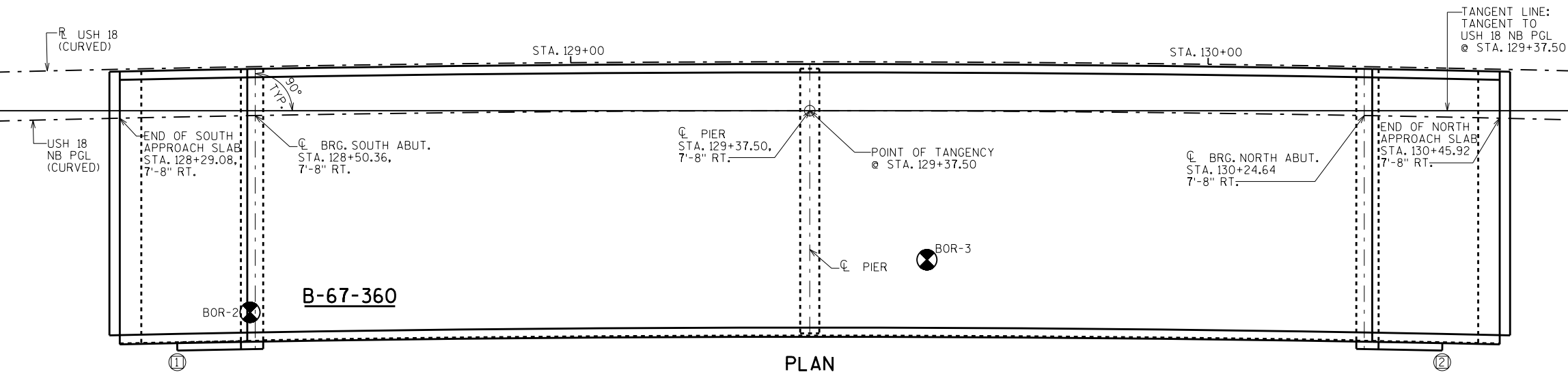
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

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-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
SUBSURFACE EXPLORATION		SHEET 3	

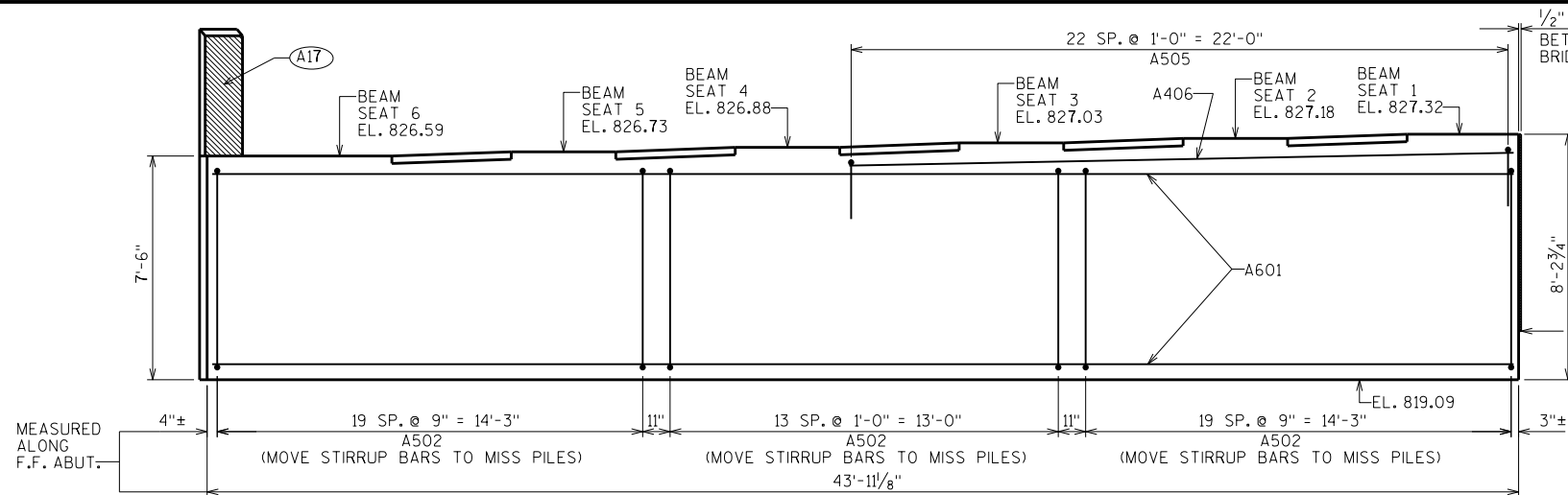
* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.



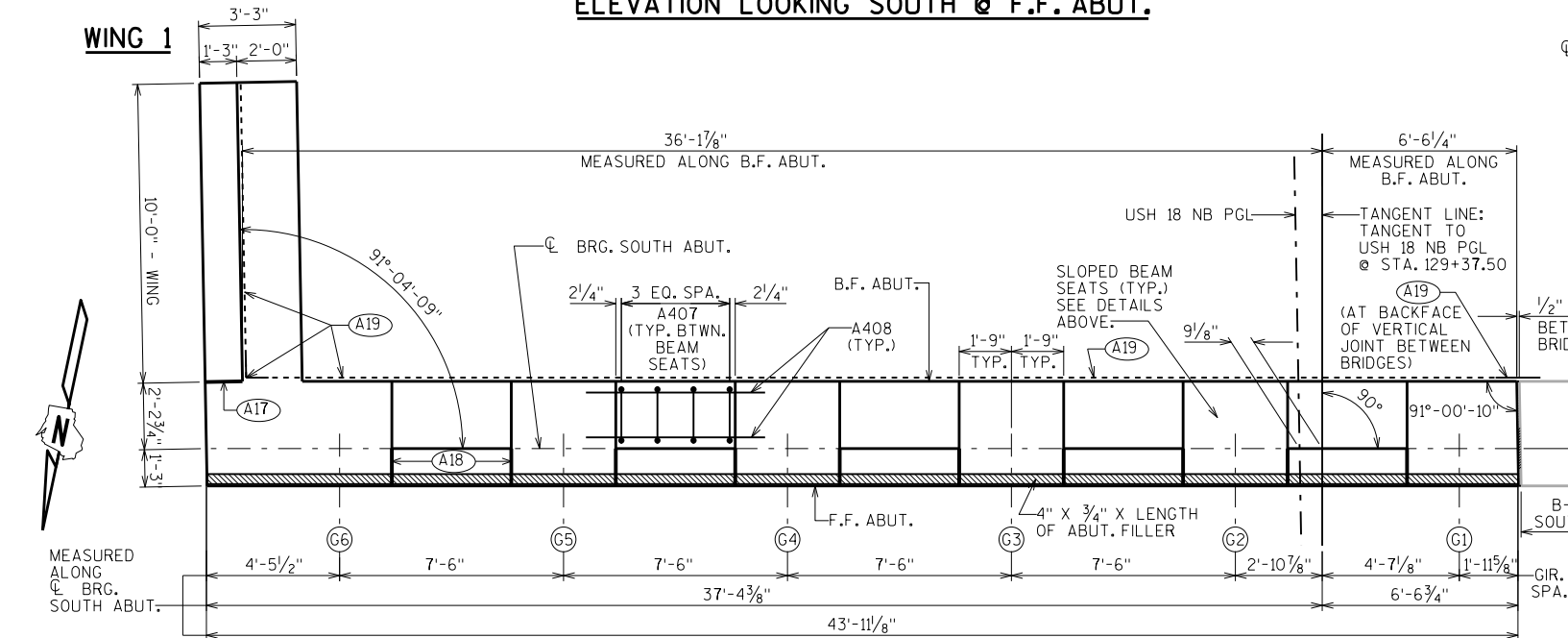
8

8

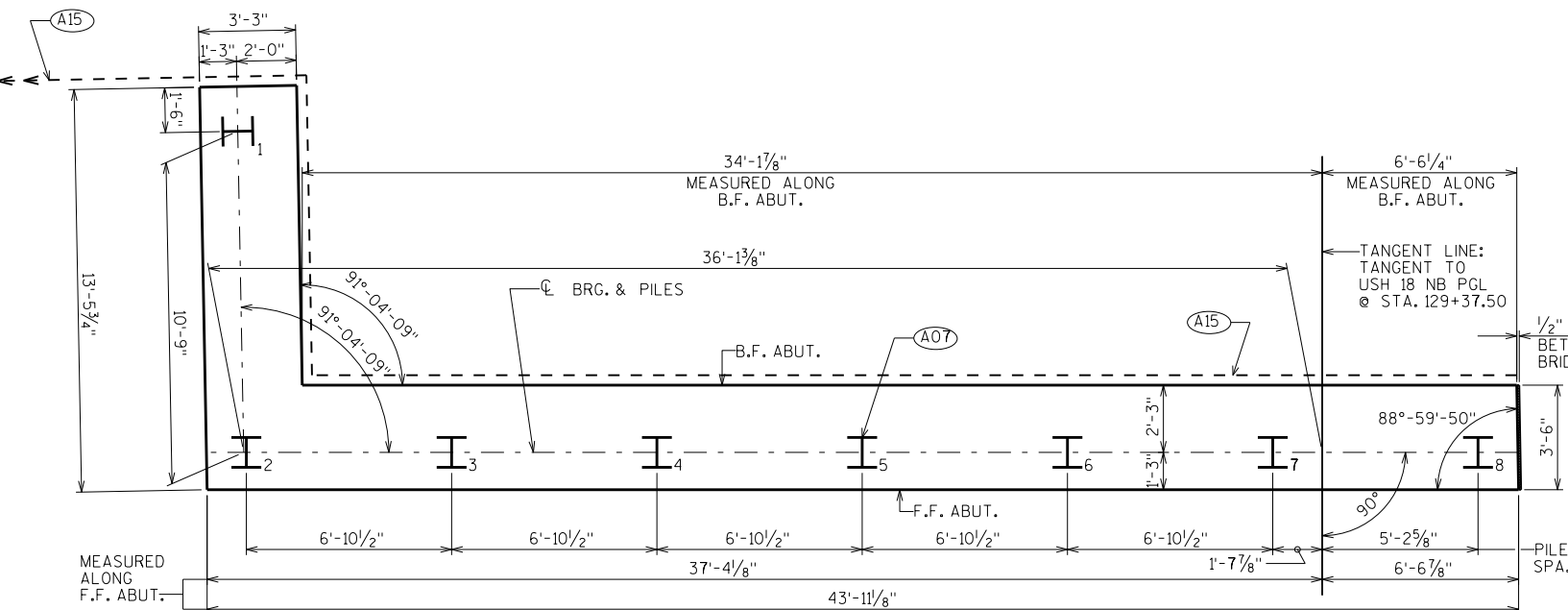
SCALE = 10



ELEVATION LOOKING SOUTH @ F.F. ABUT.

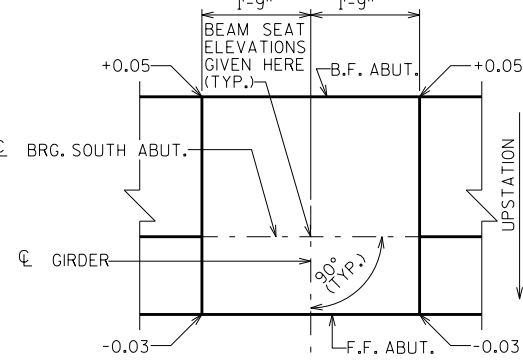


PLAN

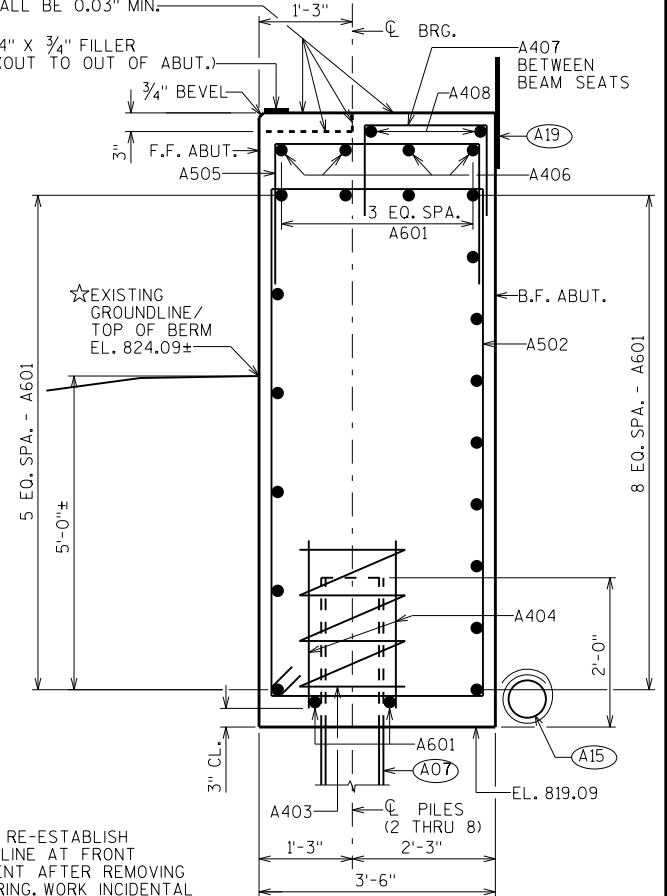


PILE PLAN

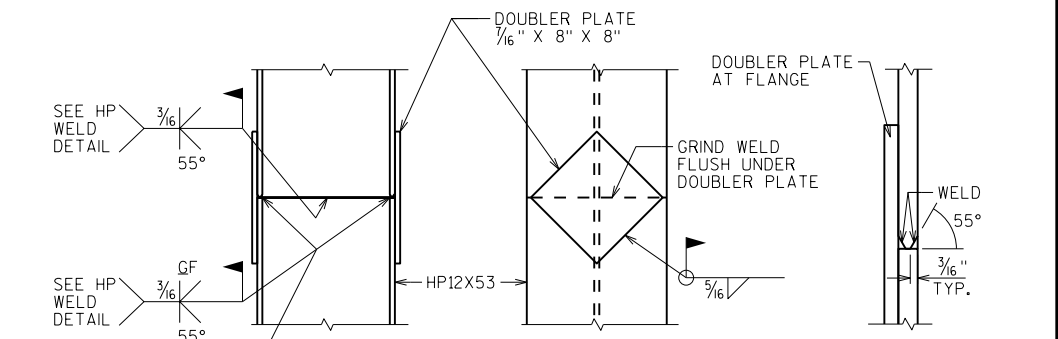
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.



TYPICAL SLOPED BEAM SEAT DETAIL



SECTION THRU BODY



STEEL 'HP' SHAPE

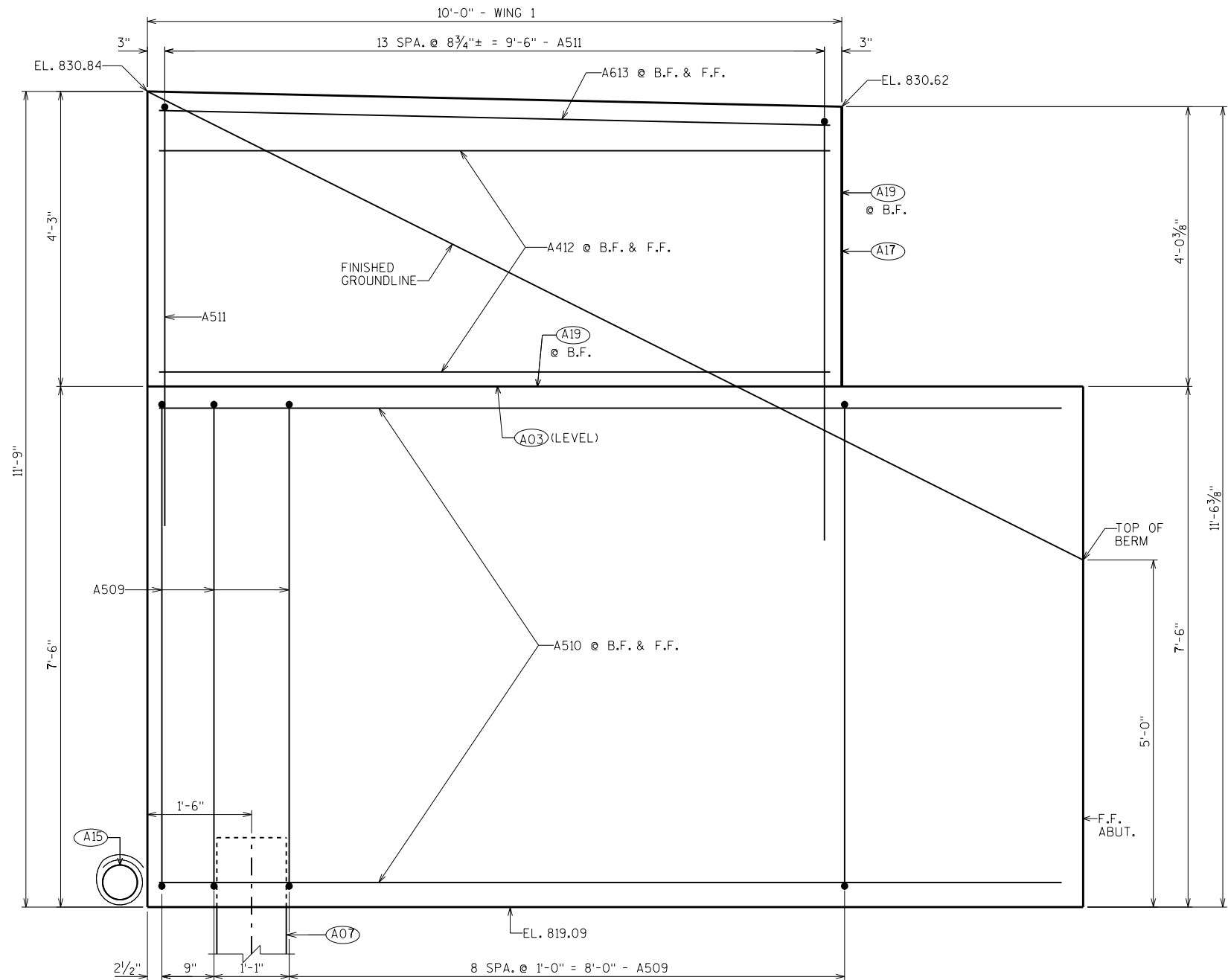
HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

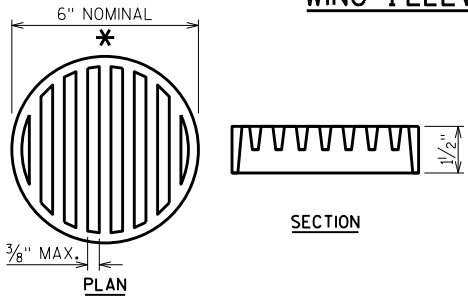
- A07 SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING, ESTIMATED 40 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQUIRED AT ALL PILES.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- A17 1/2" FILLER (INCLUDED IN WING 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-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
SOUTH ABUTMENT		SHEET 4	

- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6", (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A07) SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING, ESTIMATED 40 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQUIRED AT ALL PILES.
- (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.



