



Public Informational Material

Project I.D. 8383-00-00

T Brule, After Hours Road

Nebagamon Creek Bridge B-16-0152

After Hours Road

Douglas County

January 26, 2024



Building a Better World
for All of Us®

Engineers | Architects | Planners | Scientists

Public Informational Material

After Hours Road

Prepared for Town of Brule

1 Project Description

The proposed project involves the removal and replacement of the existing structure on After Hours Rd over Nebagamon Creek in the Town of Brule, Douglas County. See After Hours Rd Project Location Map. The existing structure has reached the end of its useful life expectancy. The existing structure consists of a 34-foot two-span steel girder, a traveled way width consisting of 10-foot driving lanes, and varying-width gravel shoulders. The existing structure was built in 1925 and has undergone routine inspection and minor maintenance.

The proposed undertaking consists of the construction of a single span reinforced concrete flat slab bridge with approximately 100 feet of approaches on each side of the bridge (200 feet total). The traveled way and shoulder widths will receive 20-feet of new asphaltic pavement and 3-foot gravel shoulders. See After Hours Rd Plan Set.

The speed limit of the project limits is 40 mph. There is no right-of-way acquisition involved.

2 Reason for Project

- Superstructure in serious condition
- Substructure in poor condition
- Roadside Safety and Maintenance

3 Traffic Volumes

- 56 Vehicles per day (2025)
- 79 Vehicles per day (2045, design year)
- 10% trucks

4 Proposed Roadway Details

- Using Existing Alignment
- Reconstruction of roadway approaches (200 feet total)
- New Asphalt Pavement
- New Gravel Shoulders

5 Proposed Structure Details

- Superstructure Type: Single Span Reinforced Concrete Flat Slab
- Railing Type: Tubular Railing Type M
- Clear Width: 24 feet
- Structure Length: 44-foot Span
- Skew: None
- Wingwall Formation: 45-degree wings

6 Traffic During Construction

- Roadway will be Closed to Traffic
 - No detour provided in plan.

7 Scheduling Dates

- Final Plan, Specifications & Estimate: August 1, 2024
- Letting Date: December 11, 2024
- Begin Construction: 2025

8 Contacts

- | | |
|--|--|
| <ul style="list-style-type: none">• <u>Design Consultant</u>
Project Manager: Chris Blum, P.E. (WI)
Short Elliott Hendrickson, Inc.
6808 Odana Road, Suite 200
Madison, WI 53719
608-620-6192
cblum@sehinc.com | <u>Town of Brule</u>
Town Clerk: Diane Nelson
5231 S County Line Road
Brule, WI 54820
218-591-0693
drthomp999@gmail.com |
|--|--|

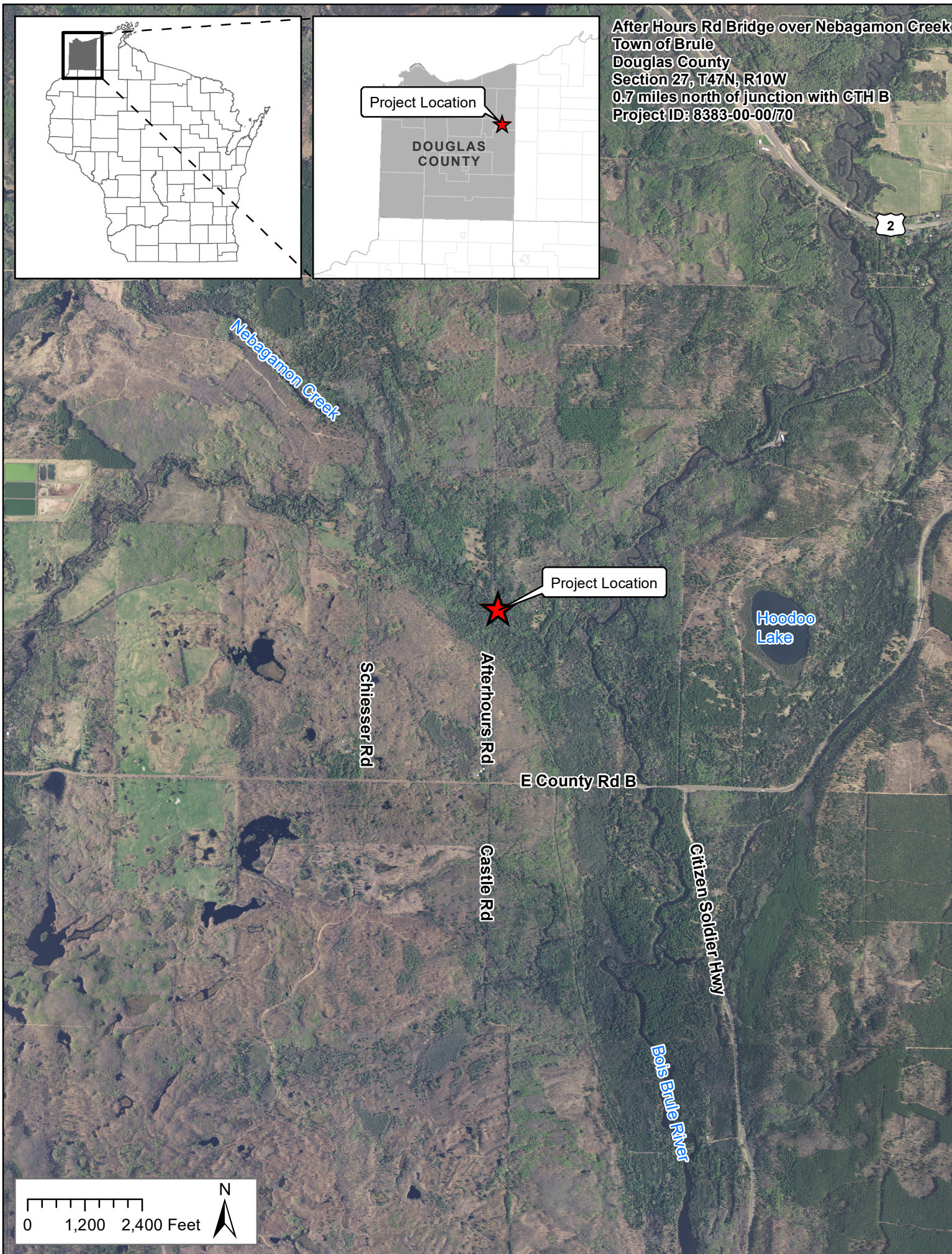
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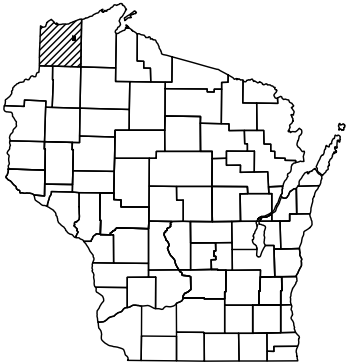
PROJECT ID: 8383-00-70
WITH: N/A

COUNTY: DOUGLAS

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

A.A.D.T.	2025	=	56
A.A.D.T.	2045	=	79
D.H.V.		=	N/A
D.D.		=	50/50
T.		=	10.0%
DESIGN SPEED		=	40 MPH
ESALS		=	22,000

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
	STORM SEWER
	TELEPHONE
MARSH AREA	WATER
	UTILITY PEDESTAL
	POWER POLE
WOODED OR SHRUB AREA	TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

