

TRAFFIC DATA

IH 94

A.D.T. = 76,100 (2005)
A.D.T. = 106,200 (2035)
R.D.S. = 70 M.P.H.

BRAUN RD. (60TH RD.)

A.D.T. = 587 (2005)
A.D.T. = 7,307 (2030)
R.D.S. = 40 M.P.H.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.10
OPERATING RATING FACTOR: RF = 1.76
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 (HPC)..... f'c = 4,000 psi
SUBSTRUCTURE..... f'c = 4,000 psi
45W-INCH PRESTRESSED CONCRETE GIRDERS..... f'c = 8,000 psi
BAR STEEL REINFORCEMENT..... f_y = 60,000 psi
STAINLESS STEEL BAR REINFORCEMENT..... f_y = 60,000 psi
C/P PILING (0.375" & 0.50" WALL)..... f_y = 45,000 psi
0.6" DIA. PRESTRESSING STRANDS..... ULTIMATE TENSILE STRENGTH = 270,000 psi

LEGEND

← DIRECTION OF TRAFFIC

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. CROSS SECTION & PROFILE GRADE LINES
3. GENERAL NOTES & QUANTITIES
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT DETAILS
7. NORTH ABUTMENT
8. NORTH ABUTMENT DETAILS
9. ABUTMENT DETAILS
10. PIER
11. PIER DETAILS (1 OF 2)
12. PIER DETAILS (2 OF 2)
13. PIER BARRIER WALL DETAILS
14. PIER ALTERNATIVE
15. 45W" PRESTRESSED GIRDER
16. 45W" PRESTRESSED GIRDER DETAILS
17. SUPERSTRUCTURE FRAMING PLAN
18. STEEL DIAPHRAGM
19. PRECAST DECK PANEL PLAN
20. PRECAST DECK PANEL DETAILS (1 OF 2)
21. PRECAST DECK PANEL DETAILS (2 OF 2)
22. SUPERSTRUCTURE REINFORCEMENT
23. SUPERSTRUCTURE CROSS SECTIONS
24. SUPERSTRUCTURE REINFORCEMENT DETAILS
25. SUPERSTRUCTURE BILL OF BARS
26. SINGLE SLOPE PARAPET 42SS MODIFIED
27. CONDUIT DETAILS
28. STRUCTURAL APPROACH SLAB
29. STRUCTURAL APPROACH SLAB DETAILS
30. AESTHETIC DETAILS

THE PE STAMP IN THIS PLAN SET COVERS ONLY
THE MODIFICATIONS SHOWN CLOUDED IN RED AND
SIGNIFIED BY Δ, WHICH MODIFY THE ORIGINAL
BRIDGE PLANS TO UTILIZE A TRADITIONAL
FULL-DEPTH, CAST IN PLACE CONCRETE DECK.
THE DECK REINFORCEMENT IS DESIGNED PER THE
CURRENT WISCONSIN DOT BRIDGE MANUAL.

FOUNDATION DATA

USING THE MODIFIED GATES DYNAMIC FORMULA:

ABUTMENTS SHALL BE SUPPORTED ON 12 3/4" X 0.375" CIP
CONCRETE PILING DRIVEN TO A REQUIRED DRIVING
RESISTANCE OF 198* TONS PER PILE AS DETERMINED BY
THE MODIFIED GATES DYNAMIC FORMULA.

PIER SHALL BE SUPPORTED ON 14" X 0.5" CIP CONCRETE
PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF
240* TONS PER PILE AS DETERMINED BY THE MODIFIED
GATES DYNAMIC FORMULA.

* THE FACTORED AXIAL RESISTANCE OF PILES IN
COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING
RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF
0.50 USING THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED PILE LENGTHS:
SOUTH ABUTMENT.....90 FEET
NORTH ABUTMENT.....90 FEET
PIER.....75 FEET

DRIVE PILING TO PLAN LENGTH UNLESS THE REQUIRED
BEARING IS OBTAINED AT A SHORTER LENGTH. IF THE
REQUIRED BEARING IS NOT OBTAINED WHEN THE PILE IS
DRIVEN TO PLAN LENGTH, CONTACT THE BUREAU OF
STRUCTURES.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 751-7200

NO.	DATE	REVISION	BY
Δ 7/20/18		REMOVE PRECAST DECK PANELS	AYRES

ORIGINAL PLANS PREPARED BY

KAPUR & ASSOCIATES
CONSULTING ENGINEERS
414.751.7200

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED *William C. Diche* 3/5/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-51-124

IH 94 / IH 41 NB OVER BRAUN ROAD

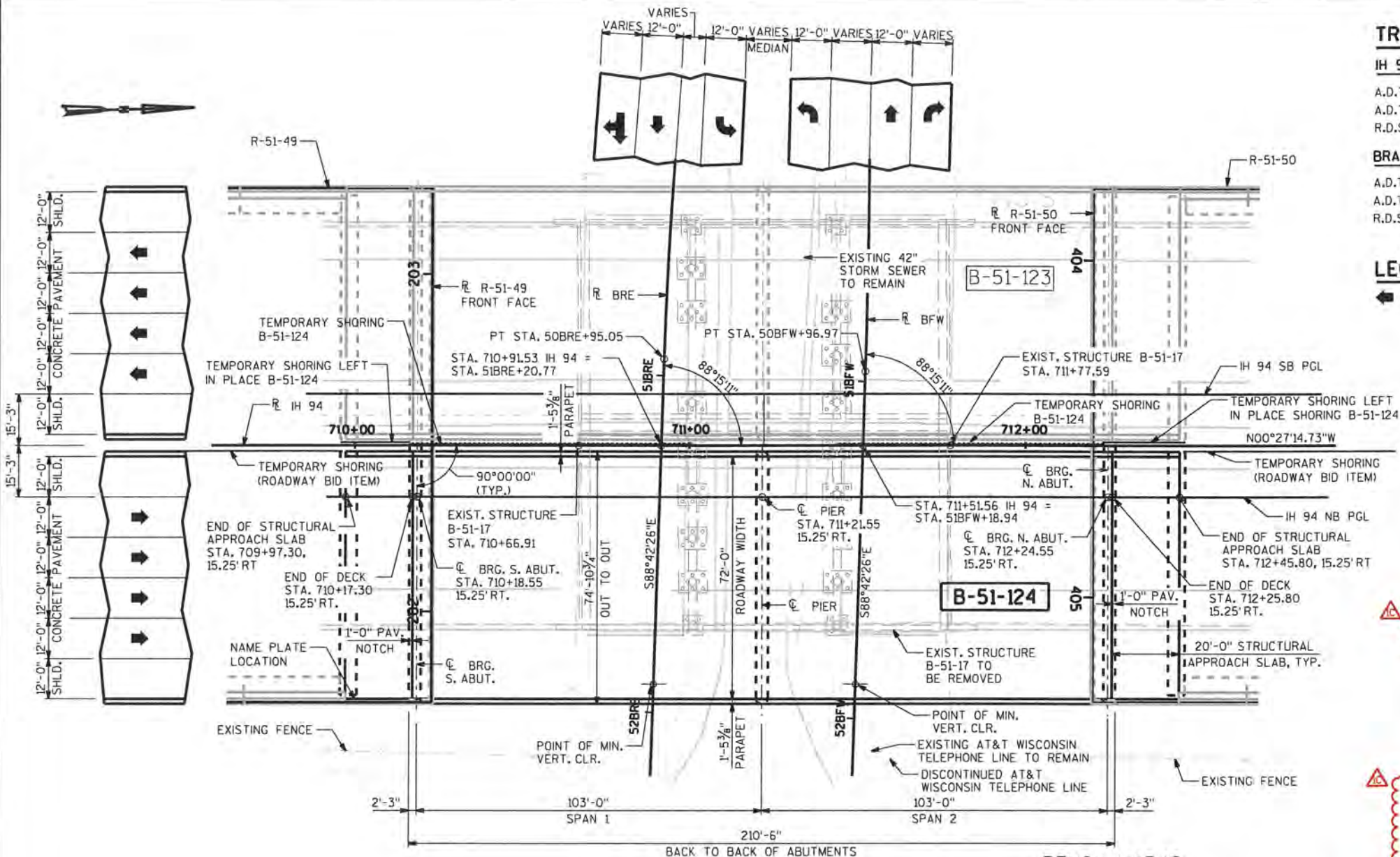
COUNTY RACINE VILLAGE MT. PLEASANT

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY AJA DESIGN BY MHZ DRAWN BY MM CKD. BY MHZ

GENERAL PLAN
& ELEVATION

SHEET 1 OF 30

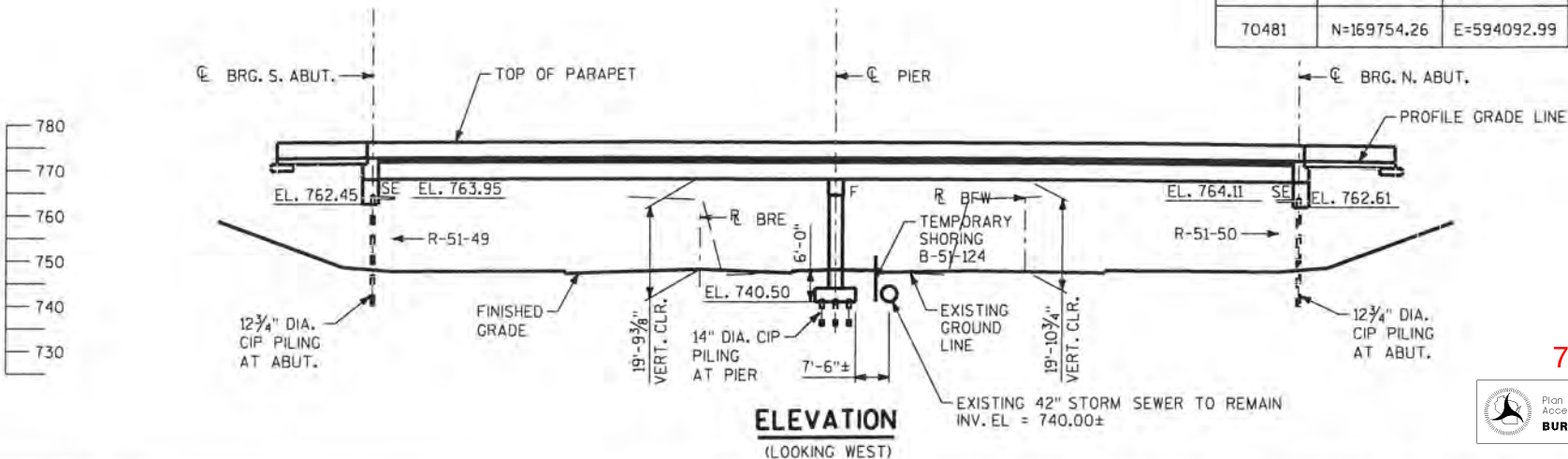


PLAN

(2 SPAN - 45W" PRESTRESSED GIRDERS)

BENCH MARKS

NO.	LOCATION	ELEVATION	DESCRIPTION
71058	N=170333.46 E=594299.46	767.08	CP BM BRIDGE DISK TOP PARAPET WALL SE CORNER IH-94 BRIDGE B-51-17-8 OVER 60TH RD
71187	N=170461.19 E=594177.44	767.07	CP BM BRIDGE DISK TOP PARAPET WALL NW CORNER I94 BRIDGE B-51-16-8 OVER 60TH RD
HMOD 1Y04	N=170296.35 E=593977.79	746.26	EXISTING WISDOT BRONZE DISK IN CONCRETE MARKED BY 2 ORANGE WITNESS POSTS
70481	N=169754.26 E=594092.99	753.23	F1000SPK BERNTSEN FENO WITH ALUM CAP

