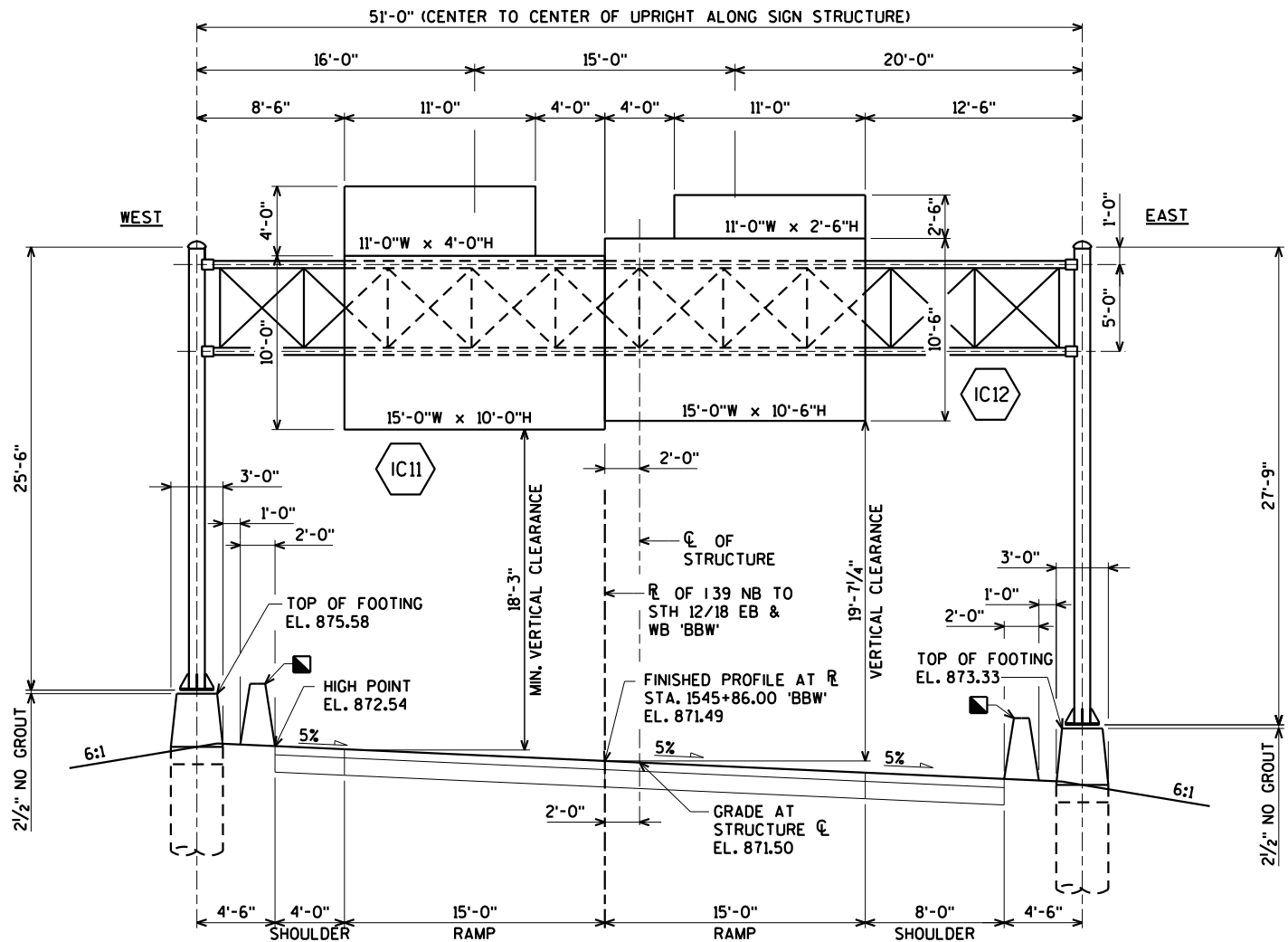


LIST OF DRAWINGS

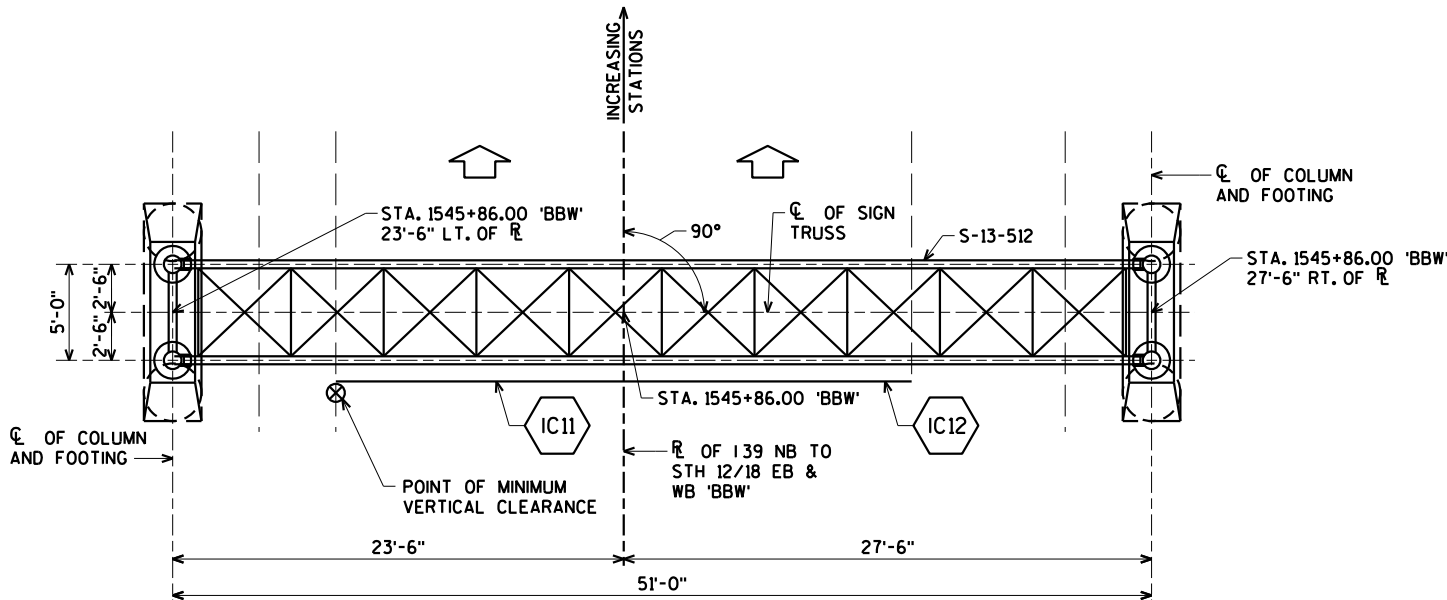
1. PRELIMINARY PLAN  
2. DESIGN DATA  
3. SUBSURFACE EXPLORATION



SIGN BRIDGE SUPPORT ELEVATION VIEW S-13-512

(STA. 1545+86 'BBW' - LOOKING NORTH)  
LOOKING AT FRONT FACE OF SIGN

CONCRETE BARRIER TYPE S42.  
SEE ROADWAY DRAWINGS



PLAN

FOR DESIGN DATA  
SEE SHEET 2

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
<b>AYRES ASSOCIATES</b> 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED _____ DATE _____ CHIEF STRUCTURES DESIGN ENGINEER			
<b>STRUCTURE S-13-512</b>			
I-39/90 NB OFF-RAMP TO USH 12/18 EB & WB OVERHEAD SIGN BRIDGE			
COUNTY	DANE	TOWN/CITY/VILLAGE	MADISON
DESIGN SPEC. STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS			
DESIGNED BY	CBM	DESIGN CK'D.	DRAWN BY
BY			CJM
PLANS CK'D.			
<b>PRELIMINARY PLAN</b>			SHEET 1 OF 3

BRIDGE OFFICE CONTACT:  
WILLIAM DREHER  
(608)-266-8489

CONSULTANT CONTACT:  
ARLEN BEAUDETTE  
(715)-834-3161

10/8/2019  
PENTABLE:BRReqd..shd..util..tbl

