

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 64F62		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 301 (US 20)  
SECTION 1-HBR-2F  
AT MERIDIAN ROAD  
STEEL GIRDER FABRICATION  
WINNEBAGO COUNTY  
C-92-006-10

PROJECT ACNHF-0301(061)

**INDEX OF SHEETS**

- 1 - COVER SHEET
- 2 - SUMMARY OF QUANTITIES
- 3 - 29 BRIDGE PLANS

**DESIGN DESIGNATION**  
MINOR ARTERIAL (URBAN)  
CLASS III TRUCK ROUTE

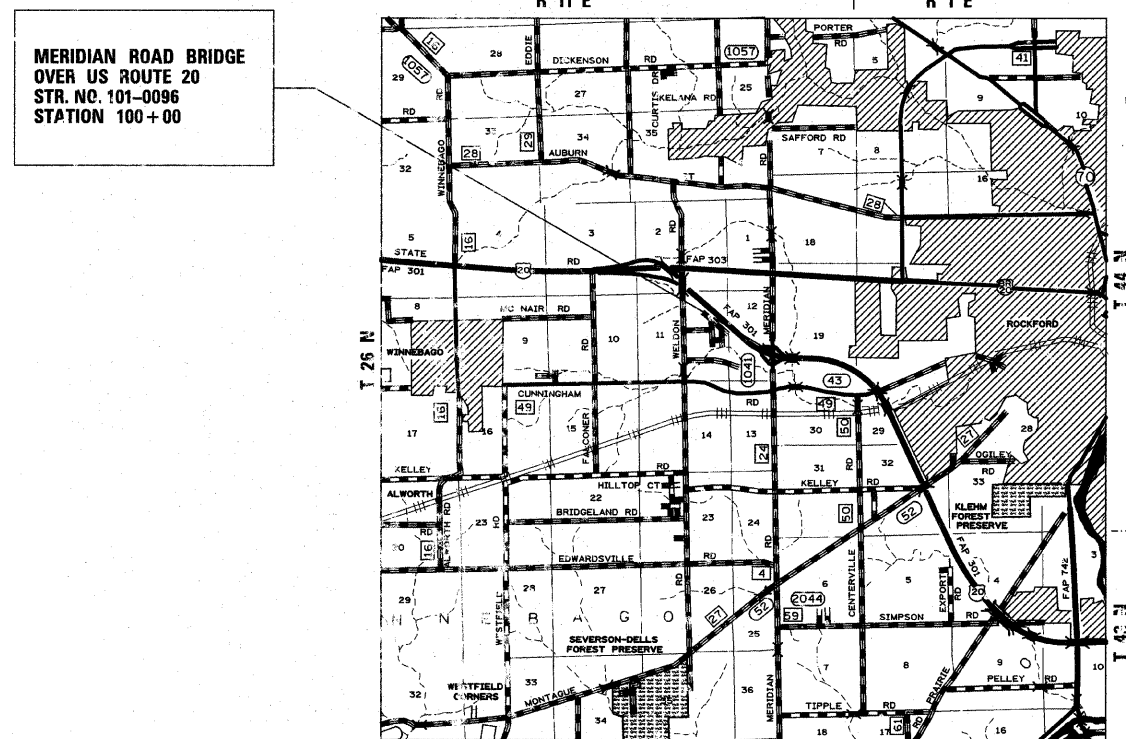
**TRAFFIC DATA:**  
MERIDIAN RD.  
2009 ADT = 9,800  
2029 ADT = 13,500  
POSTED SPEED LIMIT (45MPH)

US RTE. 20  
2009 ADT = 22,300  
2029 ADT = 33,200  
POSTED SPEED LIMIT (65MPH)

**PROJECT LOCATED IN:**  
CITY OF ROCKFORD  
WINNEBAGO TOWNSHIP (SECTION 12)  
ROCKFORD TOWNSHIP (SECTION 19)  
WINNEBAGO COUNTY

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

PROJECT ENGINEER: MASOOD AHMAD (815) 284-5510  
SENIOR SQUAD LEADER: SAM ABDULLAH (815) 284-5935  
CONTRACT NO. 64F62



SCALE: 1" = 1 MILE  
LOCATION MAP

D-92-001-10



LOCATION OF SECTION INDICATED THUS: - [Symbol]

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED August 6, 2009  
*George F. Ryan*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 2, 2009  
*Charles A. Ingersoll*  
ENGINEER OF DESIGN AND ENVIRONMENT

October 2, 2009  
*Christine M. Reed*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS  
DISTRICT 2

# SCHEDULE & SUMMARY OF QUANTITIES

X271-2A

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	80% FED 20% STATE
50500205	FURNISHING STRUCTURAL STEEL	L SUM	1	1
50500455	STORAGE OF STRUCTURAL STEEL	CAL DA	30	30
52100110	FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12	12
52100120	FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12	12
67100100	MOBILIZATION	L SUM	1	1

THESE PLANS ARE APPLICABLE TO THE GIRDER AND BEARING FABRICATION ONLY. SEE "TOTAL BILL OF MATERIAL" ON SHEET 4 OF 29. ALL OTHER DETAILS SHOWN ARE FOR INFORMATION ONLY.

FILE NAME = D:\SAP\HCH\Z09507CVR.dgn	USER NAME = polzinej	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MERIDIAN ROAD OVER US 20</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -			301	1-HBR-2F	WINNEBAGO	29	2
	PLOT DATE = Fri Jul 24 10:54:22 2009	CHECKED -	REVISED -		SCALE: 50	SHEET NO. OF SHEETS STA. TO STA.		CONTRACT NO. 64F62		
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

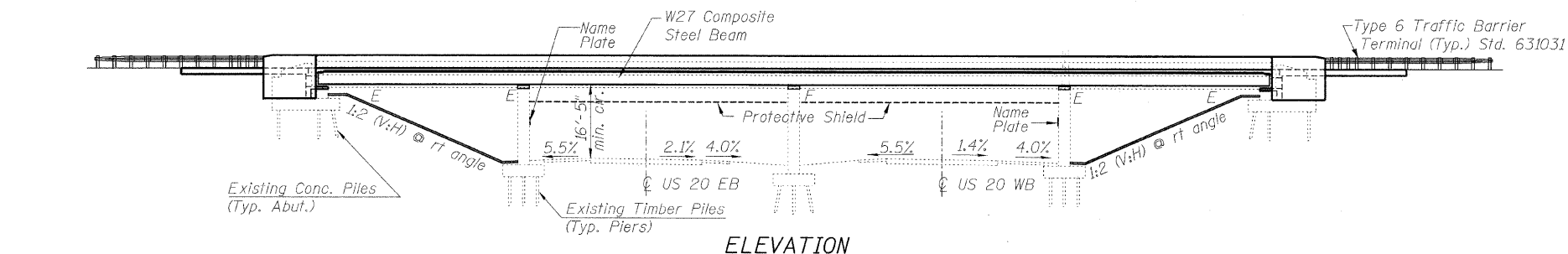
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1 27 SHEETS
301	1-HBR-2F	WINNEBAGO	29	3	
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62			

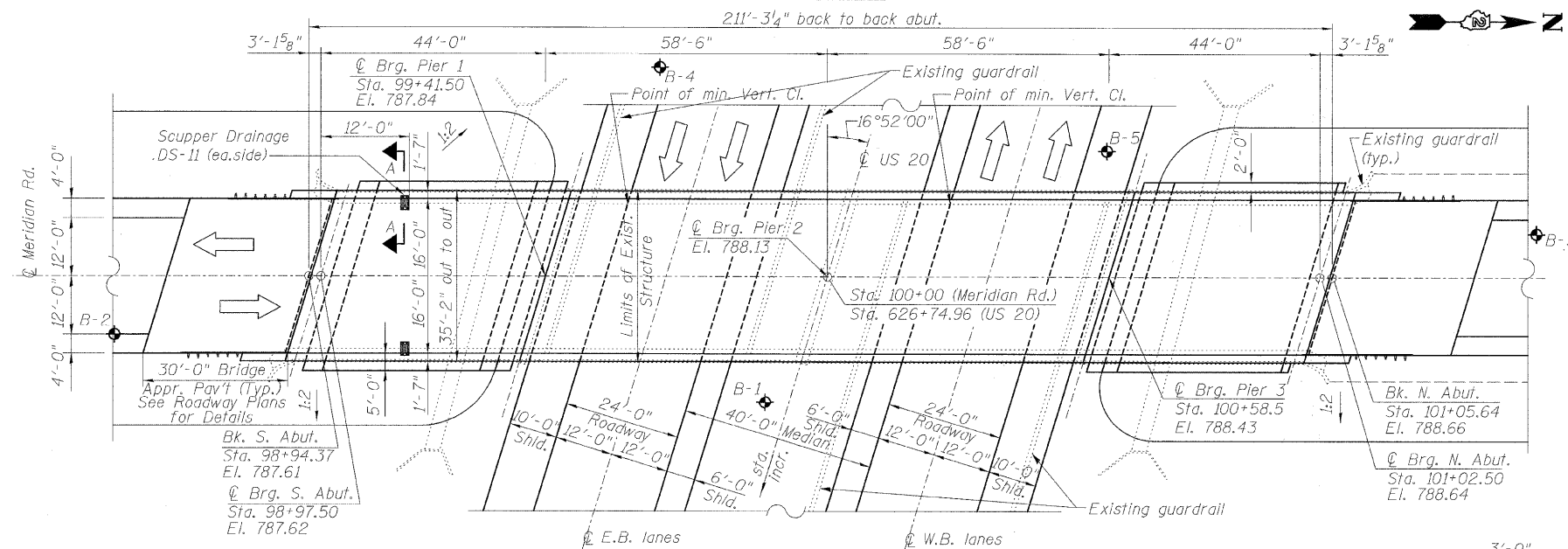
Bench Mark: #413 STA. 98+81.96, 21.53' RT EL. 787.14 Chiseled square in top of wingwall

Existing Structure: S.N. 101-0096 built 1964 as F.A. 194, Section 1HB-2. Structure consists of four span continuous WF beams and reinforced concrete deck supported by closed abutments and hammerhead piers. 209'-2" back-to-back abutments. 35'-8" out-to-out deck. Superstructure to be removed and replaced using bridge closure.