WING 1 ELEVATION LOOKING @ F.F. WING

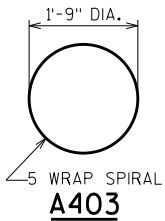


RODENT SHIELD DETAIL

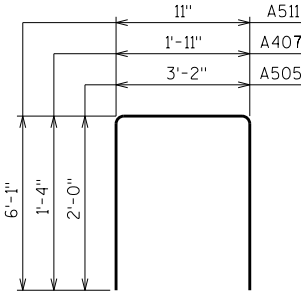
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

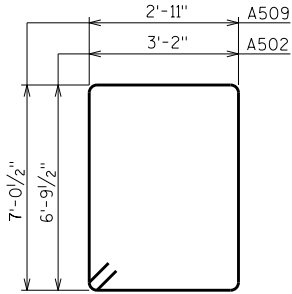
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH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



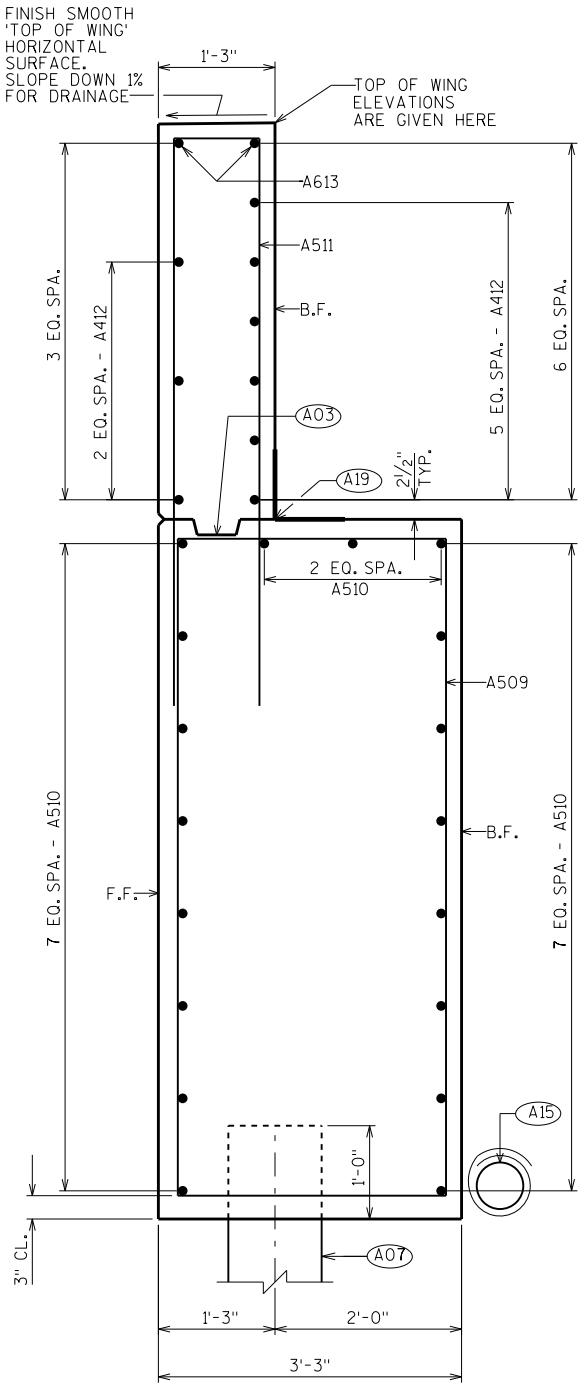
A403



A505 A407 A511



A502 A509



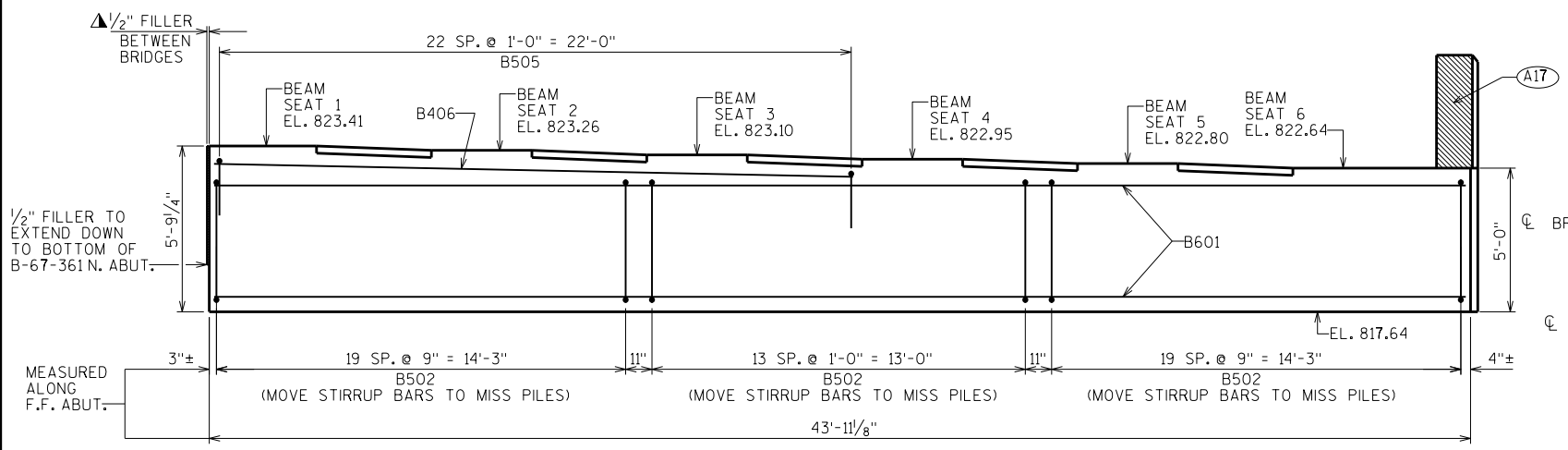
WING 1 SECTION

BILL OF BARS

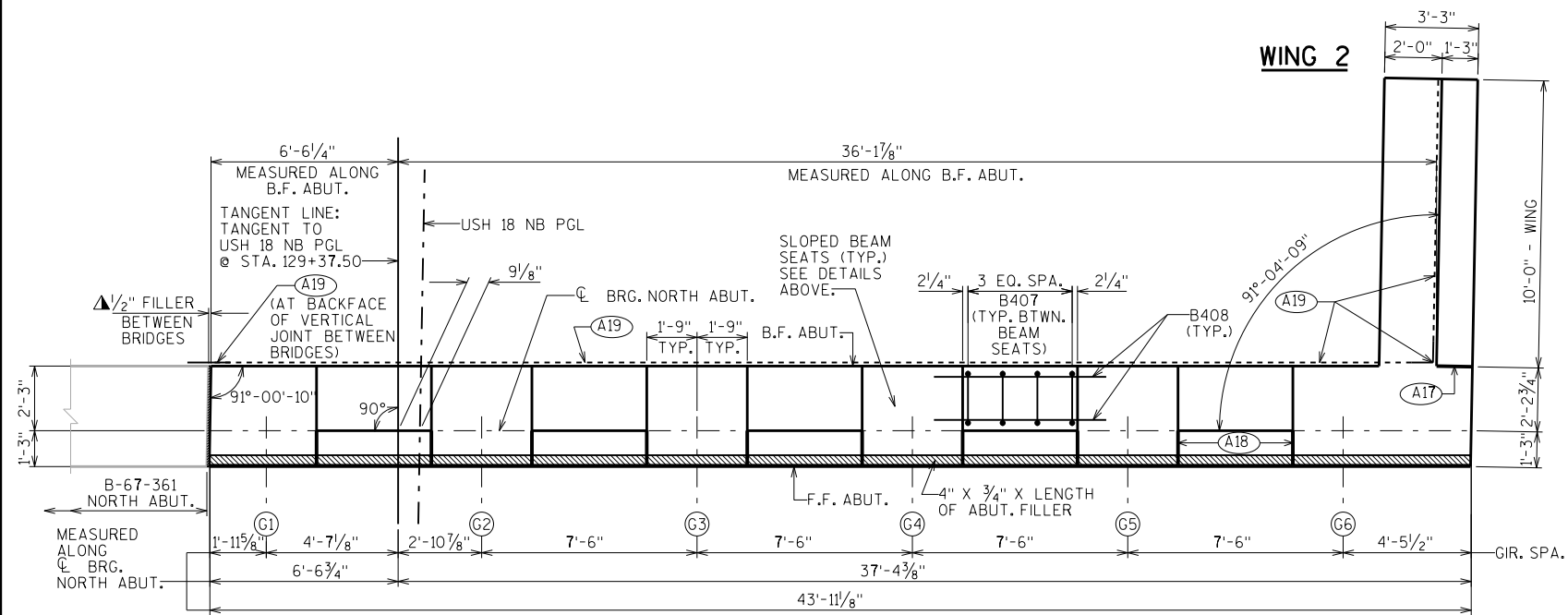
NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A601		19	43'-6"			BODY-HORIZONTAL
A502		54	20'-7"	X		BODY-STIRRUPS-VERT.
A403		7	28'-0"	X		BODY-VERT.-BOT.-SPIRAL-1 PER PILE
A404		14	2'-3"			BODY-BOT.-2 PER BODY PILE-VERT.
A505		23	6'-11"	X		BODY-TOP-VERT.-AT WEST END ONLY
A406		4	22'-3"			BODY-TOP-HORIZ.-AT WEST END ONLY
A407		20	4'-5"	X		BODY-VERT.-TOP-BETWEEN BEAM SEATS
A408		10	6'-0"			BODY-HORIZ.-TOP-BETWEEN BEAM SEATS
A509	X	11	20'-7"	X		WING 1-BOT.-VERT.-STIRRUP
A510	X	18	13'-0"			WING 1-BOT.-HORIZONTAL
A511	X	14	12'-10"	X		WING 1-TOP-VERT.
A412	X	9	9'-8"			WING 1-TOP-HORIZONTAL-B.F. & F.F.
A613	X	2	9'-8"			WING 1-TOP-HORIZONTAL-B.F. & F.F.

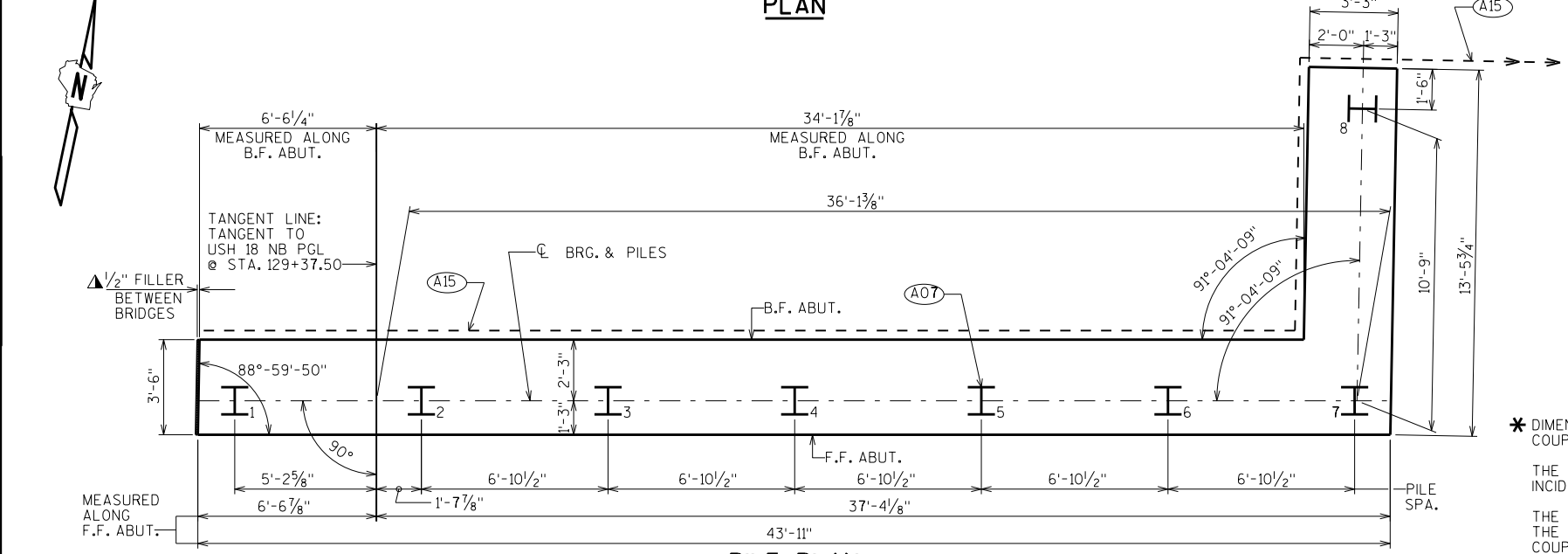
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
SOUTH ABUTMENT DETAILS		SHEET 5	



ELEVATION LOOKING NORTH @ F.F. ABUT.

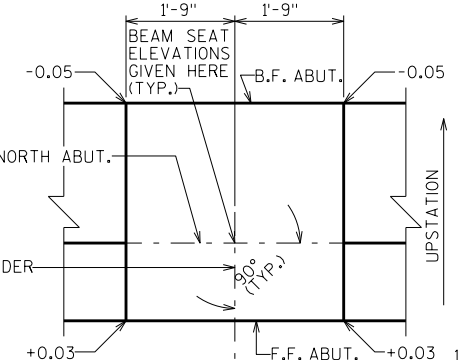


PLAN



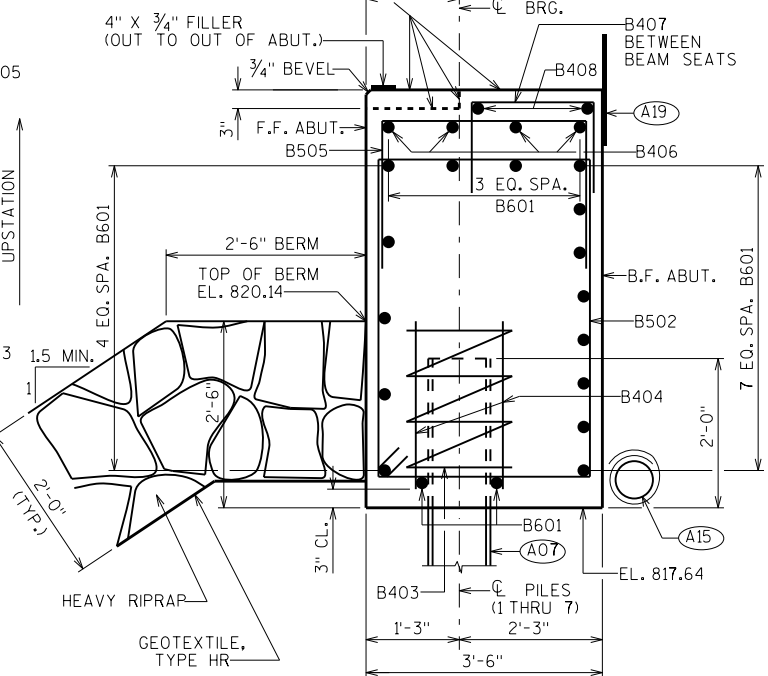
PILE PLAN

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 0.03" MIN.

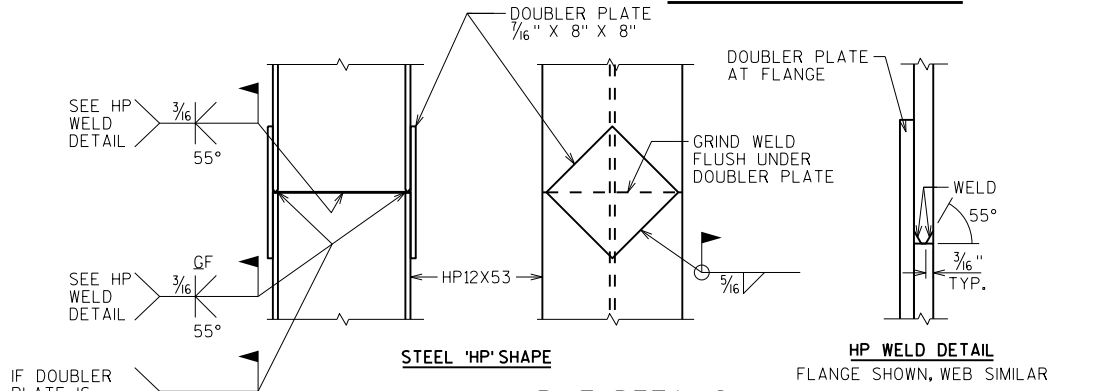


TYPICAL SLOPED BEAM SEAT DETAIL

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL 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.

