STATE PROJECT NUMBER

2788-00-71

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.12
OPERATING RATING FACTOR: RF = 1.64
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 & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

45W" 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 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 60'-0" LONG AT SOUTH ABUTMENT AND 70'-0" LONG AT NORTH ABUTMENT. 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.

LIST OF DRAWINGS

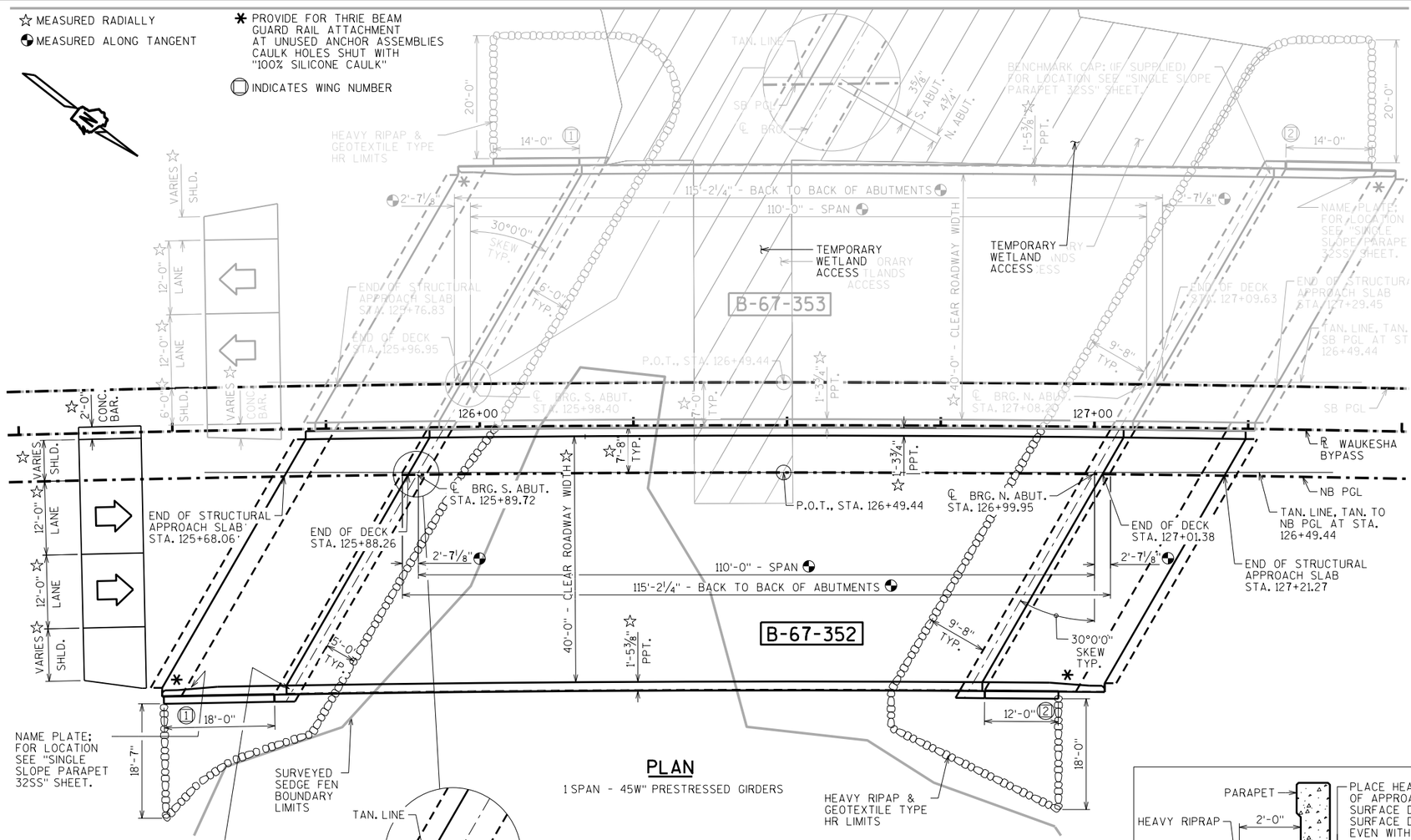
TRAFFIC VOLUME

WAUKESHA BYPASS
ADT = 17,300 (2037)
R.D.S. = 50 M.P.H.

CURVE DATA

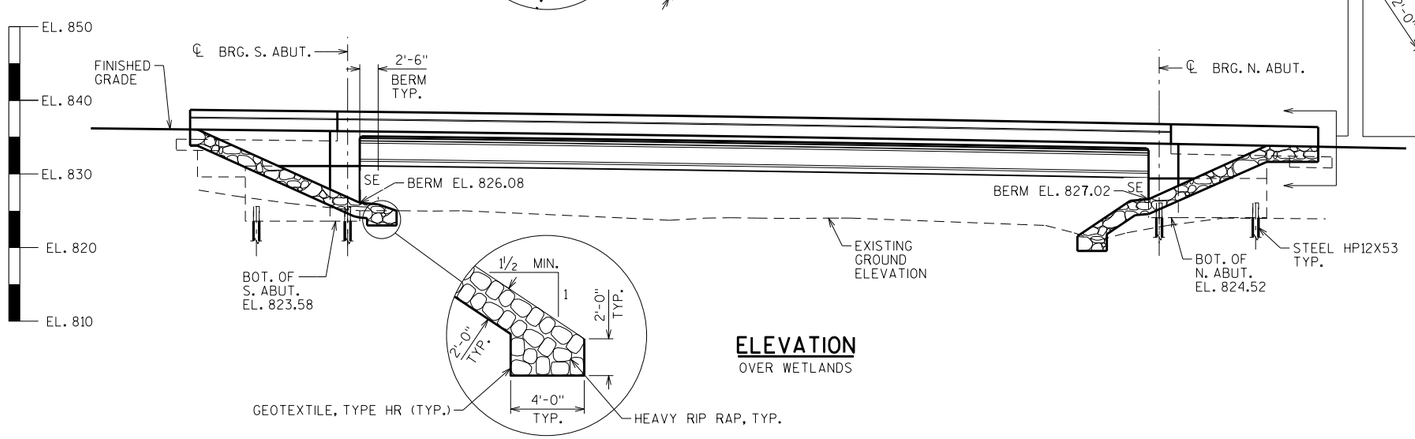
WAUKESHA BYPASS
P.I. = 125+62.72
Δ = 21°44'49"
D = 1°08'45"
T = 960.45
L = 1897.77
R = 5000
S.E. = 2.0 %
P.C. = 116+02.27
P.T. = 135+00.04

☆ MEASURED RADIALLY
◐ MEASURED ALONG TANGENT
✱ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK"
ⓝ INDICATES WING NUMBER



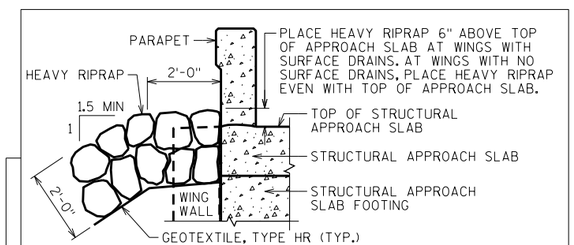
PLAN

1 SPAN - 45W" PRESTRESSED GIRDERS



ELEVATION

OVER WETLANDS



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

STRUCTURE DESIGN CONTACTS:
MAXWELL KULICK (608) 261-6108
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 6/23/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-67-352

NB WAUKESHA BYPASS OVER WETLANDS

COUNTY	TOWN
WAUKESHA	WAUKESHA

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
MJK	SEW	MJK	SEW

GENERAL PLAN

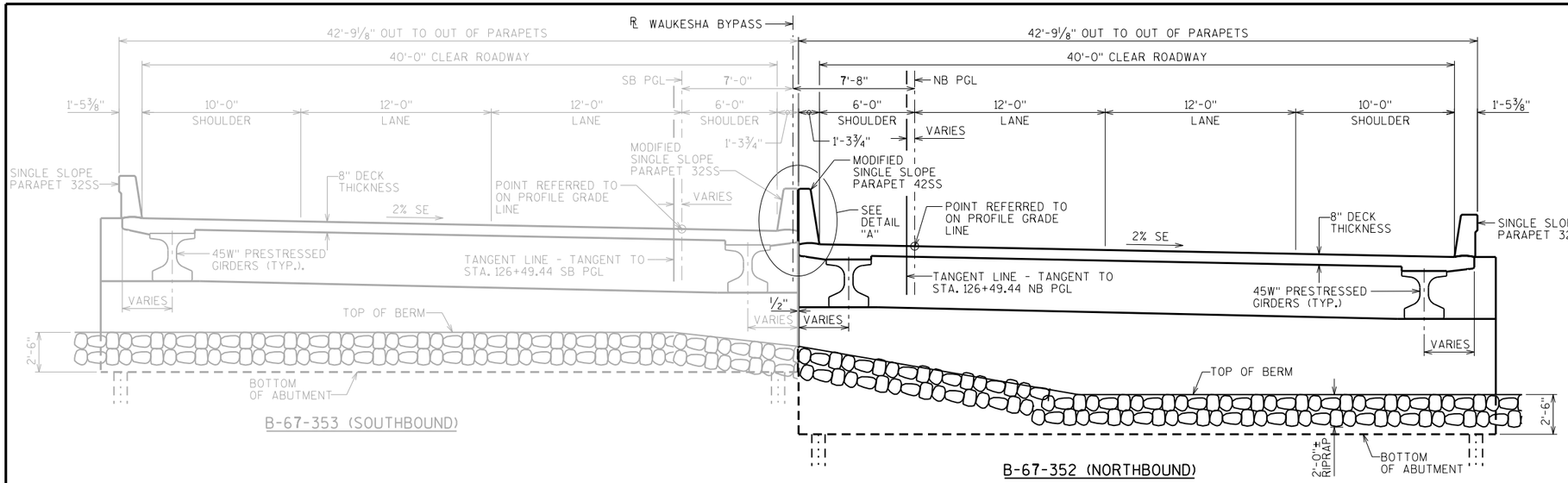
SHEET 1 OF 18

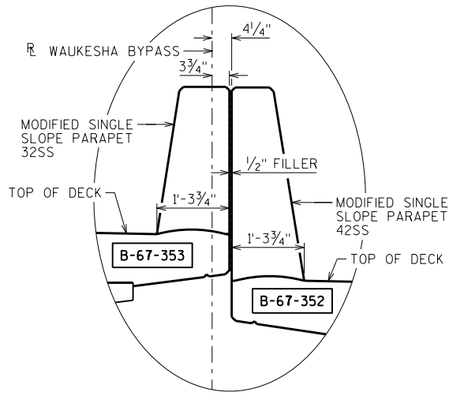
I.D. 2788-00-01M DATE: MAY 2017

SCALE = 10.00

STATE PROJECT NUMBER

2788-00-71

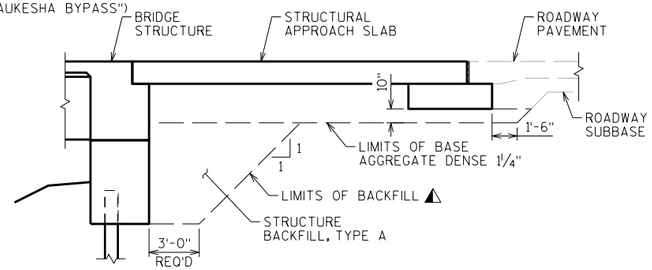




DETAIL A

CROSS SECTION THRU ROADWAY LOOKING NORTH (UPSTATION)

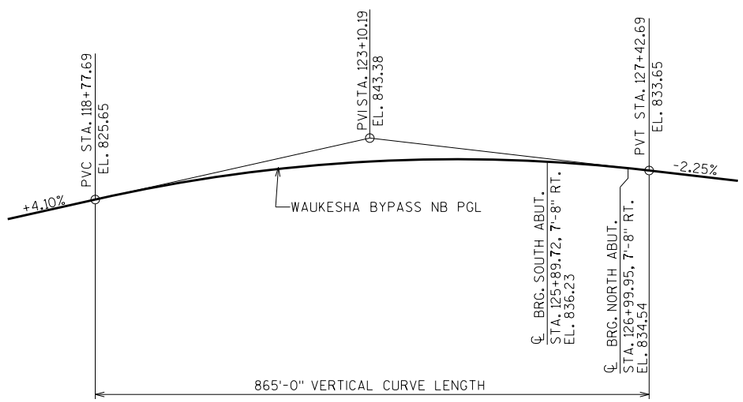
(ALL HORIZONTAL DIMENSIONS ARE MEASURED RADIALLY - NORMAL TO THE CURVED "℄ WAUKESHA BYPASS")



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 - NB WAUKESHA BYPASS

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 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 ¾" UNLESS OTHERWISE NOTED.

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

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH APPROACH SLAB	SOUTH ABUT.	NORTH ABUT.	NORTH APPROACH SLAB	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-67-352	LS	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	———	330	160	———	490
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	———	131	———	———	129	260
501.1000.S	ICE HOT WEATHER CONCRETING	LB	1,635	460	505	330	450	3,380
502.0100	CONCRETE MASONRY BRIDGES	CY	218	61	67	44	60	450
502.3200	PROTECTIVE SURFACE TREATMENT	SY	524	90	———	———	89	703
502.3210	PIGMENTED SURFACE SEALER	SY	101	18	———	———	18	137
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	777	———	———	———	———	777
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	———	4,380	2,910	———	7,290
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	32,455	10,985	1,535	780	10,985	56,740
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,465	———	———	———	———	1,465
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	14	———	———	———	———	14
506.4000	STEEL DIAPHRAGMS B-67-352	EACH	12	———	———	———	———	12
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	———	11	11	———	22
550.0500	PILE POINTS	EACH	———	———	10	10	———	20
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	———	———	600	700	———	1,300
606.0300	RIPRAP HEAVY	CY	———	———	55	80	———	135
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	———	80	80	———	160
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	———	———	———	———	2
645.0120	GEOTEXTILE TYPE HR	SY	———	———	78	115	———	193
	NON-BID ITEMS							
	FILLER	SIZE	———	———	———	———	———	½", ¾", 1½"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-352

DRAWN BY MJK | PLANS CK'D. SEW

CROSS SECTION & QUANTITIES

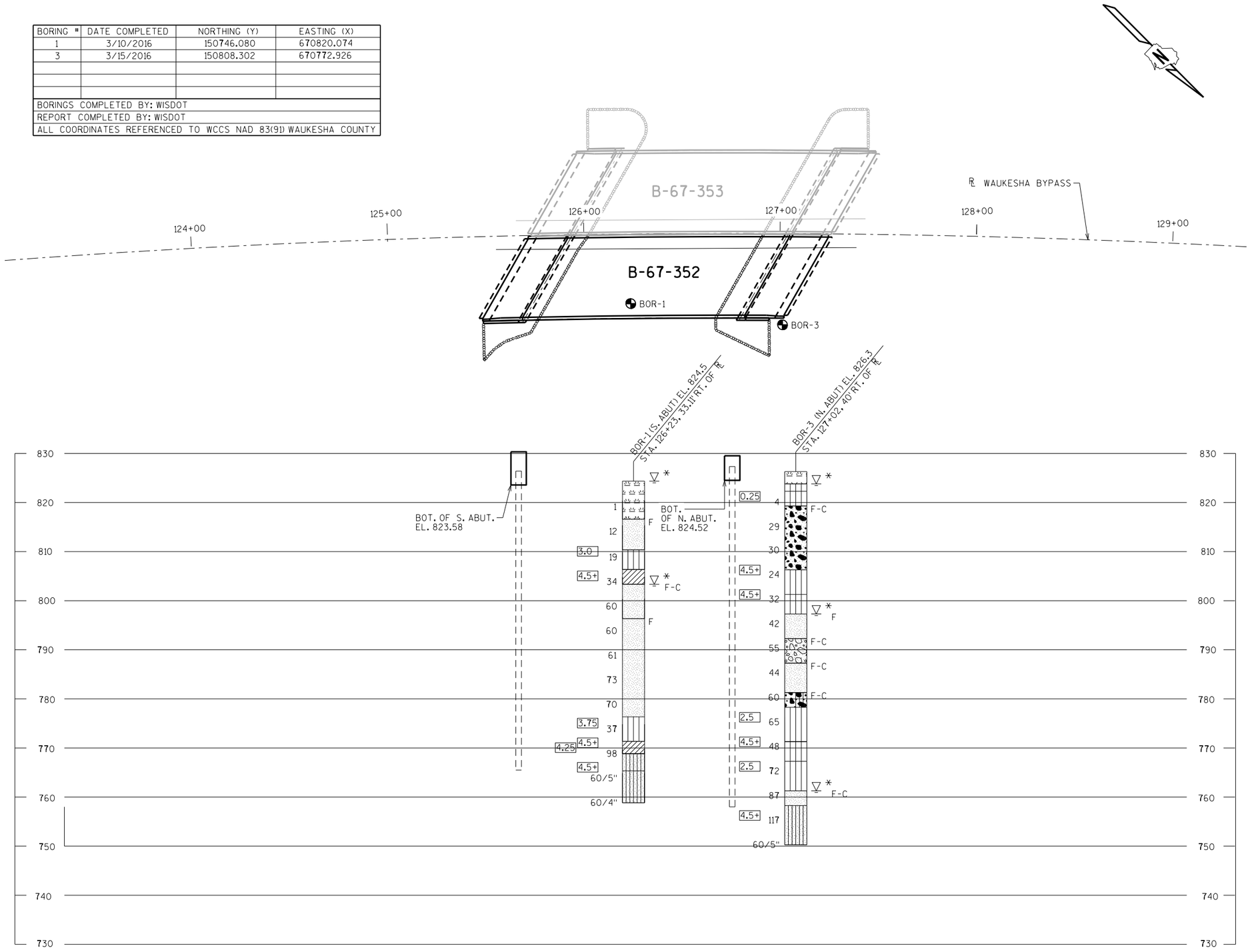
SHEET 2

SCALE = 4.00

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	3/10/2016	150746.080	670820.074
3	3/15/2016	150808.302	670772.926
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) WAUKESHA COUNTY			