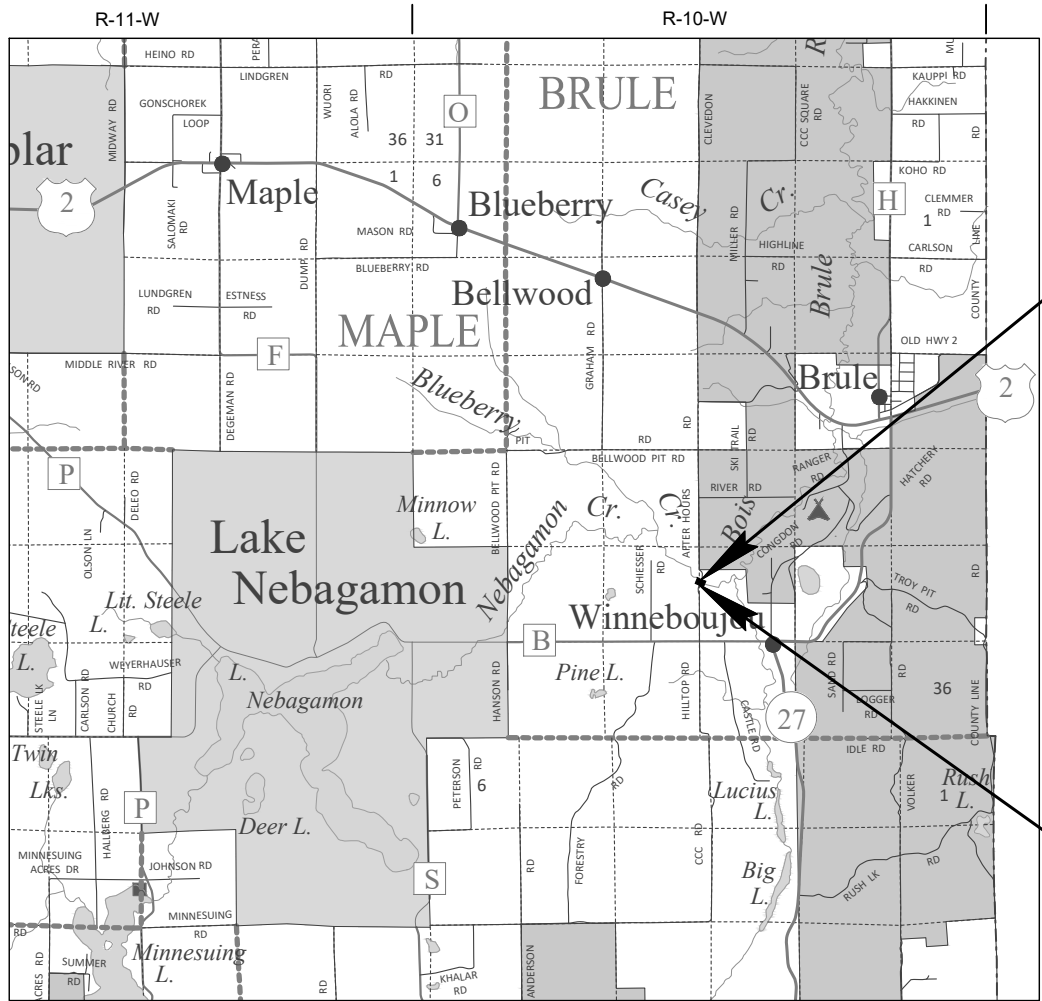
PLAN OF PROPOSED IMPROVEMENT

NEBAGAMON CREEK BRIDGE B-16-0152

T BRULE, AFTER HOURS ROAD

LOC STR
DOUGLAS COUNTY

STATE PROJECT NUMBER
8383-00-70



LAYOUT
SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.047 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DOUGLAS 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 PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8383-00-70		

ACCEPTED FOR	
TOWN	BRULE
(Date) (Signature & Title of Official)	
ORIGINAL PLANS PREPARED BY	
 Short Elliott Hendrickson Inc. 6808 Odana Road, Suite 200 Madison, WI 53719-1137 Building a Better World for All of Us™ 800.620.6199 main 888.908.8166 fax 800.732.4362 toll free www.sehinc.com	
PRELIMINARY 30% REVIEW NOT FOR BIDDING OR CONSTRUCTION	
(Date) (Signature)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	SEH
Designer	SEH
Project Manager	
Regional Examiner	
Regional Supervisor	
APPROVED FOR THE DEPARTMENT	
DATE:	(Signature)

STANDARD ABBREVIATIONS:

ABUT	ABUTMENT	ID	INSIDE DIAMETER
AC	ACRE	INV	INVERT
AGG	AGGREGATE	IP	IRON PIPE ON PIN
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE	LHF	LEFT-HAND FORWARD
AECPCS	APRON ENDWALL FOR CULVERT PIPE CORRUGATED STEEL	L	LENGTH OF CURVE
ASPH	ASPHALTIC	LF	LINEAR FOOT
AVG	AVERAGE	LC	LONG CHORD OF CURVE
ADT	AVERAGE DAILY TRAFFIC	LS	LUMP SUM
BF	BACK FACE	MH	MANHOLE
BM	BENCH MARK	MOR	MID POINT OF RADIUS
BR	BRIDGE	NC	NORMAL CROWN
CE	COMMERCIAL ENTRANCE	NO	NUMBER
C/L	CENTER LINE	OBLIT	OBLITERATE
Δ	CENTRAL ANGLE OR DELTA	PAVT	PAVEMENT
COB	CENTER OF BARRIER	PE	PRIVATE ENTRANCE
CONC	CONCRETE	PVRC	POINT OF VERTICAL REVERSE CURVE
CPRC	CULVERT PIPE REINFORCED CONCRETE	QOR	QUARTER POINT OF RADIUS
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	R	RADIUS
CR	CREEK	REQ'D	REQUIRED
CY	CUBIC YARD	RES	RESIDENCE OR RESIDENTIAL
C&G	CURB AND GUTTER	RHF	RIGHT-HAND FORWARD
D	DEGREE OF CURVE	R/W	RIGHT-OF-WAY
DHV	DESIGN HOUR VOLUME	R	RIVER
DISCH	DISCHARGE	RDWY	ROADWAY
DG	DITCH GRADE	R/L	REFERENCE LINE
DWY	DRIVEWAY	SALV	SALVAGED
X	EAST GRID COORDINATE	SAN	SANITARY SEWER
EAT	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	SF	SQUARE FEET
EOR	END POINT OF RADIUS	SY	SQUARE YARD
EL	ELEVATION	SDD	STANDARD DETAIL DRAWINGS
ENT	ENTRANCE	STA	STATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	SS	STORM SEWER
EXC	EXCAVATION	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EBS	EXCAVATION BELOW SUBGRADE	SE	SUPERELEVATION RATE
EXIST	EXISTING	TC	TOP OF CURB
FC	FACE OF CURB	T OR TN	TOWN
FF	FACE TO FACE	T	TRUCKS (PERCENT OF)
FERT	FERTILIZE	TYP	TYPICAL
FE	FIELD ENTRANCE	VAR	VARIABLE
FL	FLOW LINE	VC	VERTICAL CURVE
FO	FIBER OPTIC	Y	NORTH GRID COORDINATE
CWT	HUNDREDWEIGHT	YD	YARD
HYD	HYDRANT		

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP- TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE- TURF			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = __.____ ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = __.____ACRES

DNR AREA LIAISON:

DNR NORTHERN REGION HEADQUARTERS
810 W. MAPLE STREET
SPOONER, WI 54801
TELEPHONE: 715.635.4229
ATTENTION: AMY CRONK
EMAIL: AMY.CRONK@WISCONSIN.GOV

MUNICIPALITY CONTACT:

TOWN OF BRULE
5231 S COUNTY LINE ROAD
BRULE, WI 54820
TELEPHONE: 218.591.0693
ATTENTION: DIANE NELSON
EMAIL: DRTHOMP999@GMAIL.COM

UTILITY CONTACT LIST:

DAHLBERG LIGHT & POWER CO
9221 E MAIN STREET
SOLON SPRINGS,WI 54873
TELEPHONE: 715.378.2205
ATTENTION: SCOTT SELLWOOD
EMAIL: SCOTT@DAHLBERGLIGHTANDPOWER.COM

WISDOT CONTACT:

WI DEPT OF TRANSPORTATION
718 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
TELEPHONE: 715.579.6776
ATTENTION: PAULA GROOM
EMAIL: PAULA.GROOM@DOT.WI.GOV

