

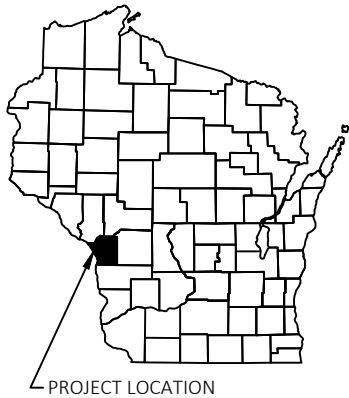
PROJECT ID:
WITH: 7272-00-72

COUNTY:
LA CROSSE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS =



DESIGN DESIGNATION 7272-00-72

A.A.D.T.	2023	=	200
A.A.D.T.	2043	=	210
D.H.V.		=	XX
D.D.		=	XXX
T.		=	XXX
DESIGN SPEED		=	30
ESALS		=	XXX

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE

GRADE LINE

ORIGINAL GROUND

MARSH OR ROCK PROFILE
(To be noted as such)

SPECIAL DITCH

GRADE ELEVATION

CULVERT (Profile View)

UTILITIES

ELECTRIC

FIBER OPTIC

GAS

SANITARY SEWER

STORM SEWER

TELEPHONE

WATER

UTILITY PEDESTAL

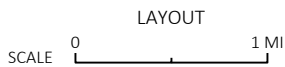
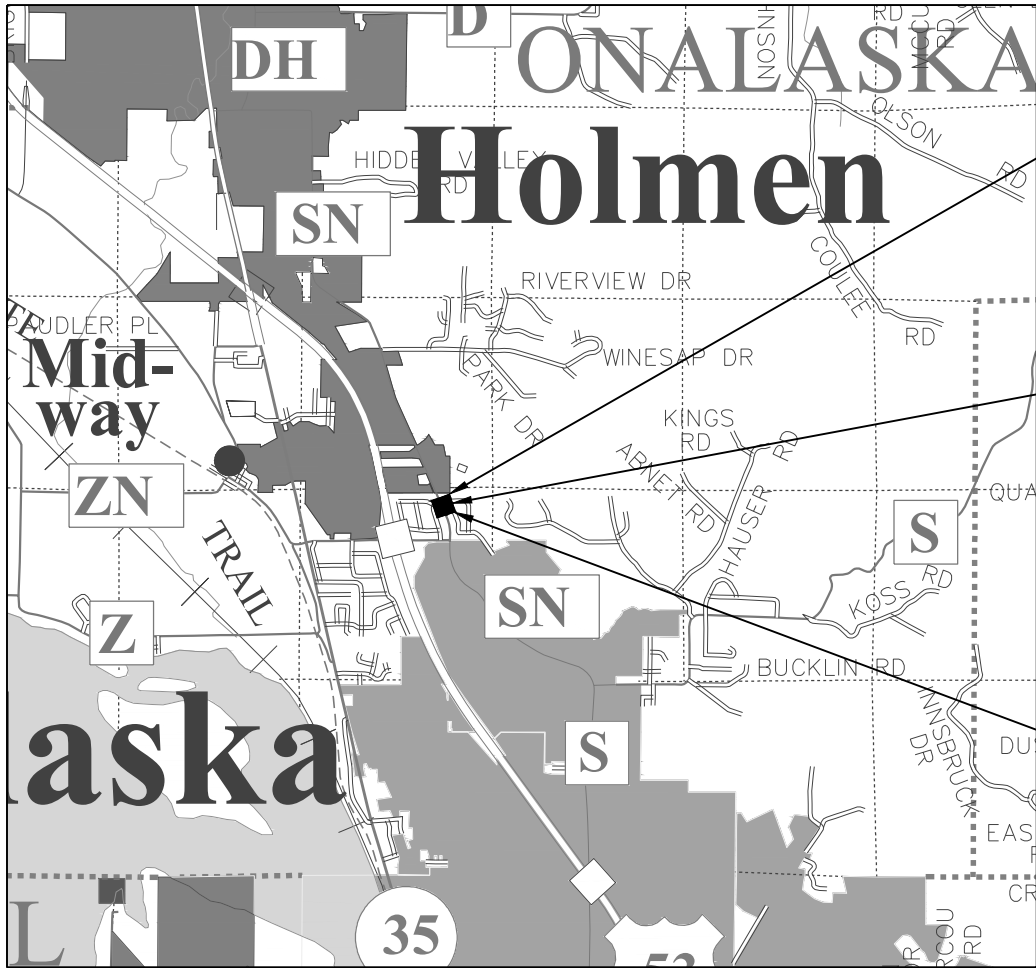
POWER POLE

TELEPHONE POLE

	ROCK
	LABEL
	95.36
	E
	FO
	G
	SAN
	SS
	T
	W



T-5-N



TOTAL NET LENGTH OF CENTERLINE = 0.0228 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), LA CROSSE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T OF ONALASKA, MOHICAN TRAIL

BR SAND LAKE COULEE CR BR B-32-0584

LOC STR
LA CROSSE COUNTY

STATE PROJECT NUMBER
7272-00-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7272-00-72		

PRELIMINARY

ACCEPTED FOR

LA CROSSE COUNTY

Date (Signature and Title of Official)

ORIGINAL PLANS PREPARED BY

WESTBROOK
Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WISCONSIN 53588
PHONE (608) 588-7866
FAX (608) 588-7954

DATE: (Professional Engineer Signature)

