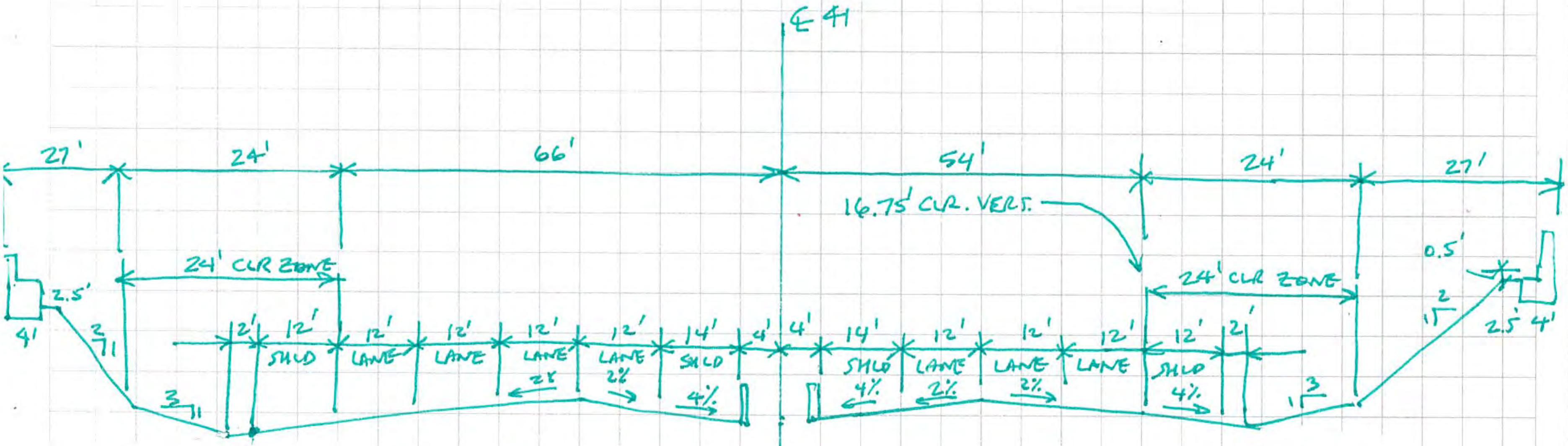
FOR:	JOB NO:	SHEET NO:
MADE BY:	CHECKED BY:	BACKCHECKED BY:
DATE:	DATE:	DATE:



SKEW = 3°

$\cos(3^\circ) = .99863$

$16.75 + 14(0.04) - \frac{10}{3} - 0.5 - \frac{X}{2} = 0$

$X = 26.95 \sim 27'$

SPAN 1 = 117'

SPAN 2 = 105'

BRIDGE LENGTH = 117 + 105 = 222'

$\frac{222}{.99863} = 222.30'$

$\approx$ 222'

ME-101-1204

Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced [1, 2]

<table>
<tr><td>Overpass Facility →</td><td colspan="2">Freeway, Expressway, or STH</td><td rowspan="2">Railroad[5], CTH, Town Road, Local Road, or Street</td><td rowspan="2">Pedestrian or Shared-use Structures</td><td rowspan="2">Sign Structures[6]</td></tr>
<tr><td>Underpass Facility ↓</td><td>Interchange</td><td>Grade Separation</td></tr>
<tr><td rowspan="3">Non-arterial
either STH, CTH, Town Road, Local Road, or Street</td><td rowspan="3">15'-3" min. or ES[3]</td><td colspan="2">If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">16'-3" min. or ES[3]</td><td rowspan="6">18'-0" min. or ES[3] for existing sign structures on new construction projects or reconstruction projects;

17'-0" or ES[3] for existing sign structures on 3R projects</td></tr>
<tr><td colspan="2">If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td colspan="2">If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial
either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td>If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td>If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial STH
(excludes freeway and expressway)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td>If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td></tr>
<tr><td>Freeway[4] or Expressway</td><td colspan="5">16'-0" min. or ES[3]</td></tr>
<tr><td>Railroad[5]</td><td colspan="5">Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.</td></tr>
</table>

General notes:

1. Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

   Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

2. Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

3. ES = approved Exceptions To Standards Report required (see FDM 11-1-2 and FDM 11-1-4).

4. See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

5. Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

6. See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced [1]

Overpass Facility →	Freeway, Expressway, or STH		Railroad[4], CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures[2]
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable 15'-3" Minimum	15'-3" Desirable 14'-9" Minimum		16'- 9" Desirable 16'-3" Minimum	18'-3" Minimum
Arterial either CTH, Town Road, Local Road, or Street (**excludes** freeway and expressway; also excludes arterial STH)	16'-9" Desirable 16'-3" Minimum	15'-3" Desirable 14'-9" Minimum		17'- 9" Desirable 17'-3" Minimum	
Freeway[3] or Expressway or arterial STH	16'-9" Desirable 16'-4" Minimum			17'- 9" Desirable 17'-4" Minimum	
Railroad[4,5,6,7]	23'-0" Minimum to 23'-3½" Maximum				

General notes:

1 Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

2 See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

3 See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

4 Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

5 A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

See Chapter 17 for additional information.

6 Provide justification for a vertical clearance >23'-3 ½" to the RHS.

7 Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: STH 47 SB		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-035
Feature Under: USH 41		Sect/Twn/Rng: S14 T21N R17E		
Location: 1.2M S JCT CTH JJ		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE(44020)	
Inv Rating: HS20	Rdwy Width (ft): 30.0	Deck Width (ft): 39.0	Existing Posting:	
Oper Rating: HS34	Total Length (ft): 235.5	Deck Area(ft2): 9184	ADT On: 8700 Yr: 2004	ADT Under: 51620 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	08-22-12						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 1.0	Date: 01-09-01	Deck Surface Type: INTEGRAL CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 08-09-10	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated:

Expansion Joints

Temp: 85

Location	Type	File Insp. Date	File Insp. (in)	New Insp. (in)
SOUTH AB	J-300		1.8	
PIER 1	J-250		2.0	
PIER 2	AS-300A		1.3	
PIER 3	J-250		1.9	
NORTH AB	J-300		1.8	

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers			
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	15.05		
Min. Veritcal Clearance Under (non-Cardinal)	15.33		
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
PREST CONCRET	DECK GIRDER		45.0
PREST CONCRET	DECK GIRDER		68.0
PREST CONCRET	DECK GIRDER		68.0
PREST CONCRET	DECK GIRDER		50.5

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1961	NEW STRUCTURE	P038	F046
1972	PAINTING		
1982	CONCRETE OVER	C226	C226
1985	BEARING - MIS	C275	
9999	NOT BUILT		

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control		
Access Equipment		
Other		

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 08-22-12	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	22 / 4	Conc Deck/Conc Ov	SF	9185				9185	
	Long cracks, Large areas of delamination. See Thermography Survey for more information.								
X	109 / 4	P/S Conc Open Girder	LF	1774	1747	27			
X	205 / 4	R/Conc Column	EA	9	9				
X	215 / 4	R/Conc Abutment	LF	78	25	6	47		
	South abutment has extensive delamination and some exposed r-bar with some section loss								
X	234 / 4	R/Conc Cap	LF	87	27	35	25		
	Exposed r-bar over at pier # 1 with some section loss.								
X	250 / 4	Concrete Diaphragm	EA	42		36	6		
	Some spalling exposed reiforcement with section loss.								
X	300 / 4	Strip Seal Exp Joint	LF	39			39		
	Sealed with rubber. joint shows evidence of leaking at pier # 2								
X	302 / 4	Compressn Joint Seal	LF	157		157			
	Sealed with rubber								
X	310 / 4	Elastomeric Bearing	EA	30	30				
X	313 / 4	Fixed Bearing	EA	30	30				
X	322 / 4	Bituminous Approach	EA	2	2				
X	330 / 4	Metal Rail Uncoated	LF	472			472		
	NW rail bent outward 6"								
X	342 / 3	RipRap Slope Protect	EA	2			2		
	Blocks missing and sliding down hill. Severe settling on S. slope.								
X	358 / 4	Deck Cracking SmFlag	EA	1			1		

Element Inspection (X) Check Elements Inspected

Ck	Elem./Env.	Description	Unit	Total QTY.	Quantity in Condition States 1	2	3	4	5
X	359 / 4	Und Dk Surf Sm Flag	EA	1			1		
X	400 / 3	Concrete Wingwall	EA	4	4				
X	410 / 4	Curb	LF	236		136	100		
X	415 / 4	Sidewalk/Median	LF	236	26	150	60		

General Inspection/Maintenance Notes

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Deck - Patching
Amount: **Date(YYYY-MM-DD):**
Maintenance item comment: w/asphalt Rt lane 4'X8' & 4'X2'. Lt Lane 4'X4' & 6'X4'

Maintenance Item:
Amount: **Date(MM-DD-YY):**
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	5	5	Culvert	N	N
Superstructure	6	5	Channel	N	N
Substructure	5	5	Waterway	N	N

Maintenance Item:
Amount: **Date(MM-DD-YY):**
Maintenance item comment:

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-035
STH 47 SB over USH 41

LOCATION

(3) Municipality:	TOWN-GRAND CHUTE(44020)
(16) Latitiude(° ' "):	44°17'56.14"N
(17) Longitude(° ' "):	88°24'55.81"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC X-ONE WAY TRAFFIC -TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	1

GEOMETRY

(49) Structure Length(ft):	235.5	
(50) Sidewalk Width(ft):	Left: 3.0	Right: 6.0
(50) Curb Width(ft):	0.0	
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 2	Direction: X-RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	30.0	30.0
(52) Deck(ft):	39.0	39.0
(32) Approach Roadway(ft):	30	0
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	60.0	60.0
(55) Minimum Right Lateral(ft):	12.0	12.0
(55) Minimum Left Lateral(ft):	22.0	22.0

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	X-SUB-STANDARD -STANDARD -NOT APPLICABLE	
(36B) Transition Adequacy:	X-SUB-STANDARD -STANDARD -NOT APPLICABLE	
(36C) Approach Guardrail Adequacy:	X-SUB-STANDARD -STANDARD -NOT APPLICABLE	
(36D) Guardrail Termination Adequacy:	X-SUB-STANDARD -STANDARD -NOT APPLICABLE	
Outer Rail:	Left / Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) **Left:** 3 LINE HORIZONTAL CHANNEL(50) **Right:** 3 LINE HORIZONTAL CHANNEL(50)
Transition Type:		CONT GUARD RAIL
		NO APP GRDRL
		NO ATTACHMENT
4		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
Guardrail Termination Type:		(01) ENERGY ABSORBING TERMINAL/EAT
X		(02) TURN DOWN
		(99) OTHER (Please specify)

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: STH 47 NB		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-036
Feature Under: USH 41		Sect/Twn/Rng: S14 T21N R17E		
Location: 1.7M N JCT STH 96		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE(44020)	
Inv Rating: HS21	Rdwy Width (ft): 30.0	Deck Width (ft): 39.0	Existing Posting:	
Oper Rating: HS36	Total Length (ft): 235.5	Deck Area(ft2): 9184	ADT On: 10200 Yr: 2003	ADT Under: 51620 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	08-22-12						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 2.0	Date: 01-09-01	Deck Surface Type: INTEGRAL CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 08-09-10	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated:

Expansion Joints

Location	Type	Temp: / File Insp. Date	File Insp. (in)	New Insp. (in)
SOUTH AB	COMPSEAL		2.0	
PIER 1	COMPSEAL		1.9	
PIER 2	STRIPSEA		0.6	
PIER 3	COMPSEAL		1.6	
NORTH AB	COMPSEAL		1.7	

Temp: 85

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers	Y	Y	
Narrow Bridge			
One Lane Road			
Vertical Clearance	Y	Y	15ft3in
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	15.16		
Min. Veritcal Clearance Under (non-Cardinal)	15.41		
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
PREST CONCRET	DECK GIRDER		45.0
PREST CONCRET	DECK GIRDER		68.0
PREST CONCRET	DECK GIRDER		68.0
PREST CONCRET	DECK GIRDER		50.5

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1961	NEW STRUCTURE	P038	F046
1972	PAINTING		
1983	CONCRETE OVER	C226	C226
1985	BEARING - MIS	C275	
9999	NOT BUILT		

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control		
Access Equipment		
Other		

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 08-22-12	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	22 / 4	Conc Deck/Conc Ov	SF	9185				9185	
	Areas of map cracking. Large areas of map cracking. See Thermography Surveys for more information.								
X	109 / 4	P/S Conc Open Girder	LF	1774	1750	24			
	Minor collision damage on East girder.								
X	205 / 4	R/Conc Column	EA	9	9				
X	215 / 4	R/Conc Abutment	LF	78	59	19			
X	234 / 4	R/Conc Cap	LF	114	74	40			
	Delaminated and spalled.								
X	250 / 4	Concrete Diaphragm	EA	78		75	3		
	Some spalling exposed reiforcement with section loss								
X	300 / 4	Strip Seal Exp Joint	LF	39		39			
	Leaking Sealed with rubber								
X	302 / 4	Compressn Joint Seal	LF	157		157			
	Sealed with rubber								
X	310 / 4	Elastomeric Bearing	EA	30	30				
X	313 / 4	Fixed Bearing	EA	30	30				
X	322 / 4	Bituminous Approach	EA	2	2				
X	330 / 4	Metal Rail Uncoated	LF	472			472		
X	342 / 3	RipRap Slope Protect	EA	2			2		
	Blocks missing and sliding downhill, washout at North abutment								
X	358 / 4	Deck Cracking SmFlag	EA	1			1		

Element Inspection (X) Check Elements Inspected

Ck	Elem./Env.	Description	Unit	Total QTY.	Quantity in Condition States 1	2	3	4	5
X	359 / 4	Und Dk Surf Sm Flag	EA	1		1			
X	362 / 4	Traf Impact SmFlag	EA	1	1				
X	400 / 3	Concrete Wingwall	EA	4	4				
X	410 / 4	Curb	LF	236	181	50	5		
X	415 / 4	Sidewalk/Median	LF	236	86	100	50		
X	416 / 4	Utilities	EA	1	1				

General Inspection/Maintenance Notes

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Deck - Patching
Amount: Date(YYYY-MM-DD):
Maintenance item comment: w/asphalt Rt lane-2'X2' & 4'X4'

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	5	5	Culvert	N	N
Superstructure	5	5	Channel	N	N
Substructure	5	5	Waterway	N	N

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-036
STH 47 NB over USH 41

LOCATION

(3) Municipality:	TOWN-GRAND CHUTE(44020)
(16) Latitiude(° ' "):	44°17'53.81"N
(17) Longitude(° ' "):	88°24'54.89"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC X-ONE WAY TRAFFIC -TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	1

GEOMETRY

(49) Structure Length(ft):	235.5	
(50) Sidewalk Width(ft):	Left: 3.0	Right: 6.0
(50) Curb Width(ft):	0.0	
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 2	Direction: X-RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	30.0	30.0
(52) Deck(ft):	39.0	39.0
(32) Approach Roadway(ft):	35	0
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	60.0	60.0
(55) Minimum Right Lateral(ft):	12.0	12.0
(55) Minimum Left Lateral(ft):	22.0	22.0

RAILING APPRAISAL

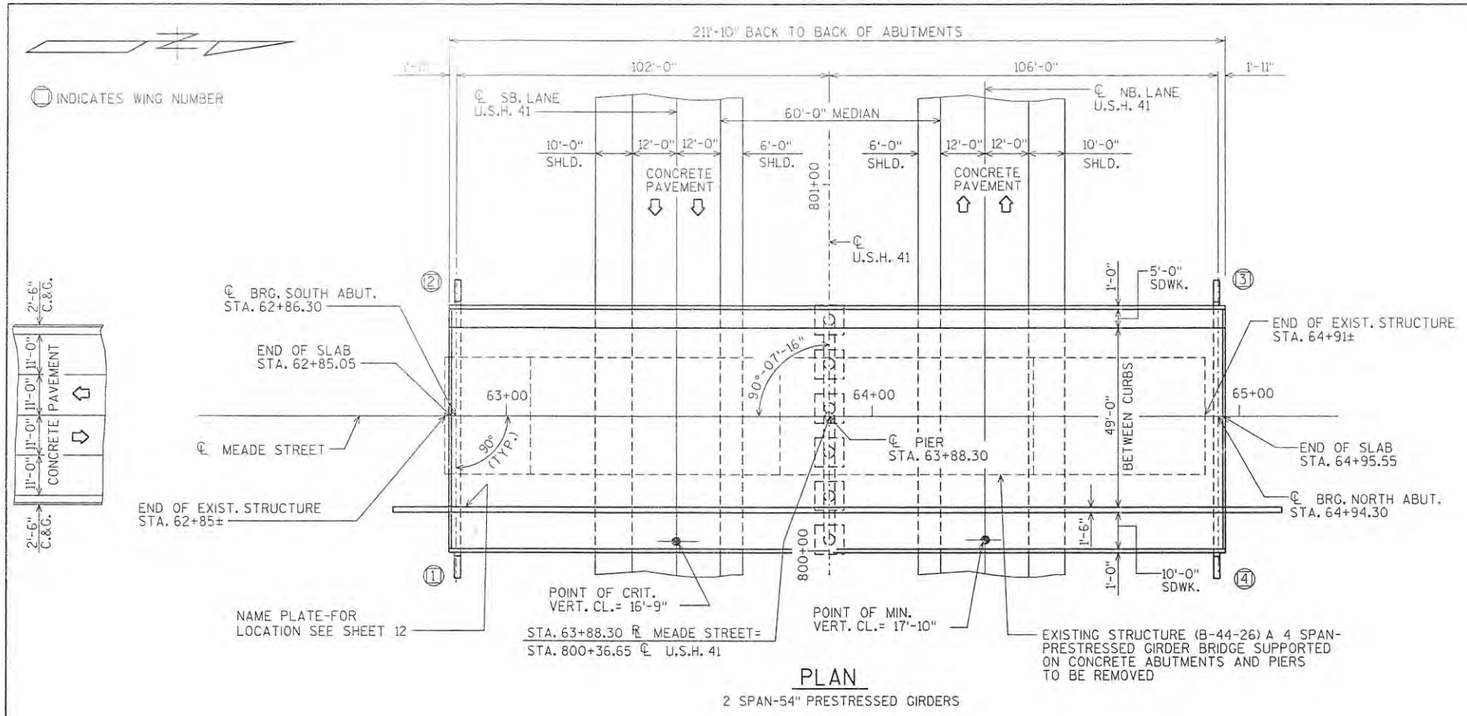
(36A) Bridge Rail Adequacy:	X-SUB-STANDARD -STANDARD -NOT APPLICABLE	
(36B) Transition Adequacy:	X-SUB-STANDARD -STANDARD -NOT APPLICABLE	
(36C) Approach Guardrail Adequacy:	X-SUB-STANDARD -STANDARD -NOT APPLICABLE	
(36D) Guardrail Termination Adequacy:	X-SUB-STANDARD -STANDARD -NOT APPLICABLE	
Outer Rail:	Left	Right
			TYPE F (TWO SQUARE TUBES) - STEEL(8)
			TYPE F (3 SQUARE TUBES) - STEEL(65)
			TYPE F (4 SQUARE TUBES) - STEEL(72)
			TYPE M-STEEL 3 SQUARE TUBES(93)
			SLOPED FACE PARAPET LF(91)
			SLOPED FACE PARAPET HF(92)
			VERTICAL FACE PARAPET TYPE A(74)
			TYPE W-THRIE BEAM(79)
			TYPE H ON VERTICAL PARAPET(80)
			TIMBER(38)
	X	X	OTHER(99) (Please specify) **Left:** 3 LINE HORIZONTAL CHANNEL(50) **Right:** 3 LINE HORIZONTAL CHANNEL(50)
Transition Type:			CONT GUARD RAIL
			NO APP GRDRL
			NO ATTACHMENT
	4		22 MM(7/8") BOLT (Please enter quantity)
			25 MM(1") BOLT (Please enter quantity)
			OTHER (Please specify)
Guardrail Termination Type:			(01) ENERGY ABSORBING TERMINAL/EAT
	X		(02) TURN DOWN
			(99) OTHER (Please specify)

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

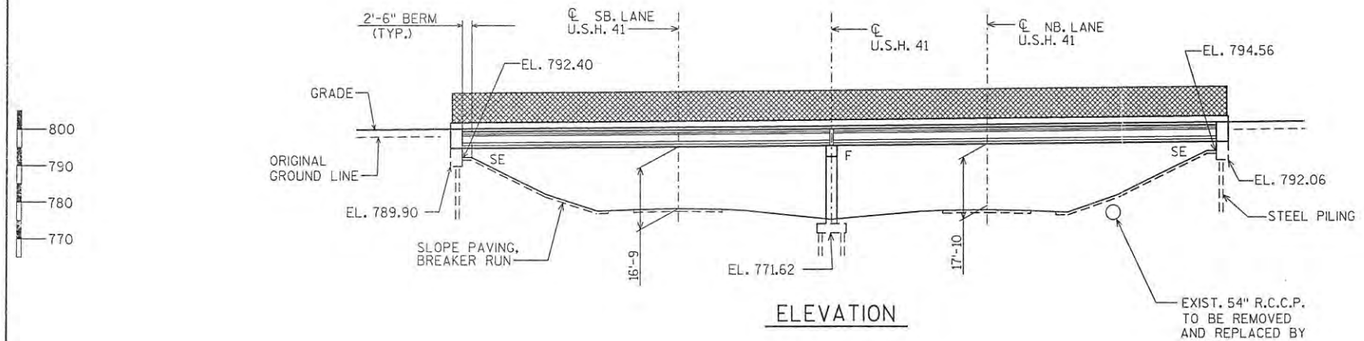
TYPE CODE = X281

STATE PROJECT NUMBER	SHEET NO.
1123-06-71/72	8.0

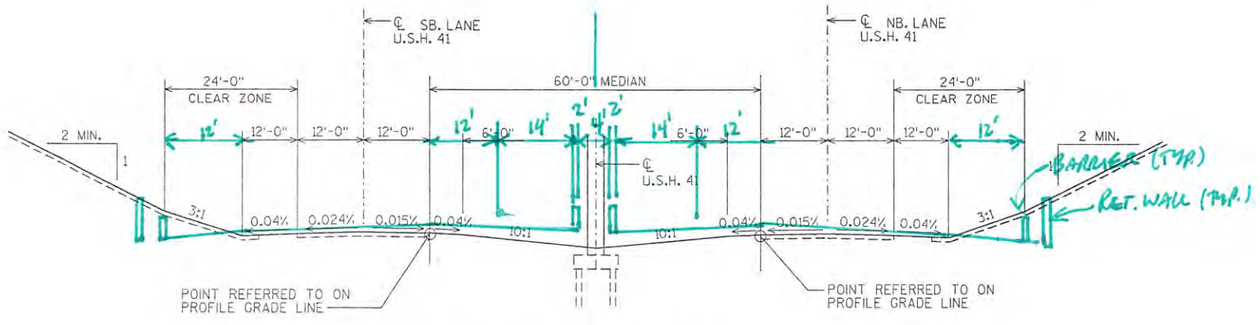


PLAN

2 SPAN-54" PRESTRESSED GIRDERS



ELEVATION



TYPICAL SECTION THRU U.S.H. 41

DESIGN DATA

LIVE LOAD:

DESIGN RATING; HS-20
INVENTORY RATING; HS-22
OPERATIONAL RATING; HS-44
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.

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

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.
54" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 6,000 P.S.I.
STRANDS-½" ϕ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 55 TONS PER PILE. ESTIMATED 55'-0" LONG.

PIER TO BE SUPPORTED ON HP 10X42 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 55 TONS PER PILE. ESTIMATED 40'-0" LONG.

TRAFFIC VOLUME

MEADE STREET	U.S.H. 41
A.D.T.=10,800 (1991)	A.D.T.=15,000 (1991)
R.D.S.=35 M.P.H.	R.D.S.=65 M.P.H.

2037-1991 = 46
$10{,}800(1.03)^{46} = 42070$ (IF 3% GROWTH)
$10{,}800(1.02)^{46} = 26860$ (IF 2% GROWTH)

LIST OF DRAWINGS

BRIDGE OFFICE CONTACTS :
KENT BAHLER (608) 266-8490
JACK KLEMM (608) 266-5093

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-44-171

MEADE STREET OVER U.S.H. 41

COUNTY: OUTAGAMIE		~~TOWN~~/CITY/~~VILLAGE~~: APPLETON	
DESIGN SPEC.: AASHTO 1994		LOAD: HS-20	CONST. SPEC.: 1989
DESIGNED BY: M.G.W.	DESIGN CK'D.: P.C.	DRAWN BY: B.W.	PLANS CK'D.: J.C.K.

