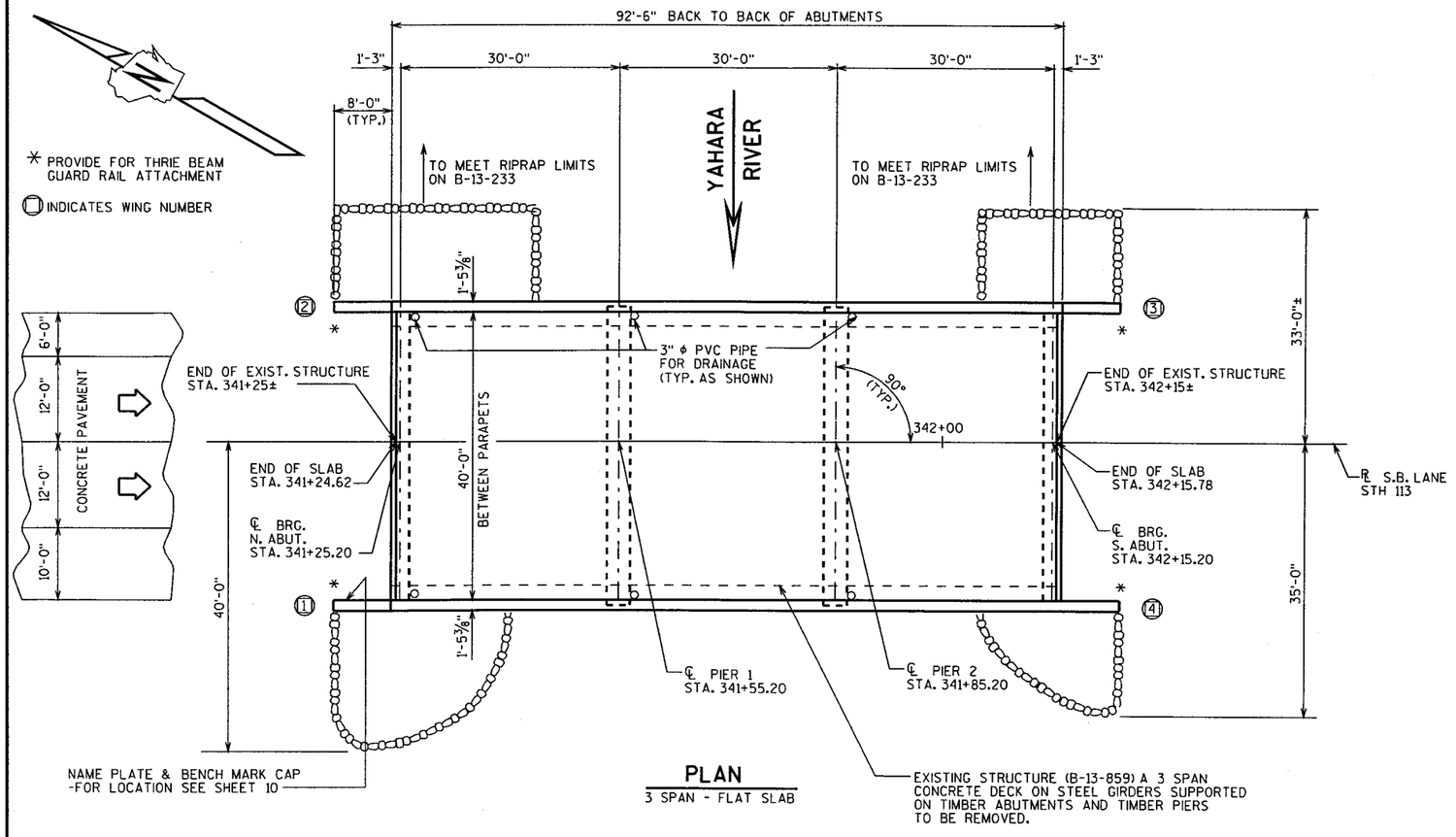
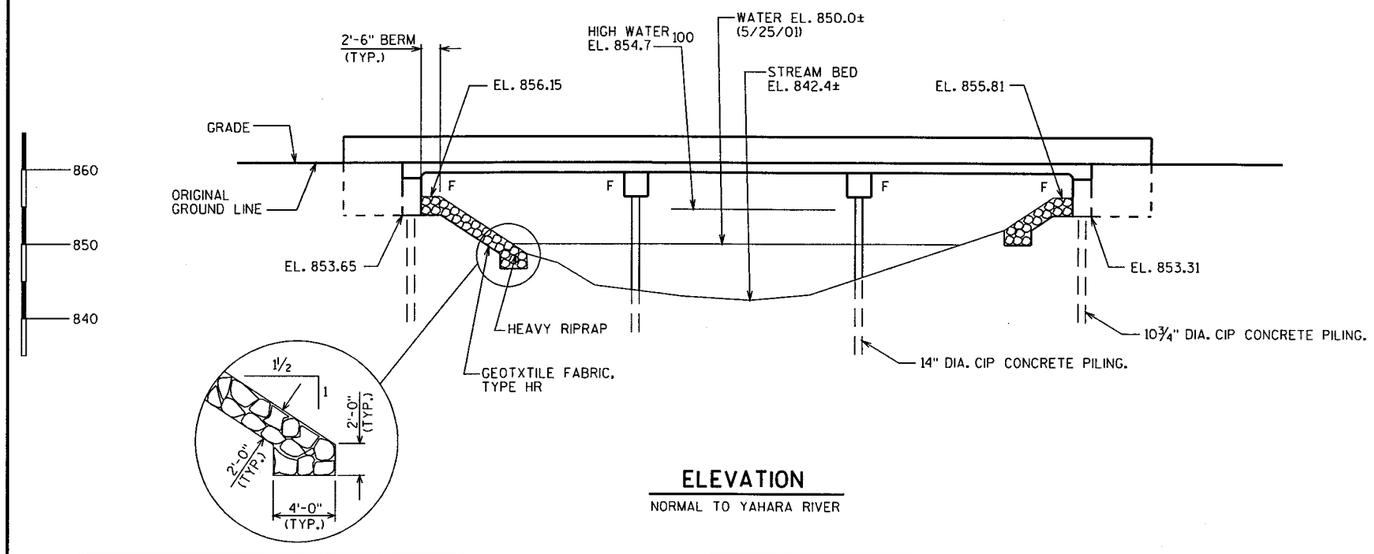
STATE PROJECT NUMBER

5420-00-72



PLAN

3 SPAN - FLAT SLAB



ELEVATION

NORMAL TO YAHARA RIVER

DESIGN DATA

LIVE LOAD:

DESIGN RATING; HS-20
INVENTORY RATING; HS-24
OPERATIONAL RATING; HS-41
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.

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

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY 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.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON 10¾" DIA. CIP CONCRETE PILING DRIVEN TO A MINIMUM BEARING VALUE OF 40 TONS PER PILE. ESTIMATED 60'-0" LONG.

PIER TO BE SUPPORTED ON 14" DIA. CIP CONCRETE PILING DRIVEN TO A MINIMUM BEARING VALUE OF 60 TONS PER PILE. ESTIMATED 100'-0" LONG.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 2600 C.F.S.
VEL. =4.30 F.P.S.
HW.= EL. 854.7
WATERWAY AREA= 605 SQ. FT.
DRAINAGE AREA= 114 SQ. MI.
ROAD OVERTOPPING = NA
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 =876 C.F.S.
$HW._2$ = EL. 850.6

TRAFFIC VOLUME

S.T.H. 113
A.D.T.=22,950 (2015)
=25,700 (2025)
R.D.S.=55 M.P.H.