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

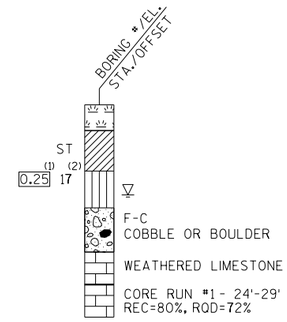
STATE PROJECT NUMBER

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-67-352

DRAWN BY TLP/MJK | PLANS CK'D. SEW

SUBSURFACE EXPLORATION

SHEET 3

SCALE = 2.5

8

8

STATE PROJECT NUMBER

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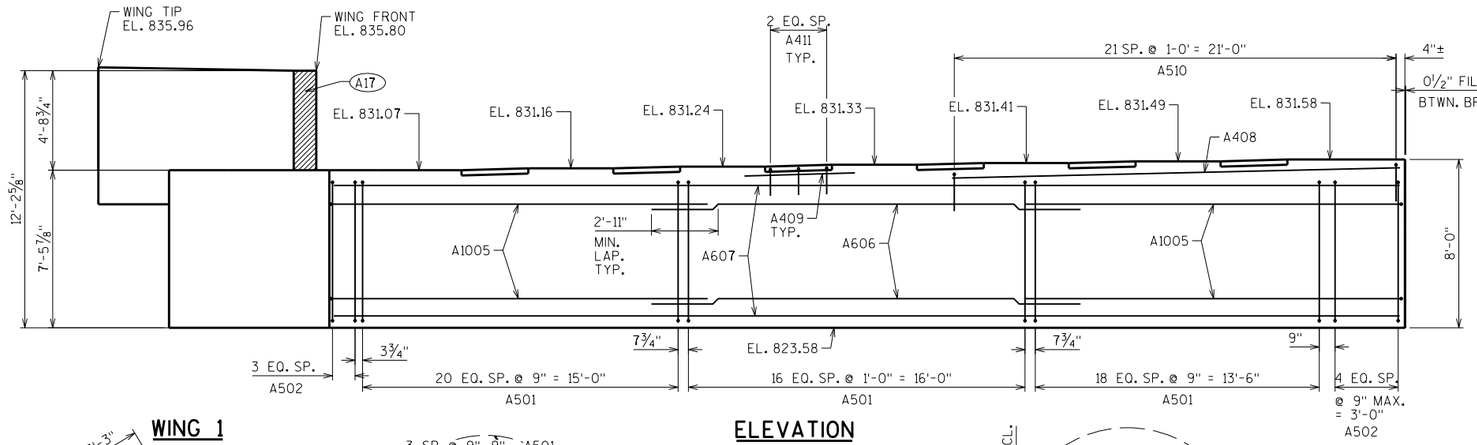
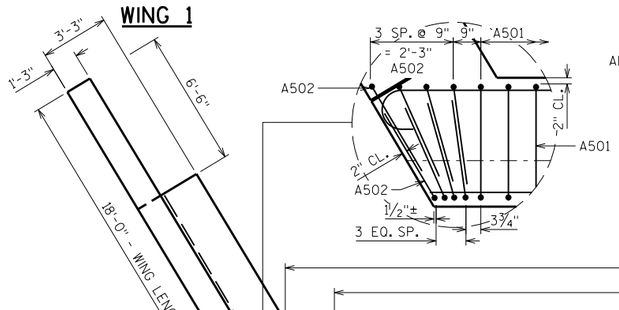
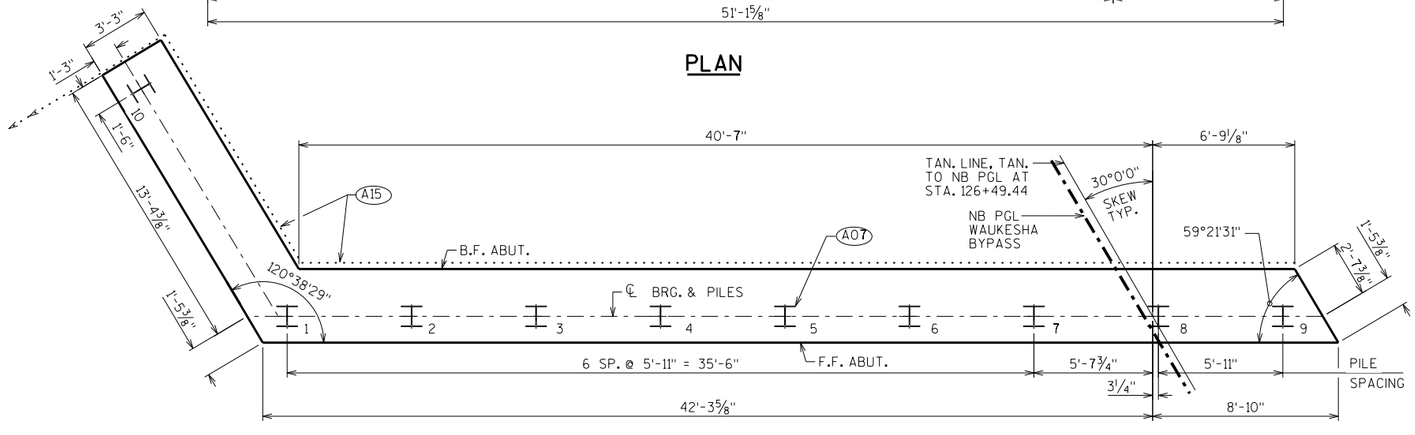


ELEVATION

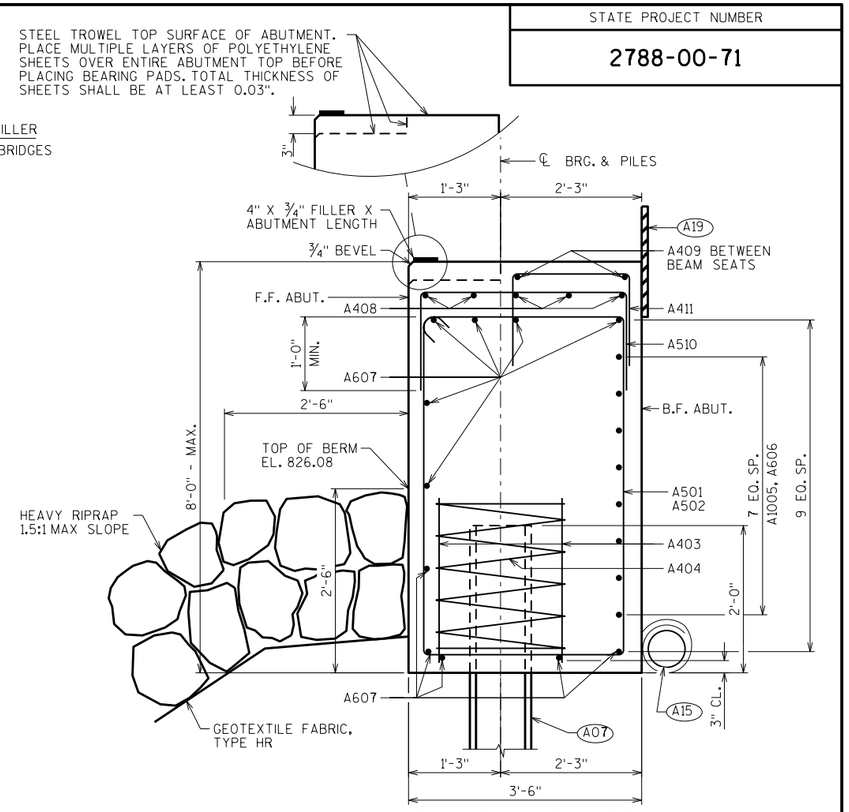
LOOKING SOUTH AT FRONT FACE
ADJUST STIRRUP SPACING TO MISS PILES



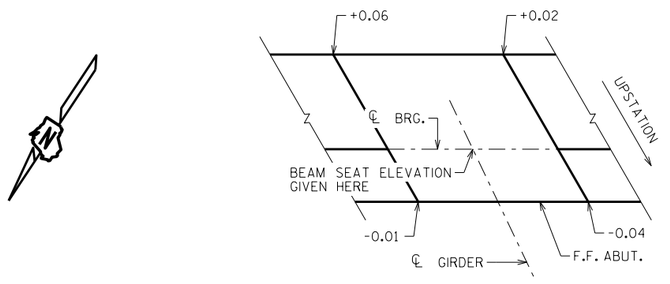
PLAN



PILE PLAN



SECTION THRU BODY



SLOPED BEAM SEAT DETAIL

◯ INDICATES GIRDER NUMBER

(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 REQUIRED.

(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-67-352

DRAWN BY MJK | PLANS CK'D. SEW

SOUTH ABUTMENT

SHEET 4

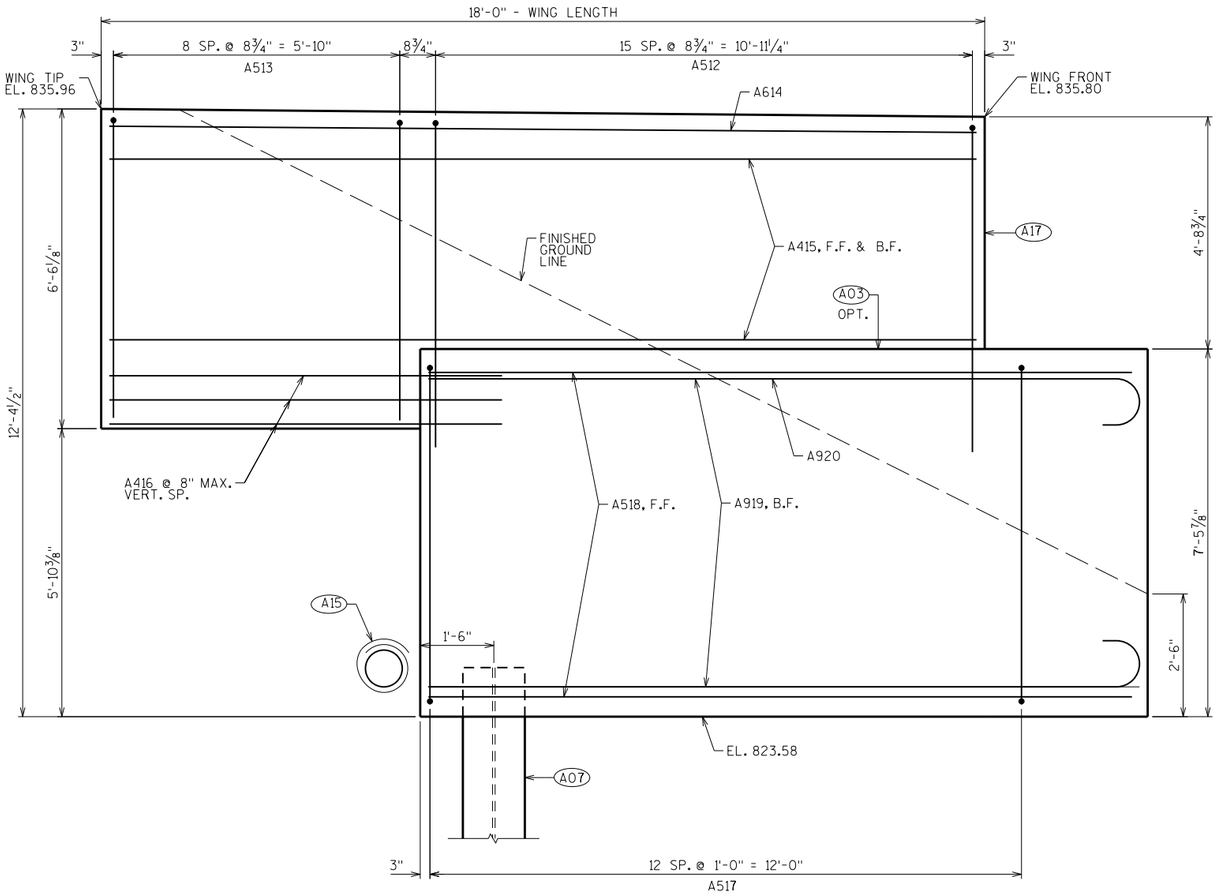
SCALE = 3.50

8

8

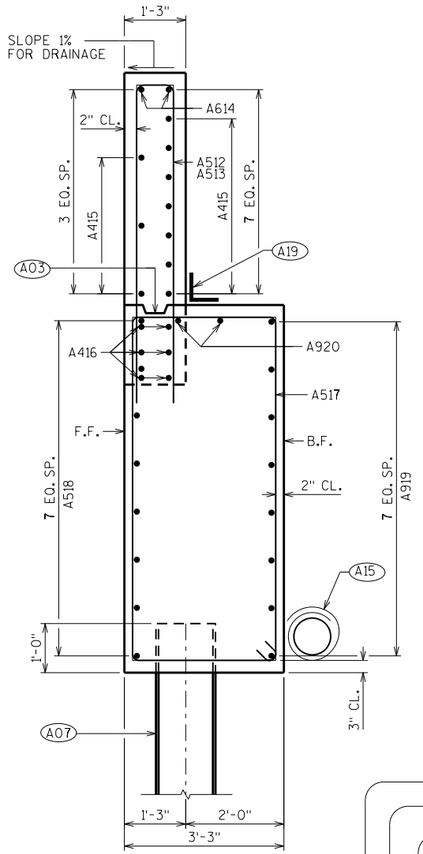
STATE PROJECT NUMBER

2788-00-71



WING 1 ELEVATION

ADJUST STIRRUP SPACING TO MISS PILES

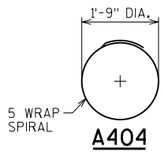


WING 1 SECTION

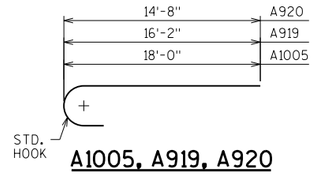
BILL OF BARS

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

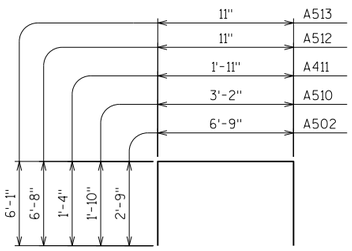
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		57	20'-6"	X		BODY-STIRRUPS
A502		18	12'-0"	X		BODY-VERTICAL-ENDS
A403		18	2'-3"			PILES-2 PER BODY PILE
A404		9	28'-0"	X		PILES-1 PER BODY PILE
A1005		16	19'-5"	X		BODY-HORIZ.-B.F.
A606		8	20'-5"			BODY-HORIZ.-B.F.
A607		11	50'-8"			BODY-HORIZ.
A408		5	21'-4"			BODY-HORIZ.-OVER GIR. 1-3
A409		12	5'-3"			BODY-HORIZ.-BTWN. BEAM SEATS
A510		22	6'-7"	X		BODY-VERT.-OVER GIR. 1-3
A411		18	4'-5"	X		BODY-VERT.-BTWN. BEAM SEAT
A512	X	16	14'-0"	X		WING 1-VERT.-UPPER WING
A513	X	9	12'-10"	X		WING 1-VERT.-UPPER WING
A614	X	2	17'-8"			WING 1-HORIZ.-TOP-UPPER WING
A415	X	10	17'-8"			WING 1-HORIZ.-UPPER WING
A416	X	6	8'-0"			WING 1-HORIZ.-UPPER WING
A517	X	13	20'-4"	X		WING 1-VERT.-LOWER WING
A518	X	8	14'-4"			WING 1-HORIZ.-F.F.-LOWER WING
A919	X	8	17'-5"	X		WING 1-HORIZ.-B.F.-LOWER WING
A920	X	2	15'-11"	X		WING 1-HORIZ.-LOWER WING



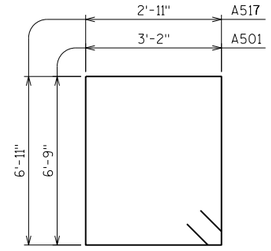
A404



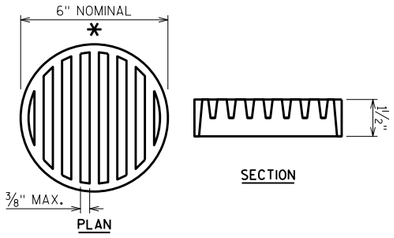
A1005, A919, A920



A502, A510, A411, A512, A513



A501, A517

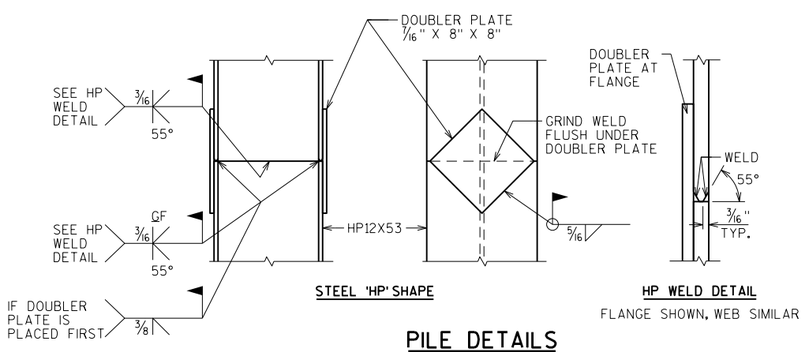


RODENT SHIELD DETAIL

* 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 COMMERCIALLY 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.