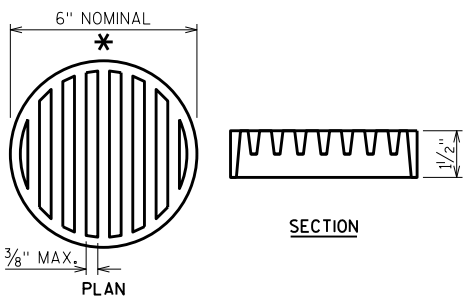


SECTION THRU BODY



PILE DETAILS

- A07 SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING, ESTIMATED 40 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQUIRED AT ALL PILES.
- 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.



RODENT SHIELD DETAIL

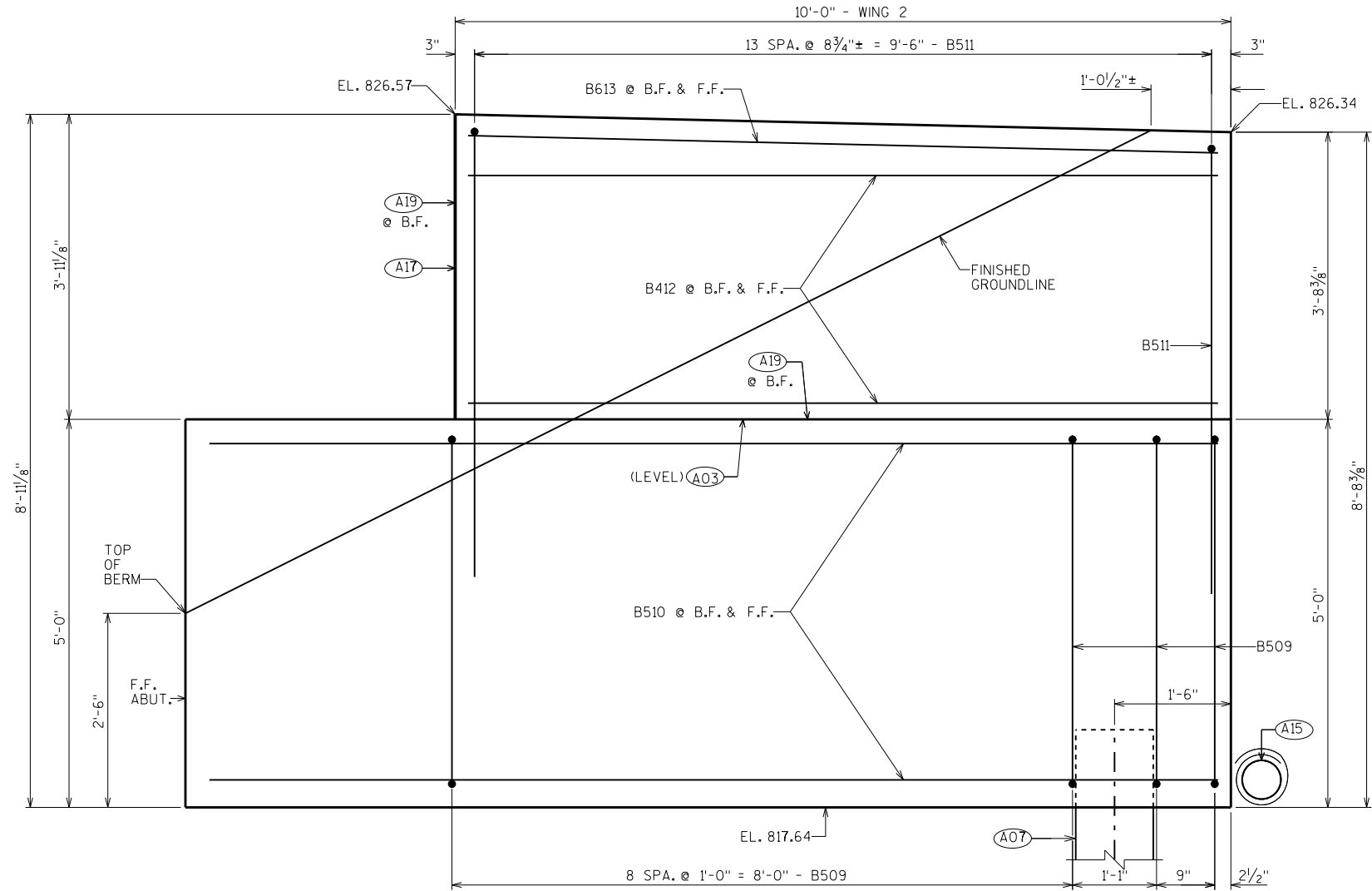
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

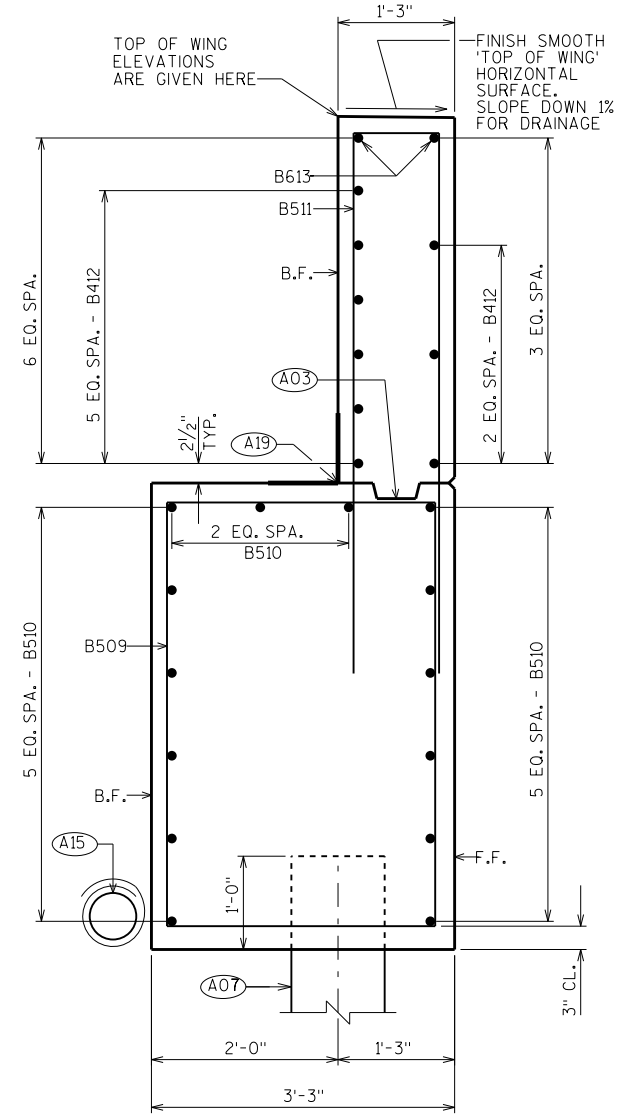
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
NORTH ABUTMENT		SHEET 6	

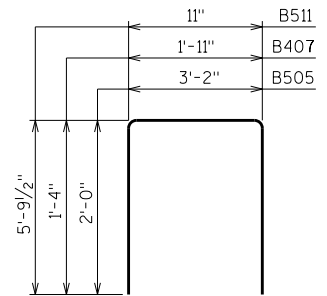
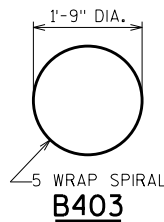
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A07) SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING, ESTIMATED 40 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQUIRED AT ALL PILES.
- (A15) 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.



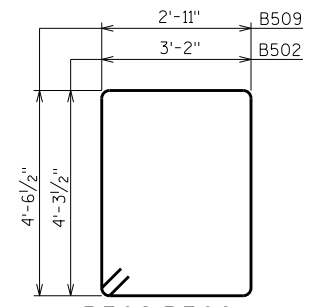
WING 2 ELEVATION LOOKING @ F.F. WING



WING 2 SECTION



B505 B407 B511



B502 B509

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B601		17	43'-6"			BODY-HORIZONTAL
B502		54	15'-7"	X		BODY-STIRRUPS-VERT.
B403		7	28'-0"	X		BODY-VERT.-BOT.-SPIRAL-1 PER PILE
B404		14	2'-3"			BODY-BOT.-2 PER BODY PILE-VERT.
B505		23	6'-11"	X		BODY-TOP-VERT.-AT WEST END ONLY
B406		4	22'-3"			BODY-TOP-HORIZ.-AT WEST END ONLY
B407		20	4'-5"	X		BODY-VERT.-TOP-BETWEEN BEAM SEATS
B408		10	6'-0"			BODY-HORIZ.-TOP-BETWEEN BEAM SEATS
B509	X	11	15'-7"	X		WING 2-BOT.-VERT.-STIRRUP
B510	X	14	13'-0"			WING 2-BOT.-HORIZONTAL
B511	X	14	12'-3"	X		WING 2-TOP-VERT.
B412	X	9	9'-8"			WING 2-TOP-HORIZONTAL-B.F. & F.F.
B613	X	2	9'-8"			WING 2-TOP-HORIZONTAL-B.F. & F.F.

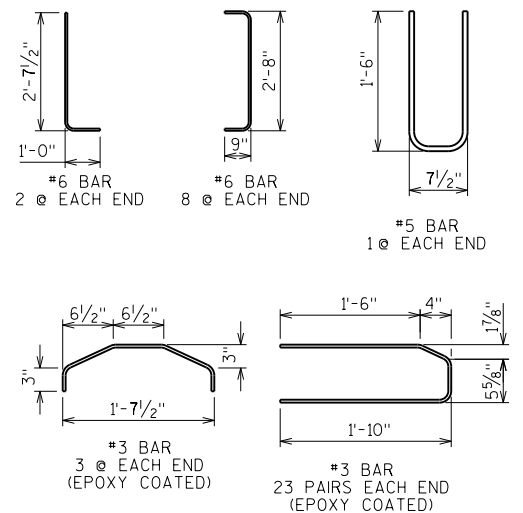
NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CK'D. SEW	
NORTH ABUTMENT DETAILS		SHEET 7	

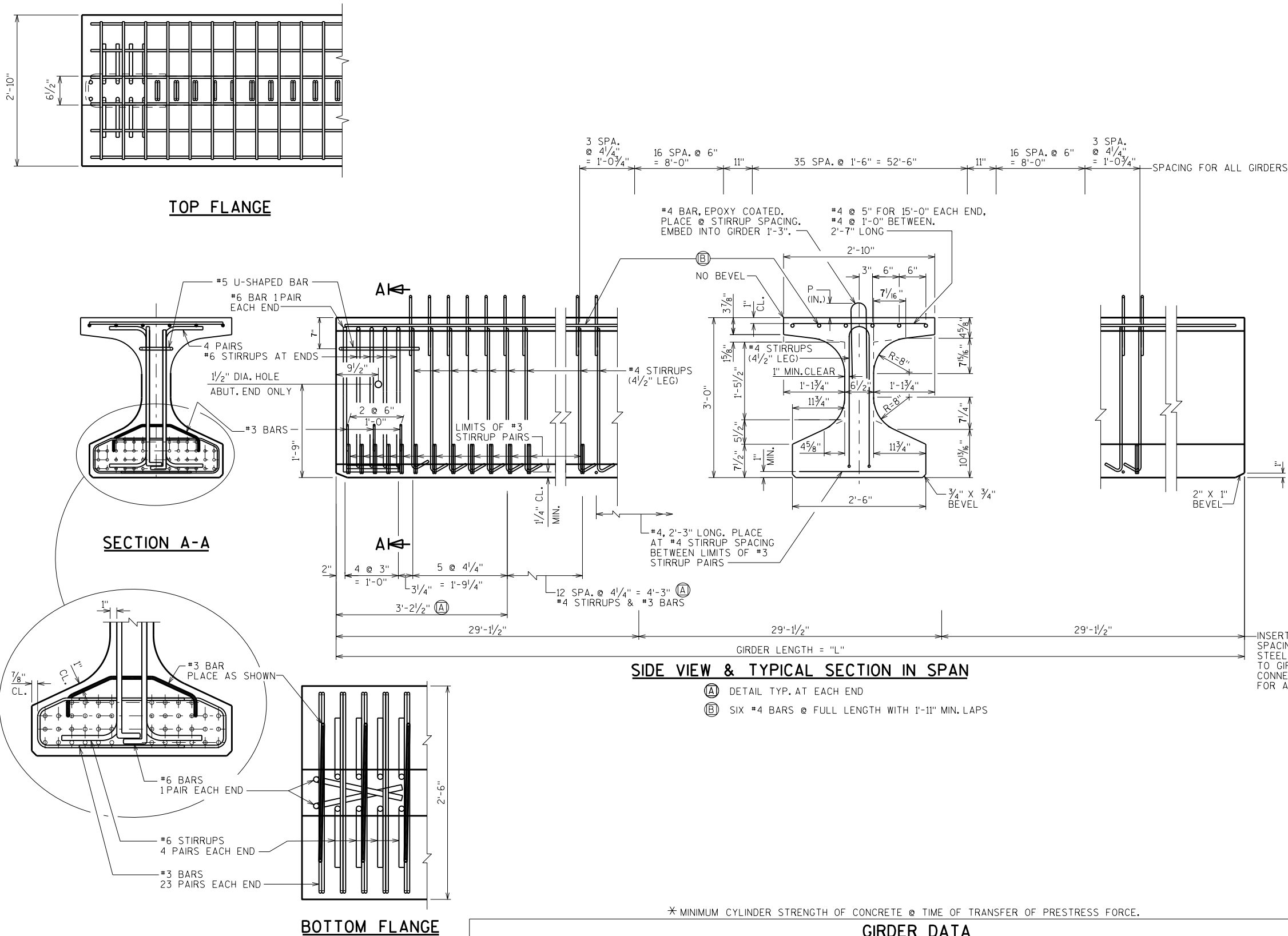
TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED
TRANSVERSELY, EXCEPT THE THE OUTSIDE 8" OF GIRDER,
WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED
CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH
SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

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

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

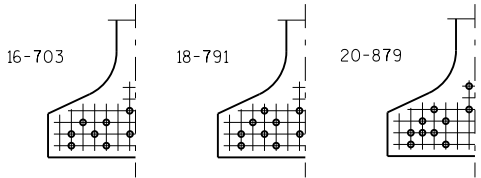


Ⓐ DETAIL TYP. AT EACH END
Ⓑ SIX #4 BARS @ FULL LENGTH WITH 1'-11" MIN. LAPS



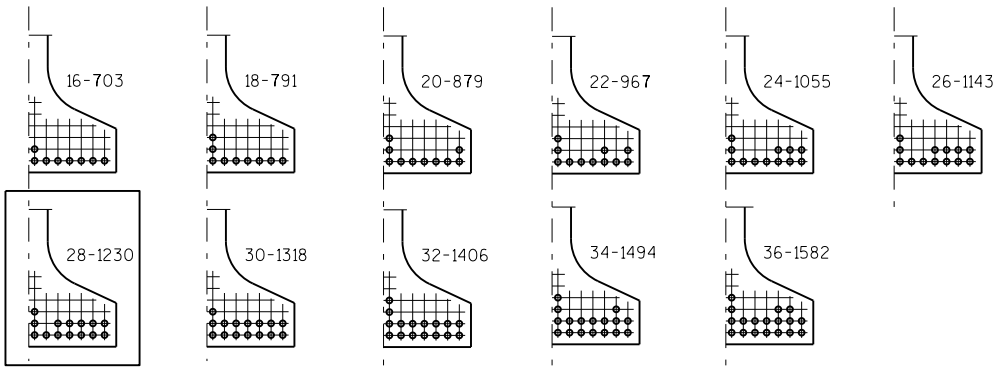
GIRDER DATA

[illegible]



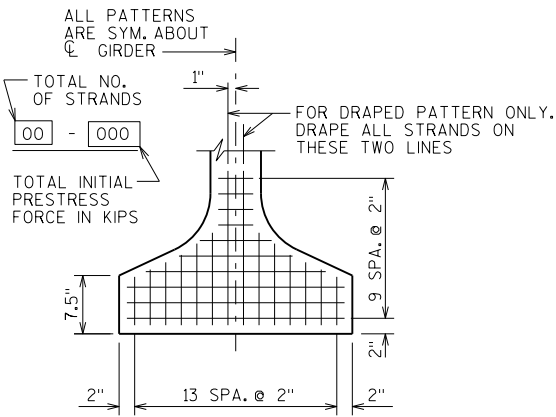
**STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY
TO AVOID DRAPING OF STRANDS**

0.6"φ STRANDS

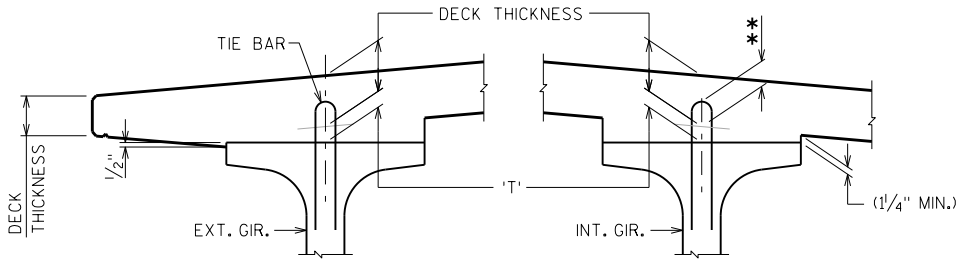


ARRANGEMENT AT CL SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"φ STRANDS



TYP. STRAND PATTERN



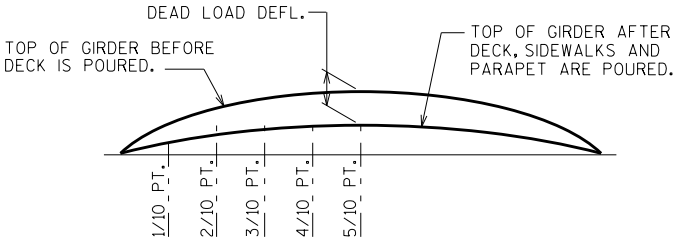
DECK HAUNCH DETAIL

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.