LIST OF DRAWINGS

BRIDGE OFFICE CONTACT = DAVID R. GENSON (608) 266-8491

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

APPROVED Lisa Hubbard 10-27-2003
CHIEF STRUCTURAL DESIGN ENGINEER — DATE

8

STRUCTURE B-13-556

S.T.H. 113 SOUTHBOUND OVER YAHARA RIVER

COUNTY: DANE		TOWN/~~CITY/VILLAGE~~: WESTPORT	
DESIGN SPEC.: AASHTO STD. SPEC. 2003		LOAD: HS-20	CONST. SPEC.: 2003
DESIGNED BY: KMA	DESIGN CK'D.: DRG	DRAWN BY: MPH	PLANS CK'D.: DRG

GENERAL PLAN

SHEET 1 OF 10

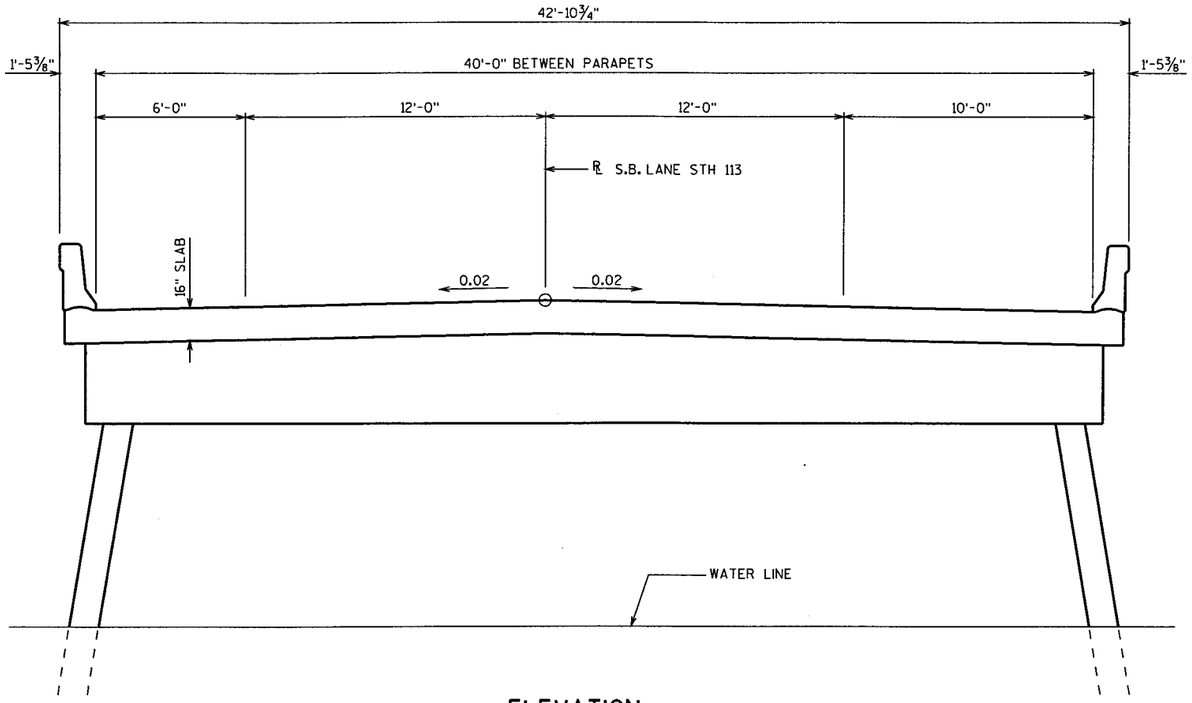
320

I.D. 5420-00-03

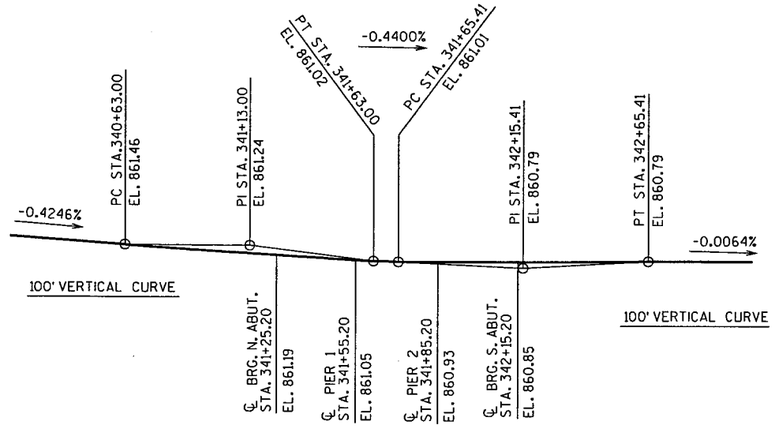
DATE: JULY, '03

FILE= 01-556GP.DGN
SCALE = 10.0

STATE PROJECT NUMBER
5420-00-72



ELEVATION
LOOKING SOUTH



PROFILE GRADE LINE S.T.H. 113

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	NORTH ABUT.	PIER 1	PIER 2	SOUTH ABUT.	TOTALS
REMOVING OLD STRUCTURE, STA. 341+70±	L.S.	——	——	——	——	——	1
EXCAVATION FOR STRUCTURES, BRIDGES, B-13-556	L.S.	——	——	——	——	——	1
BACKFILL STRUCTURE	C.Y.	——	95	——	——	95	190
CONCRETE MASONRY, BRIDGES	C.Y.	216	32	15	15	32	310
PROTECTIVE SURFACE TREATMENT	S.Y.	484	——	——	——	——	484
BAR STEEL REINFORCEMENT HS BRIDGES	LB.	——	2,120	6,950	6,950	2,120	18,140
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB.	42,480	715	——	——	715	43,910
RUBBERIZED MEMBRANE WATERPROOFING	S.Y.	——	8	——	——	8	16
RIPRAP HEAVY	C.Y.	——	130	——	——	80	210
GEOTEXTILE FABRIC, TYPE HR	S.Y.	——	215	——	——	135	350
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	——	——	——	——	4
PIPE UNDERDRAIN, 6-INCH	L.F.	——	56	——	——	56	112
PIPE UNDERDRAIN, UNPERFORATED, 6-INCH	L.F.	——	20	——	——	20	40
OMP CONCRETE STRUCTURES 5-CYLINDER	C.Y.	216	32	15	15	32	310
INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL.	2,160	320	150	150	320	3,100
PILING CIP DELIVERED AND DRIVEN 14-INCH	L.F.	——	——	600	600	——	1,200
PILING CIP DELIVERED AND DRIVEN 10 3/4-INCH	L.F.	——	360	——	——	360	720
GEOTEXTILE FABRIC, TYPE DF (SCHEDULE A)	S.Y.	——	47	——	——	47	94
NON-BID ITEMS							
FILLER	SIZE	——	——	——	——	——	½" & ¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

AT THE BACKFACE 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.

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

PILE SPLICES AT PIERS INVOLVING BENDING, SHALL BE MADE BY A CERTIFIED WELDER.

AT ABUTMENTS, 14" DIA. CIP CONCRETE PILING MAY BE USED IN LIEU OF 10¾" DIA. CIP CONCRETE PILING. PAYMENT SHALL BE BASED ON THE BID PRICE FOR 10¾" DIA CIP CONCRETE PILING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-556