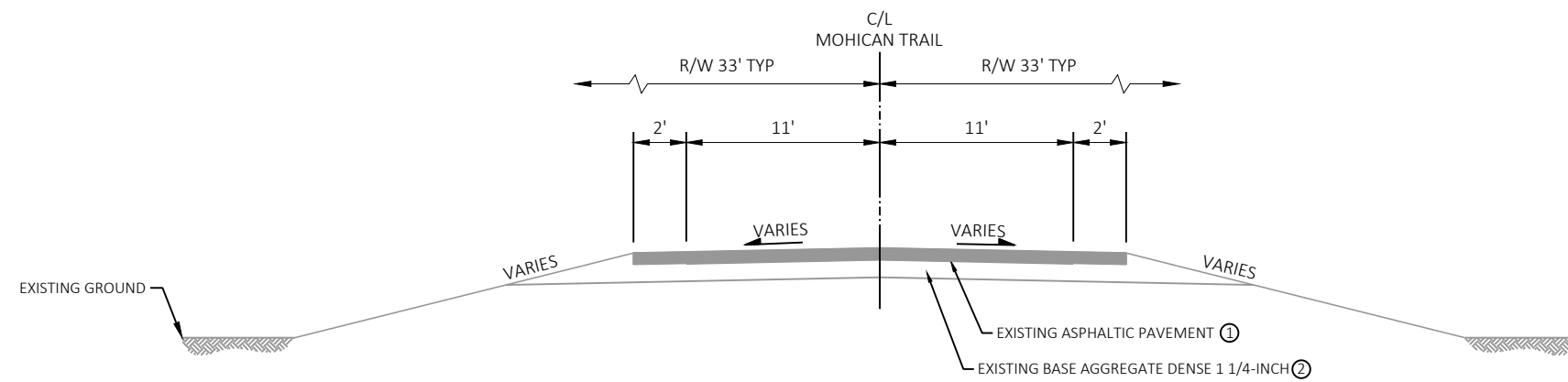
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	WESTBROOK ASSOCIATED ENGINEERS
Designer	WESTBROOK ASSOCIATED ENGINEERS
Project Manager	BRANDAN BURGER, P.E.
Regional Examiner	SW REGION
Regional Supervisor	OSCAR WINGER, P.E.

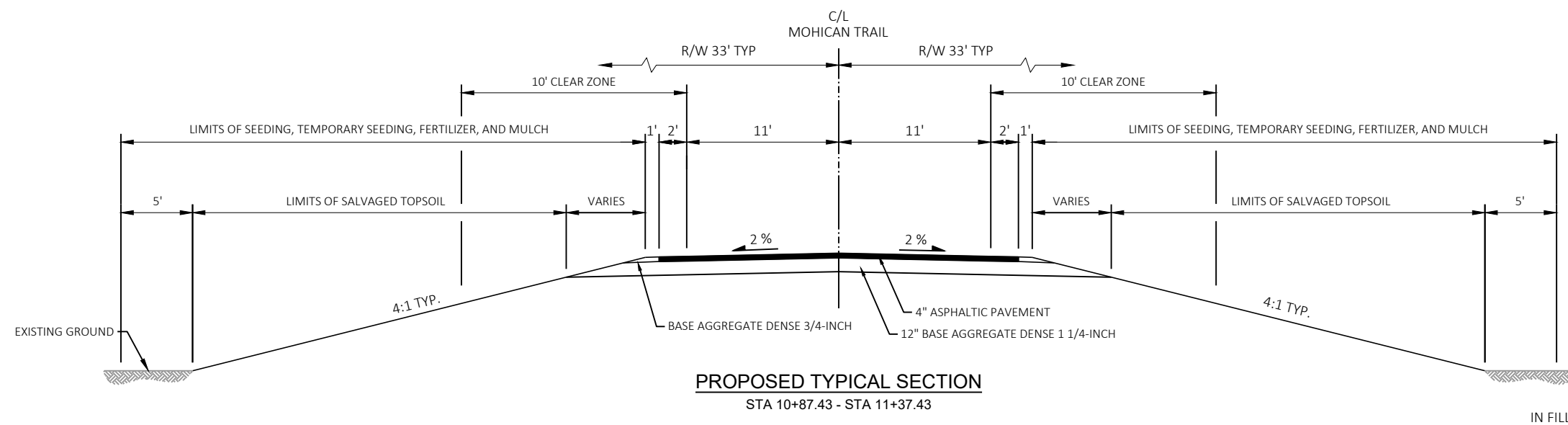
APPROVED FOR THE DEPARTMENT

DATE: (Signature)

