

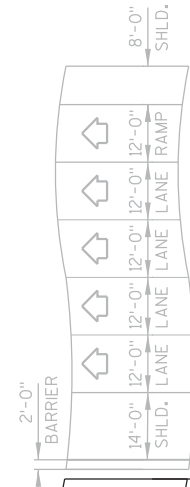
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PLOT DATE: 11/14/2014 PLOT TIME: 7:50:11 AM

⊗ INDICATES WING NUMBER

✱ LOCATION OF ANCHOR ASSEMBLY FOR
FOR STEEL PLATE BEAM GUARD

THE EXISTING STRUCTURE B-53-229
TO REMAIN IN PLACE. THE DECK
WILL BE REPLACED AND THE
STRUCTURE WIDENED.



B-53-229

BRG. S. ABUT.
STA. 735+26.03
END OF DECK
STA. 735+24.78
BEGIN APPR. SLAB
STA. 735+04.78

B-53-230

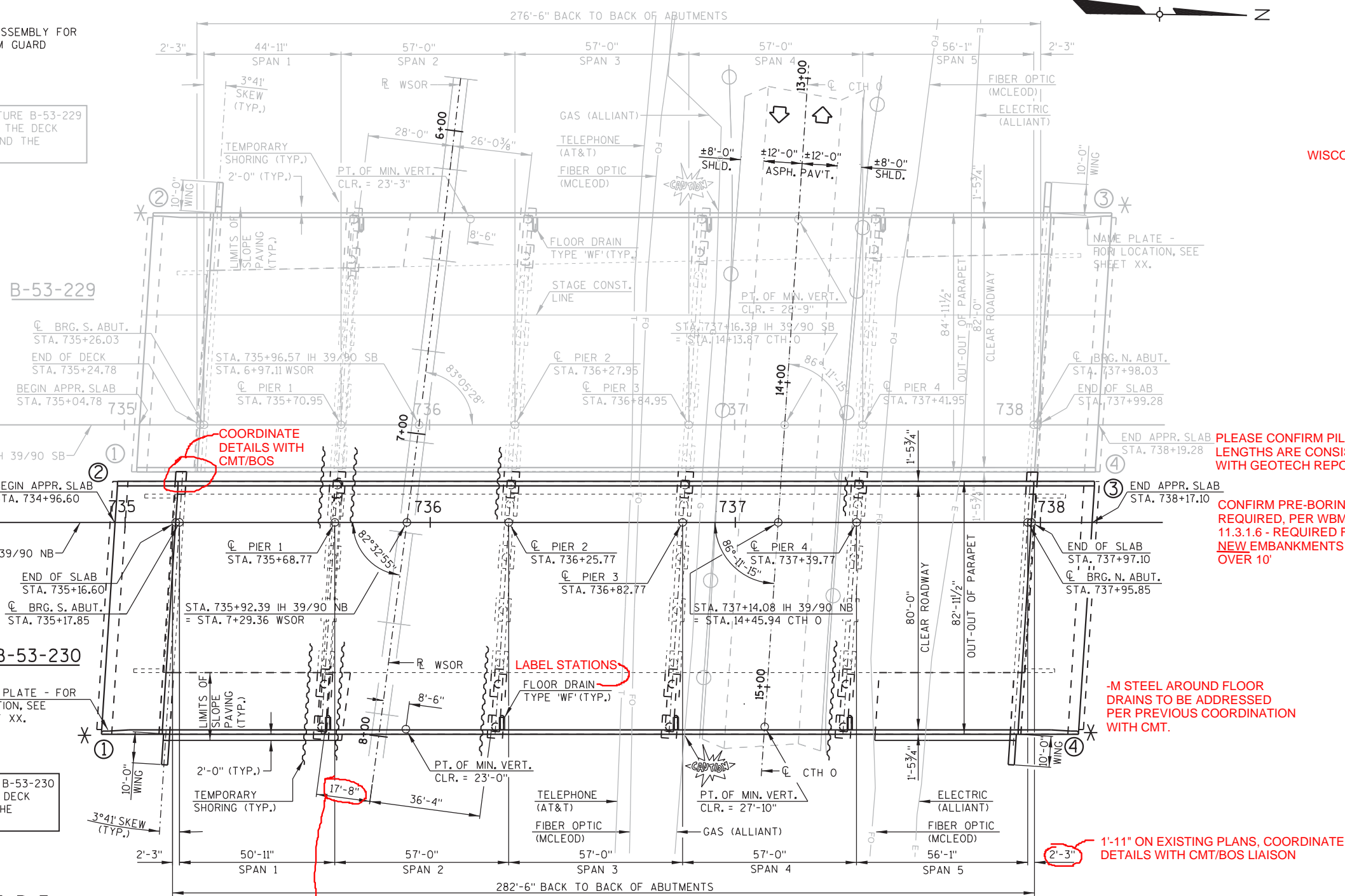
NAME PLATE - FOR
LOCATION, SEE
SHEET XX.