APPROVED: Gerald H. Anderson — CHIEF STRUCTURAL DESIGN ENGINEER — DATE: 12-07-95

GENERAL PLAN

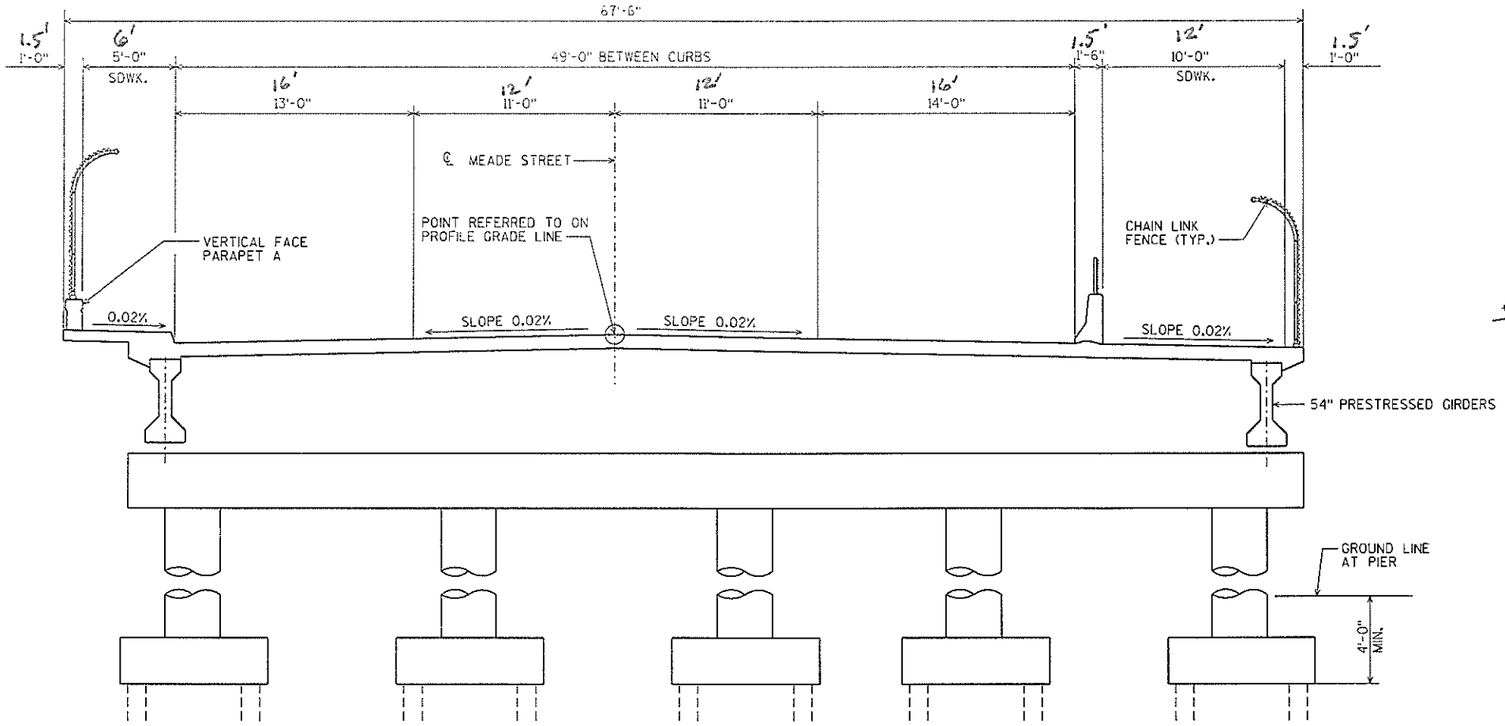
SHEET 1 OF 15

DATE: 11-95

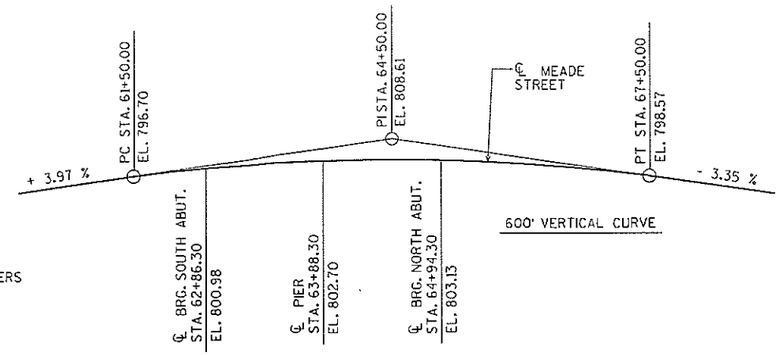
FILE= BR B4417:171GP.DGN

I.D. 1123-06-00

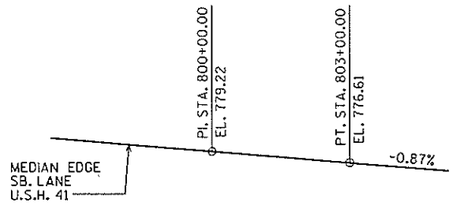
STATE PROJECT NUMBER	SHEET NO.
1123-06-71/72	8.1



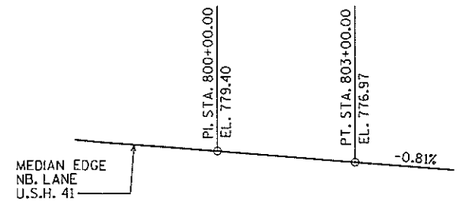
CROSS SECTION THRU ROADWAY LOOKING NORTH



PROFILE GRADE LINE MEADE STREET



NORTHBOUND LANE



SOUTHBOUND LANE

PROFILE GRADE LINE U.S.H. 41

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	PIER	TOTALS
REMOVING OLD BRIDGE, STA. 63+88.30	L.S.	——	——	——	——	1
EXCAVATION FOR STRUCTURES, BRIDGES, B-44-171	L.S.	——	——	——	——	1
CONCRETE MASONRY, BRIDGES	C.Y.	517	58	58	69	702
PROTECTIVE SURFACE TREATMENT	GAL.	106	——	——	——	106
PRESTRESSED GIRDER, I TYPE, 54-INCH	L.F.	1,879	——	——	——	1,879
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	——	4,600	4,600	880	10,080
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	97,310	230	230	10,190	107,960
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	27	——	——	——	27
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	——	770	770	1,200	2,740
RUBBERIZED MEMBRANE WATERPROOFING	S.Y.	——	14	14	——	28
SLOPE PAVING, BREAKER RUN	S.Y.	——	290	295	——	585
CHAIN LINK FENCE , 8' FT.	L.F.	212	——	——	——	212
STEEL DIAPHRAGM, STRUCTURE B-44-171	EACH	32	——	——	——	32
STRUCTURAL BACKFILL	C.Y.	——	310	310	——	620
CHAIN LINK FENCE - 10 FOOT	L.F.	212	——	——	——	212
CHAIN LINK FENCE - 2 FOOT	L.F.	225	——	——	——	225
CONCRETE MASONRY ANCHORS, TYPE 'S' - 3/4 INCH	EACH	348	——	——	——	348
NON-BID ITEMS						
FILLER	SIZE	——	——	——	——	1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

THE FINISHED GRADED SECTION SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

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

AT THE BACKFACE OF ABUTMENT ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURAL BACKFILL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

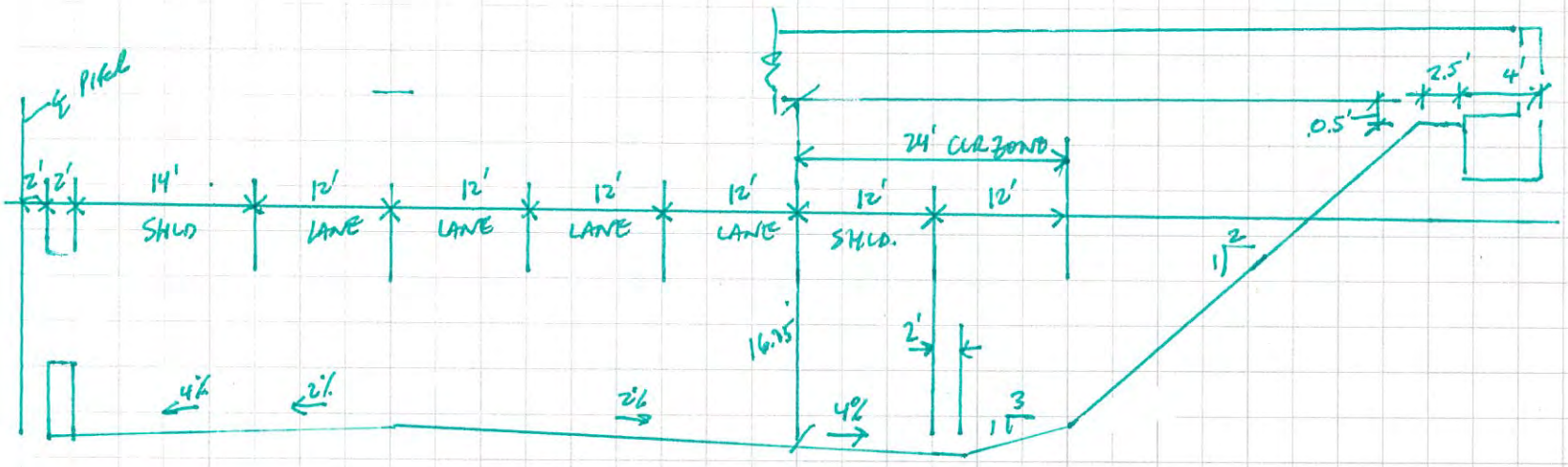
STRUCTURE B-44-171

CONST. SPEC. 1989	DRAWN BY B.W.	PLANS CK'D. J.C.K.

CROSS SECTION & QUANTITIES

SHEET 2

FILE= BR B44171171GP.DGN



$$16.75' + 14(0.04) - \frac{10}{3} - \frac{X}{2} - 0.5' = 0.00$$

$$X = 27'$$

SPAN 1 = SPAN 2 = 123.5

BRIDGE LENGTH = 123.5(2) = 247'

2 SPAN = 54W

4 SPAN = 36W

FOR: JOB NO: SHEET NO:

MADE BY: CHECKED BY: BACKCHECKED BY:

DATE: DATE: DATE:

HNTB

Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced [1, 2]

<table>
<tr><td>Overpass Facility →</td><td colspan="2">Freeway, Expressway, or STH</td><td>Railroad[5], CTH, Town Road, Local Road, or Street</td><td>Pedestrian or Shared-use Structures</td><td>Sign Structures[6]</td></tr>
<tr><td>Underpass Facility ↓</td><td>Interchange</td><td>Grade Separation</td><td></td><td></td><td></td></tr>
<tr><td rowspan="3">Non-arterial
either STH, CTH, Town Road, Local Road, or Street</td><td rowspan="3">15'-3" min. or ES[3]</td><td colspan="2">If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">16'-3" min. or ES[3]</td><td rowspan="6">18'-0" min. or ES[3] for existing sign structures on new construction projects or reconstruction projects;

17'-0" or ES[3] for existing sign structures on 3R projects</td></tr>
<tr><td colspan="2">If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td colspan="2">If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial
either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td>If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td>If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial STH (excludes freeway and expressway)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td>If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td></tr>
<tr><td>Freeway[4] or Expressway</td><td colspan="4">16'-0" min. or ES[3]</td></tr>
<tr><td>Railroad[5]</td><td colspan="5">Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.</td></tr>
</table>

General notes:

1. Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

   Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

2. Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

3. ES = approved Exceptions To Standards Report required (see FDM 11-1-2 and FDM 11-1-4).

4. See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

5. Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

6. See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced [1]

Overpass Facility →	Freeway, Expressway, or STH		Railroad[4], CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures[2]
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable 15'-3" Minimum	15'-3" Desirable 14'-9" Minimum		16'- 9" Desirable 16'-3" Minimum	18'-3" Minimum
Arterial either CTH, Town Road, Local Road, or Street (**excludes** freeway and expressway; also excludes arterial STH)	16'-9" Desirable 16'-3" Minimum	15'-3" Desirable 14'-9" Minimum		17'- 9" Desirable 17'-3" Minimum	
Freeway[3] or Expressway or arterial STH	16'-9" Desirable 16'-4" Minimum			17'- 9" Desirable 17'-4" Minimum	
Railroad[4,5,6,7]	23'-0" Minimum to 23'-3½" Maximum				

General notes:

1 Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

2 See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

3 See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

4 Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

5 A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

See Chapter 17 for additional information.

6 Provide justification for a vertical clearance >23'-3 ½" to the RHS.

7 Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: MEADE ST		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-171
Feature Under: USH 41		Sect/Twn/Rng: S13 T21N R17E		
Location: 0.8M N JCT CTH OO		County: OUTAGAMI	Municipality: CITY-APPLETON(44201)	
Inv Rating: HS22	Rdwy Width (ft): 49.0	Deck Width (ft): 67.6	Existing Posting:	
Oper Rating: HS44	Total Length (ft): 210.5	Deck Area(ft2): 14229	ADT On: 10800 Yr: 1991	ADT Under: 51620 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-13-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 10-15-09	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated: 02-20-96

Expansion Joints

Location	Type	Temp: File Insp. Date	File Insp. (in)	New Insp. (in)

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers			
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	17.06		
Min. Veritcal Clearance Under (non-Cardinal)	17.77		
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
CONCRETE	DECK GIRDER		102.0
CONCRETE	DECK GIRDER		106.0

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1996	NEW STRUCTURE	PLAN	

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control	Y	
Access Equipment	Y	
Other	Y	

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 10-13-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 4	Conc Deck/Coatd Bars	SF	14229	14229				
	Diag, trans cracks, leaching								
X	109 / 4	P/S Conc Open Girder	LF	1870	1870				
X	172 / 4	Painted Steel Diaphr	EA	32	32				
X	205 / 4	R/Conc Column	EA	5	5				
X	215 / 4	R/Conc Abutment	LF	134	134				
	Leaching between bridge seat & backwall								
X	234 / 4	R/Conc Cap	LF	62	62				
X	250 / 4	Concrete Diaphragm	EA	8	8				
X	321 / 4	R/Conc Approach Slab	EA	2	1		1		
	East approach settling, cracked and wedged								
X	331 / 4	Conc Bridge Railing	LF	639	614	25			
	With galv. chain link fence								
X	342 / 4	RipRap Slope Protect	EA	2	2				
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1		1			
X	400 / 4	Concrete Wingwall	EA	4	4				
X	415 / 4	Sidewalk/Median	LF	426	426				

General Inspection/Maintenance Notes

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Approach - Seal Approach to Paving Block
Amount: Date(YYYY-MM-DD):
Maintenance item comment: w/rubber

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	8	8	Culvert	N	N
Superstructure	8	8	Channel	N	N
Substructure	8	8	Waterway	N	N

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-171
MEADE ST over USH 41

LOCATION

(3) Municipality:	CITY-APPLETON(44201)
(16) Latitiude(° ' "):	44°17'53.10"N
(17) Longitude(° ' "):	88°23'43.41"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	6

GEOMETRY

(49) Structure Length(ft):	210.5	
(50) Sidewalk Width(ft):	Left: 5.0	Right: 10.0
(50) Curb Width(ft):		
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	49.0	49.0
(52) Deck(ft):	67.6	67.6
(32) Approach Roadway(ft):	48	0
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	59.0	59.0
(55) Minimum Right Lateral(ft):	15.0	15.0
(55) Minimum Left Lateral(ft):	20.0	20.0

RAILING APPRAISAL

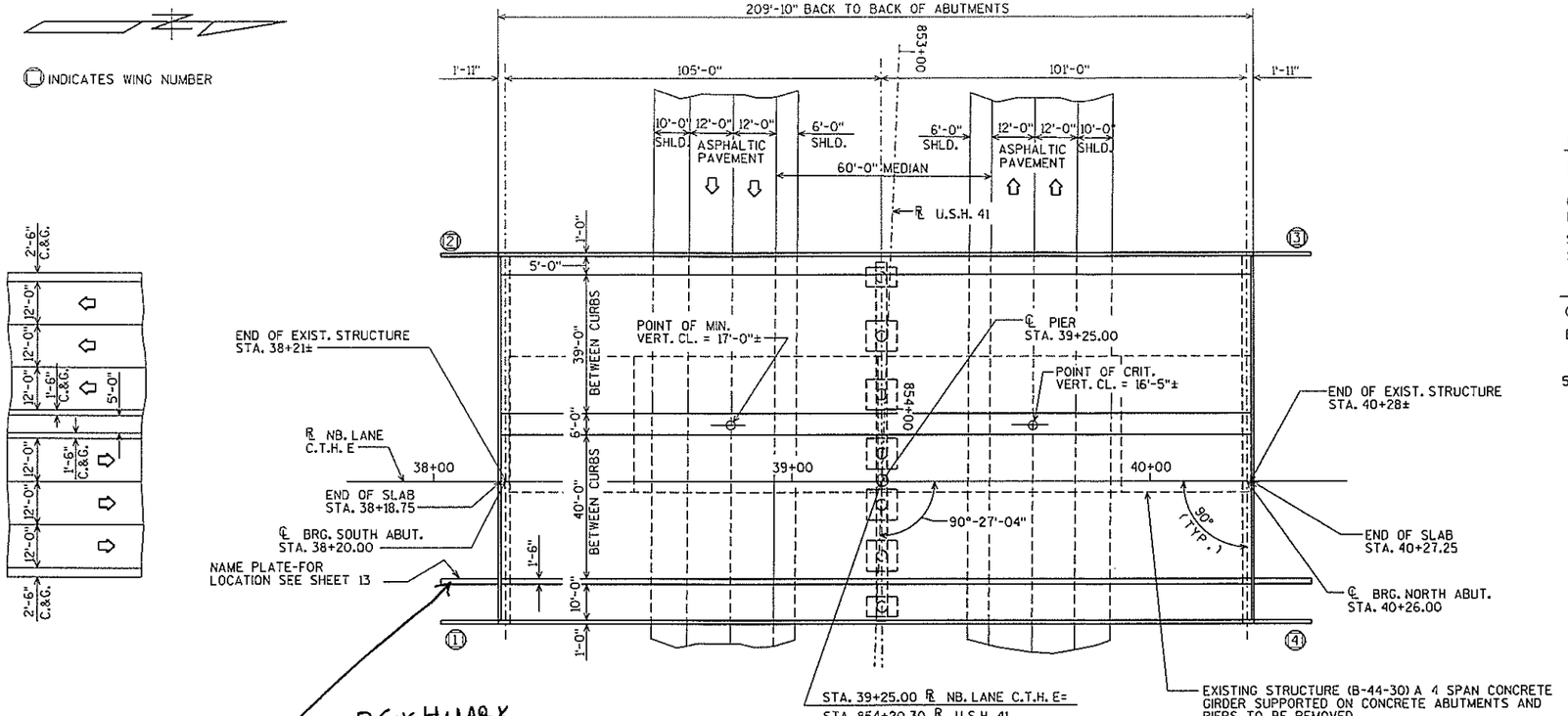
(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
(36B) Transition Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
Outer Rail:	Left / Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
	X / X	OTHER(99) (Please specify) **Left:** VERTICAL PARAPET-FENCE/VINYL(90) **Right:** VERTICAL PARAPET-FENCE/VINYL(90)
Transition Type:		CONT GUARD RAIL
	X	NO APP GRDRL
		NO ATTACHMENT
		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
Guardrail Termination Type:		(01) ENERGY ABSORBING TERMINAL/EAT
		(02) TURN DOWN
		(99) OTHER (Please specify)

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

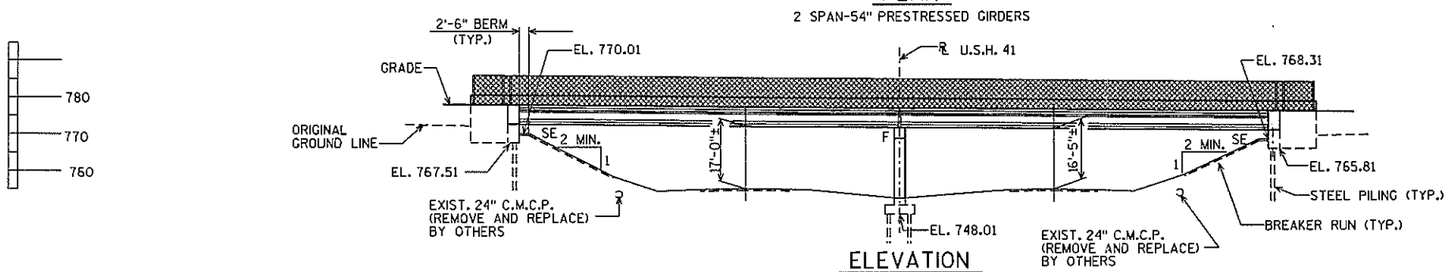
TYPE CODE = X281

STATE PROJECT NUMBER	SHEET NO.
1123-07-71, 72	8.0

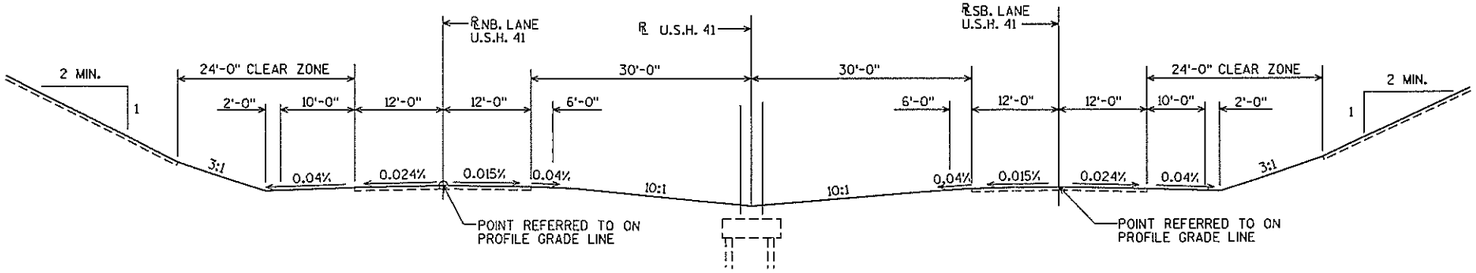


PLAN

2 SPAN-54" PRESTRESSED GIRDERS



ELEVATION



TYPICAL SECTION THRU U.S.H. 41

AT RIGHT ANGLES TO U.S.H. 41

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.

DESIGN DATA

LIVE LOAD:

DESIGN RATING; HS-20
INVENTORY RATING; HS-22
OPERATIONAL RATING; HS-40
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 25D KIPS.

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

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,5DD P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

54" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 6,000 P.S.I.
STRANDS-½" ϕ WITH ULTIMATE TENSILE STRENGTH OF 270,DOO P.S.I.

FOUNDATION DATA

ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING EST. 65'-0" ℄ S.ABUT. & 60'-0" ℄ N.ABUT. LONG AND DRIVEN TO MIN. BRG. VALUE OF 55 TONS PER PILE.

PIER TO BE SUPPORTED ON HP 10 X 42 STEEL PILING EST 45'-0" LONG AND DRIVEN TO MIN. BRG. VALUE OF 55 TONS PER PILE.

TRAFFIC VOLUME

C.T.H. E	U.S.H. 41
A.D.T.=25,500 (2016)	A.D.T.=49,775 (2D16)
R.D.S.=4D M.P.H.	R.D.S.=65 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH BREAKER RUN TO THE EXTEND SHOWN DN SHEET 1 AND IN THE ABUTMENT DETAILS.

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

AT THE BACKFACE OF ABUTMENT ALL EXCAVATED VOLUME NDT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH GRADE 1 GRANULAR BACKFILL.

THE FINISHED GRADED SECTION SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

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

LIST OF DRAWINGS

BRIDGE OFFICE CONTACTS :
FINN HUBBARD (6D8) 266-8489
KEITH NELSON (608) 266-5083

NO.	DATE	REVISION	BY
1	1/95	ADD 2' FENCE TO PPT "C" SHT.14A	G

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-44-172

C.T.H E OVER U.S.H. 41

COUNTY OUTAGAMIE	TOWN: GRAND CHUTE CITY: APPLETON
DESIGN SPEC. AASHTO 1994	LOAD HS-20 / CONST. SPEC. 1989
DESIGNED BY KTN / DESIGN CK'D. CR	DRAWN BY G / PLANS CK'D. Budd

APPROVED Gerald H. Anderson — CHIEF STRUCTURAL DESIGN ENGINEER — 01-18-95 DATE

GENERAL PLAN

SHEET 1 OF 14

DATE: NOV. 94 JAN. 95

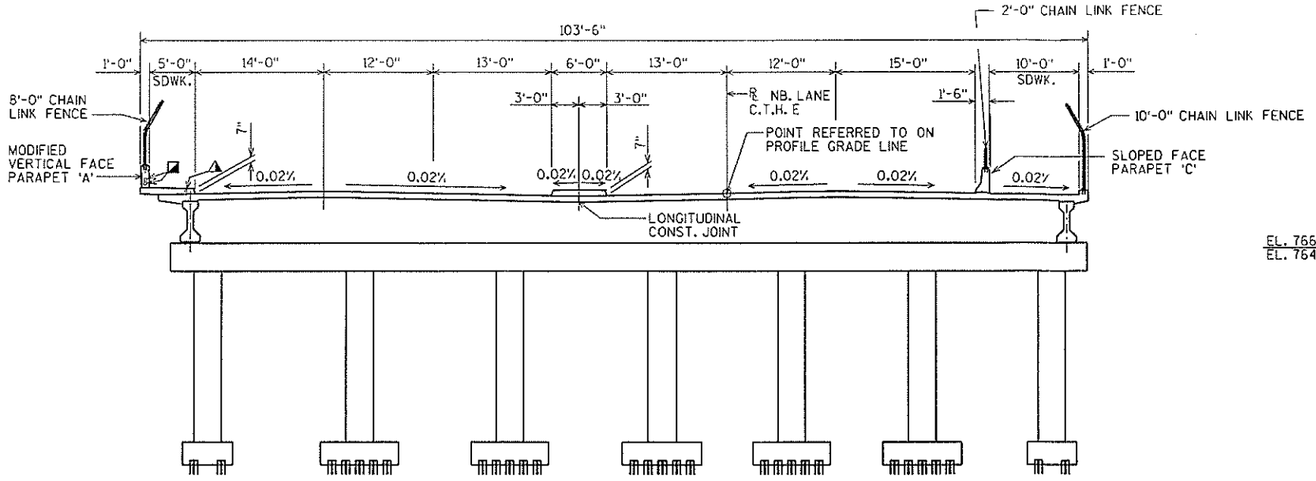
I.D. 1123-07-00

DISTRICT CONTACT RICHARD SABOURIN

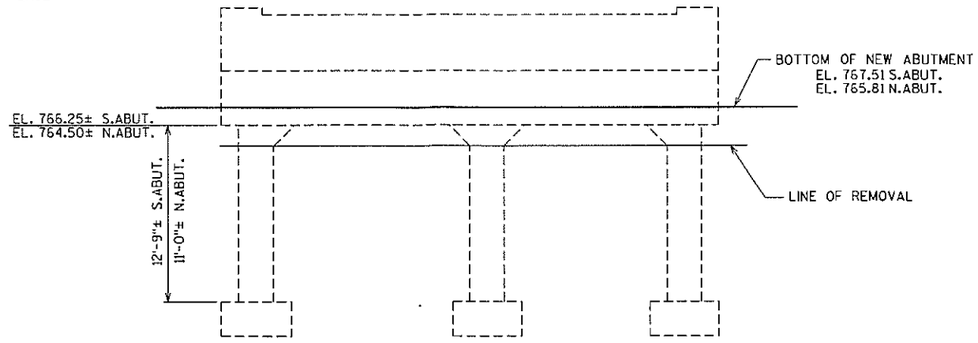
BR B44172:172GP.DGN

SCALE = 20

STATE PROJECT NUMBER	SHEET NO.
1123-07-71, 72	8.1



CROSS SECTION THRU ROADWAY LOOKING NORTH

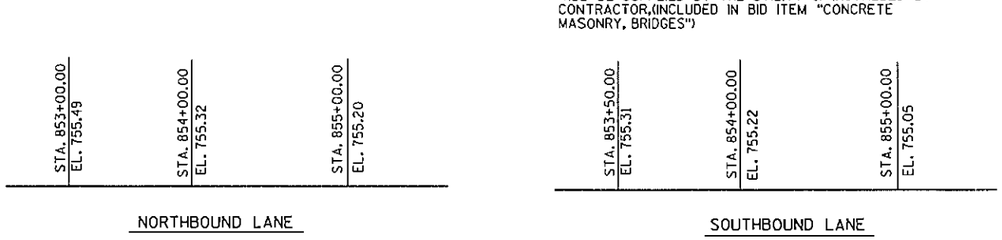


ELEVATION EXISTING ABUTMENT

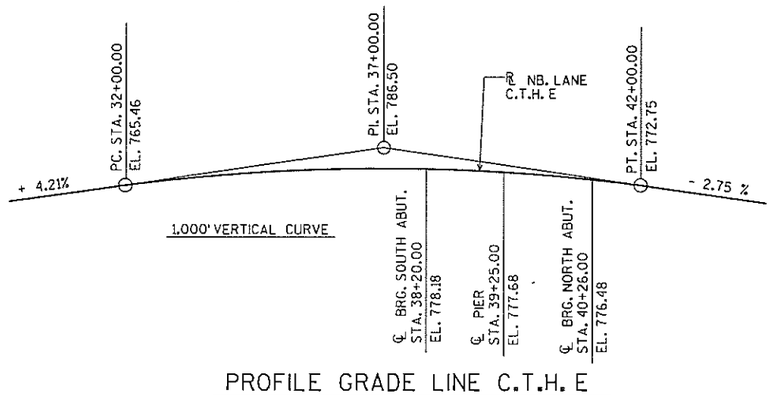
SHOWING LIMITS OF REMOVAL

△ 3"ϕ NONMETALLIC CONDUIT FOR TRAFFIC LIGHTING. EXPANSION FITTINGS WILL BE REQUIRED AT THE BACK FACE OF ABUTMENTS. RUN CONDUIT TO PULL BOX IN APPROACH SIDEWALK.