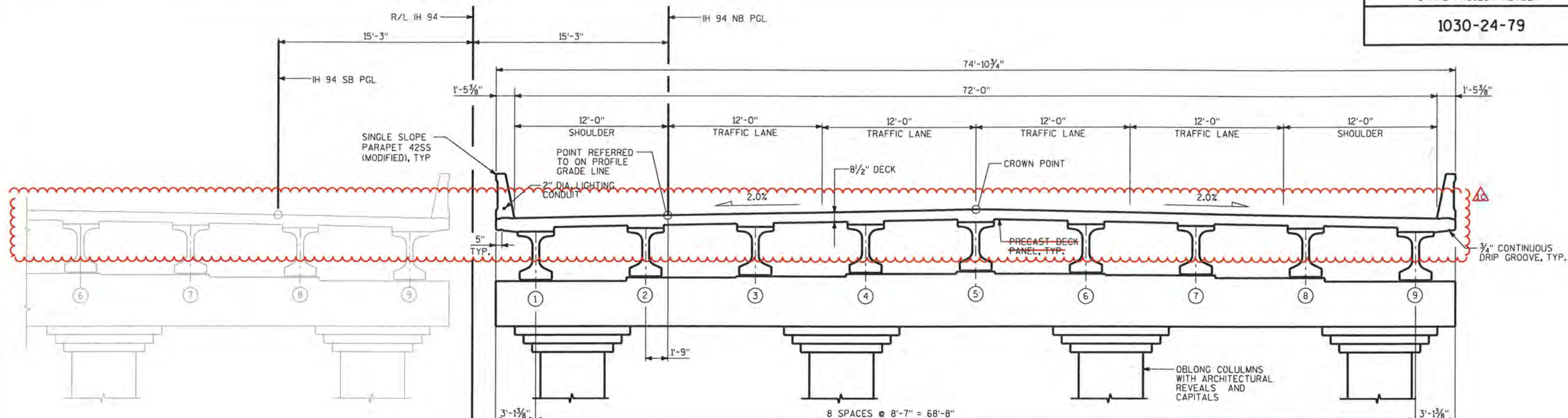
ELEVATION
(LOOKING WEST)

7/23/18

Plan Sheet
Accepted By
BUREAU OF STRUCTURES

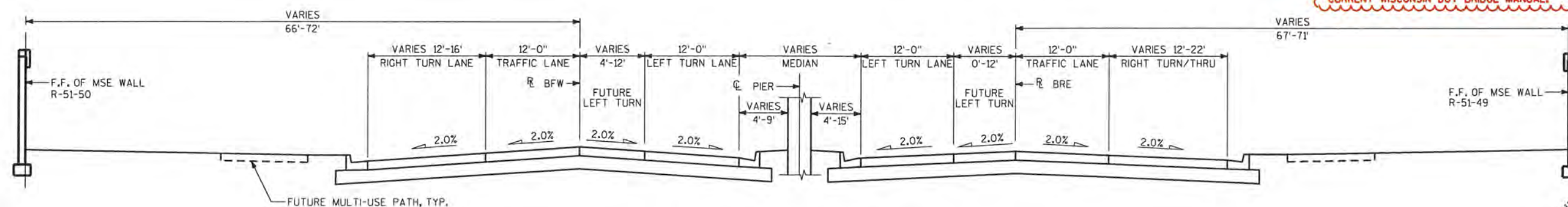


7/20/2018

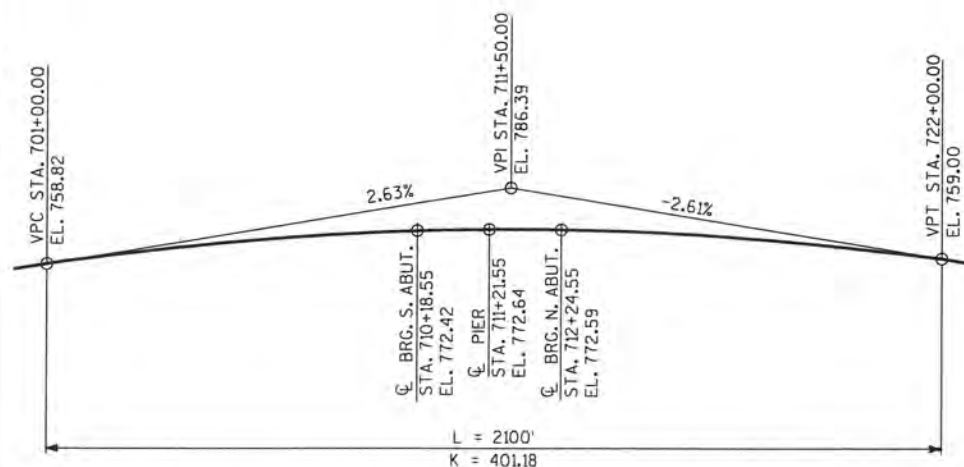


45W" PRESTRESSED CONCRETE GIRDERS
(LOOKING NORTH)

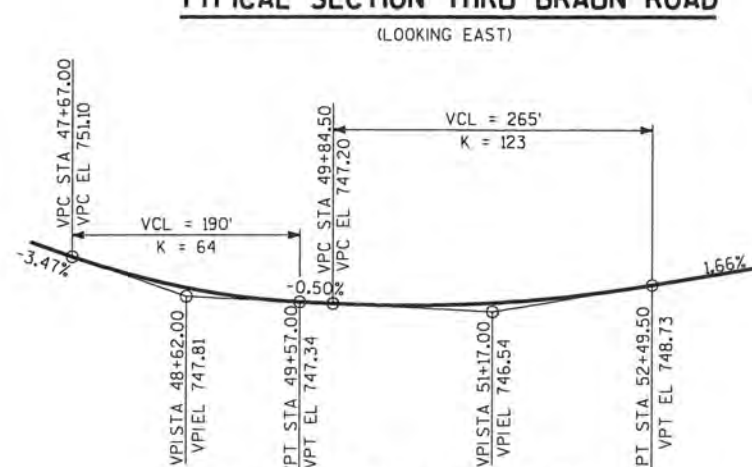
THE PE STAMP IN THIS PLAN SET COVERS ONLY THE MODIFICATIONS SHOWN CLOUDED IN RED AND SIGNIFIED BY , WHICH MODIFY THE ORIGINAL BRIDGE PLANS TO UTILIZE A TRADITIONAL FULL-DEPTH, CAST IN PLACE CONCRETE DECK. THE DECK REINFORCEMENT IS DESIGNED PER THE CURRENT WISCONSIN DOT BRIDGE MANUAL.



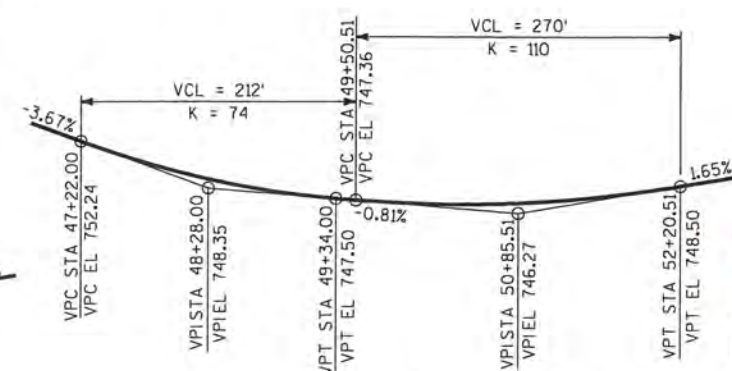
(LOOKING EAST)



PROFILE GRADE LINE - IH 94 NB



PROFILE GRADE LINE BRE



PROFILE GRADE LINE BFW

7/23/18



7/20/18		REMOVE PRECAST DECK PANELS		AYRES	
NO.	DATE	REVISION		BY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-51-124					
		DRAWN BY		MM	PLANS CK'D. MHZ
CROSS SECTION & PROFILE GRADE LINES				SHEET 2 OF 30	

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT WILL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

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

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), RACINE COUNTY ZONE, NAD 1983 (87). ALL STATIONS AND ELEVATIONS ARE IN FEET, ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 88 (91).

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-51-123" SHALL BE THE EXISTING GROUNDLINE.

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.

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

THE AVERAGE HAUNCH IS SHOWN ON THE PRESTRESSED GIRDER DETAIL SHEET. THE GROUT ON THE TOP FLANGE OF GIRDERS IS TO BE INCLUDED IN THE BID ITEM "PARTIAL DEPTH PRECAST PRESTRESSED CONCRETE DECK PANELS B-51-124".

THE PARAPET CONCRETE QUANTITY FOR SINGLE SLOPE PARAPET 42SS MODIFIED SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

EXISTING STRUCTURE B-51-17 IS A 3-SPAN CONTINUOUS HAUNCHED SLAB BRIDGE WITH AN OVERALL LENGTH = 110'-8" AND OVERALL WIDTH = 60'-11". THE ENTIRE STRUCTURE TO BE REMOVED IN ACCORDANCE WITH PROJECT CONSTRUCTION STAGING PLANS.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF BRIDGE B-51-123 ABUTMENTS WITH CONSTRUCTION OF RETAINING WALLS R-51-49 AND R-51-50.

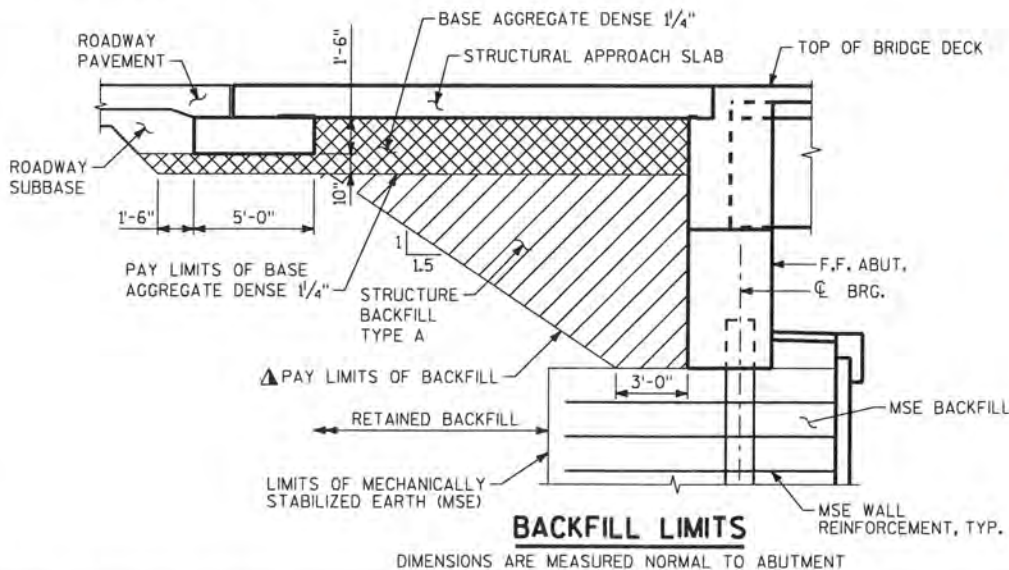
APPLY PIGMENTED SURFACE SEALER TO THE TOP & INSIDE FACE OF PARAPETS ON THE BRIDGE & APPROACH SLAB.

