STATE PROJECT NUMBER

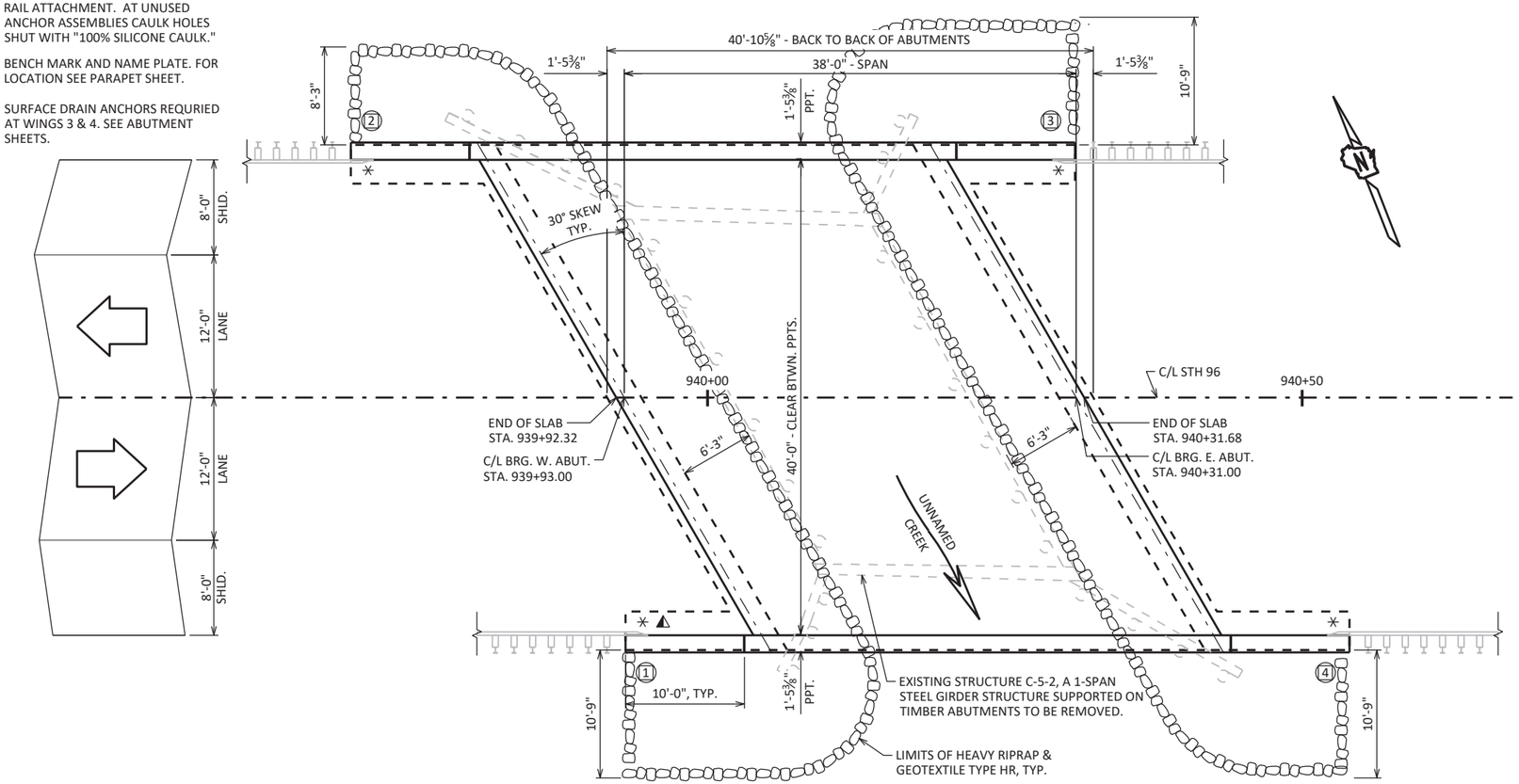
4075-39-72

(1) INDICATES WING NUMBER

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

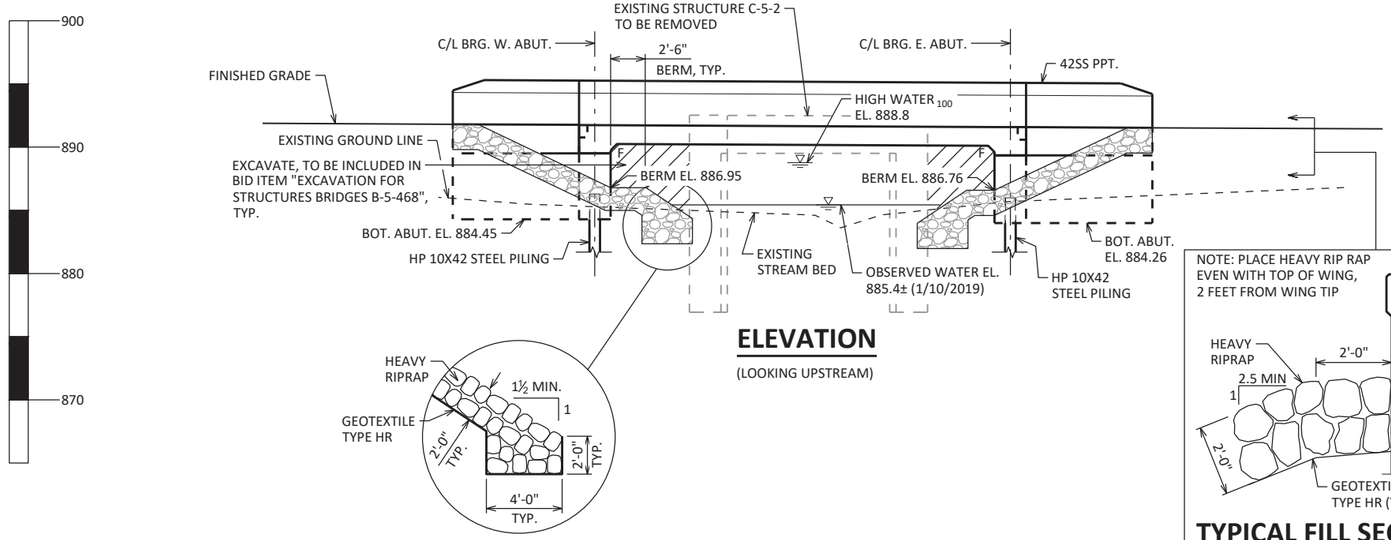
⚠ BENCH MARK AND NAME PLATE. FOR LOCATION SEE PARAPET SHEET.

SURFACE DRAIN ANCHORS REQURIED AT WINGS 3 & 4. SEE ABUTMENT SHEETS.



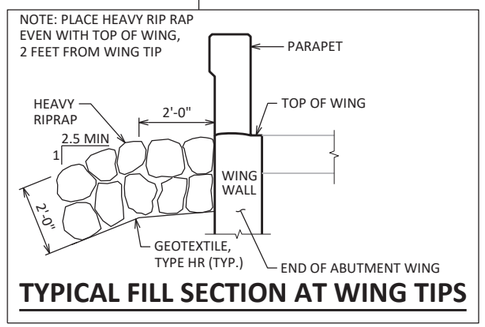
PLAN

SINGLE SPAN 21½" FLAT SLAB



ELEVATION

(LOOKING UPSTREAM)



TYPICAL FILL SECTION AT WING TIPS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.26
OPERATING RATING: 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 — f'_c = 4,000 PSI
ALL OTHER — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 75'-0" LONG.
ESTIMATED 75'-0" LONG.

**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 PILE CAPACITY.

HYDRAULIC DATA

100-YEAR FREQUENCY:
Q_{100}= 300 C.F.S.
V_{100}= 2.73F.P.S.
HW_{100}= EL. 888.76
WATERWAY AREA = 109.89 SQ. FT.
DRAINAGE AREA = 3.58 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:
Q_{100}= 75 C.F.S.
V_{100}= 1.11 F.P.S.
HW_{100}= EL. 887.12

TRAFFIC DATA

STH 96:
ADT = 4,230 (2042)
R.D.S. = 60 MPH

LIST OF DRAWINGS:

1 GENERAL PLAN
2 CROSS SECTION & QUANTITIES
3 SUBSURFACE EXPLORATION
4 WEST ABUTMENT
5 WEST ABUTMENT DETAILS
6 EAST ABUTMENT
7 EAST ABUTMENT DETAILS
8 SUPERSTRUCTURE
9 SUPERSTRUCTURE DETAILS
10 SINGLE SLOPE PARAPET 42SS

STRUCTURE DESIGN CONTACTS:
JOHN SENDOR 608-266-5163
DOMINIQUE BECHLE 608-261-8205

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

ACCEPTED DMB 11/19/21
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-05-468