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" R.M.W. @ B.F. & ¾" 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 REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTERLINE 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-67-352

DRAWN BY MJK | PLANS CK'D. SEW

SOUTH ABUTMENT DETAILS

SHEET 5

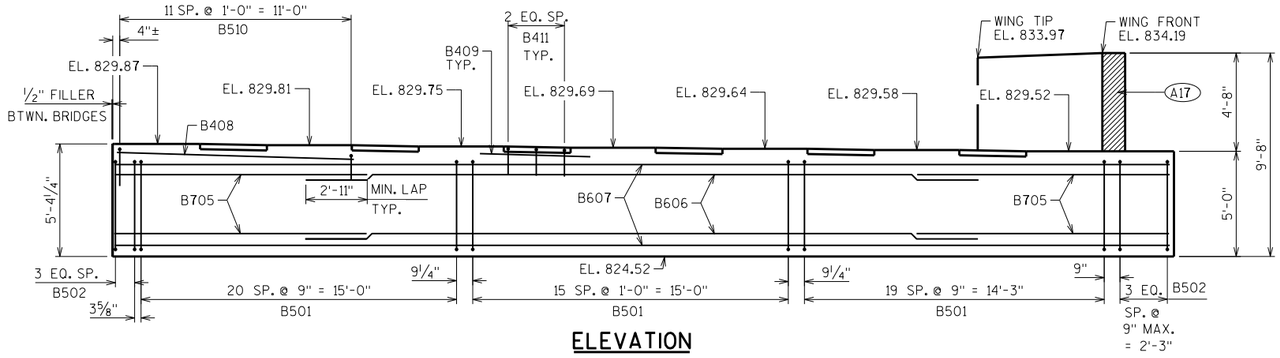
SCALE = 1.50

8

8

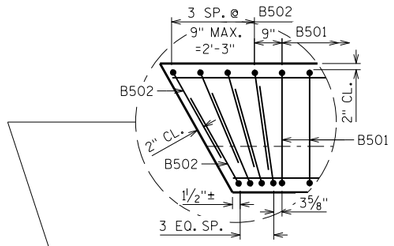
STATE PROJECT NUMBER

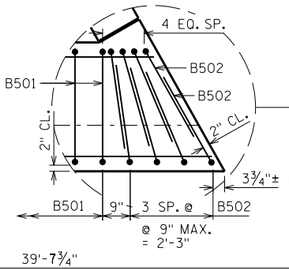
2788-00-71

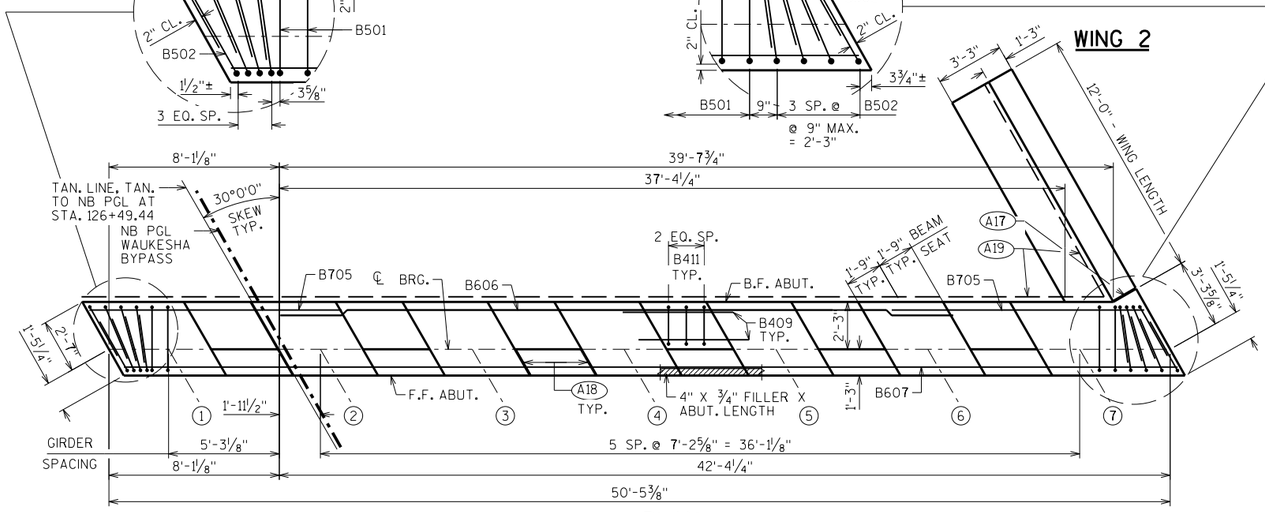


ELEVATION

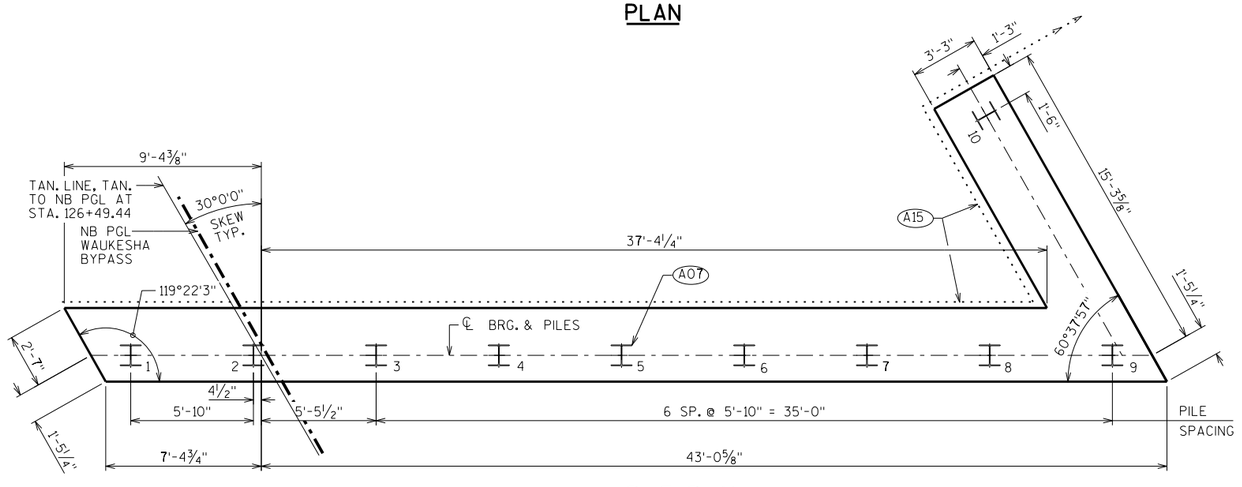
LOOKING NORTH AT FRONT FACE
ADJUST STIRRUP SPACING TO MISS PILES



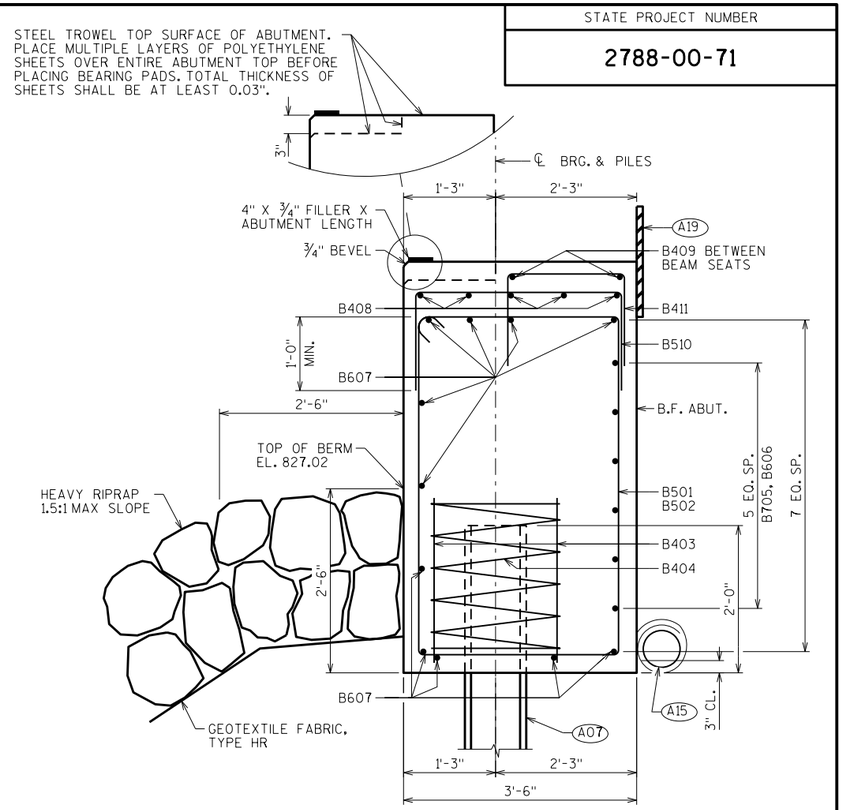




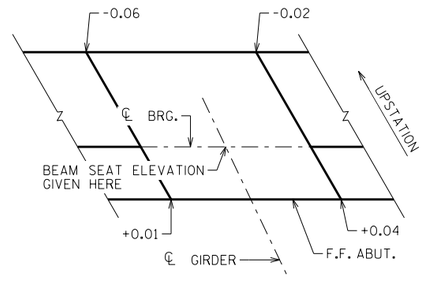
PLAN



PILE PLAN



SECTION THRU BODY



SLOPED BEAM SEAT DETAIL

◯ INDICATES GIRDER NUMBER

(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 REQUIRED.

(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-67-352

DRAWN BY MJK | PLANS CK'D. SEW

NORTH ABUTMENT

SHEET 6

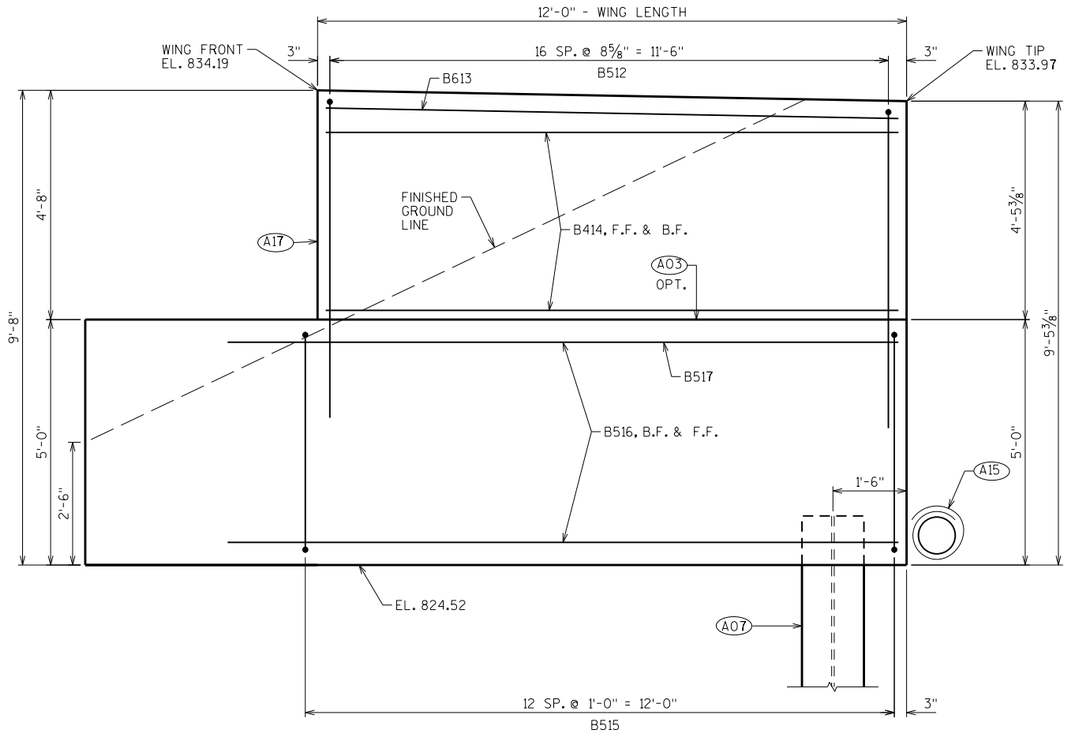
SCALE = 3.50

8

8

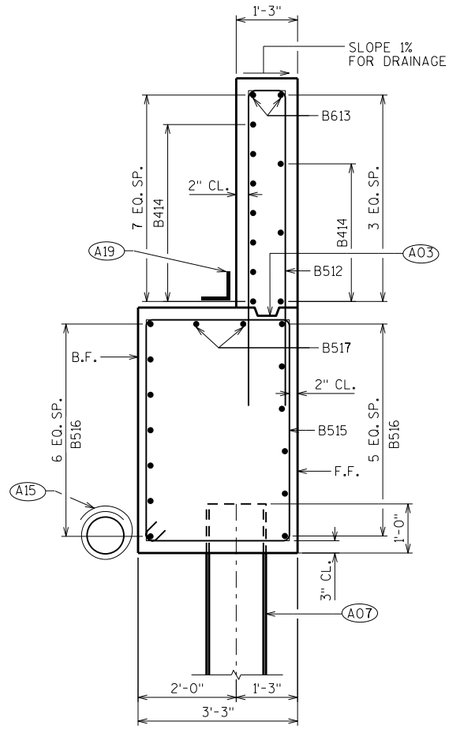
STATE PROJECT NUMBER

2788-00-71



WING 2 ELEVATION

ADJUST STIRRUP SPACING TO MISS PILES

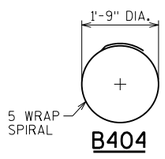


WING 2 SECTION

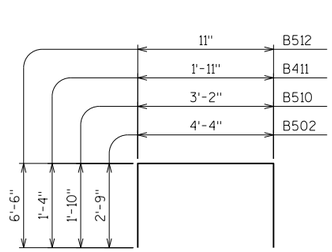
BILL OF BARS

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

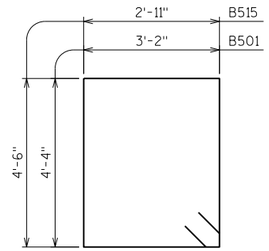
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		57	15'-8"	X		BODY-STIRRUPS
B502		16	9'-7"	X		BODY-VERTICAL-ENDS
B403		18	2'-3"			PILES-2 PER BODY PILE
B404		9	28'-0"	X		PILES-1 PER BODY PILE
B705		12	12'-0"			BODY-HORIZ.-B.F.
B606		6	31'-11"			BODY-HORIZ.-B.F.
B607		11	50'-0"			BODY-HORIZ.
B408		5	11'-4"			BODY-HORIZ.-OVER GIR. 1&2
B409		12	5'-3"			BODY-HORIZ.-BTWN. BEAM SEATS
B510		12	6'-7"	X		BODY-VERT.-OVER GIR. 1&2
B411		18	4'-5"	X		BODY-VERT.-BTWN. BEAM SEAT
B512	X	17	13'-8"	X		WING 2-VERT.-UPPER WING
B613	X	2	11'-8"			WING 2-HORIZ.-TOP-UPPER WING
B414	X	10	11'-8"			WING 2-HORIZ.-UPPER WING
B515	X	13	15'-6"	X		WING 2-VERT.-LOWER WING
B516	X	13	13'-8"			WING 2-HORIZ.-LOWER WING
B517	X	2	14'-0"			WING 2-HORIZ.-LOWER WING