No Salvage.



ELEVATION



PLAN

STATION 626+74.96  
RE-BUILT 20... BY  
STATE OF ILLINOIS  
F.A.P. 301 - SEC. 1-HBR-2  
LOADING HL93  
STR. NO. 101-0096

NAME PLATE

See Std. 515001  
Place Name Plate next to existing Name Plates.

**DESIGN SPECIFICATIONS**  
2007 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS  
4th Edition with 2008 Interims for Super Structures  
1995 FHWA Seismic Retrofit Manual

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)  
 $f_y = 50,000$  psi (AASHTO M270 GRADE 50)

FIELD UNITS (EXISTING CONSTRUCTION)

$f_c = 1,000$  psi Substructure (with earth pressure)  
 $f_c = 1,400$  psi Substructure (without earth pressure)  
 $f_s = 20,000$  psi (reinforcement)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
Bedrock Acceleration Coefficient (A) = 0.04  
Site Coefficient (S) = 1.2

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

APPROVED

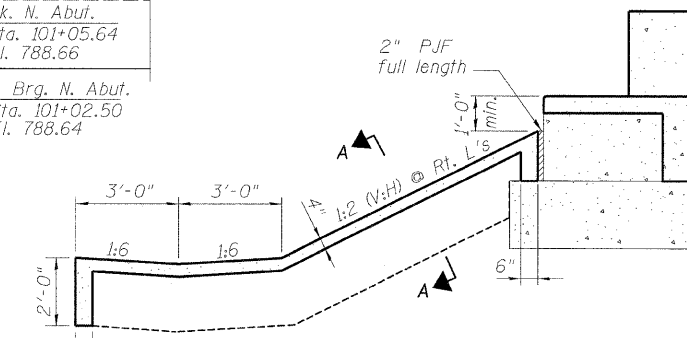
FOR STRUCTURAL ADEQUACY ONLY

*Ralph E. Anderson (TS)*  
ENGINEER OF BRIDGES AND STRUCTURES

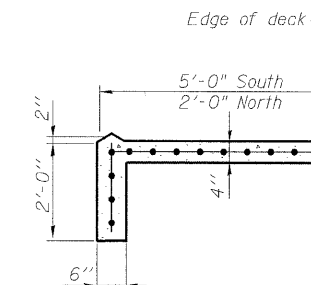


Licensed Structural Engineer  
(Illinois Structural Engineer's Seal)

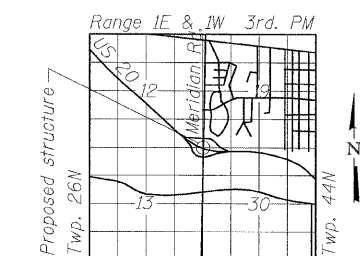
MY LICENSE EXPIRES 11/30/2010



SECTION THRU PILE SUPPORTED  
STUB ABUTMENT  
(Horiz. dim. @ Rt. L's)



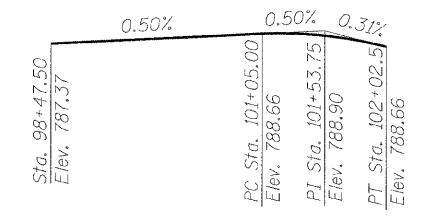
SECTION A-A



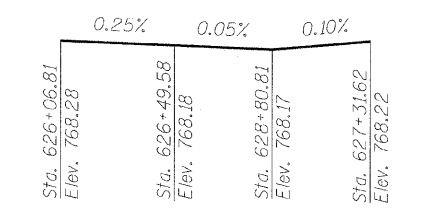
LOCATION SKETCH

◆ Indicates Soil Boring

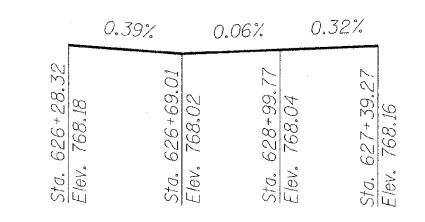
No.	Station	Offset
B-1	Sta. 99+87	26'R
B-2	Sta. 98+52	12'R
B-3	Sta. 101+50	9'L
B-4	Sta. 99+65	49'L
B-5	Sta. 100+58	26'L



PROFILE GRADE  
(along Meridian Rd.)  
LVC-97.50



US 20 WB PAVEMENT ELEV.  
US 20 Crown @ E



US 20 EB PAVEMENT ELEV.  
US 20 Crown @ E

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	4
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 2  
27 SHEETS

**GENERAL NOTES**

- Fasteners shall be AASHTO M164 Type I, Mechanically Galvanized Bolts. Bolts 7/8in. dia. open holes 15/16in. dia. unless otherwise noted.
- Calculated weight of Structural Steel  
= 150,730 lb. (AASHTO M 270 Grade 50)  
= 13,750 lb. (AASHTO M 270 Grade 36)
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new Structural Steel except where otherwise noted. The color of the final finish coat for all interior Steel surfaces shall be gray, Munsell No. 5b 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Colors for fascias: Blue, Munsell No. 10B 3/. See Special Provisions for "Cleaning and Painting New Metal Structures".
- Load carrying components designated "NTR" conform to the Supplemental Requirements for Notch Toughness, Zone 2.

**INDEX OF SHEETS**

- General Plan & Elevation
- General Notes, Index of Sheets & Bill of Material
- Top of Slab Elevations Layout & Details
- Top of Slab Elevations Details
- Top of Slab Elevations Details
- Top of South Approach Slab Elevations
- Top of North Approach Slab Elevations
- Deck Plan
- Deck Section and Details
- Steel Framing Plan
- Structural Steel Details
- Bearing Details (Piers)
- Bearing Details (Abutments)
- Abutment & Wingwall Concrete Removal
- North and South Abutment
- Abutment Details
- Pier Details
- Preformed Joint Strip Seal
- Cantilever Forming Brackets for Superstructure with W27 Beams and Smaller
- Drainage Scupper, DS-II
- Bar Splicer Assembly Details
- Concrete Parapet Slipforming Option
- Soil Borings
- Soil Borings
- Soil Borings
- Soil Borings
- Soil Borings

\*For information only.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL QUANTITY
FURNISHING STRUCTURAL STEEL	L SUM	1
STORAGE OF STRUCTURAL STEEL	CAL DA	30
FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12
FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12
MOBILIZATION	L SUM	1

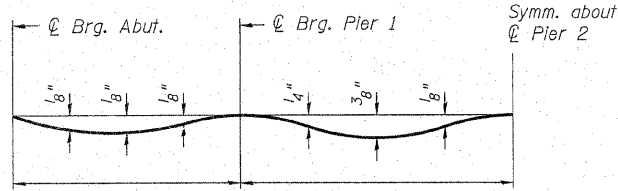
DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

GENERAL NOTES, INDEX OF SHEETS  
AND BILL OF MATERIAL  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.	SHEET NO. 3
301	1-HBR-2F	WINNEBAGO	29	5
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

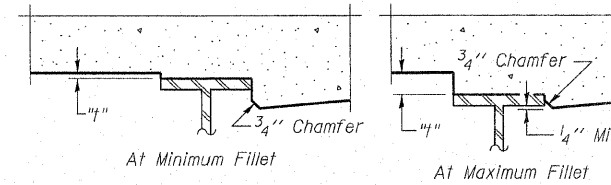
27 SHEETS



**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted For Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**FILLET HEIGHTS**