◪ TWO 4"ϕ NONMETALLIC CONDUIT FOR AMERTECH. EXPANSION FITTINGS WILL BE REQUIRED AT THE BACK FACE OF ABUTMENTS. TERMINATE 6" PAST ENDS OF WINGWALLS, 1'-6"± UNDER GROUND, CAP ENDS. CONDUIT WILL BE SUPPLIED BY THE UTILITY & INSTALLED BY CONTRACTOR, (INCLUDED IN BID ITEM "CONCRETE MASONRY, BRIDGES")



PROFILE GRADE LINE U.S.H. 41



PROFILE GRADE LINE C.T.H. E

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	PIER	TOTALS
REMOVING OLD BRIDGE, STA. 39+25	L.S.	——	——	——	——	1
EXCAVATION FOR STRUCTURES, BRIDGES, B-44-172	L.S.	——	——	——	——	1
CONCRETE MASONRY, BRIDGES	C.Y.	790	87	87	112	1076
PROTECTIVE SURFACE TREATMENT	GAL.	159	——	——	——	159
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	——	6900	6900	1980	15780
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	141800	780	780	16140	159500
CONCRETE MASONRY ANCHORS, TYPE S, ¾-INCH	EACH	388	——	——	——	388
PRESTRESSED GIRDER, I TYPE, 54-INCH	L.F.	3102	——	——	——	3102
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	45	——	——	——	45
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	——	1550	1430	2115	5095
RUBBERIZED MEMBRANE WATERPROOFING	S.Y.	——	20	20	——	40
SLOPE PAVING, BREAKER RUN	S.Y.	——	330	275	——	605
PIPE UNDERDRAIN, 6-INCH	L.F.	——	107	107	——	214
PIPE UNDERDRAIN, UNPERFORATED, 6-INCH	L.F.	——	20	20	——	40
NONMETALLIC CONDUIT, 3-INCH	L.F.	250	——	——	——	250
CHAIN LINK FENCE , 8 FT.	L.F.	242	——	——	——	242
CHAIN LINK FENCE , 10 FT.	L.F.	242	——	——	——	242
GEOTEXTILE FABRIC, TYPE DF	S.Y.	——	83	83	——	166
STEEL DIAPHRAGMS, STRUCTURE B-44-172	EACH	56	——	——	——	56
CHAIN LINK FENCE , 2 FT.	L.F.	224	——	——	——	224
NON-BID ITEMS		——	——	——	——	——
FILLER	SIZE	——	——	——	——	½" & ¾"
		——	——	——	——	

NO.	DATE	REVISION	BY
1	1/95	ADDED 2' CHAIN LINK FENCE	G

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

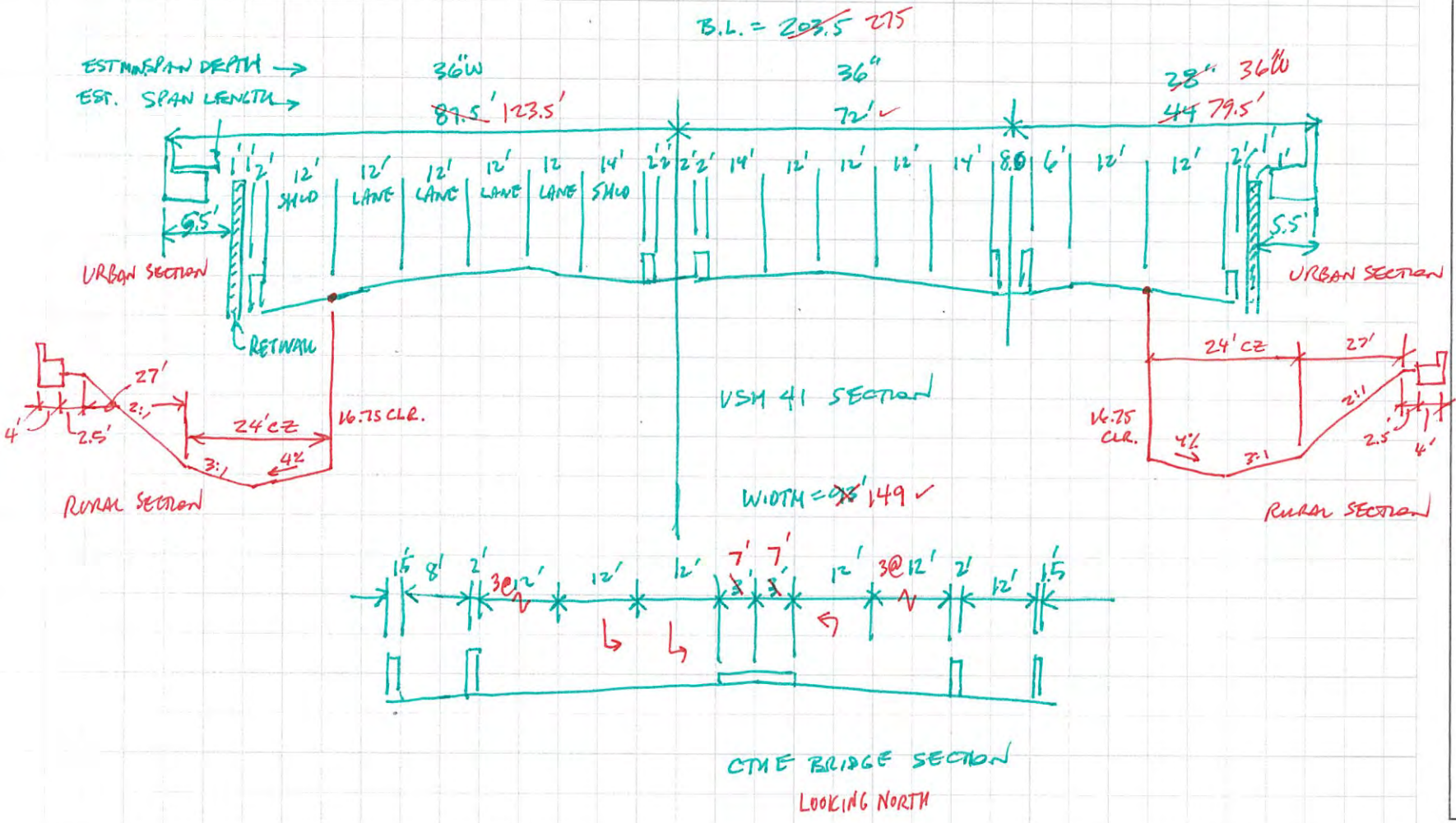
STRUCTURE B-44-172

CONST. SPEC.	DRAWN BY	PLANS CK'D.
1989	G	Budd

CROSS SECTION & QUANTITES

SHEET 2

BRB44172-172GP.DGN
SCALE = 8



FOR: JOB NO: SHEET NO:

MADE BY: CHECKED BY: BACKCHECKED BY:

DATE: DATE: DATE:

HNTB

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced [1]

Overpass Facility →	Freeway, Expressway, or STH		Railroad[4], CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures[2]
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable 15'-3" Minimum	15'-3" Desirable 14'-9" Minimum		16'- 9" Desirable 16'-3" Minimum	18'-3" Minimum
Arterial either CTH, Town Road, Local Road, or Street (**excludes** freeway and expressway; also excludes arterial STH)	16'-9" Desirable 16'-3" Minimum	15'-3" Desirable 14'-9" Minimum		17'- 9" Desirable 17'-3" Minimum	
Freeway[3] or Expressway or arterial STH	16'-9" Desirable 16'-4" Minimum			17'- 9" Desirable 17'-4" Minimum	
Railroad[4,5,6,7]	23'-0" Minimum to 23'-3½" Maximum				

General notes:

1. Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

   Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

   Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

2. See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

3. See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

4. Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

5. A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

   See Chapter 17 for additional information.

6. Provide justification for a vertical clearance >23'-3 ½" to the RHS.

7. Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: CTH E (Ballard Rd)		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-172
Feature Under: USH 41		Sect/Twn/Rng: S13 T21N R17E		
Location: 0.8M N JCT CTH OO		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE(44020)	
Inv Rating: HS22	Rdwy Width (ft): 79.0	Deck Width (ft): 103.6	Existing Posting:	
Oper Rating: HS40	Total Length (ft): 208.5	Deck Area(ft2): 21600	ADT On: 8100 Yr: 1994	ADT Under: 50240 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-13-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 10-15-09	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated: 02-21-95

Expansion Joints

Location	Type	Temp: File Insp. Date	File Insp. (in)	New Insp. (in)

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers			
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	17.09		
Min. Veritcal Clearance Under (non-Cardinal)	16.42		
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
CONT PREST CO	DECK GIRDER		105.0
CONT PREST CO	DECK GIRDER		101.0

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1995	NEW STRUCTURE	PLAN	

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control	Y	
Access Equipment	Y	
Other	Y	

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 10-13-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 4	Conc Deck/Coatd Bars	SF	21600	21600				
	Diag cracks at ends leaching								
X	109 / 4	P/S Conc Open Girder	LF	3136	3136				
X	172 / 4	Painted Steel Diaphr	EA	56	56				
X	205 / 4	R/Conc Column	EA	7	7				
X	215 / 4	R/Conc Abutment	LF	206	206				
	Leaching between the bridge seat & backwall								
X	234 / 4	R/Conc Cap	LF	114	114				
X	250 / 4	Concrete Diaphragm	EA	14	14				
X	321 / 4	R/Conc Approach Slab	EA	2	2				
	South approaches have settled								
X	331 / 4	Conc Bridge Railing	LF	426	426				
	Chain link fence on North parapet								
X	342 / 4	RipRap Slope Protect	EA	2	2				
X	358 / 2	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1		1			
X	400 / 4	Concrete Wingwall	EA	4	4				
X	410 / 4	Curb	LF	213	213				
	Curb has chain link fence								
X	415 / 4	Sidewalk/Median	LF	639	579	60			

General Inspection/Maintenance Notes

NBI Ratings

NBI	File	New	NBI	File	New
Deck	8	8	Culvert	N	N
Superstructure	8	8	Channel	N	N
Substructure	8	8	Waterway	N	N

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item:
Amount: Date(YYYY-MM-DD):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-172
CTH E (Ballard Rd) over USH 41

LOCATION

(3) Municipality:	TOWN-GRAND CHUTE(44020)
(16) Latitiude(° ' "):	44°17'52.23"N
(17) Longitude(° ' "):	88°22'29.32"W

TRAFFIC SERVICE

(28A) Lanes On:	6
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	1

GEOMETRY

(49) Structure Length(ft):	208.5	
(50) Sidewalk Width(ft):	Left: 6.0	Right: 11.0
(50) Curb Width(ft):		
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	79.0	79.0
(52) Deck(ft):	103.6	103.6
(32) Approach Roadway(ft):	72	0
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	58.0	58.0
(55) Minimum Right Lateral(ft):	14.0	14.0
(55) Minimum Left Lateral(ft):	20.0	20.0

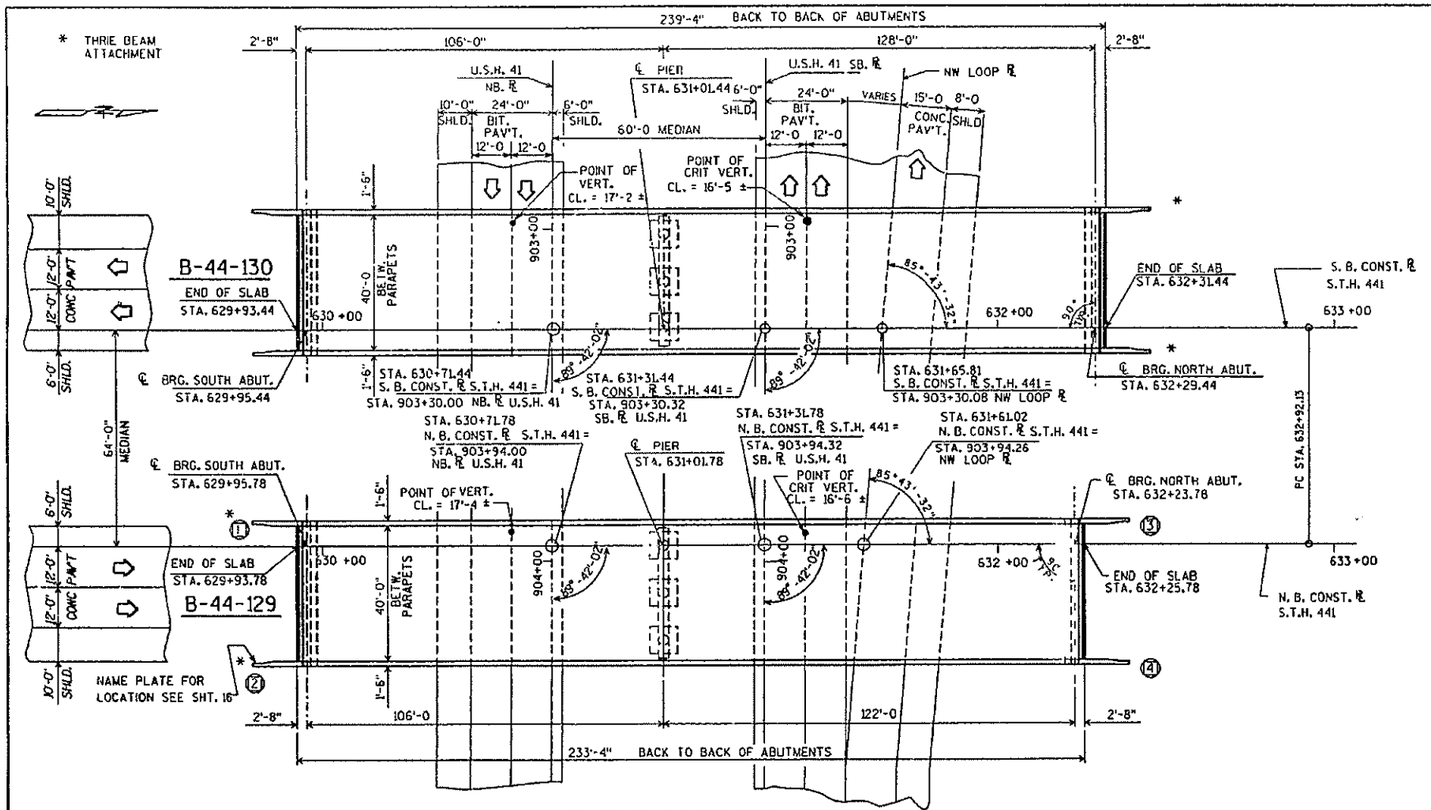
RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
(36B) Transition Adequacy:	-SUB-STANDARD -STANDARD X-NOT APPLICABLE	
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD -STANDARD X-NOT APPLICABLE	
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD -STANDARD X-NOT APPLICABLE	
Outer Rail:	Left / Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) Left: CHAIN LINK PEDESTRIAN/DAVIT(41) Right: CHAIN LINK PEDESTRIAN/DAVIT(41)
Transition Type:		CONT GUARD RAIL
	X	NO APP GRDRL
		NO ATTACHMENT
		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
Guardrail Termination Type:		(01) ENERGY ABSORBING TERMINAL/EAT
		(02) TURN DOWN
		(99) OTHER (Please specify)

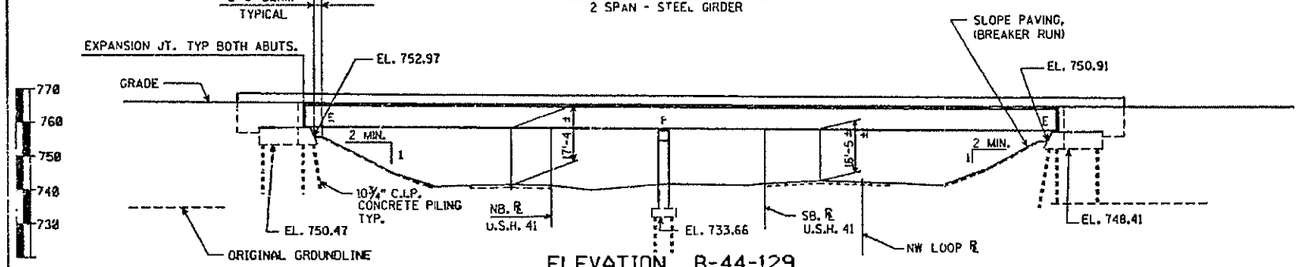
ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

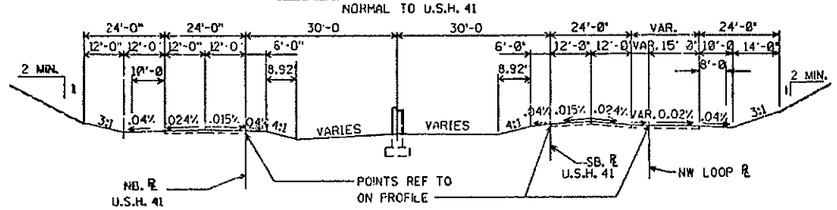
STATE PROJECT NUMBER	SHEET NO.
4685-2-81	8.24



PLAN B-44-129/130
2 SPAN - STEEL GIRDER



ELEVATION B-44-129
NORMAL TO U.S.H. 41



TYPICAL SECTION THRU U.S.H. 41

DESIGN DATA

LIVE LOAD:

DESIGN RATING; HS-20
INVENTORY RATING; HS-27
OPERATIONAL RATING; HS-45

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS
ULTIMATE DESIGN STRESSES:
CONCRETE MASONRY SLAB —f'c = 4,000 P.S.I. ALL OTHER —f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 —— fy = 60,000 P.S.I.
HIGH-STRENGTH STRUCTURAL STEEL (ASTM A572) TO AND INCLUDING 4" THICK —— Fy = 50,000 P.S.I.
STRUCTURAL CARBON STEEL (ASTM A36) —— Fy = 36,000 P.S.I.

TRAFFIC VOLUME

STH 441
A.D.T.=16,500 (2010)
R.D.S.=65 M.P.H.

USH 41
A.D.T.=33,200 (2010)
R.D.S.=65 M.P.H.

FOUNDATION DATA

ABUTMENTS AND PIER TO BE SUPPORTED ON 10¾" C.I.P. CONCRETE PILING.

CURVE DATA

S. B. CONST. ℄ S.T.H. 441	N. B. CONST. ℄ S.T.H. 441
P.I. 633+92.38	P.I. 633+97.98
Δ = 10°-00'-00"	Δ = 10°-00'-00"
D = 5°-00'-0	D = 4°-44'-08
T = 100.25'	T = 105.85'
L = 200.00'	L = 211.17'
R = 1145.92'	R = 1209.92'
S.E. = 0.059%	S.E. = 0.059%
R.O. = 165'	R.O. = 165'
P.C. 632+92.13	P.C. 632+92.13
P.T.634+92.13	P.T.635+03.30

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL PLAN
3. QUANTITITES AND NOTES
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT
7. NORTH ABUTMENT
8. NORTH ABUTMENT
9. PIER
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE
12. SLAB FORMING DETAILS
13. GIRDER DETAILS
14. BEARING DETAILS
15. EXPANSION JOINT
16. SLOPED FACE PARAPET "B"

BRIDGE OFFICE CONTACT - R.L. REESE (608)266-8488

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-44-129

STH 441 OVER USH 41

COUNTY OUTAGAMIE	TOWN/CITY/VILLAGE GRAND CHUTE
DESIGN SPEC. AASHTO 1989	LOAD HS 20 CONST. SPEC. 1989
DESIGNED BY MGW	DESIGN CKD. DJK
DRAWN BY ZIRK/JAR	PLANS CKD. DJK

APPROVED [signature] STATE BRIDGE ENGINEER 5/24/91 DATE

GENERAL PLAN

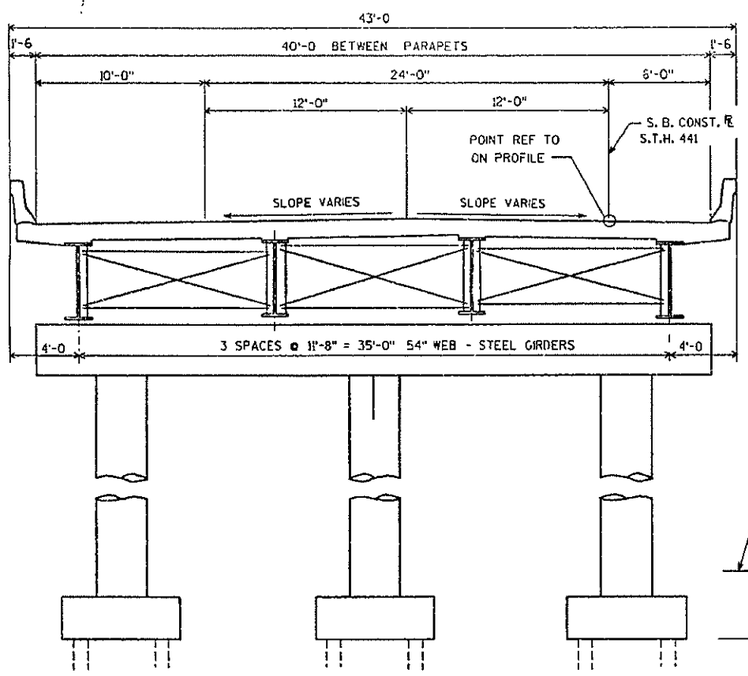
SHEET 1 OF 16

X83447

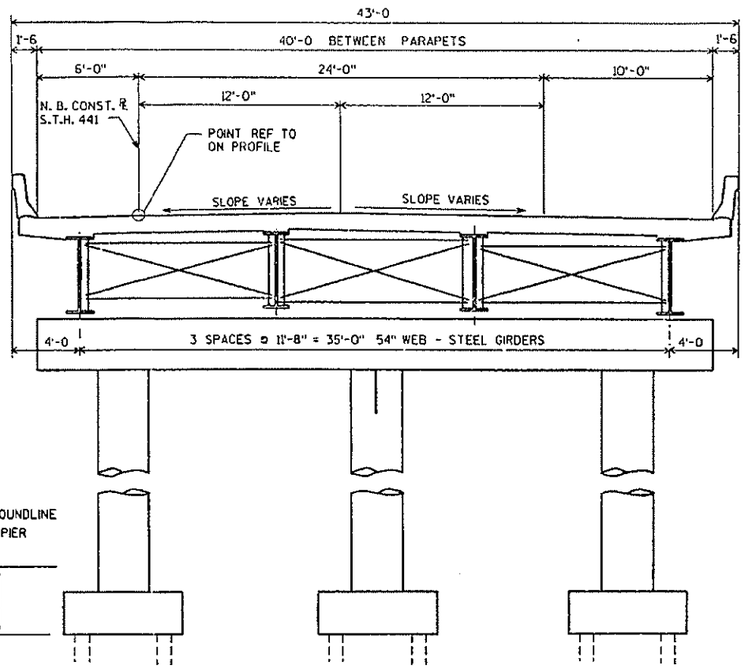
I.D. 4685-02-01E

B-44-129

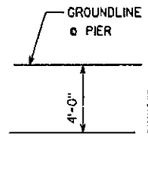
STATE PROJECT NUMBER	SHEET NO.
4685-2-81	8.25



B-44-130

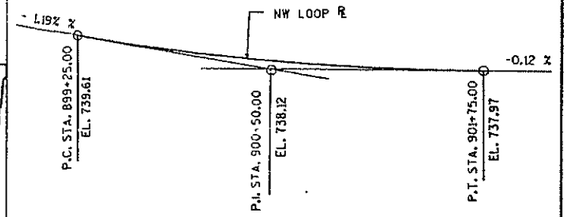


B-44-129

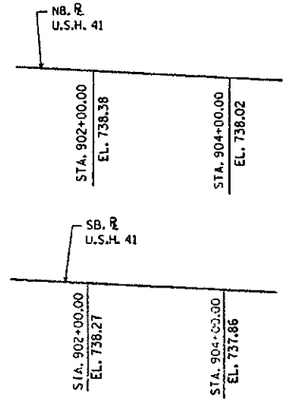


CROSS SECTION THRU ROADWAY LOOKING NORTH

250 VERT. CURVE

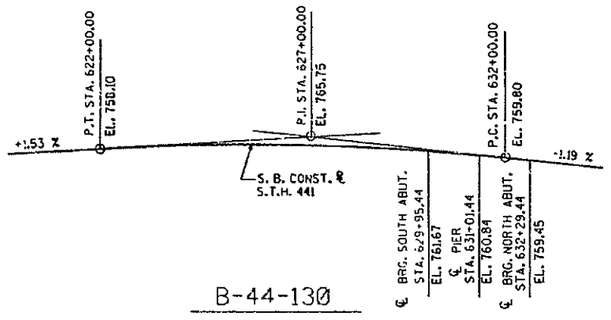


PROFILE GRADE LINE, NW LOOP ℄



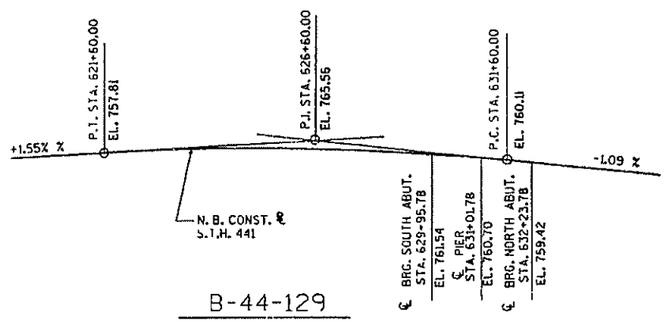
EXISTING ELEVATIONS, U.S.H. 41

1000 VERT. CURVE



B-44-130

1000 VERT. CURVE



B-44-129

PROFILE GRADE LINE, S.T.H. 441

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-44-129

CONST. SPEC.	1989	DRAWN BY	ZIRK/JAR	PLANS CK'D.	DJK

GENERAL PLAN

SHEET 2

X83447

Calculations for	Job No.	Sheet No.
Made by	Date	
Checked by	Date	

HNTB

(1/8" grid, 64 squares per inch)

SPANS 1 & 2 SIMILAR TO THE BRIDGE (B-44-172) SPAN 3 BELOW.