APPLY PROTECTIVE SURFACE TREATMENT TO THE BRIDGE DECK, PAVING NOTCH AND APPROACH SLAB.

MSE BACKFILL OR SIZE 2 COARSE AGGREGATE PLACED BETWEEN THE MSE RETAINING WALL & ABUTMENT SHALL BE INCIDENTAL TO THE BID ITEM "SLOPE PAVING CONCRETE".

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

PRECAST PIER NON-BID ITEMS (PRECAST PIER COLUMNS, GROUTED BAR COUPLERS) ARE FOR INFORMATIONAL PURPOSES ONLY. IF THE CONTRACTOR ELECTS TO UTILIZE PRECAST PIER COLUMNS, THE NON-BID ITEM SPECIAL PROVISIONS WITHIN THIS CONTRACT SHALL GOVERN THE WORK. PAYMENT FOR THE PRECAST PIER SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES" FOR THE CAST-IN-PLACE PIER.



TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SOUTH APPROACH SLAB	SOUTH ABUTMENT	PIER	NORTH ABUTMENT	NORTH APPROACH SLAB	SUPER.	TOTAL
203.0200.005	REMOVING OLD STRUCTURE STA. 711+21, RT	LS	-	-	-	-	-	-	1
206.1000.006	EXCAVATION FOR STRUCTURES BRIDGES B-51-124	LS	-	-	-	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	279	235	279	-	-	793
305.0125	BASE AGGREGATE DENSE 1 1/4-INCH	CY	-	138	-	138	-	-	276
416.0620	DRILLED DOWEL BARS	EACH	-	-	35	-	-	-	35
501.1000.S	ICE HOT WEATHER CONCRETING	LB	750	398	1283	398	750	3,555	7,134
502.0100	CONCRETE MASONRY BRIDGES	CY	20	53	171	53	20	-	317
502.3200	PROTECTIVE SURFACE TREATMENT	SY	160	-	-	-	160	1,707	2,027
502.3210	PIGMENTED SURFACE SEALER	SY	20	-	-	-	20	205	245
503.0146	PRESTRESSED GIRDER TYPE 145W-INCH	LF	-	-	-	-	-	1,861	1,861
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-	-	5,140	-	-	-	5,140
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	15,970	4,530	30,140	4,530	15,970	95,300	166,440
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	-	-	-	-	-	2,580	2,580
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	9	18	9	-	-	36
506.4000.004	STEEL DIAPHRAGMS B-51-124	EACH	-	-	-	-	-	32	32
511.200.013	TEMPORARY SHORING B-51-124	SF	-	2,160	520	2,160	-	-	4,840
511.2200.005	TEMPORARY SHORING LEFT IN PLACE B-51-124	SF	-	400	-	400	-	-	800
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	16	-	16	-	-	32
517.1010.S.410	CONCRETE STAINING B-51-124	SF	118	307	2,414	307	118	2,427	5,691
550.0600	PILE REDRIVING	EACH	-	3	3	3	-	-	9
550.2126	PILING CIP CONCRETE 12 3/4 X 0.375-INCH	LF	-	1,080	-	1,080	-	-	2,160
550.2148	PILING CIP CONCRETE 14 X 0.50-INCH	LF	-	-	2,700	-	-	-	2,700
604.0400	SLOPE PAVING CONCRETE	SY	-	23	-	23	-	-	46
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	3	-	-	-	3	12	18
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	17	-	-	-	17	203	237
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	-	-	-	-	-	1	1
SPV.0035.400	HPC MASONRY STRUCTURES	CY	80	-	-	-	80	474	634
SPV.0165.401	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,440	-	-	-	1,440	15,012	17,892
SPV.0165.468	PARTIAL DEPTH PRECAST PRESTRESSED CONCRETE DECK PANELS B-51-124	SF	-	-	-	-	-	10,344	10,344
NON-BID ITEMS									
	PREFORMED JOINT FILLER	SIZE	-	-	-	-	-	-	3/4", 1", 1 1/2"
	NON-BITUMINOUS JOINT FILLER	SIZE	-	-	-	-	-	-	1/2"
	CORK FILLER	SIZE	-	-	-	-	-	-	3/4"
	NAME PLATE	EACH	-	-	-	-	-	-	1
	PRECAST PIER COLUMNS	-	-	-	-	-	-	-	-
	GROUTED BAR COUPLERS	-	-	-	-	-	-	-	-

			SUPER.	TOTAL
501.1000.S	ICE HOT WEATHER CONCRETING	LB	1,180	1,180
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	40,490	40,490
SPV.0035.400	HPC MASONRY STRUCTURES	CY	157	157

ALL ITEMS ARE CATEGORY 2050

REVISION QUANTITIES FOR INFORMATIONAL PURPOSES ONLY.



7/23/18



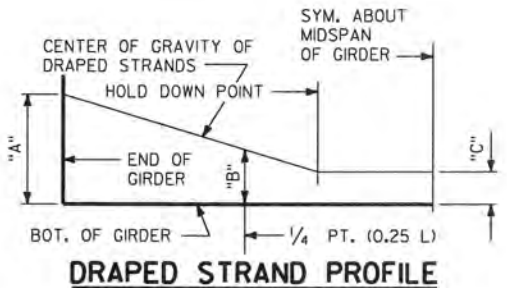
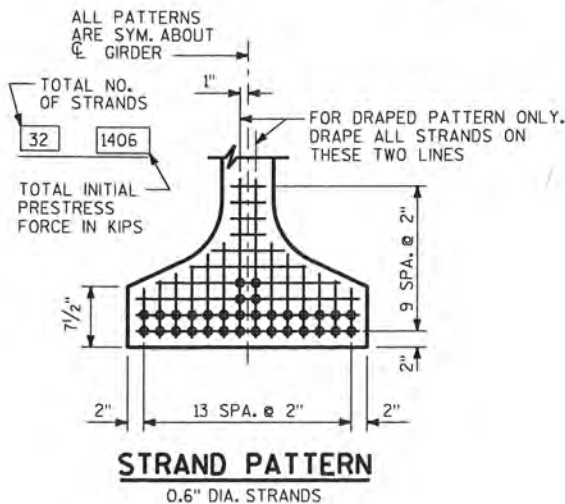
	7/20/18	REMOVE PRECAST DECK PANELS	AYRES
	5/17/18	QUANTITY REVISED	AJA
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-51-124			
		DRAWN BY AJA	PLANS CKD. MHZ
GENERAL NOTES & QUANTITIES		SHEET 3 OF 30	

GIRDER DATA

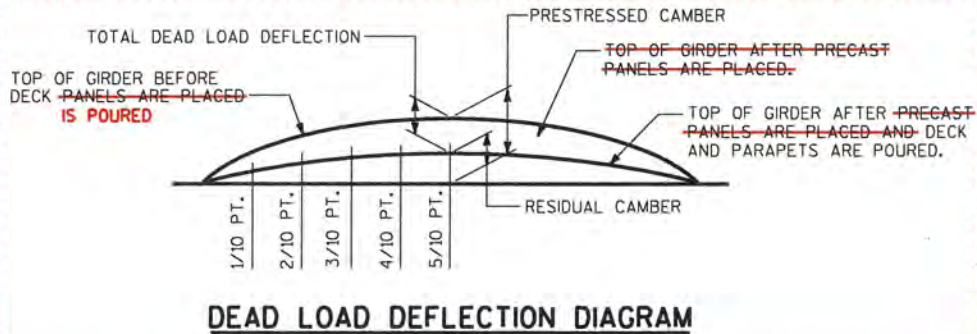
GIRDER DATA																	
SPAN	GIRDER LOCATION	GIRDER LENGTH "L"	TOTAL DEAD LOAD DEFL. (IN.) ***					CONC. STRGTH. f'c (p.s.i.)	f'ci (P.S.I.) *	"P"	DIA. OF STRAND (IN.)	TOTAL NO. OF STRANDS	DRAPED PATTERN (IN.)				
			1/10	2/10	3/10	4/10	5/10						"A"	"B" MIN.	"B" MAX.	"C"	
1 & 2	EXTERIOR	103'-4 1/2"	5/8"	1 1/4"	1 5/8"	2"	2"	8000	6800	8"	0.6	32	8	40	13 3/4"	16 3/4"	5
1 & 2	INTERIOR	103'-4 1/2"	5/8"	1 3/8"	1 7/8"	2 1/8"	2 1/4"	8000	6800	8"	0.6	32	8	40	13 3/4"	16 3/4"	5

SPAN	GIRDER LOCATION	GIRDER LENGTH "L"	PRECAST PANEL DEAD LOAD DEFL. (IN.)				
SPAN	GIRDER LOCATION	GIRDER LENGTH "L"	1/10	2/10	3/10	4/10	5/10
1 & 2	EXTERIOR	103'-4 1/2"	1/8"	1/4"	3/8"	3/8"	3/8"
1 & 2	INTERIOR	103'-4 1/2"	1/4"	3/8"	5/8"	3/4"	3/4"

*** SEE DEAD LOAD DEFLECTION DIAGRAM. DEAD LOAD DEFLECTIONS ARE SYMMETRICAL ON GIRDERS.
* MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRESTRESS FORCE.



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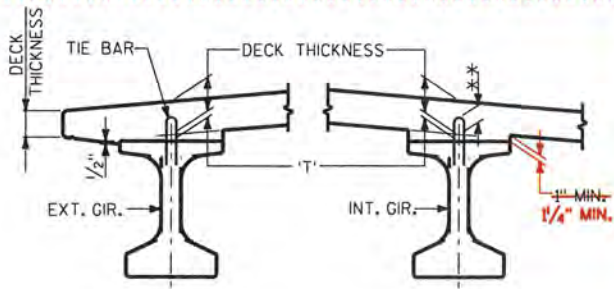


SPAN	GIRDER LOCATION	PRESTRESS CAMBER* (IN.)	TOTAL DEAD LOAD DEFLECTION (IN.)	RESIDUAL CAMBER (IN.)
1 & 2	EXTERIOR	3 1/4"	2"	1 1/4"
1 & 2	INTERIOR	3 1/4"	2 1/4"	1"

* 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.