THE EXISTING STRUCTURE B-53-230
TO REMAIN IN PLACE. THE DECK
WILL BE REPLACED AND THE
STRUCTURE WIDENED.

BENCH MARK TABLE

NO.	STATION	DESCRIPTION	ELEVATION
253L	745+90.17	CHISELED SQUARE ON SIGN BASE	841.80

8

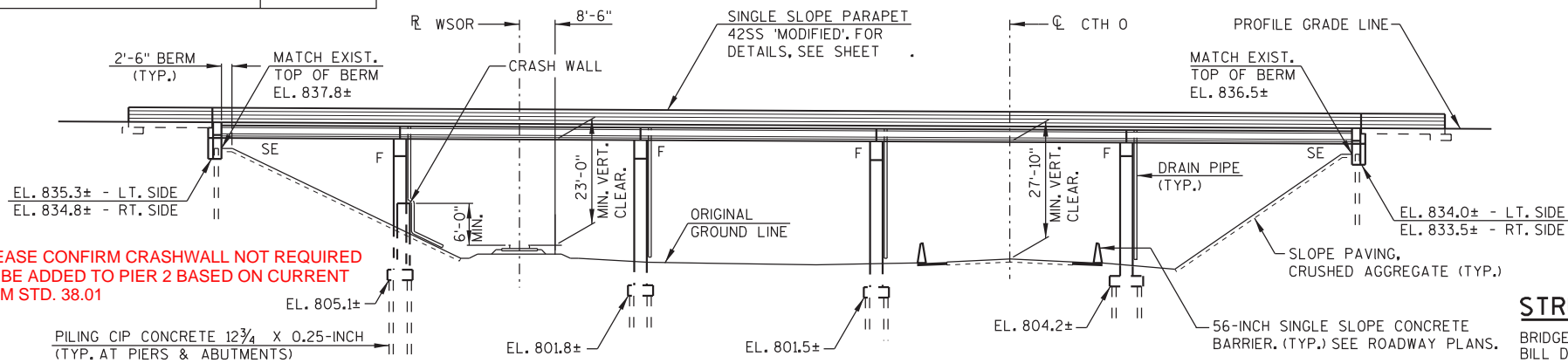


CONFIRM NOTE 9 FROM
WBM STD. 38.01 HAS
BEEN ADDRESSED

PLEASE CONFIRM CRASHWALL NOT REQUIRED
TO BE ADDED TO PIER 2 BASED ON CURRENT
WBM STD. 38.01

PILING CIP CONCRETE 12 3/4 X 0.25-INCH
(TYP. AT PIERS & ABUTMENTS)

PLAN (5 - SPAN 36" PRESTRESSED CONCRETE GIRDERS)



ELEVATION (NORMAL TO CTH 0 & WSOR)

-M STEEL AROUND FLOOR
DRAINS TO BE ADDRESSED
PER PREVIOUS COORDINATION
WITH CMT.

1'-11" ON EXISTING PLANS, COORDINATE
DETAILS WITH CMT/BOS LIAISON

PRELIMINARY
PLAN
APPROVED:
BH
1/12/15

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
BILL DREHER (608) 266-8489
CONSULTANT:
ADRIAN KIDARSA (608) 828-8207

STATE PROJECT NUMBER

1003-10-84

DESIGN DATA

LIVE LOAD

DESIGN RATING: HL-93
INVENTORY RATING FACTOR: X.XX
OPERATIONAL RATING FACTOR: X.XX
WISCONSIN MAX STANDARD PERMIT VEHICLE LOAD: XXX KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING
SURFACE OF 20 PSF.

STRUCTURE IS RATED FOR A POLYMER OVERLAY OF
5 PSF. THE POLYMER OVERLAY WILL BE APPLIED
TO THE ENTIRE DECK UNDER A FUTURE CONTRACT.