DESIGN CONTACT:

SHORT ELLIOTT HENDRICKSON INC
6808 ODANA ROAD, SUITE 200
MADISON, WI 53719-1137
TELEPHONE: 608.620.6192
ATTENTION: CHRISTOPHER BLUM
EMAIL: CBLUM@SEHINC.COM

NORVADO
P.O. BOX 67
CABLE, WI 54821
TELEPHONE: 715.580.8123
ATTENTION: GUY FOLSOM
EMAIL: GFOLSOM@NORVADO.COM

GENERAL NOTES:

- NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
- PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLANS WITH THE ENGINEER.
- WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.
- INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
- BROKEN CONCRETE CONTAINING RE-BAR SHALL NOT BE USED AS RIPRAP.
- CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 4-INCH TYPICAL DEPTH.
- TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.
- THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- ASPHALTIC AND CONCRETE SURFACES SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE TOPSOILED, FERTILIZED AND SEEDED.
- FERTILIZER SHALL NOT BE USED NEAR NAVIGABLE WATERWAYS OR WETLANDS.
- A CONVERSION FACTOR OF 2.0 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE.
- THE BRIDGE APPROACHES SHALL BE PLACED IN TWO LIFTS. THE 4" OF ASPHALTIC SURFACE SHALL CONSIST OF A 2" LOWER LAYER AND A 2" UPPER LAYER.
- APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO MILLED SURFACE AND 0.05 GA/SY BETWEEN LAYERS OF ASPHALTIC SURFACE.
- ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
- THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN AND TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