E



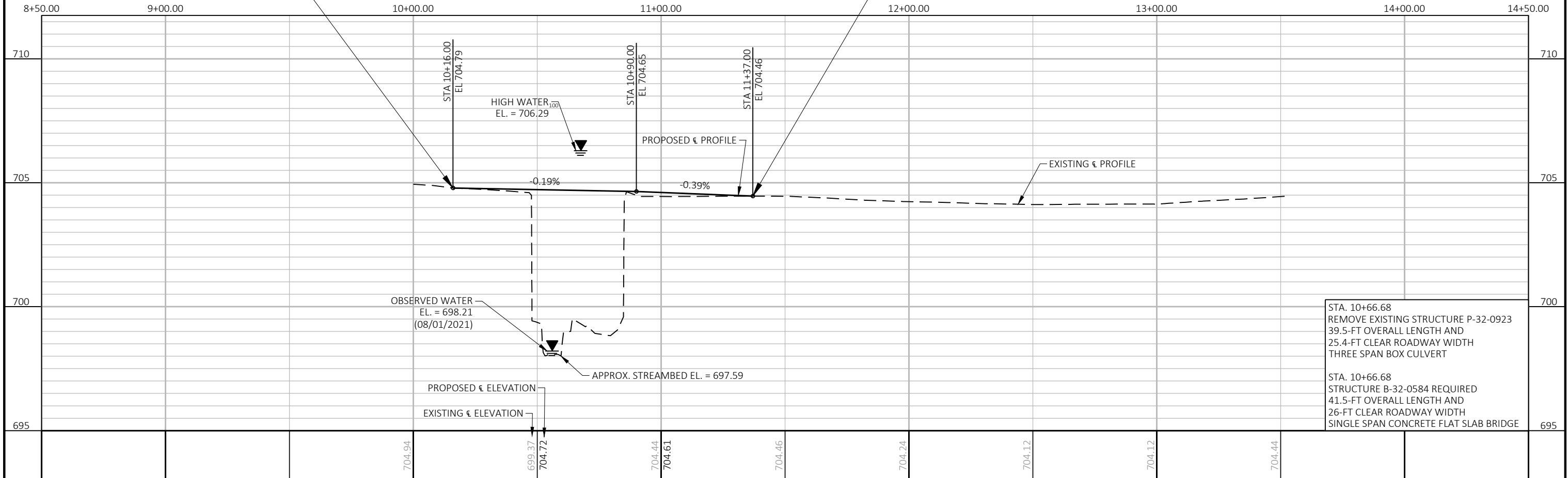
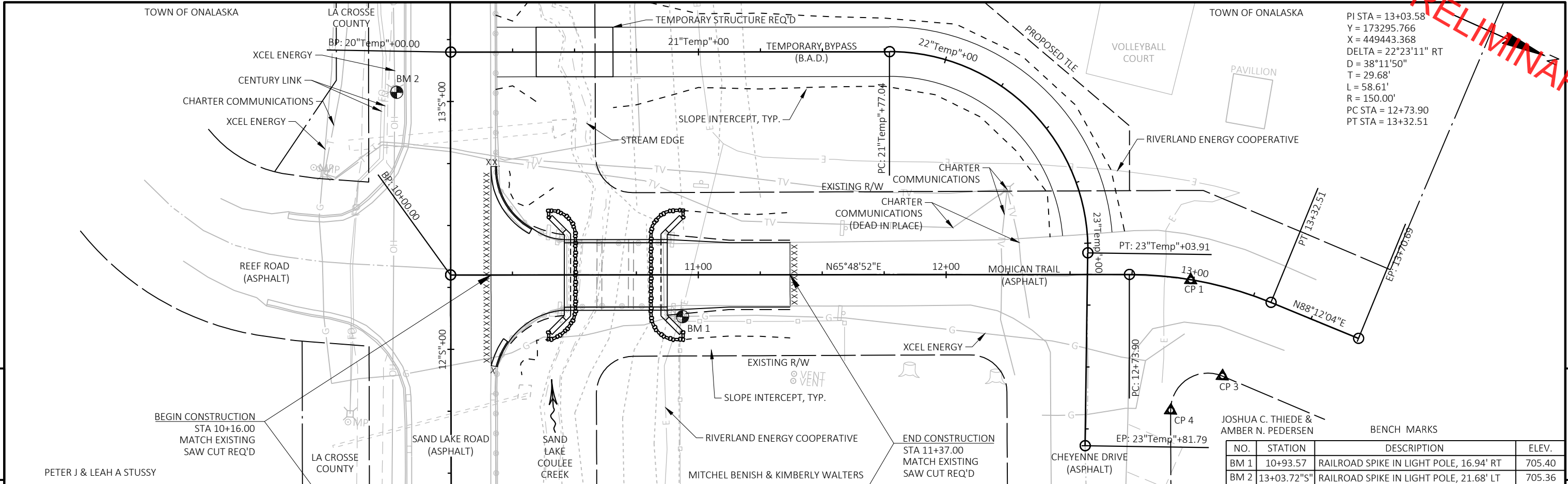
EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION