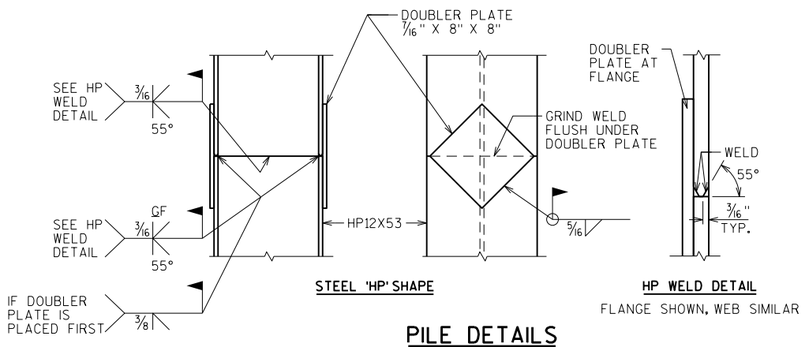
B404



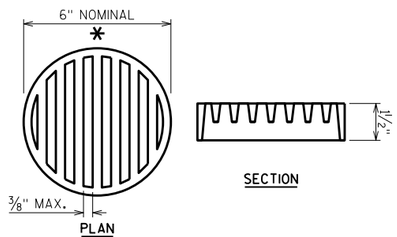
B502, B510, B411, B512



B501, B515



PILE DETAILS



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 COMMERCIALLY 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.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6, (18" R.M.W. @ B.F. & ¾" 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 REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTERLINE 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-67-352

DRAWN BY MJK | PLANS CK'D. SEW

NORTH ABUTMENT DETAILS

SHEET 7

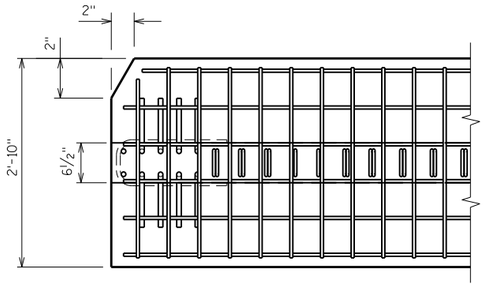
8

8

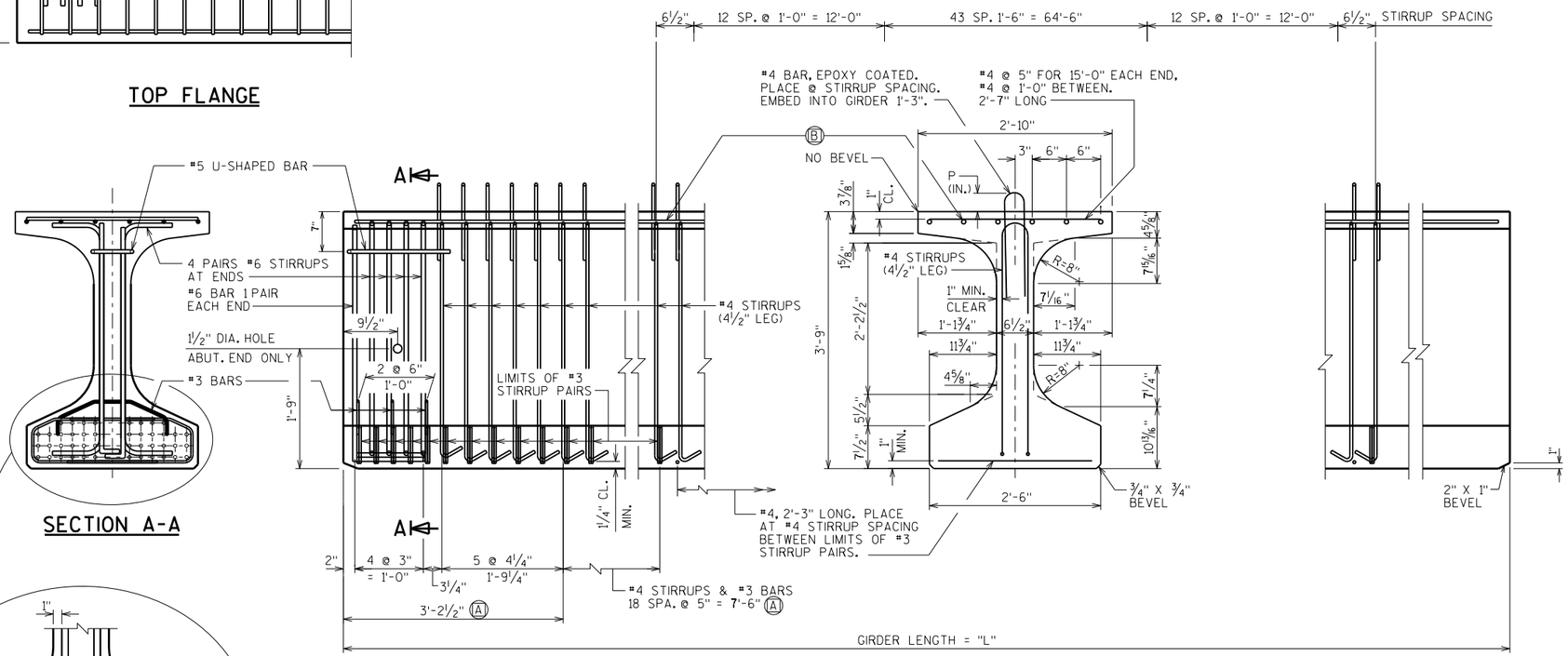
SCALE = 1.50

STATE PROJECT NUMBER

2788-00-71



TOP FLANGE

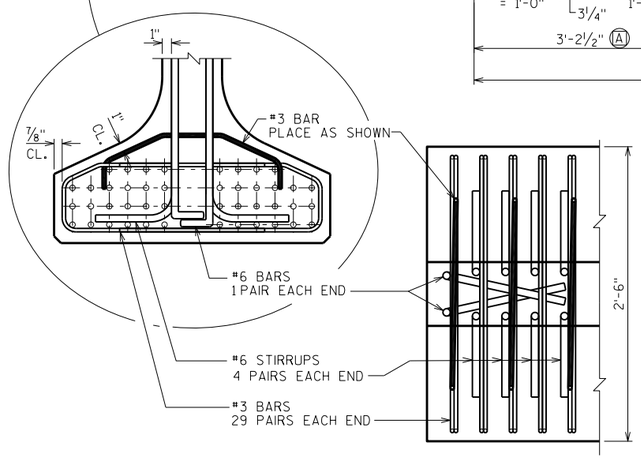


SECTION A-A

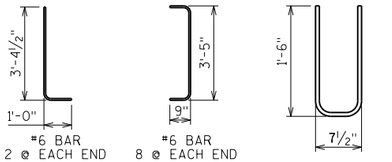
SIDE VIEW & TYPICAL SECTION IN SPAN

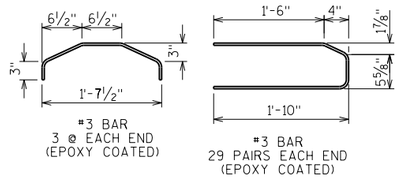
(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE





NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT 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, 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 A1064 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 DIAPHRAGMS" SHEET.

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

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ 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.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	2-6	111	0.7	1.4	1.9	2.2	2.3	2.2	1.9	1.4	0.7	8,000	7"	7"	7"	0.6	36	6,800	40	13.75	16.75	5		
1	1&7	111	0.7	1.3	1.8	2.1	2.2	2.1	1.8	1.3	0.7	8,000	7"	7"	7"	0.6	36	6,800	40	13.75	16.75	5		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-352

DRAWN BY MJK | PLANS CK'D. SEW

45W" PRESTRESSED GIRDER DETAILS 1

SHEET 8

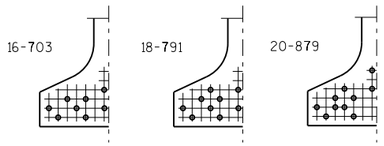
SCALE = 1.00

8

8

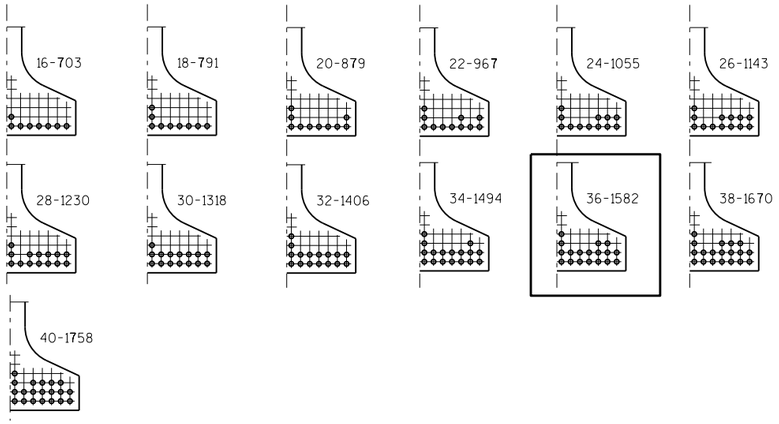
STATE PROJECT NUMBER

2788-00-71



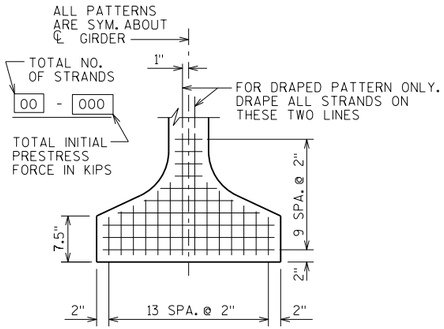
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"φ STRANDS

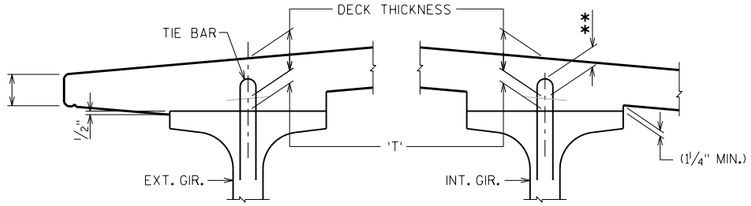


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

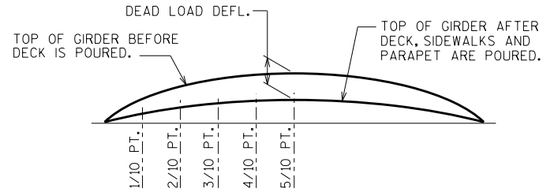
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

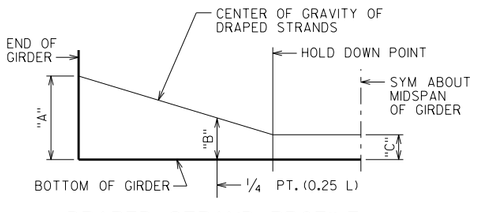
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

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 3.0" WAS USED IN THE 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	4.03

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-67-352

DRAWN BY MJK | PLANS CK'D. SEW

45W" PRESTRESSED GIRDER DETAILS 2

SHEET 9

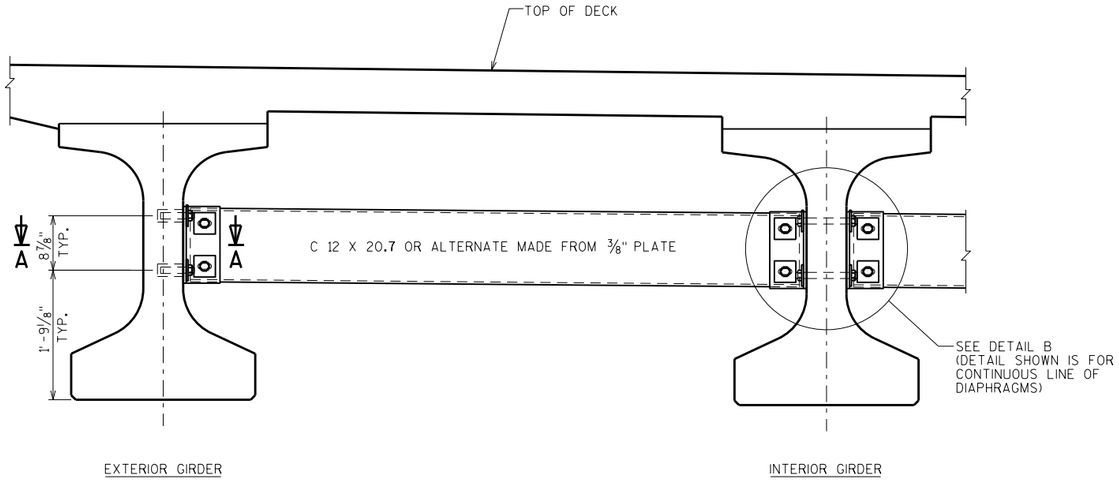
8

8

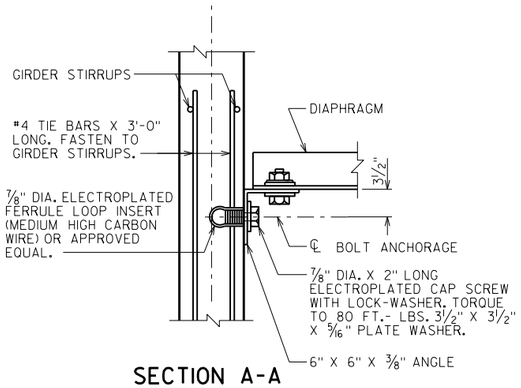
SCALE = 1.00

STATE PROJECT NUMBER

2788-00-71

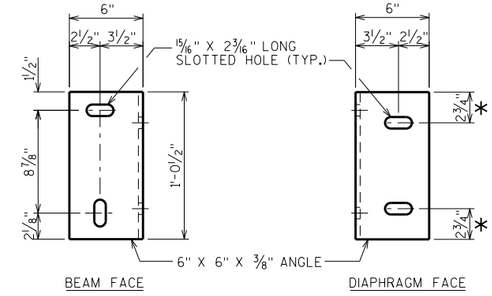


PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DIAPHRAGM SUPPORT

* 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM

NOTES

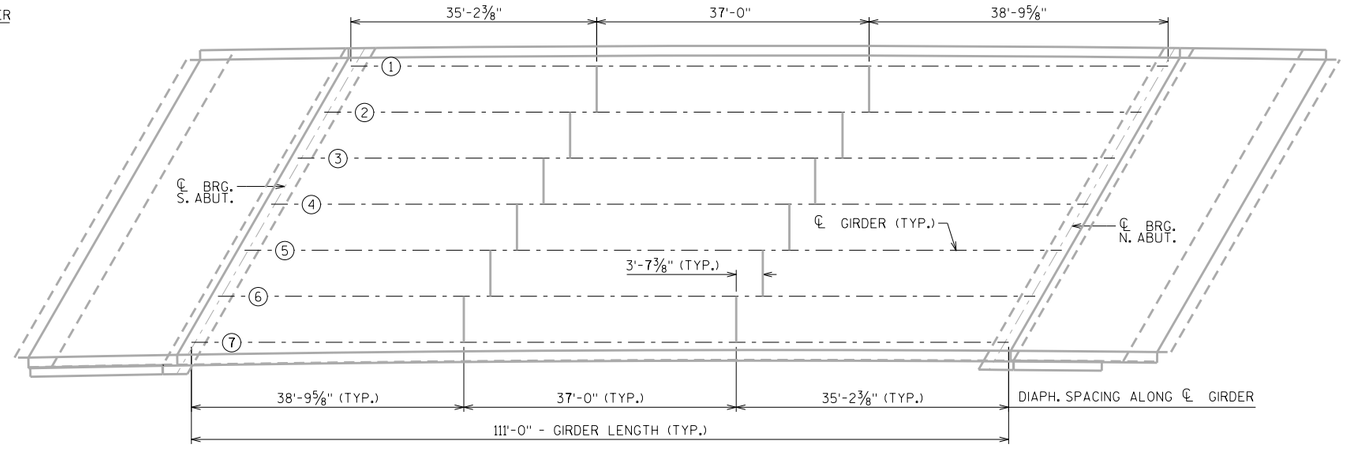
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-67-352", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

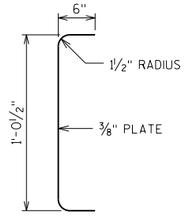
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

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.