PROJECT NO: 8383-00-70

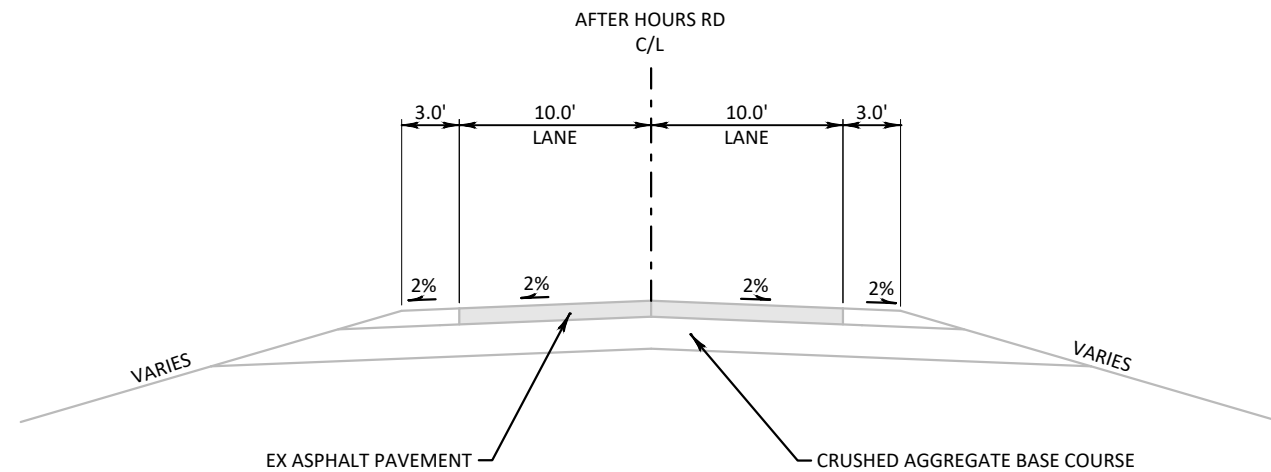
HWY: LOC STR

COUNTY: DOUGLAS

GENERAL NOTES

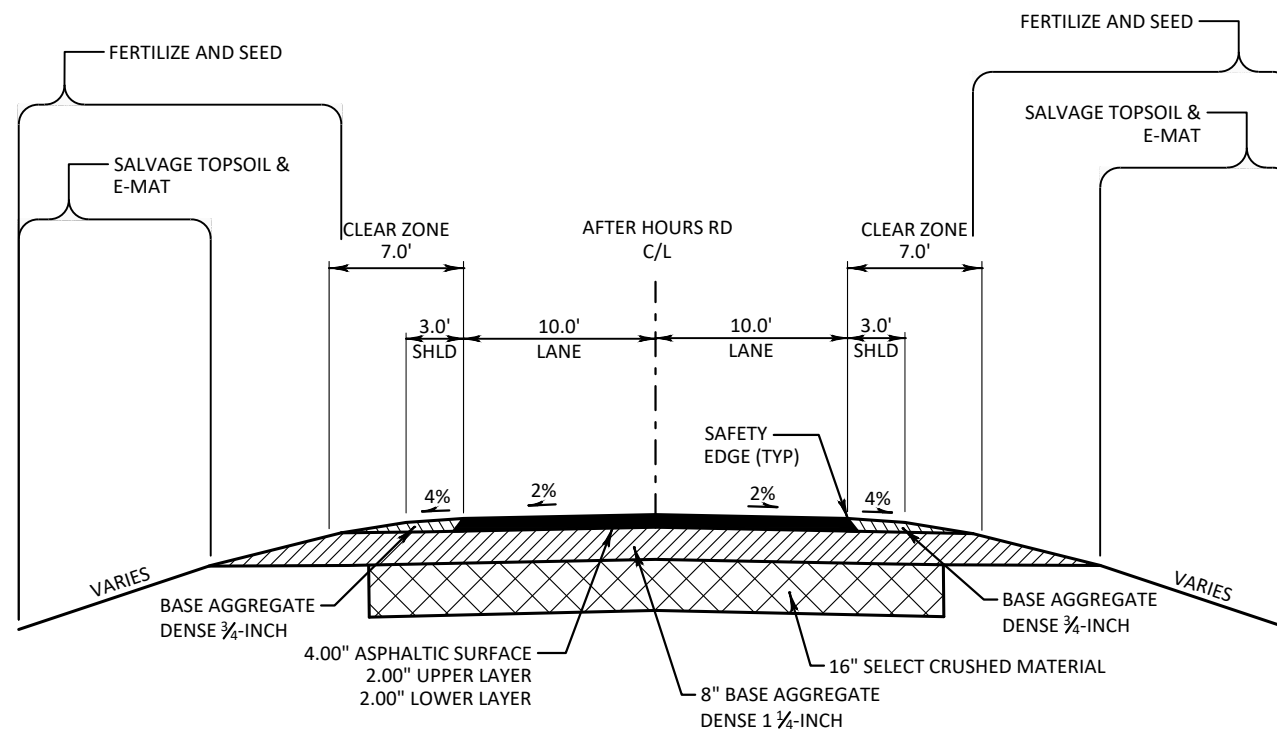
SHEET

E



TYPICAL EXISTING SECTION

AFTER HOURS RD
STA 8+75.00 TO STA 11+25.00



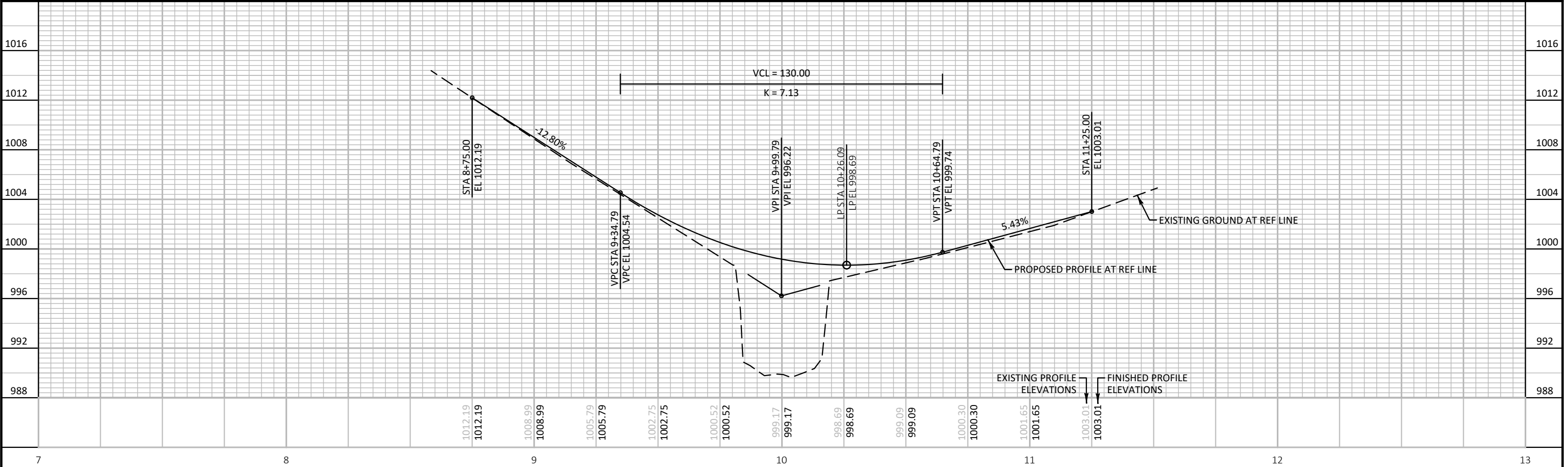
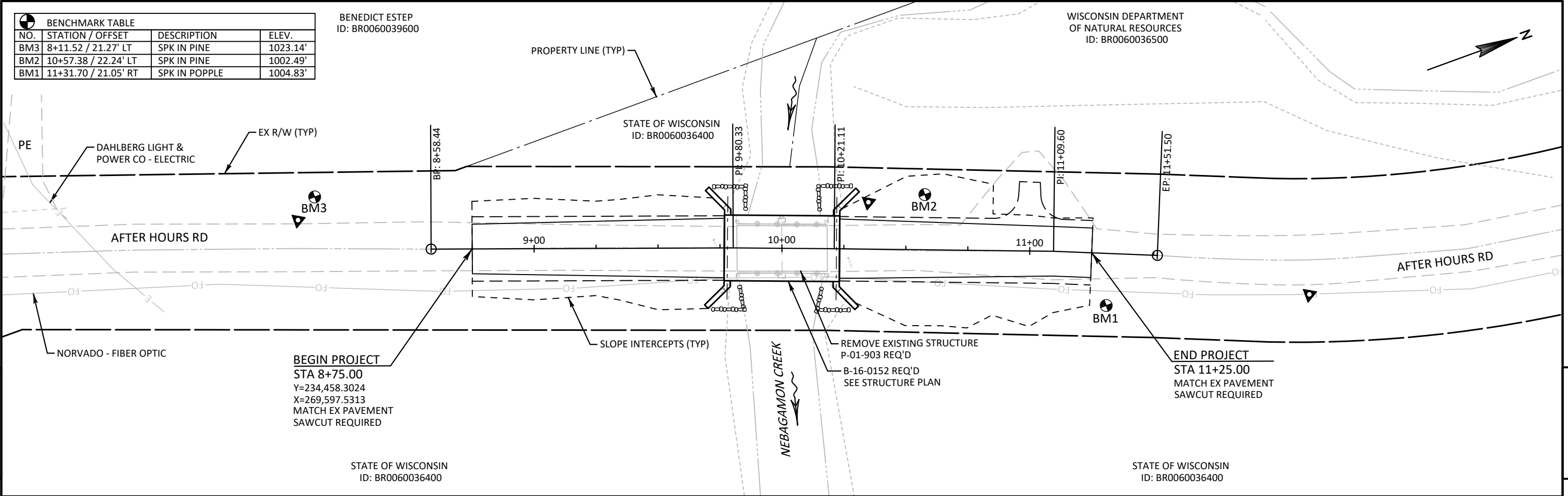
TYPICAL FINISHED SECTION

AFTER HOURS RD
STA 8+75.00 TO STA 11+25.00

BENCHMARK TABLE			
NO.	STATION / OFFSET	DESCRIPTION	ELEV.
BM3	8+11.52 / 21.27' LT	SPK IN PINE	1023.14'
BM2	10+57.38 / 22.24' LT	SPK IN PINE	1002.49'
BM1	11+31.70 / 21.05' RT	SPK IN POPPLE	1004.83'

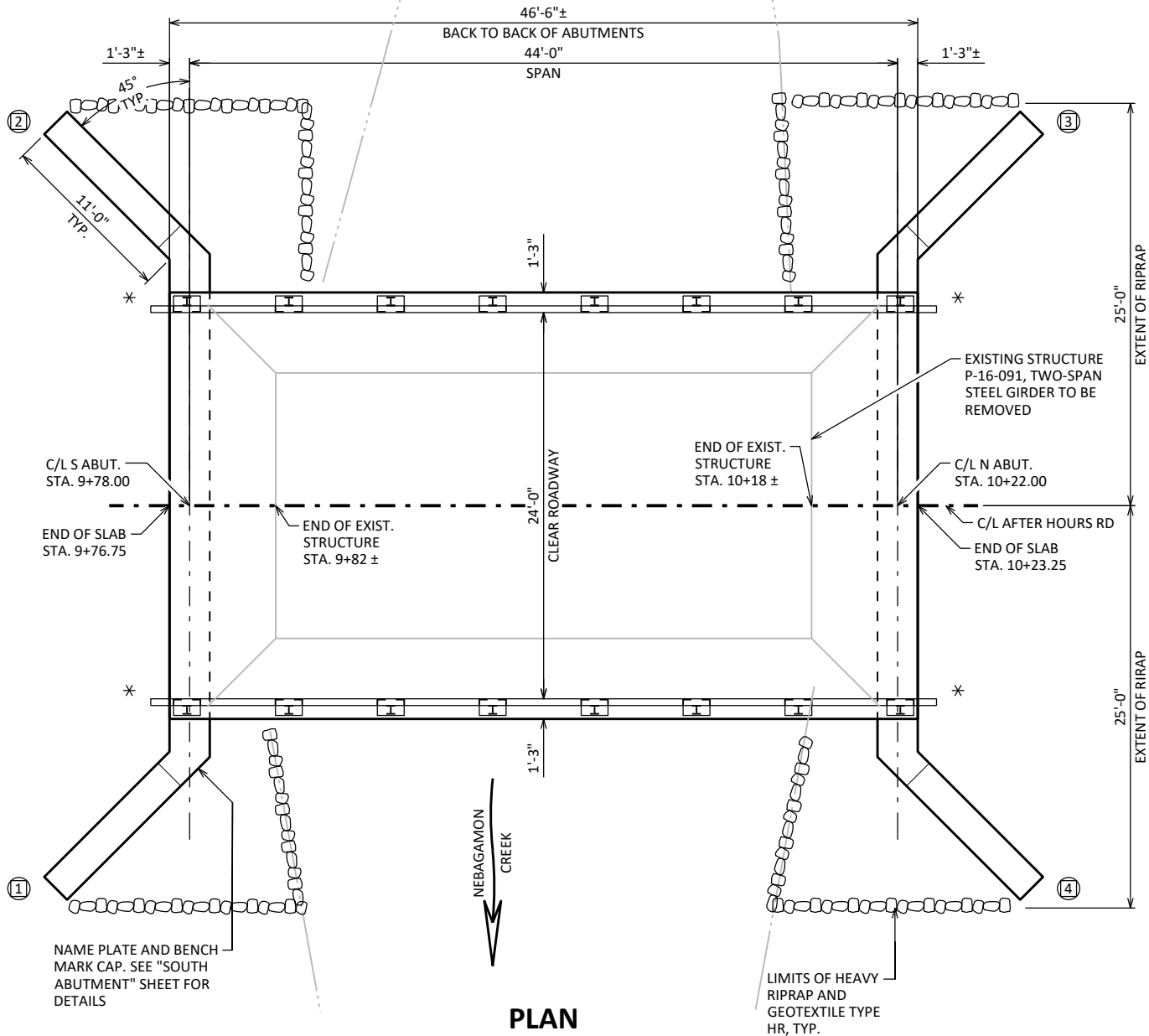
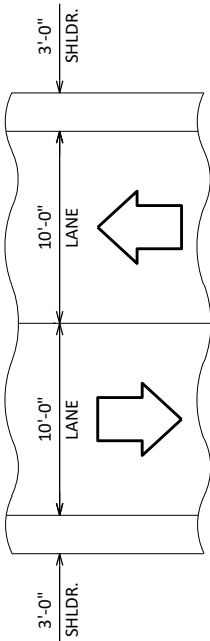
BENEDICT ESTEP
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WISCONSIN DEPARTMENT
OF NATURAL RESOURCES
ID: BR0060036500