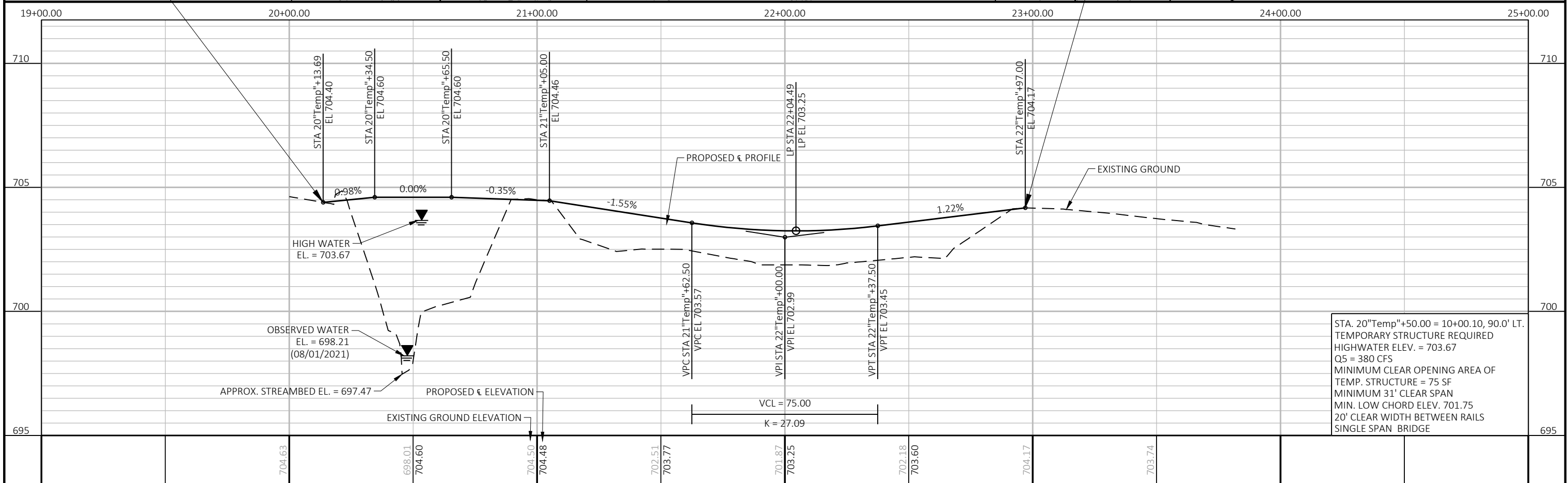
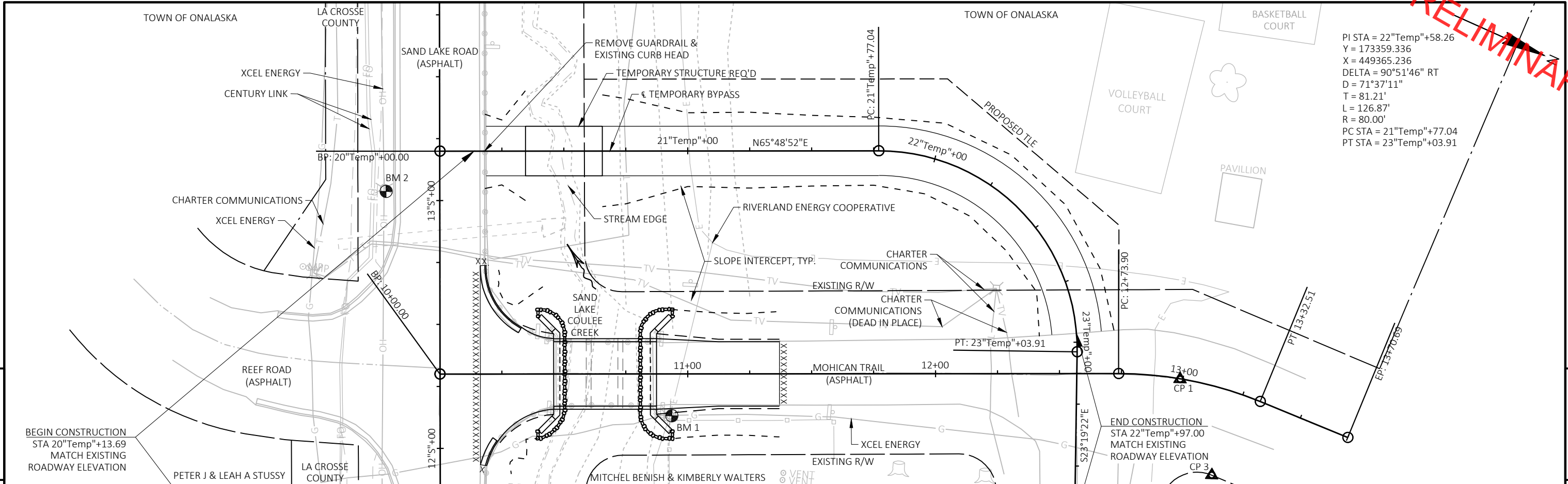
STA 10+87.43 - STA 11+37.43

PRELIMINARY



PROJECT NO:	7272-00-72	HWY:	MOHICAN TRAIL	COUNTY:	LA CROSSE	PLAN & PROFILE:	MOHICAN TRAIL	SHEET	E
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PRELIMINARY



PROJECT NO:	7272-00-72	HWY:	MOHICAN TRAIL	COUNTY:	LA CROSSE	PLAN & PROFILE:	TEMPORARY BYPASS	SHEET	E
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STATE PROJECT NUMBER
7272-00-72

PRELIMINARY

DESIGN DATA

LIVE LOAD:

DESIGN LOADING ————— HL-93
INVENTORY RATING FACTOR ——— RF=XXX
OPERATING RATING FACTOR ——— RF=XXX
WISCONSIN STANDARD PERMIT
VEHICLE RATING (WIS.-SPV): — XXX KIPS

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

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB ——— f'_c = 4,000 P.S.I.
ALL OTHER ————— f'_c = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL
REINFORCEMENT ————— f_y = 60,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE** AT W. ABUT. AND 180 TONS PER PILE** AT E. ABUT. AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 75 FT PILE LENGTHS AT W. ABUT. AND 70 FT PILE LENGTHS AT E. 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 DYNAMIC FORMULA TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA:

100 YEAR DESIGN FREQUENCY:
Q₁₀₀ ————— 1,060 C.F.S.
Q₁₀₀ (THRU BRIDGE) ——— 458 C.F.S.
Q₁₀₀ (ROAD) ————— 602 C.F.S.
DRAINAGE AREA ————— 5.2 SQ. MI.
BRIDGE WATER AREA ——— 134 SQ. FT.
BRIDGE VELOCITY ————— 3.42 F.P.S.
HIGH WATER₁₀₀ EL. ——— 706.29 FT.
SCOUR CRITICAL CODE ——— 5
Q₂ ————— 196 C.F.S.
Q₂ ELEVATION ————— 701.97 FT.
Q₂ VELOCITY ————— 1.76 F.P.S.

ROADWAY OVERTOPPING:
OVERTOPPING Q ————— 560 C.F.S.
OVERTOPPING EL. ————— 704.62 FT.
OVERTOPPING Q FREQ. ——— 12 YR.

TEMPORARY STRUCTURE REQUIREMENTS:
HIGH WATER₅ EL. ————— 703.67 FT.
Q₅ ————— 380 C.F.S.
Q₅ VELOCITY ————— 5.09 F.P.S.
MINIMUM CLEAR OPENING
AREA OF TEMP. STR. — 75 SQ. FT.
MINIMUM CLEAR SPAN ——— 31 FT.
MINIMUM LOW CHORD EL. — 701.75 FT.
MINIMUM CLEAR WIDTH ——— 20 FT.

NOTES

EXCAVATION AS INDICATED IN THE HATCH AREAS, TO BE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-32-584".

G01 BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-32-584". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

G02 "GEOTEXTILE TYPE DF SCHEDULE A" LIMITS. EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT FOR THE ENTIRE ABUTMENT BODY LENGTH.

G03 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "ABUTMENT DETAILS" SHEET.