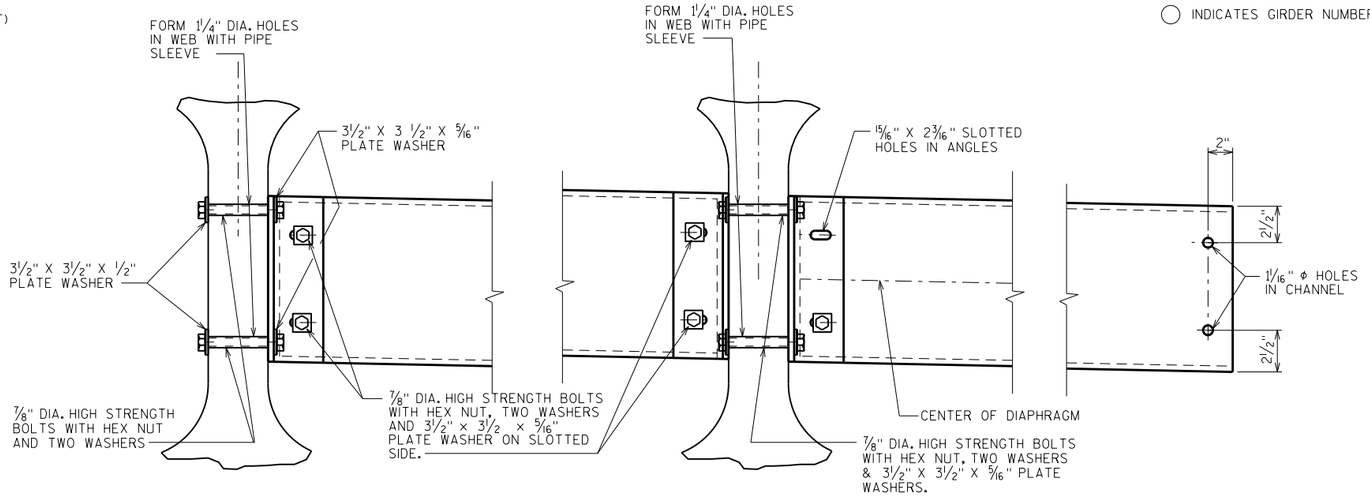


DIAPHRAGM FRAMING PLAN

◯ INDICATES GIRDER NUMBER



SECTION THRU ALTERNATE DIAPHRAGM



DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-352

DRAWN BY MJK | PLANS CK'D. SEW

STEEL DIAPHRAGMS

SHEET 10

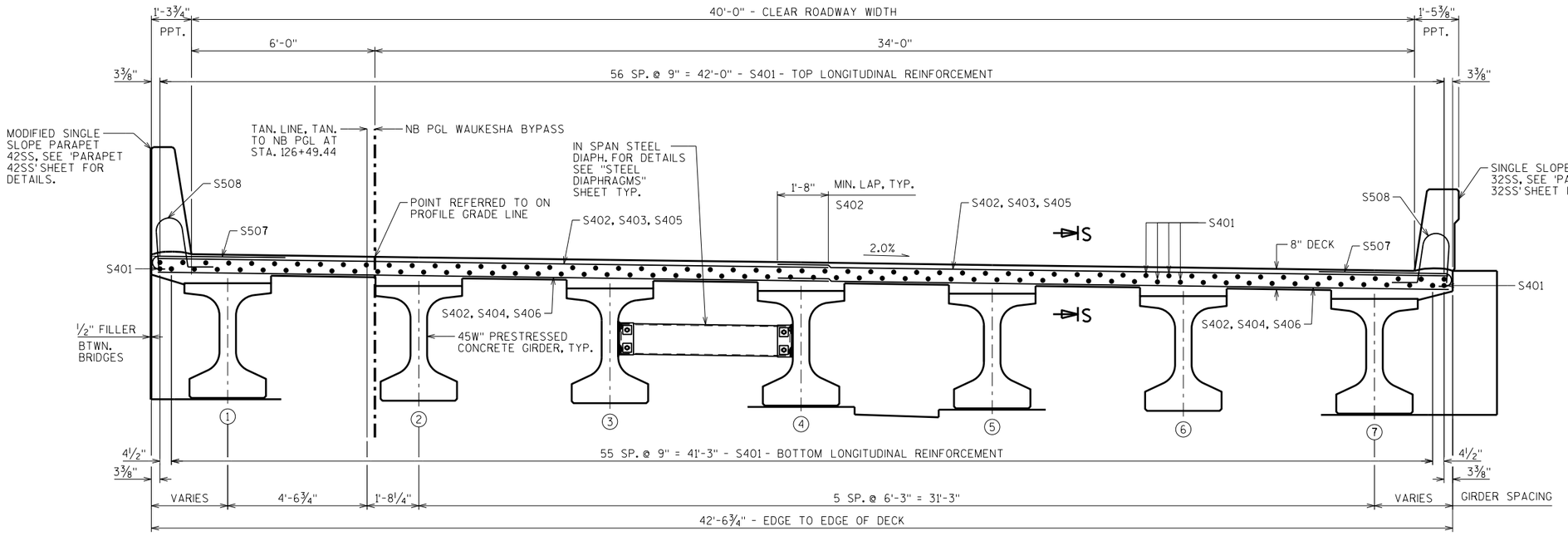
8

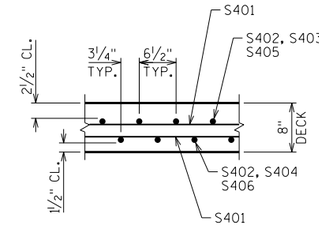
8

SCALE = 1.00

STATE PROJECT NUMBER

2788-00-71





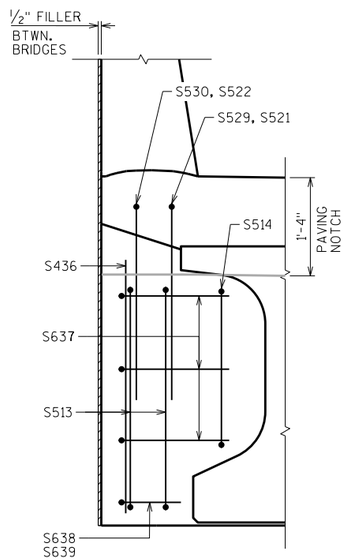
SECTION S-S

CROSS SECTION THRU ROADWAY

ALL HORIZONTAL DIMENSIONS MEASURED RADIALLY - EXCEPT FOR GIRDER SPACING DIMENSIONS

LOOKING NORTH

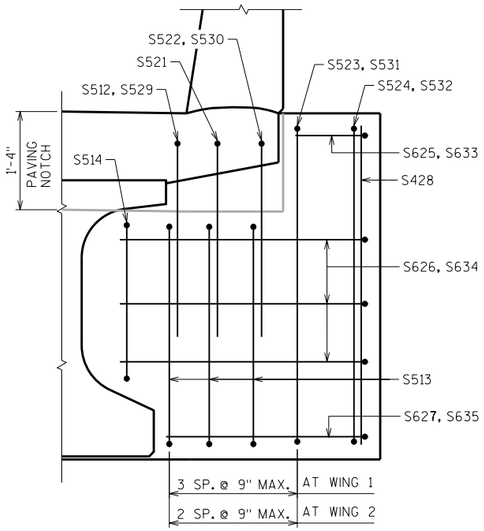
◯ INDICATES GIRDER NUMBER



ABUTMENT DIAPHRAGM WEST EXTERIORS

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

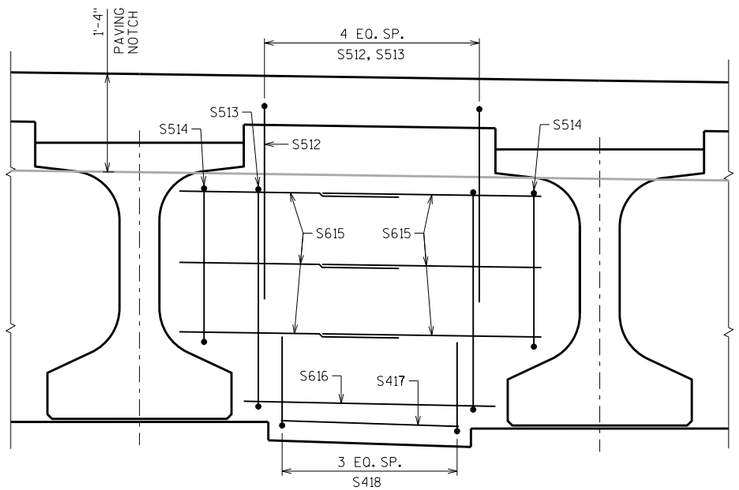
NORTH. ABUT. SHOWN. (NW CORNER)
SOUTH ABUT. (SW CORNER) SIMILAR



ABUTMENT DIAPHRAGM EAST EXTERIORS

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

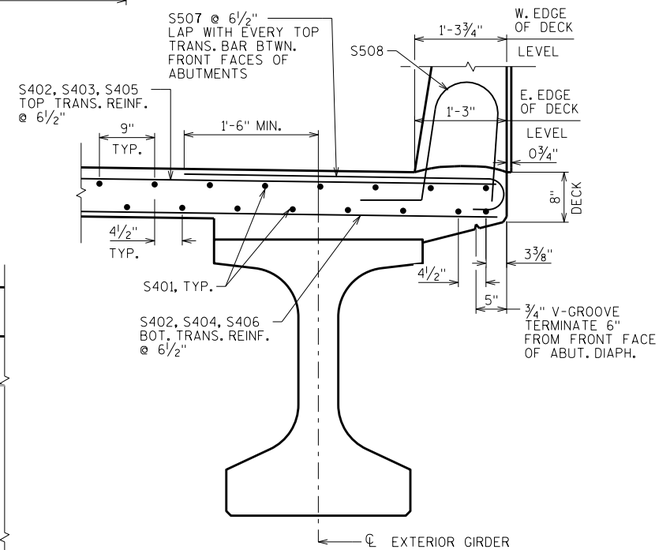
NORTH. ABUT. SHOWN. (WING 2 CORNER)
SOUTH ABUT. (WING 1 CORNER) SIMILAR



INTERIOR DIAPHRAGM AT ABUTMENTS

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

TYPICAL BETWEEN GIRDERS



EDGE OF DECK DETAIL

TYP. AT BOTH EDGES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-352

DRAWN BY MJK | PLANS CK'D. SEW

SUPESTRUCTURE CROSS SECTION

SHEET 11

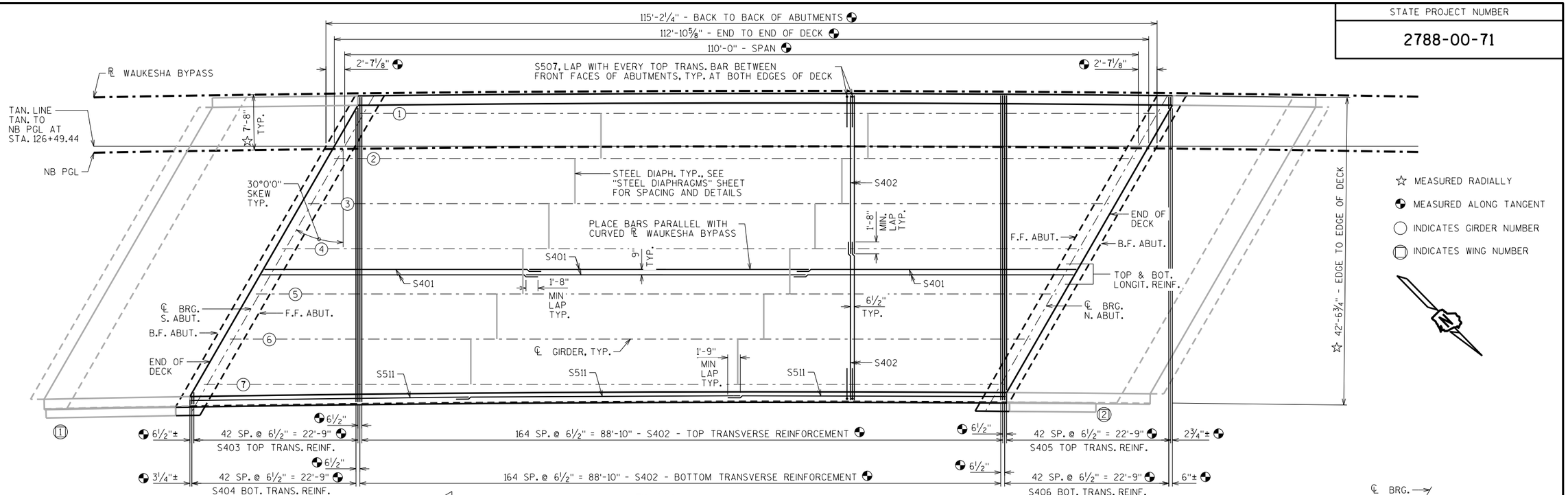
SCALE = 2.00

8

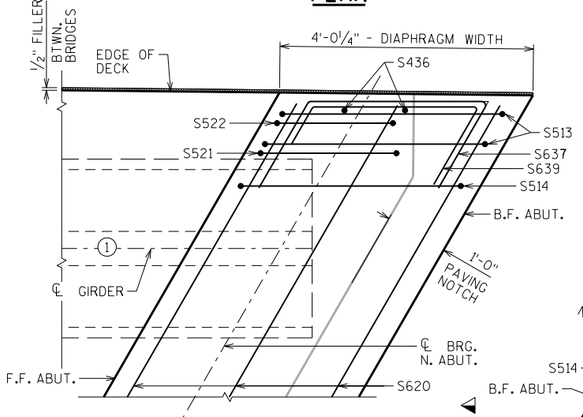
8

STATE PROJECT NUMBER

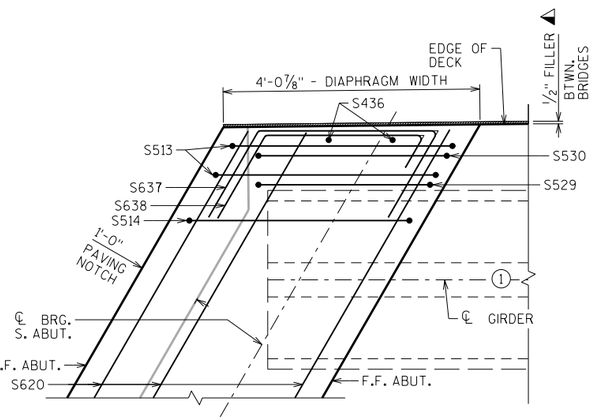
2788-00-71



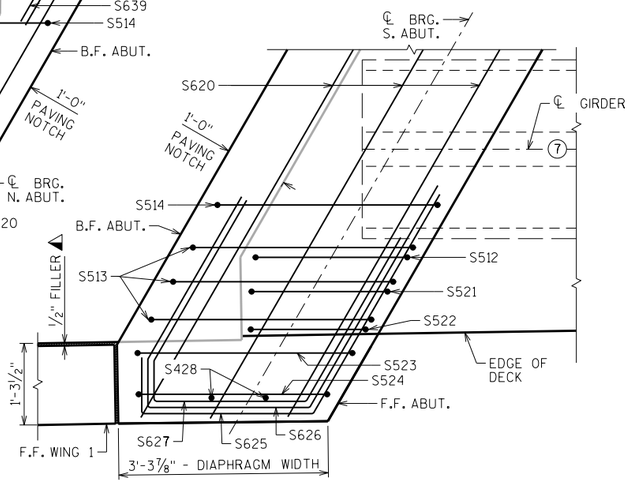
PLAN



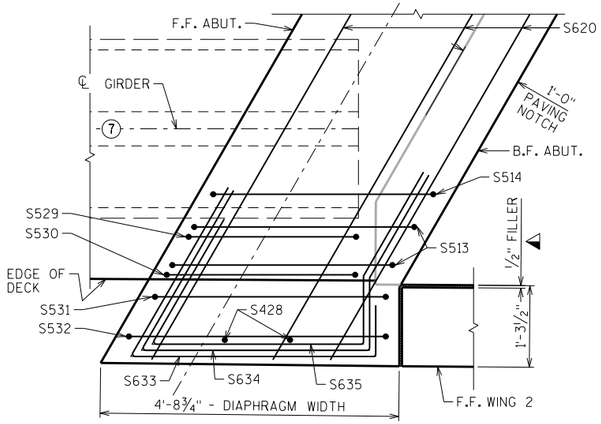
PLAN-NORTHWEST CORNER



PLAN-SOUTHWEST CORNER



PLAN-SOUTHEAST CORNER (WING 1)