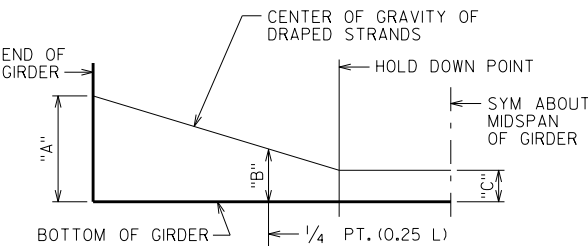
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT CL OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

- 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 3" WAS USED FOR COMPUTING THE SUPERSTRUCTURE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



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	3.1
2	3.1

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-67-360			
DRAWN BY JPH		PLANS CK'D. SEW	
36W" PRESTRESSED GIRDER DETAILS 2			SHEET 10

NOTES

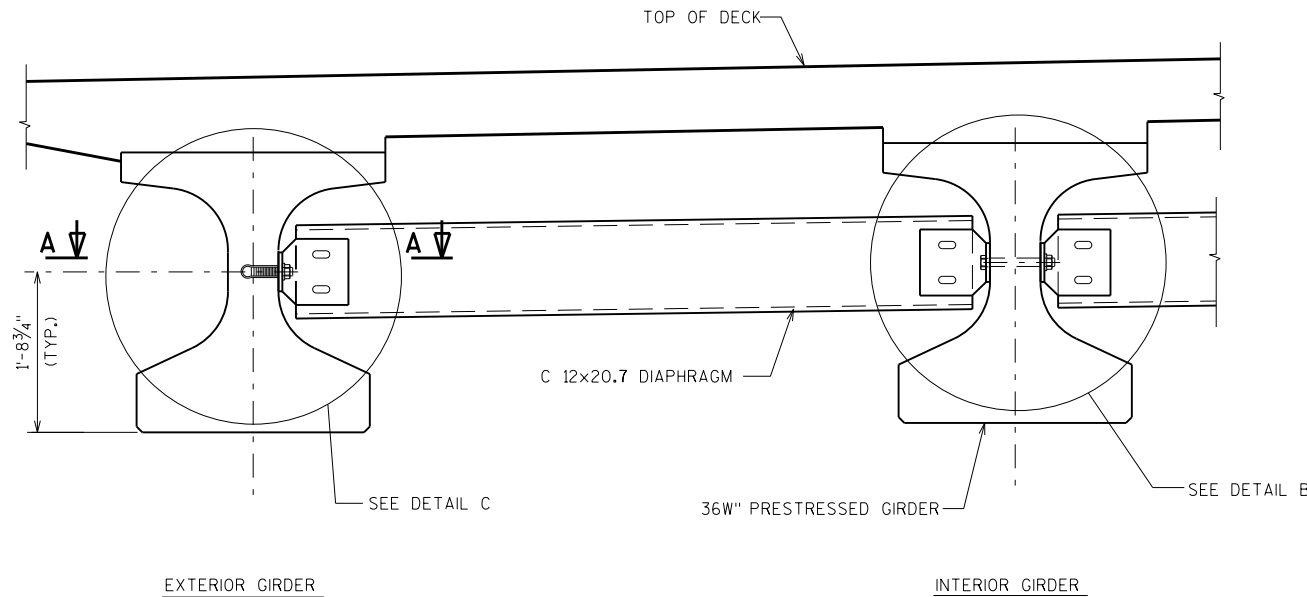
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-67-360", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

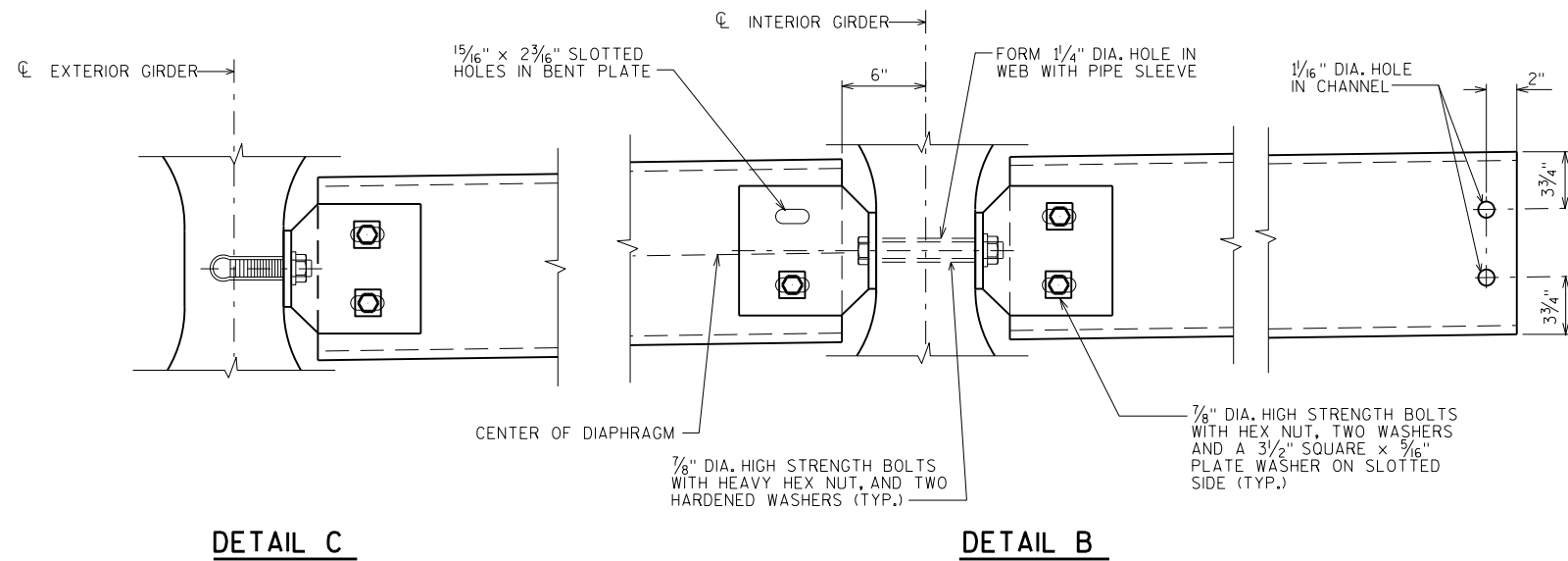
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

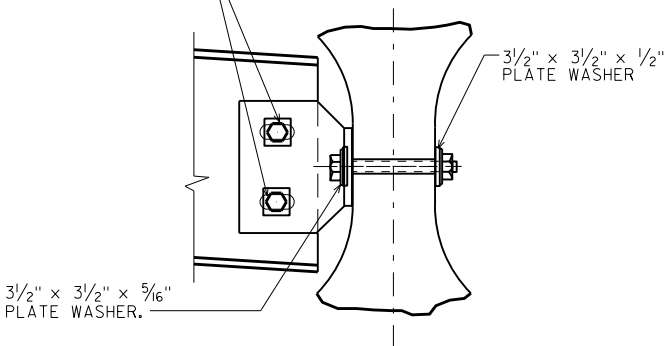
STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



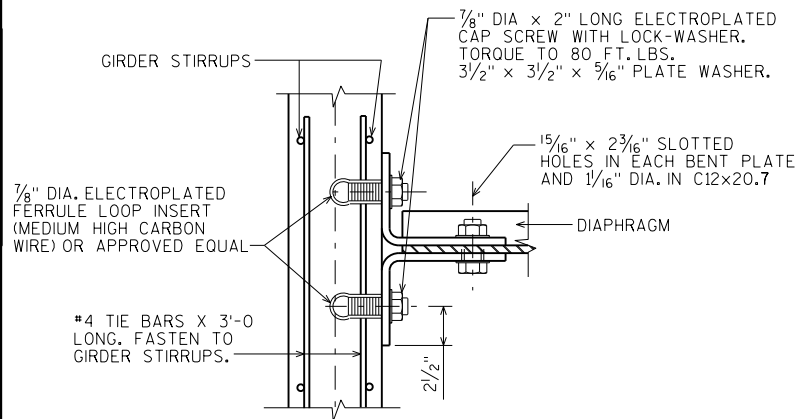
PART TRANSVERSE SECTION AT DIAPHRAGM



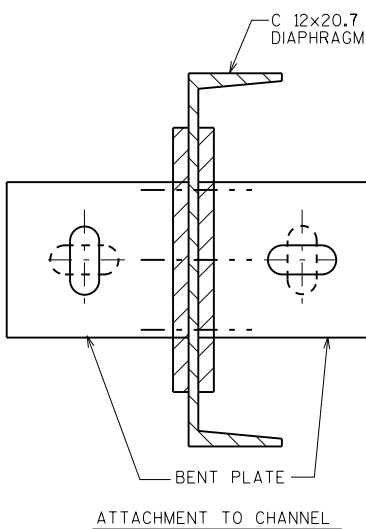
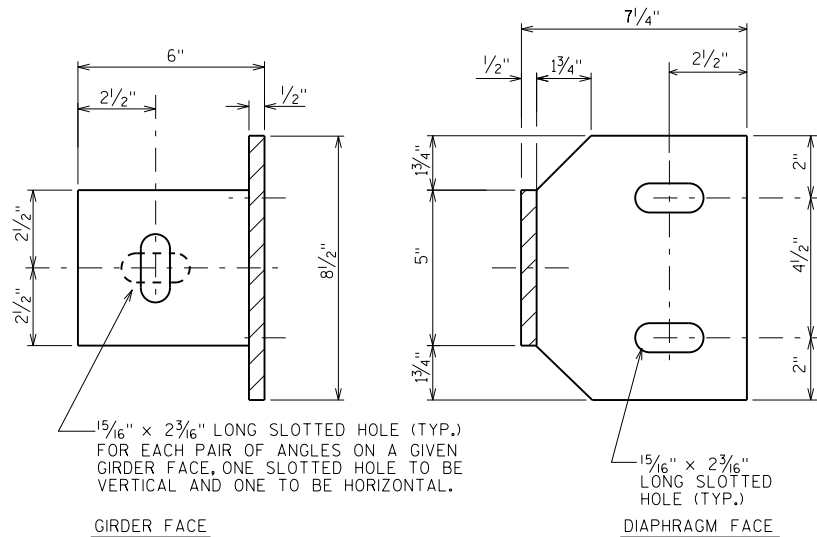
7/8" DIA HIGH STRENGTH BOLTS WITH HEX NUT, TWO WASHERS AND A 3/2" SQUARE x 5/16" PLATE WASHER ON SLOTTED SIDE.



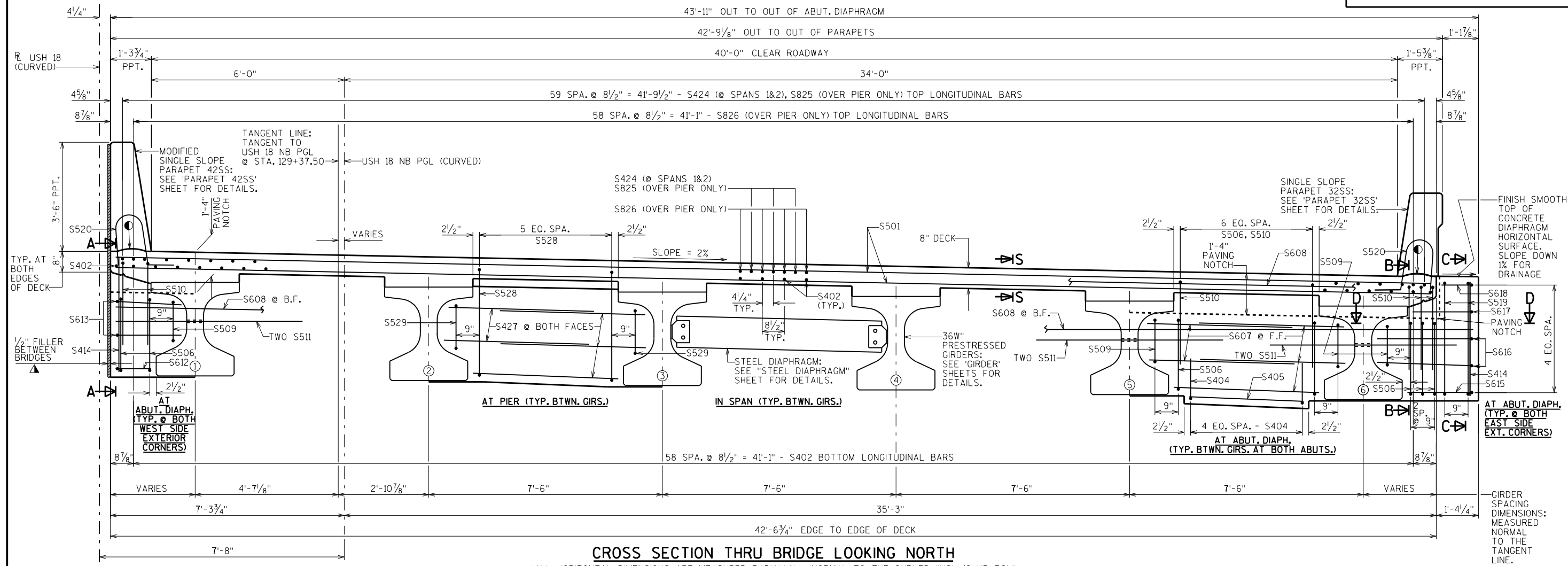
SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°



SECTION A-A
(FOR EXTERIOR ATTACHMENT)



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
STEEL DIAPHRAGM		SHEET 11	



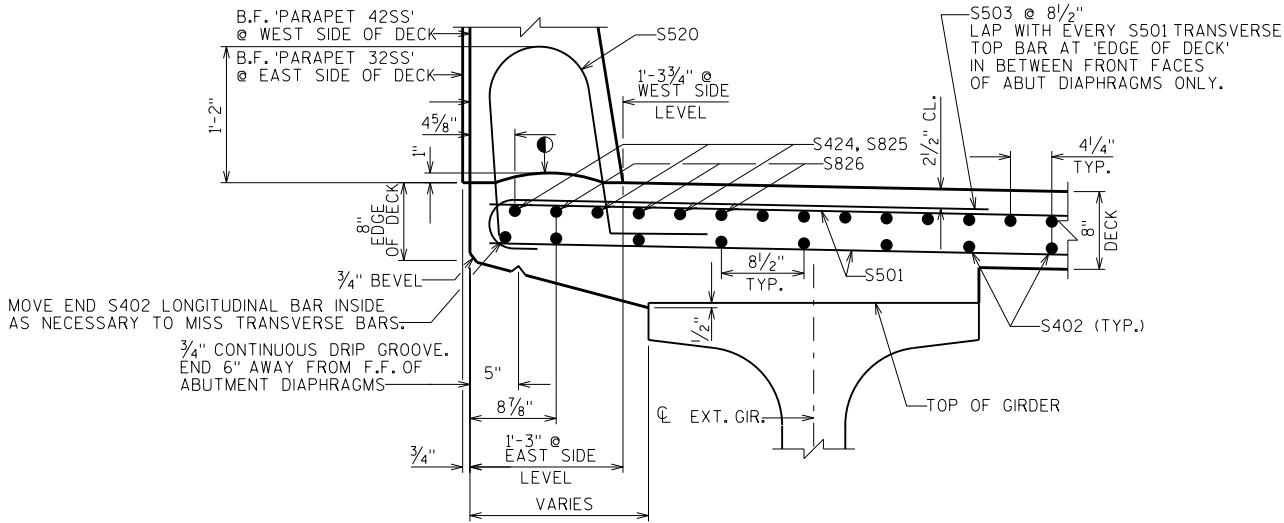
CROSS SECTION THRU BRIDGE LOOKING NORTH

(ALL HORIZONTAL DIMENSIONS ARE MEASURED RADIALLY - NORMAL TO THE CURVED "USH 18 NB PGL" EXCEPT FOR THE GIRDER SPACING DIMENSIONS.)

(NORTH ABUTMENT SHOWN, SOUTH ABUTMENT SIMILAR)

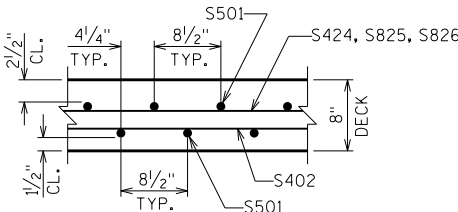
NOTES:

- FOR THE SECTIONS THRU THE ABUTMENT DIAPHRAGMS SEE "ABUTMENT DIAPHRAGMS" SHEET.
- SEE "ABUTMENT DIAPHRAGMS" SHEET FOR ABUTMENT DIAPHRAGM CORNER DETAILS.
- FOR THE SECTION THRU THE PIER DIAPHRAGM SEE "PIER DIAPHRAGM" SHEET.
- HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN
- ▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL 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.