ULTIMATE DESIGN STRESSES

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
36" PRE-STRESSED GIRDER $f_c = 6,000$ PSI
CONCRETE MASONRY $f_c = 6,000$ PSI
STRANDS 0.5-INCH DIA.
ULTIMATE TENSILE STRENGTH $f_{pu} = 270,000$ PSI

FOUNDATION DATA

ABUTMENTS AND PIERS TO BE SUPPORTED ON PILING
CIP 12 3/4 X 0.25-INCH AND DRIVEN TO A REQUIRED
DRIVING RESISTANCE OF 160 TONS** PER PILE AS
DETERMINED BY THE MODIFIED GATES DYNAMIC
FORMULA. ESTIMATED 60 FEET LONG AT ABUTMENTS,
60 FEET LONG AT PIER 4 AND 80 FEET LONG AT
PIERS 1, 2 & 3. PRE-BORING ESTIMATED TO BE 30
FEET AT SOUTH ABUT. AND 25 FEET AT NORTH ABUT.

**THE FACTORED AXIAL RESISTANCE OF PILES IN
COMPRESSION USED FOR DESIGN IS THE REQUIRED
DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE
FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE
DRIVEN PILE CAPACITY.

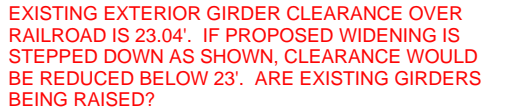
TRAFFIC DATA

IH 39/90
A.D.T. (2020) = 65,100
A.D.T. (2040) = 94,300
R.D.S. = 70 MPH
CTH 0
A.D.T. (2015) = 3,900
A.D.T. (2040) = 6,300
R.D.S. = 50 MPH

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION AND PROFILES
3. GENERAL NOTES AND QUANTITIES
4. SUBSURFACE EXPLORATION
5. SUBSURFACE EXPLORATION
6. CONSTRUCTION STAGING
7. CONSTRUCTION STAGING

NO.	DATE	REVISION	BY
AECOM			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED _____ CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-53-230			
NB IH 39/90 OVER CTH 0 & WSOR			
COUNTY	ROCK	TOWN/CITY/VILLAGE	LA PRAIRIE
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	AK	DESIGN CK'D.	TR
DRAWN BY	TAW	PLANS CK'D.	TR
GENERAL PLAN			SHEET 1 OF 7