PLAN-NORTHEAST CORNER (WING 2)

⚠ SEAL ALL HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-352

DRAWN BY MJK | PLANS CK'D. SEW

SUPERSTRUCTURE PLAN

SHEET 12

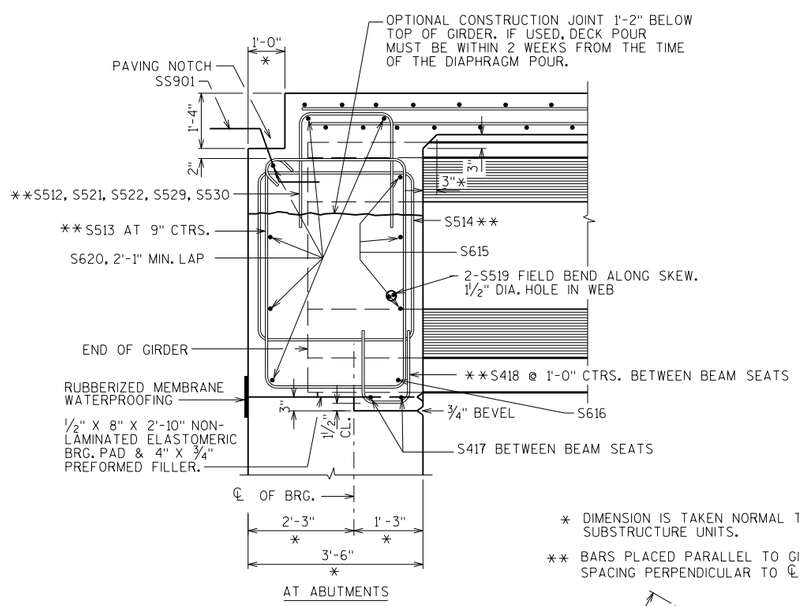
8

8

SCALE = 7.00

STATE PROJECT NUMBER

2788-00-71

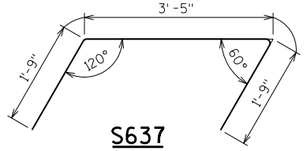


AT ABUTMENTS

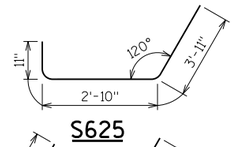
PART LONGIT. SECTION

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS



S637



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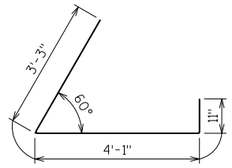

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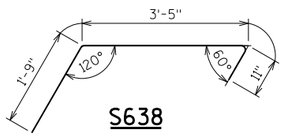

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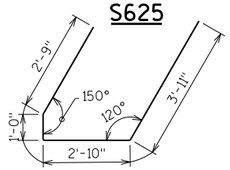

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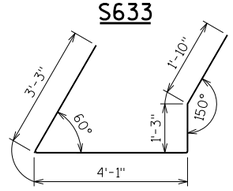

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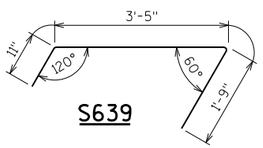

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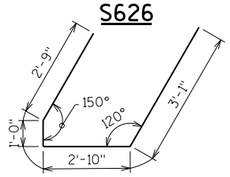

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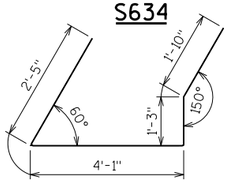
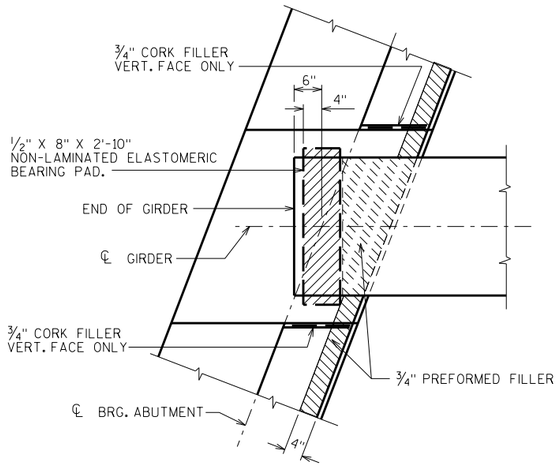


S635

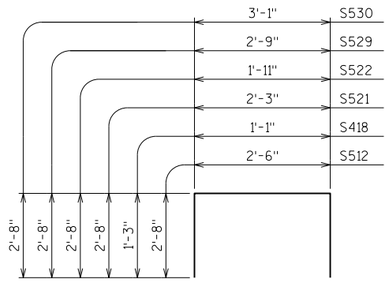
TOP OF DECK ELEVATIONS

EOD = EDGE OF DECK, GL = GUTTERLINE

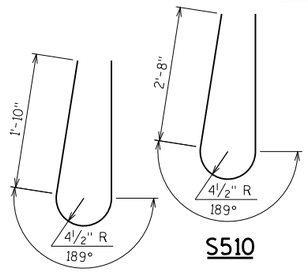
	℄ BRG. S. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. N. ABUT.
W EOD	836.30	836.17	836.03	835.88	835.72	835.55	835.38	835.19	835.00	834.80	834.58
W GL	836.31	836.18	836.04	835.89	835.73	835.57	835.39	835.21	835.01	834.81	834.60
G 1	836.30	836.16	836.02	835.87	835.71	835.55	835.37	835.19	835.00	834.80	834.59
G 2	836.21	836.08	835.95	835.80	835.64	835.48	835.31	835.12	834.94	834.74	834.53
G 3	836.13	836.00	835.87	835.72	835.57	835.41	835.24	835.06	834.87	834.68	834.47
G 4	836.05	835.92	835.79	835.65	835.50	835.34	835.17	834.99	834.81	834.62	834.41
G 5	835.96	835.84	835.71	835.57	835.42	835.27	835.10	834.93	834.75	834.55	834.36
G 6	835.88	835.76	835.63	835.49	835.35	835.19	835.03	834.86	834.68	834.49	834.30
G 7	835.79	835.67	835.55	835.41	835.27	835.12	834.96	834.79	834.61	834.43	834.24
E GL	835.77	835.65	835.53	835.40	835.26	835.11	834.95	934.78	834.61	834.42	834.22
E EOD	835.77	835.66	835.54	835.41	835.27	835.12	834.96	834.79	834.62	834.43	834.24



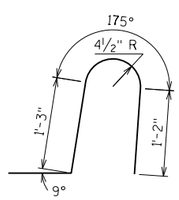
BEARING PAD DETAIL



S512, S418, S521, S522
S529, S530



S509 S510



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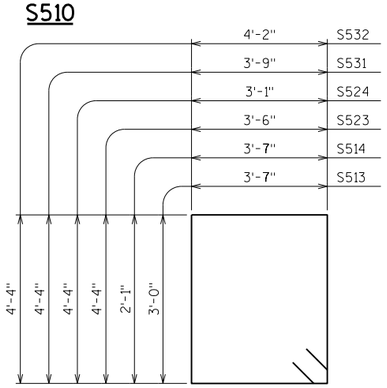


S513, S514, S523, S524
S531, S532

BILL OF BARS

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

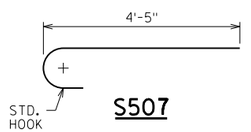
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	345	38'-8"			DECK-LONGIT.-TOP & BOT.
S402	X	660	22'-2"			DECK-TRANS.-TOP & BOT.
S403	X	43	21'-3"		⚠	DECK-TRANS.-SOUTH END-TOP
S404	X	43	20'-9"		⚠	DECK-TRANS.-SOUTH END-BOT.
S405	X	43	21'-0"		⚠	DECK-TRANS.-NORTH END-TOP
S406	X	43	21'-6"		⚠	DECK-TRANS.-NORTH END-BOT.
S507	X	396	5'-0"	X		DECK-TOP-TRANS.-HOOK BARS
S508	X	340	4'-5"	X		PARAPETS/DECK-VERT.-TRANS.
S509	X	170	5'-0"	X		32SS PARAPET-VERT.-TRANS.
S510	X	170	6'-8"	X		42SS MODIFIED PARAPET-VERT.-TRANS.
S511	X	42	38'-10"			PARAPETS-HORIZ.-LONGIT.
S512	X	61	7'-7"	X		ABUT. DIAPH.-VERT.-BTWN. GIR. & AT WING 1 CORNER
S513	X	69	13'-10"	X		ABUT. DIAPH.-STIRRUPS-BTWN. GIR. & AT EXTERIORS
S514	X	28	12'-0"	X		ABUT. DIAPH.-STIRRUPS-AT GIR. & AT EXTERIORS
S615	X	72	3'-9"			ABUT. DIAPH.-HORIZ.-BTWN. GIR.
S616	X	12	3'-5"			ABUT. DIAPH.-HORIZ.-BTWN. GIR.
S417	X	24	2'-5"			ABUT. DIAPH.-HORIZ.-BTWN. GIR.
S418	X	48	3'-5"	X		ABUT. DIAPH.-VERT.-BTWN. GIR.
S519	X	28	6'-0"			ABUT. DIAPH.-HORIZ.-THRU GIR.
S620	X	24	26'-5"			ABUT. DIAPH.-HORIZ.
S521	X	2	7'-4"	X		ABUT DIAPH.-VERT.-EXT.-WING 1 & NW CORNER
S522	X	2	7'-0"	X		ABUT. DIAPH.-VERT.-EXT.-WING 1 & NW CORNER
S523	X	1	16'-4"	X		ABUT. DIAPH.-VERT.-EXT.-WING 1
S524	X	1	15'-6"	X		ABUT. DIAPH.-VERT.-EXT.-WING 1
S625	X	1	7'-6"	X		ABUT. DIAPH-HORIZ.-EXT.-WING 1
S626	X	3	10'-4"	X		ABUT. DIAPH-HORIZ.-EXT.-WING 1
S627	X	1	9'-6"	X		ABUT. DIAPH-HORIZ.-EXT.-WING 1
S428	X	4	4'-4"			ABUT. DIAPH-VERT.-EXT.-WINGS
S529	X	2	7'-10"	X		ABUT. DIAPH.-VERT.-EXT.-WING 2 & SW CORNER
S530	X	2	8'-2"	X		ABUT. DIAPH.-VERT.-EXT.-WING 2 & SW CORNER
S531	X	1	16'-10"	X		ABUT. DIAPH.-VERT.-EXT.-WING 2
S532	X	1	17'-8"	X		ABUT. DIAPH.-VERT.-EXT.-WING 2
S633	X	1	7'-9"	X		ABUT. DIAPH-HORIZ.-EXT.-WING 2
S634	X	3	9'-11"	X		ABUT. DIAPH-HORIZ.-EXT.-WING 2
S635	X	1	9'-1"	X		ABUT. DIAPH-HORIZ.-EXT.-WING 2
S436	X	4	3'-5"			ABUT. DIAPH-VERT.-EXT.
S637	X	6	6'-7"	X		ABUT. DIAPH.-HORIZ.-EXT. SW & NW CORNERS
S638	X	1	5'-8"	X		ABUT. DIAPH.-HORIZ.-EXT. SW CORNER
S639	X	1	5'-8"	X		ABUT. DIAPH.-HORIZ.-EXT. NW CORNER
STAINLESS STEEL → SS901		86	5'-0"	X		ABUT. DIAPH.-APP. SLAB TIE

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

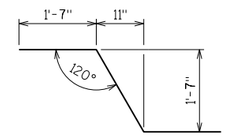
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
S403	1 SERIES OF 43	1'-8" TO 40'-9"
S404	1 SERIES OF 43	1'-2" TO 40'-3"
S405	1 SERIES OF 43	1'-2" TO 40'-9"
S406	1 SERIES OF 43	1'-8" TO 41'-3"

BUNDLE AND TAG EACH SERIES SEPARATELY.



S507



SS901

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-352

DRAWN BY MJK | PLANS CK'D. SEW

SUPERSTRUCTURE DETAILS

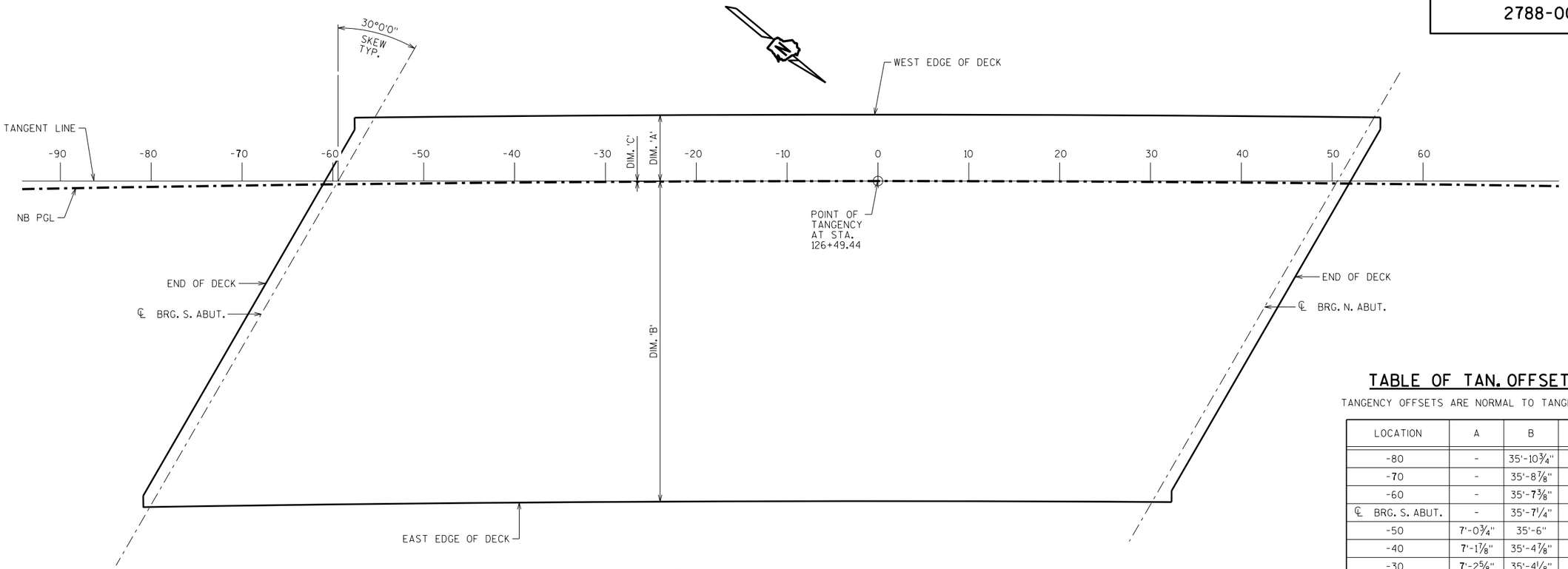
SHEET 13

SCALE = 1.33

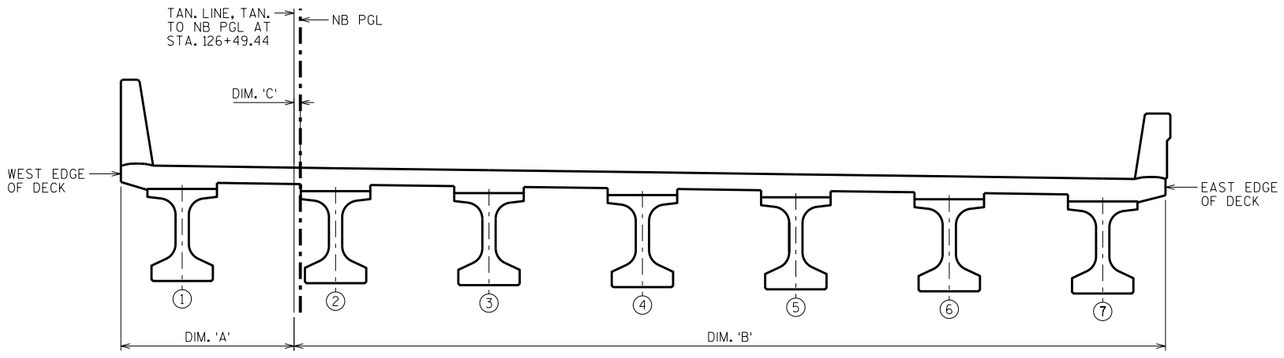
8

8

STATE PROJECT NUMBER
2788-00-71



PLAN



CROSS SECTION THRU BRIDGE

LOOKING NORTH

HORIZONTAL DIMENSIONS MEASURED NORMAL TO TANGENT LINE

TABLE OF TAN. OFFSETS

TANGENCY OFFSETS ARE NORMAL TO TANGENT LINE

LOCATION	A	B	C
-80	-	35'-10¾"	7¾"
-70	-	35'-8⅞"	5⅞"
-60	-	35'-7⅜"	4⅜"
℄ BRG. S. ABUT.	-	35'-7¼"	4¼"
-50	7'-0¾"	35'-6"	3"
-40	7'-1⅛"	35'-4⅞"	1⅞"
-30	7'-2⅝"	35'-4⅛"	1⅛"
-20	7'-3¼"	35'-3½"	½"
-10	7'-3⅝"	35'-3⅛"	⅛"
P.O.T. (0)	7'-3¾"	35'-3"	0"
10	7'-3⅝"	35'-3⅛"	⅛"
20	7'-3¼"	35'-3½"	½"
30	7'-2⅝"	35'-4⅛"	1⅛"
40	7'-1⅞"	-	1⅞"
50	7'-0¾"	-	3"
℄ BRG. N. ABUT.	7'-0⅝"	-	3⅛"

NOTES:

DIMENSION 'A' = DISTANCE BETWEEN THE 'TANGENT LINE' AND THE WEST 'EDGE OF DECK'.