**BEAM 1**

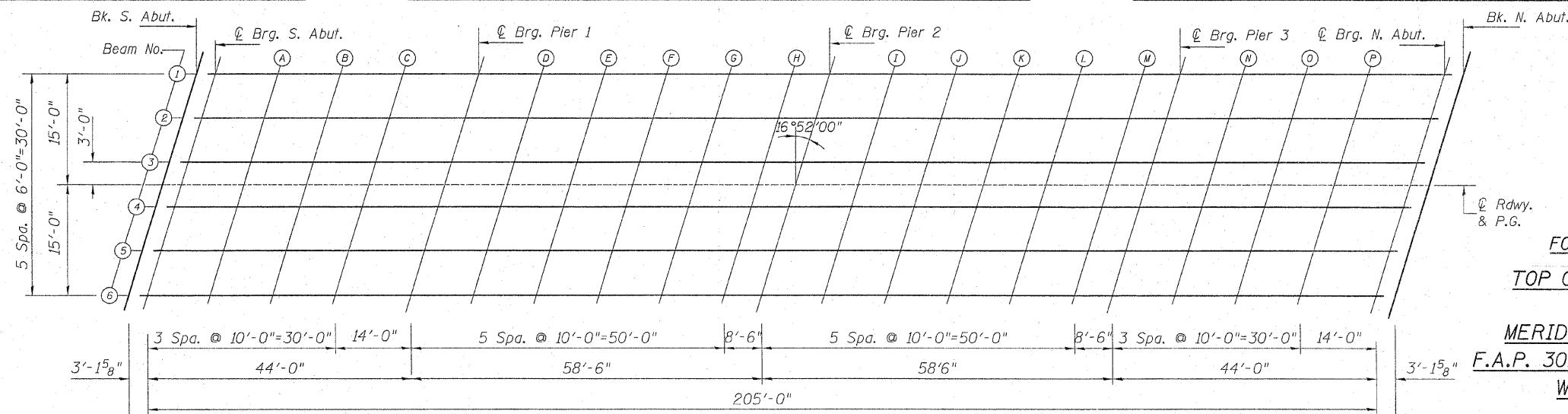
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	98+98.91	-15.00	787.38	787.38
⊕ Brg. S. Abut.	99+02.05	-15.00	787.39	787.39
A	99+12.05	-15.00	787.44	787.45
B	99+22.05	-15.00	787.49	787.51
C	99+32.05	-15.00	787.54	787.55
⊕ Brg. Pier 1	99+46.05	-15.00	787.61	787.61
D	99+56.05	-15.00	787.66	787.67
E	99+66.05	-15.00	787.71	787.74
F	99+76.05	-15.00	787.76	787.79
G	99+86.05	-15.00	787.81	787.83
H	99+96.05	-15.00	787.86	787.87
⊕ Brg. Pier 2	100+04.55	-15.00	787.91	787.91
I	100+14.55	-15.00	787.96	787.96
J	100+24.55	-15.00	788.01	788.03
K	100+34.55	-15.00	788.06	788.08
L	100+44.55	-15.00	788.10	788.12
M	100+54.55	-15.00	788.15	788.16
⊕ Brg. Pier 3	100+63.05	-15.00	788.20	788.20
N	100+73.05	-15.00	788.25	788.25
O	100+83.05	-15.00	788.30	788.31
P	100+93.05	-15.00	788.35	788.36
⊕ Brg. N. Abut.	101+07.05	-15.00	788.42	788.42
Bk. N. Abut.	101+10.18	-15.00	788.43	788.43

**BEAM 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	98+97.09	-9.00	787.48	787.48
⊕ Brg. S. Abut.	99+00.23	-9.00	787.49	787.49
A	99+10.23	-9.00	787.54	787.56
B	99+20.23	-9.00	787.59	787.61
C	99+30.23	-9.00	787.64	787.65
⊕ Brg. Pier 1	99+44.23	-9.00	787.71	787.71
D	99+54.23	-9.00	787.76	787.77
E	99+64.23	-9.00	787.81	787.84
F	99+74.23	-9.00	787.86	787.89
G	99+84.23	-9.00	787.91	787.93
H	99+94.23	-9.00	787.96	787.97
⊕ Brg. Pier 2	100+02.73	-9.00	788.01	788.01
I	100+12.73	-9.00	788.06	788.06
J	100+22.73	-9.00	788.11	788.13
K	100+32.73	-9.00	788.16	788.18
L	100+42.73	-9.00	788.20	788.22
M	100+52.73	-9.00	788.25	788.26
⊕ Brg. Pier 3	100+61.23	-9.00	788.30	788.30
N	100+71.23	-9.00	788.35	788.35
O	100+81.23	-9.00	788.40	788.41
P	100+91.23	-9.00	788.45	788.46
⊕ Brg. N. Abut.	101+05.23	-9.00	788.52	788.52
Bk. N. Abut.	101+08.36	-9.00	788.53	788.53

**BEAM 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	98+95.27	-3.00	787.56	787.56
⊕ Brg. S. Abut.	98+98.41	-3.00	787.58	787.58
A	99+08.41	-3.00	787.63	787.64
B	99+18.41	-3.00	787.68	787.69
C	99+28.41	-3.00	787.73	787.74
⊕ Brg. Pier 1	99+42.41	-3.00	787.80	787.80
D	99+52.41	-3.00	787.85	787.86
E	99+62.41	-3.00	787.90	787.92
F	99+72.41	-3.00	787.95	787.98
G	99+82.41	-3.00	788.00	788.02
H	99+92.41	-3.00	788.05	788.06
⊕ Brg. Pier 2	100+00.91	-3.00	788.09	788.09
I	100+10.91	-3.00	788.14	788.15
J	100+20.91	-3.00	788.19	788.21
K	100+30.91	-3.00	788.24	788.27
L	100+40.91	-3.00	788.29	788.31
M	100+50.91	-3.00	788.34	788.35
⊕ Brg. Pier 3	100+59.41	-3.00	788.38	788.38
N	100+69.41	-3.00	788.43	788.44
O	100+79.41	-3.00	788.48	788.49
P	100+89.41	-3.00	788.53	788.55
⊕ Brg. N. Abut.	101+03.41	-3.00	788.60	788.60
Bk. N. Abut.	101+06.55	-3.00	788.62	788.62



**PLAN**

DESIGNED	GUN / DAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

FOR INFORMATION ONLY  
TOP OF SLAB ELEVATIONS  
AND LAYOUT  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

**HOH** HARRY O. HETTER-ASSOCIATES, INC.  
DESIGN AND CONSULTING ENGINEERS  
95 East Jackson Blvd. Suite 400  
Chicago, IL 60604  
312-266-8131  
PROJECT NUMBER 2945

12/07/02 PM 7/22/2009 I:\projects\2945\Structural\Meridian Road\Draws from SD\DCN Files\Final\Draws 1-2009\1010096-64D50-003-DECKELEV1.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	6
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 4  
27 SHEETS

☉ ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	98+94.37	0.00	787.61	787.61
☉ Brg. S. Abut.	98+97.50	0.00	787.62	787.62
A	99+07.50	0.00	787.67	787.68
B	99+17.50	0.00	787.72	787.74
C	99+27.50	0.00	787.77	787.78
☉ Brg. Pier 1	99+41.50	0.00	787.84	787.84
D	99+51.50	0.00	787.89	787.90
E	99+61.50	0.00	787.94	787.96
F	99+71.50	0.00	787.99	788.02
G	99+81.50	0.00	788.04	788.06
H	99+91.50	0.00	788.09	788.10
☉ Brg. Pier 2	100+00.00	0.00	788.13	788.13
I	100+10.00	0.00	788.18	788.19
J	100+20.00	0.00	788.23	788.26
K	100+30.00	0.00	788.28	788.31
L	100+40.00	0.00	788.33	788.35
M	100+50.00	0.00	788.38	788.39
☉ Brg. Pier 3	100+58.50	0.00	788.42	788.42
N	100+68.50	0.00	788.47	788.48
O	100+78.50	0.00	788.52	788.54
P	100+88.50	0.00	788.57	788.59
☉ Brg. N. Abut.	101+02.50	0.00	788.64	788.64
Bk. N. Abut.	101+05.64	0.00	788.66	788.66

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	98+93.46	3.00	787.55	787.55
☉ Brg. S. Abut.	98+96.59	3.00	787.57	787.57
A	99+06.59	3.00	787.62	787.63
B	99+16.59	3.00	787.67	787.68
C	99+26.59	3.00	787.72	787.73
☉ Brg. Pier 1	99+40.59	3.00	787.79	787.79
D	99+50.59	3.00	787.84	787.85
E	99+60.59	3.00	787.89	787.91
F	99+70.59	3.00	787.94	787.97
G	99+80.59	3.00	787.99	788.01
H	99+90.59	3.00	788.04	788.05
☉ Brg. Pier 2	99+99.09	3.00	788.08	788.08
I	100+09.09	3.00	788.13	788.14
J	100+19.09	3.00	788.18	788.20
K	100+29.09	3.00	788.23	788.26
L	100+39.09	3.00	788.28	788.30
M	100+49.09	3.00	788.33	788.34
☉ Brg. Pier 3	100+57.59	3.00	788.37	788.37
N	100+67.59	3.00	788.42	788.43
O	100+77.59	3.00	788.47	788.49
P	100+87.59	3.00	788.52	788.54
☉ Brg. N. Abut.	101+01.59	3.00	788.59	788.59
Bk. N. Abut.	101+04.73	3.00	788.61	788.61