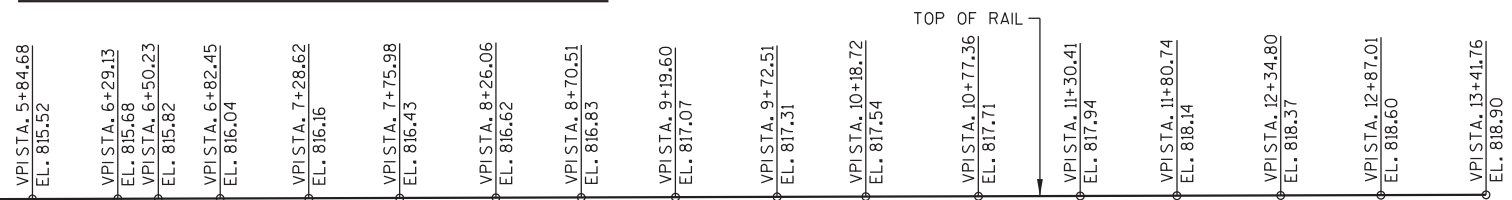


B-53-230

NOT CONSISTENT WITH PLAN —
AND PROFILE, PLEASE CONFIRM

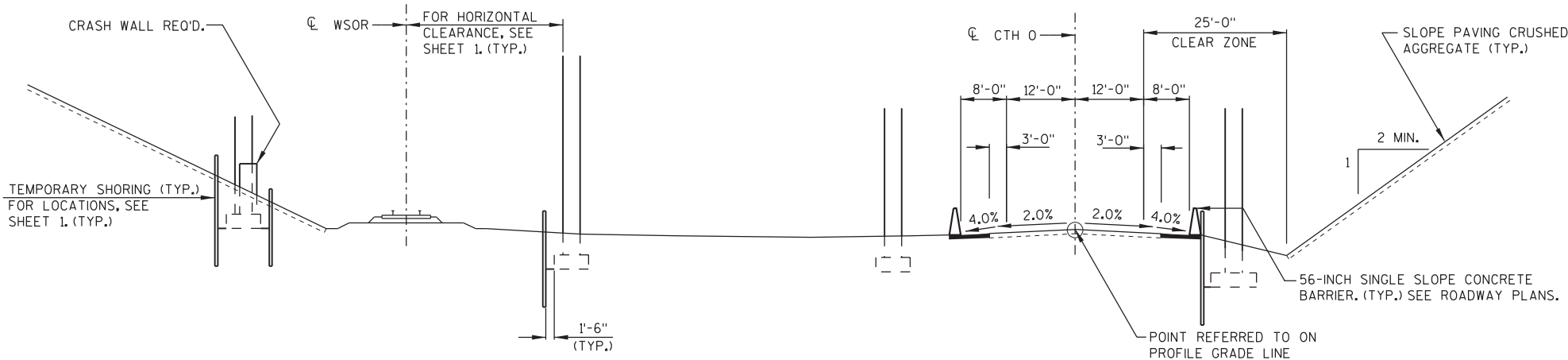
(LOOKING NORTH)

- 843.29



NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-53-230					
		DRAWN BY	TAW	PLANS CK'D.	TR
CROSS SECTIONS AND PROFILES				SHEET 2 OF 7	

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PLOT DATE: 11/14/2014 PLOT TIME: 7:50:14 AM



TYPICAL SECTION THRU CTH 0 & WSOR

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK & APPROACH SLAB AND THE FRONT FACE AND THE TOP OF THE PARAPET.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

THE EXISTING STRUCTURE (B-53-230) IS A 5 SPAN PRESTRESSED CONCRETE GIRDER BRIDGE, 281.8' LONG x 59'±" WIDE. THE SUBSTRUCTURE AND SUPER-STRUCTURE SHALL BE WIDENED BY ADDING 3 GIRDER LINES TO THE OUTSIDE SHOULDER AND ADDING 1 GIRDER LINE TO THE INSIDE SHOULDER SIDE OF THE BRIDGE.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL PLANS, ~~THEREFORE, PRIOR TO THERE ACCEPTANCE THE CONTRACTOR SHALL FIELD VERIFY.~~ **OMIT PER WBM 6.3.2.1.2**

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

CLEAN, STRAIGHTEN, AND EXTEND EXISTING BAR STEEL REINFORCEMENT 24 BAR DIAMETERS INTO NEW CONSTRUCTION WHERE APPLICABLE.

ROUGHEN SURFACE OF CONCRETE 1/4" MIN. DEEP AT ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT AT ABUTMENTS AND PIERS.

THE EXISTING ABUTMENTS AND PIERS TO REMAIN IN PLACE AS SHOWN AND INCORPORATED INTO NEW CONSTRUCTION.

THE PROPOSED GRADE SEPARATION PROJECT SHALL NOT INCREASE THE QUANTITY AND/OR CHARACTERISTICS OF THE FLOW IN THE RAILROAD'S EXISTING DITCHES AND/OR DRAINAGE STRUCTURES.

AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

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

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

CLARIFY WHICH COMPONENTS TO BE HPC.

ADD FOLLOWING NOTES FROM 6.3.2.1.2:
-VARIATIONS TO NEW GRADE LINE.....
-THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE.....

305.0120 BASE AGGREGATE DENSE 1 1/4- INCH TON

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	STA. BID ITEM	UNIT	SOUTH APPROACH	SOUTH ABUTMENT	PIER 1	PIER 2	PIER 3	PIER 4	NORTH ABUTMENT	NORTH APPROACH	SUPER.	TOTALS
203.0200	REMOVING OLD STRUCTURE 736+50	LS										1
203.0225.S	DEBRIS CONTAINMENT STRUCTURE B-53-230	LS										1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-53-230	LS										1
210.0100	BACKFILL STRUCTURE	CY										
502.0100	CONCRETE MASONRY BRIDGES	CY										
502.3200	PROTECTIVE SURFACE TREATMENT	SY										
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH										
502.5020	MASONRY ANCHORS TYPE L NO. 8 BARS	EACH										
503.0136	PRESTRESSED GIRDER TYPE I 36-INCH	LF										
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB										
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB										
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH										
506.4000	STEEL DIAPHRAGMS B-53-230	EACH										
509.1500	CONCRETE SURFACE REPAIR	SF										
511.1200	TEMPORARY SHORING B-53-230	SF										
514.0450	FLOOR DRAINS TYPE WF	EACH										
514.2608	DOWNSPOUT 8-INCH	LF										
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY										
550.0010	PRE-BORING UNCONSOLIDATED MATERIALS	LF										
550.2124	PIILING CIP CONCRETE 12 3/4 X 0.25-INCH	LF										
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY										
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF										
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH										
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF										
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF										
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH										
SPV.0035	HPC MASONRY STRUCTURES	CY										
SPV.0165	LONGITUDINAL DECK GROOVING	SF										
SPV.0085	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB										
	NON-BID ITEMS											
	FILLER	SIZE										1/2" & 3/4"