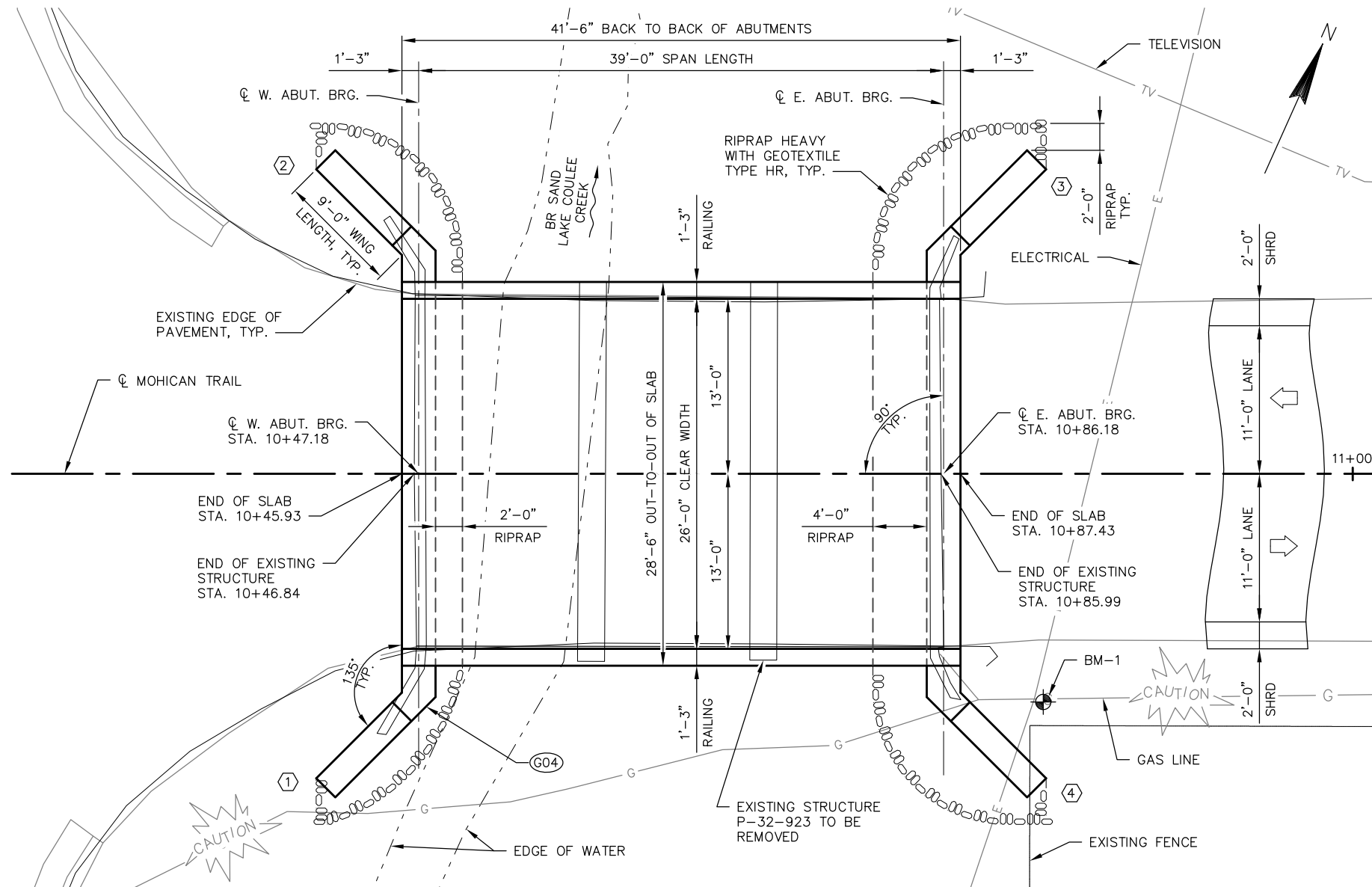
G04 NAME PLATE REQUIRED AND BENCH MARK CAP (WHEN SUPPLIED). FOR LOCATION SEE "ABUTMENT" SHEET.