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	98+91.64	9.00	787.45	787.45
☉ Brg. S. Abut.	98+94.77	9.00	787.47	787.47
A	99+04.77	9.00	787.52	787.53
B	99+14.77	9.00	787.57	787.58
C	99+24.77	9.00	787.62	787.63
☉ Brg. Pier 1	99+38.77	9.00	787.69	787.69
D	99+48.77	9.00	787.74	787.75
E	99+58.77	9.00	787.79	787.81
F	99+68.77	9.00	787.84	787.86
G	99+78.77	9.00	787.89	787.91
H	99+88.77	9.00	787.94	787.94
☉ Brg. Pier 2	99+97.27	9.00	787.98	787.98
I	100+07.27	9.00	788.03	788.04
J	100+17.27	9.00	788.08	788.10
K	100+27.27	9.00	788.13	788.16
L	100+37.27	9.00	788.18	788.20
M	100+47.27	9.00	788.23	788.23
☉ Brg. Pier 3	100+55.77	9.00	788.27	788.27
N	100+65.77	9.00	788.32	788.32
O	100+75.77	9.00	788.37	788.38
P	100+85.77	9.00	788.42	788.43
☉ Brg. N. Abut.	100+99.77	9.00	788.49	788.49
Bk. N. Abut.	101+02.91	9.00	788.51	788.51

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

FOR INFORMATION ONLY  
TOP OF SLAB ELEVATIONS  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2 F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	7
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 5  
27 SHEETS

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	98+89.82	15.00	787.33	787.33
⊕ Brg. S. Abut.	98+92.95	15.00	787.35	787.35
A	99+02.95	15.00	787.40	787.41
B	99+12.95	15.00	787.45	787.46
C	99+22.95	15.00	787.50	787.51
⊕ Brg. Pier 1	99+36.95	15.00	787.57	787.57
D	99+46.95	15.00	787.62	787.63
E	99+56.95	15.00	787.67	787.69
F	99+66.95	15.00	787.72	787.74
G	99+76.95	15.00	787.77	787.79
H	99+86.95	15.00	787.82	787.82
⊕ Brg. Pier 2	99+95.45	15.00	787.86	787.86
I	100+05.45	15.00	787.91	787.92
J	100+15.45	15.00	787.96	787.98
K	100+25.45	15.00	788.01	788.04
L	100+35.45	15.00	788.06	788.08
M	100+45.45	15.00	788.11	788.12
⊕ Brg. Pier 3	100+53.95	15.00	788.15	788.15
N	100+63.95	15.00	788.20	788.21
O	100+73.95	15.00	788.25	788.26
P	100+83.95	15.00	788.30	788.31
⊕ Brg. N. Abut.	100+97.95	15.00	788.37	788.37
Bk. N. Abut.	101+01.09	15.00	788.39	788.39

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

FOR INFORMATION ONLY  
TOP OF SLAB ELEVATIONS  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	8
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 6  
27 SHEETS

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End S. Appr. Pav't.	98+69.87	-16.42	787.20
A	98+79.87	-16.42	787.25
B	98+89.87	-16.42	787.30
Bk. S. Abut.	98+99.87	-16.42	787.35

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End S. Appr. Pav't.	98+68.53	-12.00	787.29
A	98+78.53	-12.00	787.34
B	98+88.53	-12.00	787.39
Bk. S. Abut.	98+98.53	-12.00	787.44

☉ ROADWAY & PG

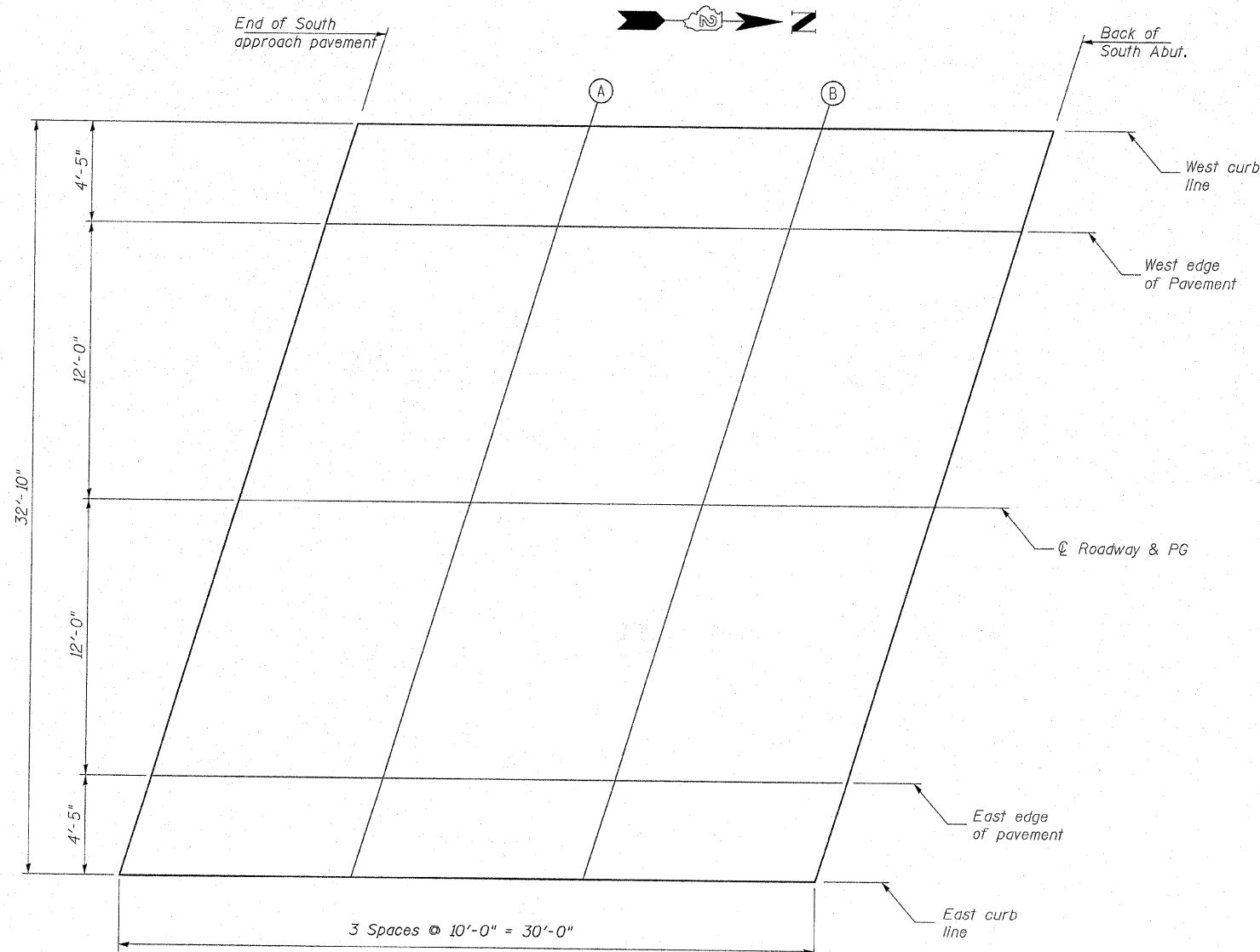
Location	Station	Offset	Theoretical Grade Elevations
End S. Appr. Pav't.	98+64.89	0.00	787.46
A	98+74.89	0.00	787.51
B	98+84.89	0.00	787.56
Bk. S. Abut.	98+94.89	0.00	787.61

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End S. Appr. Pav't.	98+61.25	12.00	787.25
A	98+71.25	12.00	787.30
B	98+81.25	12.00	787.35
Bk. S. Abut.	98+91.25	12.00	787.40

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End S. Appr. Pav't.	98+59.91	16.42	787.15
A	98+69.91	16.42	787.20
B	98+79.91	16.42	787.25
Bk. S. Abut.	98+89.91	16.42	787.30



PLAN

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

FOR INFORMATION ONLY

TOP OF SOUTH  
APPROACH SLAB ELEVATIONS  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 27 SHEETS
301	1-HBR-2F	WINNEBAGO	29	9	
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT NO. 64F62		

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. N. Abut.	101+10.09	-16.42	788.40
A	101+20.09	-16.42	788.44
B	101+30.09	-16.42	788.48
End N. Appr. Pav't.	101+40.09	-16.42	788.50

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. N. Abut.	101+08.75	-12.00	788.49
A	101+18.75	-12.00	788.53
B	101+28.75	-12.00	788.56
End N. Appr. Pav't.	101+38.75	-12.00	788.59