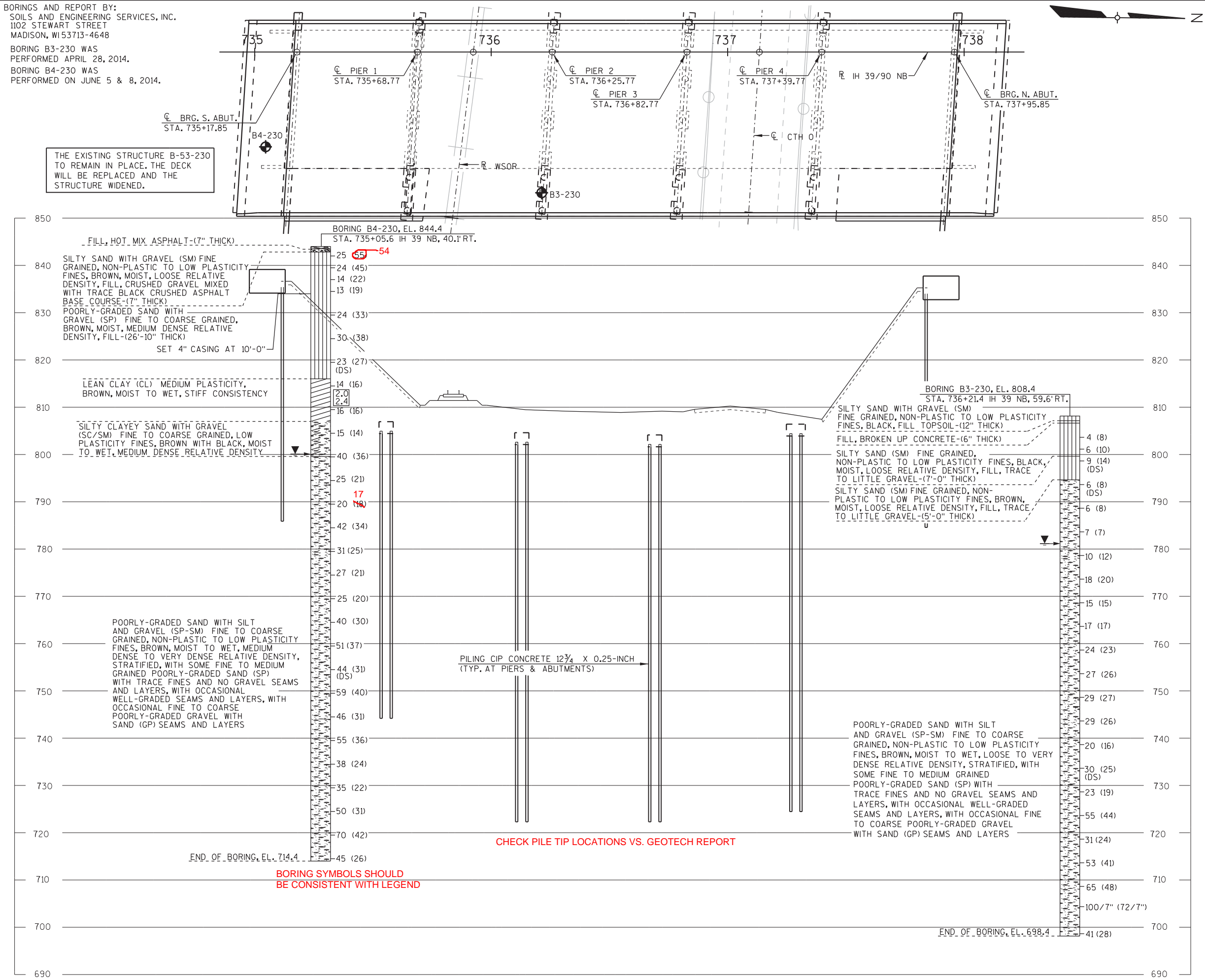
INCLUDE ARCH. SURFACE TREATMENT AND STAINING? PER WBM STD. 38.01, SPV REQUIRED FOR TEMPORARY SHORING ADJACENT TO RAILROAD