* LOCATION OF BEAM GUARD ATTACHMENT

INDICATES WING NUMBER

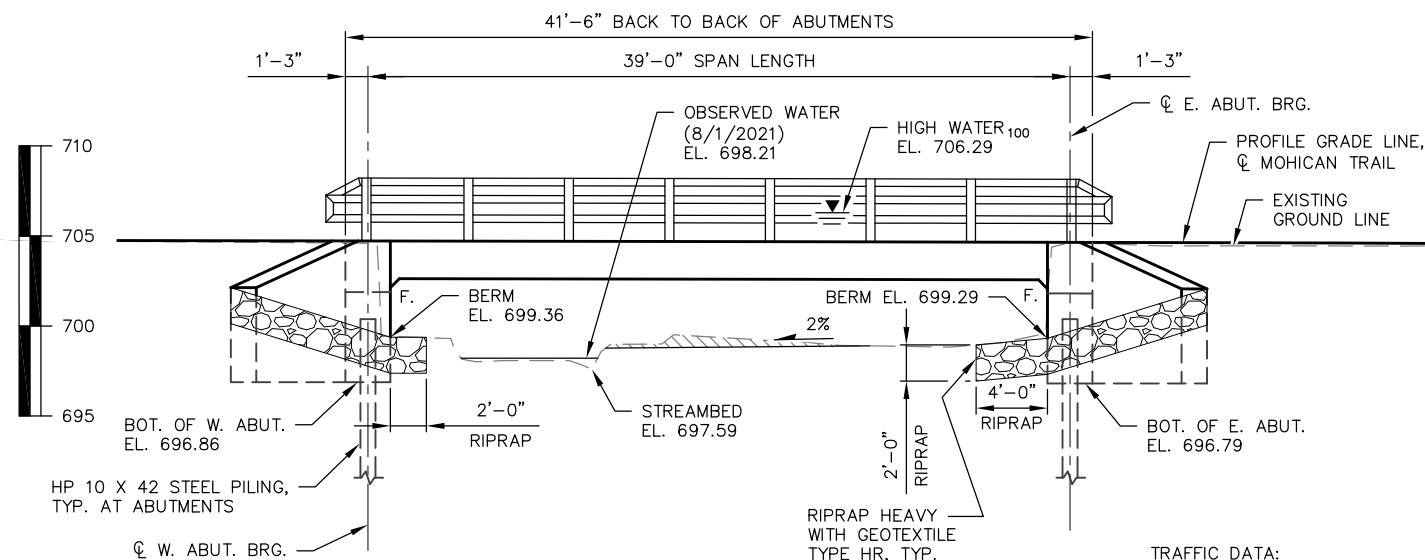
LIST OF DRAWINGS

- GENERAL PLAN
- CROSS SECTION, GENERAL NOTES & QUANTITIES
- SUBSURFACE EXPLORATION



PLAN B-32-584

(SINGLE SPAN CONCRETE FLAT SLAB BRIDGE)

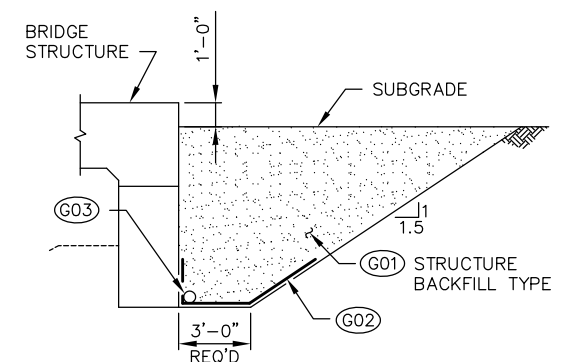


ELEVATION

(NORMAL TO BR SAND LAKE COULEE CREEK, LOOKING NORTH)

TRAFFIC DATA:

MOHICAN TRAIL
A.A.D.T. (2023) ——— 200
A.A.D.T. (2043) ——— 210
DESIGN SPEED ——— 30 M.P.H.



ABUTMENT BACKFILL DETAIL

(TYPICAL AT BOTH ABUTMENTS)

BENCH MARKS

NO.	STATION/OFFSET	DESCRIPTION	ELEVATION
BM-1	10+93.57, 16.95' RT.	SPIKE IN LIGHT POLE	705.40
BM-2	13+03.72'S, 21.68' LT.	SPIKE IN LIGHT POLE	705.36

HORIZONTAL DATUM AND ADJUSTMENT: NAD 83 (2011)
VERTICAL DATUM AND ADJUSTMENT: NAVD 88 (2012)
COORDINATE REFERENCE SYSTEM: WCCS LA CROSSE CO.

BRIDGE OFFICE CONTACT
AARON BONK, P.E.
(608) 261-0261

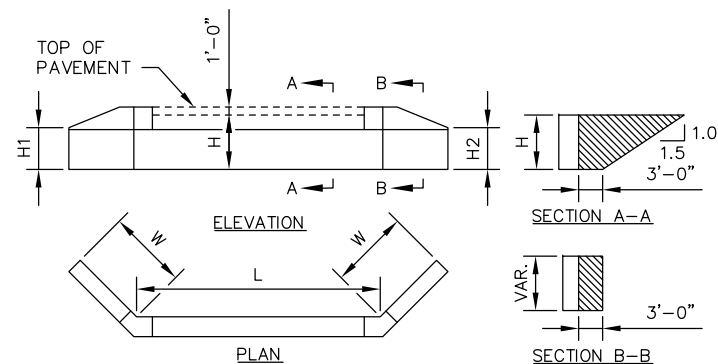
CONSULTANT CONTACT
ANDY KNUTSON, P.E., S.E.
(608) 588-7866

NO.	DATE	REVISION	BY
WESTBROOK Associated Engineers, Inc.			
619 EAST HOXIE STREET P.O. BOX 429 SPRING GREEN, WI 53588 PHONE (608) 588-7866 FAX (608) 588-7954			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED _____ CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-32-584			
MOHICAN TRAIL OVER BR SAND LAKE COULEE CREEK			
COUNTY	LA CROSSE	TOWN/CITY/VILLAGE	ONALASKA
DESIGN SPEC. AASHTO LRFD DESIGN SPEC.			
DESIGNED BY	JDO	DESIGN CK'D.	CDS
DRAWN BY	CDS	PLANS CK'D.	ACK
GENERAL PLAN			SHEET 1 OF XX

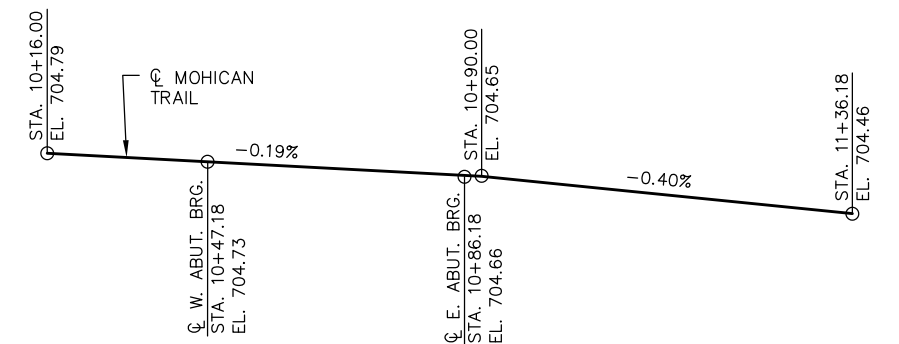
THE EXISTING STRUCTURE (P-32-923) IS A THREE-CELL CONCRETE BOX CULVERT STRUCTURE WITH AN OVERALL WIDTH OF 39.5-FT AND A BARREL LENGTH OF 25.4-FT AND IS TO BE REMOVED PER BID ITEM "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-32-923".