DRAWN BY MPH | PLANS CK'D. DRG

CROSS SECTION & QUANTITIES

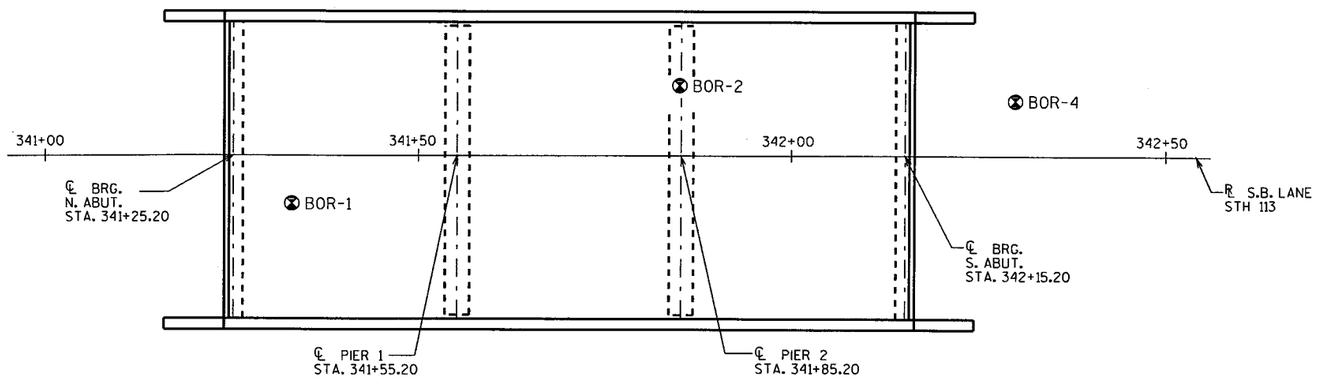
SHEET 2

321

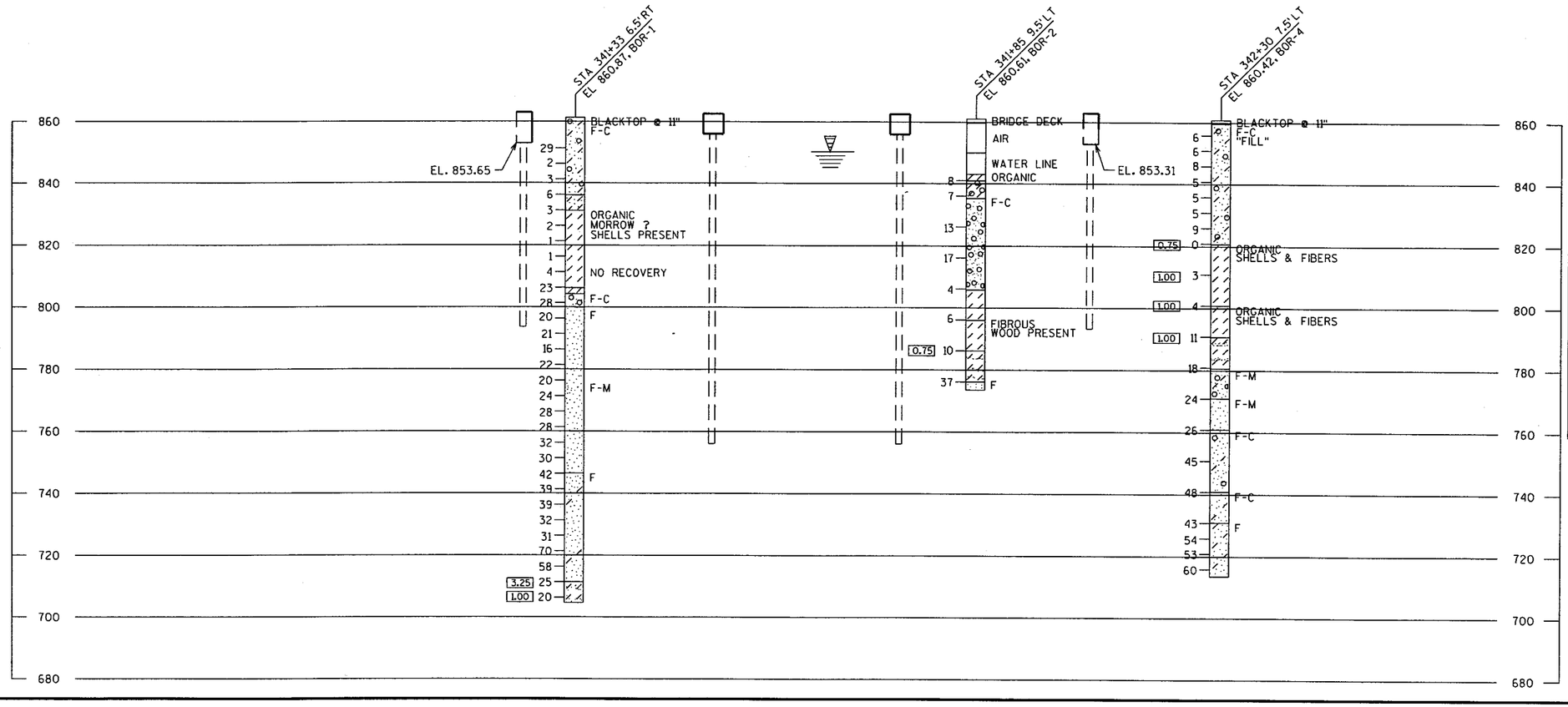
8

FILE= 02-556QUANT.DGN
SCALE = 3

STH 113 S.B. OVER YAHARA RIVER
MADISON- WAUNAKEE, DANE COUNTY



PLAN



STATE PROJECT NUMBER

5420-00-72

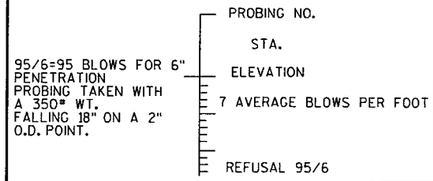
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

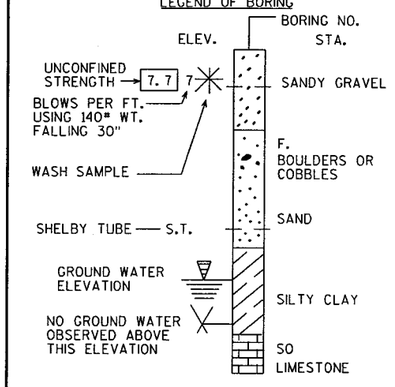
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-556

DRAWN BY WWR PLANS CK'D. DRG

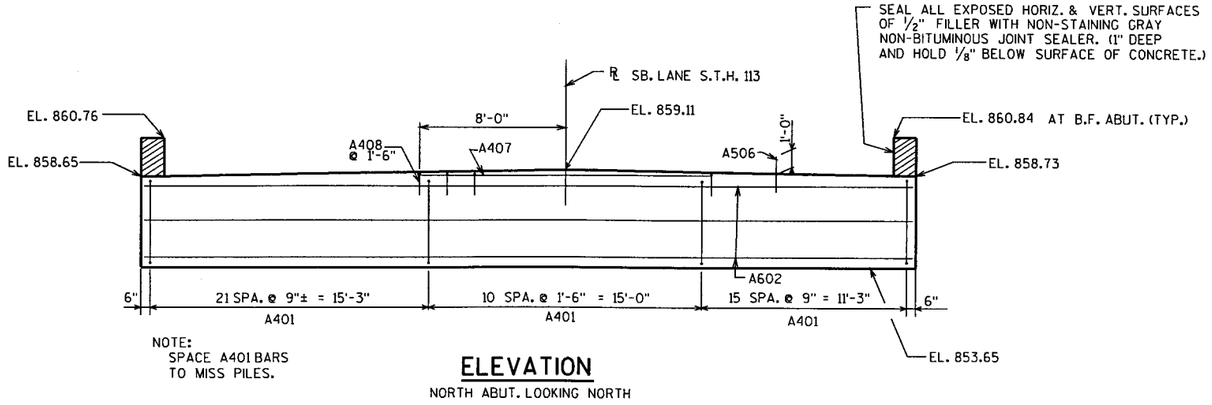
SUBSURFACE EXPLORATION

SHEET 3

322

FILE= 03-556SOILS.DGN
SCALE = 1

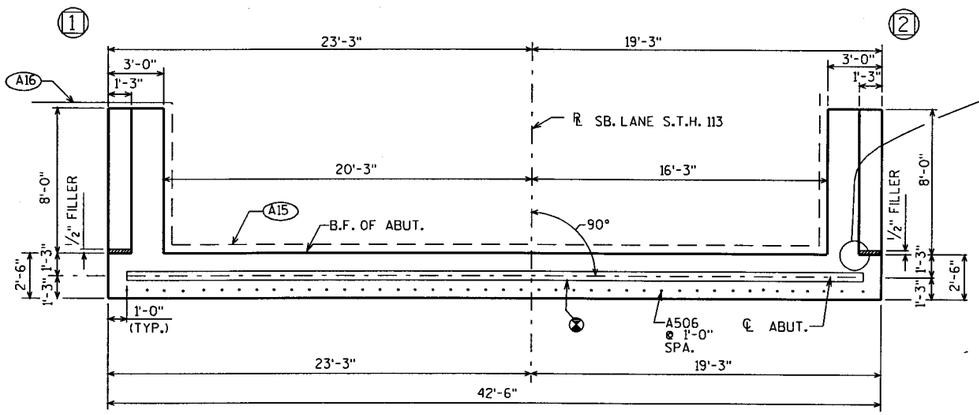
STATE PROJECT NUMBER
5420-00-72



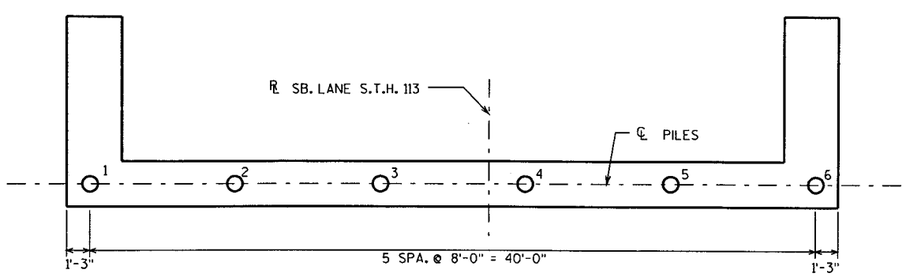
NOTE:
SPACE A401 BARS TO MISS PILES.