DIMENSION 'B' = DISTANCE BETWEEN THE 'TANGENT LINE' AND THE EAST 'EDGE OF DECK'.

DIMENSION 'C' = DISTANCE BETWEEN THE 'TANGENT LINE' AND THE NORTHBOUND PROFILE GRADE LINE OF THE WAUKESHA BYPASS.

◯ INDICATES GIRDER NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-352

DRAWN BY MJK | PLANS CK'D. SEW

DECK LAYOUT

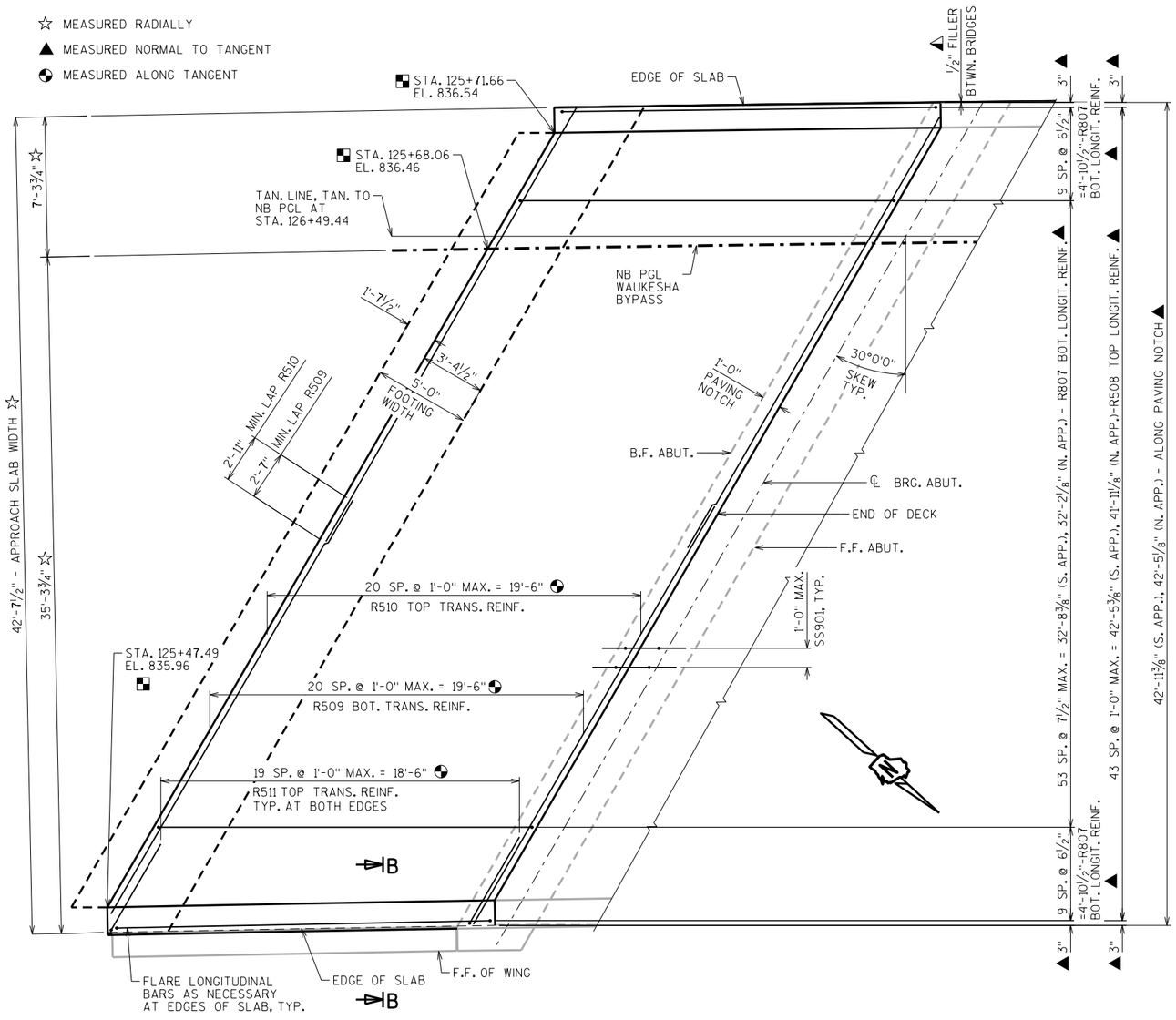
SHEET 14

SCALE = 6.00

8

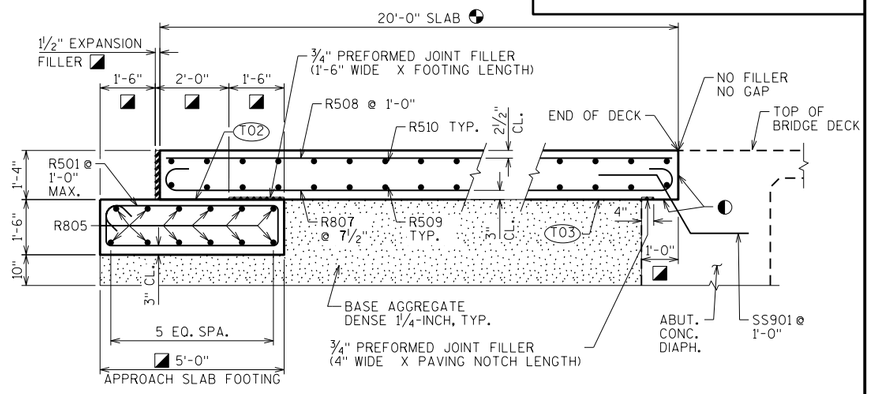
8

STATE PROJECT NUMBER
2788-00-71



PLAN

SOUTH APPROACH SLAB SHOWN
NORTH APPROACH SLAB SIMILAR



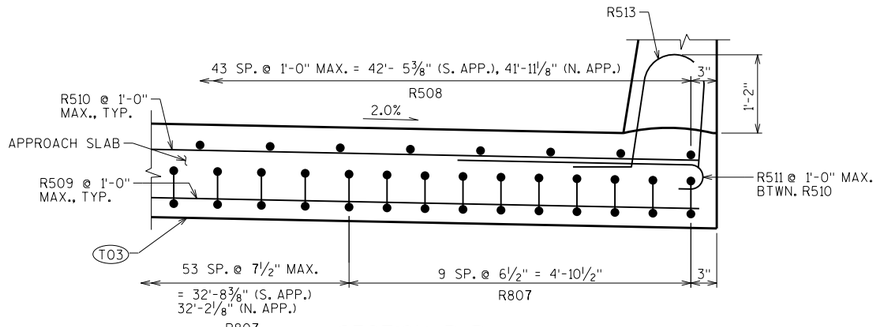
SECTION THRU APPROACH SLAB

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL 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.

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



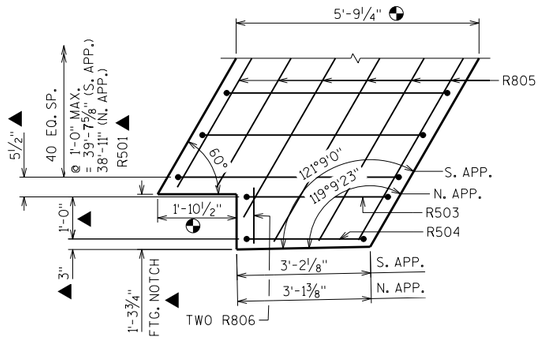
SECTION B-B

NORTH APPROACH SLAB ◪ TOP OF SLAB ELEVATIONS

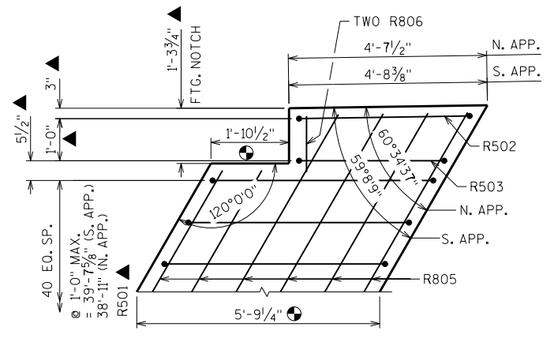
STA.	OFFSET TO NB PGL	ELEV.
127+24.62	6' LT	834.16
127+21.27	0'	834.11
127+02.11	34' RT	833.82

DESIGN DATA

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



FOOTING PLAN DETAIL-(SE&NW) CORNERS



FOOTING PLAN DETAIL-(SW&NE) CORNERS

⚠ 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-67-352

DRAWN BY MJK | PLANS CK'D. SEW

APPROACH SLAB

SHEET 15

8

8

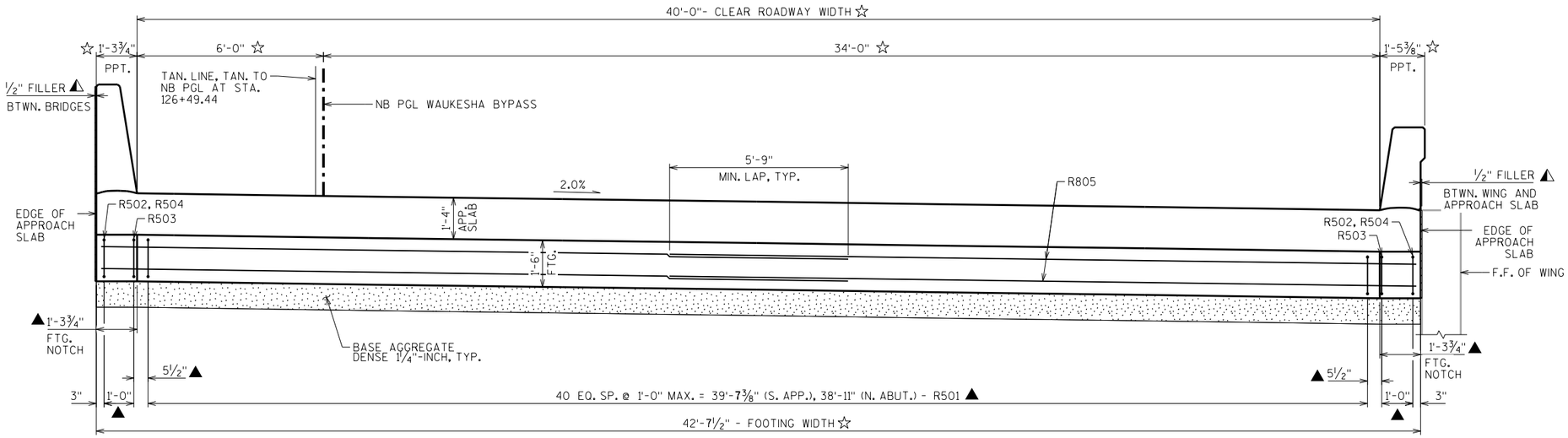
SCALE = 3.50

STATE PROJECT NUMBER

2788-00-71

☆ MEASURED RADIALLY

▲ MEASURED NORMAL TO TANGENT



CROSS SECTION THRU APPROACH SLAB

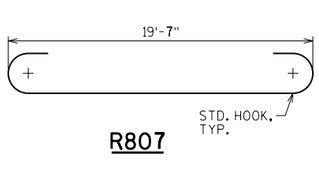
LOOKING NORTH

SHOWING FOOTING REINFORCEMENT ONLY

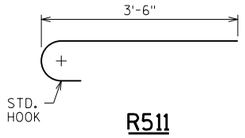
BILL OF BARS

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

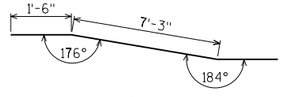
BAR MARK	COAT	NO. REQ'D. SOUTH SLAB	NO. REQ'D. NORTH SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	41	41	13'-6"	X		FOOTING-VERT.-LONGIT.-STIRRUP
R502	X	1	1	11'-0"	X		FOOTING-VERT.-LONGIT.-STIRRUP-SW & NE CORNERS
R503	X	2	2	9'-10"	X		FOOTING-VERT.-LONGIT.-CORNERS
R504	X	1	1	8'-8"	X		FOOTING-VERT.-LONGIT.-STIRRUP-SE & NW CORNERS
R805	X	24	24	27'-7"			FOOTING-HORIZ.-TRANS.-TOP & BOT.
R806	X	4	4	1'-4"			FOOTING-HORIZ.-TRANS-TOP & BOT.
R807	X	72	72	21'-5"	X		SLAB-HORIZ.-LONGIT.-BOT.
R508	X	44	44	19'-7"			SLAB-HORIZ.-LONGIT.-TOP
R509	X	42	42	26'-0"			SLAB-HORIZ.-TRANS.-BOT.
R510	X	42	42	26'-2"			SLAB-HORIZ.-TRANS.-TOP
R511	X	40	40	4'-1"	X		SLAB-HORIZ.-TRANS.-TOP-HOOKED BARS
R512	X	40	40	6'-8"	X		PARAPET 42SS-VERT.-TRANS.
R513	X	57	57	4'-5"	X		PARAPETS-VERT.-TRANS.
R514	X	8	8	19'-6"			PARAPET 42SS-HORIZ.
R515	X	1	1	19'-6"	X		PARAPET 32SS-HORIZ.
R516	X	17	17	4'-4"	X		PARAPET 32SS-VERT.-TRANS.
R517	X	11	11	4'-9"	X		PARAPET 32SS-VERT.-TRANS.
R518	X	6	6	4'-10"	X		PARAPET 32SS-VERT.-TRANS.
R519	X	12	12	2'-9"	X		PARAPET 32SS-VERT.-TRANS.
R520	X	17	17	5'-0"	X		PARAPET 32SS-VERT.-TRANS.
R521	X	5	5	19'-5"			PARAPET 32SS-HORIZ.