STATE PROJECT NUMBER

1007-12-80

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	
641.6600.701	SIGN BRIDGE STRUCTURE S-13-512	LS	

FOUNDATION DATA

ALLOWABLE END BEARING PRESSURE = 2.0 TONS/SQ. FT.

DESIGN DATA

SIGN STRUCTURE DESIGN IS BASED ON THE FOLLOWING:

SIGN AREA = 428 SQ. FEET  
MAX. SIGN DEPTH = 14 FEET

THE WEIGHT OF ADDITIONAL SIGN PANEL AND BRACKETS IS EQUIVALENT TO 3.0 PSF ASSUMED EVENLY DISTRIBUTED TO SIGN AREA.

DESIGNED ACCORDING TO THE 6TH EDITION AND INTERIM REVISIONS OF AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS".

DEAD LOAD = 3 PSF OF SIGN, WT. OF SUPPORTING STRUCTURE  
LIVE LOAD = N/A  
ICE LOAD = 3 PSF TO ONE FACE OF SIGN AND AROUND SURFACE OF MEMBERS.  
WIND PRESSURE = 90 MPH (3-SECOND GUST) TO SIGN AREA AND EXPOSED MEMBERS.  
FATIGUE - NOT APPLICABLE  
WIND COMPONENTS  
COMBINATION 1  
COMBINATION 2

	NORMAL	TRANSVERSE
	1.0	0.2
	0.6	0.3

GROUP LOADS  
1. DEAD  
2. DEAD + WIND  
3. DEAD + ICE + 1/2(WIND)\*

% OF ALLOWABLE STRESS
100
133
133

\*MIN. VALUE OF 25 PSF FOR GROUP 3.