STH 96 OVER UNNAMED CREEK

COUNTY	TOWN
BROWN	NEW DENMARK

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
JJS	ABS	ABS	JJS

GENERAL PLAN

SHEET 1 OF 10
131

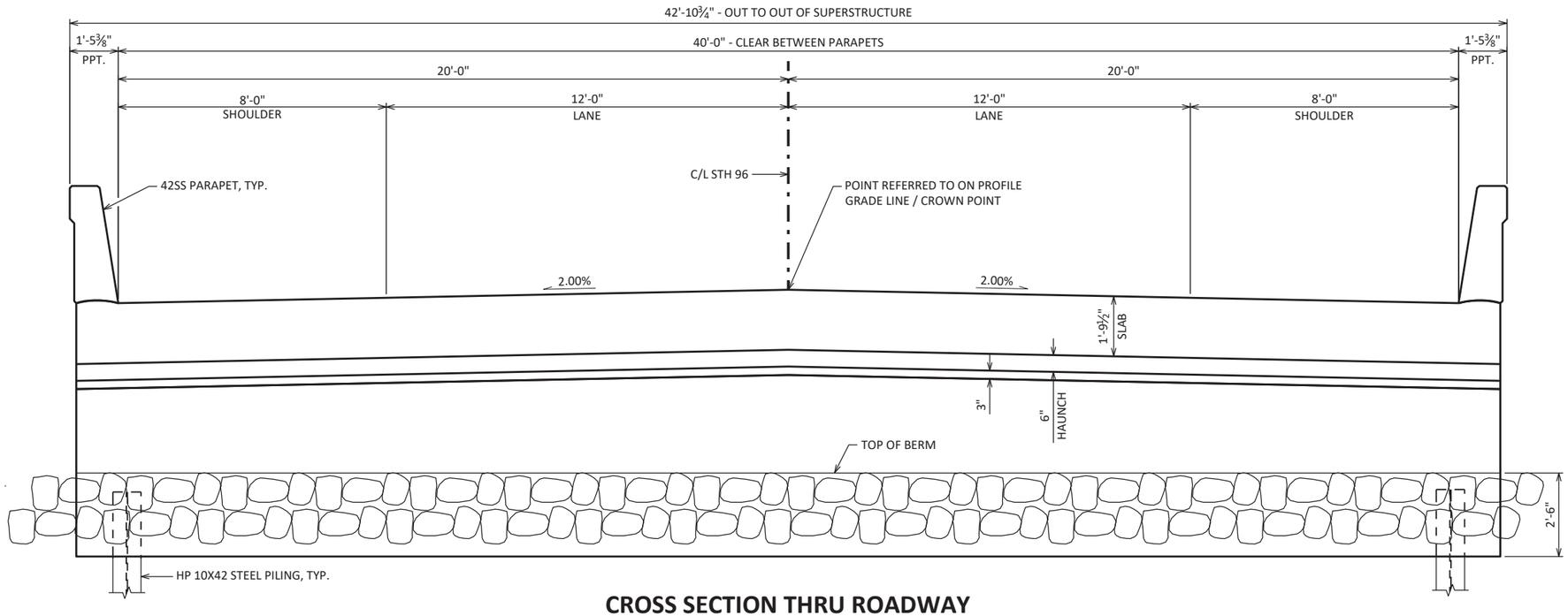
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I.D. 4075-36-00A

DATE: NOV. 2021

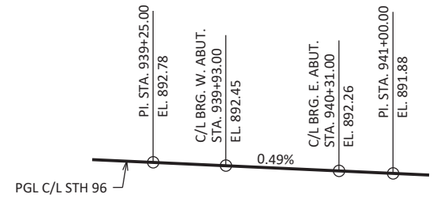
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8



CROSS SECTION THRU ROADWAY

(LOOKING EAST)



PROFILE GRADE LINE - STH 96

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-5-468" 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 TYPE A.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

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

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

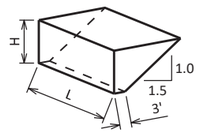
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS.

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 THE ABUTMENT DETAILS.

AT ABUTMENTS, HP 12X53 STEEL PILING MAY BE USED IN LIEU OF HP 10X42 STEEL PILING. PAYMENT SHALL BE BASED ON BID PRICE FOR HP 10X42 STEEL PILING.

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

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

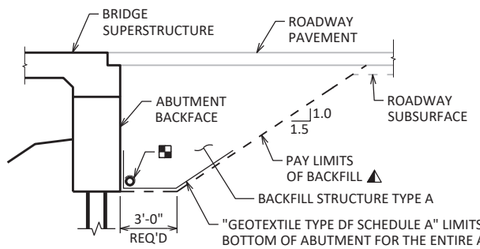


ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS C-5-2	EACH	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-5-468	LS	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	188	188	376
502.0100	CONCRETE MASONRY BRIDGES	CY	131.5	41.2	41.2	214
502.3200	PROTECTIVE SURFACE TREATMENT	SY	192	---	---	192
502.3210	PIGMENTED SURFACE SEALER	SY	40	10	10	60
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	2,830	2,830	5,660
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	26,530	2,040	2,070	30,640
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	12	12	24
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	525	525	1,050
606.0300	RIPRAP HEAVY	CY	---	70	70	140
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	80	80	160
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	---	---	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	59	59	118
645.0120	GEOTEXTILE TYPE HR	SY	---	140	140	280
	NON-BID ITEMS					
	FILLER	SIZE	---	---	---	1/2", 3/4"



TYPICAL SECTION THRU ABUTMENT

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

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

STATE PROJECT NUMBER

4075-39-72

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-05-468

DRAWN BY ABS | PLANS CK'D JJS

CROSS SECTION & QUANTITIES

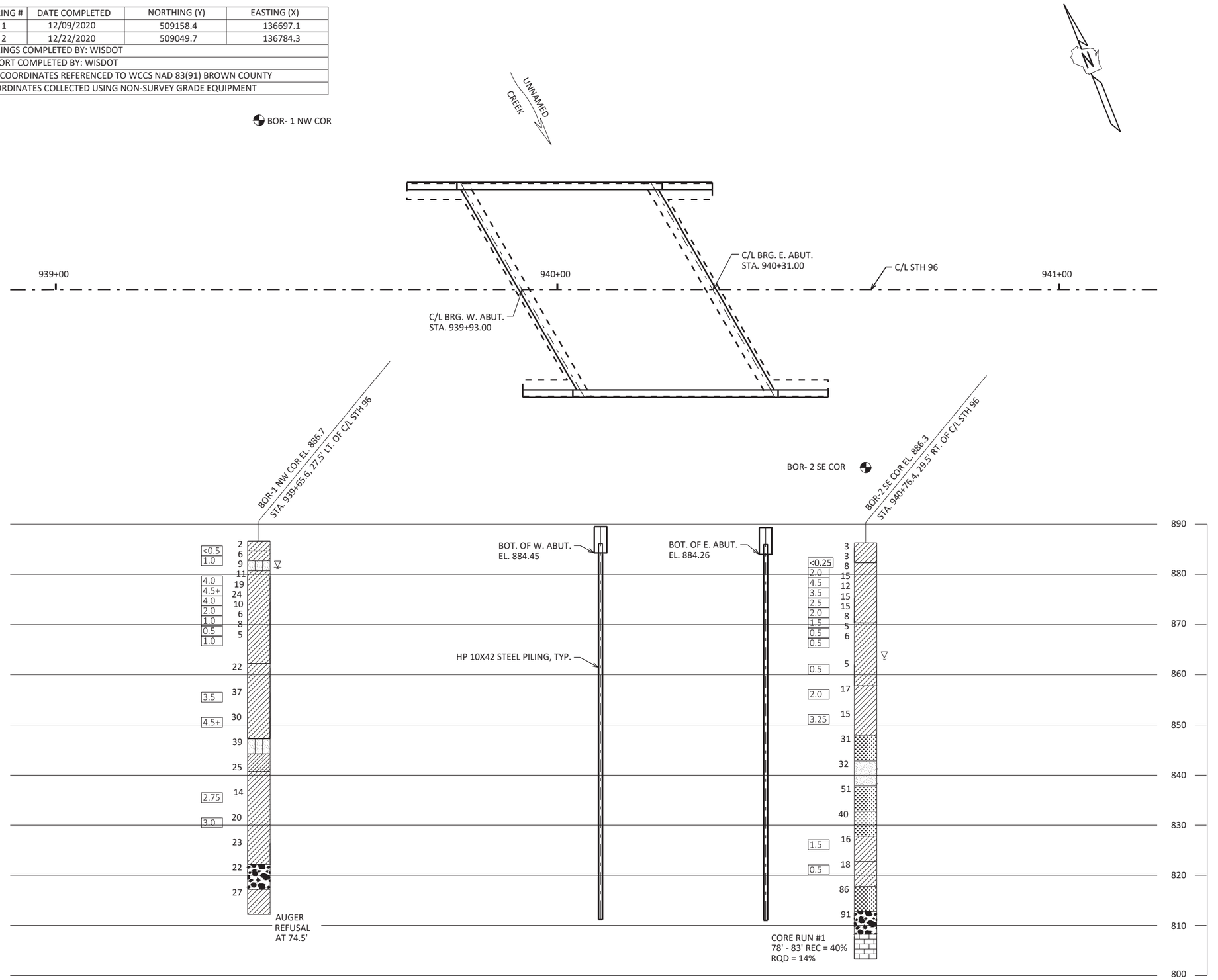
SHEET 2
132

SCALE = 4.0

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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	12/09/2020	509158.4	136697.1
2	12/22/2020	509049.7	136784.3
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) BROWN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