PARTIAL USH 41 FRONTAGE ROAD & RAMP SECTIONS

SPAN 3 = 60 FT

B.L. = 87.5 + 72 + 60 = 219.50

WIDTH 45'

41 RAMP SECTION

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced [1]

Overpass Facility →	Freeway, Expressway, or STH		Railroad[4], CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures[2]
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable 15'-3" Minimum	15'-3" Desirable 14'-9" Minimum		16'- 9" Desirable 16'-3" Minimum	18'-3" Minimum
Arterial either CTH, Town Road, Local Road, or Street (**excludes** freeway and expressway; also excludes arterial STH)	16'-9" Desirable 16'-3" Minimum	15'-3" Desirable 14'-9" Minimum		17'- 9" Desirable 17'-3" Minimum	
Freeway[3] or Expressway or arterial STH	16'-9" Desirable 16'-4" Minimum			17'- 9" Desirable 17'-4" Minimum	
Railroad[4,5,6,7]	23'-0" Minimum to 23'-3½" Maximum				

General notes:

1 Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

2 See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

3 See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

4 Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

5 A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

See Chapter 17 for additional information.

6 Provide justification for a vertical clearance >23'-3 ½" to the RHS.

7 Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: STH 441 NB		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-129
Feature Under: USH 41		Sect/Twn/Rng: S18 T21N R18E		
Location: 1.0M N JCT CTH OO		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE(44020)	
Inv Rating: HS27	Rdwy Width (ft): 40.0	Deck Width (ft): 43.0	Existing Posting:	
Oper Rating: HS45	Total Length (ft): 233.3	Deck Area(ft2): 10031	ADT On: 24300 Yr: 2003	ADT Under: 50240 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	08-23-12						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 08-13-10	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated: 07-21-92

Expansion Joints

Location	Type	Temp: / File Insp. Date	File Insp. (in)	New Insp. (in)
		80		
SOUTH AB	STRIPSEA		1.1	
NORTH AB	STRIPSEA		0.9	

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers			
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)

	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	16.8		
Min. Veritcal Clearance Under (non-Cardinal)	17.4		
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
CONT STEEL	DECK GIRDER		106.0
CONT STEEL	DECK GIRDER		122.0

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1993	NEW STRUCTURE	C333	C333

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control		
Access Equipment		
Other		

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 08-23-12	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 4	Conc Deck/Coatd Bars	SF	10032	10032				
	Trans. cracks, leaching.								
X	107 / 4	Paint Stl Opn Girder	LF	918	600	95	223		
	Paint is debonding from primer								
X	172 / 4	Painted Steel Diaphr	EA	36	36				
X	205 / 4	R/Conc Column	EA	3	3				
X	215 / 4	R/Conc Abutment	LF	85	83	2			
	CS-2(N Abut 1' & S Abut 1')								
X	234 / 4	R/Conc Cap	LF	39	39				
X	300 / 4	Strip Seal Exp Joint	LF	85			85		
	Seals are filled with hot rubber.								
X	311 / 4	Moveable Bearing	EA	8	6	2			
	Bearings are not centered over stiffener								
X	313 / 4	Fixed Bearing	EA	4	4				
X	321 / 4	R/Conc Approach Slab	EA	2	2				
X	331 / 4	Conc Bridge Railing	LF	508	422	86			
X	342 / 4	RipRap Slope Protect	EA	2		2			
	Both settling								
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1	1				

General Inspection/Maintenance Notes

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Expansion Joints - Seal
Amount: Date(YYYY-MM-DD):
Maintenance item comment: w/rubber

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	7	7	Culvert	N	N
Superstructure	6	6	Channel	N	N
Substructure	8	8	Waterway	N	N

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-129
STH 441 NB over USH 41

LOCATION

(3) Municipality:	TOWN-GRAND CHUTE(44020)
(16) Latitiude(° ' "):	44°17'51.85"N
(17) Longitude(° ' "):	88°21'20.88"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC X-ONE WAY TRAFFIC -TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	0

GEOMETRY

(49) Structure Length(ft):	233.3	
(50) Sidewalk Width(ft):	Left: 0.0	Right: 0.0
(50) Curb Width(ft):		
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	40.0	40.0
(52) Deck(ft):	43.0	43.0
(32) Approach Roadway(ft):	40	0
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	62.0	78.0
(55) Minimum Right Lateral(ft):	16.0	12.0
(55) Minimum Left Lateral(ft):	22.0	24.0

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36B) Transition Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE

Outer Rail:

Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) **Left:** NJ SLOPING PARAPET(61) **Right:** NJ SLOPING PARAPET(61)

Transition Type:

	CONT GUARD RAIL
	NO APP GRDRL
	NO ATTACHMENT
5	22 MM(7/8") BOLT (Please enter quantity)
	25 MM(1") BOLT (Please enter quantity)
	OTHER (Please specify)

Guardrail Termination Type:

X	(01) ENERGY ABSORBING TERMINAL/EAT
	(02) TURN DOWN
	(99) OTHER (Please specify)

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:

	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: STH 441 SB		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-130
Feature Under: USH 41		Sect/Twn/Rng: S18 T21N R18E		
Location: AT JCT USH 41		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE(44020)	
Inv Rating: HS28	Rdwy Width (ft): 40.0	Deck Width (ft): 43.0	Existing Posting:	
Oper Rating: HS47	Total Length (ft): 239.3	Deck Area(ft2): 10289	ADT On: 14900 Yr: 1990	ADT Under: 50240 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	08-23-12						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 08-13-10	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated: 07-21-92

Expansion Joints

Location	Type	Temp: / File Insp. Date	80 / File Insp. (in)	New Insp. (in)
NORTH AB	STRIPSEA		0.9	
SOUTH AB	STRIPSEA			

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers			
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	16.5		
Min. Veritcal Clearance Under (non-Cardinal)	17.3		
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
CONT STEEL	DECK GIRDER		106.0
CONT STEEL	DECK GIRDER		128.0

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1993	NEW STRUCTURE	C333	C333

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control		
Access Equipment		
Other		

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 08-23-12	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 4	Conc Deck/Coatd Bars	SF	10290	10290				
X	107 / 4	Paint Stl Opn Girder	LF	944	650	150	144		
	Paint is debonding from primer								
X	172 / 4	Painted Steel Diaphr	EA	36	36				
X	205 / 4	R/Conc Column	EA	3	3				
X	215 / 4	R/Conc Abutment	LF	85	77	8			
	CS-2 (N Abut 4' & S Abut 4')								
X	234 / 4	R/Conc Cap	LF	39	38	1			
X	300 / 4	Strip Seal Exp Joint	LF	85			85		
	Gland is torn. Sealed w/rubber.								
X	311 / 4	Moveable Bearing	EA	8	6	2			
	Rusted due to leaking joint"s								
X	313 / 4	Fixed Bearing	EA	4	4				
X	321 / 4	R/Conc Approach Slab	EA	2	2				
X	331 / 4	Conc Bridge Railing	LF	518	432	86			
X	342 / 4	RipRap Slope Protect	EA	2		2			
	Both settling								
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1	1				

General Inspection/Maintenance Notes

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Expansion Joints - Seal
Amount: Date(YYYY-MM-DD):
Maintenance item comment: w/rubber

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	8	8	Culvert	N	N
Superstructure	6	6	Channel	N	N
Substructure	8	8	Waterway	N	N

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-130
STH 441 SB over USH 41

LOCATION

(3) Municipality:	TOWN-GRAND CHUTE(44020)
(16) Latitiude(° ' "):	44°17'54.42"N
(17) Longitude(° ' "):	88°21'22.61"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC X-ONE WAY TRAFFIC -TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	0

GEOMETRY

(49) Structure Length(ft):	239.3	
(50) Sidewalk Width(ft):	Left: 0.0	Right: 0.0
(50) Curb Width(ft):		
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	40.0	40.0
(52) Deck(ft):	43.0	43.0
(32) Approach Roadway(ft):	40	0
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	62.0	73.0
(55) Minimum Right Lateral(ft):	16.0	13.0
(55) Minimum Left Lateral(ft):	22.0	24.0

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36B) Transition Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE

Outer Rail:

Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) Left: NJ SLOPING PARAPET(61) Right: NJ SLOPING PARAPET(61)

Transition Type:

	CONT GUARD RAIL
	NO APP GRDRL
	NO ATTACHMENT
5	22 MM(7/8") BOLT (Please enter quantity)
	25 MM(1") BOLT (Please enter quantity)
	OTHER (Please specify)

Guardrail Termination Type:

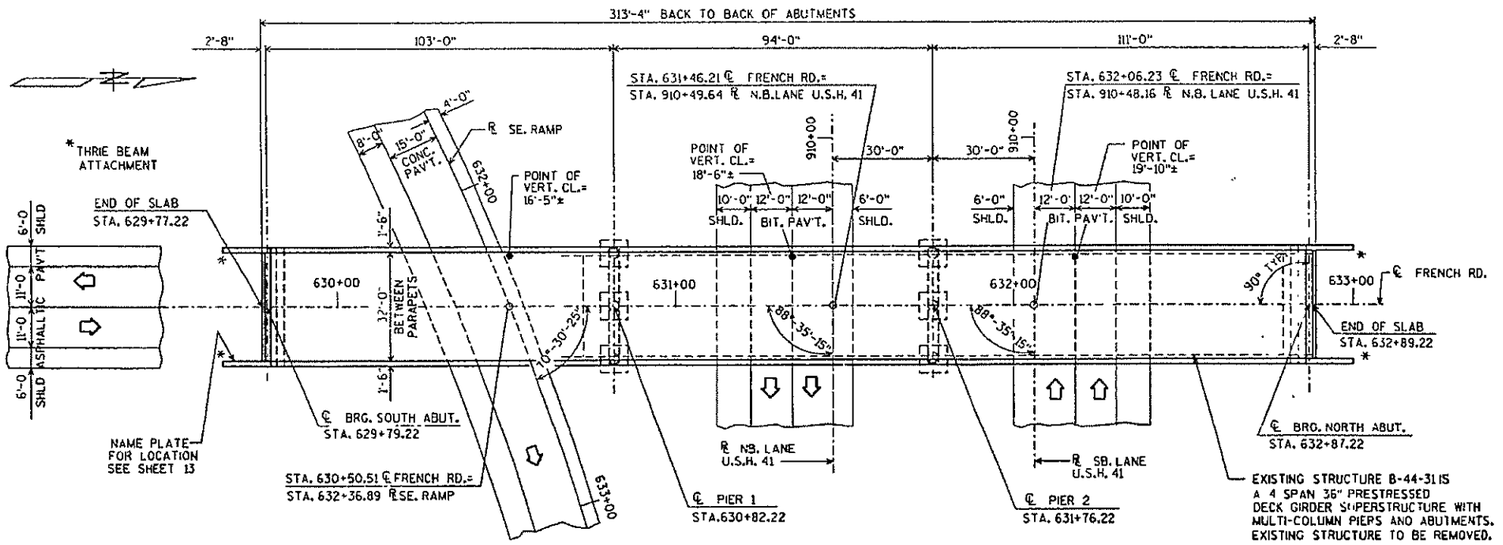
X	(01) ENERGY ABSORBING TERMINAL/EAT
	(02) TURN DOWN
	(99) OTHER (Please specify)

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:

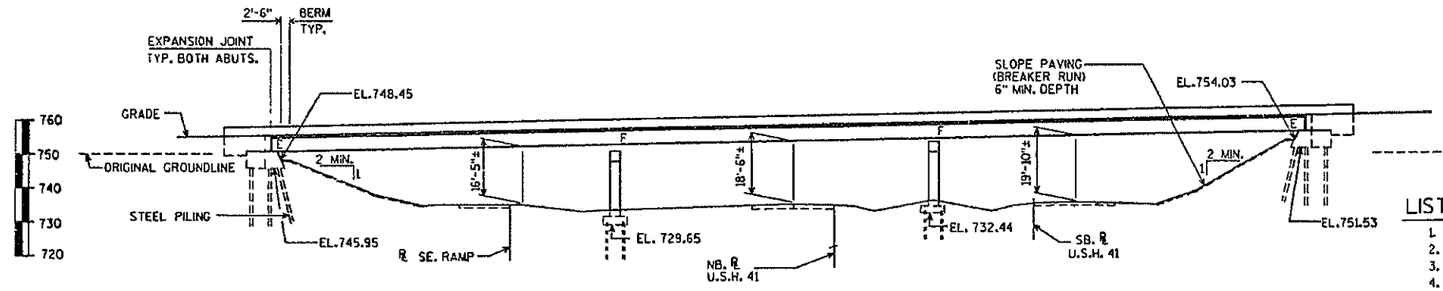
	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

STATE PROJECT NO.	SHEET NO.
4685-2-97	8



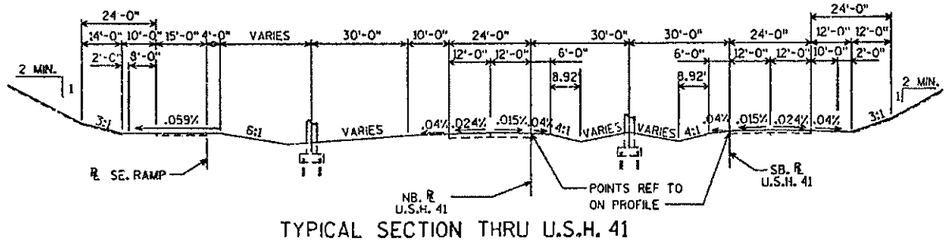
PLAN B-44-132

3 SPAN - STEEL GIRDERS



ELEVATION

NORMAL TO U.S.H. 41



TYPICAL SECTION THRU U.S.H. 41

DESIGN DATA

LIVE LOAD:

DESIGN RATING; HS-20
INVENTORY RATING; HS-27
OPERATIONAL RATING; HS-46
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 Kips.

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

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB —f'c = 4,000 P.S.I. ALL OTHER —f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 —— fy = 60,000 P.S.I.
PARAPETS AND TOP SLAB STEEL TO BE EPOXY COATED.
STRUCTURAL CARBON STEEL (A.S.T.M. A36) —— fy = 36,000 P.S.I.
HIGH STRENGTH STRUCTURAL STEEL (A.S.T.M.A572)
TO AND INCLUDING 2" THICK —— fy = 50,000 P.S.I.

FOUNDATION DATA

PLACE SOUTH ABUTMENT ON HP 10x42 STEEL PILING DRIVEN TO 55 TONS/PILE MIN. BRG.
EST. LENGTH=95'-0"

PLACE PIER 1 ON HP 10x42 STEEL PILING DRIVEN TO 55 TONS/PILE MIN. BRG.
EST. LENGTH=75'-0"

PLACE PIER 2 ON HP 10x42 STEEL PILING DRIVEN TO 55 TONS/PILE MIN. BRG.
EST. LENGTH=80'-0"

PLACE NORTH ABUTMENT ON HP 10x42 STEEL PILING DRIVEN TO 55 TONS/PILE MIN. BRG.
EST. LENGTH=100'-0"

TRAFFIC VOLUME

FRENCH RD
A.D.T.=±700 (2010)
R.D.S.=45 M.P.H.

U.S.H. 41
A.D.T.=32,100 (2010)
R.D.S.=65 M.P.H.

LIST OF DRAWINGS

BRIDGE OFFICE CONTACT - R.L. REESE (608)266-8488

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-44-132

FRENCH RD. OVER U.S.H. 41 NB. & SB.

COUNTY	OUTAGAMIE	TOWN/CITY/VILLAGE	GRAND CHUTE
DESIGN SPEC.	AASHTO 1989	LOAD	HS-20
CONST. SPEC.	1989		
DESIGNED BY	BD	DESIGN CK'D.	KAB
DRAWN BY	DHB	PLANS CK'D.	LOY

APPROVED Stanley W. Woodward STATE BRIDGE ENGINEER 5/27/97 DATE

GENERAL PLAN

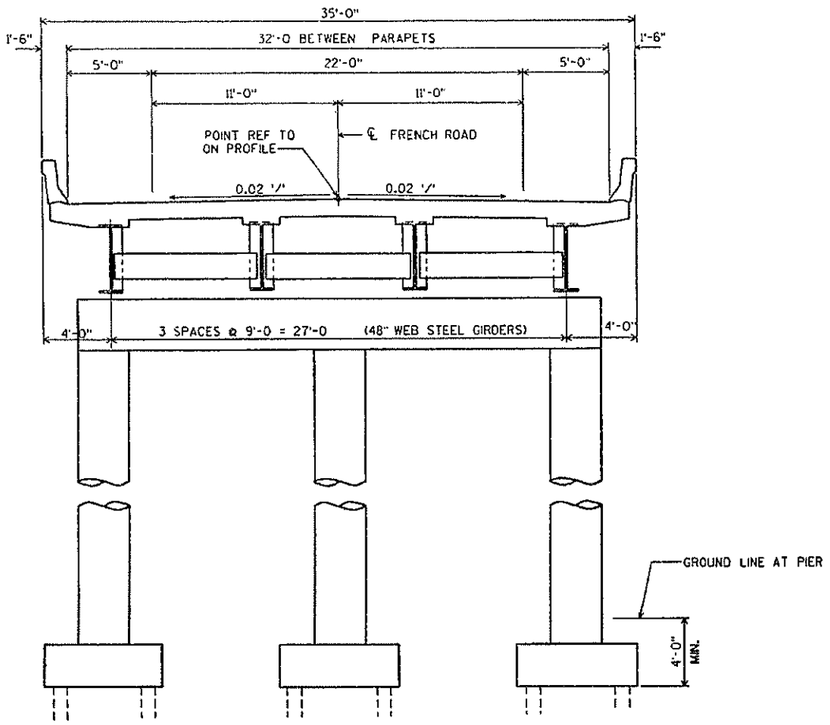
SHEET 1 OF 13

X83439

I.D. 4685-02-01

B-44-132

STATE PROJECT NUMBER	SHEET NO.
1685-2-87	81



CROSS SECTION THRU ROADWAY LOOKING NORTH

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

ALL FIELD CONNECTIONS SHALL BE MADE WITH ¾" DIAMETER A325 HIGH-TENSILE STRENGTH BOLTS UNLESS OTHERWISE SHOWN OR NOTED.

THE FINISHED GRADED SECTION SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

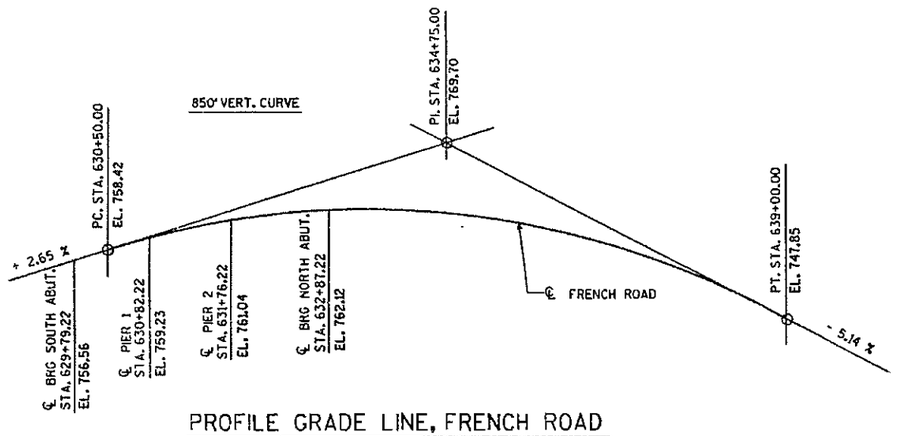
THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH BREAKER RUN TO THE EXTENT SHOWN ON SHT. 1 & IN THE ABUTMENT DETAILS.

PROTECTIVE SURFACE TREATMENT COVERAGE SHALL BE 150 SQ. FT. PER GALLON OR PER MANUFACTURER'S RECOMMENDATIONS.

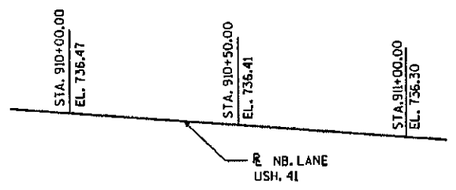
PAINT COLOR SHALL BE BROWN, CONFORMING TO FEDERAL SPECIFICATION NUMBER 20122.

TOTAL ESTIMATED QUANTITIES

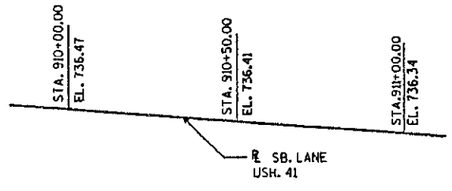
BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	PIER 1	PIER 2	NORTH ABUT.	TOTALS
REMOVING OLD BRIDGE, STATION 631+46	L.S.	—	—	—	—	—	1
EXCAVATION FOR STRUCTURES, BRIDGES, B-44-132	L.S.	—	—	—	—	—	1
CONCRETE MASONRY, BRIDGES	C.Y.	337	54	57	56	54	558
PROTECTIVE SURFACE TREATMENT	GAL.	78	—	—	—	—	78
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	44,400	700	—	—	700	45,800
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	30,500	2,030	9,360	9,160	2,030	53,080
HIGH-STRENGTH STRUCTURAL STEEL	LB.	208,640	—	—	—	—	208,640
BEARING PADS	S.F.	28	—	—	—	—	28
EXPANSION DEVICE, B-44-132	L.S.	—	—	—	—	—	1
STEEL PILING, DELIVERED AND DRIVEN, 10 INCH×42 POUND	L.F.	—	1,045	1,350	1,440	1,100	4,935
SLOPE PAVING, BREAKER RUN	S.Y.	—	142	—	—	181	323
EXPANSION BEARING ASSEMBLY, B-44-132	EA.	—	4	—	—	4	8
FIXED BEARING ASSEMBLY, B-44-132	EA.	—	—	4	4	—	8
STRUCTURAL CARBON STEEL	LB.	23,530	—	—	—	—	23,530
WELDED STUD SHEAR CONNECTORS, ⅞"x4"	EACH	2,520	—	—	—	—	2,520
PAINTING, VINYL SYSTEM, STRUCTURE B-44-132	L.S.	—	—	—	—	—	1
NON-BID ITEMS							
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	32	—	—	32	64
FILLER	SIZE	—	—	—	—	—	½" & ¾"



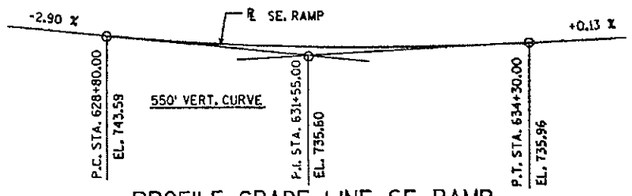
PROFILE GRADE LINE, FRENCH ROAD



EXISTING ELEVATIONS, NB. LANE USH. 41



EXISTING ELEVATIONS, SB. LANE USH. 41



PROFILE GRADE LINE, SE. RAMP

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-44-132

CONST. SPEC. 1989	DRAWN BY DMB	PLANS CHK. LDY

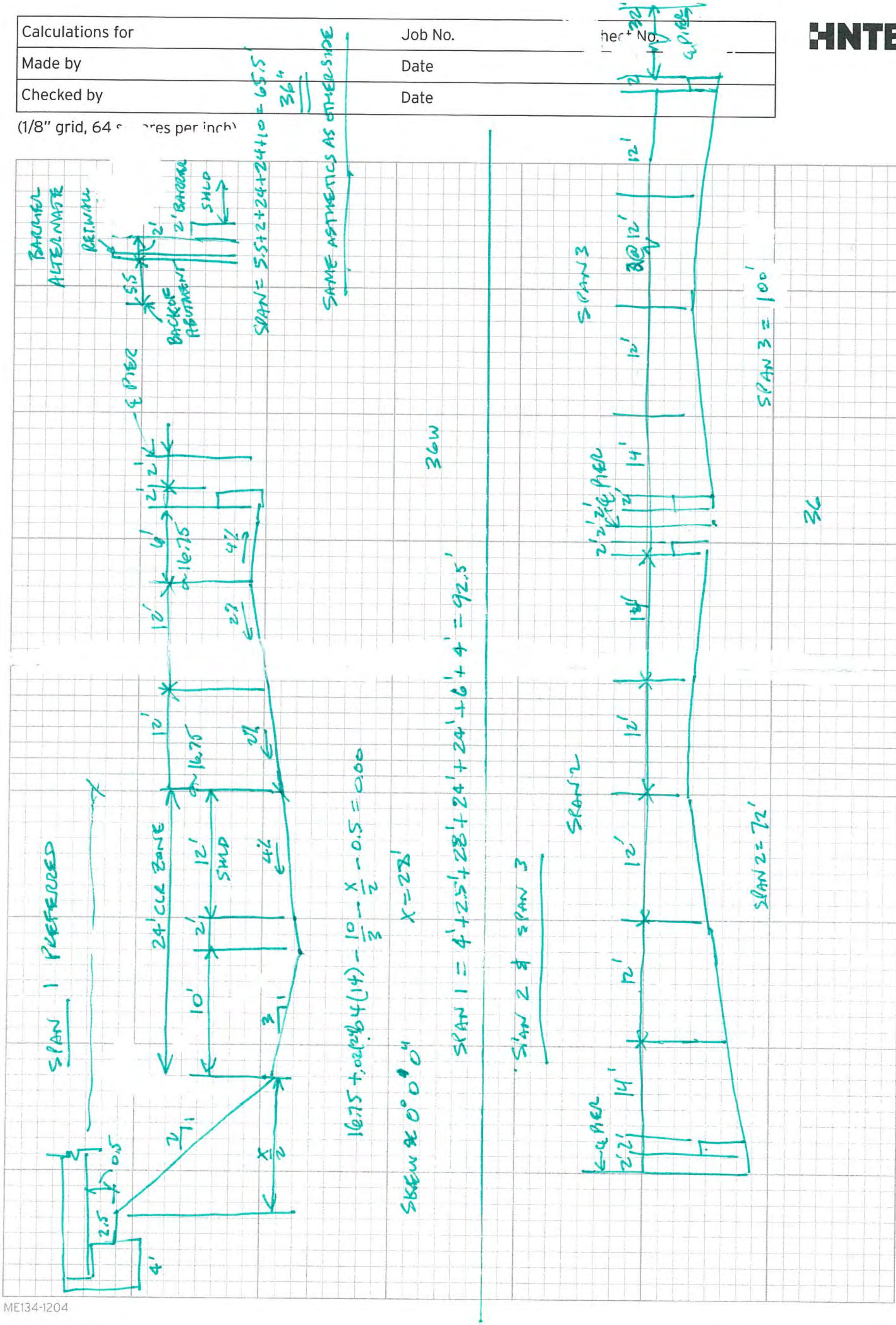
NOTES AND QUANTITIES

SHEET 2

X83439

Calculations for	Job No.	Sheet No.
Made by	Date	
Checked by	Date	

(1/8" grid, 64 squares per inch)



Calculations for | Job No. | Sheet No.