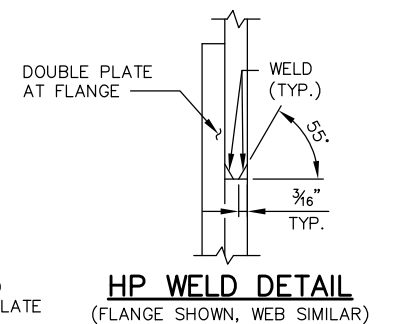
(G06) 3/4" V-GROOVE REQ'D. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT.



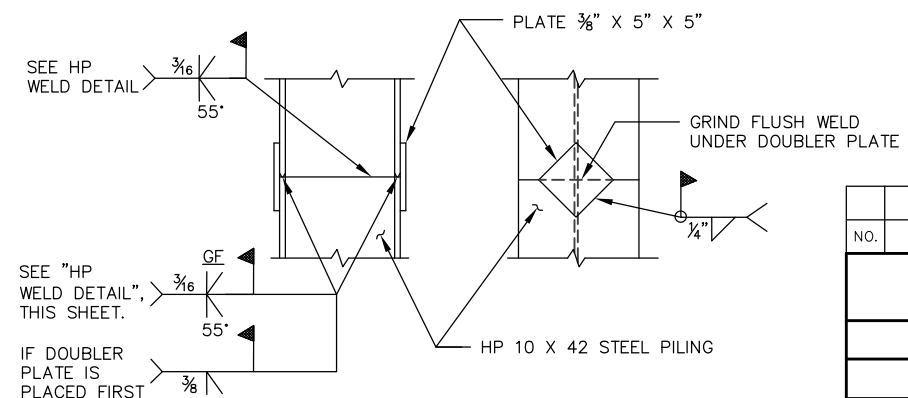
L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING 1 HEIGHT AT TIP (FT)
H2 = WING 2 HEIGHT AT TIP (FT)
W = WING LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
 $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)$
 $V_{CY} = V_{CF}(EF)/27$
 $V_{TON} = V_{CY}(2.0)$



PROFILE GRADE LINE, CL MOHICAN TRAIL



ITEM NO.	BID ITEMS	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-32-923	EACH	---	---	---	---
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-32-584	LS	---	---	---	---
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	---	---	---
502.0100	CONCRETE MASONRY BRIDGES	CY	---	---	---	---
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	---	---
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	---	---	---
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	---	---	---	---
513.4061	RAILING TUBULAR TYPE M	LF	---	---	---	---
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	---	---	---
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	---	---	---
606.0300	RIPRAP HEAVY	CY	---	---	---	---
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	---	---	---
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	---	---	---
645.0120	GEOTEXTILE TYPE HR	SY	---	---	---	---
(NON-BID ITEM)	FILLER	SIZE				½" & ¾"



PILE SPLICE DETAILS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-584			
DRAWN BY		CDS	PLANS CK'D ACK
CROSS SECTION, GENERAL NOTES & QUANTITIES		SHEET 2 OF xx	

B-32-584 BORINGS

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
BORING B-1	7/27/2021	173216.0	449249.7
BORING B-2	7/28/2021	173182.3	449207.6