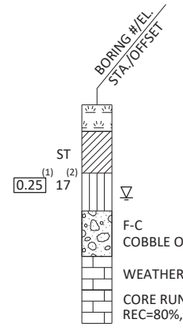
STATE PROJECT NUMBER

4075-39-72

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-05-468

DRAWN BY ABS/TLP | PLANS CK'D JJS

SUBSURFACE EXPLORATION

SHEET 3
133

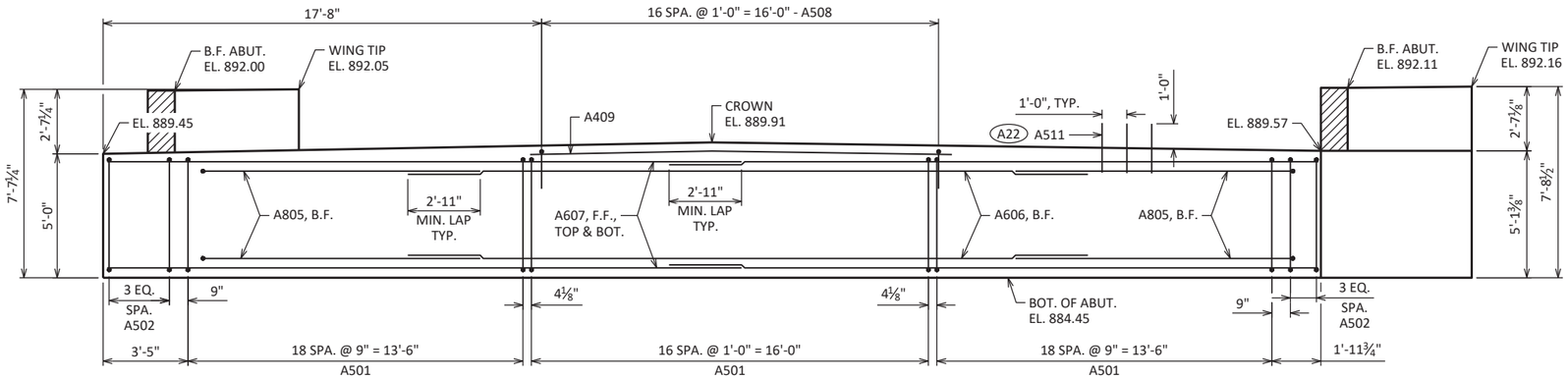
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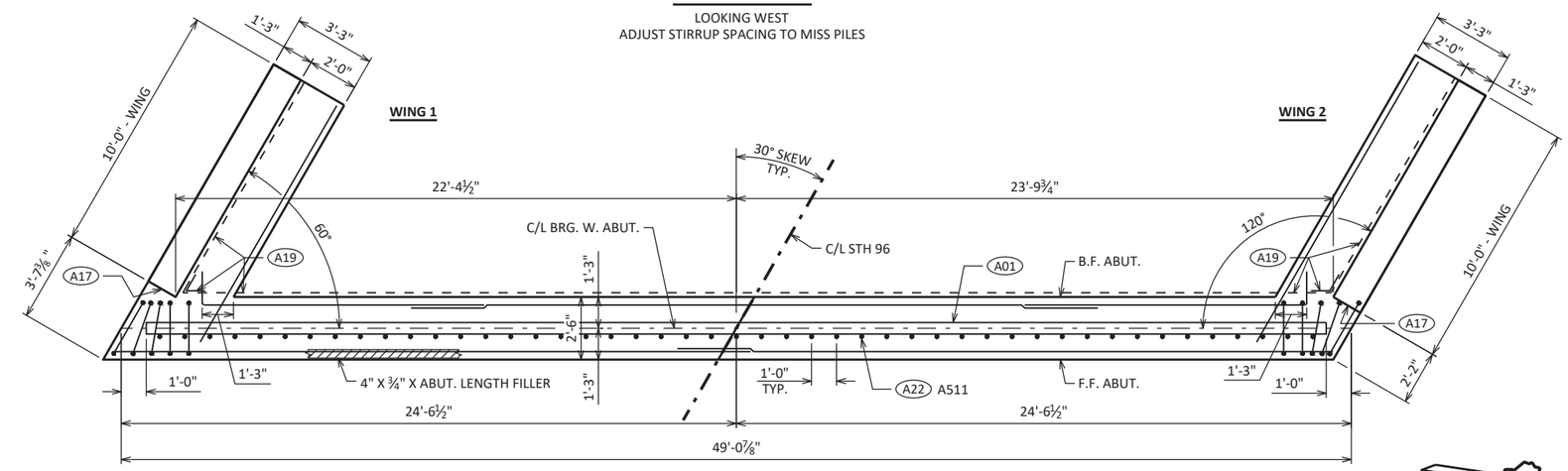
STATE PROJECT NUMBER

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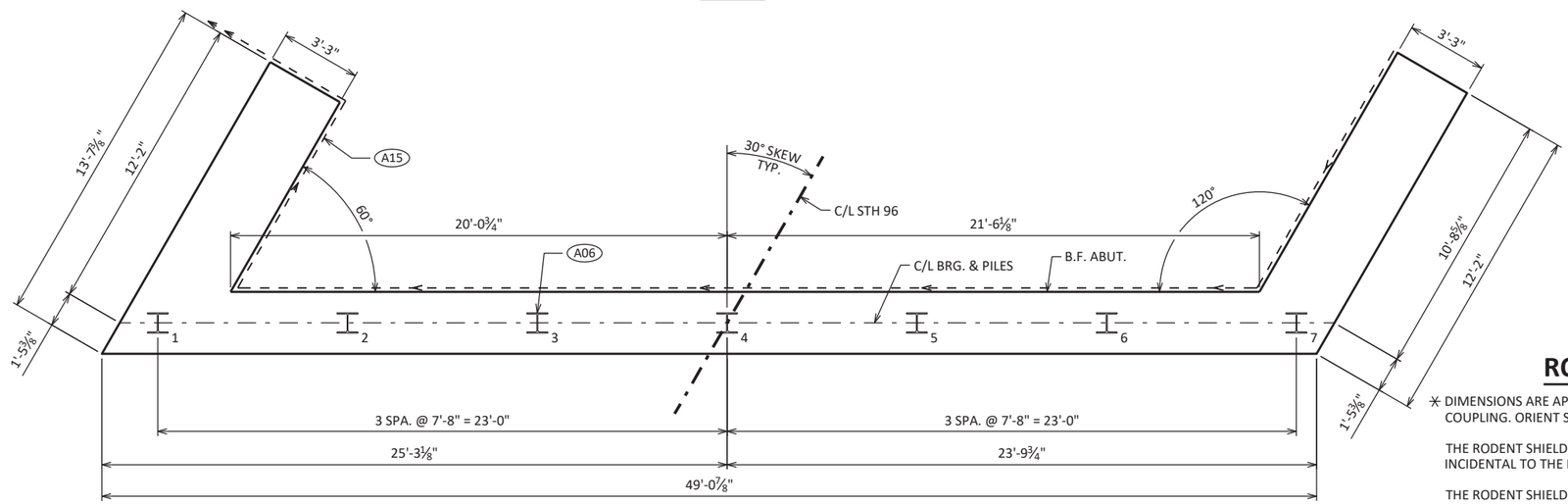


ELEVATION

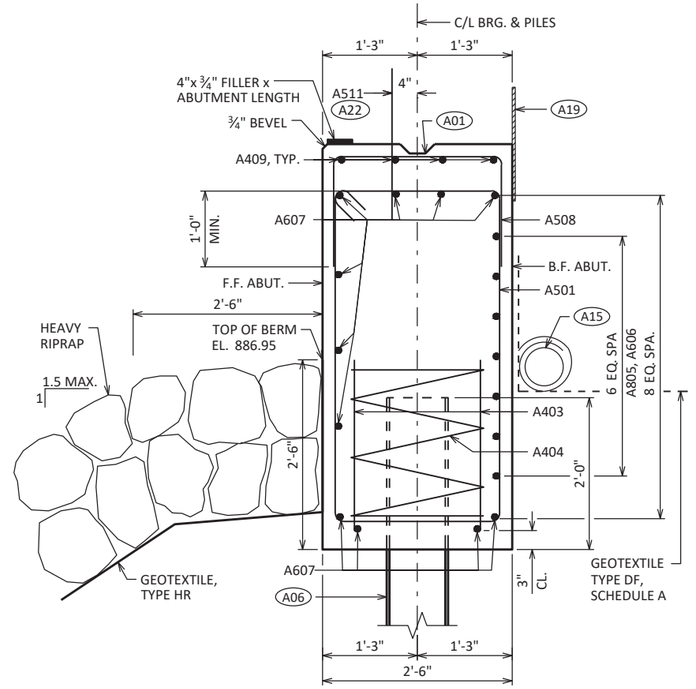
LOOKING WEST
ADJUST STIRRUP SPACING TO MISS PILES



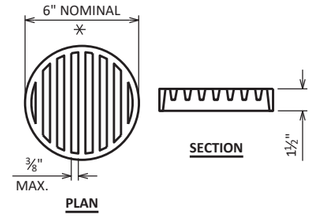
PLAN



PILE PLAN



SECTION THRU BODY



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 UNDERDRAING 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.