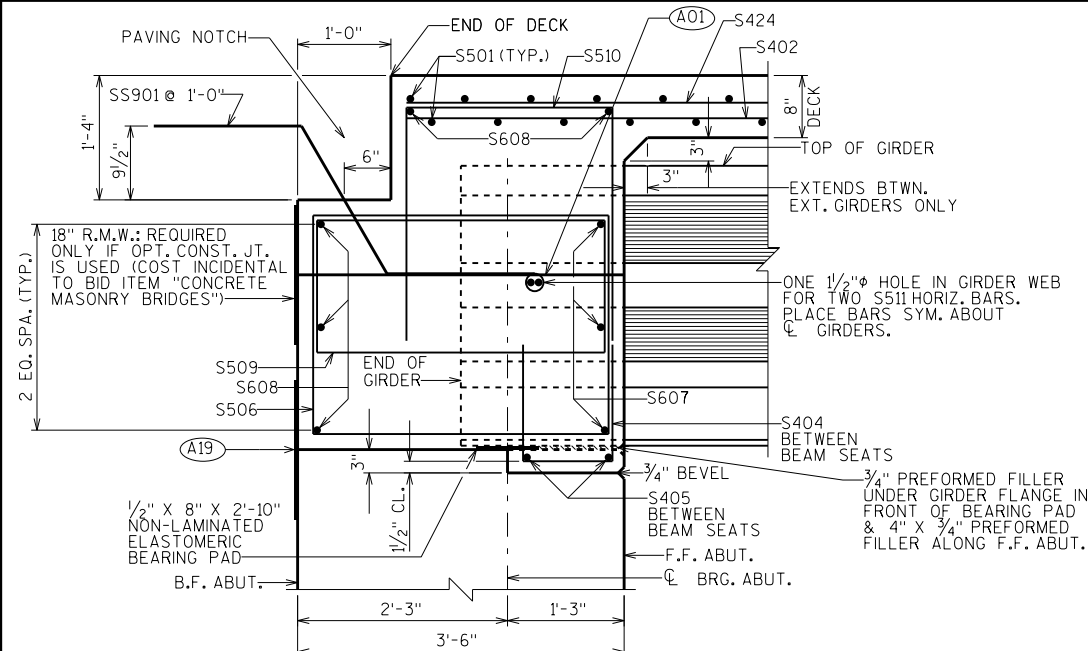
EDGE OF DECK DETAIL

(TYP. @ BOTH SIDES)

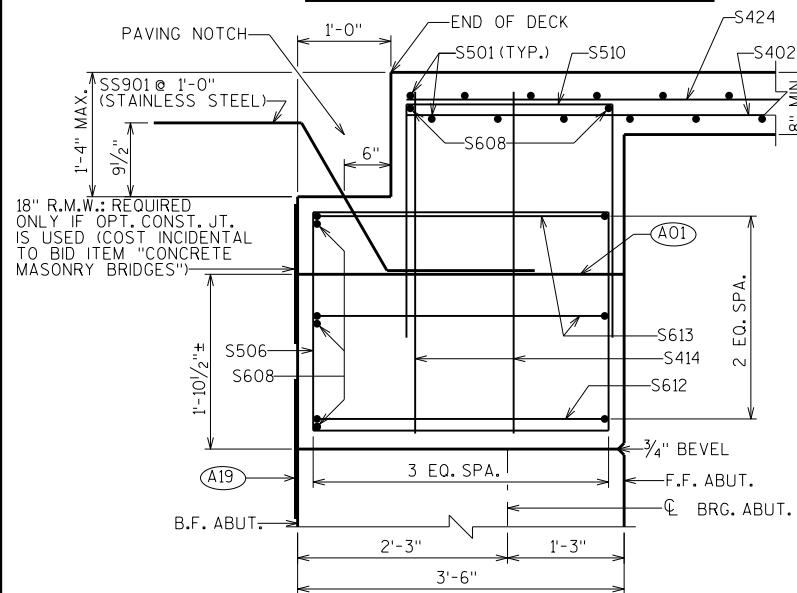


SECTION S-S

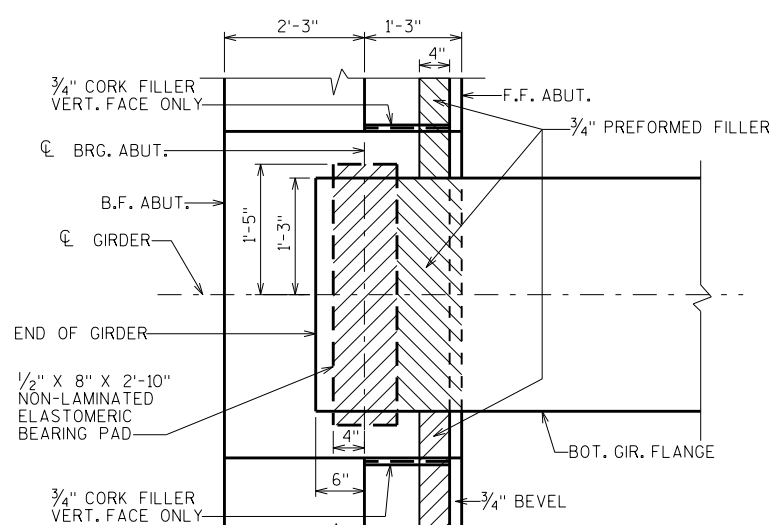
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
SUPERSTRUCTURE CROSS SECTIONS			SHEET 12



CROSS SECTION THRU ABUTMENT DIAPHRAGMS BETWEEN EXTERIOR GIRDERS



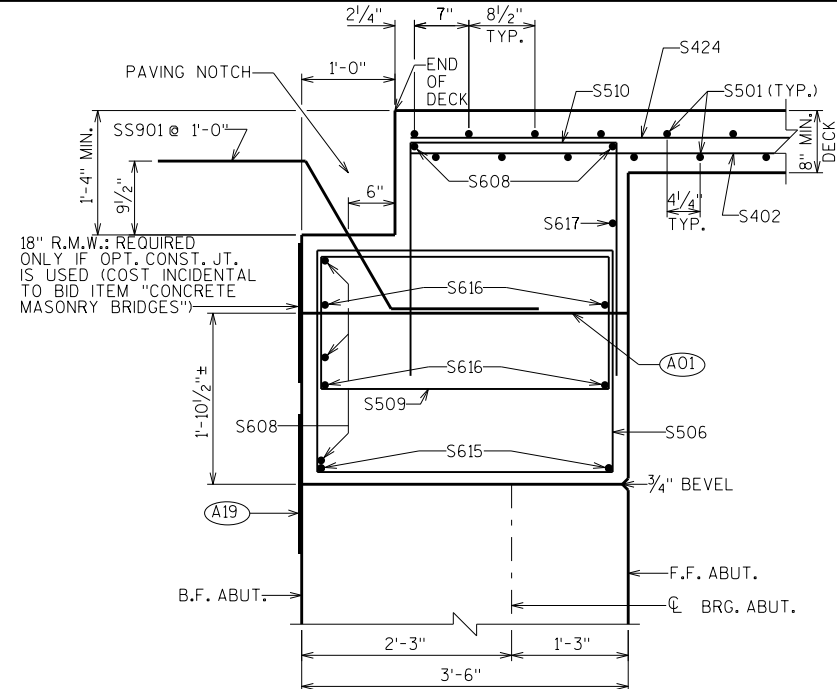
SECTION A-A
SECTION THRU ABUTMENT DIAPHRAGMS AT GIRDER 1 EXTERIOR



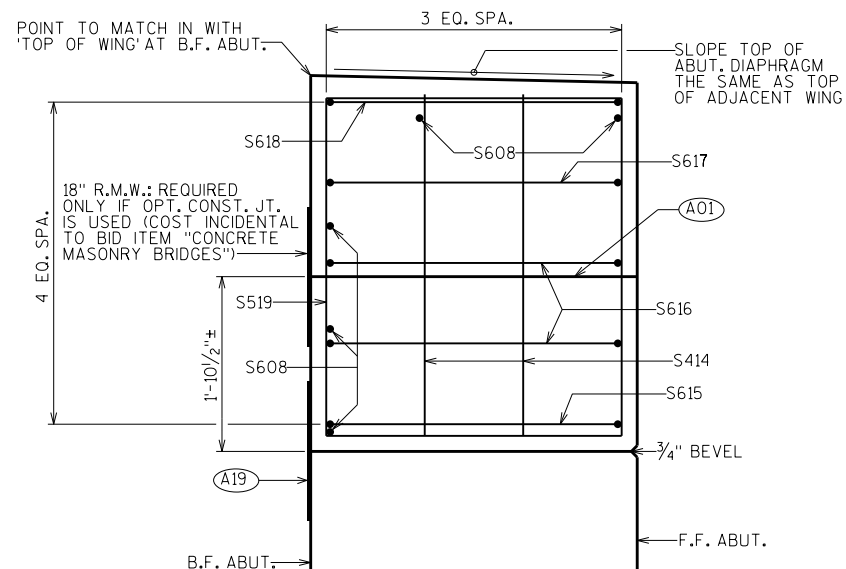
PLAN VIEW AT ABUTMENTS

NOTE:
SEE "SUPERSTRUCTURE BAR DETAILS" SHEET FOR THE 'BILL OF BARS' AND BAR DETAILS.

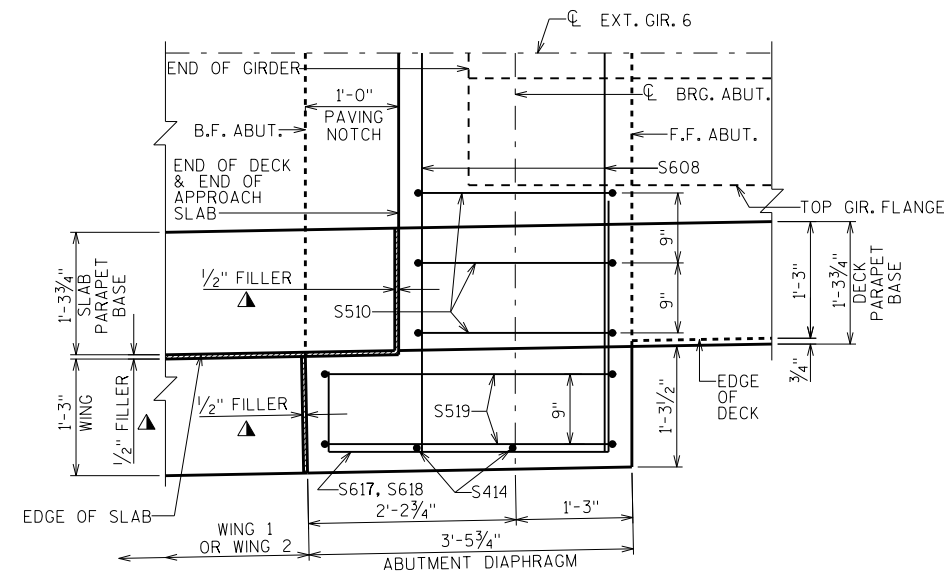
▲ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).



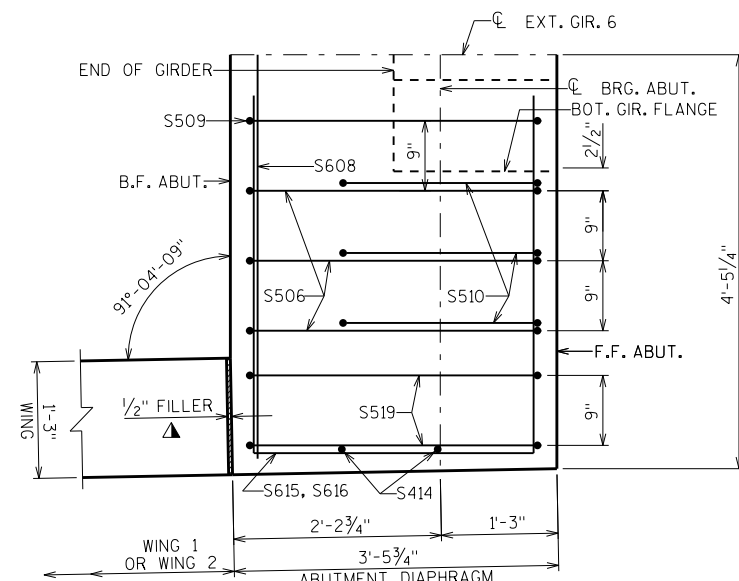
SECTION B-B
SECTION THRU ABUTMENT DIAPHRAGMS AT GIRDER 6 EXTERIOR (UNDER DECK)



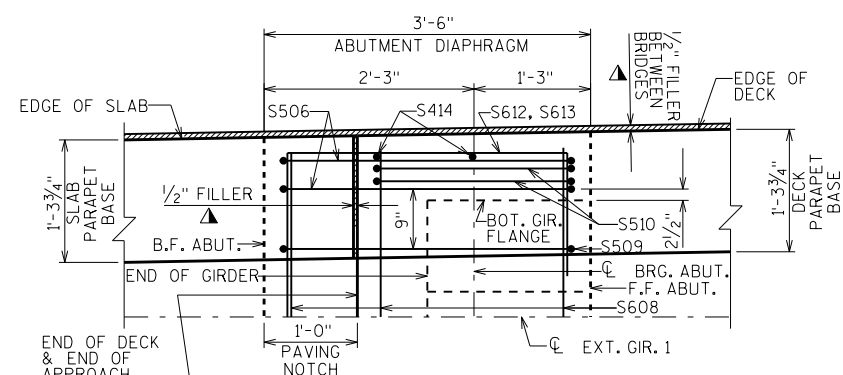
SECTION C-C
SECTION THRU ABUTMENT DIAPHRAGMS AT GIRDER 6 EXTERIOR (OUTSIDE EDGE OF DECK)



TYPICAL DIAPHRAGM CORNER DETAIL AT WINGS 1&2 (PLAN VIEW)



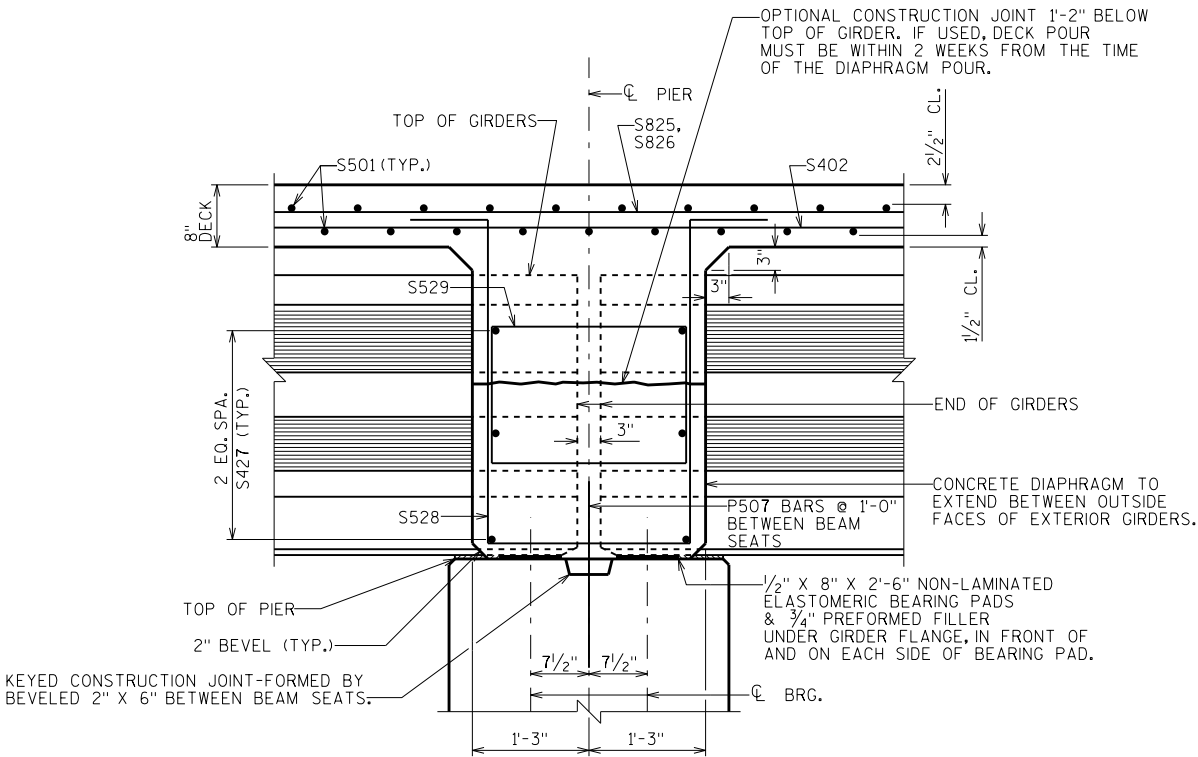
SECTION D-D
TYPICAL DIAPHRAGM CORNER DETAIL AT WINGS 1&2 (SECTION BELOW PAVING NOTCH)