Ⓞ ROADWAY & PG

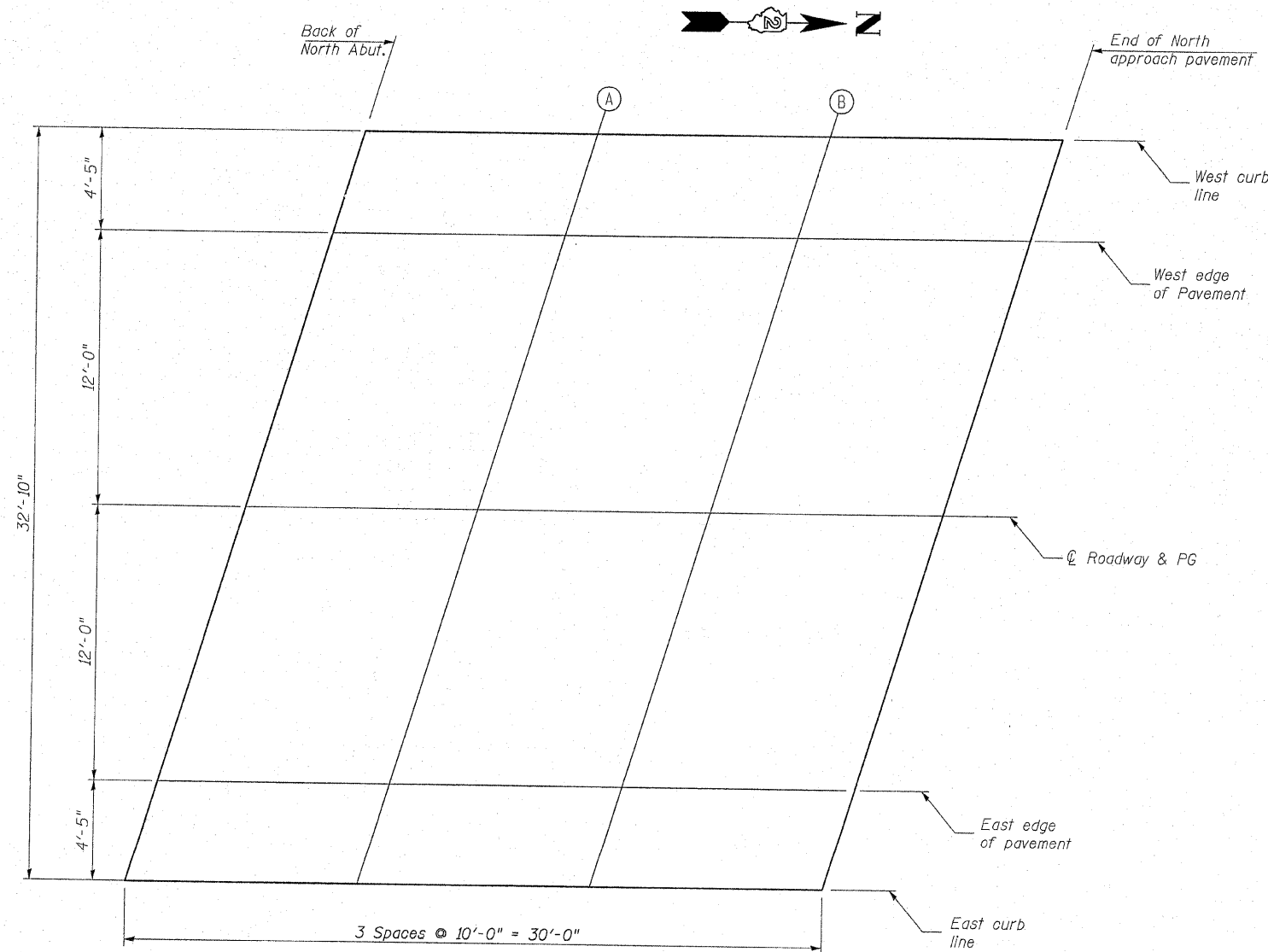
Location	Station	Offset	Theoretical Grade Elevations
Bk. N. Abut.	101+05.11	0.00	788.66
A	101+15.11	0.00	788.70
B	101+25.11	0.00	788.74
End N. Appr. Pav't.	101+35.11	0.00	788.77

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. N. Abut.	101+01.47	12.00	788.45
A	101+11.47	12.00	788.50
B	101+21.47	12.00	788.54
End N. Appr. Pav't.	101+31.47	12.00	788.57

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. N. Abut.	101+00.14	16.42	788.35
A	101+10.14	16.42	788.40
B	101+20.14	16.42	788.44
End N. Appr. Pav't.	101+30.14	16.42	788.48



PLAN

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

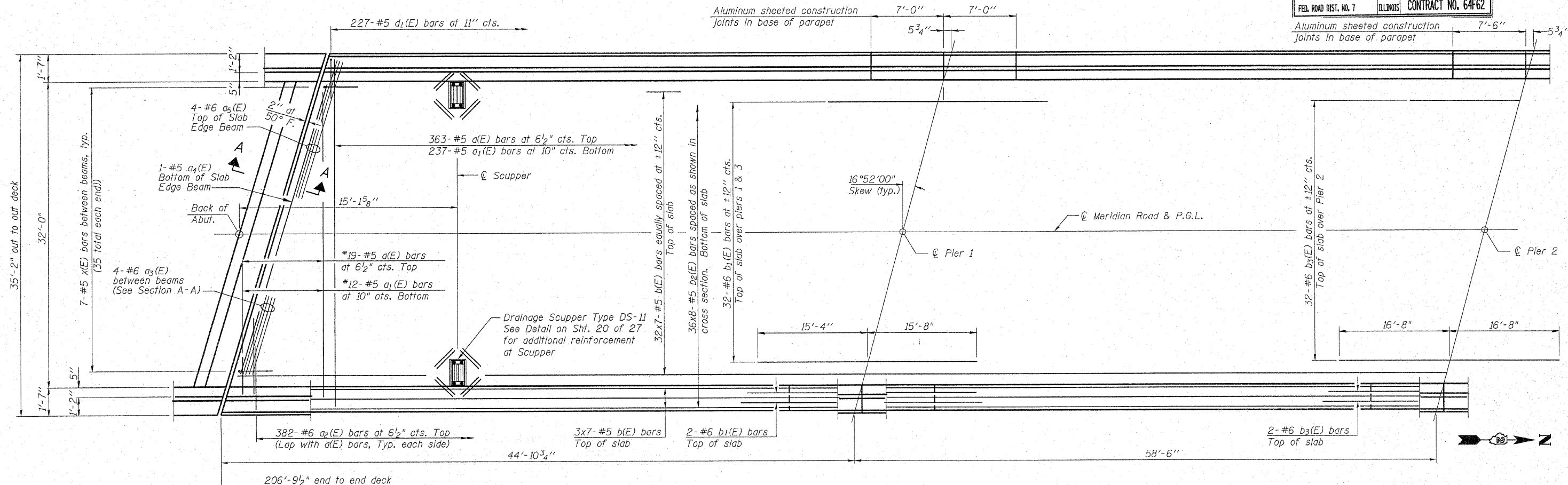
FOR INFORMATION ONLY  
TOP OF NORTH  
APPROACH SLAB ELEVATIONS  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

12/07/05 PM 7/22/2009 I:\proj\roads\2945\Structural\Meridian\_Road\Draws from SDN\Drawn Files\Final Drawings\2009\10\0096\64D50-007-1\Approach.dgn

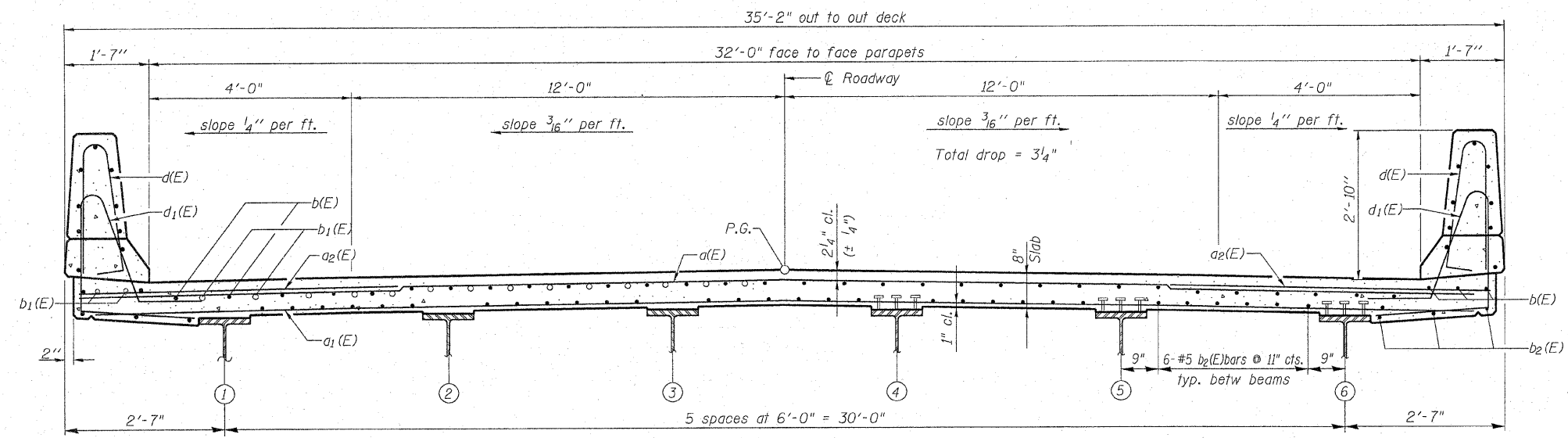
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 27 SHEETS
301	1-HBR-2F	WINNEBAGO	29	10	
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62			

\* Order a(E) & a<sub>1</sub>(E) bars full length.  
Cut to fit skew and use remainder  
of bars in opposite end.