Made by | Date

Checked by | Date

(1/8" grid, 64 squares per inch)

ME134-1204

SPAN 4 = 1 0' (AS MEASURED)

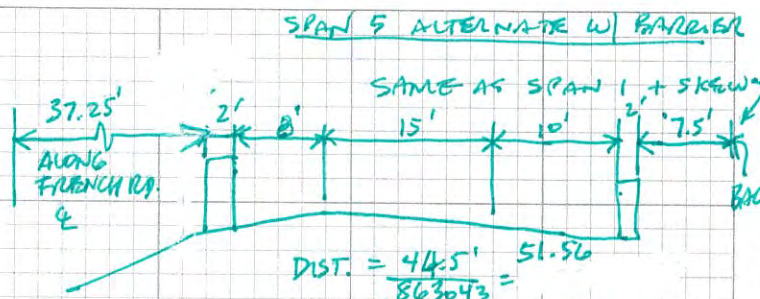
54W

BRIDGE LENGTH = (TRAPEZOID)

65.5' + 72' + 100' + 100' + 88.81 = 426.31

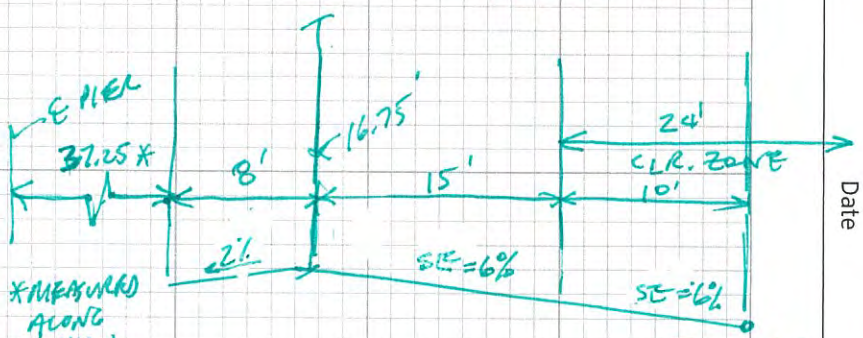
AVE.

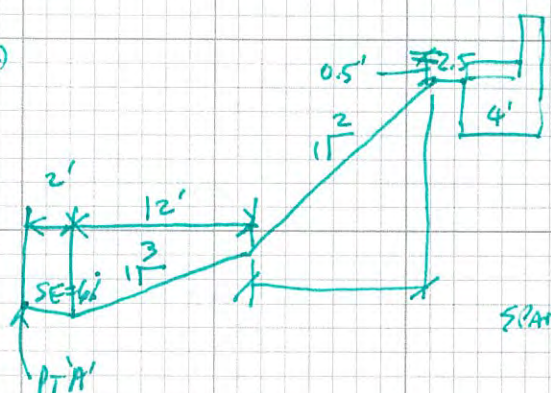
SPAN 5 ALTERNATE W/ BARRIER



SPAN 5 PREFERRED. → 51.56 + 37.25 = 88.81' ALONG ℄

36W SPAN →





SPAN LENGTH = 37.25 + 94.25 = 131.5

54W

94.14 ~ 94.25

16.75 + .06(27) − 4 − X/2 − 0.5 = 0.00

X = 27.75'

SKEW = 30.34°

cos(30.34°) = 0.863043

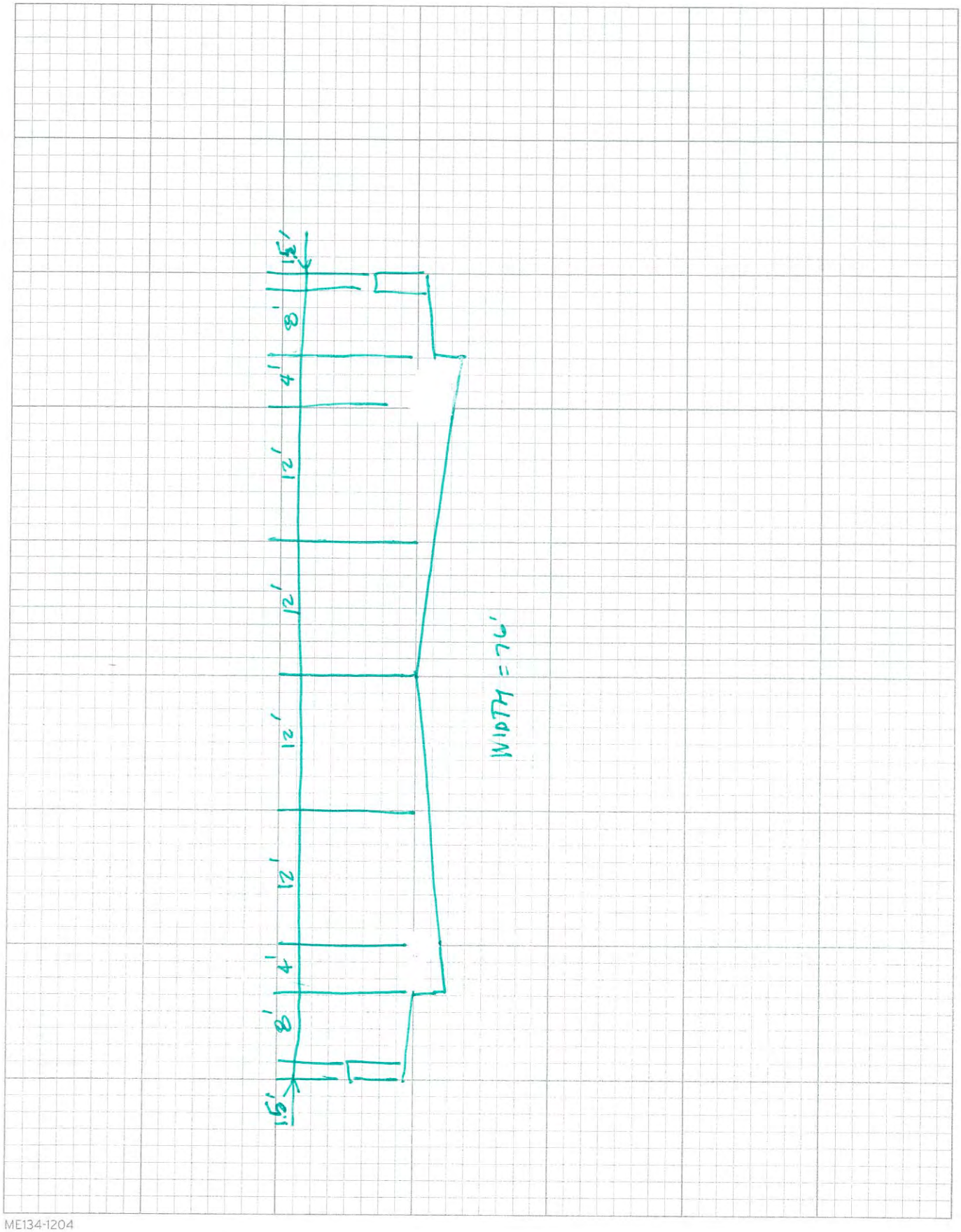
BARRIER SPAN LENGTH = (8 + 15 + 10 + 2' + 12' + 27.75 + 2.5 + 4) = 81.25

HNTB

Calculations for	Job No.	Sheet No.
Made by	Date	
Checked by	Date	

HNTB

(1/8" grid, 64 squares per inch)



Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced [1]

Overpass Facility →	Freeway, Expressway, or STH		Railroad[4], CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures[2]
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable 15'-3" Minimum	15'-3" Desirable 14'-9" Minimum		16'- 9" Desirable 16'-3" Minimum	18'-3" Minimum
Arterial either CTH, Town Road, Local Road, or Street (**excludes** freeway and expressway; also excludes arterial STH)	16'-9" Desirable 16'-3" Minimum	15'-3" Desirable 14'-9" Minimum		17'- 9" Desirable 17'-3" Minimum	
Freeway[3] or Expressway or arterial STH	16'-9" Desirable 16'-4" Minimum			17'- 9" Desirable 17'-4" Minimum	
Railroad[4,5,6,7]	23'-0" Minimum to 23'-3½" Maximum				

General notes:

1 Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

2 See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

3 See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

4 Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

5 A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

See Chapter 17 for additional information.

6 Provide justification for a vertical clearance >23'-3 ½" to the RHS.

7 Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: FRENCH RD		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-132
Feature Under: USH 41		Sect/Twn/Rng: S17 T21N R18E		
Location: 0.8M N JCT CTH OO		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE(44020)	
Inv Rating: HS27	Rdwy Width (ft): 32.0	Deck Width (ft): 35.0	Existing Posting:	
Oper Rating: HS46	Total Length (ft): 313.3	Deck Area(ft2): 10965	ADT On: 5760 Yr: 2003	ADT Under: 46750 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-21-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date: 01-01-01	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 10-15-09	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated: 12-10-91

Expansion Joints

Location	Type	Temp: File Insp. Date	35 File Insp. (in)	55 New Insp. (in)
NORTH AB	STRIPSEA		1.8	1.7
SOUTH AB	STRIPSEA		2.0	1.4

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers			
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	16.28		
Min. Veritcal Clearance Under (non-Cardinal)	19.88		
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
CONT STEEL	DECK GIRDER		103.0
CONT STEEL	DECK GIRDER		94.0
CONT STEEL	DECK GIRDER		111.0

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1992	NEW STRUCTURE	C333	C333

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control	Y	
Access Equipment	Y	
Other	Y	

Inspector Information

Team Leader Name and No. Printed: Michaelson, Neil (3010)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 10-21-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 4	Conc Deck/Coatd Bars	SF	10965	10965				
	Numerous trans cracks leaching								
X	107 / 4	Paint Stl Opn Girder	LF	1240	1140	100			
	Paint peeling in misc areas								
X	172 / 4	Painted Steel Diaphr	EA	48	48				
X	205 / 4	R/Conc Column	EA	6	6				
X	215 / 4	R/Conc Abutment	LF	68	65	3			
X	234 / 4	R/Conc Cap	LF	65	65				
X	300 / 4	Strip Seal Exp Joint	LF	68	34	34			
	North joint filled with hot rubber								
X	311 / 4	Moveable Bearing	EA	8	8				
X	313 / 4	Fixed Bearing	EA	8	8				
X	322 / 4	Bituminous Approach	EA	2		1	1		
	South approach is settled and undermined								
X	331 / 4	Conc Bridge Railing	LF	669	589	80			
X	342 / 4	RipRap Slope Protect	EA	2		2			
	Both settling								
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1		1			
X	400 / 4	Concrete Wingwall	EA	4	4				

General Inspection/Maintenance Notes

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item:
Amount: Date(YYYY-MM-DD):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	8	8	Culvert	N	N
Superstructure	8	8	Channel	N	N
Substructure	8	8	Waterway	N	N

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-132
FRENCH RD over USH 41

LOCATION

(3) Municipality:	TOWN-GRAND CHUTE(44020)
(16) Latitiude(° ' "):	44°17'50.90"N
(17) Longitude(° ' "):	88°21'12.07"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	5
(102) Traffic Pattern On:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	12

GEOMETRY

(49) Structure Length(ft):	313.3	
(50) Sidewalk Width(ft):	Left: 0.0	Right: 0.0
(50) Curb Width(ft):		
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	32.0	32.0
(52) Deck(ft):	35.0	35.0
(32) Approach Roadway(ft):	34	0
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	86.0	75.0
(55) Minimum Right Lateral(ft):	38.5	22.5
(55) Minimum Left Lateral(ft):	23.5	23.5

RAILING APPRAISAL

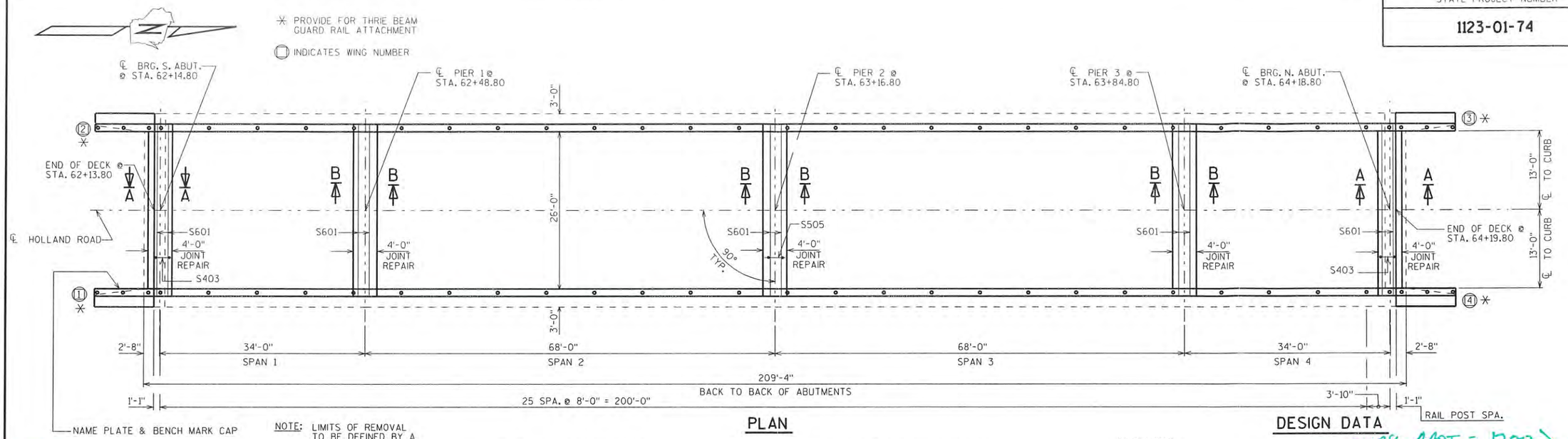
(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
(36B) Transition Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
Outer Rail:	Left / Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) Left: NJ SLOPING PARAPET(61) Right: NJ SLOPING PARAPET(61)
Transition Type:		CONT GUARD RAIL
		NO APP GRDRL
		NO ATTACHMENT
5		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
Guardrail Termination Type:		(01) ENERGY ABSORBING TERMINAL/EAT
		(02) TURN DOWN
X		(99) OTHER (Please specify)

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

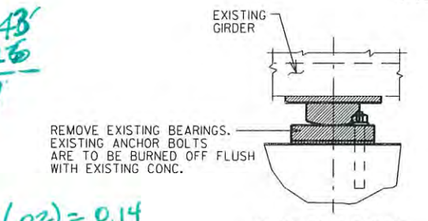
STATE PROJECT NUMBER

1123-01-74



PLAN

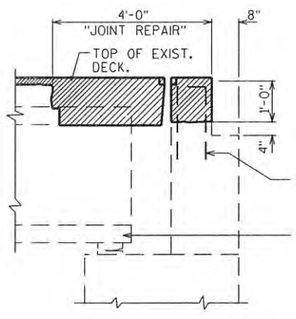
NOTE: LIMITS OF REMOVAL TO BE DEFINED BY A 1" DEEP SAWCUT.



BEARING REMOVAL

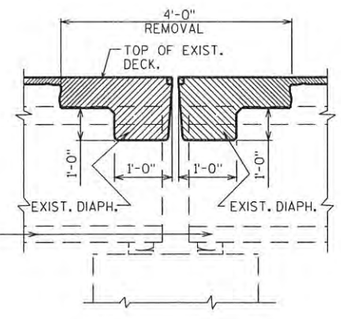
FOR NEW BEARING DETAILS SEE SHEET 8

NOTE: REMOVE EXIST. PAV. BLK., AND EXP. JT.



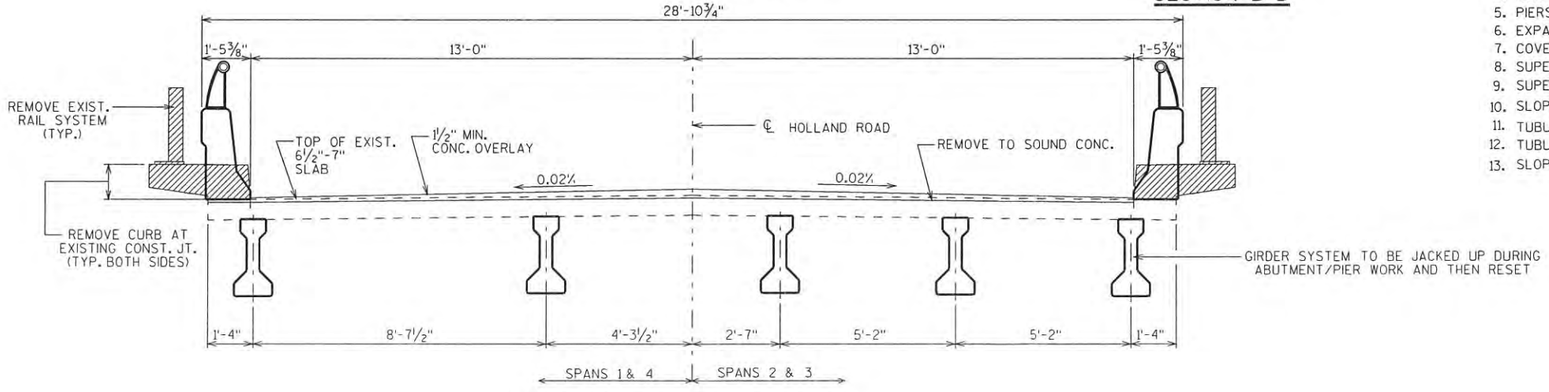
SECTION A-A

NOTE: REMOVE EXIST. CONC. DIAPHS. EXP. JTS. AT ALL PIERS.



SECTION B-B

NOTE:
MILL OFF 1" CONCRETE
PLACE 1½" CONCRETE
OVERLAY



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:
INVENTORY RATING; HS-17
OPERATIONAL RATING; HS-32
MAX PERMIT VEHICLE = 225 KIPS

ULTIMATE DESIGN STRESSES:
CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
72	963+48.0	PT. MK. S.W. CORNER BRIDGE 210' LT	729.32

LIST OF DRAWINGS

1. CONCRETE OVERLAY
2. QUANTITIES
3. SOUTH ABUTMENT
4. NORTH ABUTMENT
5. PIERS 1, 2, & 3
6. EXPANSION DEVICE
7. COVER PLATE DETAILS
8. SUPERSTRUCTURE DETAILS
9. SUPERSTRUCTURE DETAILS
10. SLOPED FACE PARAPET "LF"
11. TUBULAR RAILING TYPE 'H' (ALUM.)
12. TUBULAR RAILING TYPE 'H' (STEEL)
13. SLOPED PAVING REPAIR

STRUCTURE DESIGN CONTACT:
MATT COUPAR (608) 266-5083
CHRIS FOLTMAN (608) 266-5094

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

APPROVED William C. Dukin SDR 12-19-07
CHIEF STRUCTURAL DESIGN ENGINEER DATE

STRUCTURE B-44-33

HOLLAND ROAD OVER U.S.H. 41

COUNTY OUTAGAMIE	TOWN/~~CITY/VILLAGE~~ VANDENBROEK
DESIGN SPEC. AASHTO STD. SPEC. 2003	LOAD HS-25 / CONST. SPEC. 2003
DESIGNED BY MSC / DESIGN CK'D. LLS	DRAWN BY CRJ / PLANS CK'D. CF

CONC. OVERLAY & RAISING

SHEET 1 OF 13

58

I.D. 1123-01-03

DATE: SEPT. '07

SCALE = 8.5

8

8

PROP: = 43
EXIST = 26
17

20-13=7

7(.02) = 0.14

16.40
- .14
16.26

2008 AADT = 1700
2028 AADT = 3400 > 3.53%
2037 AADT = 3400(1.035)^9 = 4650

Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced [1, 2]

<table>
<tr><td>Overpass Facility →</td><td colspan="2">Freeway, Expressway, or STH</td><td>Railroad[5], CTH, Town Road, Local Road, or Street</td><td>Pedestrian or Shared-use Structures</td><td>Sign Structures[6]</td></tr>
<tr><td>Underpass Facility ↓</td><td>Interchange</td><td>Grade Separation</td><td colspan="3"></td></tr>
<tr><td rowspan="3">Non-arterial
either STH, CTH, Town Road, Local Road, or Street</td><td rowspan="3">15'-3" min. or ES[3]</td><td colspan="2">If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">16'-3" min. or ES[3]</td><td rowspan="9">18'-0" min. or ES[3] for existing sign structures on new construction projects or reconstruction projects;

17'-0" or ES[3] for existing sign structures on 3R projects</td></tr>
<tr><td colspan="2">If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td colspan="2">If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial
either CTH, Town Road, Local Road, or Street
(excludes freeway and expressway; also excludes arterial STH)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td colspan="2">If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td colspan="2">If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td colspan="2">If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial STH
(excludes freeway and expressway)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td colspan="2">If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td colspan="2">If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td colspan="2">If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td></tr>
<tr><td>Freeway[4] or Expressway</td><td colspan="4">16'-0" min. or ES[3]</td></tr>
<tr><td>Railroad[5]</td><td colspan="5">Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.</td></tr>
</table>

General notes:

1. Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

   Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

2. Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

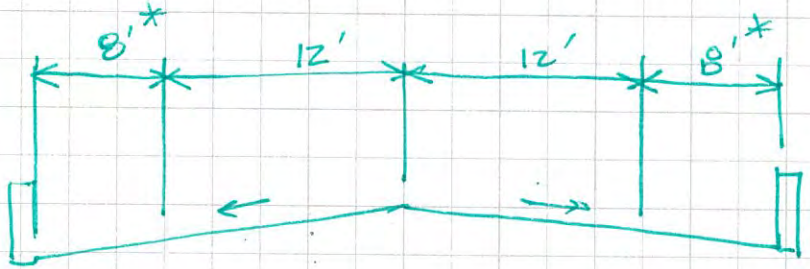
3. ES = approved Exceptions To Standards Report required (see FDM 11-1-2 and FDM 11-1-4).

4. See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

5. Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

6. See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

FOR: JOB NO: SHEET NO:
MADE BY: CHECKED BY: BACKCHECKED BY:
DATE: DATE: DATE:

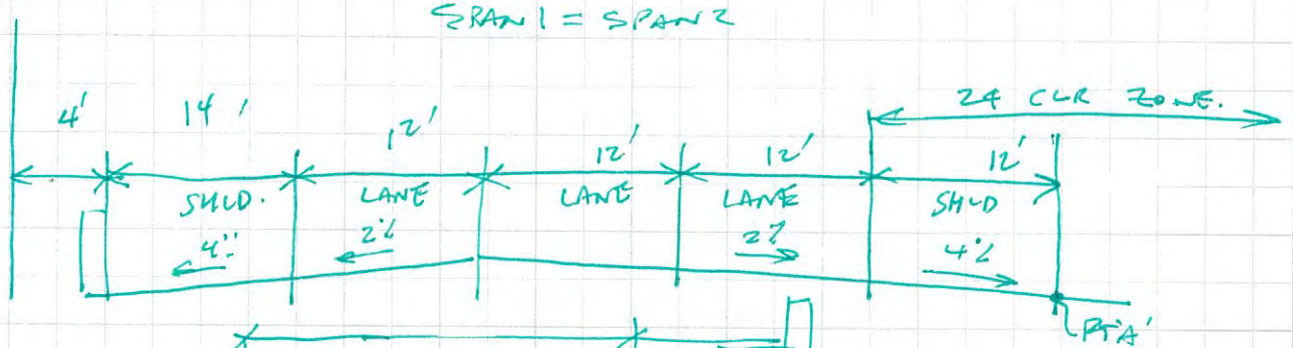


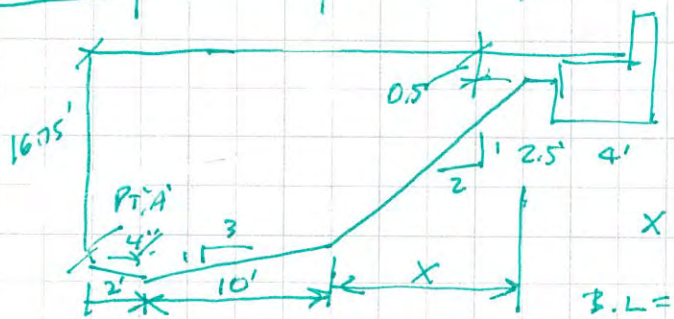
SECTION WIDTH = 40'

* CAN BE REDUCED TO 3' FOR STRUCTURES LONGER THAN 100'

MEDIAN
℄ PIER

SPAN 1 = SPAN 2





$16.75 + 14(.04) - 3.33 - 0.5 - \frac{X}{2} = 0$

$X = 27'$

SPAN 2 = 4' + 14' + 12'(3) + 12 + 27 + 2.5 + 4 = 111.5

T.L = 111.5 x 2 = 223

ASSUME 45W BEAMS

HNTB

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced [1]

Overpass Facility →	Freeway, Expressway, or STH		Railroad[4], CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures[2]
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable 15'-3" Minimum	15'-3" Desirable 14'-9" Minimum		16'- 9" Desirable 16'-3" Minimum	18'-3" Minimum
Arterial either CTH, Town Road, Local Road, or Street (**excludes** freeway and expressway; also excludes arterial STH)	16'-9" Desirable 16'-3" Minimum	15'-3" Desirable 14'-9" Minimum		17'- 9" Desirable 17'-3" Minimum	
Freeway[3] or Expressway or arterial STH	16'-9" Desirable 16'-4" Minimum			17'- 9" Desirable 17'-4" Minimum	
Railroad[4,5,6,7]	23'-0" Minimum to 23'-3½" Maximum				

General notes:

1 Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

2 See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

3 See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

4 Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

5 A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

See Chapter 17 for additional information.

6 Provide justification for a vertical clearance >23'-3 ½" to the RHS.

7 Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: HOLLAND RD		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-033
Feature Under: USH 41		Sect/Twn/Rng: S16 T21N R18E		
Location: 0.8M N JCT CTH OO		County: OUTAGAMI	Municipality: TOWN-VANDENBROEK(44040)	
Inv Rating: HS17	Rdwy Width (ft): 26.0	Deck Width (ft): 32.0	Existing Posting:	
Oper Rating: HS32	Total Length (ft): 208.0	Deck Area(ft2): 6656	ADT On: 200 Yr: 1980	ADT Under: 46750 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-21-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.			12-04-08				
Frequency	N/A		00				
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 2.0	Date: 12-19-07	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 10-15-09	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated: 10-31-07

Expansion Joints

		Temp:	35	55
Location	Type	File Insp. Date	File Insp. (in)	New Insp. (in)
SOUTH AB	STRIPSEA		2.2	1.5
NORTH AB	STRIPSEA		2.2	2.0

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers			
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	16.4	01-20-09	
Min. Veritcal Clearance Under (non-Cardinal)	16.3	01-20-09	
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
PREST CONCRET	DECK GIRDER		34.0
PREST CONCRET	DECK GIRDER		68.0
PREST CONCRET	DECK GIRDER		68.0
PREST CONCRET	DECK GIRDER		34.0

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1960	NEW STRUCTURE	P037	F046
1972	PAINTING		
1994	REPAIR DECK		
2008	RAISE STRUCTU		

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control	Y	
Access Equipment	Y	
Other	Y	

Inspector Information

Team Leader Name and No. Printed: Michaelson, Neil (3010)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 10-21-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	22 / 2	Conc Deck/Conc Ov	SF	6656	6656				
X	109 / 4	P/S Conc Open Girder	LF	1056	1046	10			
	Small spalls due to previous traffic impacts								
X	205 / 4	R/Conc Column	EA	9	9				
X	215 / 3	R/Conc Abutment	LF	64	60	4			
	CS-2 North 4"								
X	234 / 3	R/Conc Cap	LF	94	64	30			
X	250 / 4	Concrete Diaphragm	EA	26	20	6			
X	300 / 2	Strip Seal Exp Joint	LF	52	52				
X	310 / 3	Elastomeric Bearing	EA	40	40				
X	322 / 2	Bituminous Approach	EA	2		2			
	Both settled slightly								
X	333 / 2	Combin Bridge Railing	LF	455	355	100			
	Vertical cracks and scaling								
X	340 / 4	Concrete Slope Prote	EA	2		2			
	Concrete block								
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1		1			
X	362 / 4	Traf Impact SmFlag	EA	1	1				
	Superstructure raised 21"+- in 2008.								
X	400 / 4	Concrete Wingwall	EA	4	4				

General Inspection/Maintenance Notes

Bridge raised 21"+- in 2008.