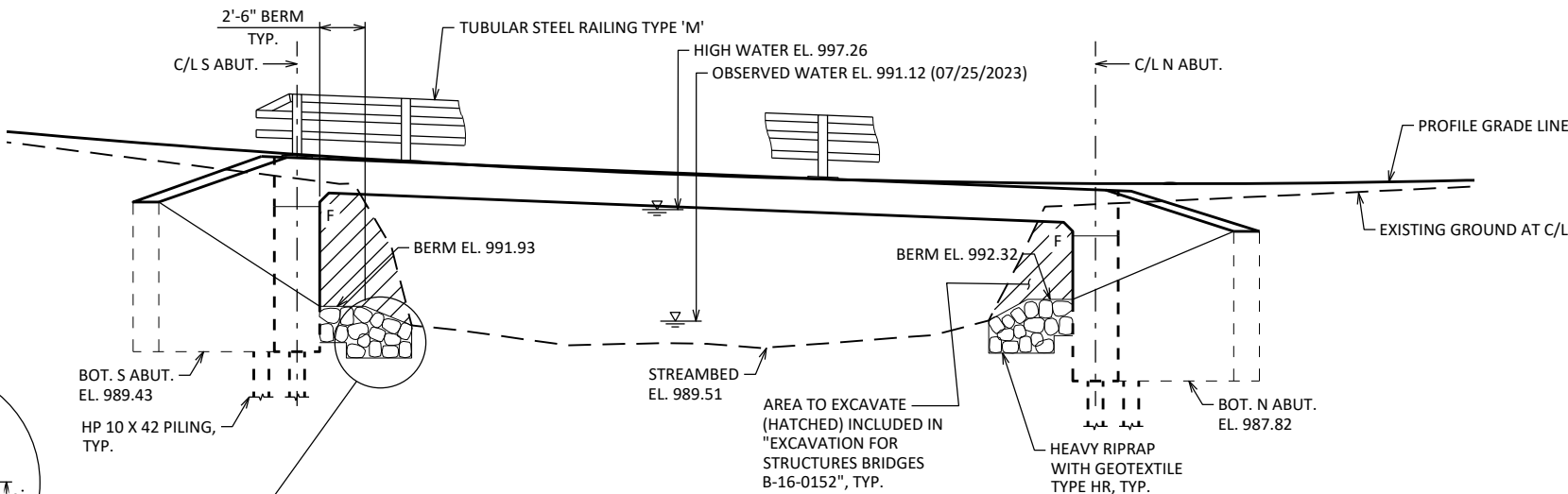


PROJECT NO: 8383-00-70	HWY: LOC STR	COUNTY: DOUGLAS	PLAN AND PROFILE	SHEET	E
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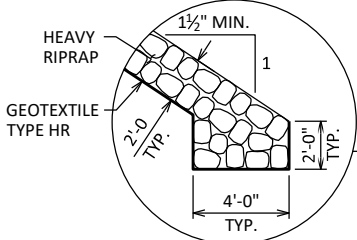
✱ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT.
① INDICATES WING NUMBER



PLAN
SINGLE SPAN FLAT SLAB



ELEVATION
NORMAL TO WATERWAY
(VIEW TAKEN FROM EAST EDGE OF BRIDGE LOOKING WEST)



THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.0.0.0

STATE PROJECT NUMBER

8383-00-70

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.09
OPERATING RATING FACTOR: RF = 1.41
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: _____ f'c = 4,000 P.S.I.
SUPERSTRUCTURE _____ f'c = 3,500 P.S.I.
ALL OTHER _____
BAR STEEL REINFORCEMENT: _____ fy = 60,000 P.S.I.
GRADE 60 _____

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS †† PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 45 FEET 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 DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

FEATURE ON AFTER HOURS RD
ADT = 79 (2045)
R.D.S. = 40 M.P.H.

HYDRAULIC DATA

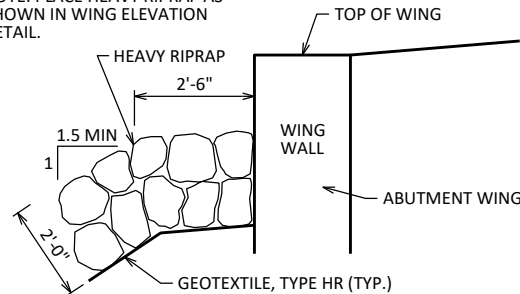
100 YEAR FREQUENCY

Q₁₀₀ = 1500 C.F.S.
VEL. = 6.16 F.P.S.
HW₁₀₀ = EL. 997.26
WATERWAY AREA = 243 SQ. FT.
DRAINAGE AREA = 59.8 SQ. MI.
ROADWAY OVERTOPPING = NA
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q₂ = 413 C.F.S.
VEL. = 3.67 F.P.S.
HW₂ = EL. 993.86

NOTE: PLACE HEAVY RIPRAP AS SHOWN IN WING ELEVATION DETAIL.



TYPICAL FILL SECTION AT WING

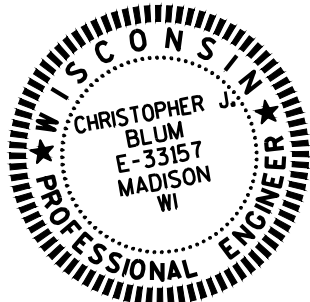
LIST OF DRAWINGS


1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. TUBULAR STEEL RAILING TYPE 'M'

STRUCTURE DESIGN CONTACTS:

CHRIS BLUM 608-620-6192
AARON BONK 608-261-0261

THESE PLANS ARE BASED UPON STANDARD BRIDGE PLANS DEVELOPED AND MAINTAINED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION THROUGH THE USE OF THE WISDOT STANDARD BRIDGE DESIGN TOOL. THE UNDERSIGNED DESIGNER CERTIFIES THE ACCURACY OF THE BRIDGE TYPE, SIZE AND LOCATION, HYDRAULICS AND FOUNDATION SUPPORT, AND INFORMATION IN THE PLANS THAT IS NOT PART OF THE STANDARD PLANS SUPPLIED BY THE DEPARTMENT. THE DESIGNER FURTHER CERTIFIES THAT USE OF THE STANDARD BRIDGE DESIGN TOOL FOR DEVELOPMENT OF THIS PLAN IS CONSISTENT WITH THE GUIDANCE PROVIDED IN THE WISDOT BRIDGE MANUAL.



NO.	DATE	REVISION	BY
 SHORT ELLIOTT HENDRICKSON INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED _____ CHIEF STRUCTURES DESIGN ENGINEER DATE _____			
STRUCTURE B-16-0152			
AFTER HOURS RD OVER NEBAGAMON CREEK			
COUNTY	DOUGLAS	TOWN/VILLAGE	BRULE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION			
DESIGNED BY	CJB	DESIGNED CK'D	JGM
DRAWN BY	ALC	PLANS CK'D	JGM
GENERAL PLAN			SHEET 1 OF 10

I.D.