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-53-230			
	DRAWN BY	TAW	PLANS CK'D. TR
GENERAL NOTES & QUANTITIES		SHEET 3 OF 7	

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PLOT DATE: 11/14/2014 PLOT TIME: 7:50:17 AM BATCH PRINT SHEET 4 OF 7

8



STATE PROJECT NUMBER

1003-10-84

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

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6"
PENETRATION
PROBING TAKEN WITH
A 350# WT.
FALLING 18" ON A 2"
O.D. POINT.

LEGEND OF BORING

ELEV. BORING NO.
STA.

UNCONFINED STRENGTH 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"

WASH SAMPLE

SHELBY TUBE S.T.

GROUND WATER ELEVATION

NO GROUND WATER OBSERVED ABOVE THIS ELEVATION

SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

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 CAGED 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.

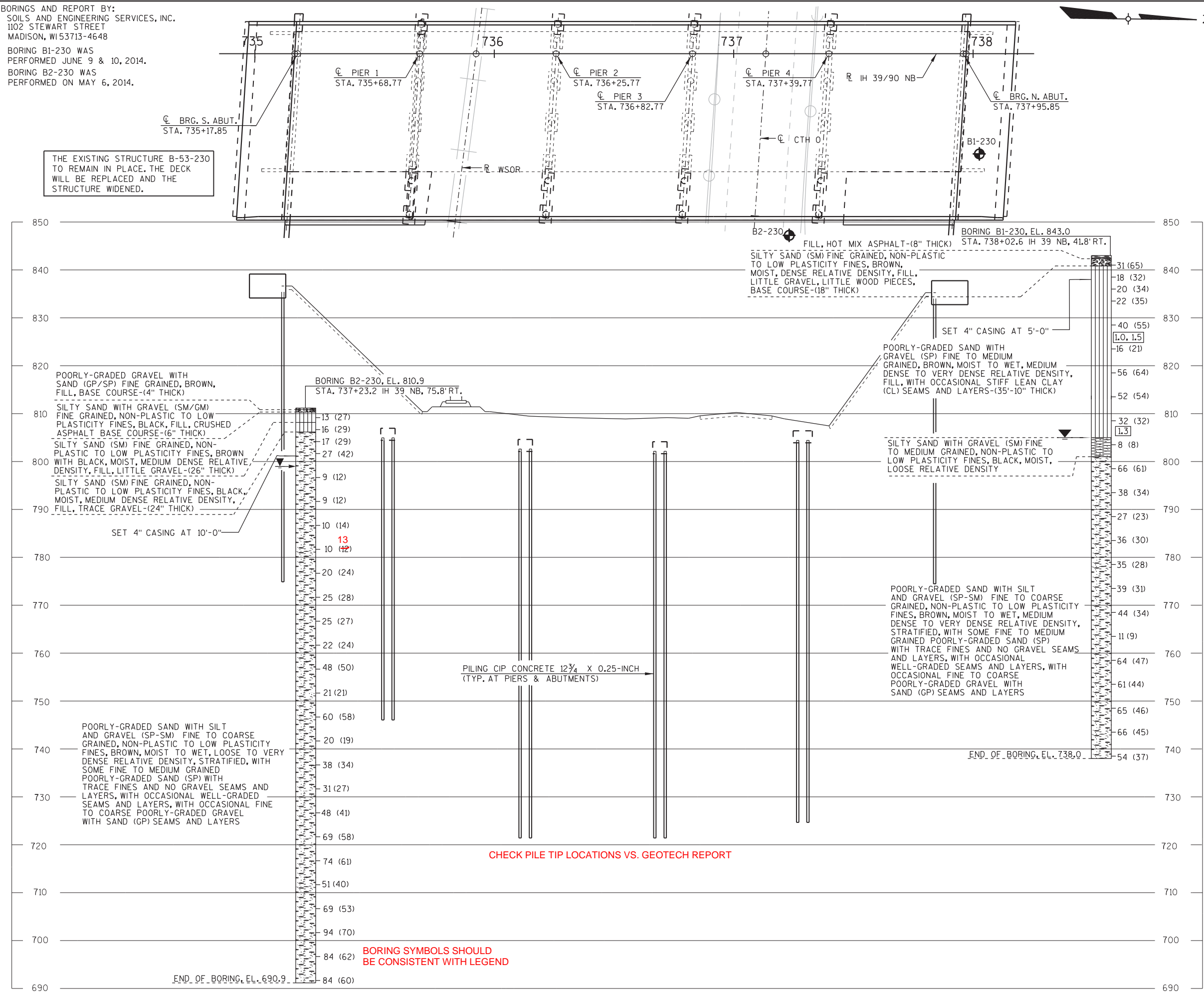
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-53-230			
DRAWN BY T.A.W.		PLANS CK'D. TR	
SUBSURFACE EXPLORATION			SHEET 4 OF 7