NBI Ratings

NBI	File	New	NBI	File	New
Deck	8	8	Culvert	N	N
Superstructure	7	7	Channel	N	N
Substructure	7	7	Waterway	N	N

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item:
Amount: Date(YYYY-MM-DD):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-033
HOLLAND RD over USH 41

LOCATION

(3) Municipality:	TOWN-VANDENBROEK(44040)
(16) Latitiude(° ' "):	44°17'51.44"N
(17) Longitude(° ' "):	88°19'59.13"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	4

GEOMETRY

(49) Structure Length(ft):	208.0	
(50) Sidewalk Width(ft):	Left:	Right:
(50) Curb Width(ft):		
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	26.0	26.0
(52) Deck(ft):	32.0	32.0
(32) Approach Roadway(ft):	30	0
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	48.0	48.0
(55) Minimum Right Lateral(ft):	10.0	10.0
(55) Minimum Left Lateral(ft):	14.0	14.0

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD -STANDARD -NOT APPLICABLE	
(36B) Transition Adequacy:	-SUB-STANDARD -STANDARD -NOT APPLICABLE	
(36C) Approach Guardrail Adequacy:	X-SUB-STANDARD -STANDARD -NOT APPLICABLE	
(36D) Guardrail Termination Adequacy:	X-SUB-STANDARD -STANDARD -NOT APPLICABLE	
Outer Rail:	Left / Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
	X / X	SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
		OTHER(99) (Please specify)
Transition Type:		CONT GUARD RAIL
		NO APP GRDRL
		NO ATTACHMENT
		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
Guardrail Termination Type:		(01) ENERGY ABSORBING TERMINAL/EAT
		(02) TURN DOWN
		(99) OTHER (Please specify)

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

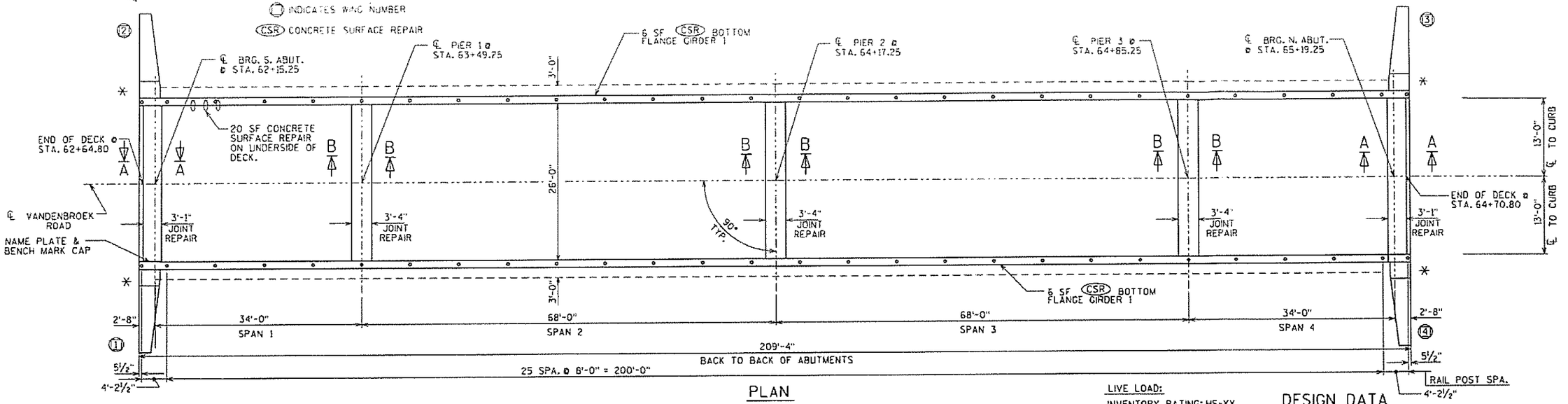
STATE PROJECT NUMBER

1123-01-73

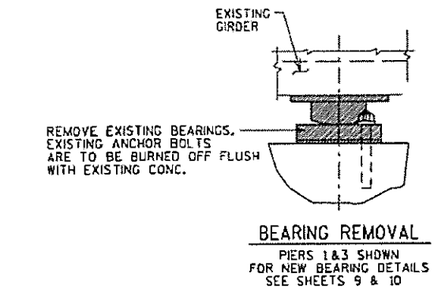
* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT

(#) INDICATES WING NUMBER

(CSR) CONCRETE SURFACE REPAIR

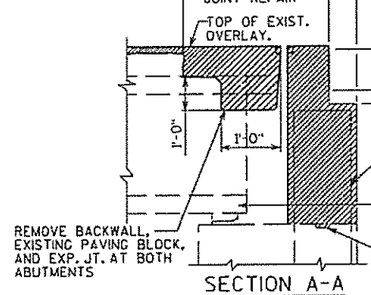


PLAN

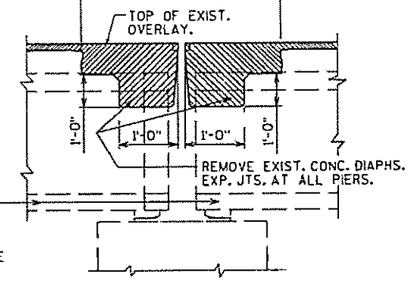


BEARING REMOVAL

PIERS 1&3 SHOWN FOR NEW BEARING DETAILS SEE SHEETS 9 & 10

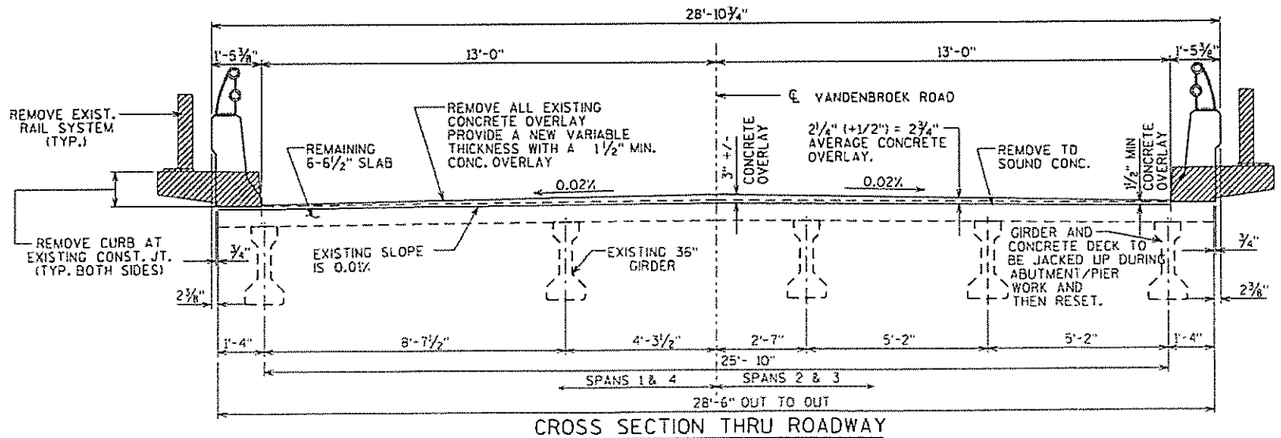


SECTION A-A



SECTION B-B

NOTE:
REMOVE ALL OF EXISTING 1½" +/- CONCRETE OVERLAY.
PLACE NEW MIN 1½" CONCRETE OVERLAY.



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:

INVENTORY RATING; HS-XX
OPERATIONAL RATING; HS-XX
MAX PERMIT VEHICLE = XX KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
668		CHISELED SQUARE, EAST END OF SOUTH PARAPET WALL AT VANDENBROEK ROAD	729.86
669		CHISELED SQUARE, TOP OF SOUTHWEST WINGWALL ON STRUCTURE C-44-25-60, 0.20 MILES EAST OF VANDENBROEK ROAD	721.85

LIST OF DRAWINGS

WISCONSIN
ALBERT M. LINDNER
E-18992
BROOKFIELD, WIS.
PROFESSIONAL ENGINEER
1-19-09

STRUCTURE DESIGN CONTACT:

WILLIAM DREHER PE (608) 261-8489
ALBERT M. LINDNER PE (414) 259-1500

NO.	DATE	REVISION	BY

PLANS PREPARED BY: GRAEF

One Honey Creek Corporate Center, 125 South 84th Street, Suite 401, Milwaukee, WI 53214-1470, 414 | 256 3500, 414 | 256 3501 fax, www.graef-usa.com

WISDOT
BUREAU OF STRUCTURES

APPROVED: William C Dreher SDR — CHIEF STRUCTURAL DESIGN ENGINEER — 1-20-09 DATE

STRUCTURE B-44-34

VANDENBROEK ROAD OVER U.S.H. 41

COUNTY	TOWN		
OUTAGAMIE	VANDENBROEK		
DESIGN SPEC. AASHTO STD. SPEC. 2003			LOAD HS-20
DESIGNED BY JRS	DESIGN CK'D. KGW	DRAWN BY MWB	PLANS CK'D. AML

CONC. OVERLAY & RAISING

SHEET 1 OF 14

55

8

8

STATE PROJECT NUMBER
1123-01-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153, TYPE I, II, OR III, OR M213.

AT ABUTMENTS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL STRUCTURE".

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

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION AND CONSTRUCTION.

INFORMATION ON THESE DRAWINGS RELATED TO THE EXISTING BRIDGE IS BASED UPON AVAILABLE DRAWING FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION, NO GUARANTEE OR WARRANTY IS MADE THAT THE INFORMATION IS ALL INCLUSIVE OR TOTALLY ACCURATE. THEREFORE, THE CONTRACTOR SHALL MAKE ITS OWN DETERMINATION OF THE ACTUAL CONDITIONS TO BE ENCOUNTERED.

THE EXISTING STRUCTURE, B-44-34, IS A 4 SPAN, PRESTRESSED CONCRETE DECK GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 32 FEET AND AN OVERALL LENGTH OF 209.33 FEET. THE EXISTING RAIL SYSTEM, THE ENTIRE 3 FOOT WIDE BRUSH CURBS, AND OTHER REMOVALS NOT INDICATED ON THE PLANS ARE TO BE REMOVED UNDER THE BID ITEM "REMOVING OLD STRUCTURE". THE EXISTING CONCRETE MASONRY OVERLAY IS TO BE REMOVED UNDER THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

THE EXISTING STRUCTURE HAS A 1.5 INCH CONCRETE OVERLAY AT A 0.01 FOOT PER FOOT CROSS SLOPE. THE ENTIRE EXISTING CONCRETE OVERLAY IS TO BE REMOVED, AND A NEW VARIABLE THICKNESS CONCRETE OVERLAY PLACED AT A 0.02 FOOT PER FOOT CROSS SLOPE.

CONCRETE SURFACE REPAIR AS DIRECTED BY PROJECT ENGINEER.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2 AS DIRECTED BY PROJECT ENGINEER.

THE BID ITEM "CONCRETE MASONRY OVERLAY DECK" INCLUDES CONCRETE FOR PREPARATION DECKS 1, PREPARATION DECKS TYPE 2, FULL DEPTH DECK REPAIR AND CONCRETE OVERLAY PLACED OVER THE JOINT REPAIR.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A ½" DEEP SAW CUT.

USE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETER INTO NEW WORK.

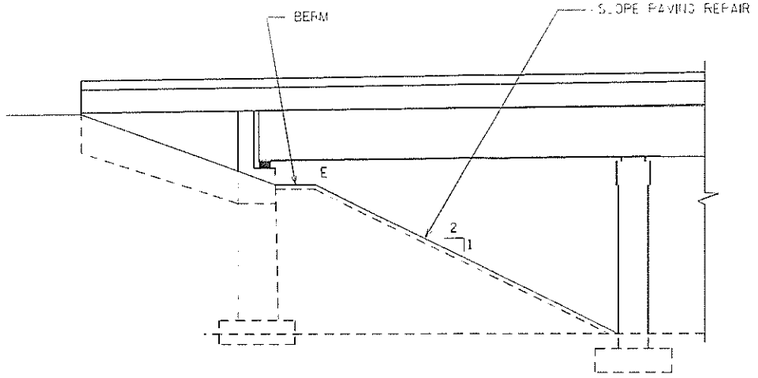
VARIATIONS TO THE NEW GRADE LINE OVER ½" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE BUREAU OF STRUCTURES SECTION FOR REVIEW.

THE CONTRACTOR SHALL SUBMIT A REMOVAL PLAN TO THE ENGINEER FOR APPROVAL PER SPECIAL PROVISIONS.

CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAILED DRAWINGS. THE NEW NAME PLATE SHALL SHOW THE ORIGINAL CONSTRUCTION YEAR OF 1960.

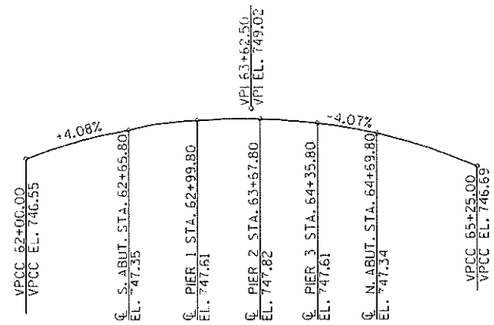
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE ROADWAY DECK, FRONT FACE OF THE PARAPETS AND THE TOP OF THE PARAPETS. PROTECTIVE SURFACE TREATMENT SHALL ALSO BE APPLIED TO PIERS 1 AND 3 FROM THE EXISTING GROUND LINE TO THE BOTTOM OF THE PIER CAP.

IN ADDITION TO THE STANDARD SPECIFICATIONS FOR THE BID ITEM "CONCRETE SURFACE REPAIR", THE FOLLOWING SHALL BE FOLLOWED FOR THE REPAIR: PRIOR TO THE PLACING OF THE CONCRETE MIXTURE ON THE DAMAGED AREAS OF THE PRESTRESSED GIRDER, THE REAR AXLES OF A 15 TON TRUCK, FULLY LOADED, SHALL BE PARKED OVER THE FACIA GIRDER BEING REPAIRED. THE LOADED TRUCK SHALL REMAIN IN PLACE DURING THE CURING PERIOD OF THE SURFACE REPAIR, OR FOR A MINIMUM PERIOD OF FOUR DAYS.



SLOPE PAVING REPAIR AT ABUTMENTS

SEE SHT. 14 FOR DETALS



VANDENBROEK ROAD PROFILE GRADE LINE

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	PIER 1	PIER 2	PIER 3	TOTALS
EXCAVATION FOR STRUCTURE B-44-34	LS	—	—	—	—	—	—	1
BACKFILL STRUCTURE	CY	—	20	20	—	—	—	40
CONCRETE MASONRY OVERLAY DECKS	CY	56	—	—	—	—	—	56
PREPARATION DECKS TYPE 1	SY	260	—	—	—	—	—	260
PREPARATION DECKS TYPE 2	SY	39	—	—	—	—	—	39
JOINT REPAIR	SY	52	—	—	—	—	—	52
CONCRETE SURFACE REPAIR	SF	40	—	—	70	—	10	120
BAR STEEL REINFORCMENT HS BRIDGES	LB	3230	—	—	—	—	—	3230
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	11,620	2770	2770	910	910	910	19,890
CONCRETE MASONRY BRIDGES	CY	94	29	29	8	8	8	176
MASONRY ANCHORS TYPE L NO. 8 BARS	EACH	—	8	8	—	—	—	16
MASONRY ANCHORS TYPE S 5/8-INCH	EACH	944	78	78	64	64	64	1292
BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	—	4	4	10	12	10	40
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	2	2	—	—	—	4
RUBBERIZED MEMBRANE WATERPROOFING	SY	—	18	18	—	—	—	36
BRIDGE JACKING B-44-34	LS	—	—	—	—	—	—	1
REMOVING BEARINGS B-44-34	EACH	—	4	4	10	12	10	40
SLOPE PAVING REPAIR	SY	—	6	5	—	—	—	11
FULL-DEPTH DECK REPAIR	SY	1	—	—	—	—	—	1
RAILING TUBULAR TYPE H B-44-34	LS	—	—	—	—	—	—	1
REMOVING OLD STRUCTURE STA. 63+67.80	LS	—	—	—	—	—	—	1
REMOVING CONCRETE MASONRY DECK OVERLAY	SY	554	—	—	—	—	—	554
PROTECTIVE SURFACE TREATMENT	SY	790	—	—	36	—	36	862

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-34

DRAWN BY MWB | PLANS CKD. AML

QUANTITIES

SHEET 2 OF 14
56

L:\Jobs2007\20070222-01\CAD\Structural\dgn\00\B-44-34\02-34_QUANTITIES.dgn 1/20/2009 9:35:20 AM

FOR:	JOB NO:	SHEET NO:
MADE BY:	CHECKED BY:	BACKCHECKED BY:
DATE:	DATE:	DATE:

HNTB

SAME X-SECTION AND USH 41 SECTION AS HOLLAND ROAD

Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced [1, 2]

<table>
<tr><td>Overpass Facility →</td><td colspan="2">Freeway, Expressway, or STH</td><td>Railroad[5], CTH, Town Road, Local Road, or Street</td><td>Pedestrian or Shared-use Structures</td><td>Sign Structures[6]</td></tr>
<tr><td>Underpass Facility ↓</td><td>Interchange</td><td>Grade Separation</td><td colspan="3"></td></tr>
<tr><td rowspan="3">Non-arterial
either STH, CTH, Town Road, Local Road, or Street</td><td rowspan="3">15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3" colspan="2"></td><td rowspan="6">18'-0" min. or ES[3] for existing sign structures on new construction projects or reconstruction projects;

17'-0" or ES[3] for existing sign structures on 3R projects</td></tr>
<tr><td>If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial
either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td>If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td>If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial STH (excludes freeway and expressway)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td>If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td></tr>
<tr><td>Freeway[4] or Expressway</td><td colspan="3">16'-0" min. or ES[3]</td><td colspan="2"></td></tr>
<tr><td>Railroad[5]</td><td colspan="5">Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.</td></tr>
</table>

General notes:

1. Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

   Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

2. Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

3. ES = approved Exceptions To Standards Report required (see FDM 11-1-2 and FDM 11-1-4).

4. See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

5. Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

6. See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced [1]

Overpass Facility →	Freeway, Expressway, or STH		Railroad[4], CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures[2]
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable 15'-3" Minimum	15'-3" Desirable 14'-9" Minimum		16'- 9" Desirable 16'-3" Minimum	18'-3" Minimum
Arterial either CTH, Town Road, Local Road, or Street (**excludes** freeway and expressway; also excludes arterial STH)	16'-9" Desirable 16'-3" Minimum	15'-3" Desirable 14'-9" Minimum		17'- 9" Desirable 17'-3" Minimum	
Freeway[3] or Expressway or arterial STH	16'-9" Desirable 16'-4" Minimum			17'- 9" Desirable 17'-4" Minimum	
Railroad[4,5,6,7]	23'-0" Minimum to 23'-3½" Maximum				

General notes:

1 Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

2 See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

3 See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

4 Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

5 A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

See Chapter 17 for additional information.

6 Provide justification for a vertical clearance >23'-3 ½" to the RHS.

7 Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: VANDENBROEK RD		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-034
Feature Under: USH 41		Sect/Twn/Rng: S16 T21N R17E		
Location: 1.3M S JCT CTH JJ		County: OUTAGAMI	Municipality: TOWN-VANDENBROEK(44040)	
Inv Rating: HS15	Rdwy Width (ft): 26.0	Deck Width (ft): 32.0	Existing Posting:	
Oper Rating: HS31	Total Length (ft): 208.0	Deck Area(ft2): 6656	ADT On: 500 Yr: 1980	ADT Under: 46750 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-21-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 2.0	Date: 11-06-01	Deck Surface Type: INTEGRAL CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 10-15-09	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated:

Expansion Joints

Location	Type	Temp: File Insp. Date	File Insp. (in)	New Insp. (in)

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers			
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	16.31	10-06-09	
Min. Veritcal Clearance Under (non-Cardinal)	16.42	10-06-09	
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
PREST CONCRET	DECK GIRDER		34.0
PREST CONCRET	DECK GIRDER		68.0
PREST CONCRET	DECK GIRDER		68.0
PREST CONCRET	DECK GIRDER		34.0

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1960	NEW STRUCTURE	P037	F046
1972	PAINTING		
1983	CONCRETE OVER	C226	C226
1985	BEARING - MIS	C275	
1993	BEARING - MIS		
2009	RAISE STRUCTU		

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control	Y	
Access Equipment	Y	
Other	Y	

Inspector Information

Team Leader Name and No. Printed: Michaelson, Neil (3010)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 10-21-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 3	Conc Deck/Coatd Bars	SF	6656	6656				
X	109 / 4	P/S Conc Open Girder	LF	1055	1048	7			
	Small spalls due to previous traffic impacts								
X	205 / 4	R/Conc Column	EA	9	7	2			
	Center column on P1; north column on P3								
X	215 / 3	R/Conc Abutment	LF	64	60	4			
	CS-2 East 4"								
X	234 / 3	R/Conc Cap	LF	91	91				
X	250 / 4	Concrete Diaphragm	EA	26	20	6			
	Some spalling								
X	322 / 3	Bituminous Approach	EA	2		2			
	Both approaches are slightly settled								
X	333 / 3	Combin Bridge Railing	LF	416	324	92			
	New in 2009								
X	340 / 4	Concrete Slope Prote	EA	2		2			
	Concrete block slope protection; both are settling								
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1	1				
X	362 / 4	Traf Impact SmFlag	EA	1	1				
X	400 / 4	Concrete Wingwall	EA	4	4				
	New in 2009								

General Inspection/Maintenance Notes

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item:
Amount: Date(YYYY-MM-DD):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	8	8	Culvert	N	N
Superstructure	6	6	Channel	N	N
Substructure	8	7	Waterway	N	N

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-034
VANDENBROEK RD over USH 41

LOCATION

(3) Municipality:	TOWN-VANDENBROEK(44040)
(16) Latitiude(° ' "):	44°17'51.24"N
(17) Longitude(° ' "):	88°19'22.75"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	4

GEOMETRY

(49) Structure Length(ft):	208.0	
(50) Sidewalk Width(ft):	**Left:**	**Right:**
(50) Curb Width(ft):	0.0	
(52) Culvert Barrel Length(ft):		
(34) Skew:	**Angle(°):** 0	**Direction:** -RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	**Non-Cardinal Width**
(51) Bridge Roadway(ft):	26.0	26.0
(52) Deck(ft):	32.0	32.0
(32) Approach Roadway(ft):	30	30
	Cardinal Under Clearance	**Non-Cardinal Under Clearance**
(47) Minimum Horizontal(ft):	48.0	56.5
(55) Minimum Right Lateral(ft):	10.0	10.0
(55) Minimum Left Lateral(ft):	14.0	22.5

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
(36B) Transition Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE	
Outer Rail:	**Left** / **Right**	**Type**
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) **Left:** TYPE H ON NJ PARAPET(69) **Right:** TYPE H ON NJ PARAPET(69)
Transition Type:		CONT GUARD RAIL
		NO APP GRDRL
		NO ATTACHMENT
5		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
Guardrail Termination Type:		
X		(01) ENERGY ABSORBING TERMINAL/EAT
		(02) TURN DOWN
		(99) OTHER (Please specify)

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:	
	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: STH 441 NB		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-127
Feature Under: OO		Sect/Twn/Rng: S18 T21N R18E		
Location: 0.8M N JCT STH 96		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE(44020)	
Inv Rating: HS21	Rdwy Width (ft): 40.0	Deck Width (ft): 43.0	Existing Posting:	
Oper Rating: HS42	Total Length (ft): 186.8	Deck Area(ft2): 8032	ADT On: 19500 Yr: 1990	ADT Under: 10000 Yr: 1990

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	08-23-12						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 08-13-10	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated: 07-21-92

Expansion Joints

Location	Type	Temp: File Insp. Date	File Insp. (in)	New Insp. (in)

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers			
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	17.17		
Min. Veritcal Clearance Under (non-Cardinal)	16.75		
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
CONT PREST CO	DECK GIRDER		94.5
CONT PREST CO	DECK GIRDER		90.5

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1993	NEW STRUCTURE	C333	C333

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control		
Access Equipment		
Other		

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 08-23-12	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected

Ck	Elem./Env.	Description	Unit	Total QTY.	Quantity in Condition States 1	2	3	4	5
X	26 / 4	Conc Deck/Coatd Bars	SF	8032	8032				
	Trans & diag cracks, leaching								
X	109 / 4	P/S Conc Open Girder	LF	915	902	13			
X	172 / 4	Painted Steel Diaphr	EA	8	8				
X	205 / 4	R/Conc Column	EA	3	3				
X	215 / 4	R/Conc Abutment	LF	84	78	6			
	Ends cracked								
X	234 / 4	R/Conc Cap	LF	39	39				
X	250 / 4	Concrete Diaphragm	EA	4	3	1			
X	321 / 4	R/Conc Approach Slab	EA	2		2			
	Both approaches have settled slightly. South approach spalled								
X	331 / 4	Conc Bridge Railing	LF	413	382	31			
X	340 / 4	Concrete Slope Prote	EA	1		1			
X	342 / 4	RipRap Slope Protect	EA	1	1				
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1	1				
X	362 / 4	Traf Impact SmFlag	EA	1	1				
	Girders show impact from WB traffic								
X	400 / 4	Concrete Wingwall	EA	4	4				

General Inspection/Maintenance Notes

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Approach - Seal Approach to Paving Block
Amount: Date(YYYY-MM-DD):
Maintenance item comment: w/rubber

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	7	7	Culvert	N	N
Superstructure	7	7	Channel	N	N
Substructure	7	7	Waterway	N	N

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-127
STH 441 NB over OO

LOCATION

(3) Municipality:	TOWN-GRAND CHUTE(44020)
(16) Latitiude(° ' "):	44°17'13.02"N
(17) Longitude(° ' "):	88°21'20.87"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC X-ONE WAY TRAFFIC -TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	0

GEOMETRY

(49) Structure Length(ft):	186.8	
(50) Sidewalk Width(ft):	Left: 0.0	Right: 0.0
(50) Curb Width(ft):		
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 5	Direction: -RIGHT FORWARD X-LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	40.0	40.0
(52) Deck(ft):	43.0	43.0
(32) Approach Roadway(ft):	40	0
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	54.0	54.0
(55) Minimum Right Lateral(ft):	14.0	14.0
(55) Minimum Left Lateral(ft):	4.0	4.0