**PARTIAL PLAN**  
(Symmetrical about Pier 2)



**CROSS SECTION**  
(Looking North)

**MINIMUM BAR LAP**  
#5 bar = 2'-2"

Notes:  
See Sheet 9 of 27 for superstructure details  
and Bill of Material.  
Bars indicated thus 36 x 8-#5 etc. indicates  
36 lines of bars with 8 lengths per line.  
See Sheet 9 of 27 for parapet reinforcement.

FOR INFORMATION ONLY  
**DECK PLAN**  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

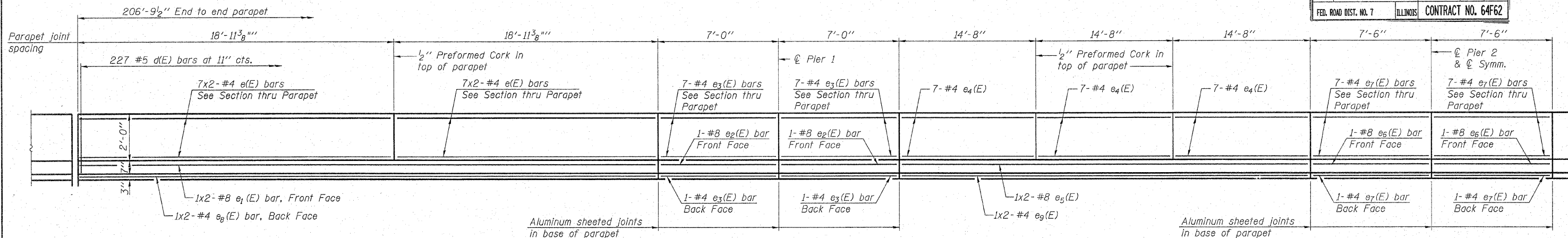
**HOH** HARRY O. HEFFER ASSOCIATES, INC.  
DESIGN AND CONSULTING ENGINEERS  
55 East Jackson Blvd.  
Suite 400  
Chicago, IL 60604  
312-516-5111

PROJECT NUMBER  
**2945**

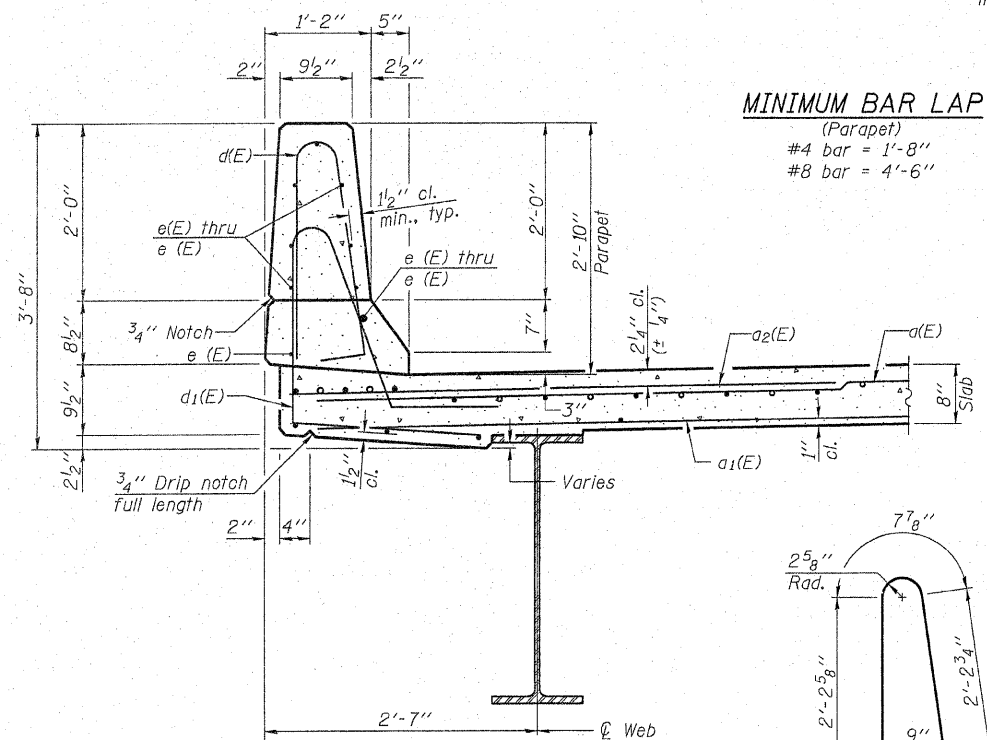
12:07:06 PM 7/22/2009 I:\projects\2945\DWGS\Structural\Meridian\_Road\Draws From SDND66 Files\Final Dwg 1-2009\1010096-64D50-008-DECKPLAN.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9 27 SHEETS
301	1-HBR-2F	WINNEBAGO	29	11	
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62			

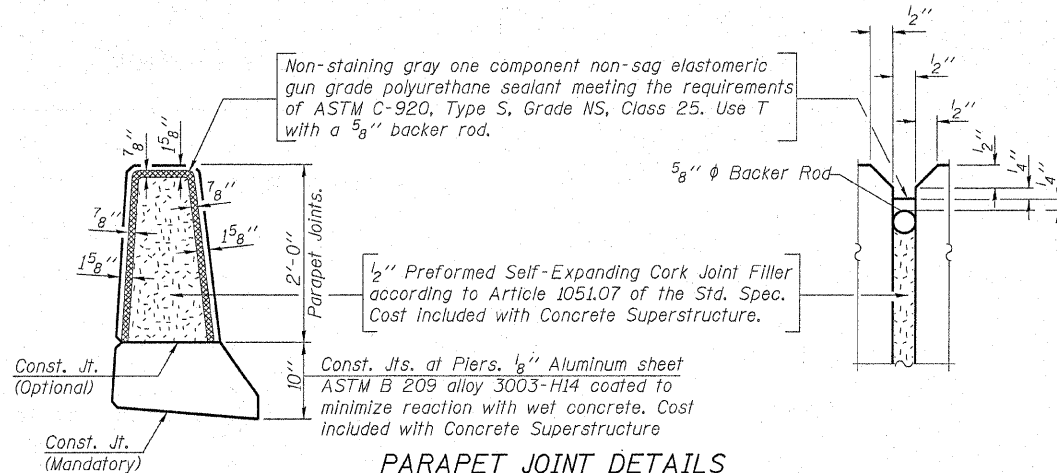


**INSIDE ELEVATION OF PARAPET**  
(SYMMETRICAL @ PIER 2)



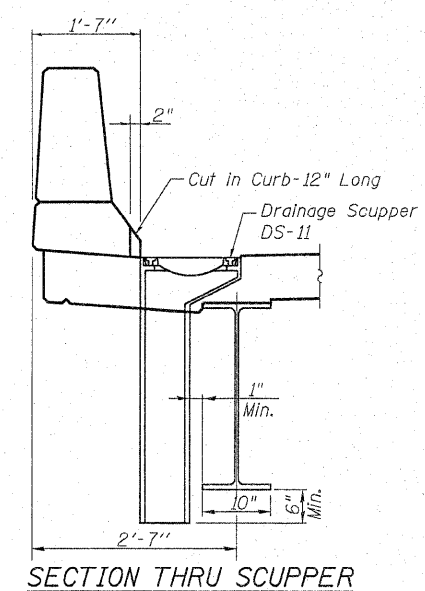
**SECTION THRU PARAPET**

**MINIMUM BAR LAP**  
(Parapet)  
#4 bar = 1'-8\"/>



**PARAPET JOINT DETAILS**

**Notes:**  
Drains shall be located clear of all diaphragms.  
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coatings Spec. SSPC-SP1 prior to painting.  
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.