FILE= SCALE =

8

BORING B1-230 WAS
PERFORMED JUNE 9 & 10, 2014.
BORING B2-230 WAS
PERFORMED ON MAY 6, 2014.

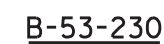
THE EXISTING STRUCTURE B-53-230
TO REMAIN IN PLACE. THE DECK
WILL BE REPLACED AND THE
STRUCTURE WIDENED.



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.

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-53-230			
DRAWN BY T.A.W.		PLANS CK'D. TR	
SUBSURFACE EXPLORATION		SHEET 5 OF 7	

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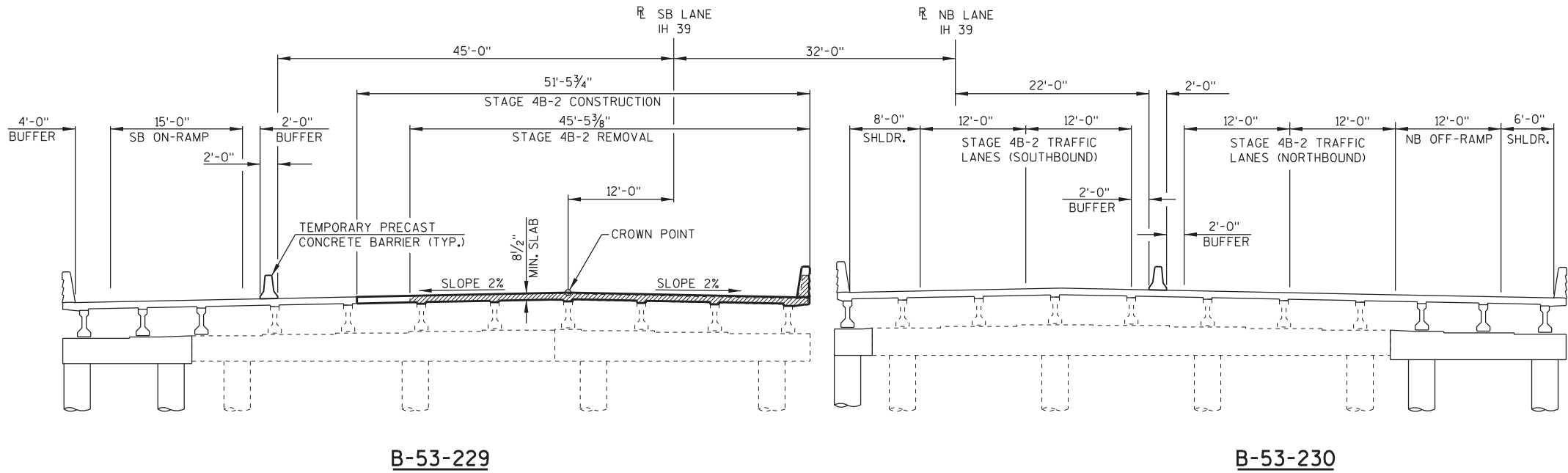


B-53-230

NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-53-230					
			DRAWN BY	TAW	PLANS CK'D.
CONSTRUCTION STAGING				SHEET 6 OF 7	

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PLOT DATE: 11/14/2014 BATCH PRINT SHEET 7 OF 7 PLOT TIME: 7:50:22 AM



STAGE 4B-2 - REMOVAL & CONSTRUCTION
(LOOKING NORTH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-53-230			
DRAWN BY TAW		PLANS CK'D. TR	
CONSTRUCTION STAGING		SHEET 7 OF 7	