ELEVATION

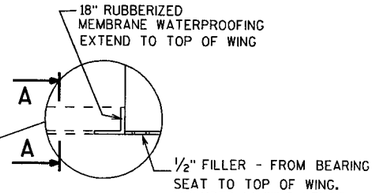
NORTH ABUT. LOOKING NORTH

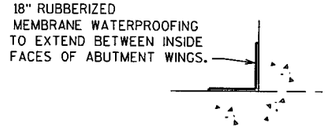


PLAN

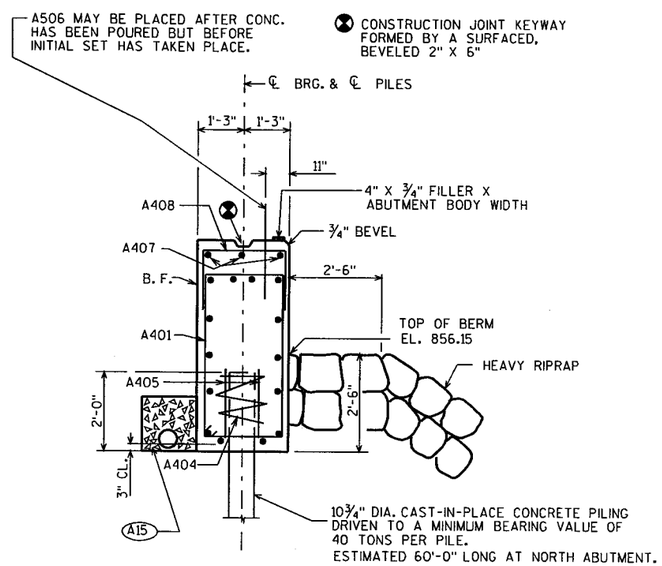


PILE PLAN





SECTION A



SECTION THRU BODY

NOTE: ALL HORIZONTAL BODY BARS NOT LABELED ARE A602

(A15) PIPE UNDERDRAINS, 6 INCH. SLOPE TO DRAIN. ENCLOSED IN 1'-6" X 1'-6" AREA OF SIZE 1 COARSE AGGREGATE (INCLUDED IN UNDERDRAIN BID ITEM) WRAPPED IN GEOTEXTILE FABRIC, TYPE DF.

(A16) PIPE UNDERDRAIN, 6 INCH, UNPERFORATED. TO SUITABLE DRAINAGE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-556

DRAWN BY MPH | PLANS CK'D. DRG

NORTH ABUTMENT

SHEET 4

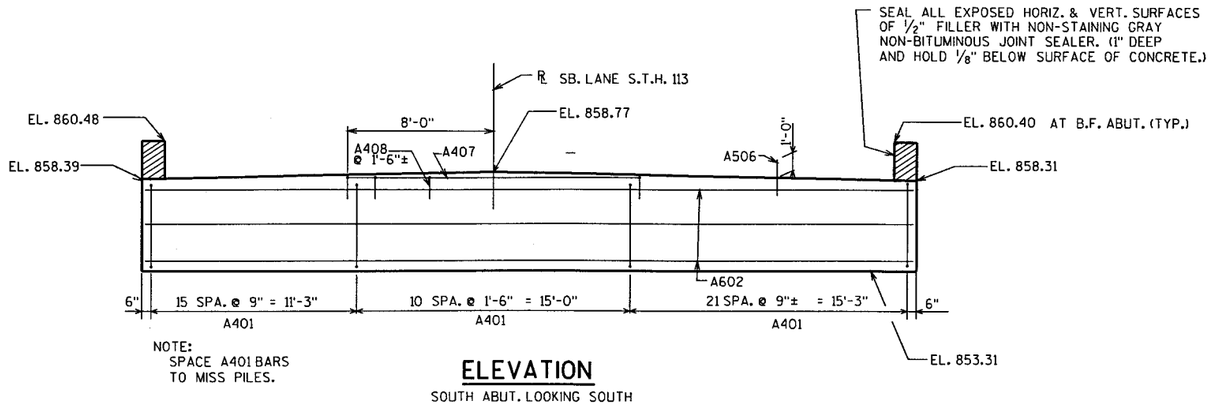
323

8

FILE= 04-556NABUT.DGN
SCALE = 4

STATE PROJECT NUMBER

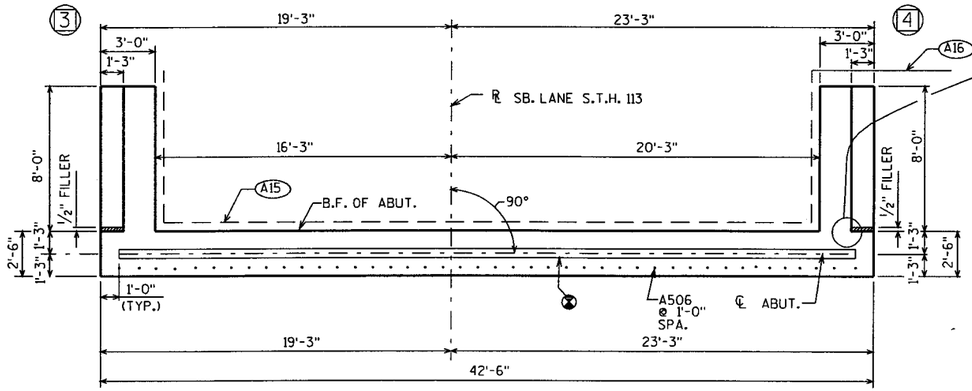
5420-00-72



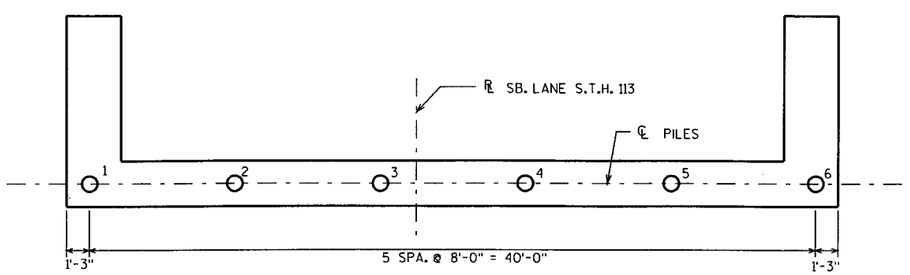
NOTE:
SPACE A401 BARS TO MISS PILES.

ELEVATION

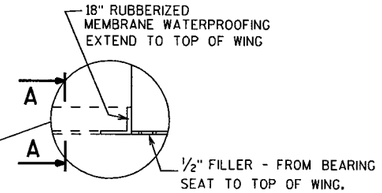
SOUTH ABUT. LOOKING SOUTH

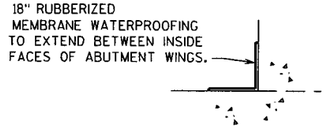


PLAN

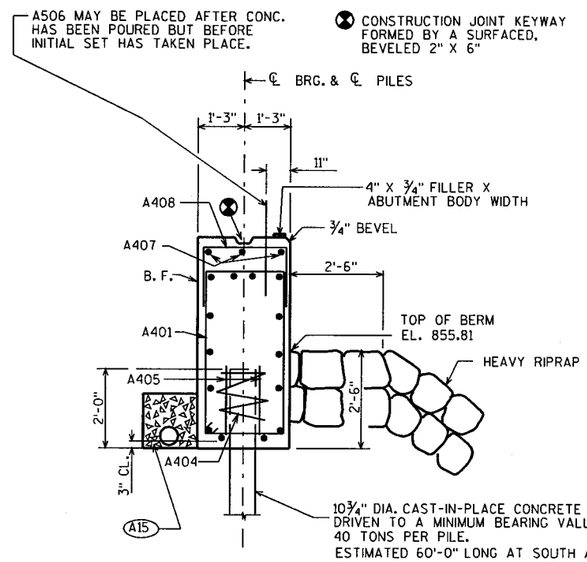


PILE PLAN





SECTION A



SECTION THRU BODY

NOTE: ALL HORIZONTAL BODY BARS NOT LABELED ARE A602

(A15) PIPE UNDERDRAINS, 6 INCH. SLOPE TO DRAIN. ENCLOSED IN 1'-6" X 1'-6" AREA OF SIZE 1 COARSE AGGREGATE (INCLUDED IN UNDERDRAIN BID ITEM) WRAPPED IN GEOTEXTILE FABRIC, TYPE DF.