MATERIAL PROPERTIES

CONCRETE MASONRY \_\_\_\_\_ f'c = 3,500 p.s.i.  
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) \_\_\_\_\_ fy = 60,000 p.s.i.  
COLUMNS & CHORD PIPES (API 5L, GRADE X42, PSL-2) \_\_\_\_\_ fy = 42,000 p.s.i. \*\*  
STRUCTURAL ANGLES, PLATES, & BARS (ASTM A709, GRADE 36) \_\_\_\_\_ fy = 36,000 p.s.i.  
ANCHOR RODS (ASTM F1554, GRADE 55) \_\_\_\_\_  
HEAVY HEX NUTS (ASTM A563A), WASHERS (ASTM F436) \_\_\_\_\_ fy = 55,000 p.s.i.  
HIGH STRENGTH BOLTS (ASTM A325) \_\_\_\_\_ fy = 92,000 p.s.i.

STRUCTURAL MEMBERS GALVANIZED (ASTM A123)  
HARDWARE GALVANIZED (ASTM A153, CLASS C)

\*\* AN ALTERNATE MATERIAL MAY BE SUBSTITUTED, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION. SEE SECTION 39.3 IN THE BRIDGE MANUAL FOR ACCEPTABLE MATERIAL.

TRAFFIC DATA

A.A.D.T. = 10,830 (2021)  
A.A.D.T. = 12,800 (2040)  
R.D.S. = 60 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

SIGN BRIDGE IDENTIFICATION PLAQUE SHALL BE INCIDENTAL TO "SIGN BRIDGE STRUCTURE S-13-512".

ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIA. A325 GALVANIZED BOLTS.

FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, HS. BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D11.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT THE TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF THE BRIDGE, 2'-0" DEEPER THAN C TO C OF CHORDS. SIGNS SHALL BE AS DESIGNATED IN PLANS.

THE STRUCTURE MUST BE ASSEMBLED IN THE SHOP TO ASSURE FIT UP PER SECTION 641.33 OF THE WISDOT STANDARD SPECIFICATIONS.

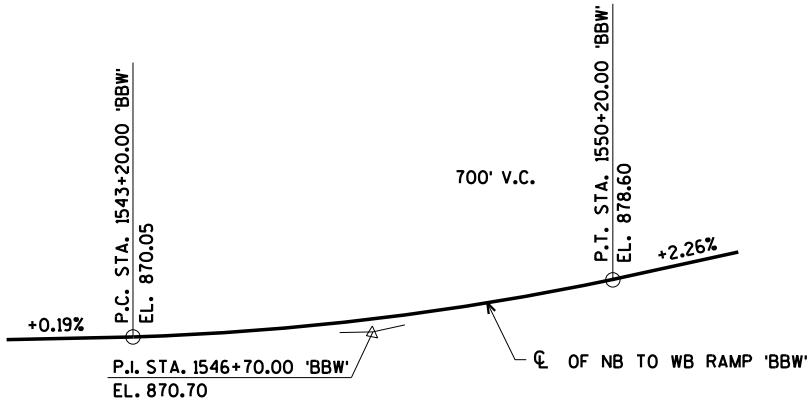
CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO FABRICATION OF STRUCTURE.

SEE SIGN PLATE NO. A4-6 OF THE SIGN PLATE MANUAL FOR INSTRUCTION ON CENTERING SIGN VERTICALLY ON TRUSS.

CONTRACTOR SHALL VERIFY UTILITY CONFLICTS PRIOR TO CONSTRUCTION OF FOOTINGS.

EXACT LOCATION OF SIGN BRIDGE SHALL BE DETERMINED BY THE REGION TRAFFIC ENGINEER.

LOCATE SIGN PANELS OVER THE APPROXIMATE LANE BASED ON SIGN PANEL ARROWS AND LANE CONFIGURATION.