THESE VALUES ARE NOT TO BE USED IN DETERMINING HAUNCH HEIGHT 'T'. USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



1/4"

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
+ TOTAL DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2 3/8" WAS CALCULATED. THE GROUT IS INCLUDED IN THE BID ITEM "PARTIAL DEPTH PRECAST PRESTRESSED CONCRETE DECK PANEL B-51-124"



7/23/18

WISDOT
BUREAU OF STRUCTURES

NO.	DATE	REVISION	BY
1	7/20/18	REMOVE PRECAST DECK PANELS	AYRES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-124

DRAWN BY	MM	PLANS CK'D.	MHZ

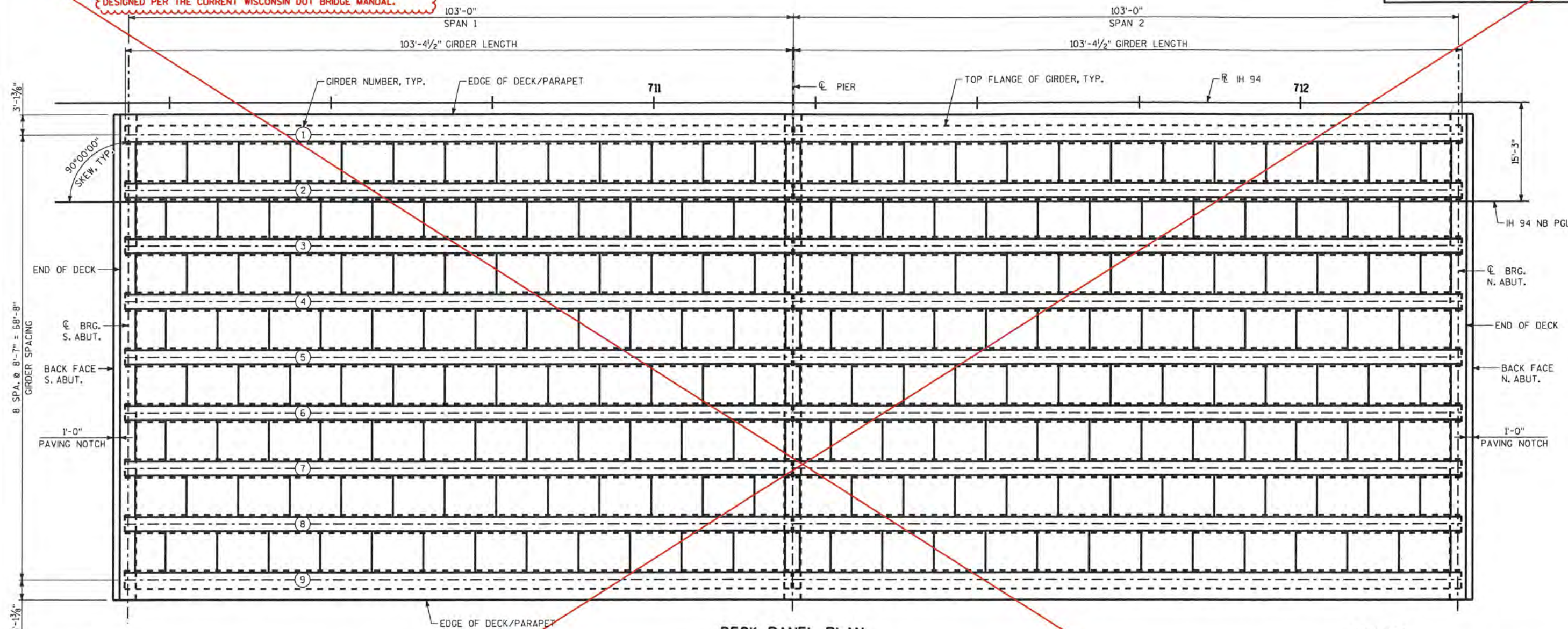
45W" PRESTRESSED GIRDER DETAILS

SHEET 16 OF 30

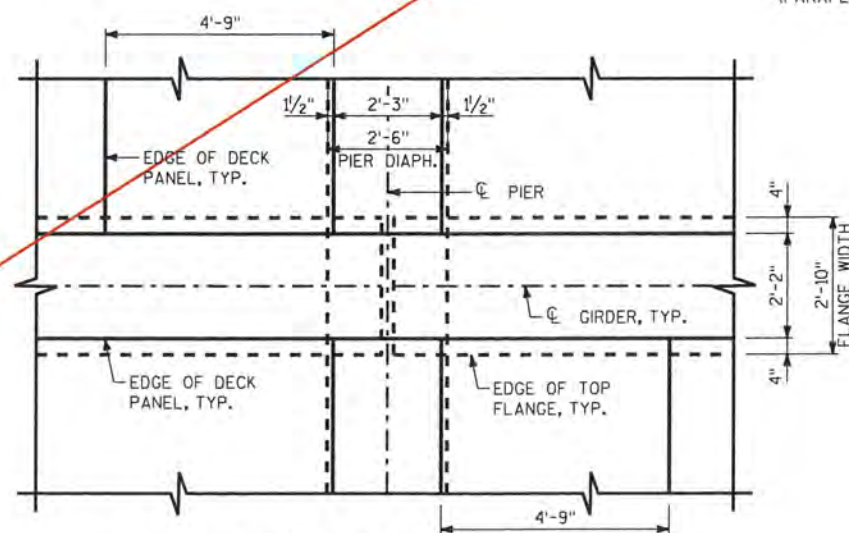
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STATE PROJECT NUMBER

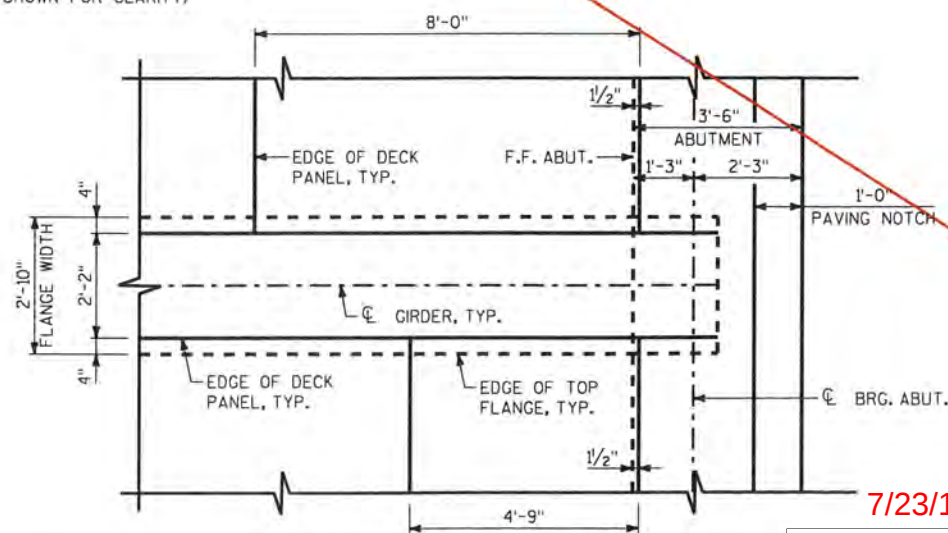
1030-24-79



DECK PANEL PLAN
(PARAPET NOT SHOWN FOR CLARITY)



PIER PARTIAL PLAN



ABUTMENT PARTIAL PLAN

LEGEND

PRECAST DECK PANEL SIZE = 8'-0" X 6'-5" X 3/2"
IN SPAN WITH NOTCH ON BOTH SIDES.
NUMBER OF PANELS REQUIRED - 176

PRECAST DECK PANEL SIZE = 8'-0" X 6'-5" X 3/2"
IN SPAN WITH NOTCH ON ONE SIDE.
NUMBER OF PANELS REQUIRED - 16

PRECAST DECK PANEL SIZE = 4'-9" X 6'-5" X 3/2"
AT SUBSTRUCTURES WITH NOTCH ON ONE SIDE.
NUMBER OF PANELS REQUIRED - 16

(X) GIRDER NUMBER

NOTES

DECK PANELS TO BE STAGGERED AS SHOWN IN PLAN.
FOR SUPERSTRUCTURE FRAMING PLAN, SEE SHEET 17.
FOR PRECAST DECK PANEL DETAILS, SEE SHEETS 20 & 21.

FILE NAME : \$\$...designfile...\$\$

PLOT DATE : \$\$...plottingdate...\$\$

PLOT BY : \$\$...plotuser...\$\$

PLOT NAME : \$FILE\$

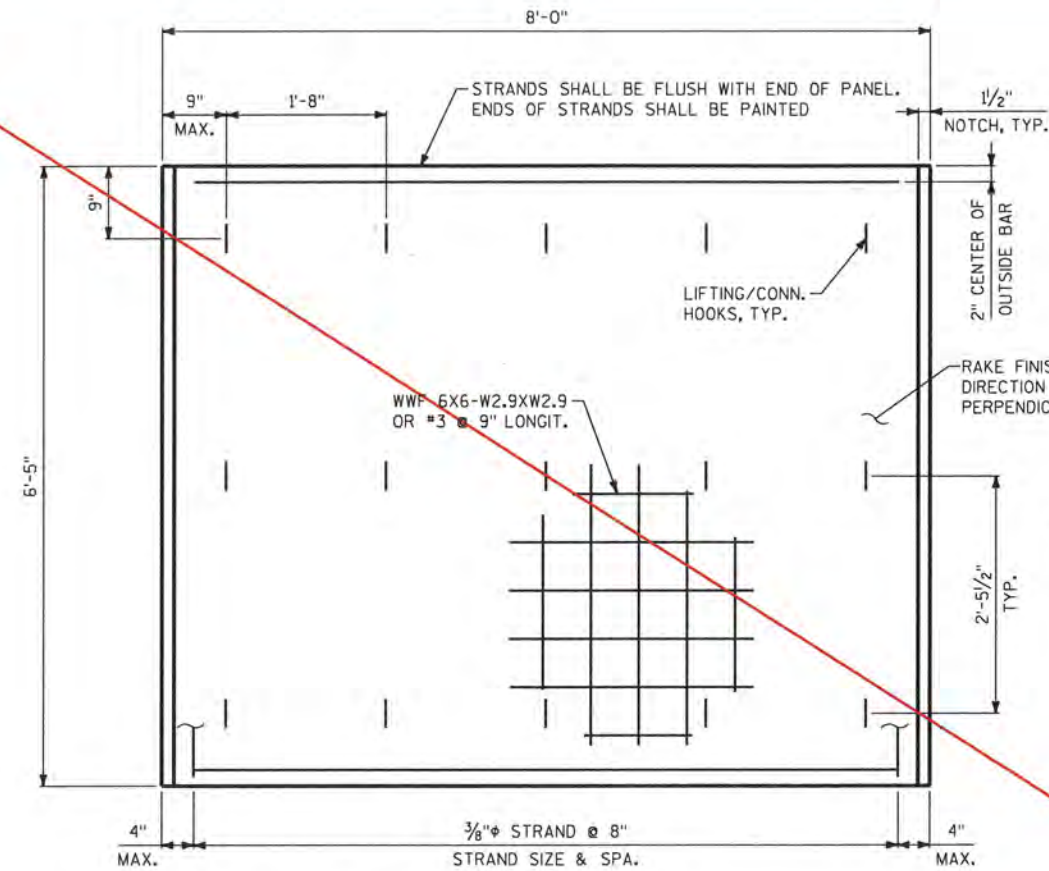
PLOT SCALE : \$\$...plotscale...\$\$



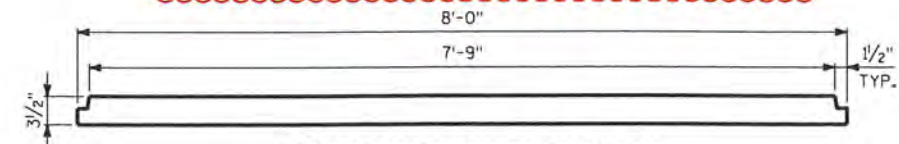
1/20/18 REMOVE PRECAST DECK PANELS		AYRES
NO.	DATE	REVISION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE B-51-124		
DRAWN BY	AJA	PLANS CKD. MHZ
PRECAST DECK PANEL PLAN		SHEET 19 OF 30



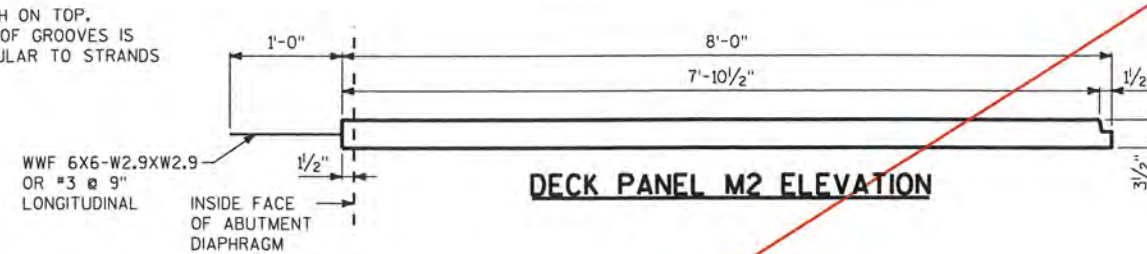
THE PE STAMP IN THIS PLAN SET COVERS ONLY THE MODIFICATIONS SHOWN CLOUDED IN RED AND SIGNIFIED BY . WHICH MODIFY THE ORIGINAL BRIDGE PLANS TO UTILIZE A TRADITIONAL FULL-DEPTH, CAST IN PLACE CONCRETE DECK. THE DECK REINFORCEMENT IS DESIGNED PER THE CURRENT WISCONSIN DOT BRIDGE MANUAL.