- (A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 75'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE, MINIMUM INVERT AT OUTLET = EL. 886.4. 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 GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A22) A511 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-05-468

DRAWN BY ABS | PLANS CK'D JJS

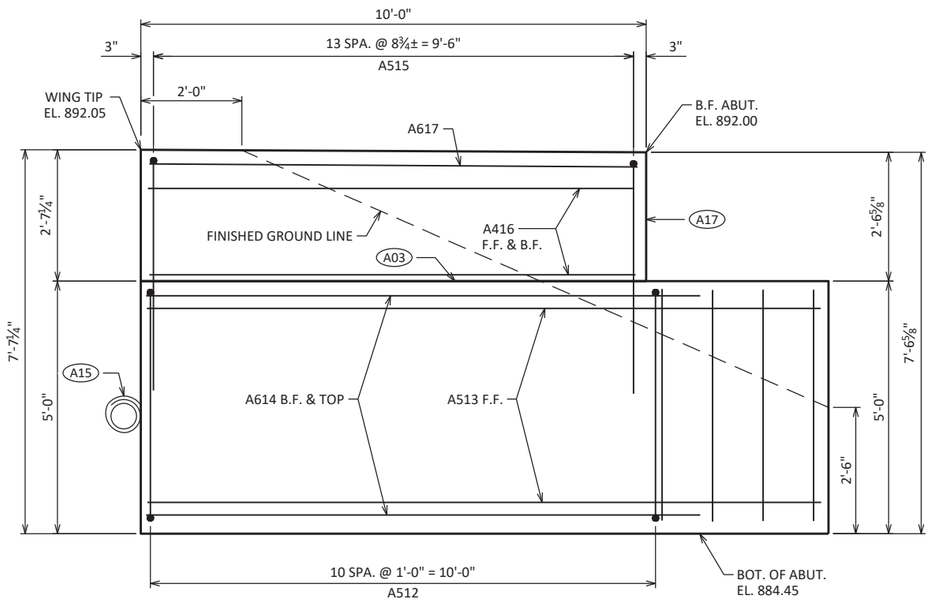
WEST ABUTMENT

SHEET 4
134

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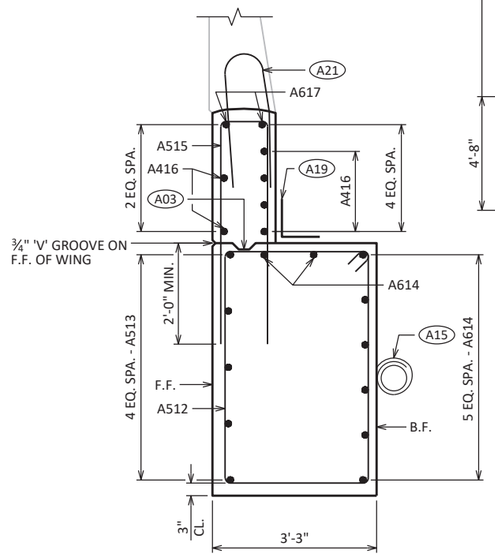
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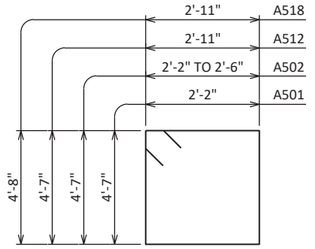


WING 1 ELEVATION

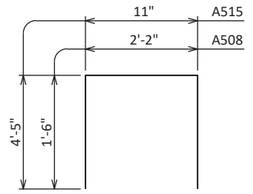
LOOKING NORTH



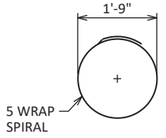
SECTION THRU WING 1



A501, A502, A512, A518



A508, A515



A404



A805

BILL OF BARS

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

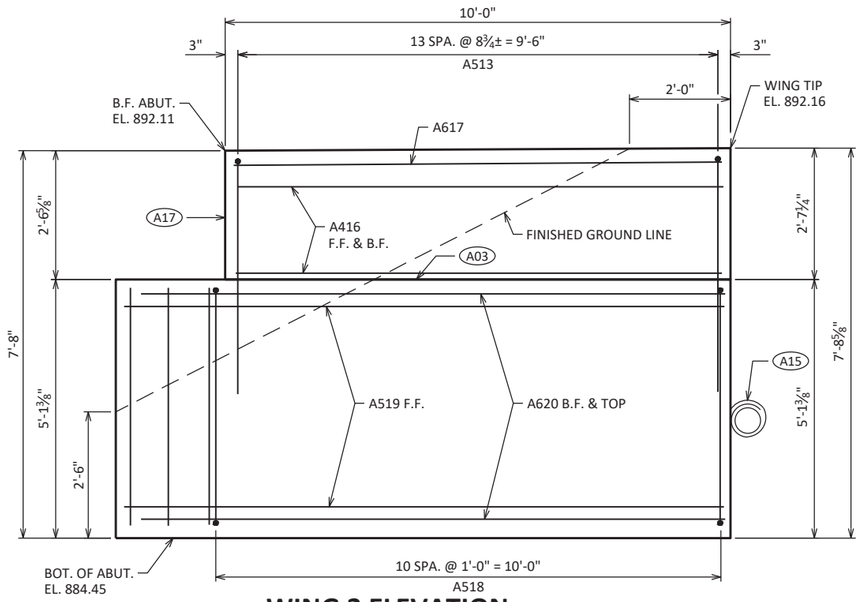
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		55	14'-2"	X		BODY - STIRRUPS
A502		8	14'-6"	X	⚠	BODY - STIRRUPS - ENDS
A403		14	2'-3"			BODY - VERT. - 2 PER PILE
A404		7	28'-0"	X		BODY - VERT. - AT BODY PILES
A805		14	12'-5"	X		BODY - HORIZ. - B.F. - ENDS
A606		7	27'-5"			BODY - HORIZ. B.F.
A607		22	25'-10"			BODY - HORIZ. - F.F. TOP AND BOTTOM
A508		17	4'-11"	X		BODY - VERT.
A409		4	17'-0"			BODY -HORIZ. -TOP
A410	X	7	4'-7"			BODY - VERT. - ENDS
A511	X	47	2'-0"			BODY - VERT. - DOWELS
A512	X	11	15'-8"	X		WING 1 - STIRRUPS
A513	X	5	13'-0"			WING 1 - HORIZ. - F.F.
A614	X	8	10'-11"			WING 1 - HORIZ. - B.F. & TOP
A515	X	28	9'-6"	X		WINGS 1 & 2 - VERT.
A416	X	12	9'-7"			WINGS 1 & 2 - HORIZ. - B.F. & F.F.
A617	X	4	9'-7"			WINGS 1 & 2 - HORIZ. - TOP
A518	X	11	15'-10"	X		WING 2 - STIRRUPS
A519	X	5	11'-10"			WING 2 - HORIZ. - F.F.
A620	X	8	12'-11"			WING 2 - HORIZ. - B.F. & TOP

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

BAR SERIES TABLE

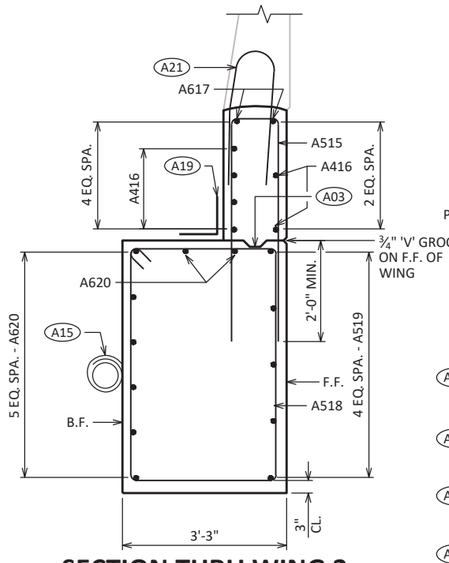
BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
A502	2 SERIES OF 4	14'-2" TO 14'-10"

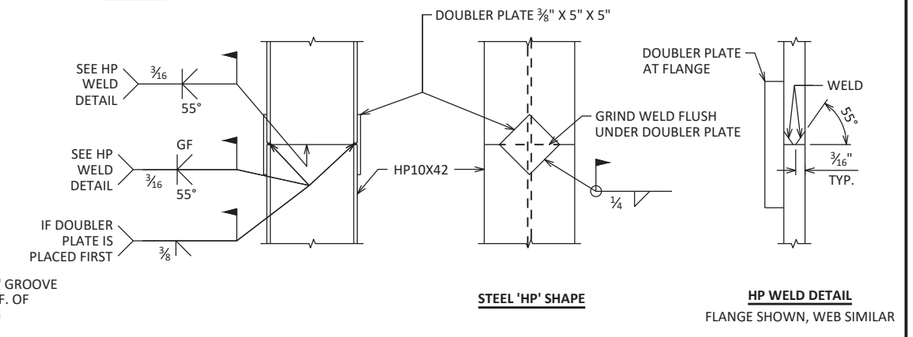


WING 2 ELEVATION

LOOKING SOUTH



SECTION THRU WING 2



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

'HP' PILE DETAILS (A06)

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 75'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE, MINIMUM INVERT AT OUTLET = EL. 886.4. 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 GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A21) FOR PPT. BARS & DIMENSIONS SEE PARAPET SHEET.