PROFILE GRADE LINE  
(I-39 XSB)

BENCH MARK:  
CHISELED SQUARE ON EAST SIGN BASE  
STA. 1149+91.00 'XNB', 59-FT. RT.  
EL. 874.38

8

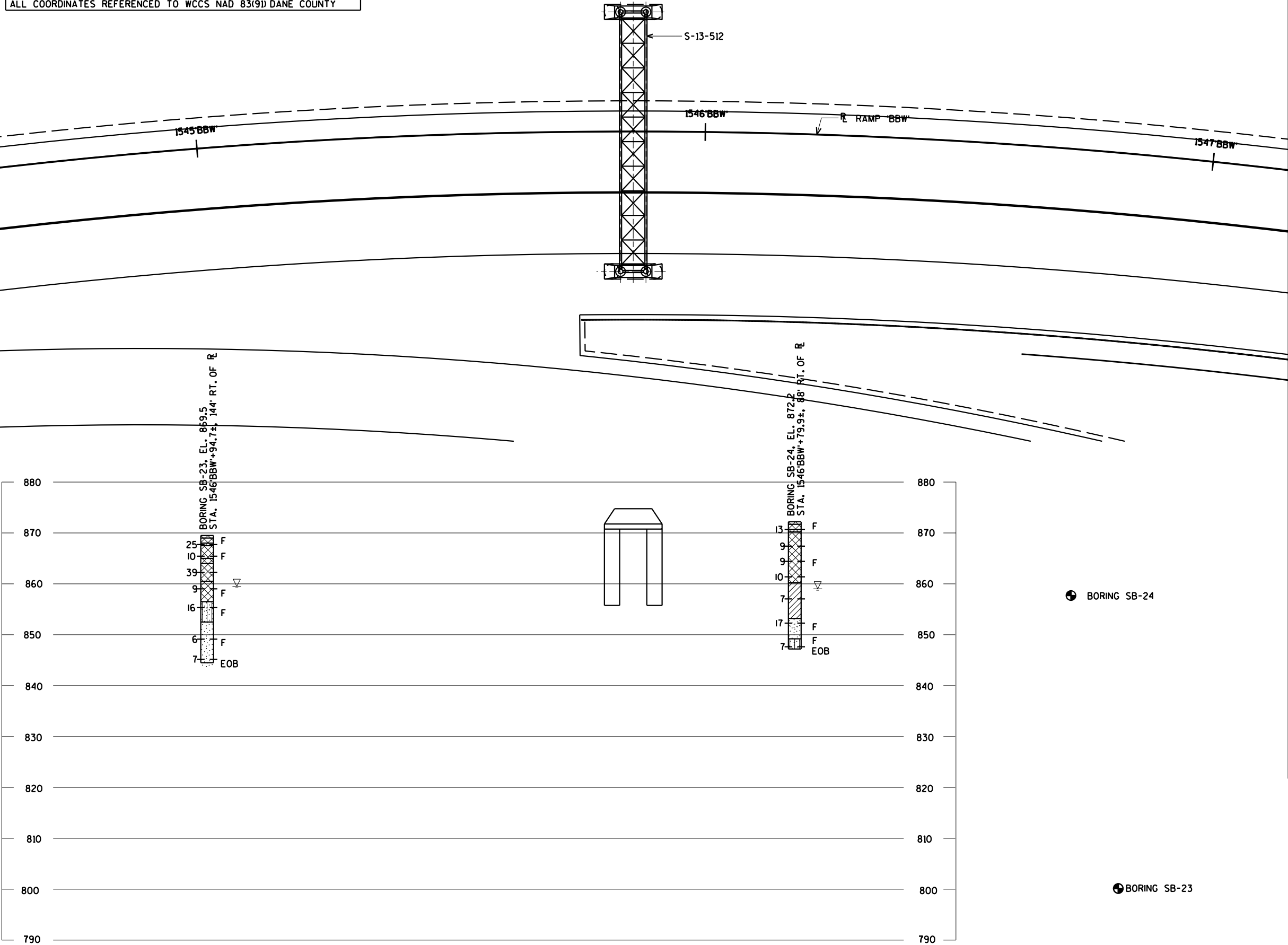
8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-13-512			
DRAWN BY		CJM	PLANS CK'D.
DESIGN DATA			SHEET 2 OF 3

ORIGINAL PLANS PREPARED BY  
**AYRES ASSOCIATES**  
3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
www.AyresAssociates.com

10/8/2019  
PENTABLE:BReau\_shd\_util.tbl

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-23	12/18/2018	471140.91	850231.01
SB-24	12/18/2018	471126.1	850174.61
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			



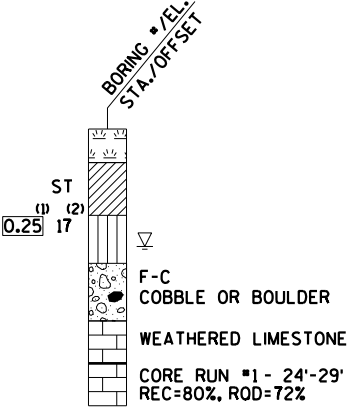
STATE PROJECT NUMBER

1007-12-80

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			
STRUCTURE S-13-512			
DRAWN BY		CJM	PLANS CK'D.
SUBSURFACE EXPLORATION		SHEET 3 OF 3	