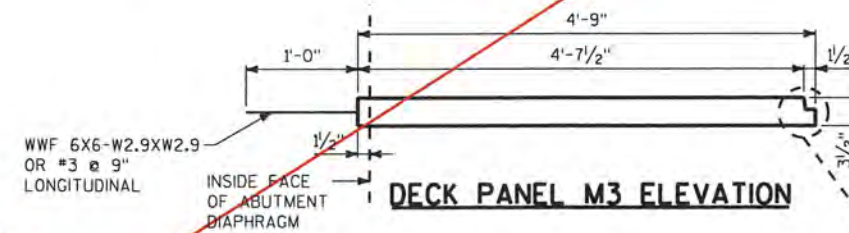
DECK PANEL M1 PLAN



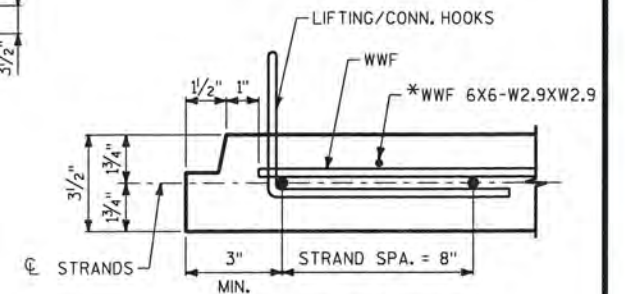
DECK PANEL M1 ELEVATION



DECK PANEL M2 ELEVATION

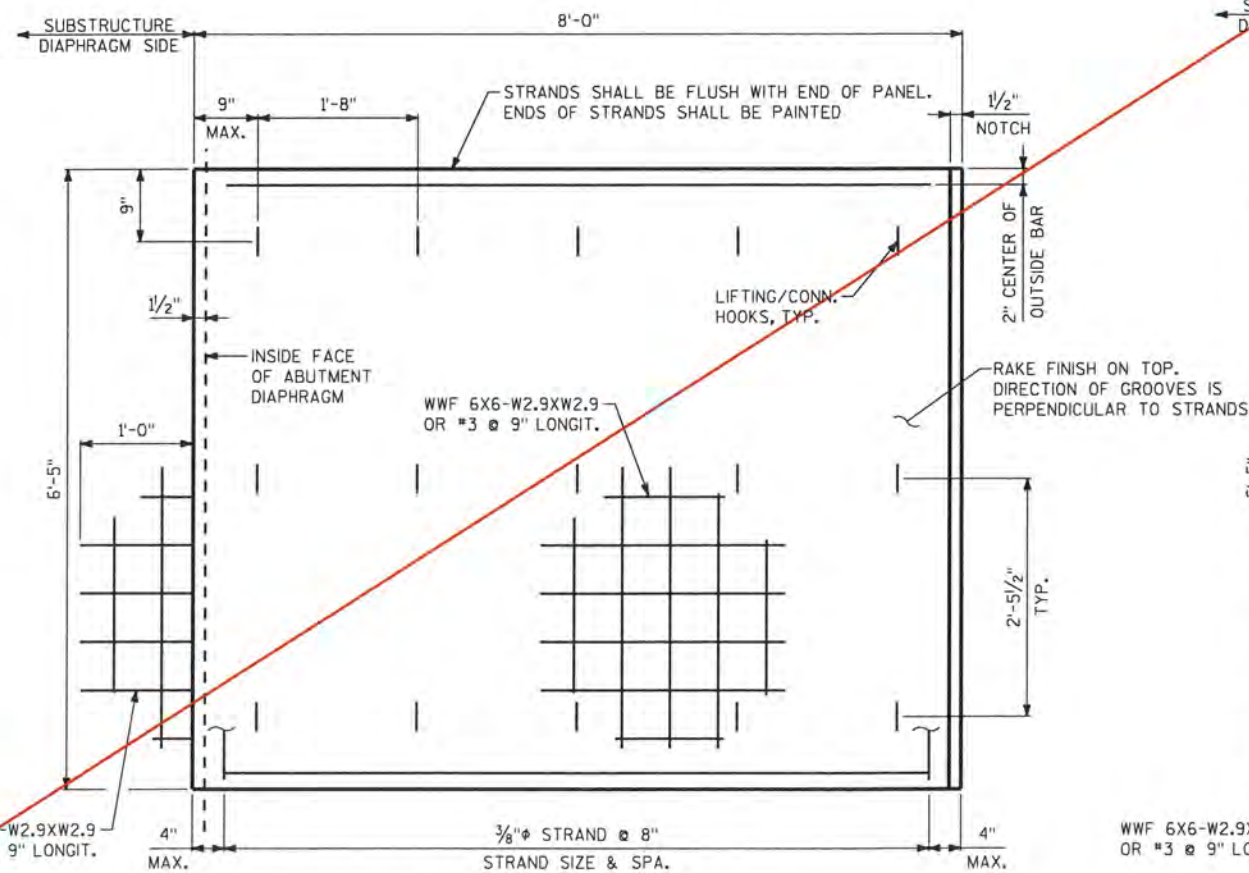


DECK PANEL M3 ELEVATION

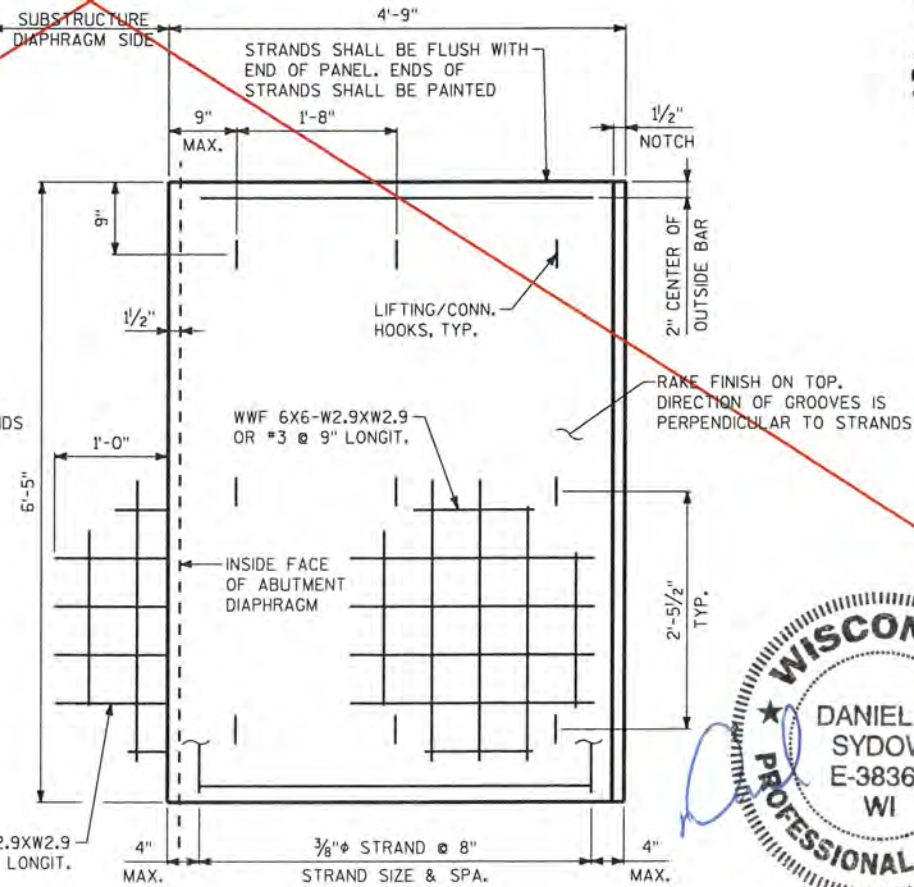


PART SECTION

* BARS IN WWF WHICH ARE PARALLEL TO THE STRANDS MUST BE A MINIMUM OF 1" CLEAR FROM THE STRANDS



DECK PANEL M2 PLAN



DECK PANEL M3 PLAN

DESIGN DATA

INITIAL PRESTRESSED
FORCE / STRAND = 15,40 KIPS

CONCRETE FOR DECK PANELS
f'ci = 4,400 psi
f'c = 6,000 psi

7/23/18



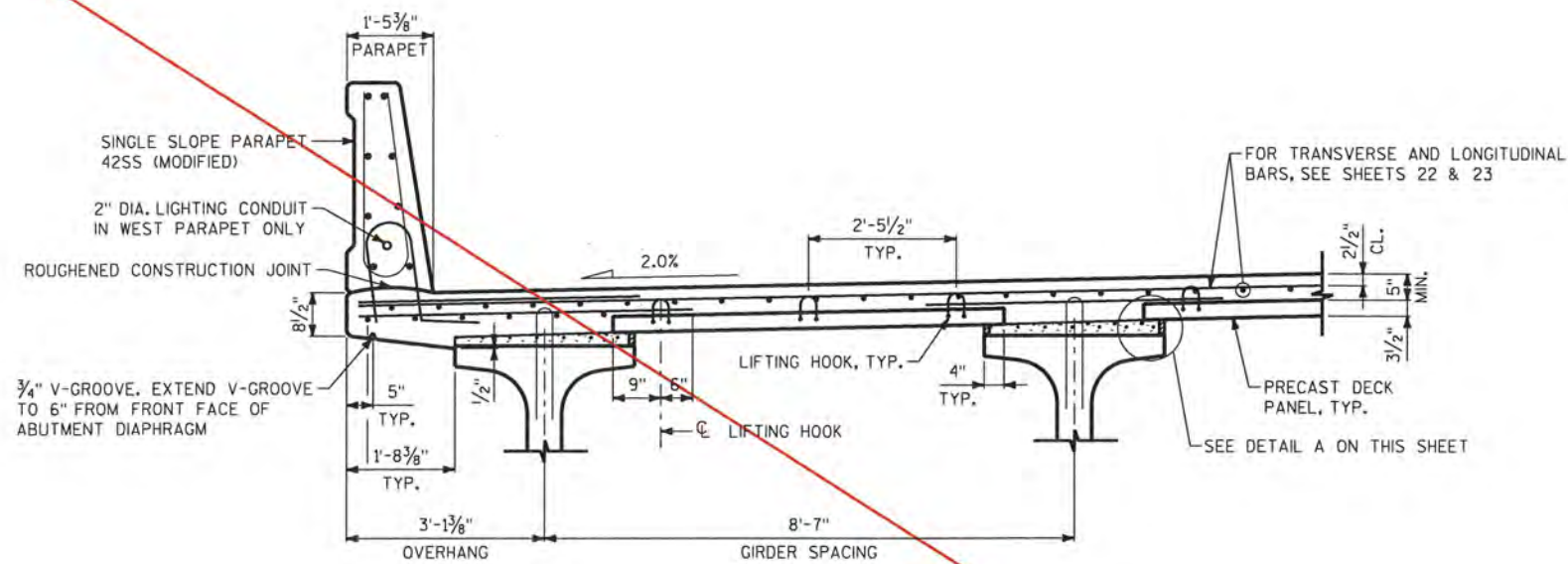
NOTES

FOR PRECAST DECK PANEL PLAN, SEE SHEET 19.