(A16) PIPE UNDERDRAIN, 6 INCH, UNPERFORATED. TO SUITABLE DRAINAGE.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-556

DRAWN BY MPH | PLANS CK'D. DRG

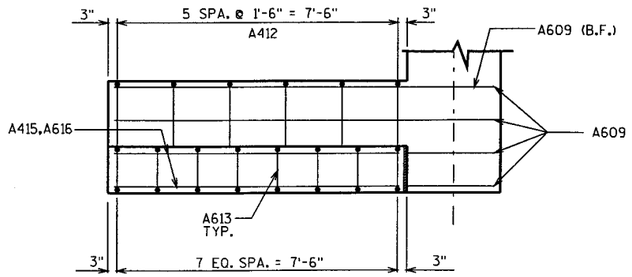
SOUTH ABUTMENT

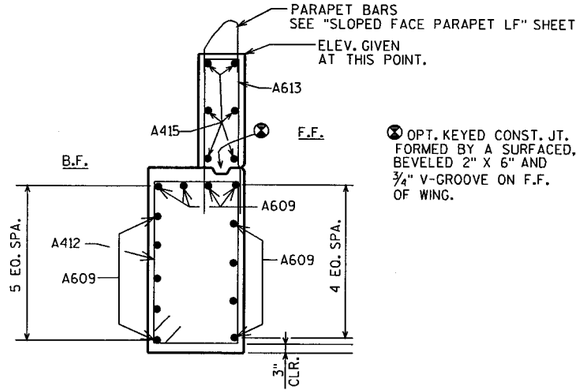
SHEET 5

324

FILE= 05-556SABUT.DGN
SCALE = 4

STATE PROJECT NUMBER
5420-00-72



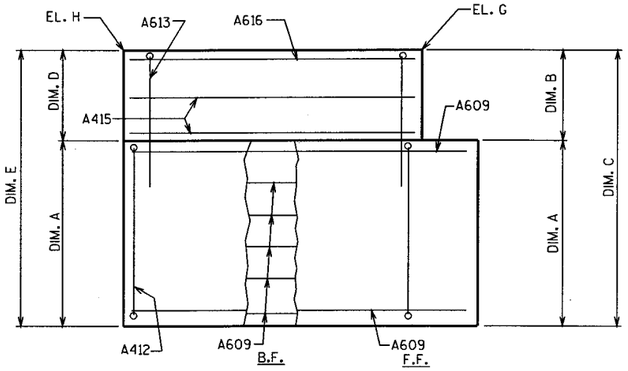


SECTION THRU WING

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D. N. ABUT.	NO. REQ'D. S. ABUT.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A401		47	47	13-8	X			BODY STIRRUPS
A602		14	14	42-1				BODY HORIZ.
A404		6	6	28-0	X			BODY 1 PER PILE
A405		12	12	2-3				BODY 2 PER PILE
A506		42	42	2-0				BODY TOP VERT.
A407		3	3	16-0				BODY TOP HORIZ.
A408		11	11	5-0	X			BODY TOP VERT.
A609		26	26	10-2				WING B.F. & F.F. HORIZ.
A412		12	12	15-0	X			WING FILLET STIRRUP
A613	X	16	16	8-7	X			WING TOP VERT.
A415	X	12	12	7-8				WING TOP HORIZ.

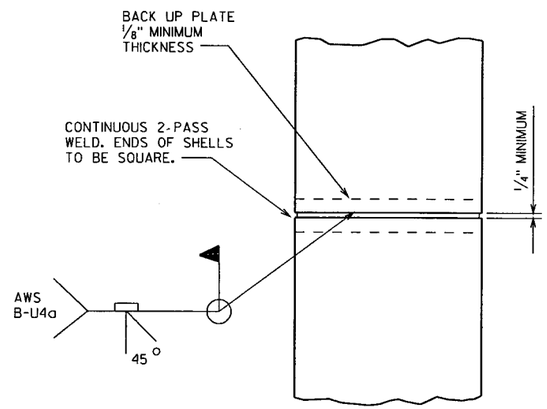


WING ELEVATION

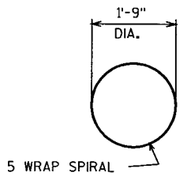
TABLE OF VARIABLES

WING	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E	EL. G	EL. H
1	5'-0"	2'-1¼"	7'-1¼"	2'-1¾"	7'-1¾"	860.76	860.79
2	5'-1"	2'-1¼"	7'-2¼"	2'-1¾"	7'-2¾"	860.84	860.87
3	5'-1"	2'-1"	7'-2"	2'-1"	7'-2"	860.48	860.47
4	5'-0"	2'-1"	7'-1"	2'-1"	7'-1"	860.40	860.39

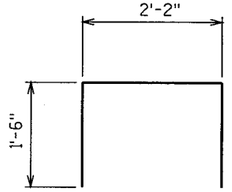
SEE "GENERAL PLAN" SHEET FOR WING NUMBERS.



PILE SPLICE DETAIL



A404



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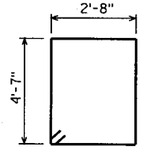
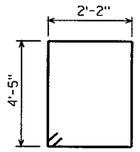
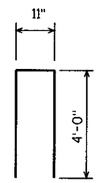