DATE:

SCALE = 10

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 B-16-0152 " 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.

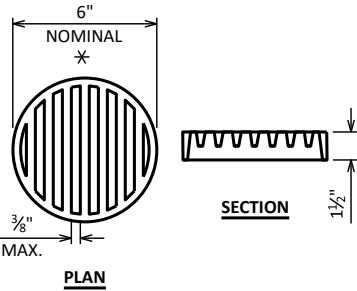
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

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

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

BENCH MARK

NO.	STATION/OFFSET	DESCRIPTION	ELEV.
BM3	8+11.52 / 21.27' LT	SPK IN PINE	1023.14'
BM2	10+57.38 / 22.24' LT	SPK IN PINE	1002.49'
BM1	11+31.70 / 21.05' RT	SPK IN POPPLE	1004.83'



PLAN

RODENT SHIELD DETAIL

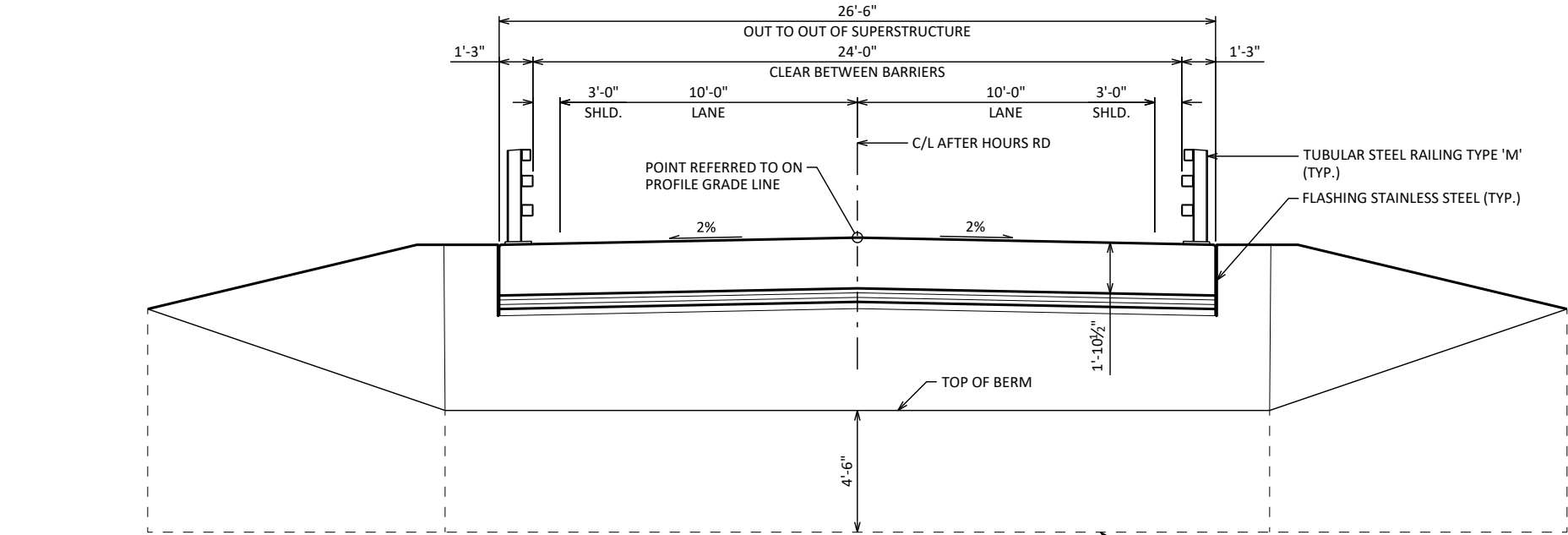
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY 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.

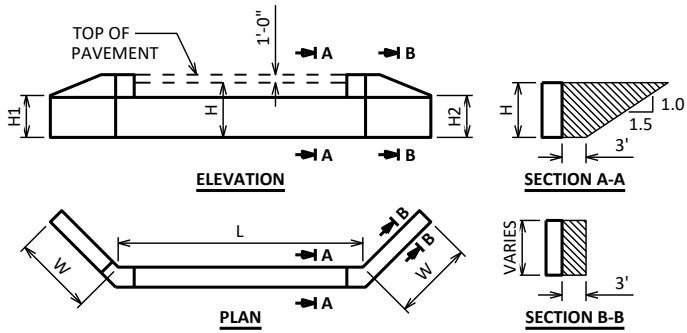
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-16-0152			
DRAWN BY		ALC	PLANS CK'D JGM
CROSS SECTION & QUANTITIES		SHEET 2	

SCALE = 6:0



CROSS SECTION THRU ROADWAY

LOOKING UPSTATION
(PILING NOT SHOWN FOR CLARITY)
(NORTH ABUTMENT SHOWN. SOUTH ABUTMENT 2'-6" FROM TOP OF BERM TO BOTTOM OF ABUTMENT)

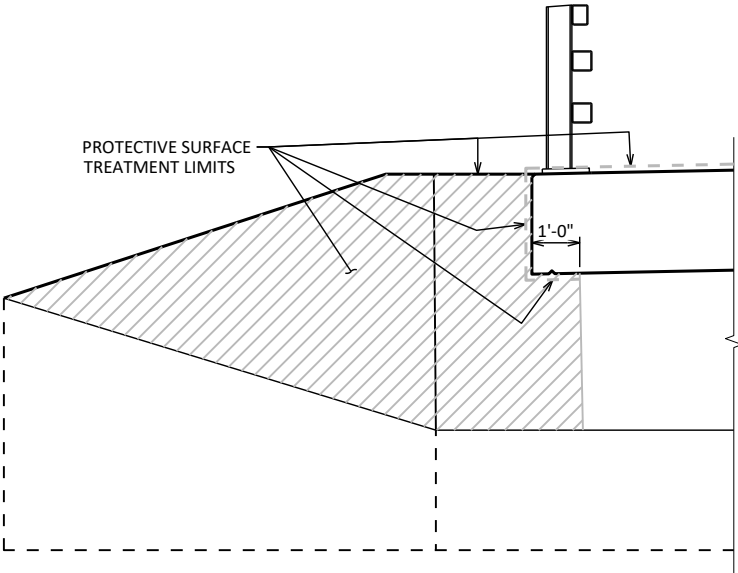


ABUTMENT BACKFILL DIAGRAM

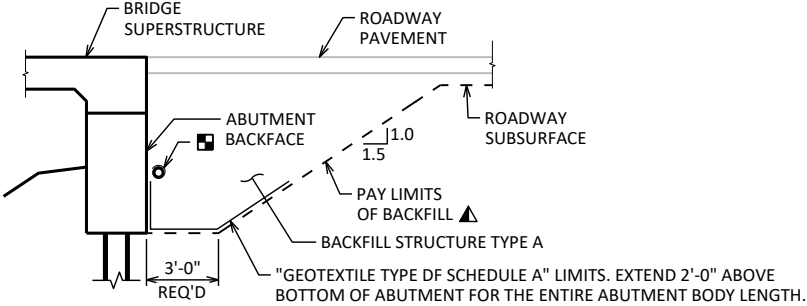
- L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
- H = AVERAGE ABUTMENT FILL HEIGHT (FT)
- H1 = WING 1 HEIGHT AT TIP (FT)
- H2 = WING 2 HEIGHT AT TIP (FT)
- W = WING LENGTH (FT)
- EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
- $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)$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

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	SOUTH ABUT.	NORTH ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS P-16-091	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-16-0152	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	272	272	544
502.0100	CONCRETE MASONRY BRIDGES	CY	89	41	41	171
502.3200	PROTECTIVE SURFACE TREATMENT	SY	163	24	24	211
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	2,180	2,180	4,360
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	18,980	1,870	1,870	22,720
513.4061	RAILING TUBULAR TYPE M	LF	98	---	---	98
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	5	5	10
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	---	---	---
606.0300	RIPRAP HEAVY	CY	---	---	---	---
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	73	73	146
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	48	48	96
645.0120	GEOTEXTILE TYPE HR	SY	---	---	---	---
SPV.0090.01	FLASHING STAINLESS STEEL	LF	---	---	---	---
NON-BID ITEMS						
	FILLER	SIZE	---	---	---	½", ¾"