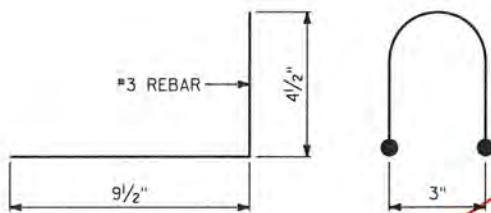
FOR SUPERSTRUCTURE REINFORCEMENT DETAILS,
SEE SHEETS 22, 23 & 24.



NO.	DATE	REVISION	BY
1	7/20/18	REMOVE PRECAST DECK PANELS	AYRES
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-51-124			
DRAWN BY		AJA	PLANS CK'D. MHZ
PRECAST DECK PANEL DETAILS (1 OF 2)		SHEET 20 OF 30	

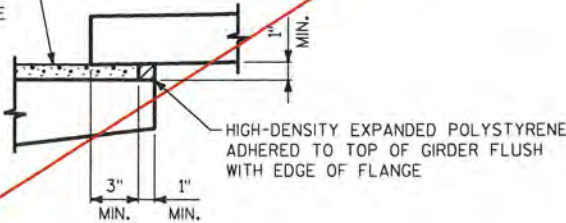


TRANSVERSE SECTION
(LOOKING NORTH)



LIFTING/CONN. HOOK DETAIL

AFTER DECK PANELS ARE PLACED, THEY ARE REQUIRED TO BE GROUTED IN PLACE PRIOR TO PLACEMENT OF THE CAST-IN-PLACE CONCRETE DECK. THE GROUT BED SHOULD EXTEND FULL WIDTH OF THE GIRDER FLANGE



DETAIL A

THE PE STAMP IN THIS PLAN SET COVERS ONLY THE MODIFICATIONS SHOWN CLOUDED IN RED AND SIGNIFIED BY . WHICH MODIFY THE ORIGINAL BRIDGE PLANS TO UTILIZE A TRADITIONAL FULL-DEPTH, CAST IN PLACE CONCRETE DECK. THE DECK REINFORCEMENT IS DESIGNED PER THE CURRENT WISCONSIN DOT BRIDGE MANUAL.

DESIGN DATA

INITIAL PRESTRESSED
FORCE / STRAND = 15.40 KIPS

CONCRETE FOR DECK PANELS
f'ci = 4,400 psi
f'c = 6,000 psi

NOTES

FOR PRECAST DECK PANEL PLAN, SEE SHEET 19.
FOR SUPERSTRUCTURE REINFORCEMENT DETAILS,
SEE SHEETS 22, 23 & 24.

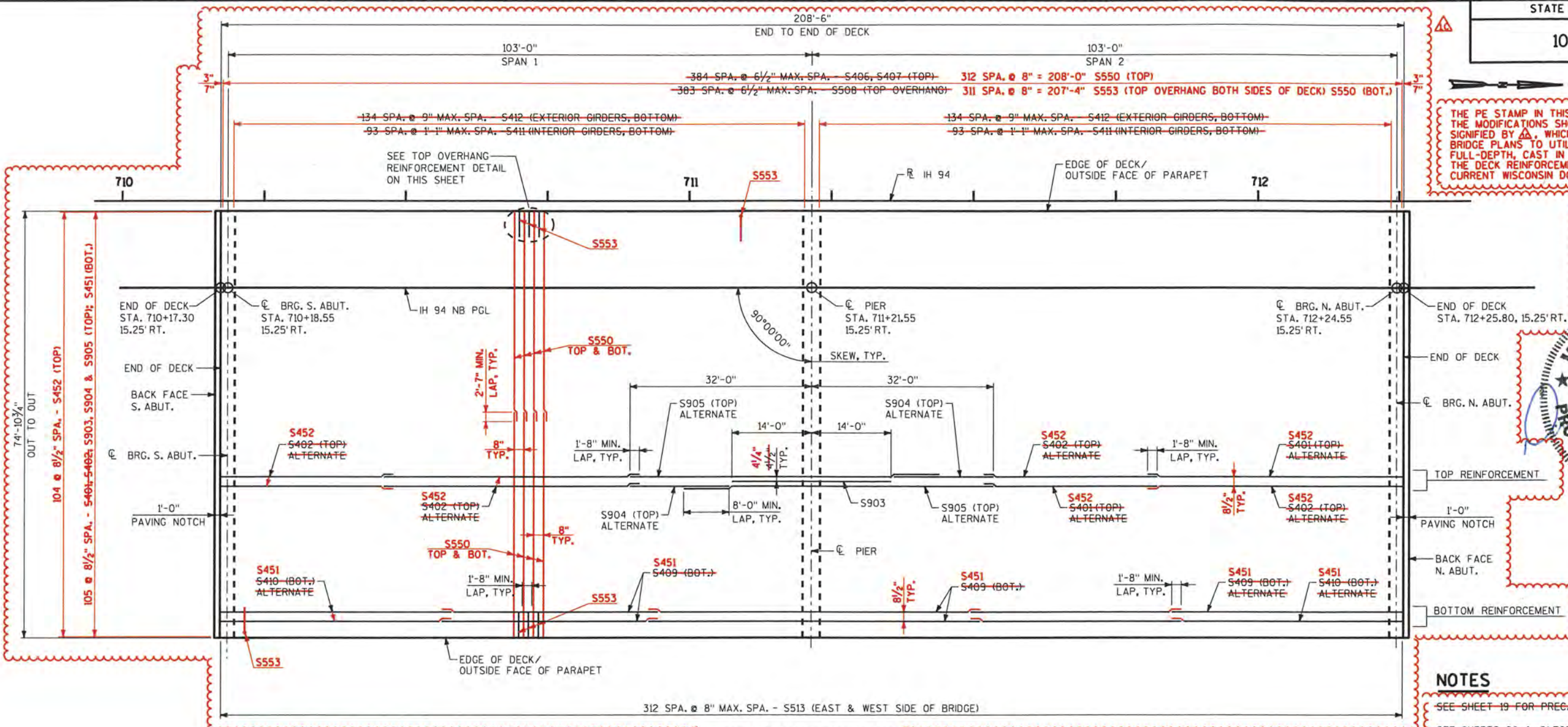
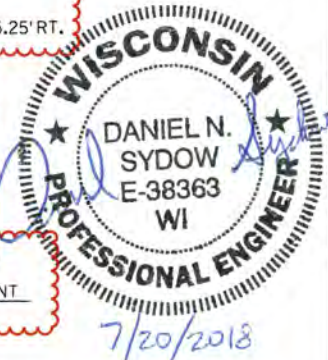


7/23/18



	1/20/18	REMOVE PRECAST DECK PANELS	AYRES
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-51-124			
DRAWN BY	AJA	PLANS CK'D.	MHZ
PRECAST DECK PANEL DETAILS (2 OF 2)		SHEET 21 OF 30	

THE PE STAMP IN THIS PLAN SET COVERS ONLY THE MODIFICATIONS SHOWN CLOUDED IN RED AND SIGNIFIED BY . WHICH MODIFY THE ORIGINAL BRIDGE PLANS TO UTILIZE A TRADITIONAL FULL-DEPTH, CAST IN PLACE CONCRETE DECK. THE DECK REINFORCEMENT IS DESIGNED PER THE CURRENT WISCONSIN DOT BRIDGE MANUAL.

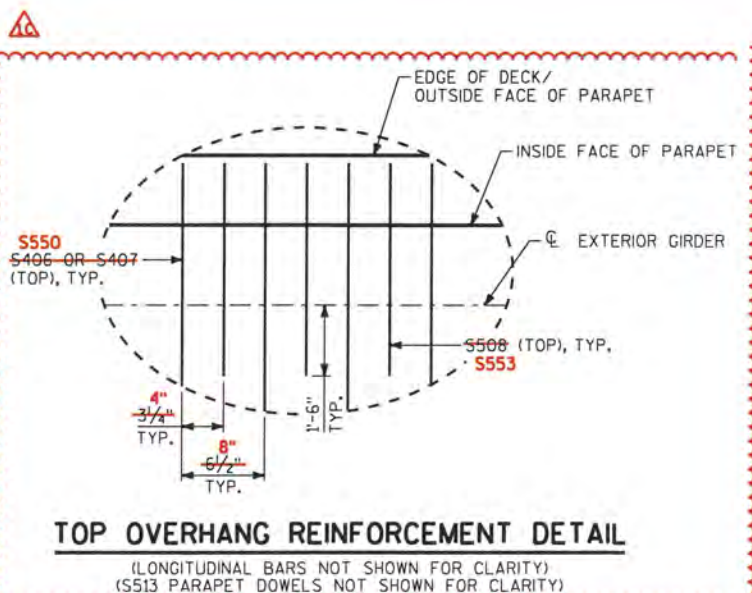


REINFORCEMENT PLAN
(PARAPET NOT SHOWN FOR CLARITY)

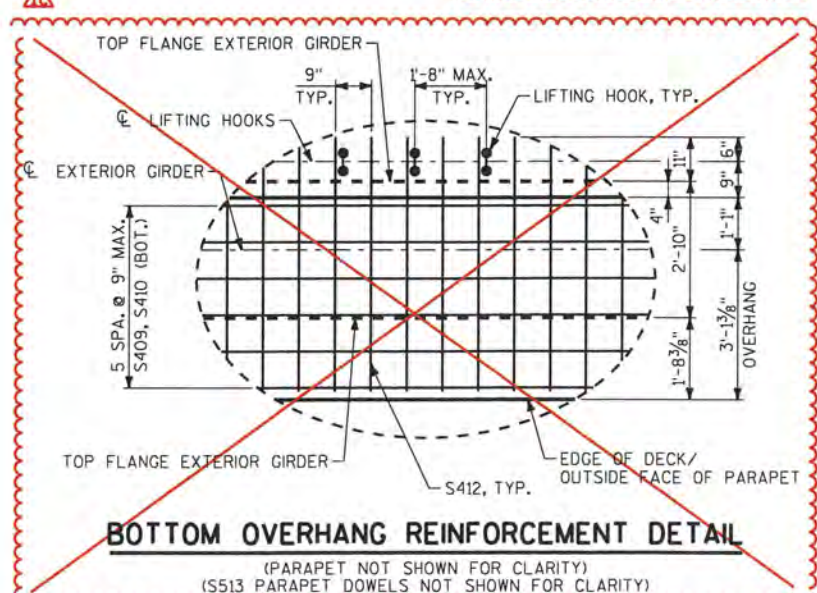
NOTES

- SEE SHEET 19 FOR PRECAST DECK PANEL PLAN.
- SEE SHEETS 20 & 21 FOR PRECAST DECK PANEL DETAILS.
- SEE SHEET 23 FOR SUPERSTRUCTURE CROSS SECTION THRU DECK.
- SEE SHEET 24 FOR SUPERSTRUCTURE REINFORCEMENT DETAILS.
- SEE SHEET 25 FOR SUPERSTRUCTURE BILL OF BARS.
- SEE SHEET 26 FOR PARAPET REINFORCEMENT.
- FOR CONDUIT DETAILS IN WEST PARAPET, SEE SHEET 27.
- SEE SHEETS 28 & 29 FOR STRUCTURAL APPROACH SLAB REINFORCEMENT.