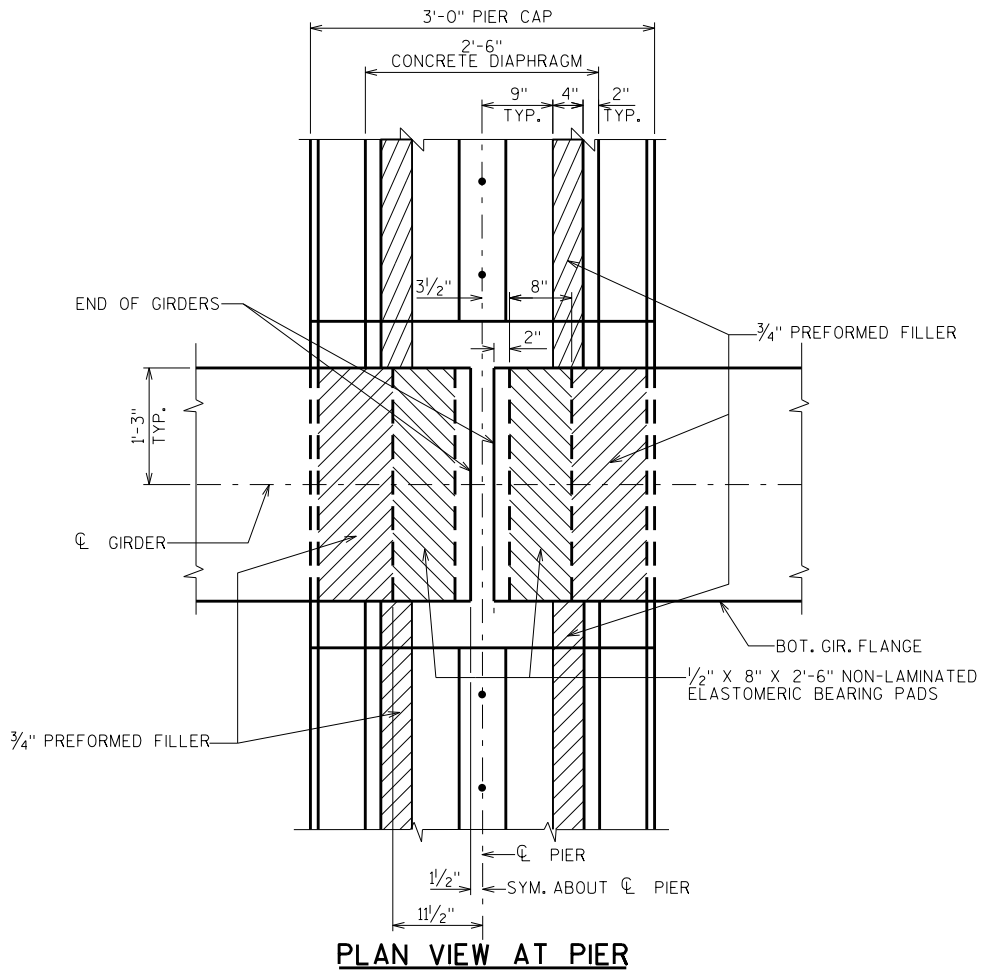
TYPICAL DIAPHRAGM CORNER DETAIL AT WEST SIDE - BOTH ENDS (PLAN VIEW)

- (A01) OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

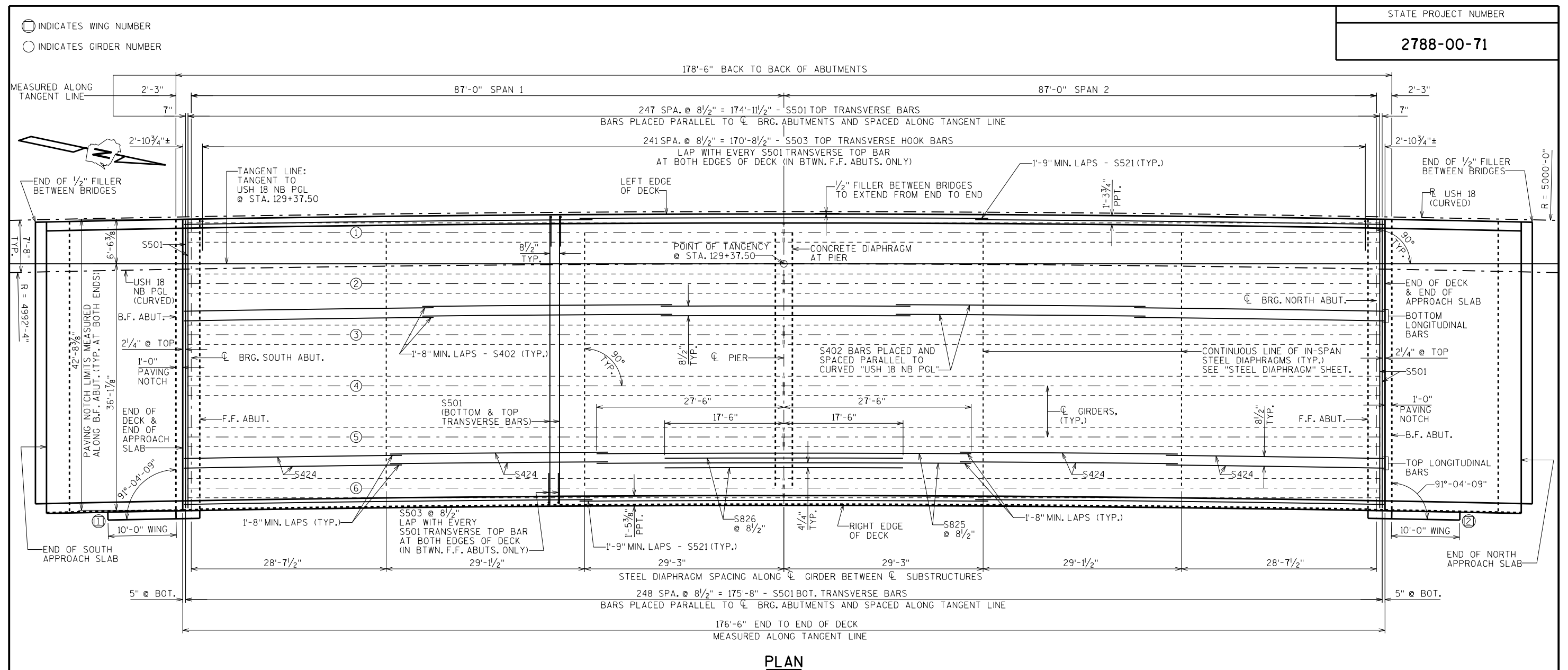
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
ABUTMENT DIAPHRAGMS		SHEET 13	



CROSS SECTION THRU PIER DIAPHRAGM



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CK'D. SEW	
PIER DIAPHRAGM		SHEET 14	

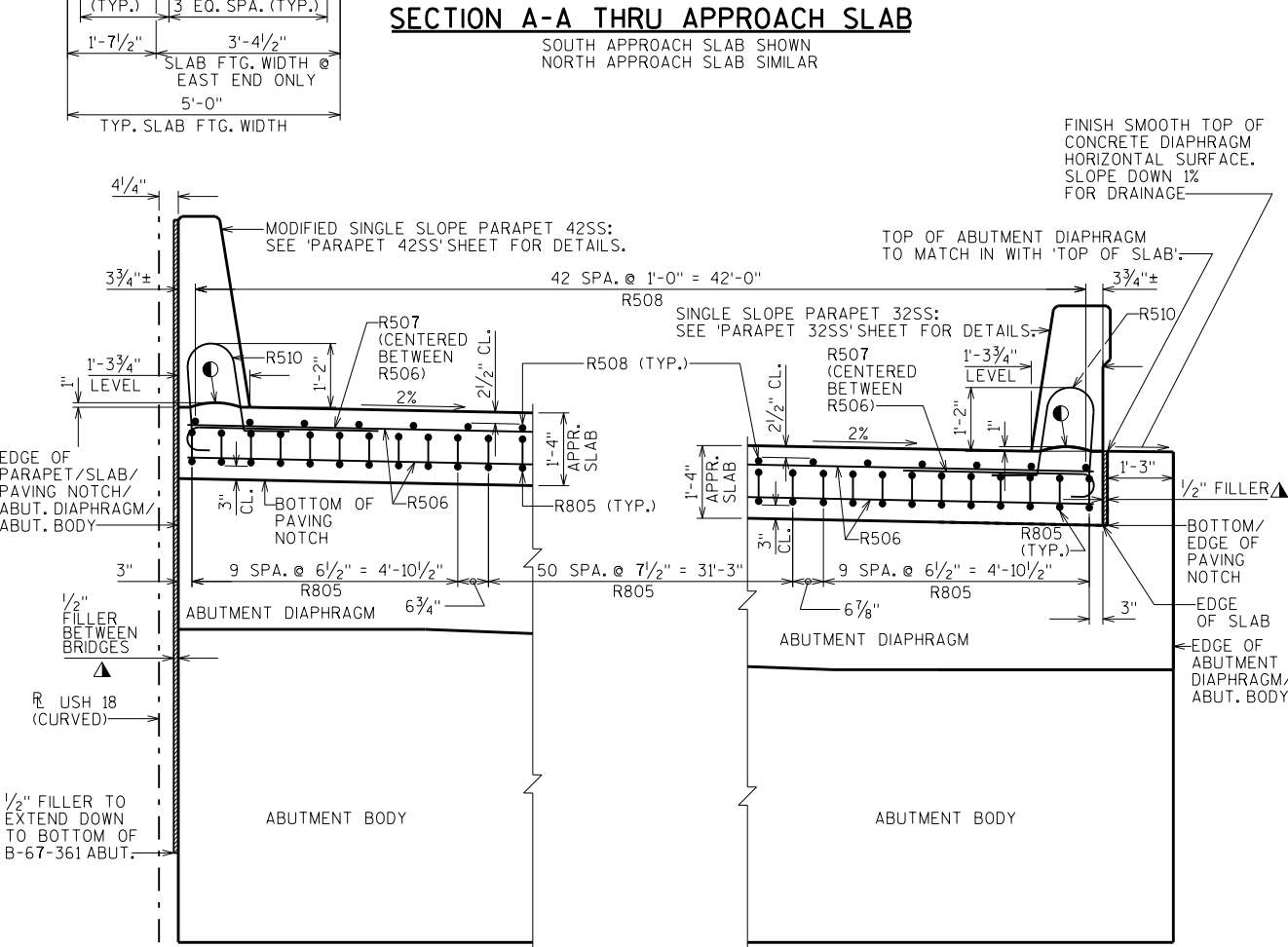
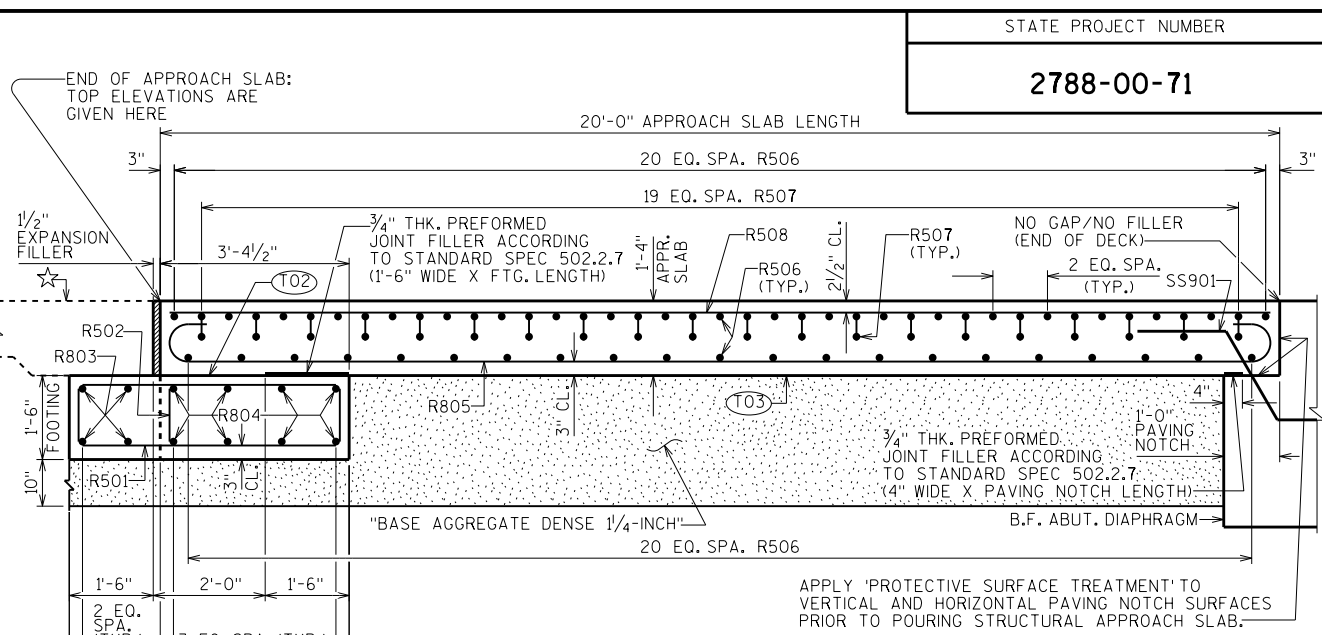
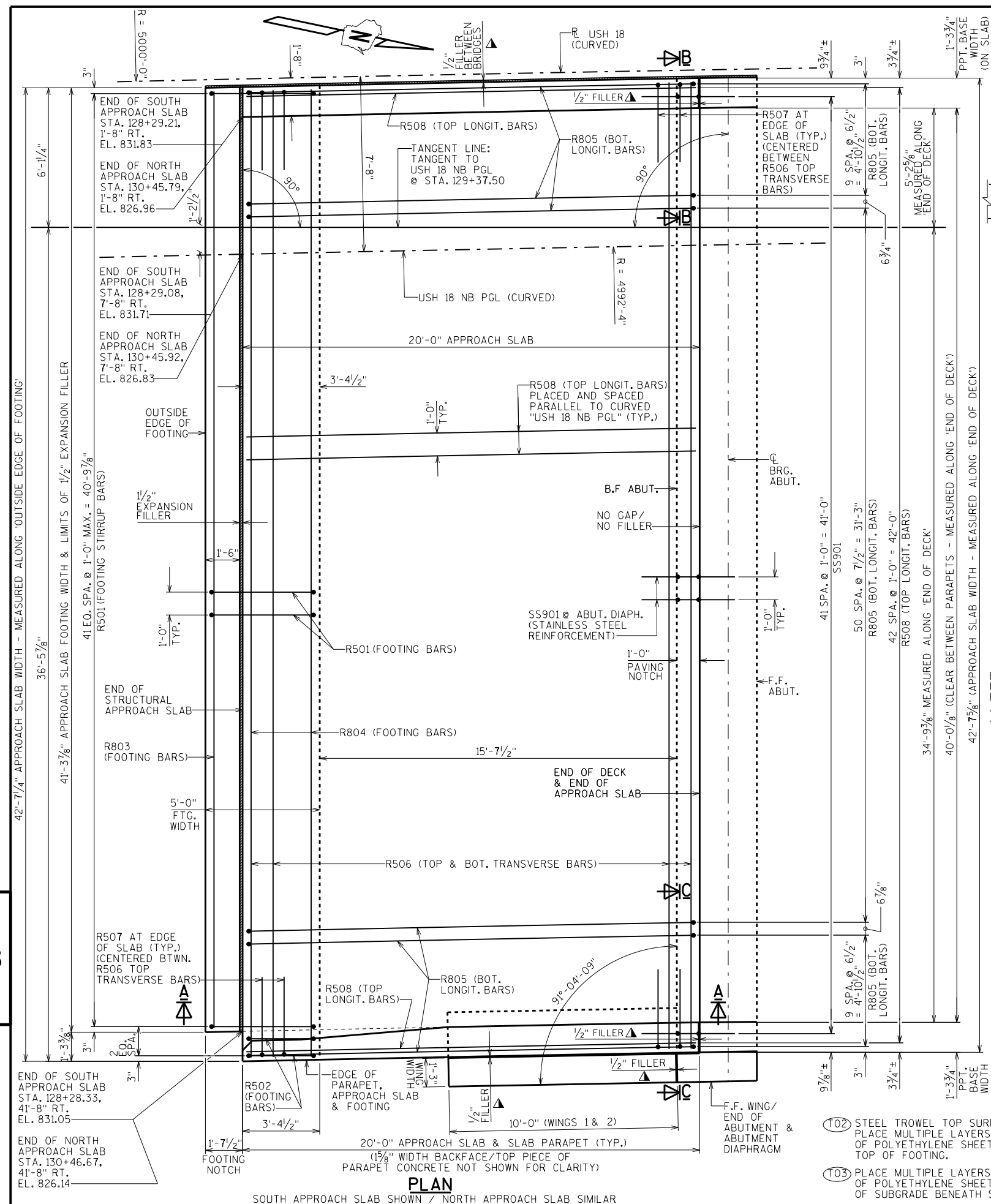


TOP OF DECK ELEVATIONS										EOD = EDGE OF DECK												
	℄ BRG. S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. N. ABUT.	
LEFT EOD	831.35	831.15	830.96	830.76	830.57	830.37	830.17	829.98	829.78	829.59	829.39	829.20	829.00	828.80	828.61	828.41	828.22	828.02	827.83	827.63	827.44	LEFT EOD
℄ GIRDER 1	831.34	831.14	830.94	830.74	830.54	830.35	830.15	829.95	829.76	829.56	829.36	829.17	828.97	828.78	828.58	828.39	828.19	828.00	827.81	827.61	827.42	℄ GIRDER 1
℄ GIRDER 2	831.19	830.99	830.79	830.59	830.39	830.20	830.00	829.80	829.61	829.41	829.21	829.02	828.82	828.63	828.43	828.24	828.04	827.85	827.66	827.46	827.27	℄ GIRDER 2
℄ GIRDER 3	831.04	830.84	830.64	830.44	830.25	830.05	829.85	829.65	829.46	829.26	829.06	828.87	828.67	828.48	828.28	828.09	827.89	827.70	827.50	827.31	827.12	℄ GIRDER 3
℄ GIRDER 4	830.89	830.69	830.50	830.30	830.10	829.90	829.70	829.50	829.31	829.11	828.91	828.72	828.52	828.33	828.13	827.93	827.74	827.54	827.35	827.16	826.96	℄ GIRDER 4
℄ GIRDER 5	830.75	830.55	830.35	830.15	829.95	829.75	829.55	829.36	829.16	828.96	828.76	828.57	828.37	828.17	827.98	827.78	827.59	827.39	827.20	827.00	826.81	℄ GIRDER 5
℄ GIRDER 6	830.60	830.40	830.20	830.00	829.80	829.60	829.40	829.21	829.01	828.81	828.61	828.42	828.22	828.02	827.83	827.63	827.44	827.24	827.05	826.85	826.66	℄ GIRDER 6
RIGHT EOD	830.56	830.37	830.17	829.97	829.78	829.58	829.38	829.18	828.99	828.79	828.59	828.39	828.20	828.00	827.80	827.61	827.41	827.21	827.01	826.82	826.62	RIGHT EOD

NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE B-67-360					
DRAWN BY			JPH	PLANS CK'D.	SEW
SUPERSTRUCTURE PLAN				SHEET 15	



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY		JPH	PLANS CK'D. SEW
DECK LAYOUT		SHEET 16	



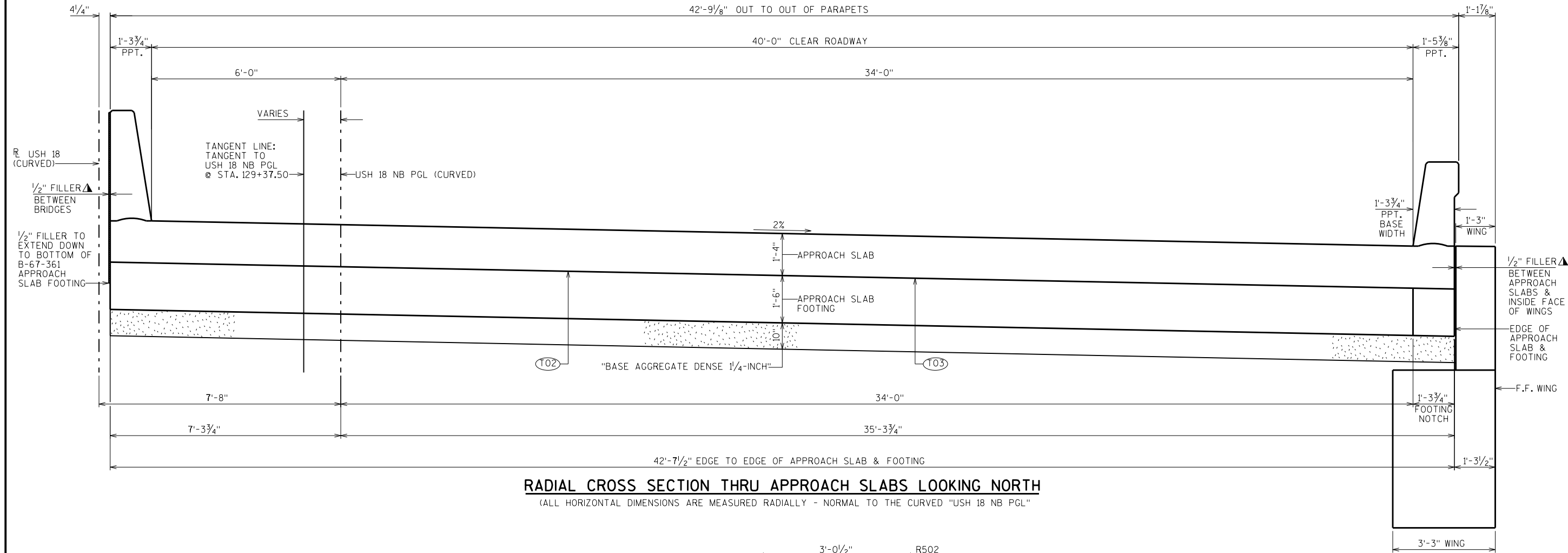
DESIGN DATA
ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.
CONCRETE STRENGTH f'c: 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60, fy: 60,000 P.S.I.

☆ FOLLOW FDM 14-10-15 REQUIREMENTS FOR ROADWAY APPROACH PAVEMENT.

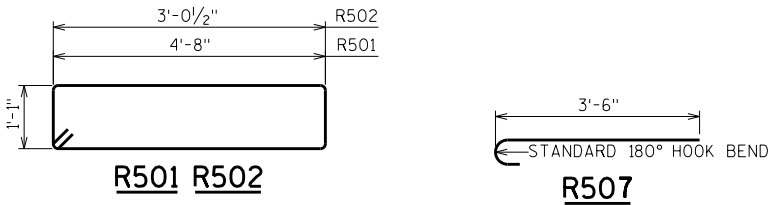
● HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL 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.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
STRUCTURAL APPROACH SLAB		SHEET 17	



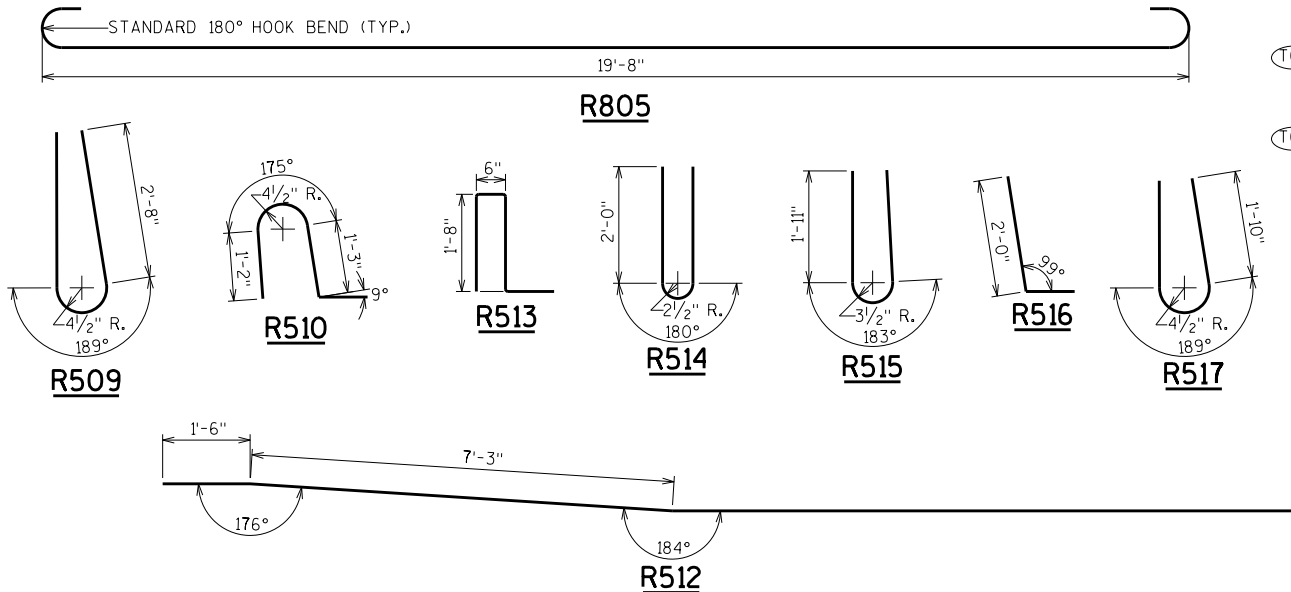
RADIAL CROSS SECTION THRU APPROACH SLABS LOOKING NORTH
(ALL HORIZONTAL DIMENSIONS ARE MEASURED RADially - NORMAL TO THE CURVED "US 18 NB PGL")



BILL OF BARS

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

BAR MARK	COAT	NO. REQUIRED. SOUTH SLAB	NO. REQUIRED. NORTH SLAB	LENGTH	BENT	LOCATION
R501	X	42	42	12'-2"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR
R502	X	2	2	8'-11"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT EAST END ONLY
R803	X	4	4	41'-0"		FOOTING-TOP & BOTTOM-OUTSIDE FACE-HORIZONTAL-TRANSVERSE
R804	X	8	8	42'-3"		FOOTING-TOP & BOTTOM-INSIDE FACE-HORIZONTAL-TRANSVERSE
R805	X	71	71	21'-6"	X	SLAB-BOTTOM-VERTICAL-LONGITUDINAL
R506	X	42	42	42'-3"		SLAB-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R507	X	40	40	4'-1"	X	SLAB-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES
R508	X	43	43	19'-8"		SLAB-TOP-HORIZONTAL-LONGITUDINAL
R509	X	40	40	6'-8"	X	PARAPET 42SS-VERTICAL-TRANSVERSE-AT WEST SIDE ONLY
R510	X	57	57	4'-5"	X	PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT BOTH SIDES
R511	X	8	8	19'-8"		PARAPET 42SS-BOTH FACES-HORIZONTAL-LONGITUDINAL-AT WEST SIDE ONLY
R512	X	1	1	19'-5"	X	PARAPET 32SS-BOT.-INSIDE FACE-HORIZONTAL-LONGITUDINAL-AT EAST SIDE ONLY
R513	X	17	17	4'-4"	X	PARAPETS 32SS/SLAB-VERTICAL-TRANSVERSE-AT EAST SIDE ONLY
R514	X	11	11	4'-9"	X	PARAPET 32SS-END-VERTICAL-TRANSVERSE-AT EAST SIDE ONLY
R515	X	6	6	4'-10"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT EAST SIDE ONLY
R516	X	12	12	2'-9"	X	PARAPETS 32SS/SLAB-INSIDE FACE-VERTICAL-TRANSVERSE-AT EAST SIDE ONLY
R517	X	17	17	5'-0"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT EAST SIDE ONLY
R518	X	5	5	19'-5"		PARAPET 32SS-BOTH FACES-HORIZONTAL-LONGITUDINAL-AT EAST SIDE ONLY

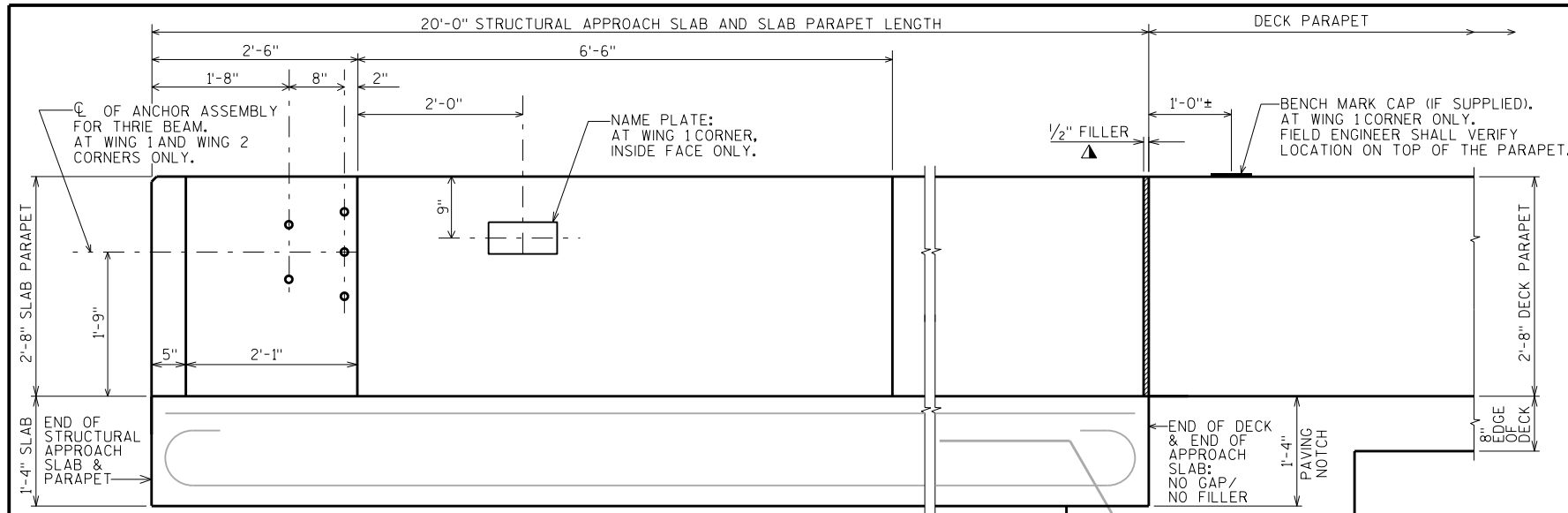


(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

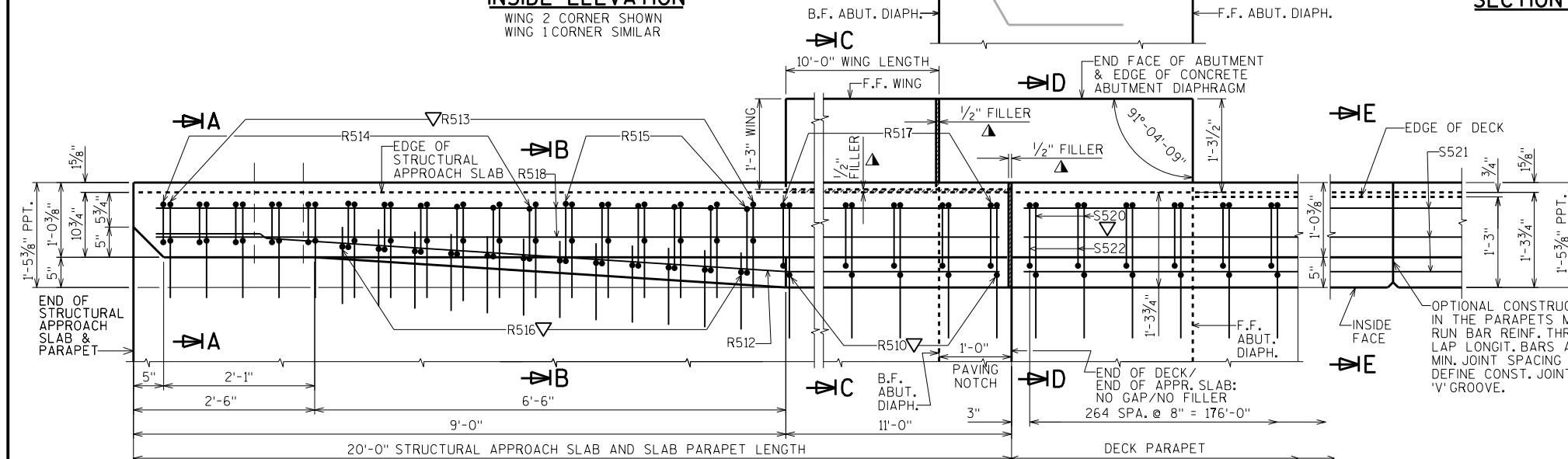
▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
STRUCTURAL APPROACH SLAB & BAR DETAILS		SHEET 18	



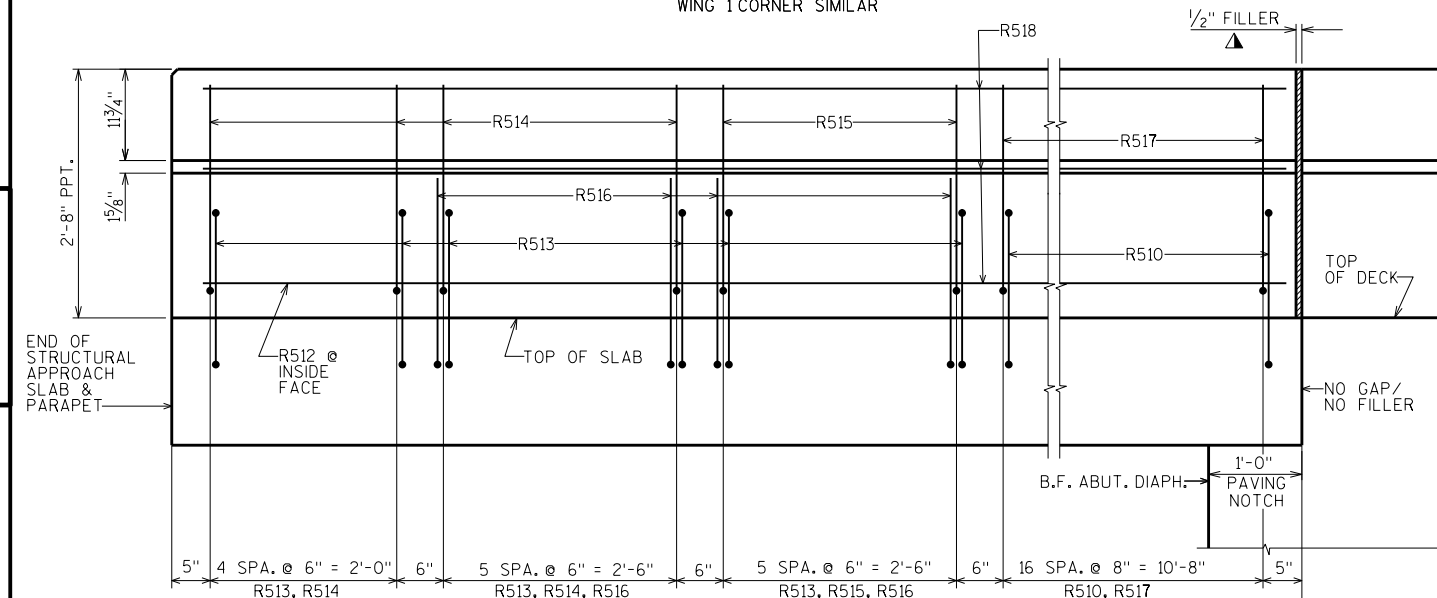
INSIDE ELEVATION

WING 2 CORNER SHOWN
WING 1 CORNER SIMILAR



PLAN

WING 2 CORNER SHOWN
WING 1 CORNER SIMILAR



OUTSIDE ELEVATION

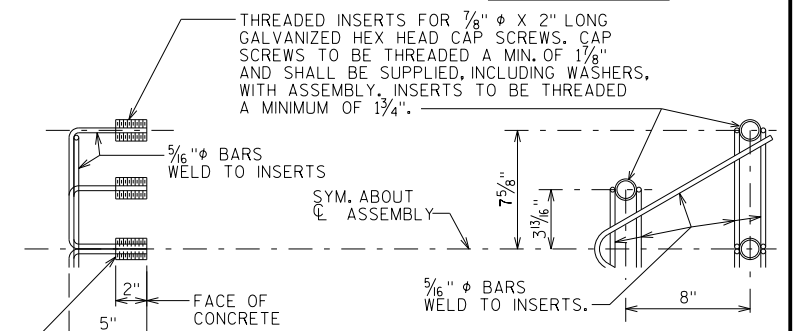
(WING NOT SHOWN FOR CLARITY)
WING 1 CORNER SHOWN
WING 2 CORNER SIMILAR

NOTES:
SEE THE 'SLAB & BAR DETAILS' SHEET FOR THE BILL OF BARS
AND BAR DETAILS FOR THE SLAB PARAPET R-BARS.
SEE THE 'SUPERSTRUCTURE BAR DETAILS' SHEET FOR THE BILL OF BARS
AND BAR DETAILS FOR THE DECK PARAPET S-BARS.