A412



A401



A613

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-556

DRAWN BY MPH | PLANS CK'D. DRG

ABUTMENT DETAILS

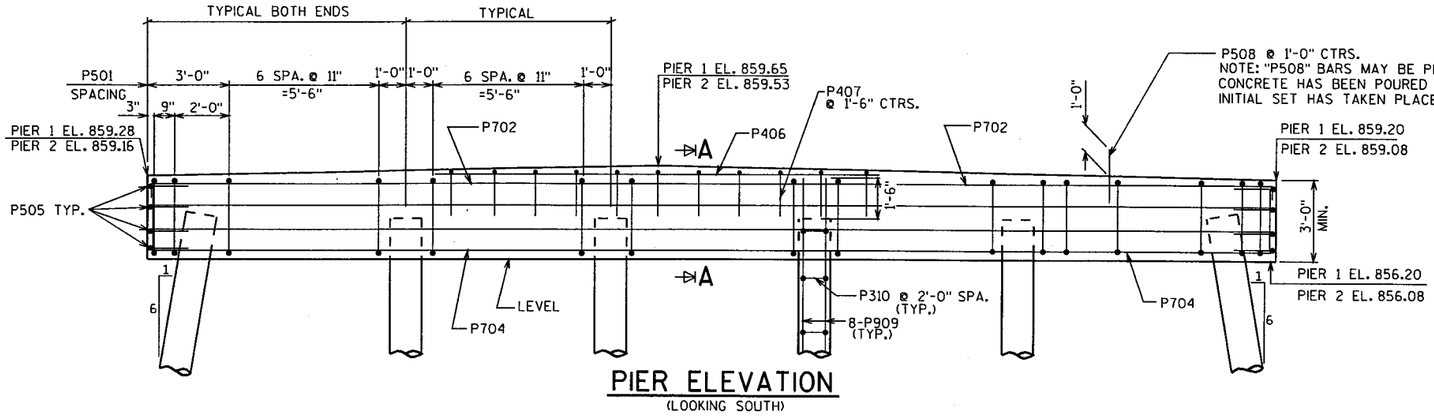
SHEET 6

325

8

FILE= 06-556ABUTDET.DGN
SCALE = 4

STATE PROJECT NUMBER
5420-00-72

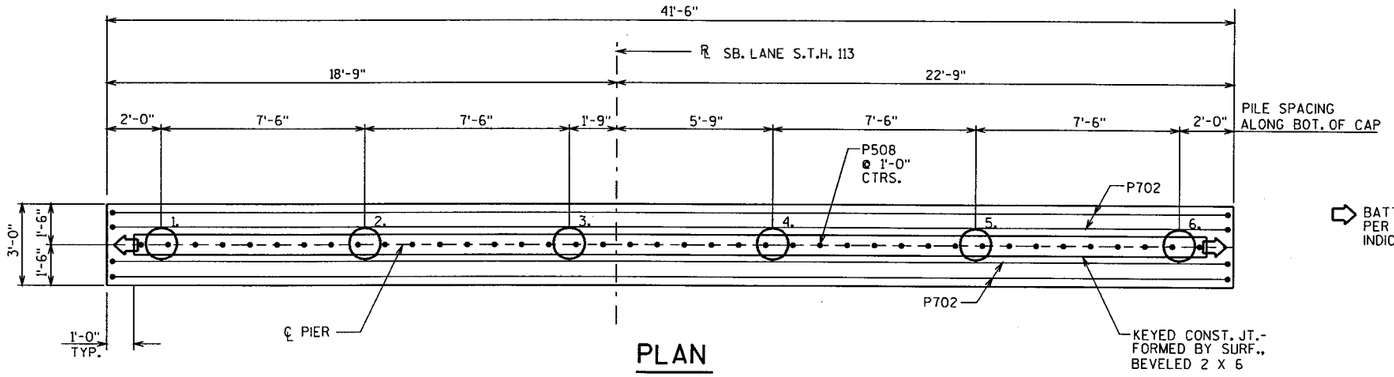


PIER ELEVATION
(LOOKING SOUTH)

BILL OF BARS

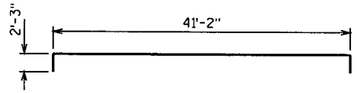
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D. PIER 1	NO. REQ'D. PIER 2	LENGTH	BENT	BAR SERIES	LOCATION
P501		39	39	11-0	X		CAP - VERT. - STIRRUPS
P702		4	4	45-4	X		CAP - HORIZ. - TOP
P503		4	4	41-2			CAP - HORIZ. - SIDES
P704		4	4	41-2			CAP - HORIZ. - BOTTOM
P505		8	8	5-3	X		CAP - HORIZ. - ENDS
P406		3	3	16-0			CAP - HORIZ. - TOP
P407		11	11	5-5	X		CAP - VERT. - TOP
P508		41	41	2-0			CAP - VERT. - DOWELS
P909		48	48	30-0			PILES-VERT.
P310		96	96	4-2	X		PILE-HORIZ.-TIES

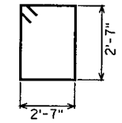


PLAN

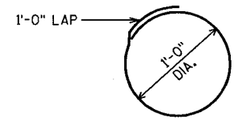
BATTER END PILES 2" PER FOOT IN DIRECTION INDICATED



P702



P501



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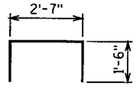

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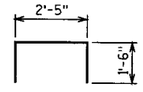
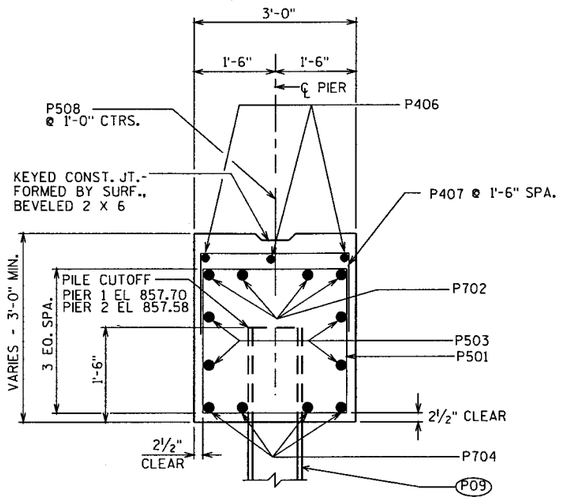
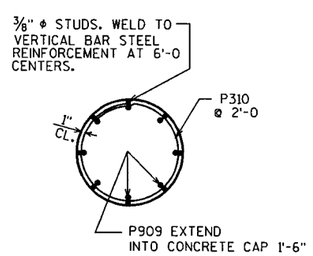


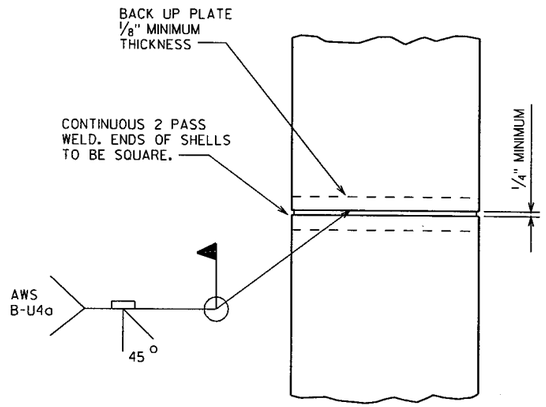
P505



SECTION A-A



SECTION THRU PILE



PILE SPLICE DETAIL

(P09) SUPPORT PIER ON 14" DIA. CAST-IN-PLACE CONCRETE PILING, ESTIMATED 100'-0" LONG, AND DRIVEN TO A MIN. BRC. VALUE OF 60 TONS PER PILE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-556