**SECTION THRU SCUPPER**

**SUPERSTRUCTURE  
BILL OF MATERIAL**

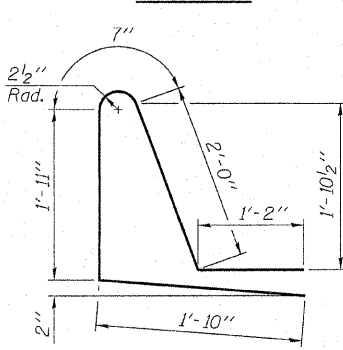
Bar	No.	Size	Length	Shape	
a(E)	382	#5	34'-7"	—	
a1(E)	249	#5	34'-0"	—	
a2(E)	764	#6	6'-0"	—	
a3(E)	40	#6	7'-3"	—	
a4(E)	2	#5	26'-2"	—	
a5(E)	8	#6	36'-0"	—	
a6(E)	16	#5	1'-6"	—	
b(E)	266	#5	31'-5"	—	
b1(E)	72	#6	31'-0"	—	
b2(E)	288	#5	27'-9"	—	
b3(E)	36	#6	33'-4"	—	
d(E)	454	#5	5'-7"	—	
d1(E)	454	#5	7'-6"	—	
e(E)	112	#4	10'-2"	—	
e1(E)	8	#8	21'-1"	—	
e2(E)	8	#8	6'-8"	—	
e3(E)	64	#4	6'-8"	—	
e4(E)	84	#4	14'-4"	—	
e5(E)	8	#8	24'-1"	—	
e6(E)	4	#8	7'-2"	—	
e7(E)	32	#4	7'-2"	—	
e8(E)	8	#4	19'-8"	—	
e9(E)	8	#4	22'-8"	—	
x(E)	70	#5	6'-5"	—	
Reinforcement Bars, Epoxy Coated				Pound	62,750
Concrete Superstructure				Cu. Yds.	246

Bars indicated thus 1x2-#8 etc. indicates 1 line of bars with 2 lengths per line.

**FOR INFORMATION ONLY**  
**DECK SECTION & DETAILS**  
**MERIDIAN ROAD OVER US 20**  
**F.A.P. 301 (US 20) - SEC. 1-HBR-2F**  
**WINNEBAGO COUNTY**  
**STATION 100+00**  
**STRUCTURE NO. 101-0096**

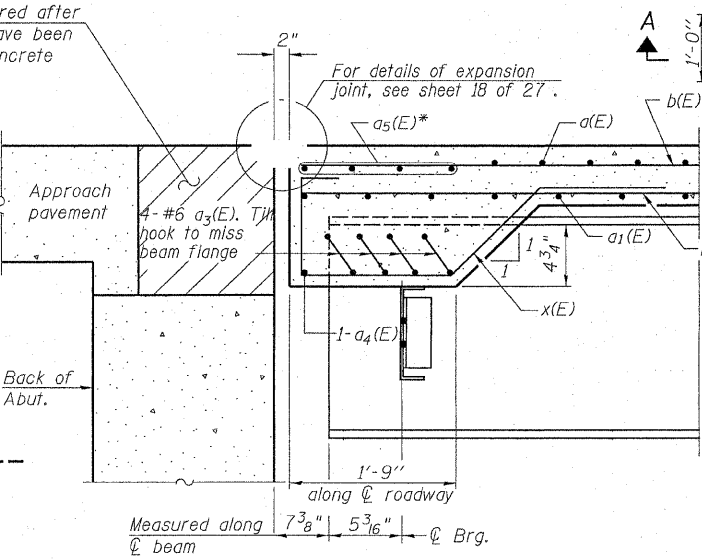
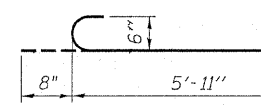
DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

**BAR d(E)**

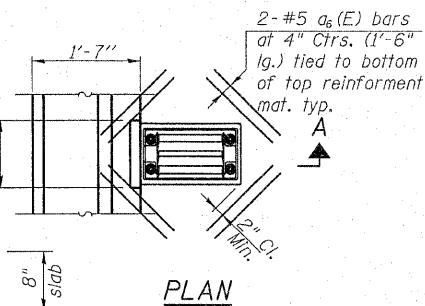


**BAR d1(E)**

**a3(E) BAR**



**SECTION A-A**  
(Between Beams Only)



**PLAN**

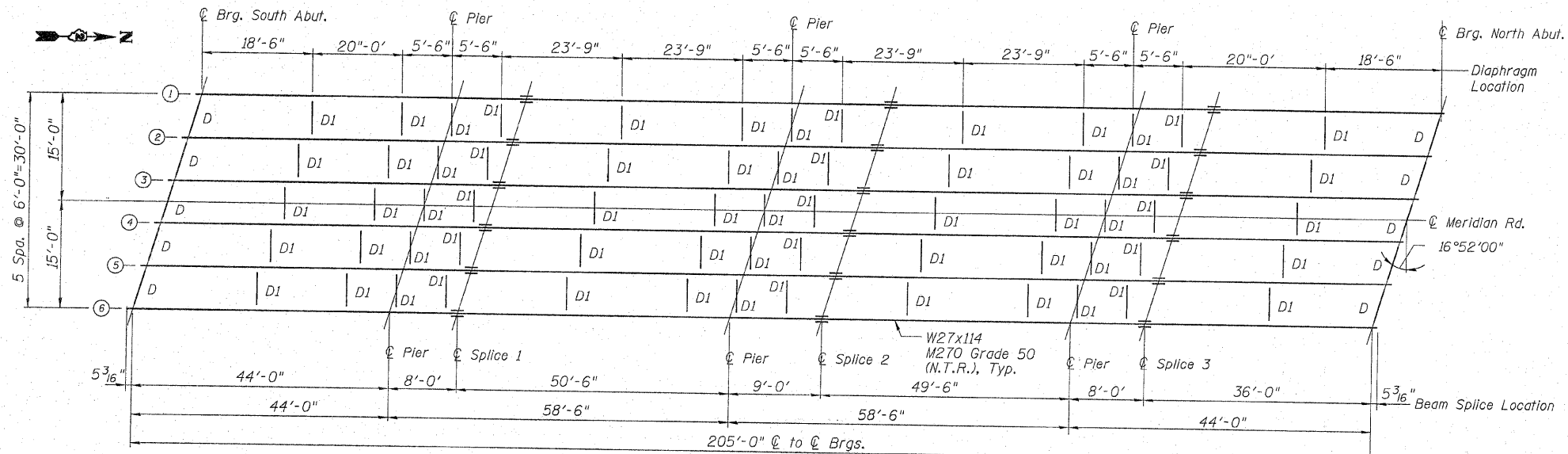
\* 4-a5 (E) bars at 4" spa. Place under longitudinal bars

**HOH** HARRY O. HEFFER ASSOCIATES, INC.  
55 East Jackson Blvd. Suite 400 Chicago, IL 60604 312-246-9131  
PROJECT NUMBER **2945**

12:07:07 PM 7/22/2009 I:\proj\jeais\2945\DNS\Structural\Meridian Road\Draws From SD\ND\011 Files\Final Drawings\2009\10100096-64D50-009-DECKSECTION&DETAILS.dgn

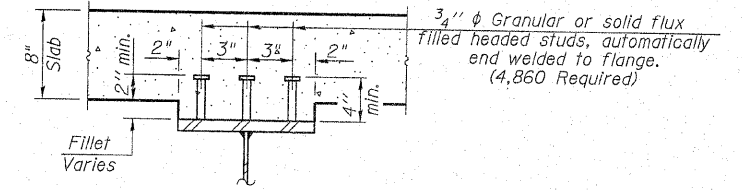
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 27 SHEETS
301	1-HBR-2F	WINNEBAGO	29	12	
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62			

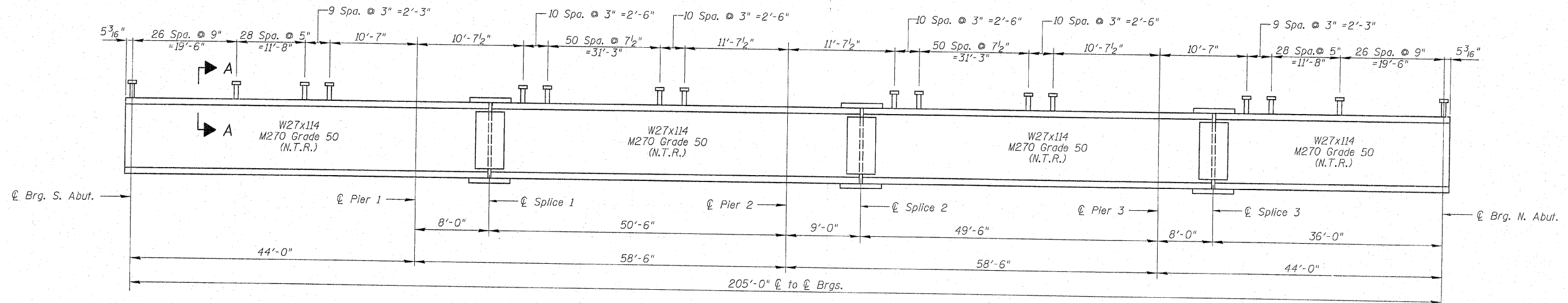


PLAN

See Sheet 11 of 27 for diaphragms D & D1



SECTION A-A



BEAM ELEVATION

NOTE:  
Load carrying components designated "N.T.R." shall conform to the supplemental requirements for Notch Toughness, Zone 2.