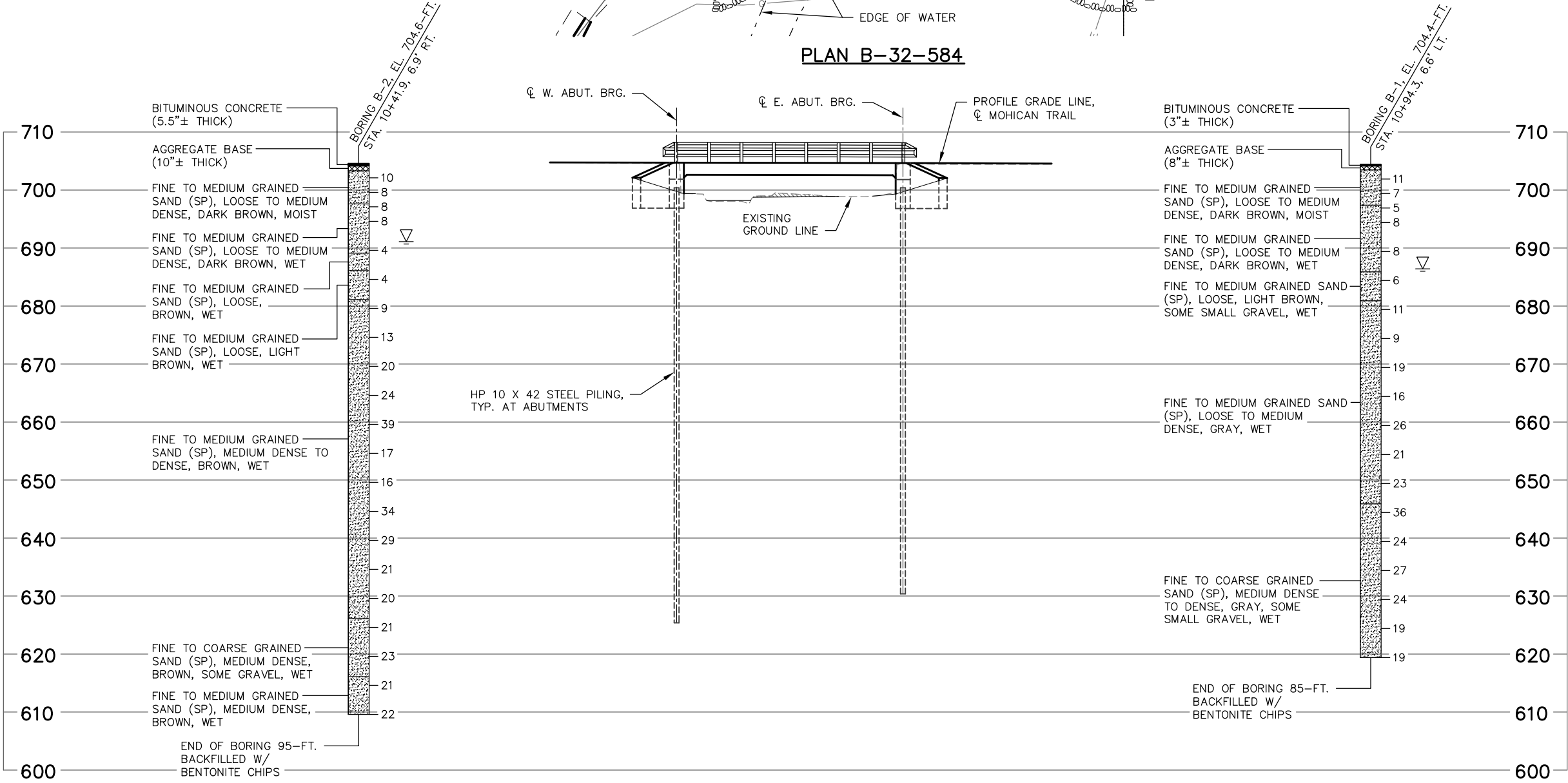
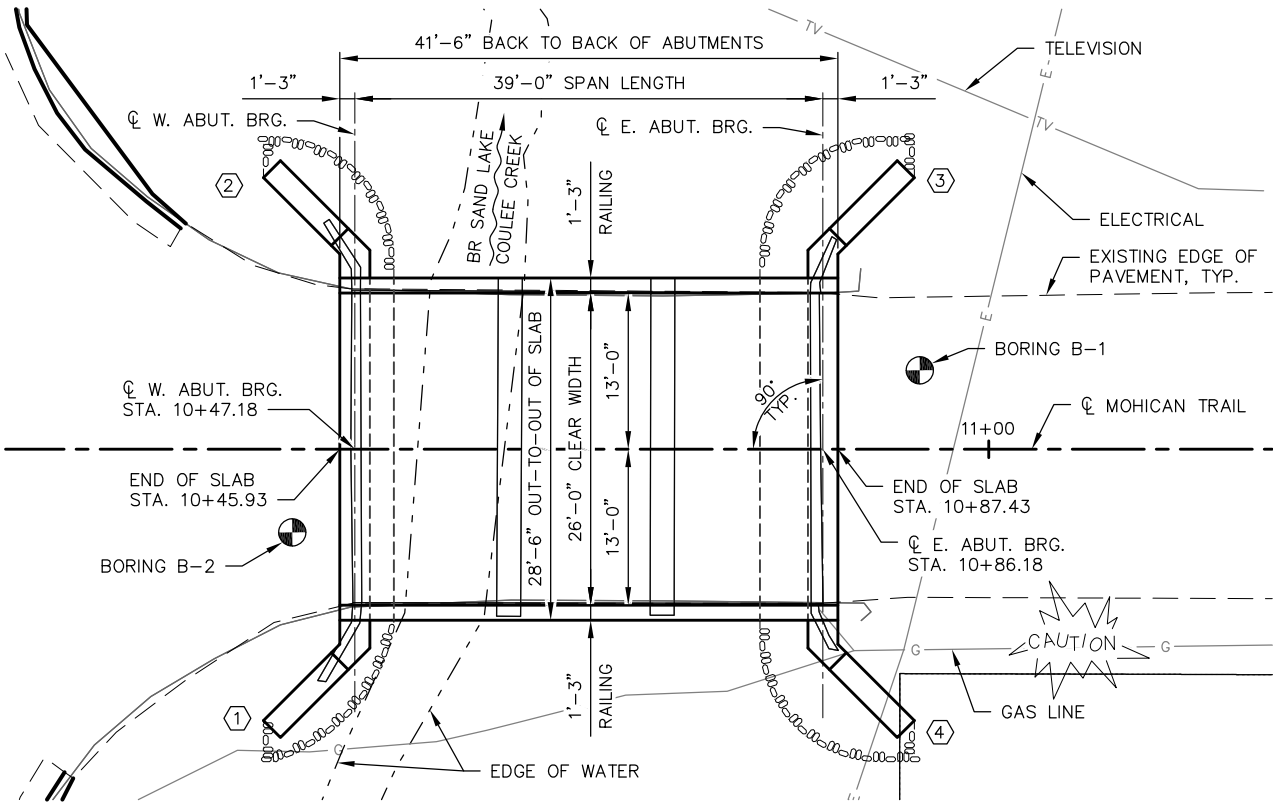
BORINGS COMPLETED BY: PROFESSIONAL SERVICES INDUSTRIES, INC.

SUBSURFACE INVESTIGATION REPORT: PROFESSIONAL SERVICES INDUSTRIES, INC.

ALL COORDINATES REFERENCED TO WCCS, LA CROSSE COUNTY

NOTE

⬡ INDICATES WING NUMBER



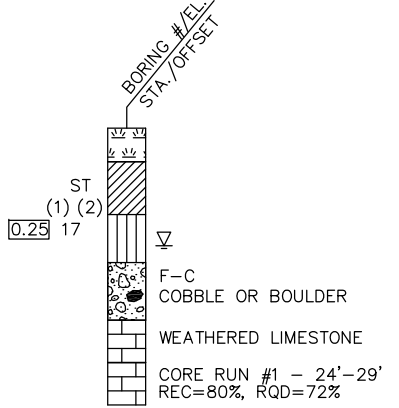
STATE PROJECT NUMBER

7272-00-72

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			
STRUCTURE B-32-584			
DRAWN BY CDS		PLANS OK'D	ACK
SUBSURFACE EXPLORATION		SHEET 3 OF XX	