STATE PROJECT NUMBER

4075-39-72

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-05-468

DRAWN BY ABS | PLANS CK'D JJS

WEST ABUTMENT DETAILS

SHEET 5
135

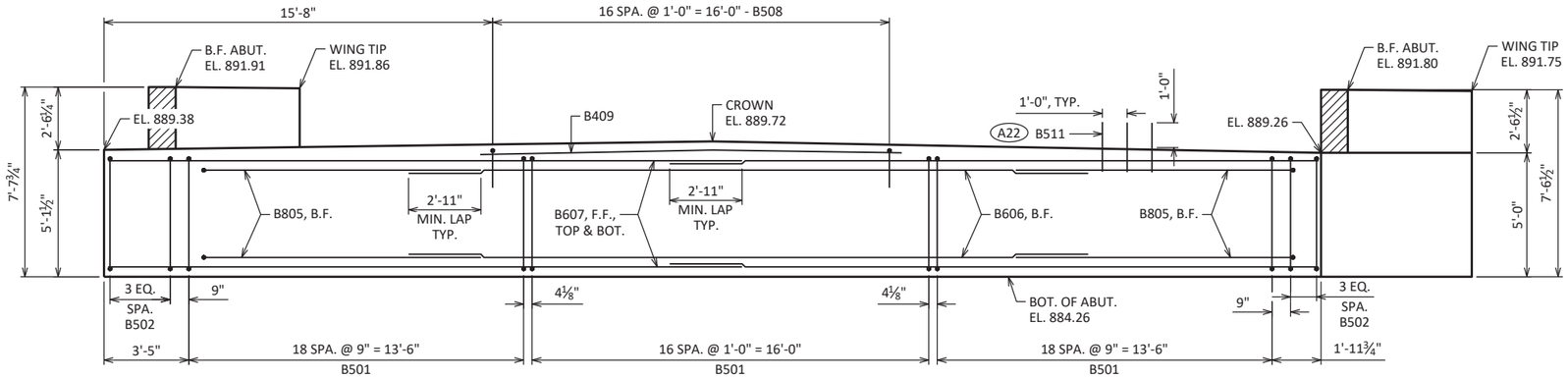
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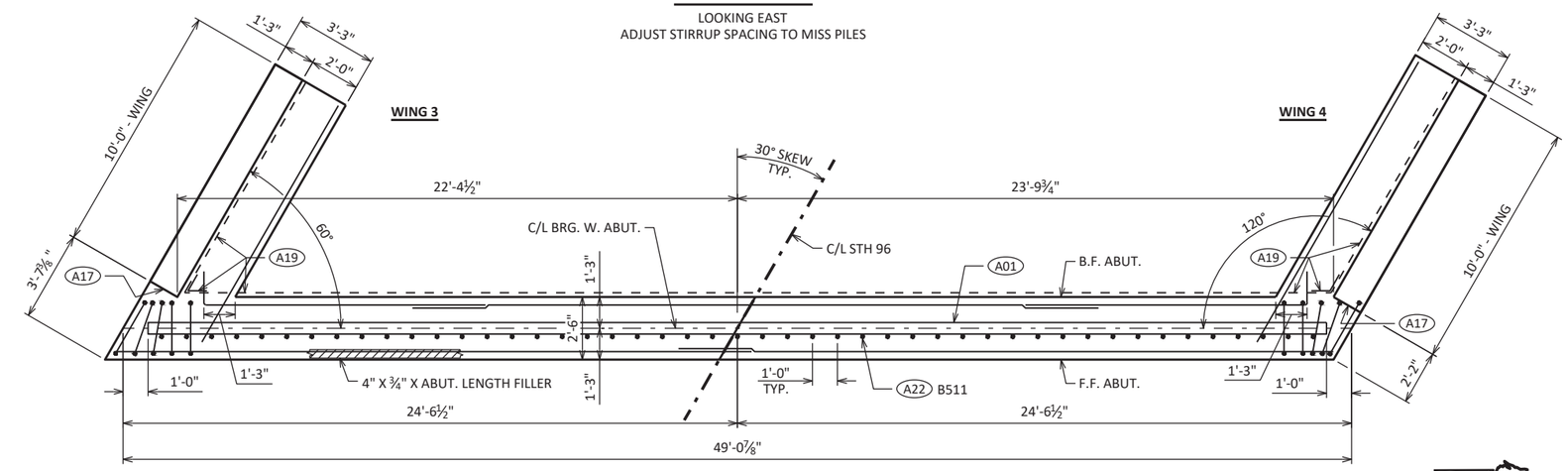
STATE PROJECT NUMBER

4075-39-72

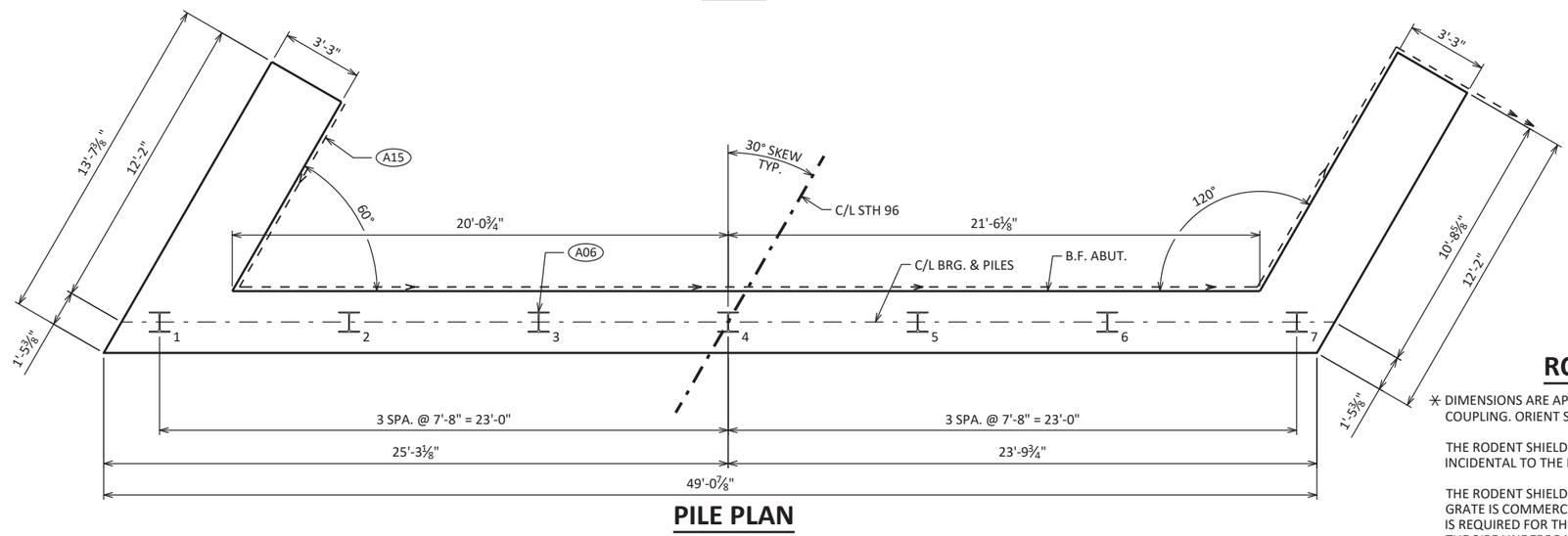


ELEVATION

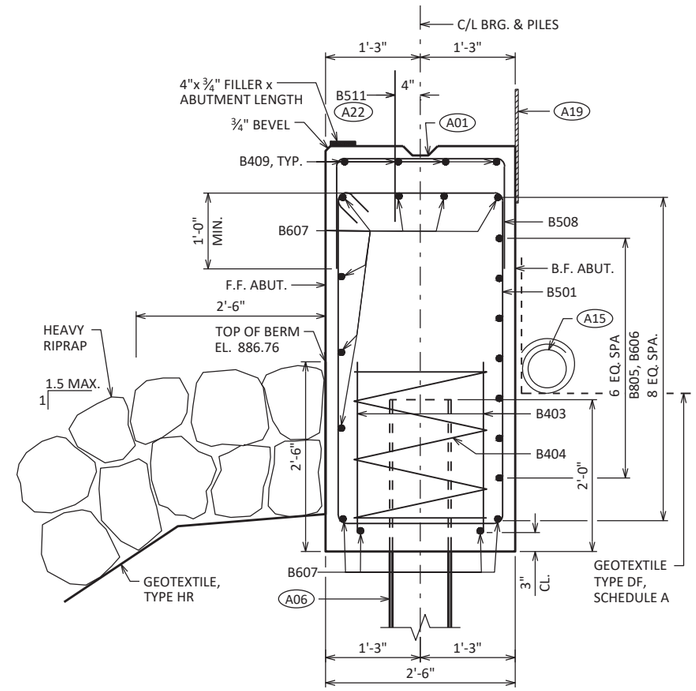
LOOKING EAST
ADJUST STIRRUP SPACING TO MISS PILES



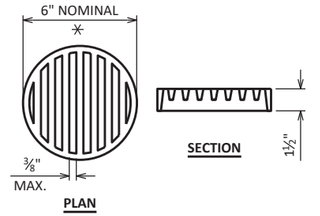
PLAN



PILE PLAN



SECTION THRU BODY



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 UNDERDRAING 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.

(A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 75'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE, MINIMUM INVERT AT OUTLET = EL. 886.4. 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 GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A22) B511 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

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STATE OF WISCONSIN
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STRUCTURE B-05-468

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EAST ABUTMENT

SHEET 6
136

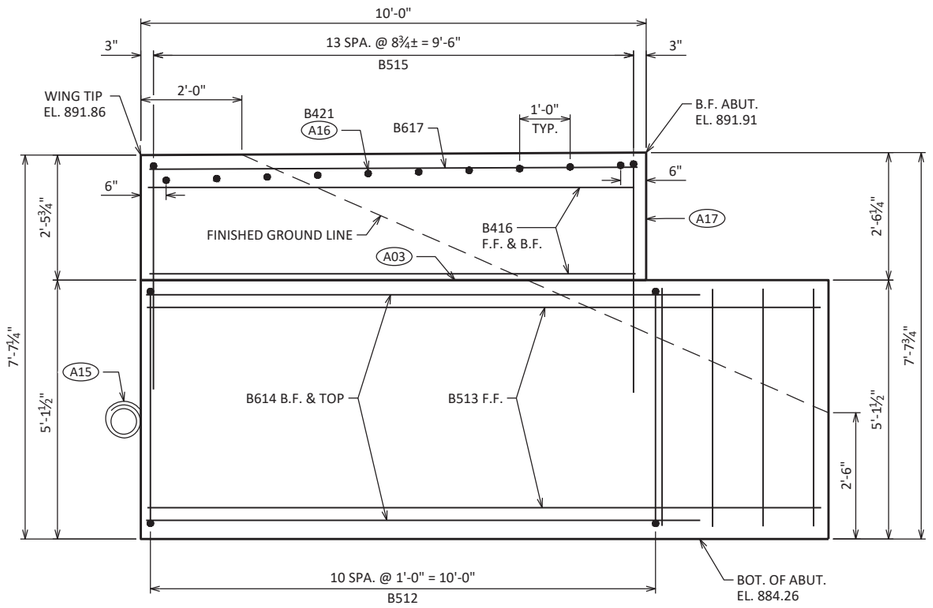
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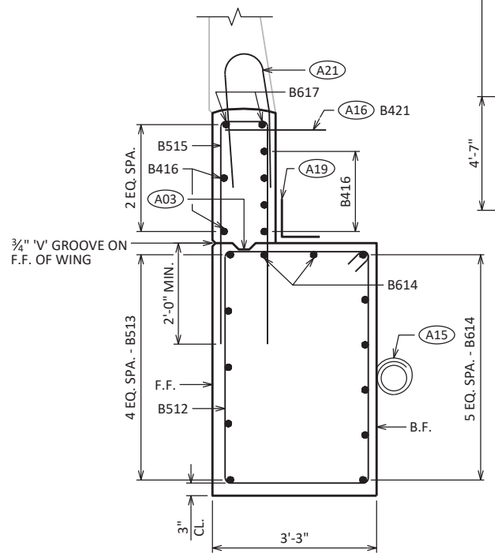
STATE PROJECT NUMBER