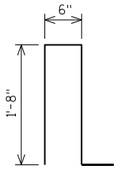
R807



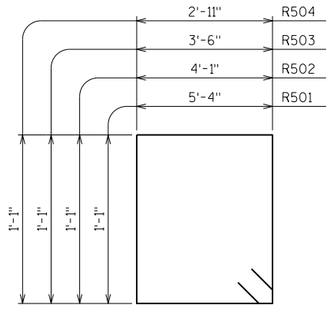
R511



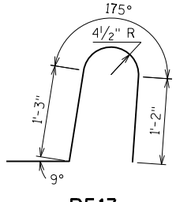
R515



R516



R501, R502, R503, R504



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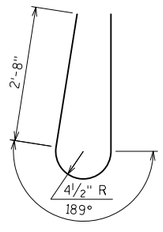

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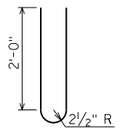
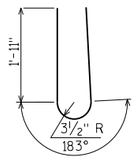


R517



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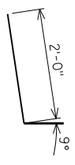
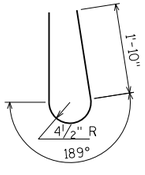


R519



R520

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" 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-67-352

DRAWN BY MJK | PLANS CK'D. SEW

APPROACH SLAB DETAILS

SHEET 16

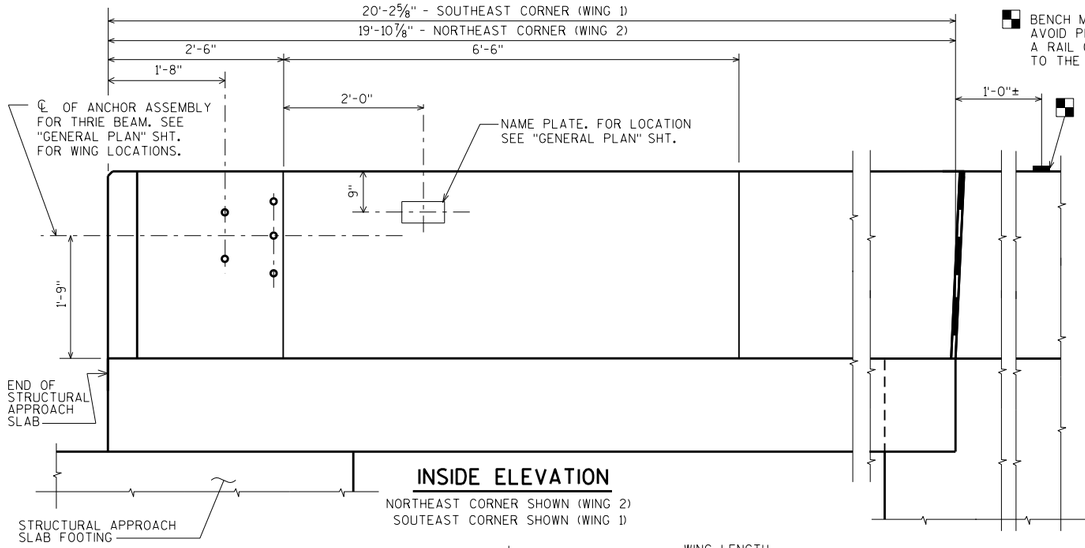
SCALE = 2.00

8

8

STATE PROJECT NUMBER

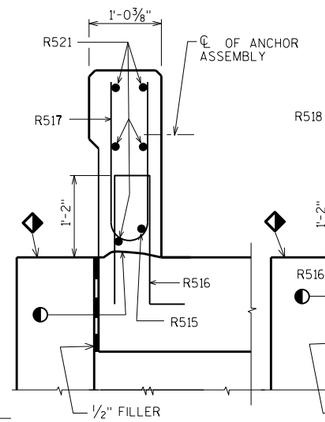
2788-00-71



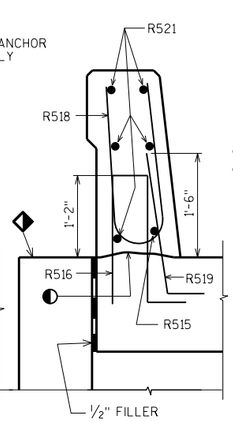
BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

INSIDE ELEVATION

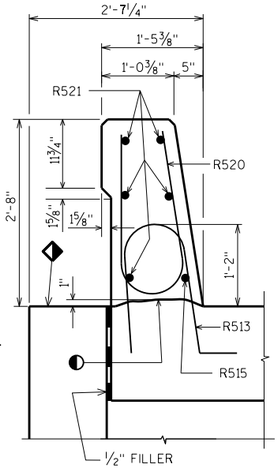
NORTHEAST CORNER SHOWN (WING 2)
SOUTEAST CORNER SHOWN (WING 1)



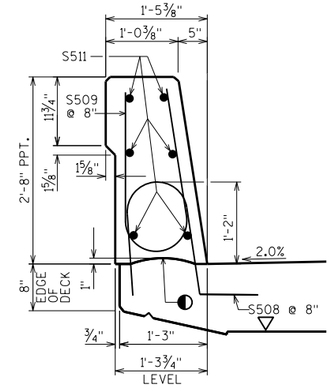
SECTION A



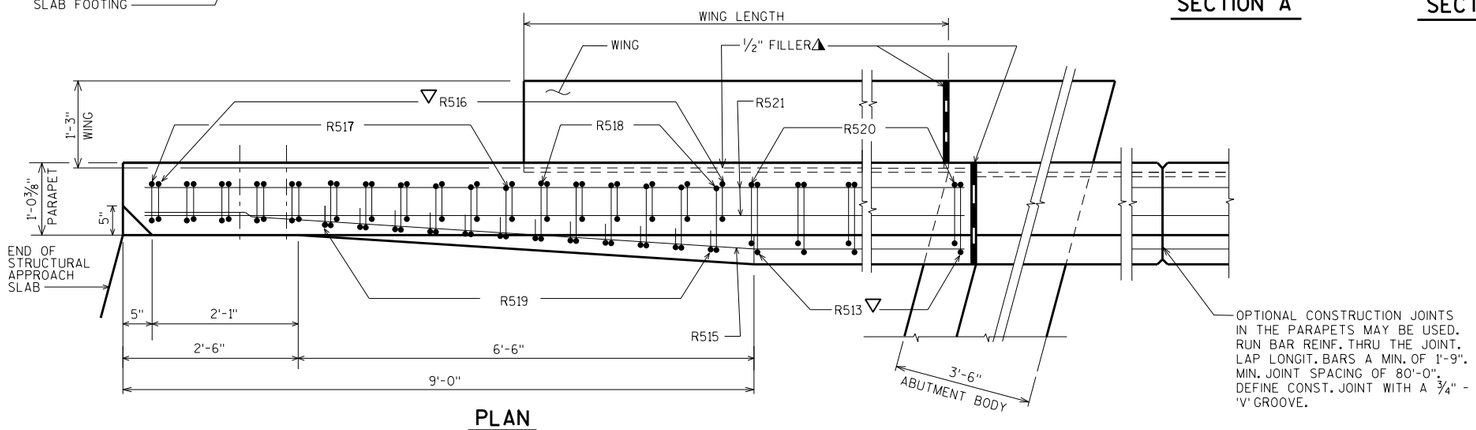
SECTION B



SECTION C

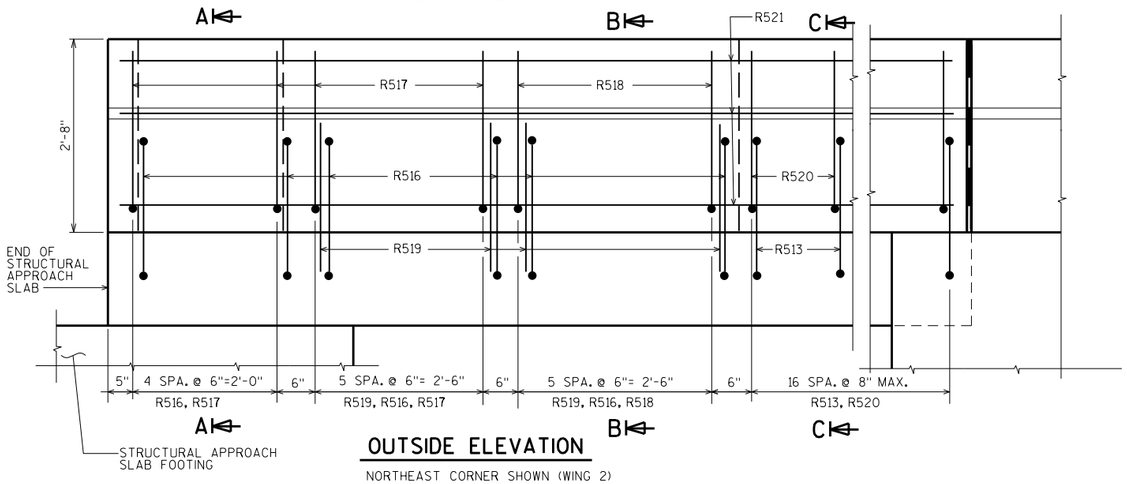


PARAPET ON DECK



PLAN

NORTHEAST CORNER SHOWN (WING 2)
SOUTHEAST CORNER SHOWN (WING 1)

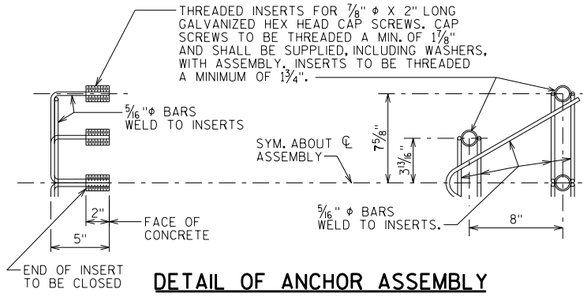


OUTSIDE ELEVATION

NORTHEAST CORNER SHOWN (WING 2)
SOUTHEAST CORNER SHOWN (WING 1)

NOTES:
SEE THE 'APPROACH SLAB DETAILS' SHEET FOR THE BILL OF BARS AND BAR DETAILS FOR THE SLAB PARAPET R-BARS.

SEE THE "SUPERSTRUCTURE DETAILS" SHEET FOR THE BILL OF BARS AND BAR DETAILS FOR THE DECK PARAPET S-BARS.



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.

⚠ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

◆ SLOPE FOR DRAINAGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R516 AND R513 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-352

DRAWN BY MJK | PLANS CK'D. SEW

SINGLE SLOPE PARAPET 32SS

SHEET 17

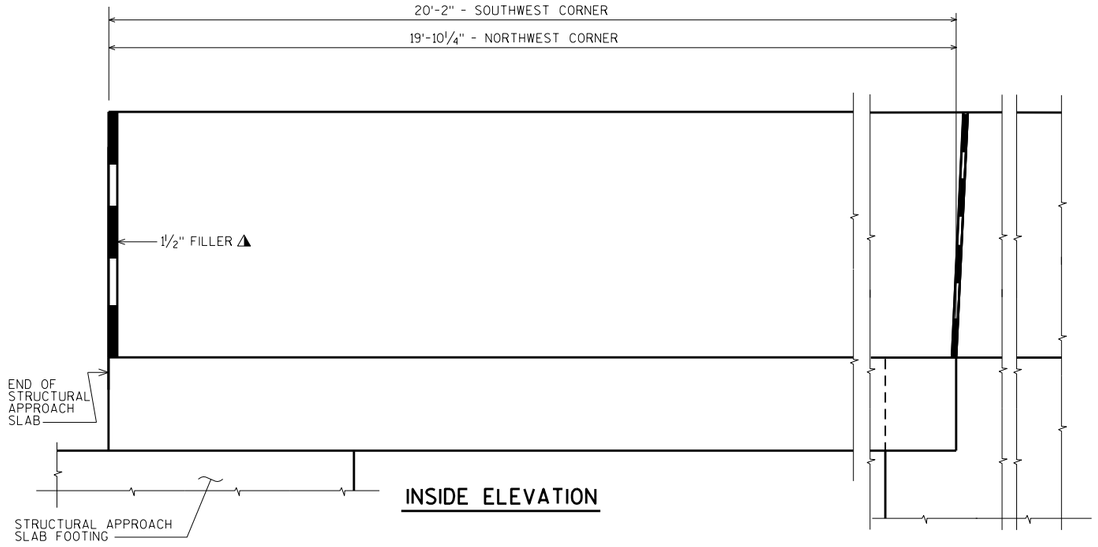
SCALE = 1.05

8

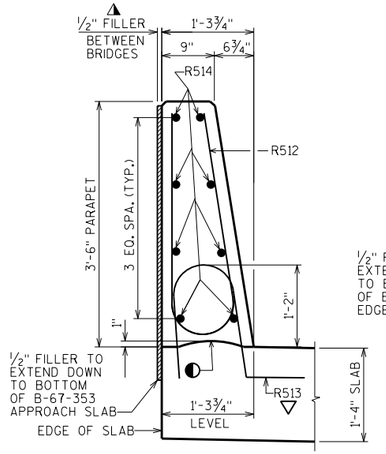
8

STATE PROJECT NUMBER

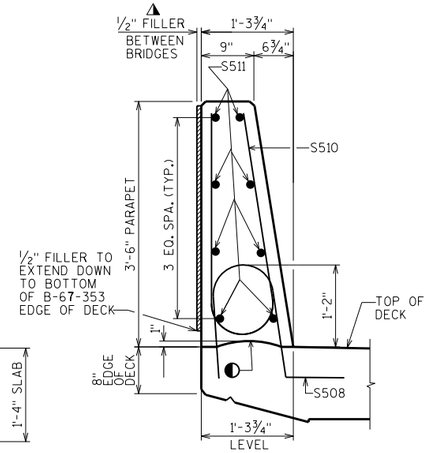
2788-00-71



INSIDE ELEVATION



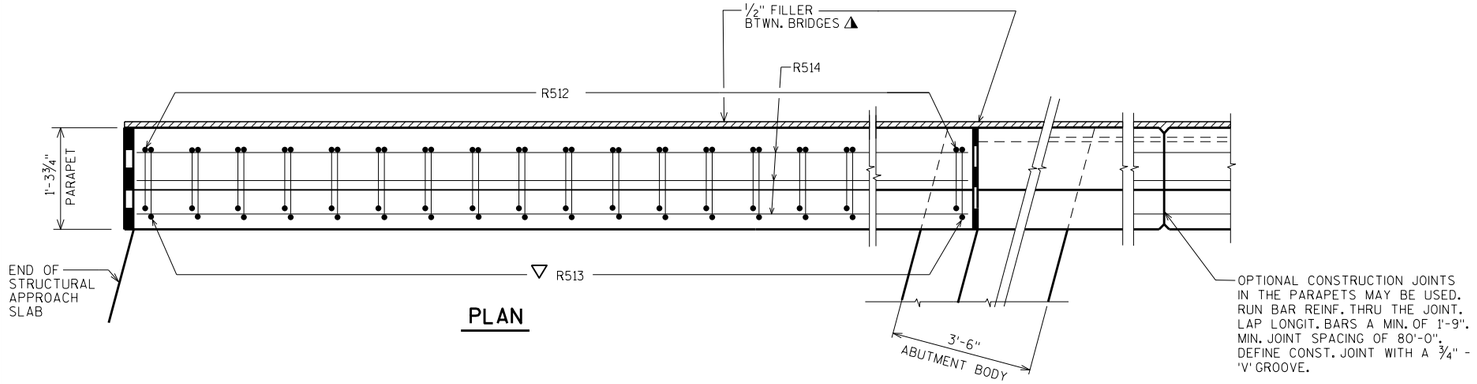
SECTION A-A (ON SLAB)



PARAPET ON DECK

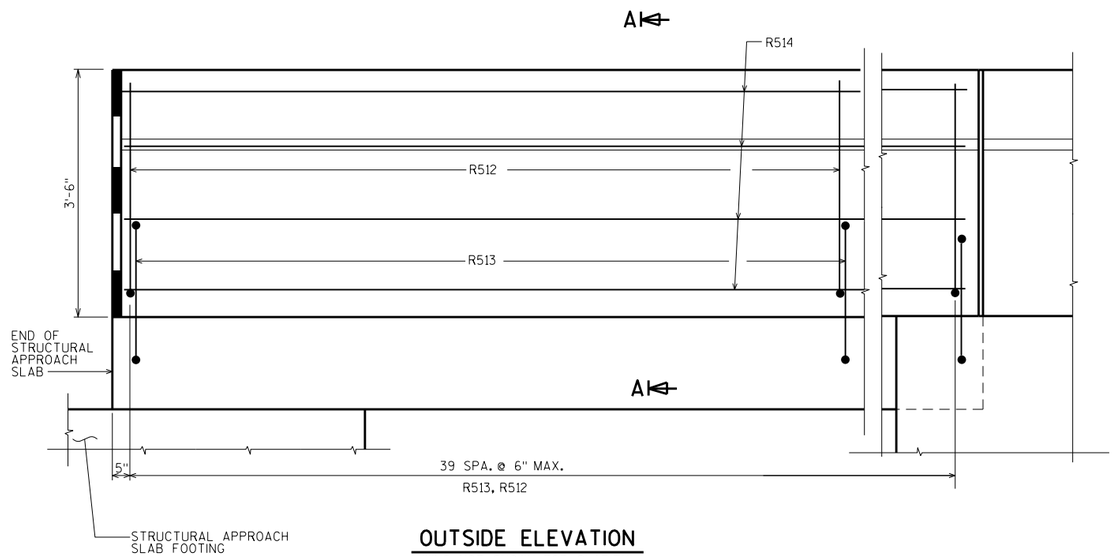
NOTES:
SEE THE 'APPROACH SLAB DETAILS' SHEET FOR THE BILL OF BARS AND BAR DETAILS FOR THE SLAB PARAPET R-BARS.

SEE THE "SUPERSTRUCTURE DETAILS" SHEET FOR THE BILL OF BARS AND BAR DETAILS FOR THE DECK PARAPET S-BARS.



PLAN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



OUTSIDE ELEVATION
(WING NOT SHOWN FOR CLARITY)

◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R513 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-352

DRAWN BY MJK | PLANS CK'D. SEW

MODIFIED SINGLE SLOPE PARAPET 42SS

SHEET 18

SCALE = 1.05

8

8