PROTECTIVE SURFACE TREATMENT DETAILS

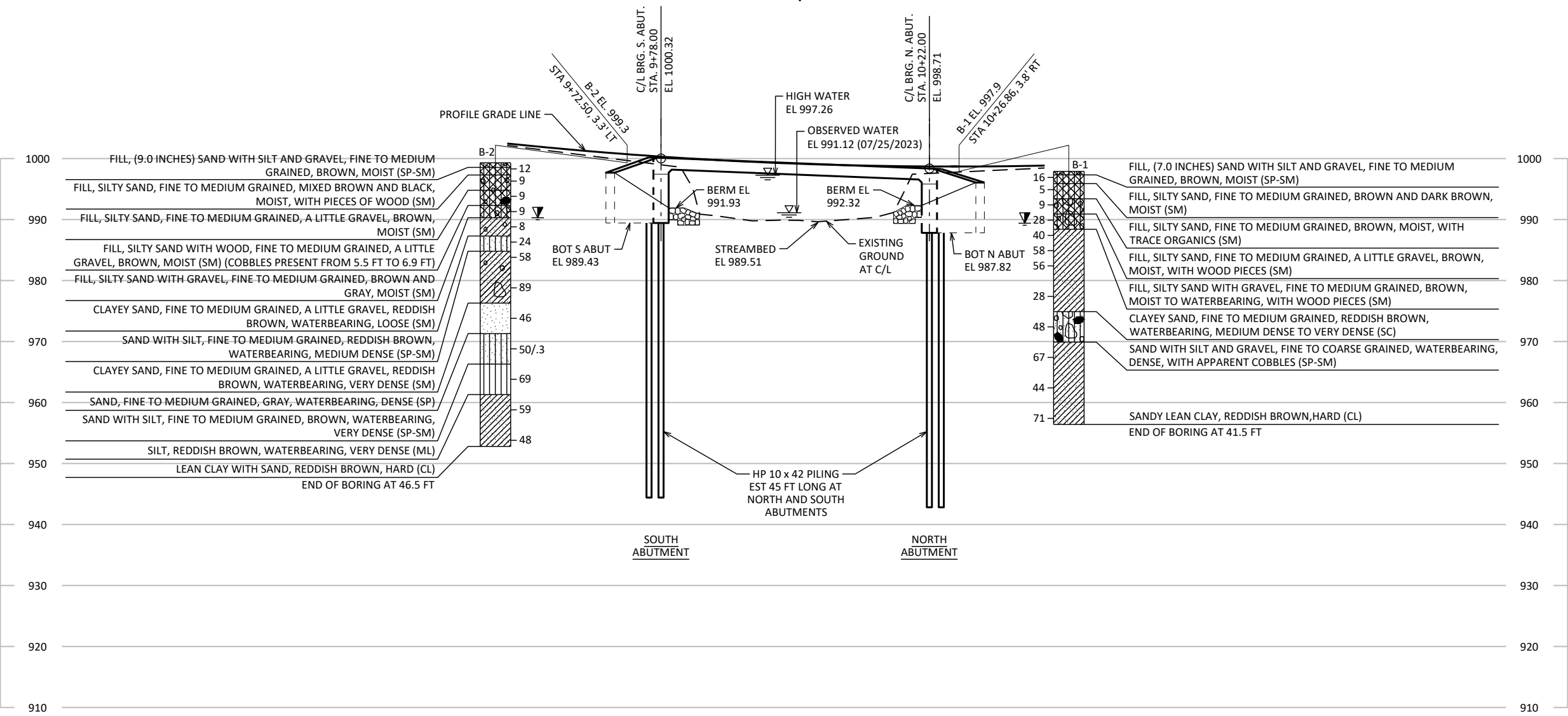
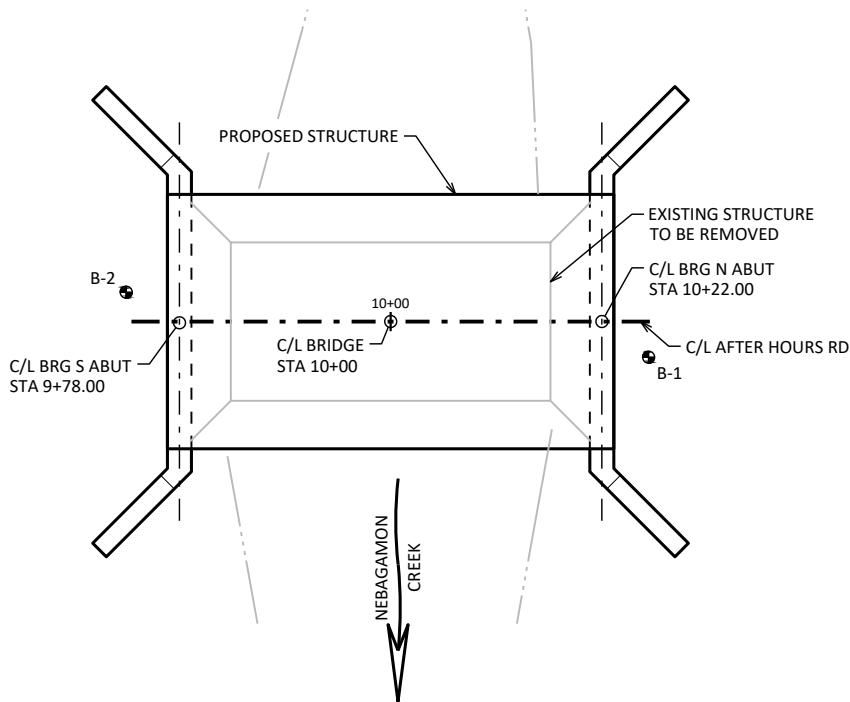


TYPICAL SECTION THRU ABUTMENT

▲ 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.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	08/29/2023	234599.68	269652.99
B-2	08/30/2023	234551.16	269627.440
BORINGS COMPLETED BY: AMERICAN ENGINEERING TESTING, INC 4203 SCHOFIELD AVENUE, SUITE 1 SCHOFIELD, WI 54476 PH: (715) 359-3534			
REPORT COMPLETED BY: MATTHEW B. WILLIAMS, P.E.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DOUGLAS COUNTY			