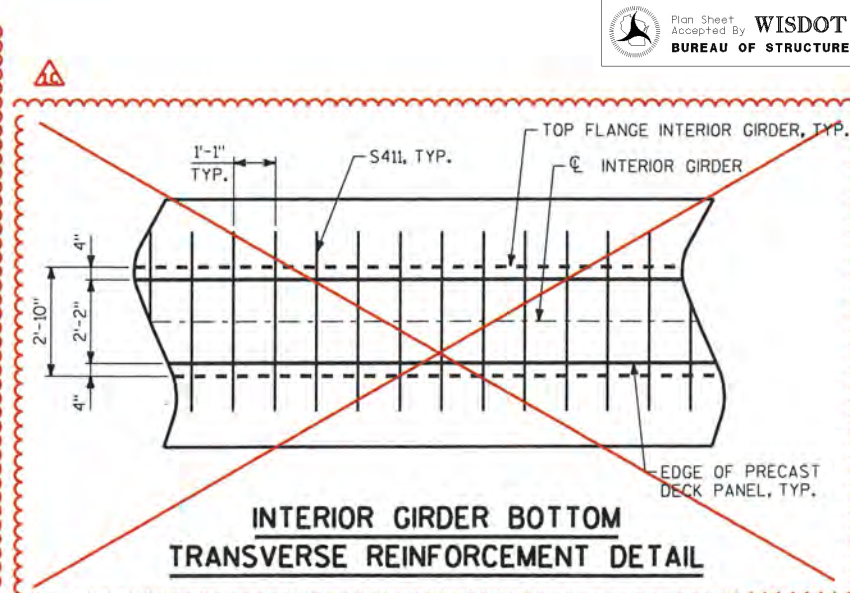
7/23/18



TOP OVERHANG REINFORCEMENT DETAIL
(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)
(S513 PARAPET DOWELS NOT SHOWN FOR CLARITY)

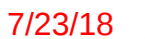


BOTTOM OVERHANG REINFORCEMENT DETAIL
(PARAPET NOT SHOWN FOR CLARITY)
(S513 PARAPET DOWELS NOT SHOWN FOR CLARITY)

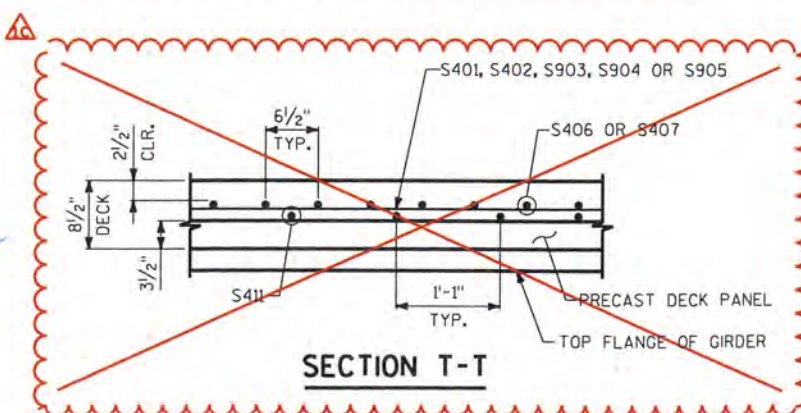


INTERIOR GIRDER BOTTOM TRANSVERSE REINFORCEMENT DETAIL

 7/20/18 REMOVE PRECAST DECK PANELS AYRES		
NO.	DATE	REVISION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE B-51-124		
DRAWN BY		PLANS CKD.
AJA		MHZ
SUPERSTRUCTURE REINFORCEMENT		
SHEET 22 OF 30		



	7/20/18	REMOVE PRECAST DECK PANELS		AYRES
NO.	DATE	REVISION		BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION				
STRUCTURE B-51-124				
		DRAWN BY	AJA	PLANS CK'D. MHZ
SUPERSTRUCTURE CROSS SECTIONS			SHEET 23 OF 30	



THE PE STAMP IN THIS PLAN SET COVERS ONLY THE MODIFICATIONS SHOWN CLOUDED IN RED AND SIGNIFIED BY , WHICH MODIFY THE ORIGINAL BRIDGE PLANS TO UTILIZE A TRADITIONAL FULL-DEPTH, CAST IN PLACE CONCRETE DECK. THE DECK REINFORCEMENT IS DESIGNED PER THE CURRENT WISCONSIN DOT BRIDGE MANUAL.



7/20/2018

NOTES

- SEE SHEET 19 FOR PRECAST DECK PANEL PLAN.
SEE SHEETS 20 & 21 FOR PRECAST DECK PANEL DETAILS.
SEE SHEET 22 FOR SUPERSTRUCTURE REINFORCEMENT PLAN.
SEE SHEET 23 FOR SUPERSTRUCTURE CROSS SECTION THRU DECK.
SEE SHEET 25 FOR SUPERSTRUCTURE BILL OF BARS.
SEE SHEET 26 FOR PARAPET REINFORCEMENT.
SEE SHEET 27 FOR CONDUIT DETAILS IN WEST PARAPET.
SEE SHEETS 28 & 29 FOR STRUCTURAL APPROACH SLAB REINFORCEMENT.

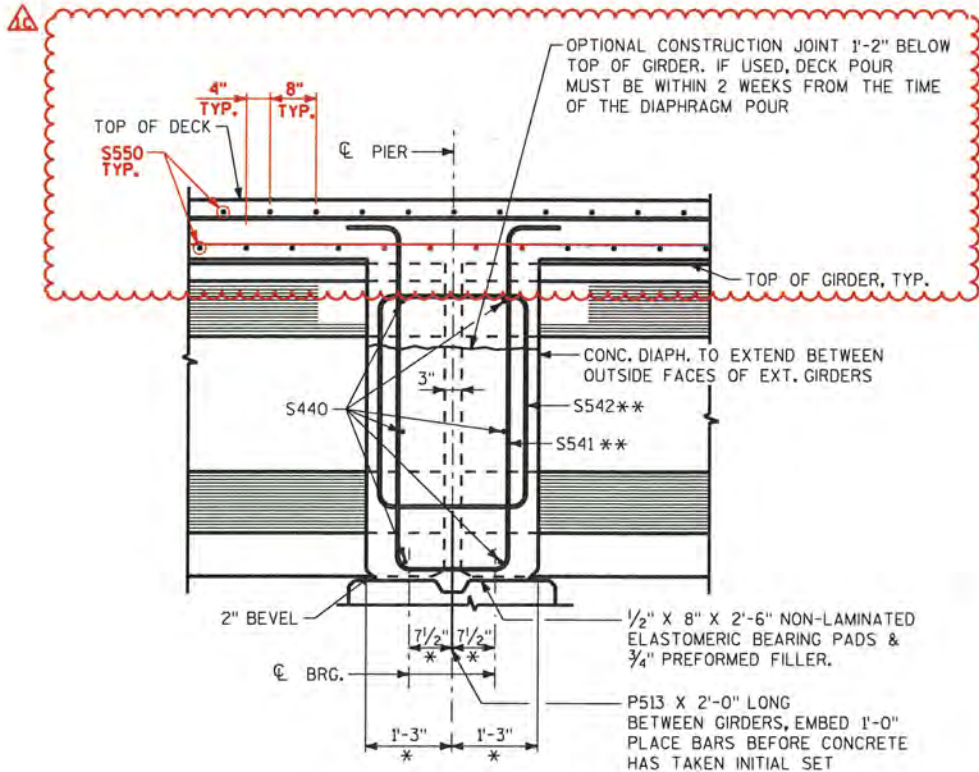
LEGEND

- * DIMENSION IS TAKEN NORMAL TO ϕ SUBSTRUCTURE UNITS.
** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ϕ GIRDERS

THE PE STAMP IN THIS PLAN SET COVERS ONLY THE MODIFICATIONS SHOWN CLOUDED IN RED AND SIGNIFIED BY Δ , WHICH MODIFY THE ORIGINAL BRIDGE PLANS TO UTILIZE A TRADITIONAL FULL-DEPTH, CAST IN PLACE CONCRETE DECK. THE DECK REINFORCEMENT IS DESIGNED PER THE CURRENT WISCONSIN DOT BRIDGE MANUAL.

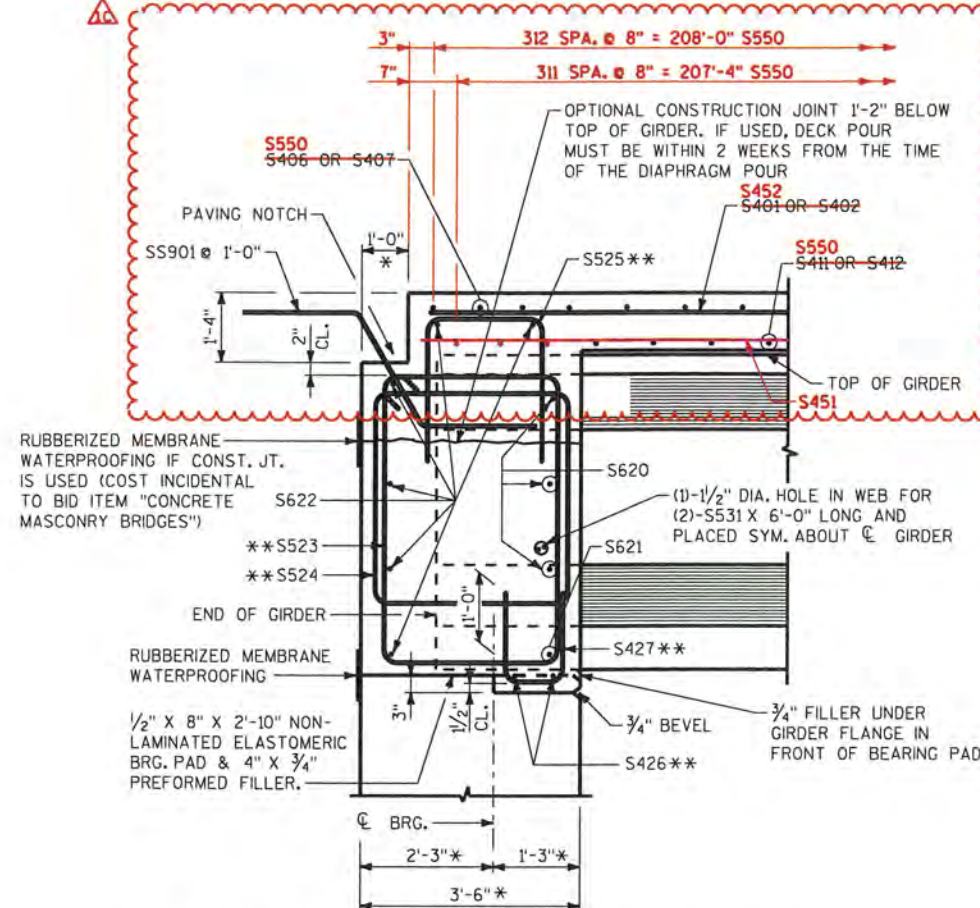


NO.	DATE	REVISION	BY
Δ 1/20/18		REMOVE PRECAST DECK PANELS	AYRES
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-51-124			
DRAWN BY		AJA	PLANS CK'D. MHZ
SUPERSTRUCTURE REINFORCEMENT DETAILS			SHEET 24 OF 30