DRAWN BY MPH | PLANS CK'D. DRG

PIERS

SHEET 7

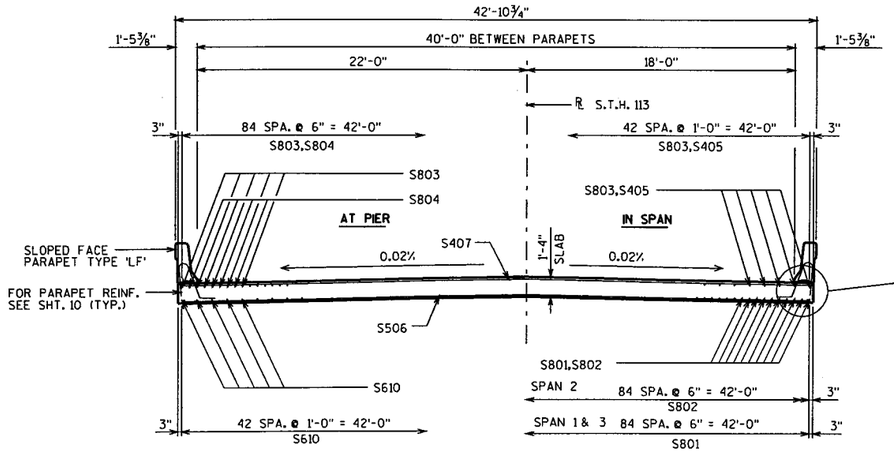
326

8

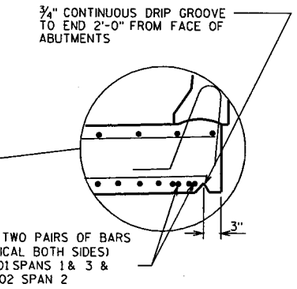
FILE= 07-556PIERS.DGN
SCALE = 2.75

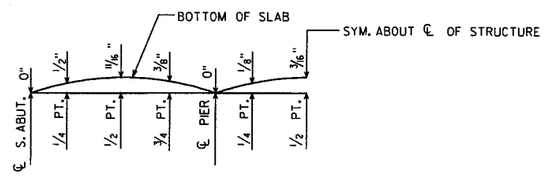
STATE PROJECT NUMBER

5420-00-72



CROSS SECTION THRU ROADWAY LOOKING NORTH





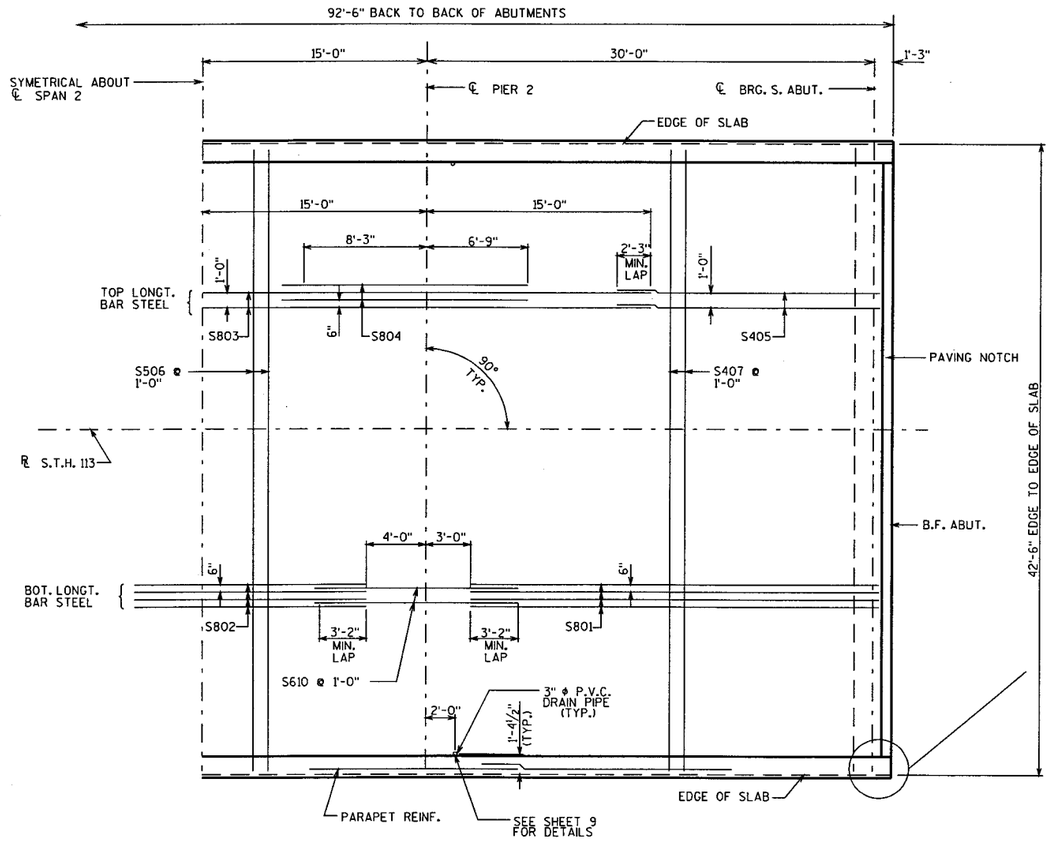
CAMBER DIAGRAM

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

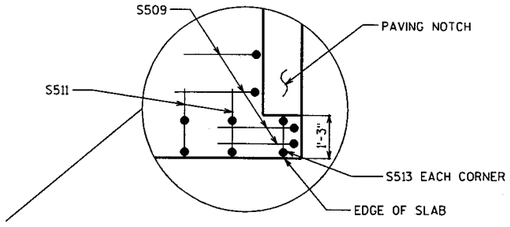
NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS TO BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).



PLAN



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-556

DRAWN BY MPH | PLANS CK'D. DRG

SUPERSTRUCTURE

SHEET 8

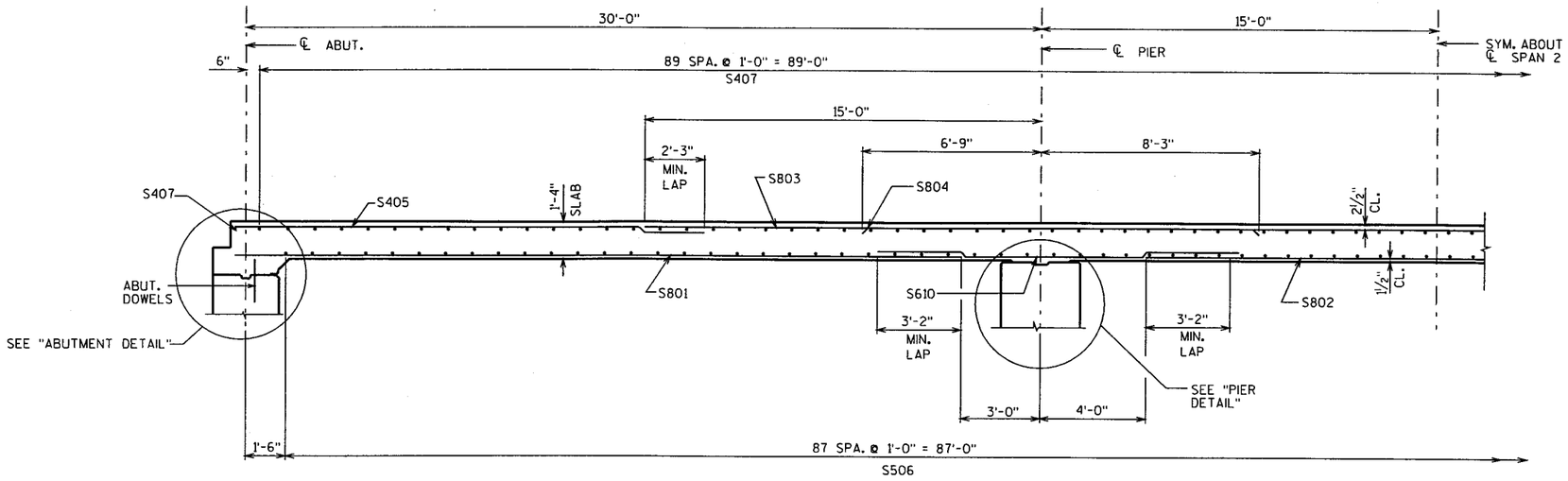
327

8

FILE= 08-556SUP.DGN
SCALE = 5

STATE PROJECT NUMBER

5420-00-72

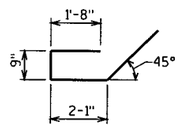


LONGITUDINAL SECTION THRU ROADWAY

BILL OF BARS

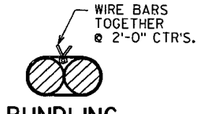
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
S801	X	178	27'-6"			X	SLAB-BOT.-LONGT. SPAN 1&3
S802	X	89	22'-0"			X	SLAB-BOT.-LONGT. SPAN 2
S803	X	43	60'-0"				SLAB-TOP-LONGT.
S804	X	84	15'-0"				SLAB-TOP-LONGT.
S405	X	86	17'-8"				SLAB-TOP-LONGT.
S506	X	88	42'-1"				SLAB-BOT.-TRANS.
S407	X	98	42'-1"				SLAB-TOP-TRANS.
S508	X	86	6'-0"	X			SLAB @ ABUT. DIAPH.
S509	X	86	3'-4"	X			SLAB @ ABUT. DIAPH.
S610	X	86	13'-4				SLAB-BOT.-LONGT. @ PIER
S511	X	274	4'-5"	X			PARAPET LF
S512	X	278	4'-10"	X			PARAPET LF
S513	X	4	5'-8"	X			PARAPET LF EACH CORNER
S514	X	40	25'-3"				PARAPET LF

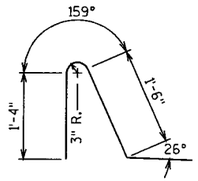


S508

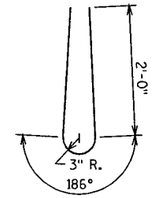
S509



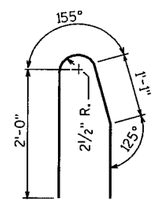
BUNDLING DETAIL



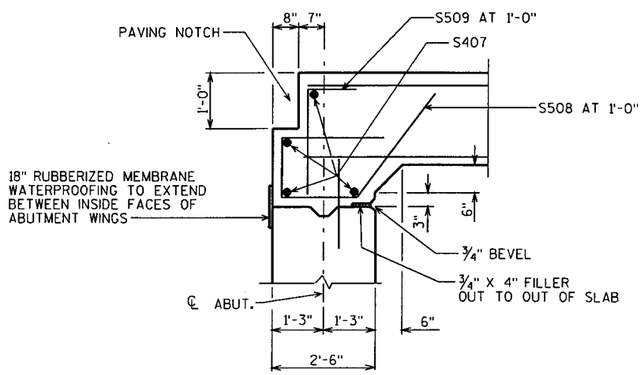
S511



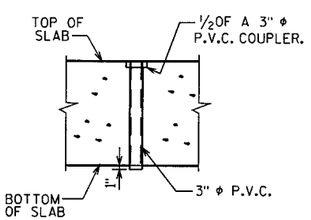
S512



S513

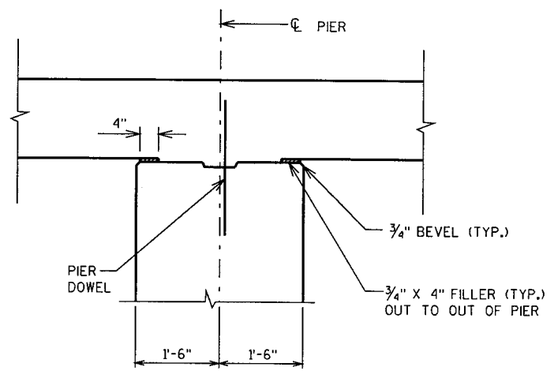


ABUTMENT DETAIL



DRAIN DETAILS

(INCIDENTAL TO CONC. MASONRY BRIDGES.)
(6 REQ'D.)