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
(36B) Transition Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
Outer Rail:	Left	Right	Type
			TYPE F (TWO SQUARE TUBES) - STEEL(8)
			TYPE F (3 SQUARE TUBES) - STEEL(65)
			TYPE F (4 SQUARE TUBES) - STEEL(72)
			TYPE M-STEEL 3 SQUARE TUBES(93)
			SLOPED FACE PARAPET LF(91)
			SLOPED FACE PARAPET HF(92)
			VERTICAL FACE PARAPET TYPE A(74)
			TYPE W-THRIE BEAM(79)
			TYPE H ON VERTICAL PARAPET(80)
			TIMBER(38)
	X	X	OTHER(99) (Please specify) Left: NJ SLOPING PARAPET(81) Right: NJ SLOPING PARAPET(61)
Transition Type:			CONT GUARD RAIL
			NO APP GRDRL
			NO ATTACHMENT
	5		22 MM(7/8") BOLT (Please enter quantity)
			25 MM(1") BOLT (Please enter quantity)
			OTHER (Please specify)
Guardrail Termination Type:	X		(01) ENERGY ABSORBING TERMINAL/EAT
			(02) TURN DOWN
			(99) OTHER (Please specify)

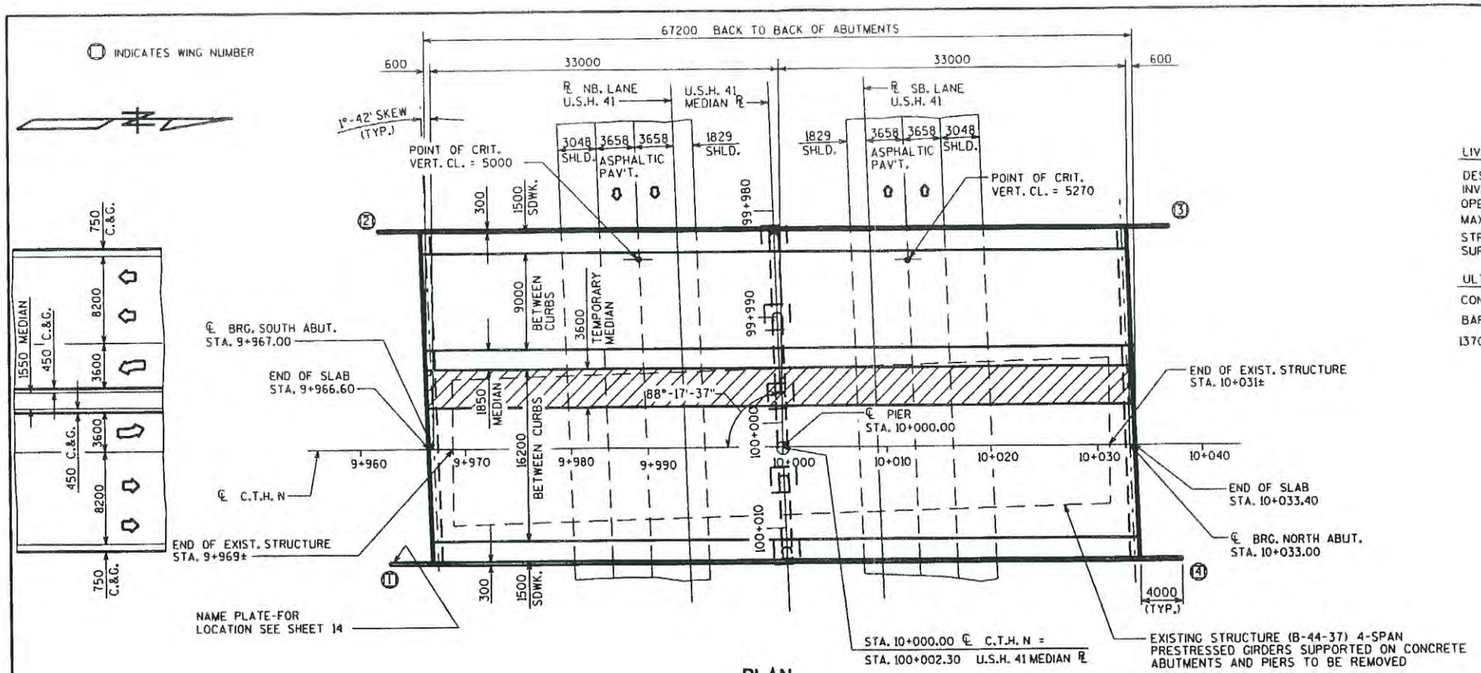
ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

DISTRICT CONTACT: DAVE SCHMIDT

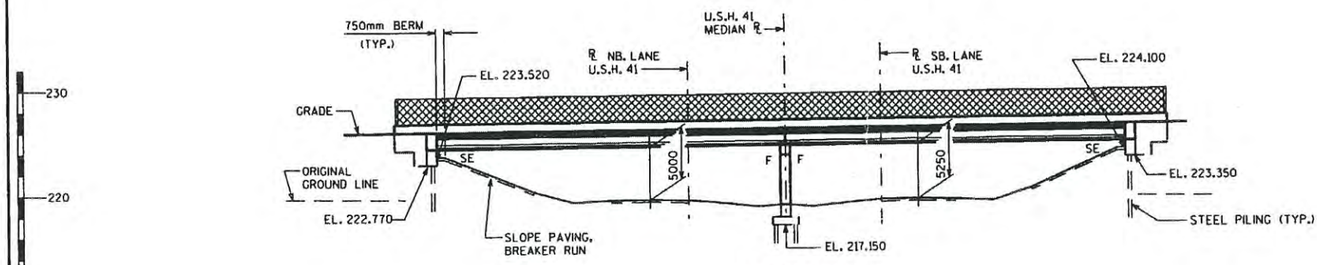
TYPE CODE = X281

STATE PROJECT NUMBER	SHEET NO.
1133-05-71,72	8.1



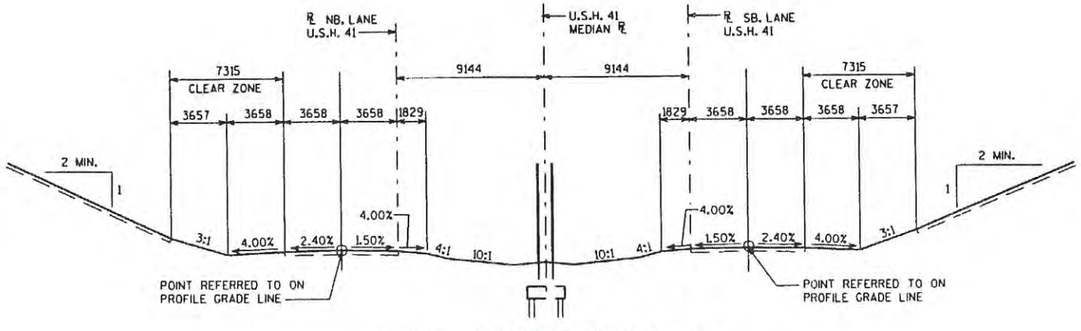
PLAN

2 SPAN-1370mm PRESTRESSED GIRDERS



ELEVATION

NORMAL TO U.S.H. 41



TYPICAL SECTION THRU U.S.H. 41

DESIGN DATA

LIVE LOAD:

DESIGN RATING: MS-18
INVENTORY RATING: MS-22
OPERATIONAL RATING: MS-41
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 1110 kN.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 1.0 kN/m².

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 28 MPa ALL OTHER — f'c = 24 MPa
BAR STEEL REINFORCEMENT, AASHTO M-42M, GRADE 420 — fy = 420 MPa
1370mm PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 42 MPa
STRANDS - 13mm DIA. WITH ULTIMATE TENSILE STRENGTH OF 1860 MPa

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 250 x 62 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 490 kN PER PILE. ESTIMATED 15.0m LONG. PILE POINTS REQUIRED

PIER TO BE SUPPORTED ON HP 250 x 62 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 490 kN PER PILE. ESTIMATED 10.0m LONG. PILE POINTS REQUIRED

TRAFFIC VOLUME

C.T.H. N	U.S.H. 41
A.D.T.=21650 (2017)	A.D.T.=49,625 (2017)
R.D.S.= 60 km/h	R.D.S.=110 km/h

INSERT WIS 441 OVER CTH 00

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUT. DETAILS
6. PIER
7. NORTH ABUTMENT
8. NORTH ABUT. DETAILS
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE DETAILS
11. SUPERSTRUCTURE DETAILS
12. 1370 mm PRESTRESSED GIRDER DETAILS
13. STEEL DIAPHGRAM
14. VERTICAL FACE PARAPET "A"
15. CHAIN LINK FENCE

NO.	DATE	REVISIONS	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-44-179

C.T.H. N OVER U.S.H. 41

COUNTY OUTAGAMIE		VILLAGE: LITTLE CHUTE TOWN: VAN DEN BROEK	
DESIGN SPEC. AASHTO 1996		LOAD MS-18	CONST. SPEC. 1996
DESIGNED BY D.J.K.	DESIGN CK'D. K.T.N.	DRAWN BY ZIRK	PLANS CK'D. JHG

APPROVED [signature] 05-10-01
CHIEF BRIDGE DESIGN ENGINEER — DATE

GENERAL PLAN

SHEET 1 OF 15

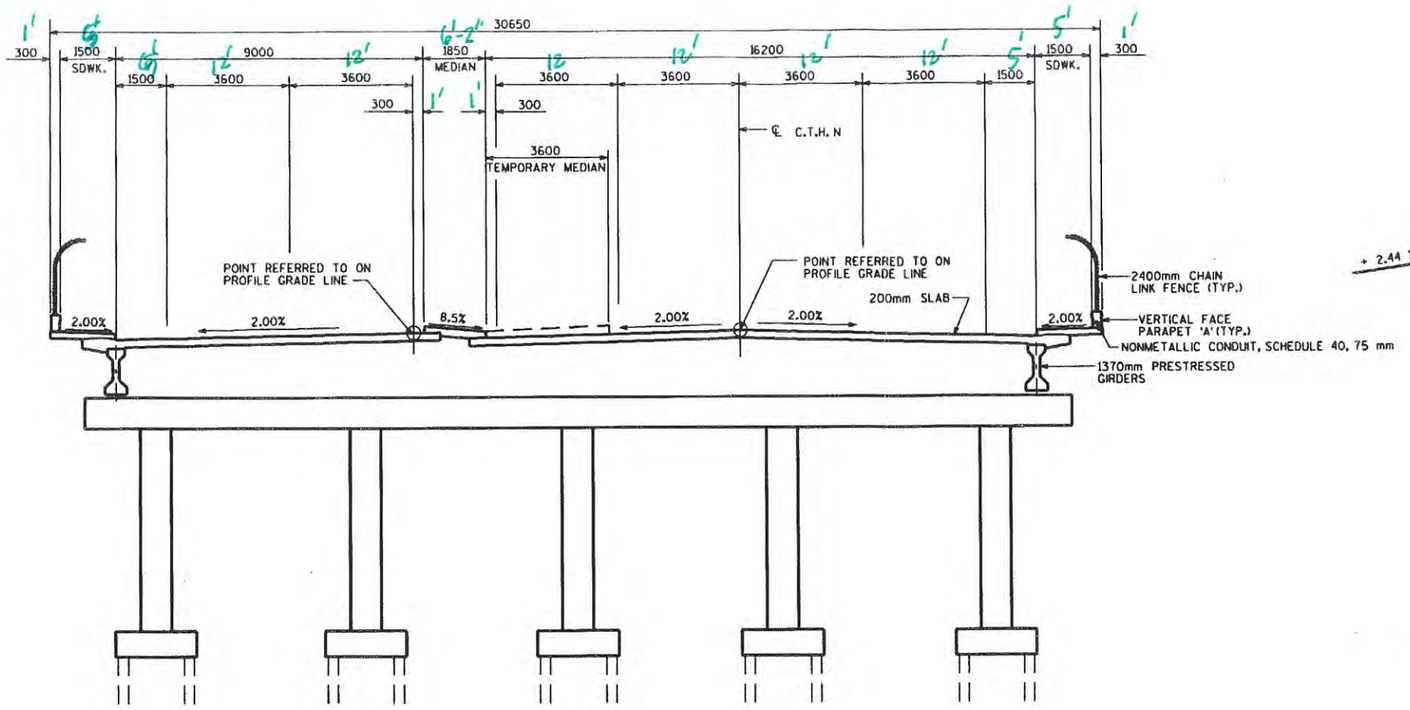
DATE: NOV. 96

I.D. 1133-05-00

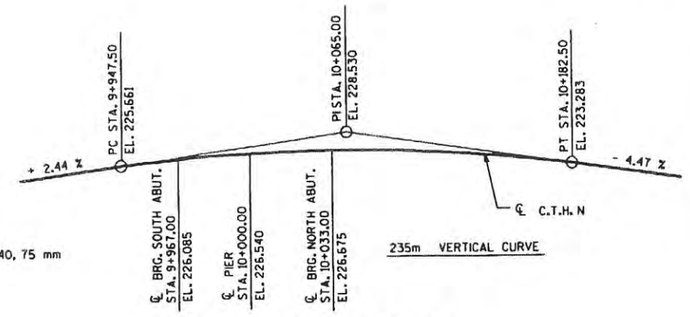
DISTRICT CONTACT

FILE= PREPLAN.DGN
SCALE= 250

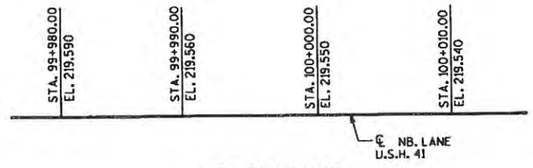
STATE PROJECT NUMBER	SHEET NO.
1133-05-71/72	8.2



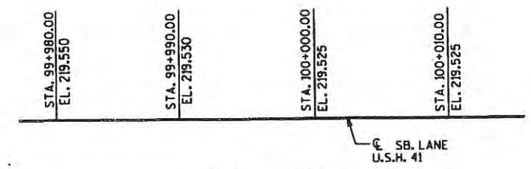
CROSS SECTION THRU ROADWAY LOOKING NORTH



PROFILE GRADE LINE C.T.H. N



NORTHBOUND LANE



SOUTHBOUND LANE

EXISTING PROFILE GRADE LINE U.S.H. 41

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	1133-05-71 CATEGORY 0020 SUPER.	SOUTH ABUT.	NORTH ABUT.	PIER	1133-05-72 CATEGORY 0010 SUPER.	SOUTH ABUT.	TOTALS
REMOVING OLD BRIDGE STA. 10+000.00	L.S.	—	—	—	—	—	—	1
EXCAVATION FOR STRUCTURES, BRIDGES, B-44-179	L.S.	—	—	—	—	—	—	1
STRUCTURE BACKFILL	m^3		380	380	—	—	—	760
CONCRETE MASONRY, BRIDGES	m^3	568	62	62	76	31	—	799
PROTECTIVE SURFACE TREATMENT	m^2	2205	—	—	—	—	—	2205
PRESTRESSED GIRDER, I TYPE, 1370 mm	mm	927	—	—	—	—	—	927
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	kg	—	2448	2720	460	—	272	5900
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	kg	58795	240	240	7580	3025	—	69880
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	—	14	14	14		—	42
STEEL PILING, DELIVERED AND DRIVEN, HP 250 mm x 62 kg/m	m	—	345	345	450	—	—	1140
PILE POINTS	EACH	—	23	23	45	—	—	91
RUBBERIZED MEMBRANE WATERPROOFING	m^2	—	18	18	—	—	—	36
SLOPE PAVING, BREAKER RUN	m^2	—	300	300	—	—	—	600
PIPE UNDERDRAIN, 150 mm	m	—	30	30	—	—	—	60
PIPE UNDERDRAIN, UNPERFORATED, 150 mm	m	—	5	5	—	—	—	10
CHAIN LINK FENCE , 2.4 m	m	150	—	—	—	—	—	150
GEOTEXTILE FABRIC, TYPE DF	m^2	—	65	65	—	—	—	130
STEEL DIAPHRAGM, STRUCTURE B-44-179	EACH	52	—	—	—	—	—	52
NONMETALLIC CONDUIT, SCHEDULE 40, 75 mm	m	76	—	—	—	—	—	76
NON-BID ITEMS								
FILLER	SIZE	—	—	—	—	—	—	13 & 19
ZINC OR ALUMINUM PLATE		2	—	—	—	—	—	2

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 50 mm CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL REINFORCING BARS ARE METRIC AND THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

ALL DIMENSIONS MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

ALL STATIONS AND ALL ELEVATIONS ARE METERS (m).

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

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

AT THE BACKFACE OF ABUTMENT ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-44-179

CONST. SPEC.	DRAWN BY	PLANS CK'D.
1996	ZIRK	JWG

CROSS SECTION & QUANTITIES

SHEET 2

FILE = 176GP.DGN
SCALE = LV=3

ME-101-1204

SAME OSH 41 SRANS AS PREVIOUS HOLLAND E/ VANDENBROEK ROADS

KEEP SAME BRIDGE SECTION.

FOR:	JOB NO:	SHEET NO:
MADE BY:	CHECKED BY:	BACKCHECKED BY:
DATE:	DATE:	DATE:

HNTB

Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced [1, 2]

<table>
<tr><td>Overpass Facility →</td><td colspan="2">Freeway, Expressway, or STH</td><td>Railroad[5], CTH, Town Road, Local Road, or Street</td><td>Pedestrian or Shared-use Structures</td><td>Sign Structures[6]</td></tr>
<tr><td>Underpass Facility ↓</td><td>Interchange</td><td>Grade Separation</td><td colspan="3"></td></tr>
<tr><td rowspan="3">Non-arterial
either STH, CTH, Town Road, Local Road, or Street</td><td rowspan="3">15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td colspan="2" rowspan="3">16'-3" min. or ES[3]</td><td rowspan="6">18'-0" min. or ES[3] for existing sign structures on new construction projects or reconstruction projects;

17'-0" or ES[3] for existing sign structures on 3R projects</td></tr>
<tr><td>If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial
either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td colspan="2" rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td>If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td>If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial STH (excludes freeway and expressway)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td colspan="2" rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td>If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td></tr>
<tr><td>Freeway[4] or Expressway</td><td colspan="3">16'-0" min. or ES[3]</td><td colspan="2"></td></tr>
<tr><td>Railroad[5]</td><td colspan="5">Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.</td></tr>
</table>

General notes:

1. Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

   Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

2. Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

3. ES = approved Exceptions To Standards Report required (see FDM 11-1-2 and FDM 11-1-4).

4. See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

5. Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

6. See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced [1]

Overpass Facility →	Freeway, Expressway, or STH		Railroad[4], CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures[2]
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable 15'-3" Minimum	15'-3" Desirable 14'-9" Minimum		16'- 9" Desirable 16'-3" Minimum	18'-3" Minimum
Arterial either CTH, Town Road, Local Road, or Street (**excludes** freeway and expressway; also excludes arterial STH)	16'-9" Desirable 16'-3" Minimum	15'-3" Desirable 14'-9" Minimum		17'- 9" Desirable 17'-3" Minimum	
Freeway[3] or Expressway or arterial STH	16'-9" Desirable 16'-4" Minimum			17'- 9" Desirable 17'-4" Minimum	
Railroad[4,5,6,7]	23'-0" Minimum to 23'-3½" Maximum				

General notes:

1 Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

2 See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

3 See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

4 Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

5 A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

See Chapter 17 for additional information.

6 Provide justification for a vertical clearance >23'-3 ½" to the RHS.

7 Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: N		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-179
Feature Under: USH 41		Sect/Twn/Rng: S15 T21N R18E		
Location: 0.8M N JCT CTH OO		County: OUTAGAMI	Municipality: TOWN-VANDENBROEK(44040)	
Inv Rating: HS24	Rdwy Width (ft): 82.6	Deck Width (ft): 110.0, 82.6	Existing Posting:	
Oper Rating: HS46	Total Length (ft): 220.0	Deck Area(ft2): 21186	ADT On: 10500 Yr: 1997	ADT Under: 48500 Yr: 1997

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-21-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 10-15-09	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated: 08-14-01

Expansion Joints

Location	Type	Temp: File Insp. Date	File Insp. (in)	New Insp. (in)

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers			
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	16.4	11-28-01	
Min. Veritcal Clearance Under (non-Cardinal)	17.19	11-28-01	
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
CONCRETE	DECK GIRDER		108.0
CONCRETE	DECK GIRDER		108.0

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
2002	NEW STRUCTURE	PLAN	

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control	Y	
Access Equipment	Y	
Other	Y	

Inspector Information

Team Leader Name and No. Printed: Michaelson, Neil (3010)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 10-21-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 4	Conc Deck/Coatd Bars	SF	18172	18172				
	Tranerse cracking at pier, diagonal at ends								
X	109 / 4	P/S Conc Open Girder	LF	3041	3041				
X	172 / 4	Painted Steel Diaphr	EA	52	52				
X	205 / 4	R/Conc Column	EA	5	5				
X	215 / 4	R/Conc Abutment	LF	200	194	6			
	CS-2 (E Abut 3" & W Abut 3"), Water leaking between seat and backwall								
X	234 / 4	R/Conc Cap	LF	91	91				
X	250 / 4	Concrete Diaphragm	EA	13	13				
X	321 / 4	R/Conc Approach Slab	EA	4	3	1			
	East approach settled								
X	331 / 4	Conc Bridge Railing	LF	492	464	28			
	Chain link fence								
X	342 / 2	RipRap Slope Protect	EA	2	2				
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1		1			
X	400 / 4	Concrete Wingwall	EA	4	4				
X	410 / 4	Curb	LF	219	219				
X	415 / 4	Sidewalk/Median	LF	439	375	64			
	Galvinized chain link fence on both sides								

General Inspection/Maintenance Notes

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Approach - Seal Approach to Paving Block
Amount: Date(YYYY-MM-DD):
Maintenance item comment: Seal north JT at north end of deck

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	8	8	Culvert	N	N
Superstructure	8	8	Channel	N	N
Substructure	8	8	Waterway	N	N

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-179
N over USH 41

LOCATION

(3) Municipality:	TOWN-VANDENBROEK(44040)
(16) Latitiude(° ' "):	44°17'50.88"N
(17) Longitude(° ' "):	88°18'46.18"W

TRAFFIC SERVICE

(28A) Lanes On:	5
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	1

GEOMETRY

(49) Structure Length(ft):	220.0	
(50) Sidewalk Width(ft):	Left: 5.0	Right: 5.0
(50) Curb Width(ft):		
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	82.6	82.6
(52) Deck(ft):	110.0	82.6
(32) Approach Roadway(ft):	40	0
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	51.0	52.0
(55) Minimum Right Lateral(ft):	13.0	14.0
(55) Minimum Left Lateral(ft):	14.0	14.0

RAILING APPRAISAL

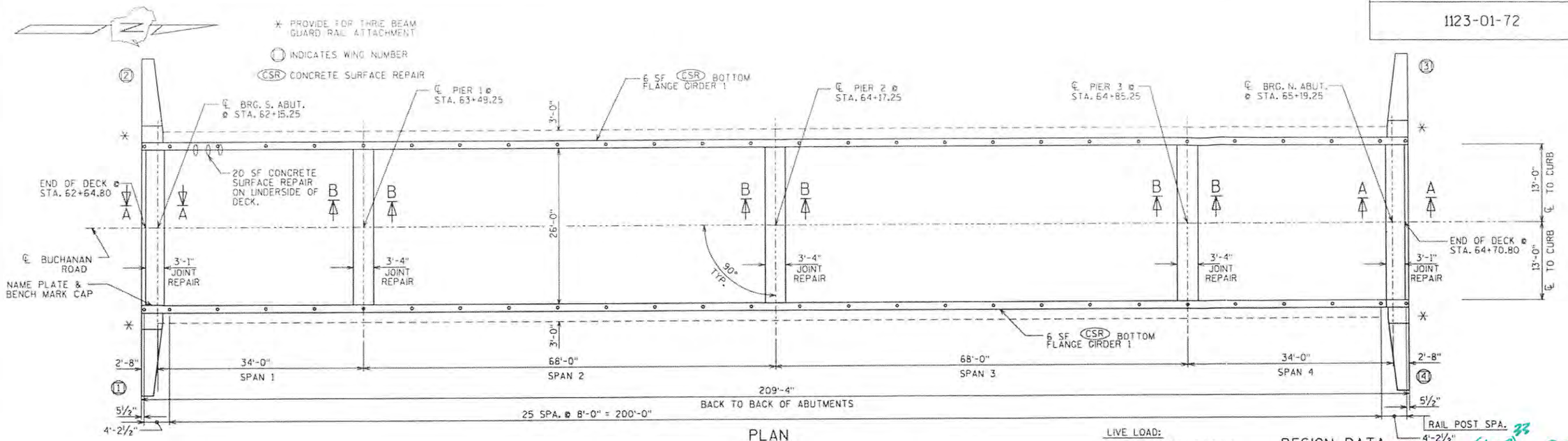
(36A) Bridge Rail Adequacy:	-SUB-STANDARD -STANDARD X-NOT APPLICABLE	
(36B) Transition Adequacy:	-SUB-STANDARD -STANDARD X-NOT APPLICABLE	
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD -STANDARD X-NOT APPLICABLE	
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD -STANDARD X-NOT APPLICABLE	
Outer Rail:	Left	Right
			TYPE F (TWO SQUARE TUBES) - STEEL(8)
			TYPE F (3 SQUARE TUBES) - STEEL(65)
			TYPE F (4 SQUARE TUBES) - STEEL(72)
			TYPE M-STEEL 3 SQUARE TUBES(93)
			SLOPED FACE PARAPET LF(91)
			SLOPED FACE PARAPET HF(92)
			VERTICAL FACE PARAPET TYPE A(74)
			TYPE W-THRIE BEAM(79)
			TYPE H ON VERTICAL PARAPET(80)
			TIMBER(38)
	X	X	OTHER(99) (Please specify) Left: VERTICAL PARAPET-FENCE/VINYL(90) Right: VERTICAL PARAPET-FENCE/VINYL(90)
Transition Type:			CONT GUARD RAIL
			NO APP GRDRL
			NO ATTACHMENT
			22 MM(7/8") BOLT (Please enter quantity)
			25 MM(1") BOLT (Please enter quanlity)
			OTHER (Please specify)
Guardrail Termination Type:			(01) ENERGY ABSORBING TERMINAL/EAT
			(02) TURN DOWN
	X		(99) OTHER (Please specify)

ROADWAY ALIGNMENT APPRAISAL

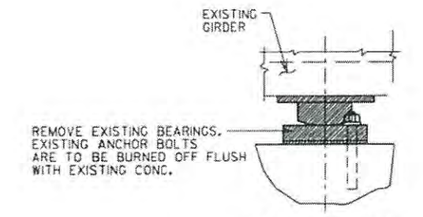
(72) Approach Alignment Appraisal:		(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
		(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
	X	(8) GOOD- No speed reduction required

STATE PROJECT NUMBER

1123-01-72

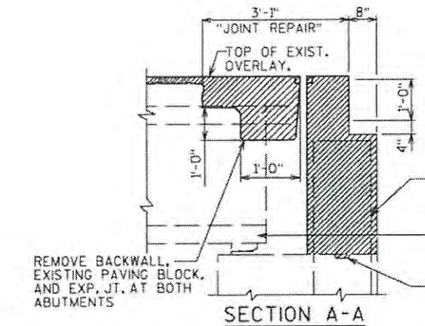


PLAN

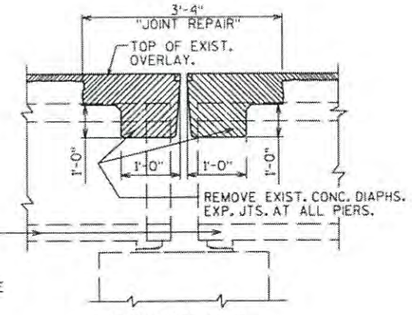


BEARING REMOVAL

PIERS 1&3 SHOWN
FOR NEW BEARING DETAILS
SEE SHEETS 9 & 10

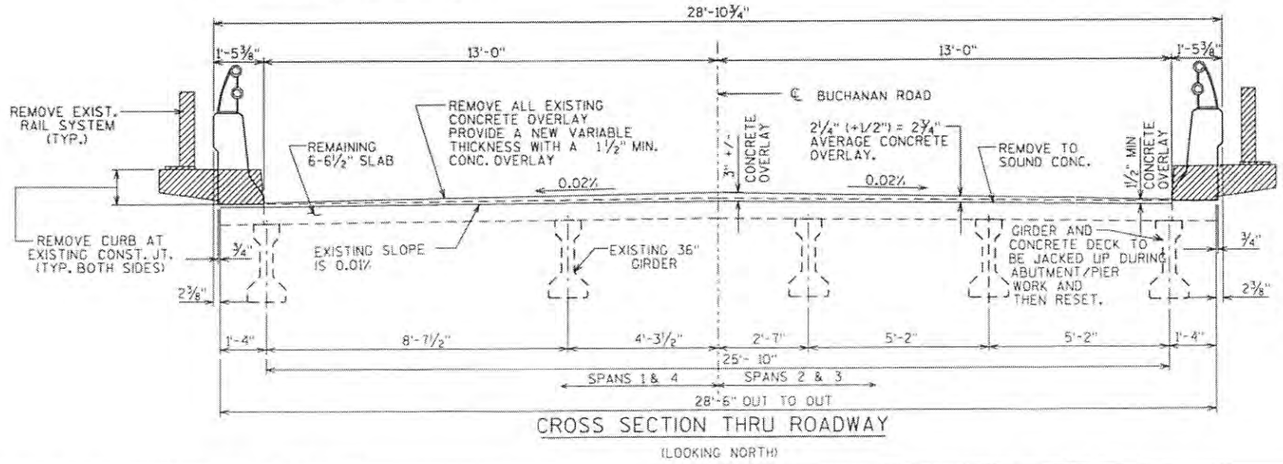


SECTION A-A



SECTION B-B

NOTE:
REMOVE ALL OF EXISTING 1½" +/- CONCRETE OVERLAY.
PLACE NEW MIN 1½" CONCRETE OVERLAY.