4075-39-72

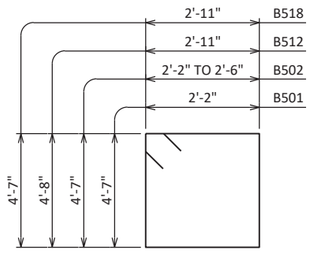


WING 3 ELEVATION

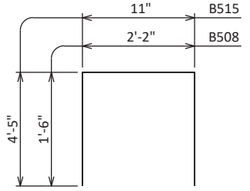
LOOKING SOUTH



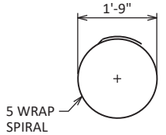
SECTION THRU WING 3



B501, B502, B512, B518



B508, B515



B404

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		55	14'-2"	X		BODY - STIRRUPS
B502		8	14'-6"	X	⚠	BODY - STIRRUPS - ENDS
B403		14	2'-3"			BODY - VERT. - 2 PER PILE
B404		7	28'-0"	X		BODY - VERT. - AT BODY PILES
B805		14	12'-5"	X		BODY - HORIZ. - B.F. - ENDS
B606		7	27'-5"			BODY - HORIZ. B.F. - F.F. TOP AND BOTTOM
B607		22	25'-10"			BODY - HORIZ.
B508		17	4'-11"	X		BODY - VERT.
B409		4	17'-0"			BODY -HORIZ. -TOP
B410	X	7	4'-7"			BODY - VERT. - ENDS
B511	X	47	2'-0"			BODY - VERT. - DOWELS
B512	X	11	15'-10"	X		WING 3 - STIRRUPS
B513	X	5	13'-0"			WING 3 - HORIZ. - F.F.
B614	X	8	10'-11"			WING 3 - HORIZ. - B.F. & TOP
B515	X	28	9'-6"	X		WINGS 3 & 4 - VERT.
B416	X	12	9'-7"			WINGS 3 & 4 - HORIZ. - B.F. & F.F.
B617	X	4	9'-7"			WINGS 3 & 4 - HORIZ. - TOP
B518	X	11	15'-8"	X		WING 4 - STIRRUPS
B519	X	5	11'-10"			WING 4 - HORIZ. - F.F.
B620	X	8	12'-11"			WING 4 - HORIZ. - B.F. & TOP
B421	X	20	2'-0"			WINGS 3 & 4 - SURFACE DRAIN ANCHORS

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

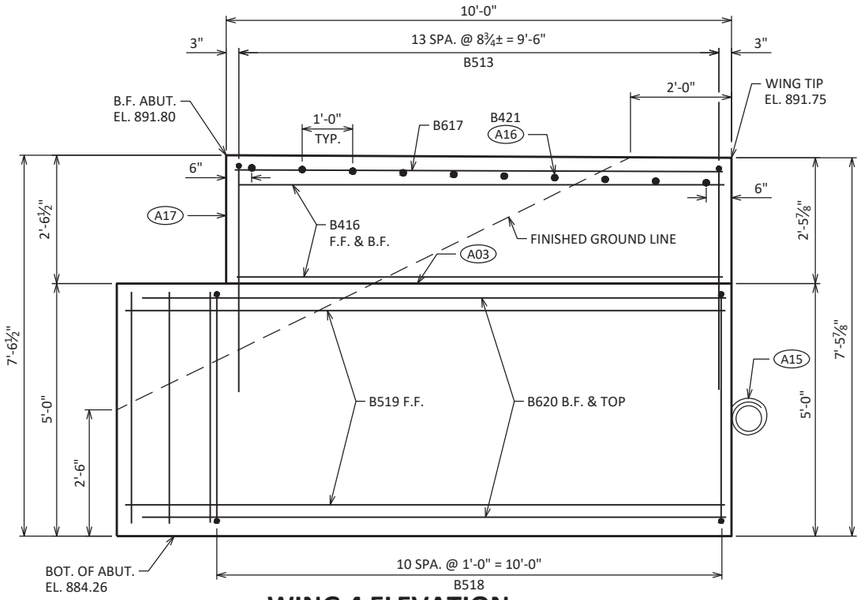


B805

BAR SERIES TABLE

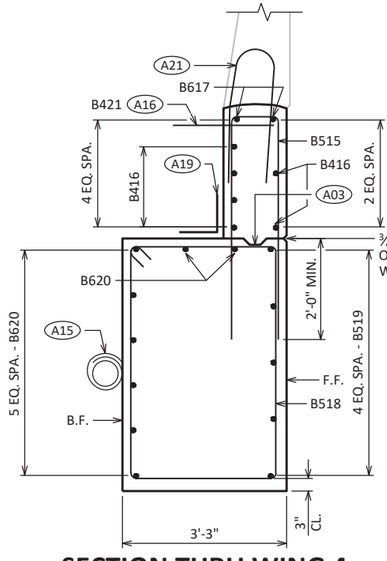
BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
B502	2 SERIES OF 4	14'-2" TO 14'-10"

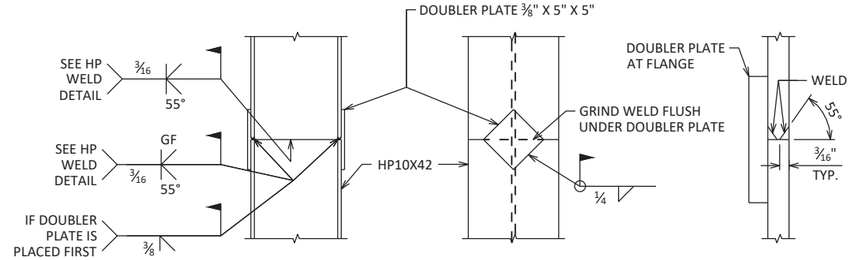


WING 4 ELEVATION

LOOKING NORTH



SECTION THRU WING 4



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

'HP' PILE DETAILS (A06)

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 75'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE, MINIMUM INVERT AT OUTLET = EL. 886.4. RODENT SHIELD REQUIRED.

(A16) B421 BARS SPACED @ 1'-0" CTRS. EMBED 1'-0" INTO WING CONC. LOCATE 3" DOWN FROM TOP OF WING @ BACKFACE TO 6" DOWN @ WING TIP.

(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 GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A21) FOR PPT. BARS & DIMENSIONS SEE PARAPET SHEET.

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STRUCTURE B-05-468

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EAST ABUTMENT DETAILS

SHEET 7
137

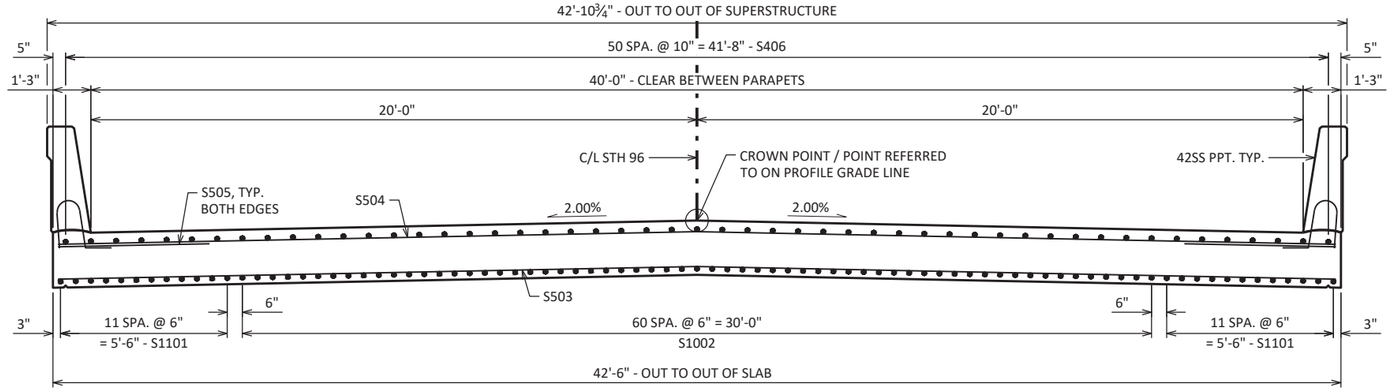
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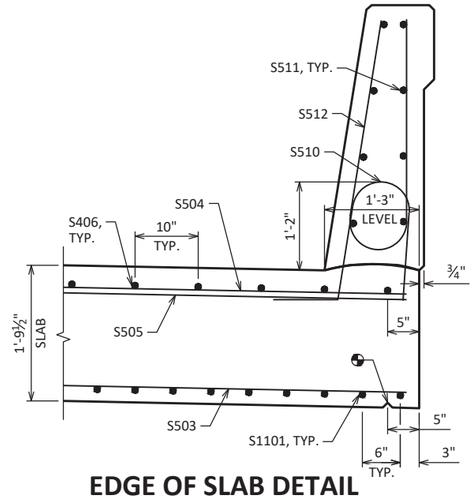
STATE PROJECT NUMBER