PIER DETAIL

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-556

DRAWN BY MPH | PLANS CK'D. DRG

SUPERSTRUCTURE DETAILS

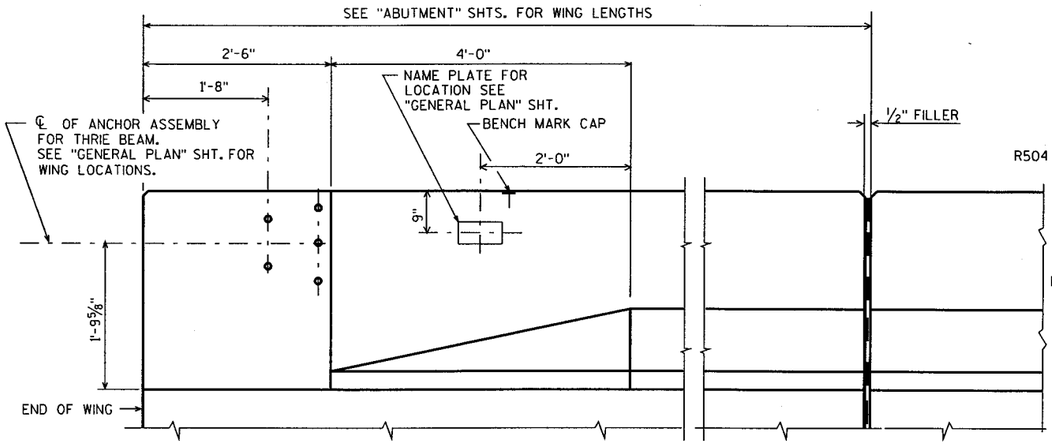
SHEET 9

328

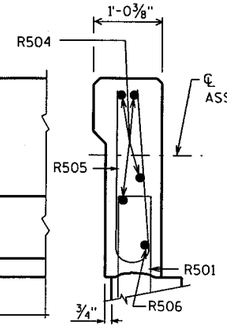
FILE= 09-556SUPEDET.DGN
SCALE = 2.6667

STATE PROJECT NUMBER

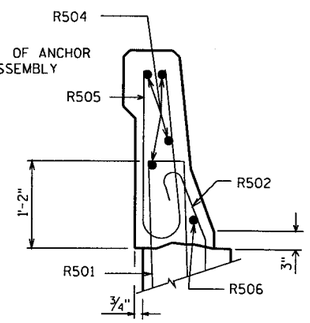
5420-00-72



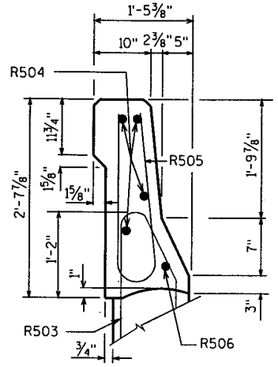
INSIDE ELEVATION



SECTION A



SECTION B

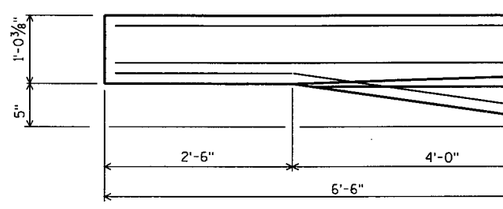


SECTION C

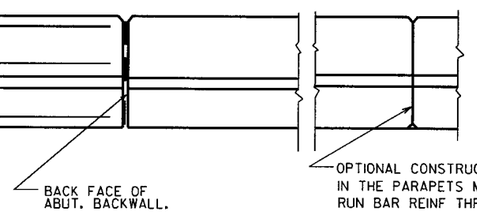
BILL OF BARS

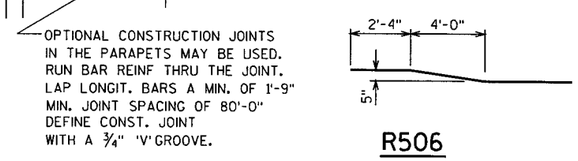
FOR ABUTMENT PARAPETS

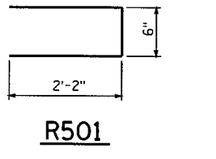
BAR MARK	COAT	NORTH ABUT.	SOUTH ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	28	28	4-7	X		PARAPET VERT.
R502	X	16	16	3-2	X		PARAPET VERT.
R503	X	4	4	4-8	X		PARAPET VERT.
R504	X	8	8	7-8			PARAPET HORIZ.
R505	X	32	32	4-10	X		PARAPET VERT.
R506	X	2	2	7-8	X		PARAPET HORIZ.



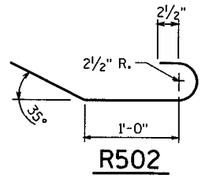
PLAN







R501



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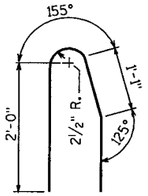

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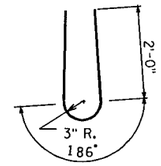
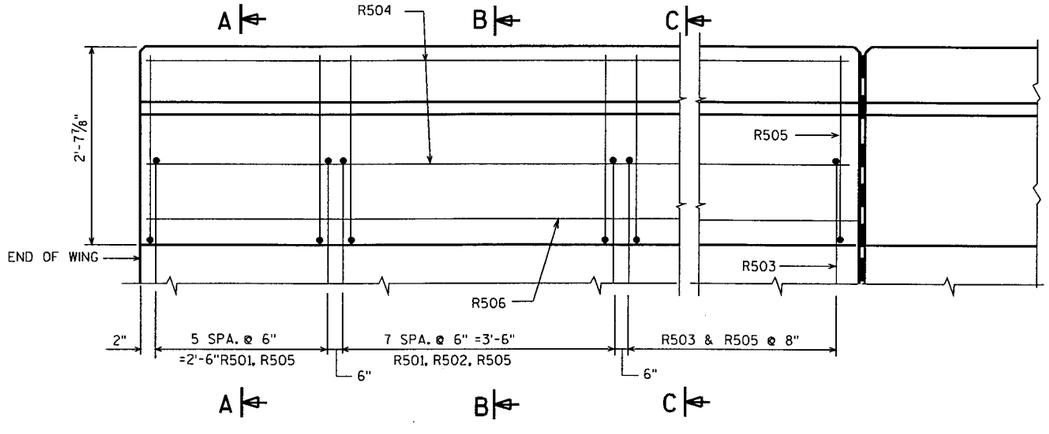
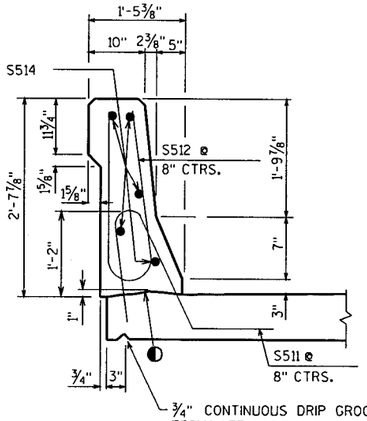


R505

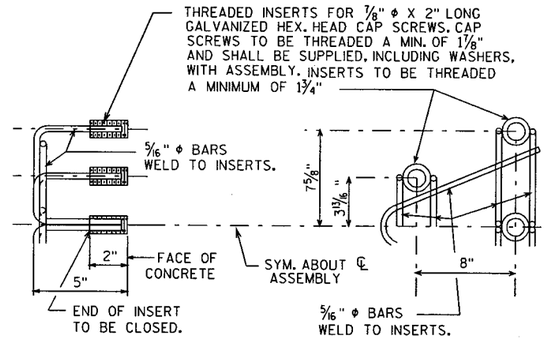
R506



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-556

DRAWN BY MPH | PLANS CK'D. DRG

SLOPED FACE PARAPET LF

SHEET 10

329

8

6 7 8 9 10 11 12 6 7

12

FILE= 10-556PPT.DGN
SCALE = 1