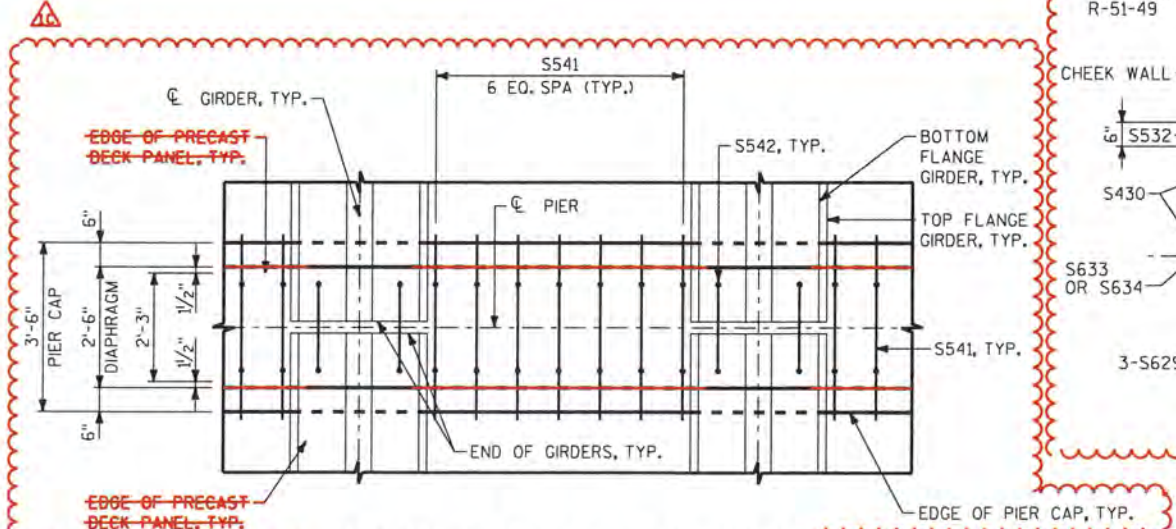
AT PIER DIAPHRAGM

(CONC. DIAPHRAGM TO EXTEND BETWEEN INSIDE WEB FACES OF EXTERIOR GIRDERS)
(SEE SHEETS 10 & 12 FOR PIER BEAM SEAT DETAILS)



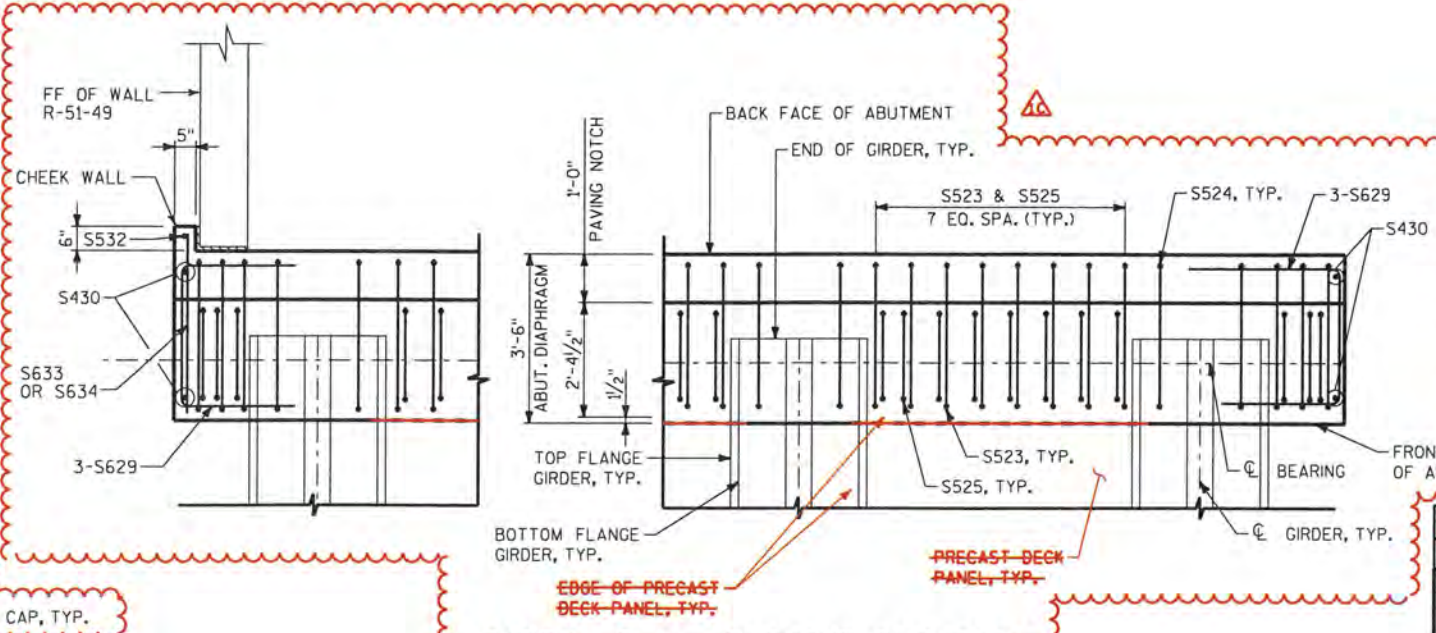
PART LONGITUDINAL SECTION AT ABUTMENT

(CONC. DIAPHRAGM TO EXTEND OUT TO OUT OF BRIDGE DECK)
(SEE SHEETS 5, 6, 7 & 8 FOR ABUTMENT BEAM SEAT DETAILS)



PARTIAL PLAN PIER DIAPHRAGM

(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)



PARTIAL PLAN ABUTMENT DIAPHRAGM

(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)
(SOUTH ABUTMENT SHOWN, NORTH ABUTMENT SIMILAR)

7/23/18



BILL OF BARS

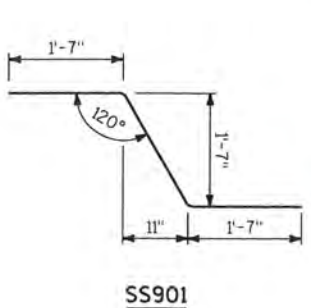
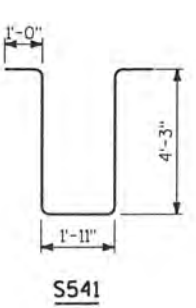
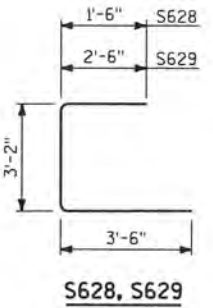
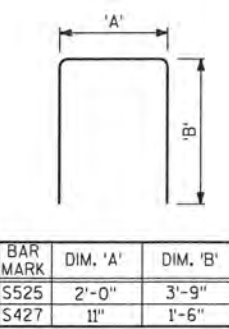
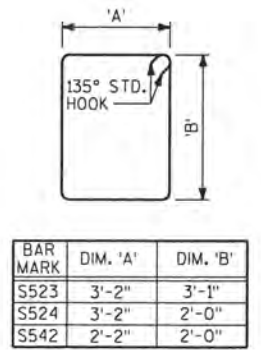
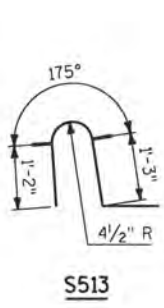
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	200	45'-0"			DECK TOP - LONG.
S402	X	200	30'-5"			DECK TOP - LONG.
S903	X	105 100	28'-0"	-	-	DECK TOP OVER PIER - LONG.
S904	X	105 100	17'-6"	-	-	DECK TOP OVER PIER - LONG.
S905	X	105 100	54'-6"	-	-	DECK TOP OVER PIER - LONG.
S406	X	385	45'-0"			DECK TOP - TRANS.
S407	X	385	31'-3"			DECK TOP - TRANS.
S508	X	768	4'-5"			DECK TOP OVERHANG - TRANS.
S409	X	48	45'-0"			DECK BOTTOM - LONG.
S410	X	12	34'-10"			DECK BOTTOM - LONG.
S411	X	1316	4'-8"			DECK BOTTOM INTERIOR - TRANS.
S412	X	540	5'-4"			DECK BOTTOM EXTERIOR - TRANS.
S513	X	626	4'-5"	X	-	PARAPET DOWELS
S620	X	96	4'-11"	-	-	ABUTMENT DIAPHRAGM F.F. - LONG.
S621	X	16	5'-9"	-	-	ABUTMENT DIAPHRAGM F.F. - LONG.
S622	X	24	39'-1"	-	-	ABUTMENT DIAPHRAGM B.F. - LONG.
S523	X	140	13'-1"	X	-	ABUTMENT DIAPHRAGM - VERT.
S524	X	36	10'-11"	X	-	ABUTMENT DIAPHRAGM - VERT.
S525	X	140	9'-3"	X	-	ABUTMENT DIAPHRAGM - VERT.
S426	X	32	4'-7"	-	-	ABUTMENT DIAPHRAGM BEAM SEAT - LONG.
S427	X	96	3'-9"	X	-	ABUTMENT DIAPHRAGM BEAM SEAT - VERT.
S628	X	4	7'-10"	X	-	ABUTMENT DIAPHRAGM CORNERS - HORIZ.
S629	X	12	8'-10"	X	-	ABUTMENT DIAPHRAGM CORNERS - HORIZ.
S430	X	8	3'-5"	-	-	ABUTMENT DIAPHRAGM CORNERS - VERT.
S531	X	36	6'-0"	-	-	ABUTMENT DIAPHRAGM THRU GIRDERS
S532	X	2	2'-3"	-	-	ABUTMENT DIAPHRAGM CHEEK WALL VERT.
S633	X	6	3'-8"	-	-	ABUTMENT DIAPHRAGM CHEEK WALL HORIZ.
S634	X	4	2'-2"	-	-	ABUTMENT DIAPHRAGM CHEEK WALL HORIZ.
S440	X	96	4'-7"	-	-	PIER DIAPHRAGM - LONG.
S541	X	56	11'-11"	X	-	PIER DIAPHRAGM - VERT.
S542	X	16	8'-11"	X	-	PIER DIAPHRAGM - VERT.
SS901	-	152	5'-0"	X	-	ABUTMENT DIAPHRAGM TO APPROACH SLAB (STAINLESS STEEL)

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S550	X	1,250	38'-7"	-	-	DECK TOP & BOT. - TRANS.
S451	X	530	43'-0"	-	-	DECK BOT. - LONG.
S452	X	420	37'-9"	-	-	DECK TOP - LONG.
S553	X	624	5'-1"	X	-	DECK TOP OVERHANG - TRANS.



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BENDING DIAGRAMS

7/23/18



	7/20/18	REMOVE PRECAST DECK PANELS	AYRES
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-51-124			
DRAWN BY		AJA	PLANS CK'D. MHZ
SUPERSTRUCTURE BILL OF BARS			SHEET 25 OF 30