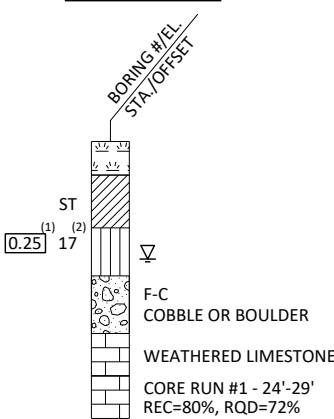
STATE PROJECT NUMBER

8383-00-70

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

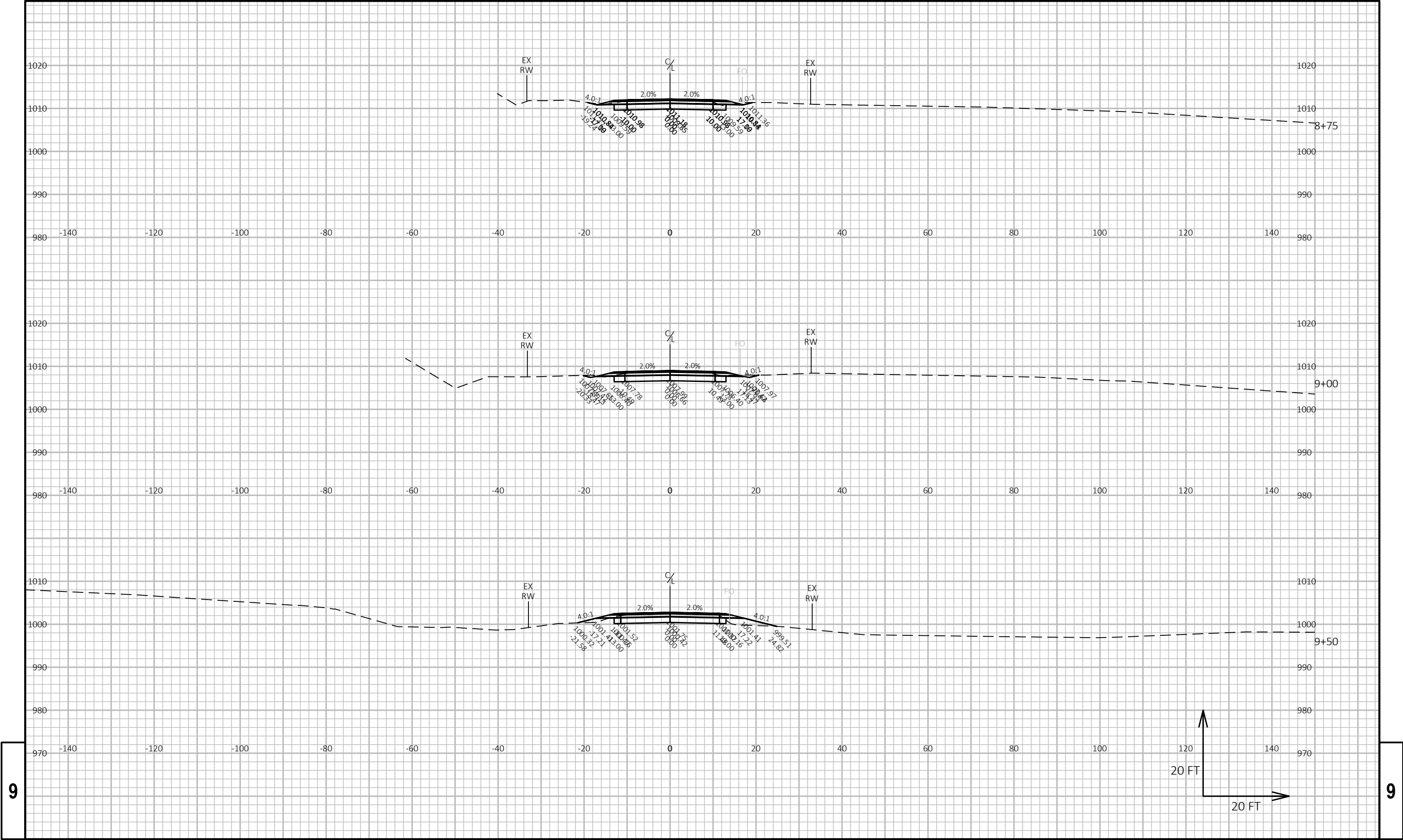
▽	AT TIME OF DRILLING
▼	END OF DRILLING
▼	AFTER DRILLING

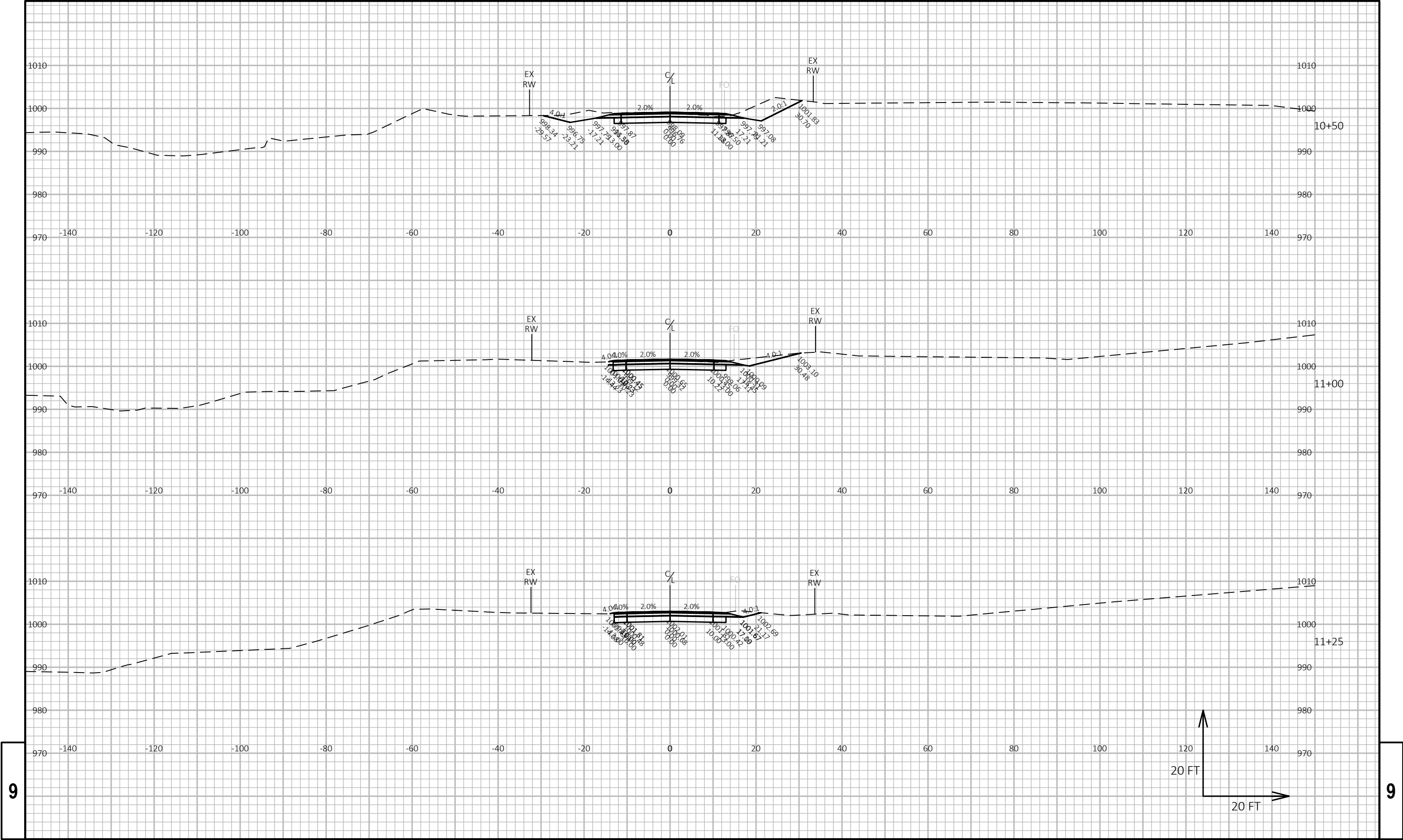
ABBREVIATIONS

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-16-0152			
DRAWN BY		ALC	PLANS CK'D JGM
SUBSURFACE EXPLORATION		SHEET 3	





Public Involvement Meeting Comment Form

Project ID 8383-00-00
T Brule, After Hours Road
Nebagamon Creek Bridge B-16-0152
After Hours Road
Douglas County

Please mail or email your comments to SEH Project Manager, Chris Blum, at 6808 Odana Road, Suite 200, Madison, WI 53719 or cblum@sehinc.com by February 9, 2024. Your comments assist us in developing a project that will serve the needs of the traveling public as well as the needs of the local community. Your input is welcome and appreciated throughout the design process.

Name: _____

Address: _____

Daytime Phone Number (optional): _____

Email Address (optional): _____

Please Print Comments (attach additional sheets if necessary)

[illegible]

The information in this document including names, addresses, phone numbers, e-mail addresses, and signatures is not confidential, and may be subject to disclosure upon request, pursuant to the requirements of the Wisconsin open records law, sections 19.31 - 19.39 of the Wisconsin Statutes.