SECTION A-A

SECTION B-B

SECTION C-C



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED
IN ACCORDANCE WITH AASHTO M232 CLASS C.

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

SECTION D-D (OVER ABUT. DIAPHRAGM)

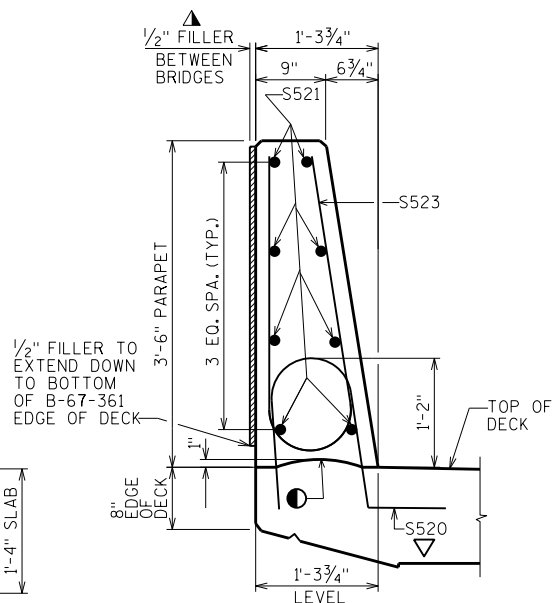
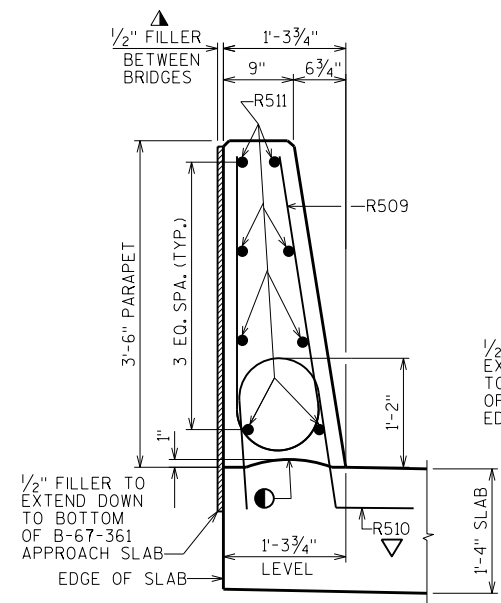
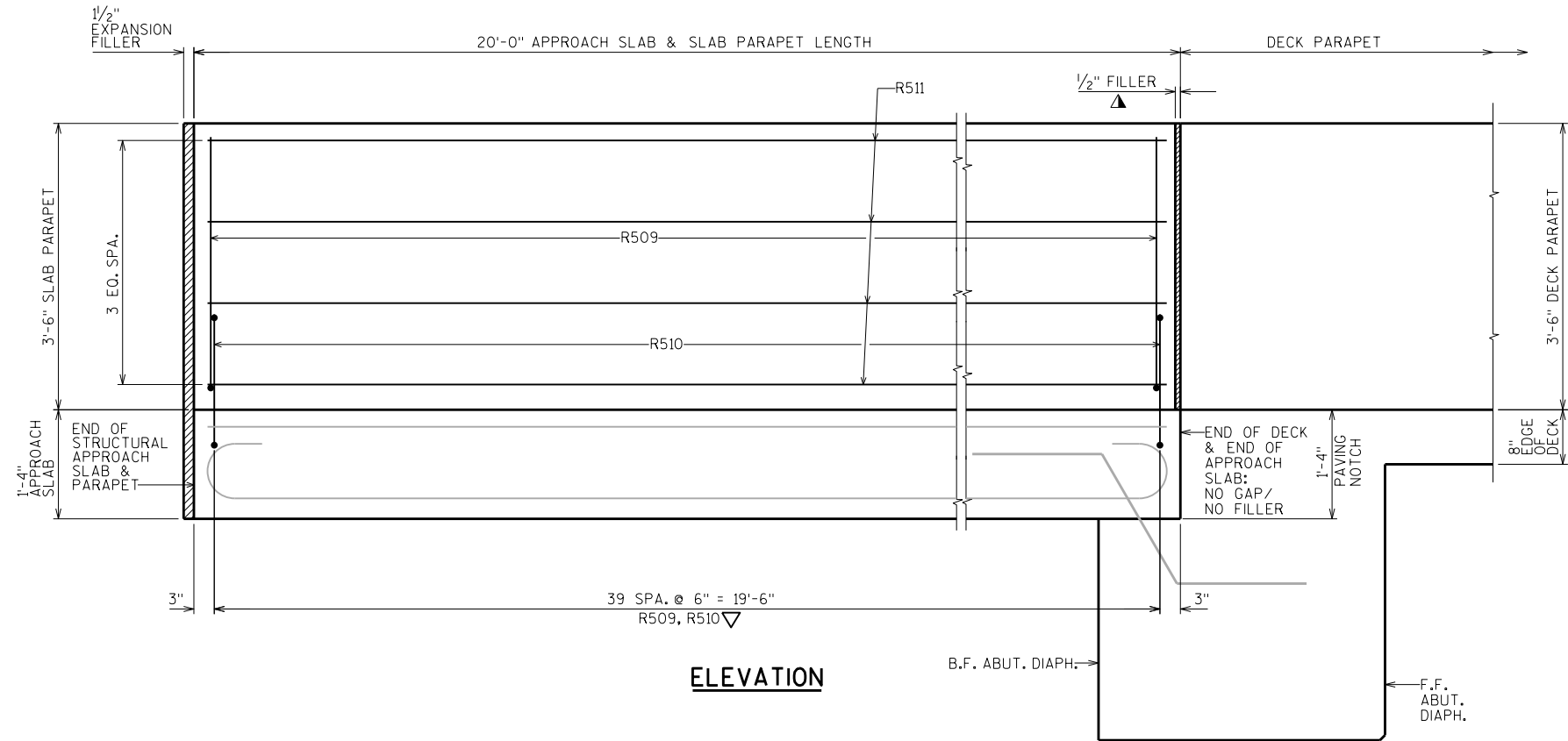
SECTION E-E (AT DECK)

▲ SEAL ALL EXPOSED HORIZONTAL AND
VERTICAL 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.

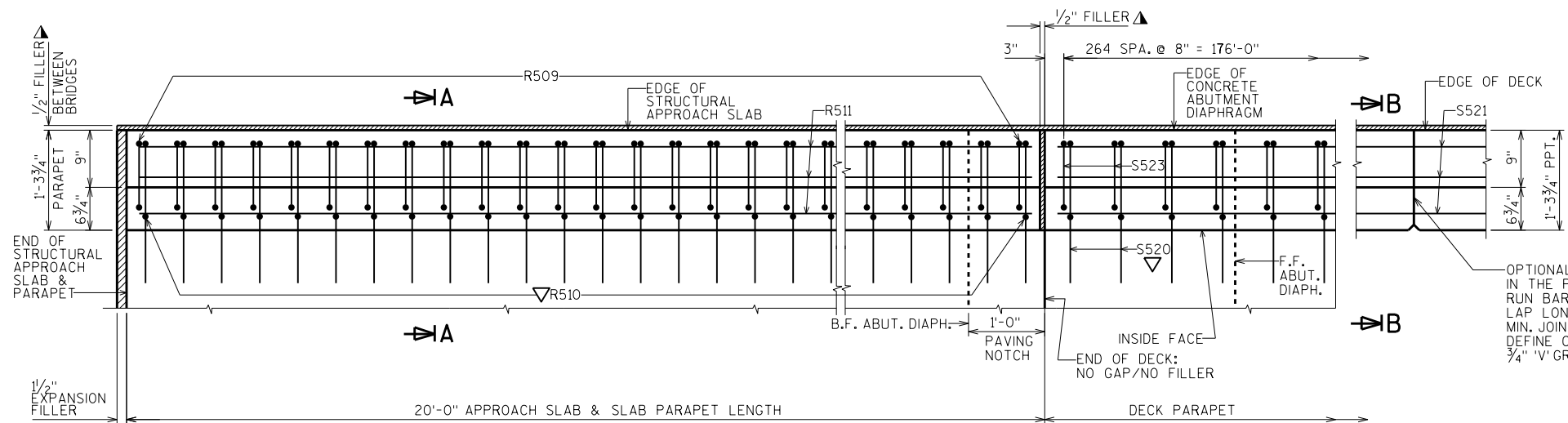
● HORIZ. CONST. JOINT - STRIKE OFF
AS SHOWN AND LEAVE ROUGH.

▽ R510, R513, R516 & S520 PARAPET BARS TO BE
TIED TO SLAB OR DECK STEEL BEFORE SLAB OR
DECK IS POURED. USE CARE TO PLACE R516 BARS
CORRECTLY ALONG TRANSITION OF PARAPET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CKD. SEW	
SINGLE SLOPE PARAPET 32SS		SHEET 19	



NOTES:
SEE THE 'SLAB & BAR DETAILS' SHEET FOR THE BILL OF BARS AND BAR DETAILS FOR THE SLAB PARAPET R-BARS.
SEE THE 'SUPERSTRUCTURE BAR DETAILS' SHEET FOR THE BILL OF BARS AND BAR DETAILS FOR THE DECK PARAPET S-BARS.



▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL 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.

● HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

▽ R510 & S520 PARAPET BARS TO BE TIED TO SLAB OR DECK STEEL BEFORE THE SLAB OR DECK IS POURED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CK'D. SEW	
MODIFIED SINGLE SLOPE PARAPET 42SS		SHEET 20	

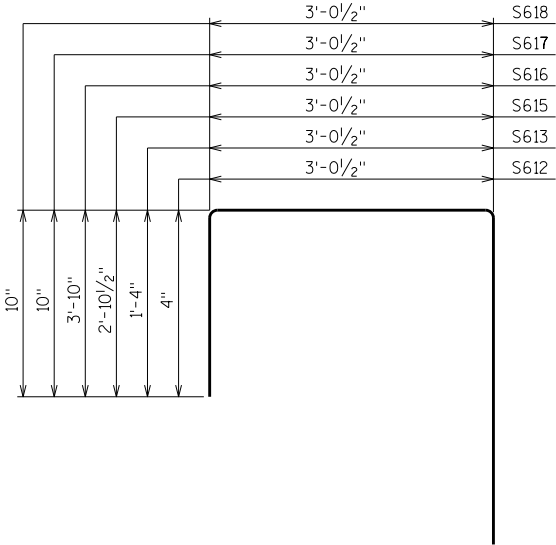
BILL OF BARS

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

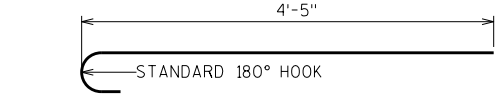
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	X	499	42'-3"		DECK-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
S402	X	305	36'-8"		DECK-BOTTOM-HORIZONTAL-LONGITUDINAL
S503	X	484	5'-0"	X	DECK-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES OF DECK
S404	X	50	3'-5"	X	ABUT. DIAPHS.-F.F.-BOT.-VERT.-BTWN. BEAM SEATS
S405	X	20	3'-8"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS
S506	X	80	11'-9"	X	ABUT. DIAPHS.-VERTICAL-UNDER PAVING NOTCHES
S607	X	50	4'-8"		ABUT. DIAPHS.-F.F.-HORIZ.-BTWN. GIRS ONLY
S608	X	10	43'-7"		ABUT. DIAPHS. B.F. & DECK-HORIZ.
S509	X	24	9'-9"	X	ABUT. DIAPHS.-VERT.-UNDER GIR. TOP FLANGES
S510	X	80	7'-4"	X	ABUT. DIAPHS./DECK-VERT.-BETWEEN EDGES OF DECKS
S511	X	24	6'-0"		ABUT. DIAPHS.-HORIZ.-THRU GIRDERS
S612	X	2	6'-8"	X	ABUT. DIAPHS.-BOT.-HORIZ.-AT GIR. 1 EXTERIORS ONLY
S613	X	4	7'-8"	X	ABUT. DIAPHS.-HORIZ.-AT GIR. 1 EXTERIORS ONLY
S414	X	8	3'-8"		ABUT. DIAPH.-VERT.-AT ALL FOUR GIR. EXTERIORS
S615	X	2	9'-2"	X	ABUT. DIAPHS.-BOT.-HORIZ.-AT GIR. 6 EXTERIORS ONLY
S616	X	4	10'-5"	X	ABUT. DIAPHS.-HORIZ.-AT GIR. 6 EXTERIORS ONLY
S617	X	2	6'-3"	X	ABUT. DIAPHS.-HORIZ.-AT GIR. 6 EXTERIORS ONLY
S618	X	2	4'-10"	X	ABUT. DIAPHS.-TOP-HORIZ.-AT GIR. 6 EXTERIORS ONLY
S519	X	4	14'-4"	X	ABUT. DIAPHS.-VERTICAL-AT GIR. 6 EXTERIORS ONLY
S520	X	530	4'-5"	X	PARAPETS/DECK-VERTICAL-TRANSVERSE-AT BOTH SIDES
S521	X	42	60'-0"		PARAPETS-BOTH FACES-HORIZ.-LONGIT.-AT BOTH SIDES
S522	X	265	5'-0"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT EAST SIDE ONLY
S523	X	265	6'-8"	X	PARAPET 42SS-VERTICAL-TRANSVERSE-AT WEST SIDE ONLY
S424	X	240	32'-0"		DECK-TOP-HORIZONTAL-LONGITUDINAL-AT SPANS 1&2
S825	X	60	55'-0"		DECK-TOP-HORIZONTAL-LONGITUDINAL-OVER PIER ONLY
S826	X	59	35'-0"		DECK-TOP-HORIZONTAL-LONGITUDINAL-OVER PIER ONLY
S427	X	50	4'-8"		PIER. DIAPH.-BOTH FACES-HORIZ.-BTWN. GIRS ONLY
S528	X	30	10'-3"	X	PIER DIAPH./DECK-VERTICAL-BTWN. GIRS ONLY
S529	X	10	7'-11"	X	PIER DIAPH.-VERT.-UNDER GIR. TOP FLANGES-BTWN. GIRS ONLY

SS901		84	5'-0"	X	APPROACH SLAB/ABUT. DIAPH.-VERT.-AT PAVING NOTCHES
-------	--	----	-------	---	--

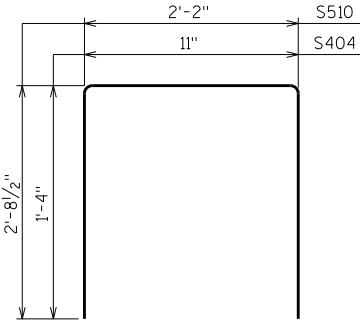
STAINLESS STEEL REINFORCEMENT



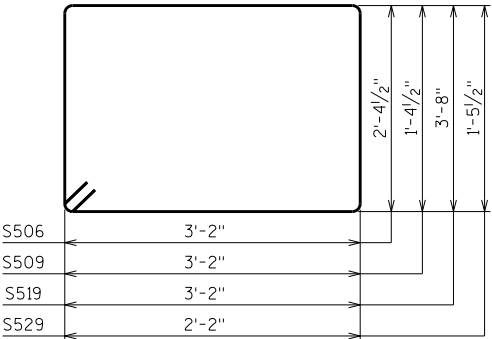
S612 S613 S615 S616 S617 S618



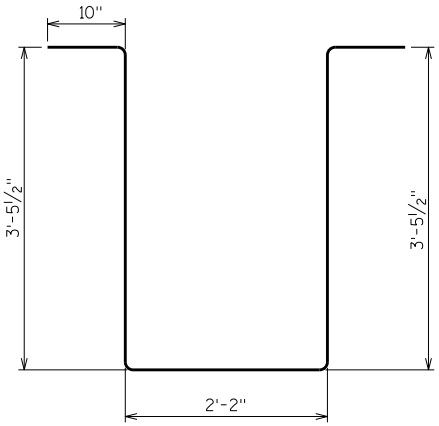
S503



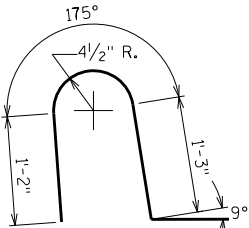
S404 S510



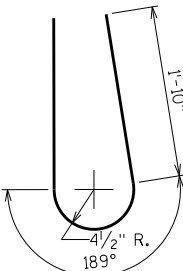
S506 S509 S519 S529
(STIRRUP BARS)



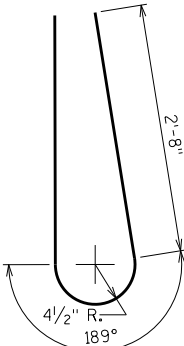
S528



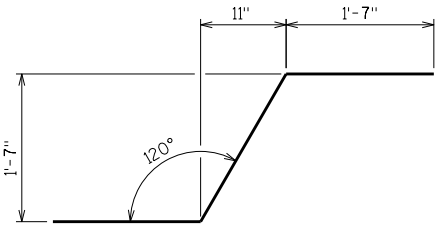
S520



S522



S523



SS901

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-360			
DRAWN BY JPH		PLANS CK'D. SEW	
SUPERSTRUCTURE BAR DETAILS		SHEET 21	