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CROSS SECTION THRU ROADWAY

LOOKING EAST

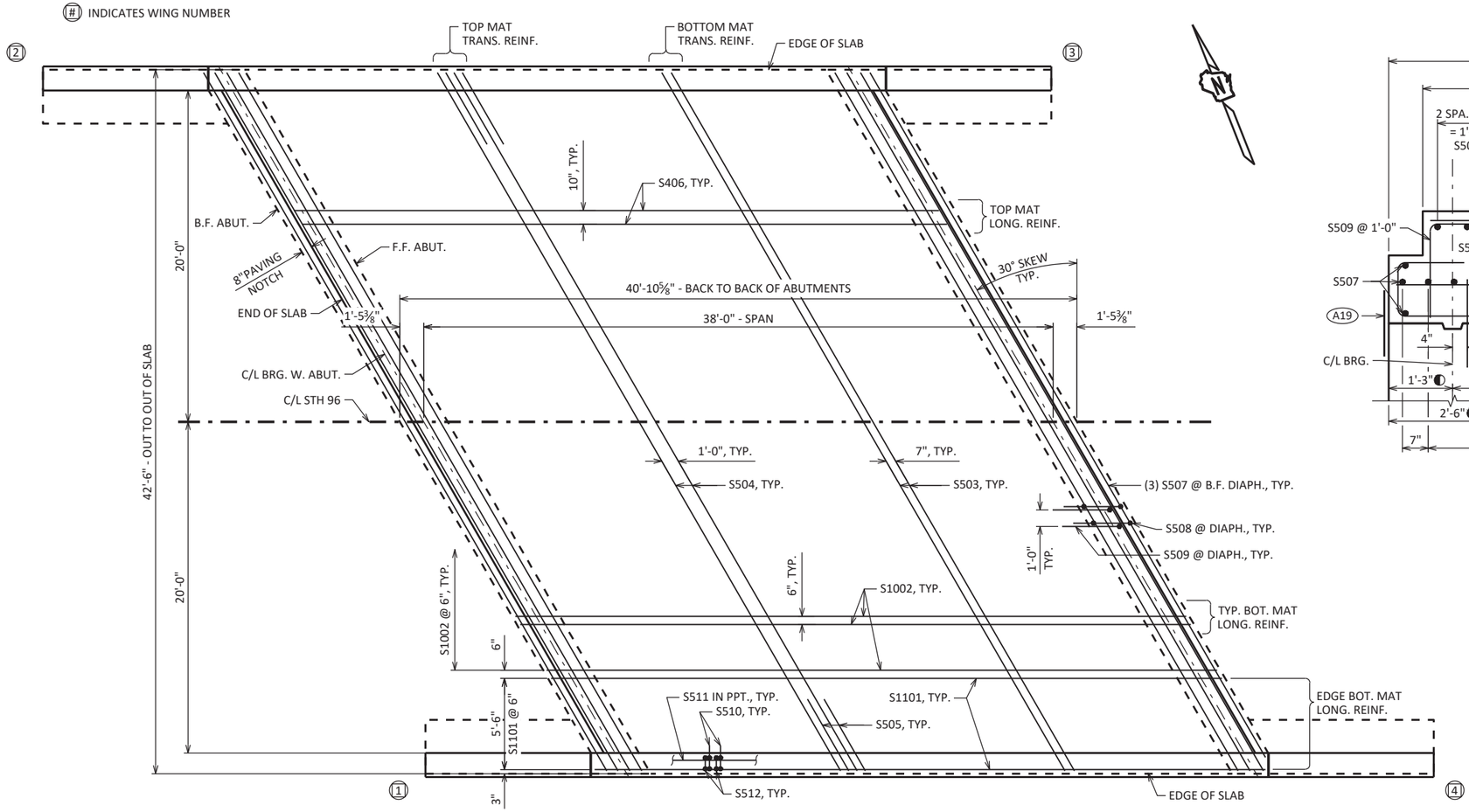


EDGE OF SLAB DETAIL

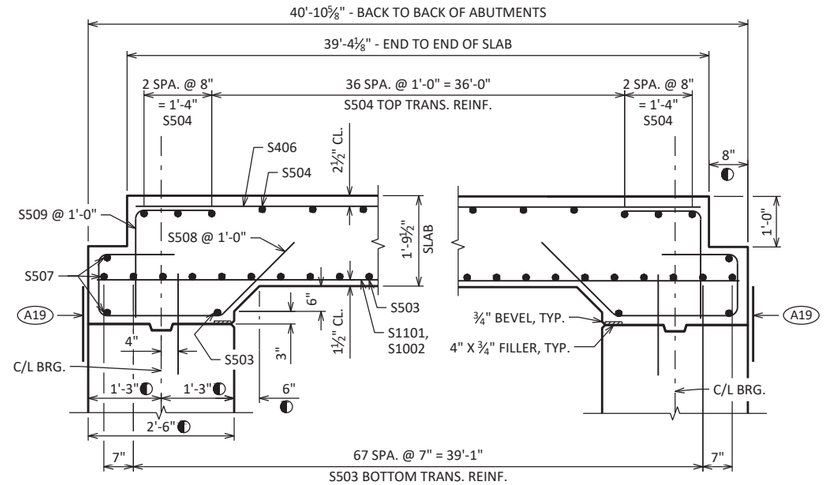
¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT. DIAPHRAGM.

V-GROOVES ARE REQUIRED.

Ⓝ INDICATES WING NUMBER



PLAN



LONGITUDINAL SECTION

LOOKING NORTH
DIMENSIONS GIVEN PARALLEL TO C/L ROADWAY UNLESS OTHERWISE NOTED

◐ MEASURED NORMAL TO THE C/L OF ABUTMENT. DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS.

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SUPERSTRUCTURE

SHEET 8
138

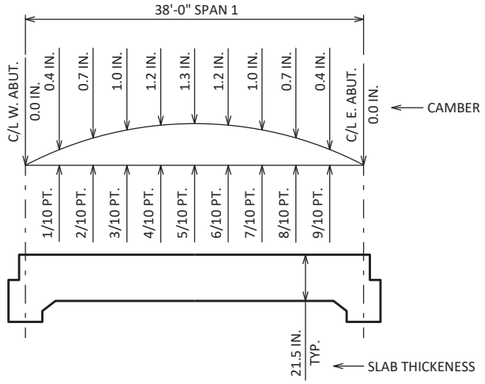
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CAMBER AND SLAB THICKNESS DIAGRAM

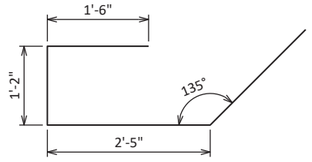
CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

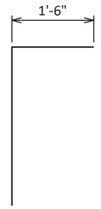
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED, EXCEPT FOR STAGED CONSTRUCTION.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

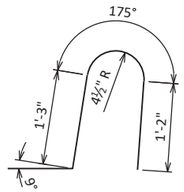
	TOP OF SLAB ELEVATION AT FINAL GRADE
MINUS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION



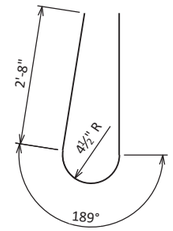
S508



S509



S510



S512

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
S1101	X	24	40'-6''			SLAB - BOT. - LONGIT. - EDGES
S1002	X	61	40'-6''			SLAB - BOT. - LONGIT.
S503	X	70	48'-8''			SLAB - BOT. -TRANS.
S504	X	41	48'-8''			SLAB - TOP - TRANS.
S505	X	80	5'-0''			SLAB - TOP - TRANS. - EDGES
S406	X	51	38'-11''			SLAB - TOP - LONGIT.
S507	X	6	47'-8''			DIAPH. - HORIZ. - B.F.
S508	X	86	7'-0''	X		DIAPH. - STIRRUPS
S509	X	86	3'-6''	X		DIAPH. - L-BARS
S510	X	124	4'-5''	X		PARAPET - VERT.
S511	X	16	40'-6''			PARAPET - LONGIT.
S512	X	124	6'-8''	X		PARAPET - VERT.

TOP OF SLAB ELEVATIONS

SPAN	LOCATION	C/L BRG. W. 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.	C/L BRG. E. ABUT.
1	N. EDGE OF SLAB	892.11	892.09	892.07	892.05	892.03	892.01	891.99	891.98	891.96	891.94	891.92
	CROWN OR C/L	892.45	892.43	892.41	892.39	892.38	892.36	892.34	892.32	892.30	892.28	892.26
	S. EDGE OF SLAB	891.99	891.97	891.96	891.94	891.92	891.90	891.88	891.86	891.85	891.83	891.81

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	ABUTMENT	5/10 PT.	ABUTMENT
N. GUTTER			
CROWN OR C/L			
S. GUTTER			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF ABUTMENTS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR C/L. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NOTES

FILL IN THE TABLE OF "SURVEY TOP OF SLAB ELEVATIONS" FOR EACH SPAN ON AS BUILT PLANS.