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:

INVENTORY RATING; HS-XX
OPERATIONAL RATING; HS-XX
MAX PERMIT VEHICLE = XX KIPS

2004 3300
2037-2004 = 33 yrs
3300 (1.03)^33 = 8750

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
671		CHISELED SQUARE, EAST END OF SOUTH PARAPET WALL AT BUCHANAN ROAD	721.24
672		CHISELED SQUARE, CONCRETE BASE FOR THE INFORMATION SIGN AT 0.55 MILES EAST OF BUCHANAN ROAD, 50 FEET +/- SOUTH OF THE CENTERLINE NORTHBOUND US HIGHWAY 41	712.56

LIST OF DRAWINGS

WISCONSIN
ALBERT M. LINDNER
E-18992
BROOKFIELD, WIS.
PROFESSIONAL ENGINEER
1-19-09

STRUCTURE DESIGN CONTACT:

WILLIAM DREHER PE (608) 261-8489
ALBERT M. LINDNER PE (414) 259-1500

NO.	DATE	REVISION	BY

PLANS PREPARED BY: GRAEF
One Honey Creek Corporate Center, 125 South 84th Street, Suite 401, Milwaukee, WI 53214-1470, 414 / 256 1500, 414 / 256 0037 fax, www.graef-usa.com

WISDOT
BUREAU OF STRUCTURES

APPROVED William C. Dreher SDR 1-20-09
CHIEF STRUCTURAL DESIGN ENGINEER DATE

STRUCTURE B-44-38

BUCHANAN ROAD OVER U.S.H. 41

COUNTY	TOWN
OUTAGAMIE	VANDENBROEK

DESIGN SPEC. AASHTO STD. SPEC. 2003 LOAD HS-20

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JRS	KGW	MWB	AML

CONC. OVERLAY & RAISING

SHEET 1 OF 14

55

8

8

STATE PROJECT NUMBER
1123-01-72

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153, TYPE I, II, OR III, OR M213.

AT ABUTMENTS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL STRUCTURE".

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

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION AND CONSTRUCTION.

INFORMATION ON THESE DRAWINGS RELATED TO THE EXISTING BRIDGE IS BASED UPON AVAILABLE DRAWING FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION, NO GUARANTEE OR WARRANTY IS MADE THAT THE INFORMATION IS ALL INCLUSIVE OR TOTALLY ACCURATE. THEREFORE, THE CONTRACTOR SHALL MAKE ITS OWN DETERMINATION OF THE ACTUAL CONDITIONS TO BE ENCOUNTERED.

THE EXISTING STRUCTURE, B-44-38, IS A 4 SPAN, PRESTRESSED CONCRETE DECK GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 32 FEET AND AN OVERALL LENGTH OF 209.33 FEET. THE EXISTING RAIL SYSTEM, THE ENTIRE 3 FOOT WIDE BRUSH CURBS, AND OTHER REMOVALS NOT INDICATED ON THE PLANS ARE TO BE REMOVED UNDER THE BID ITEM "REMOVING OLD STRUCTURE". THE EXISTING CONCRETE MASONRY OVERLAY IS TO BE REMOVED UNDER THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

THE EXISTING STRUCTURE HAS A 1.5 INCH CONCRETE OVERLAY AT A 0.01 FOOT PER FOOT CROSS SLOPE. THE ENTIRE EXISTING CONCRETE OVERLAY IS TO BE REMOVED, AND A NEW VARIABLE THICKNESS CONCRETE OVERLAY PLACED AT A 0.02 FOOT PER FOOT CROSS SLOPE.

CONCRETE SURFACE REPAIR AS DIRECTED BY PROJECT ENGINEER.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2 AS DIRECTED BY PROJECT ENGINEER.

THE BID ITEM "CONCRETE MASONRY OVERLAY DECK" INCLUDES CONCRETE FOR PREPARATION DECKS 1, PREPARATION DECKS TYPE 2, FULL DEPTH DECK REPAIR AND CONCRETE OVERLAY PLACED OVER THE JOINT REPAIR.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A ½" DEEP SAW CUT.

USE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETER INTO NEW WORK.

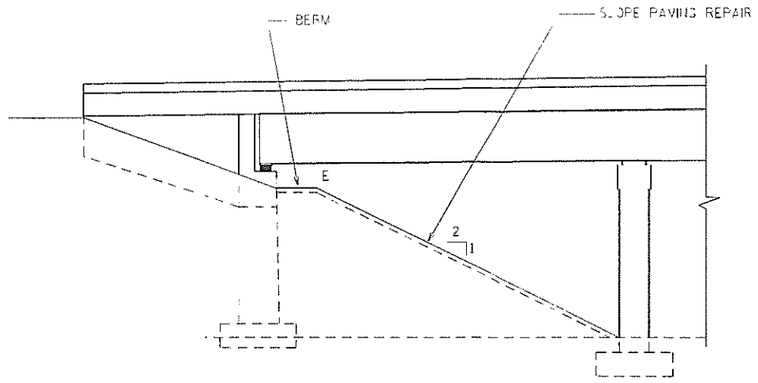
VARIATIONS TO THE NEW GRADE LINE OVER ½" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE BUREAU OF STRUCTURES SECTION FOR REVIEW.

THE CONTRACTOR SHALL SUBMIT A REMOVAL PLAN TO THE ENGINEER FOR APPROVAL PER SPECIAL PROVISIONS.

CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAILED DRAWINGS. THE NEW NAME PLATE SHALL SHOW THE ORIGINAL CONSTRUCTION YEAR OF 1961.

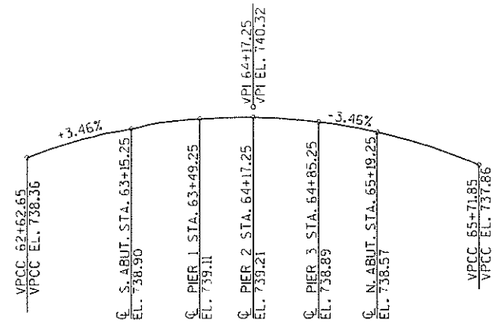
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE ROADWAY DECK, FRONT FACE OF THE PARAPETS AND THE TOP OF THE PARAPETS. PROTECTIVE SURFACE TREATMENT SHALL ALSO BE APPLIED TO PIERS 1 AND 3 FROM THE EXISTING GROUND LINE TO THE BOTTOM OF THE PIER CAP.

IN ADDITION TO THE STANDARD SPECIFICATIONS FOR THE BID ITEM "CONCRETE SURFACE REPAIR", THE FOLLOWING SHALL BE FOLLOWED FOR THE REPAIR: PRIOR TO THE PLACING OF THE CONCRETE MIXTURE ON THE DAMAGED AREAS OF THE PRESTRESSED GIRDER, THE REAR AXLES OF A 15 TON TRUCK, FULLY LOADED, SHALL BE PARKED OVER THE FACIA GIRDER BEING REPAIRED. THE LOADED TRUCK SHALL REMAIN IN PLACE DURING THE CURING PERIOD OF THE SURFACE REPAIR, OR FOR A MINIMUM PERIOD OF FOUR DAYS.



SLOPE PAVING REPAIR AT ABUTMENTS

SEE SHT. 14 FOR DETALS



BUCHANAN ROAD PROFILE GRADE LINE

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	PIER 1	PIER 2	PIER 3	TOTALS
EXCAVATION FOR STRUCTURE B-44-38	LS	——	——	——	——	——	——	1
BACKFILL STRUCTURE	CY	——	20	20	——	——	——	40
CONCRETE MASONRY OVERLAY DECKS	CY	49	——	——	——	——	——	49
PREPARATION DECKS TYPE 1	SY	90	——	——	——	——	——	90
PREPARATION DECKS TYPE 2	SY	5	——	——	——	——	——	5
JOINT REPAIR	SY	52	——	——	——	——	——	52
CONCRETE SURFACE REPAIR	SF	12	——	——	10	——	10	32
BAR STEEL REINFORCEMENT HS BRIDGES	LB	3230	——	——	——	——	——	3230
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	11,620	2770	2770	910	910	910	19,890
CONCRETE MASONRY BRIDGES	CY	94	29	29	8	8	8	176
MASONRY ANCHORS TYPE L NO. 8 BARS	EACH	——	8	8	——	——	——	16
MASONRY ANCHORS TYPE S 5/8-INCH	EACH	944	78	78	64	64	64	1292
BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	——	4	4	10	12	10	40
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	——	2	2	——	——	——	4
RUBBERIZED MEMBRANE WATERPROOFING	SY	——	18	18	——	——	——	36
BRIDGE JACKING B-44-38	LS	——	——	——	——	——	——	1
REMOVING BEARINGS B-44-38	EACH	——	4	4	10	12	10	40
SLOPE PAVING REPAIR	SY	——	6	9	——	——	——	15
FULL-DEPTH DECK REPAIR	SY	1	——	——	——	——	——	1
RAILING TUBULAR TYPE H B-44-38	LS	——	——	——	——	——	——	1
REMOVING OLD STRUCTURE STA. 64+17.25	LS	——	——	——	——	——	——	1
REMOVING CONCRETE MASONRY DECK OVERLAY	SY	554	——	——	——	——	——	554
PROTECTIVE SURFACE TREATMENT	SY	790	——	——	36	——	36	862

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-44-38

DRAWN BY MWB | PLANS CK'D. AML

QUANTITIES

SHEET 2 OF 14
56

8

8

FOR:	JOB NO:	SHEET NO:
MADE BY:	CHECKED BY:	BACKCHECKED BY:
DATE:	DATE:	DATE:

HNTB

SAME AS HOWARD RD.

Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced [1, 2]

<table>
<tr><td>Overpass Facility →</td><td colspan="2">Freeway, Expressway, or STH</td><td>Railroad[5], CTH, Town Road, Local Road, or Street</td><td>Pedestrian or Shared-use Structures</td><td>Sign Structures[6]</td></tr>
<tr><td>Underpass Facility ↓</td><td>Interchange</td><td>Grade Separation</td><td colspan="3"></td></tr>
<tr><td rowspan="3">Non-arterial
either STH, CTH, Town Road, Local Road, or Street</td><td rowspan="3">15'-3" min. or ES[3]</td><td colspan="2">If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">16'-3" min. or ES[3]</td><td rowspan="8">18'-0" min. or ES[3] for existing sign structures on new construction projects or reconstruction projects;

17'-0" or ES[3] for existing sign structures on 3R projects</td></tr>
<tr><td colspan="2">If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td colspan="2">If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial
either CTH, Town Road, Local Road, or Street
(excludes freeway and expressway; also excludes arterial STH)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td>If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td>If existing is ≥ 14'-6" then 14'-6" min. or ES[3]</td></tr>
<tr><td rowspan="3">Arterial STH
(excludes freeway and expressway)</td><td>If existing is < 15'-3" then increase to 15'-3" min. or ES[3]</td><td>If existing is < 14'-0" then increase to 14'-0" min. or ES[3]</td><td rowspan="3">17'-0" min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES[3]</td><td>If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES[3]</td></tr>
<tr><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td><td>If existing is ≥ 16' 0" then 16' 0" min. or ES[3]</td></tr>
<tr><td>Freeway[4] or Expressway</td><td colspan="4">16'-0" min. or ES[3]</td></tr>
<tr><td>Railroad[5]</td><td colspan="5">Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.</td></tr>
</table>

General notes:

1 Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

2 Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

3 ES = approved Exceptions To Standards Report required (see FDM 11-1-2 and FDM 11-1-4).

4 See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

5 Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

6 See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced [1]

Overpass Facility →	Freeway, Expressway, or STH		Railroad[4], CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures[2]
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable 15'-3" Minimum	15'-3" Desirable 14'-9" Minimum		16'- 9" Desirable 16'-3" Minimum	18'-3" Minimum
Arterial either CTH, Town Road, Local Road, or Street (**excludes** freeway and expressway; also excludes arterial STH)	16'-9" Desirable 16'-3" Minimum	15'-3" Desirable 14'-9" Minimum		17'- 9" Desirable 17'-3" Minimum	
Freeway[3] or Expressway or arterial STH	16'-9" Desirable 16'-4" Minimum			17'- 9" Desirable 17'-4" Minimum	
Railroad[4,5,6,7]	23'-0" Minimum to 23'-3½" Maximum				

General notes:

1 Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

2 See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

3 See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

4 Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

5 A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

See Chapter 17 for additional information.

6 Provide justification for a vertical clearance >23'-3 ½" to the RHS.

7 Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportion
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

Inventory Data

Feature On: BUCHANAN ST		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-038
Feature Under: USH 41		Sect/Twn/Rng: S15 T21N R18E		
Location: 0.7M N JCT CTH OO		County: OUTAGAMI	Municipality: TOWN-VANDENBROEK(44040)	
Inv Rating: HS20	Rdwy Width (ft): 26.0	Deck Width (ft): 32.0	Existing Posting:	
Oper Rating: HS32	Total Length (ft): 208.0	Deck Area(ft2): 6656	ADT On: 1000 Yr: 1980	ADT Under: 38950 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-21-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 2.0	Date: 11-06-01	Deck Surface Type: INTEGRAL CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 08-03-09	Insp. Measurement (%):	Describe:
Re-rate for load capacity?		Reason:		Date Last Rated:

Expansion Joints

Location	Type	Temp: File Insp. Date	File Insp. (in)	New Insp. (in)

Signing Condition

Type of Marker	File	Y/N	Comments
Bridge Markers	Y	Y	
Narrow Bridge			
One Lane Road			
Vertical Clearance			
Weight Limit Post			
Other(Addl. Sign)			

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	16.54	10-06-09	
Min. Veritcal Clearance Under (non-Cardinal)	16.44	10-06-09	
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)
PREST CONCRET	DECK GIRDER		34.0
PREST CONCRET	DECK GIRDER		68.0
PREST CONCRET	DECK GIRDER		68.0
PREST CONCRET	DECK GIRDER		34.0

Construction/Rehabilitation History

Year	Work Performed	Plan	Shop
1961	NEW STRUCTURE	P037	F046
1972	PAINTING		
1984	CONCRETE OVER	C226	C226
1985	BEARING - MIS	C275	
1993	BEARING - MIS		
2009	RAISE STRUCTU		

Inspection Information

Special Requirements	Y/N	Comments
Traffic Control	Y	
Access Equipment	Y	
Other	Y	

Inspector Information

Team Leader Name and No. Printed: Michaelson, Neil (3010)	Team Member(s) Name(s) Printed:	
Team Leader Signature:	Inspection Date: 10-21-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:	District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	22 / 4	Conc Deck/Conc Ov	SF	6656	6656				
	Entire deck has map cracking								
X	109 / 4	P/S Conc Open Girder	LF	1046	1034	12			
	girders have slight (spalls) or repaired damage from previous traffic impact damage								
X	205 / 4	R/Conc Column	EA	9	9				
X	215 / 3	R/Conc Abutment	LF	61	57	4			
	CS-2 North 4"								
X	234 / 3	R/Conc Cap	LF	91	87	4			
X	250 / 4	Concrete Diaphragm	EA	45	45				
X	322 / 4	Bituminous Approach	EA	2		2			
	Both have settled slightly								
X	333 / 4	Combin Bridge Railing	LF	416	316	100			
	Vertical cracks								
X	340 / 4	Concrete Slope Prote	EA	2		2			
	Concrete block; Both have settled								
X	359 / 4	Und Dk Surf Sm Flag	EA	1	1				
X	362 / 4	Traf Impact SmFlag	EA	1	1				
	Over NB & SB lanes								
X	400 / 4	Concrete Wingwall	EA	4	4				
	New in 2009								

General Inspection/Maintenance Notes

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Approach - Seal Approach to Paving Block
Amount: Date(YYYY-MM-DD):
Maintenance item comment: Seal joints at the end of the deck

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	8	7	Culvert	N	N
Superstructure	7	7	Channel	N	N
Substructure	8	8	Waterway	N	N

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-038
BUCHANAN ST over USH 41

LOCATION

(3) Municipality:	TOWN-VANDENBROEK(44040)
(16) Latitiude(° ' "):	44°17'50.83"N
(17) Longitude(° ' "):	88°18'10.13"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	5

GEOMETRY

(49) Structure Length(ft):	208.0	
(50) Sidewalk Width(ft):	Left:	Right:
(50) Curb Width(ft):	0.0	
(52) Culvert Barrel Length(ft):		
(34) Skew:	Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
	Cardinal Width	Non-Cardinal Width
(51) Bridge Roadway(ft):	26.0	26.0
(52) Deck(ft):	32.0	32.0
(32) Approach Roadway(ft):	30	30
	Cardinal Under Clearance	Non-Cardinal Under Clearance
(47) Minimum Horizontal(ft):	48.0	48.0
(55) Minimum Right Lateral(ft):	10.0	10.0
(55) Minimum Left Lateral(ft):	14.0	14.0

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36B) Transition Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE

Outer Rail:

Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
X	X	SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
		OTHER(99) (Please specify)

Transition Type:

	CONT GUARD RAIL
	NO APP GRDRL
	NO ATTACHMENT
5	22 MM(7/8") BOLT (Please enter quantity)
	25 MM(1") BOLT (Please enter quantity)
	OTHER (Please specify)

Guardrail Termination Type:

X	(01) ENERGY ABSORBING TERMINAL/EAT
	(02) TURN DOWN
	(99) OTHER (Please specify)

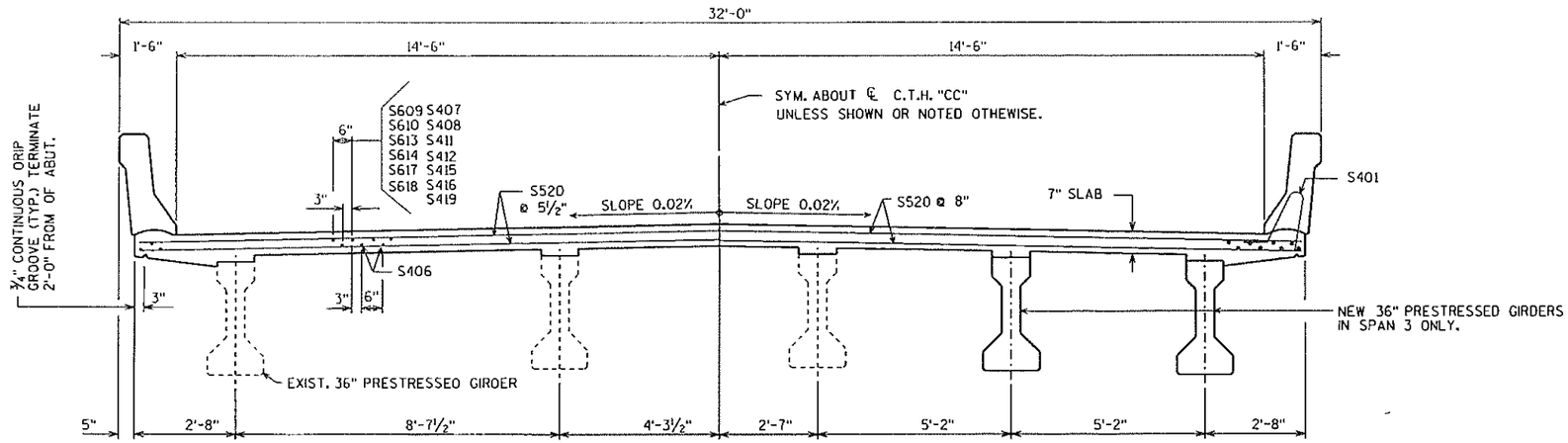
ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:

	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vhicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

TYPE CODE = X

STATE PROJECT NUMBER	SHEET NO.
1133-06-60	8.0



SPANS 1 AND 4 — SPANS 2 AND 3

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

DESIGN DATA

LIVE LOAD:

INVENTORY RATING: HS-16
OPERATIONAL RATING: HS-36
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.

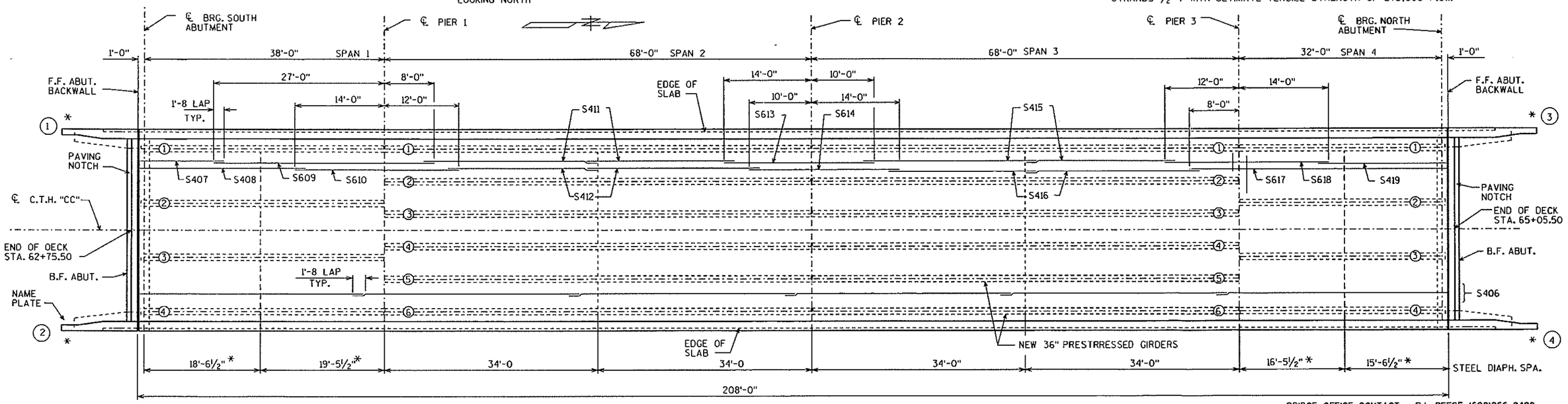
ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.
36" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 6,000 P.S.I.
STRANDS-½" ϕ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

CROSS SECTION THRU RDWY.

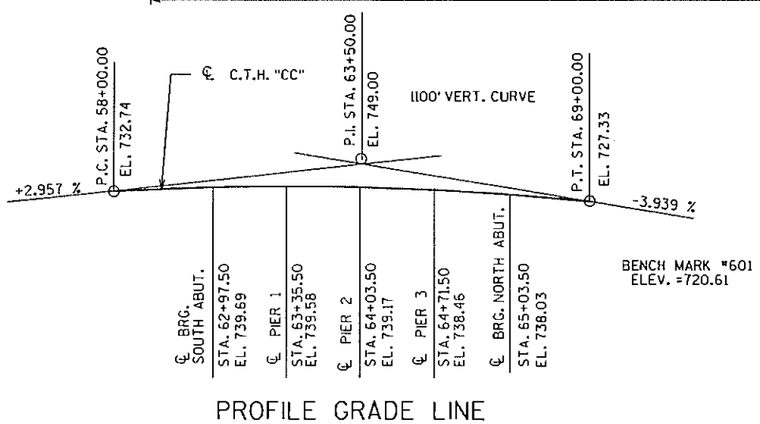
LOOKING NORTH

* DENOTES ANCHOR ASSEMBLY FOR THRIE BEAM ATTACHMENT.



PLAN

* DISPLACE DIAPH. TO MISS EXISTING INSERTS IN GIRDERS



PROFILE GRADE LINE

LIST OF DRAWINGS

1. DECK REPLACEMENT
2. TOTAL ESTIMATED QUANTITIES
3. SUPERSTRUCTURE DETAILS
4. ABUTMENT DETAILS
5. PIERS
6. PRESTRESSED GIRDER BEARINGS
7. 36" PRESTRESSED GIRDER DETAILS
8. STEEL DIAPHRAM (NEW GIRDERS)
9. STEEL DIAPHRAM (EXIST. GIRDERS)
10. EXPANSION DEVICE
11. SLOPED FACE PARAPET "B"

BRIDGE OFFICE CONTACT - R.L. REESE (608)266-8488
BRIDGE OFFICE CONTACT - F.K. HUBBARD (608)266-8489

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-44-39

C.T.H. "CC" OVER U.S.H. 41

COUNTY OUTAGAMIE		TOWN/~~CITY/VILLAGE~~ VANDEN BROEK	
DESIGN SPEC. AASHTO 1992		LOAD —	CONST. SPEC. 1989
DESIGNED BY D.J.K.	DESIGN CK'D. K.T.N.	DRAWN BY ZIRK	PLANS CK'D. FWG

APPROVED Robert L Riese 5/19/93
STATE BRIDGE ENGINEER — DATE

DECK REPLACEMENT

SHEET 1 OF 11

DATE: APRIL-93

BRB4439:39LAYOUT