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

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

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SUPERSTRUCTURE DETAILS

SHEET 9
139

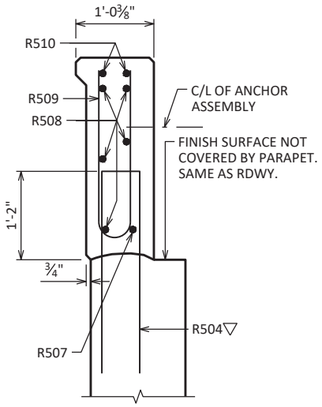
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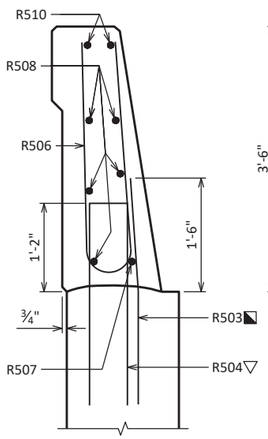
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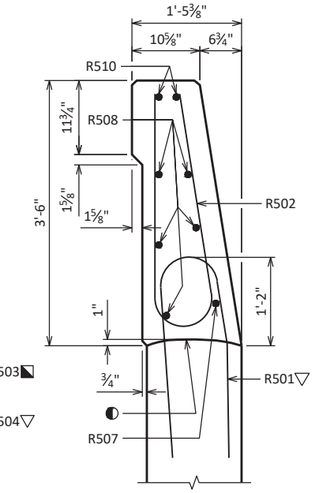
4075-39-72



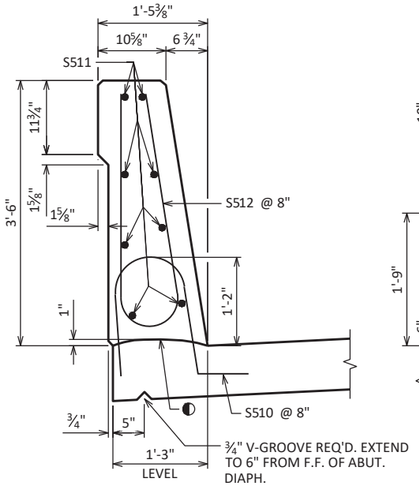
SECTION A-A



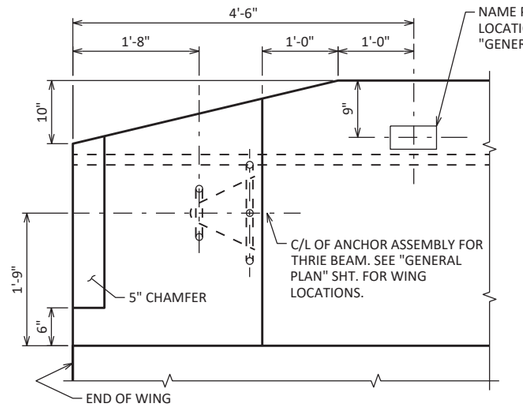
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON SLAB



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

FOR WING PARAPETS

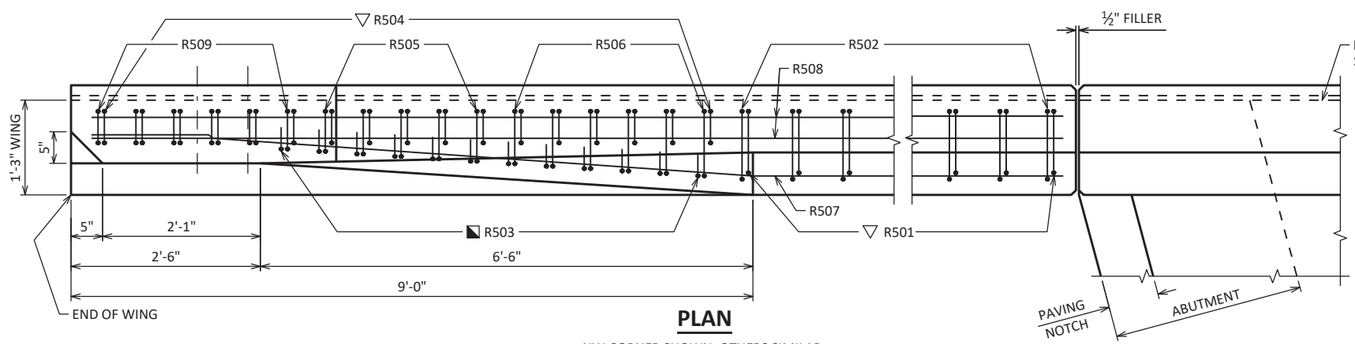
BAR MARK	COAT	W. ABUT.	E. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	6	6	5'-10"	X		PARAPET VERT.
R502	X	6	6	6'-8"	X		PARAPET VERT.
R503	X	24	24	3'-0"	X		PARAPET VERT.
R504	X	34	34	5'-7"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	9'-7"	X		PARAPET HORIZ.
R508	X	10	10	9'-7"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	9'-7"	X		PARAPET HORIZ.

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

BAR SERIES TABLE

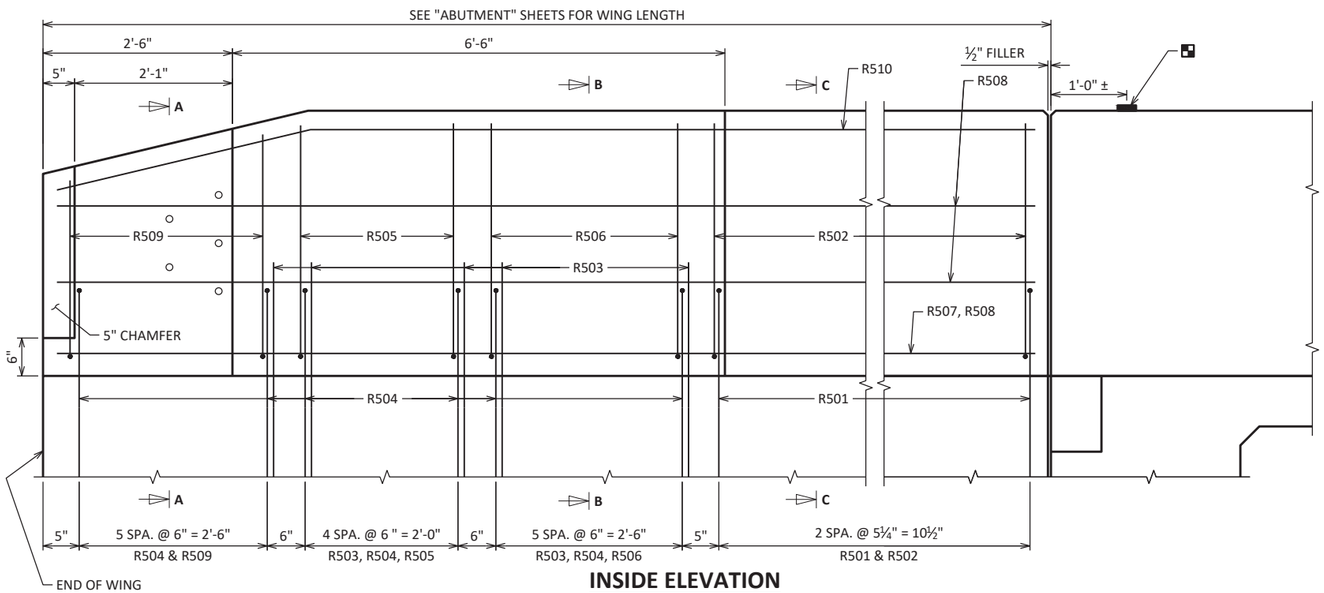
BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"



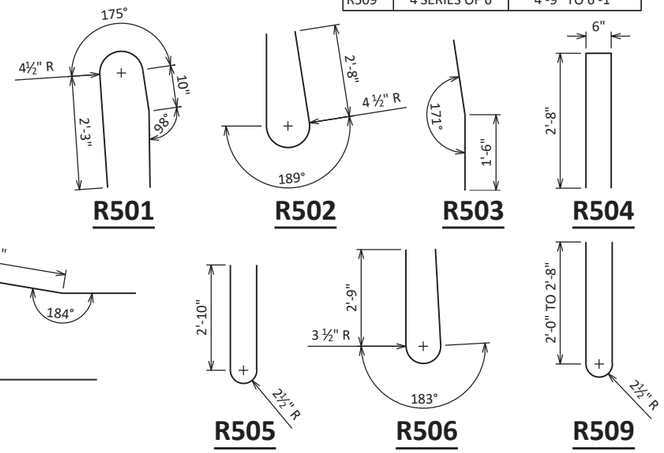
PLAN

NW CORNER SHOWN, OTHERS SIMILAR

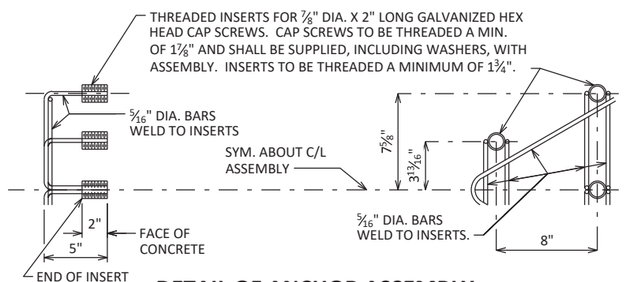


INSIDE ELEVATION

NW CORNER SHOWN, OTHERS SIMILAR



BENCH MARK CAP



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.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-05-468

DRAWN BY ABS | PLANS CK'D JJS

SINGLE SLOPE PARAPET 42SS

SHEET 10
140

SCALE = 2.00

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