TOP BEAM ELEVATIONS (FOR FABRICATION ONLY)						
Location	Beam Numbers					
	1	2	3	4	5	6
CL BRG. S. ABUT.	786.612	786.712	786.802	786.792	786.692	786.572
CL PIER 1	786.833	786.933	787.021	787.011	786.911	786.791
CL SPLICE 1	786.873	786.973	787.060	787.050	786.950	786.830
CL PIER 2	787.127	787.227	787.312	787.302	787.202	787.082
CL SPLICE 2	787.172	787.272	787.356	787.346	787.246	787.126
CL PIER 3	787.421	787.521	787.603	787.593	787.493	787.373
CL SPLICE 3	787.461	787.561	787.648	787.633	787.533	787.413
CL BRG. N. ABUT.	787.642	787.742	787.822	787.812	787.712	787.592

NOTE:  
Stud Shear connectors are not included in this contract.

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

STEEL FRAMING PLAN  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

**HOH** HARRY D. HEFTER ASSOCIATES, INC.  
DESIGN AND CONSULTING ENGINEERS  
64 East Jackson Blvd.  
Suite 500  
Chicago, IL 60604  
312-346-4101  
PROJECT NUMBER 2945

12:07:08 PM 7/22/2009  
A:\projects\2945\Drawings\Structural\Meridian\_Road\Draws From SD\Drawn Files\Final Dwg I-2009\1010096-64F62-010-STEELFRAME.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	L-HBR-2F	WINNEBAGO	29	13
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 11  
27 SHEETS

	0.4 Sp. 1 or 0.6 Sp. 4	Piers 1 & 3	0.5 Sp. 2 or 0.5 Sp. 3	Pier 2
$I_s$	(in <sup>4</sup> )	4,090	4,090	4,090
$I_c(n)$	(in <sup>4</sup> )	11,981	-	11,981
$I_c(3n)$	(in <sup>4</sup> )	8,666	-	8,666
$S_s$	(in <sup>3</sup> )	299	299	299
$S_c(n)$	(in <sup>3</sup> )	462	-	462
$S_c(3n)$	(in <sup>3</sup> )	414	-	414
Z	(in <sup>3</sup> )	-	-	-
DC1	(k/')	0.773	0.773	0.773
M <sub>DC1</sub>	(k)	99	202	117
DC2	(k/')	0.15	0.15	0.15
M <sub>DC2</sub>	(k)	19.2	39.1	22.6
DW	(k/')	0.267	0.267	0.267
M <sub>DW</sub>	(k)	34.1	69.6	40.2
M <sub>ℓ + IM</sub>	(k)	413	369	451
M <sub>u</sub> (Strength I)	(k)	921	1,051	1,023
$\phi_r M_n$ , $\phi_r M_{nc}$	(k)	4,022	1,232	4,022
$f_s$ DC1	(ksi)	3.97	8.11	4.7
$f_s$ DC2	(ksi)	0.56	1.57	0.66
$f_s$ DW	(ksi)	0.99	2.79	1.17
$f_s$ 1.3(ℓ+IM)	(ksi)	13.95	19.25	15.23
$f_s$ (Service II)	(ksi)	19.47	31.72	21.76
$f_s$ (Total)(Strength I)	(ksi)	-	-	-
V <sub>r</sub>	(k)	13.9	-	13.3

\* Compact sections  
\*\* Non-Compact and slender sections

	N & S Abut.	Piers 1 & 3	Pier 2	
R <sub>DC1</sub>	(k)	12.4	43.8	46.0
R <sub>DC2</sub>	(k)	2.38	8.46	8.93
R <sub>DW</sub>	(k)	4.22	15.04	15.87
R <sub>ℓ + IM</sub>	(k)	57.9	111.5	111.5
R <sub>Total</sub>	(k)	76.9	178.8	182.3

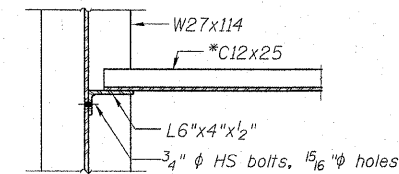
$I_s$ ,  $S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(n)$ ,  $S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).

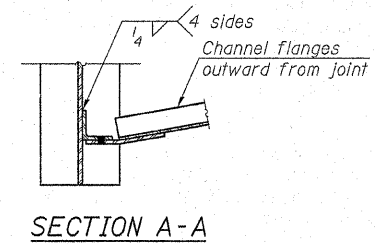
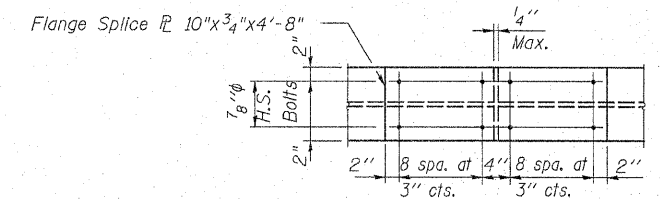
$I_c(3n)$ ,  $S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).

Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations (in<sup>3</sup>).

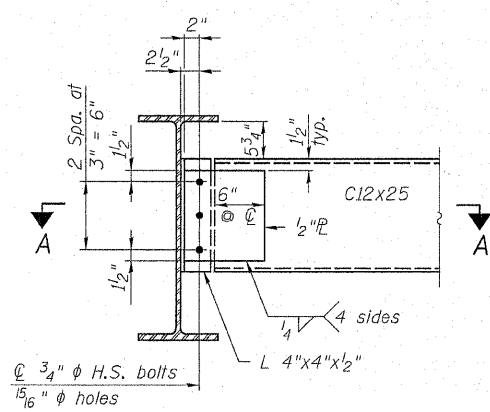
DC1: Un-factored non-composite dead load (kips/ft.).  
M<sub>DC1</sub>: Un-factored moment due to non-composite dead load (kip-ft.).  
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).  
M<sub>DC2</sub>: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).  
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).  
M<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).  
M<sub>ℓ + IM</sub>: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).  
M<sub>u</sub> (Strength I): Factored design moment (kip-ft.).  
1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75 M<sub>ℓ + IM</sub>  
 $\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).  
 $\phi_r M_{nc}$ : Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).  
 $f_s$  (Service II): Sum of stresses as computed from the moments below (ksi).  
M<sub>DC1</sub> + M<sub>DC2</sub> + M<sub>DW</sub> + 1.5 M<sub>ℓ + IM</sub>  
 $f_s$  (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).  
1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75 M<sub>ℓ + IM</sub>  
V<sub>r</sub>: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



SECTION A-A

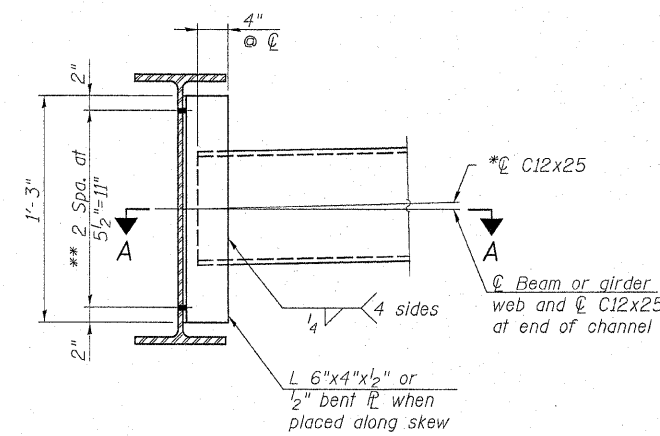


SECTION A-A



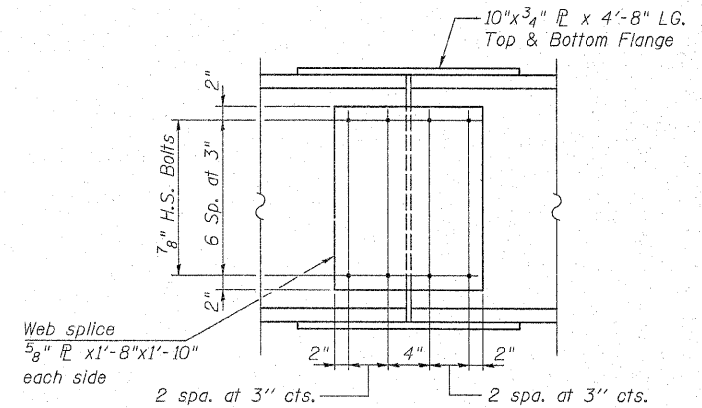
END DIAPHRAGM (D)

Note:  
Two hardened washers required for each set of oversized holes.



INTERIOR DIAPHRAGM (D1)

Note:  
Two hardened washers required for each set of oversized holes.  
\* C12x30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.  
\*\* 3/4" diameter HS bolts, 15/16" diameter holes



SPlice DETAIL  
M270 Grade 50 (N.T.R.)  
(18 Required)

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

STRUCTURAL STEEL DETAILS  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

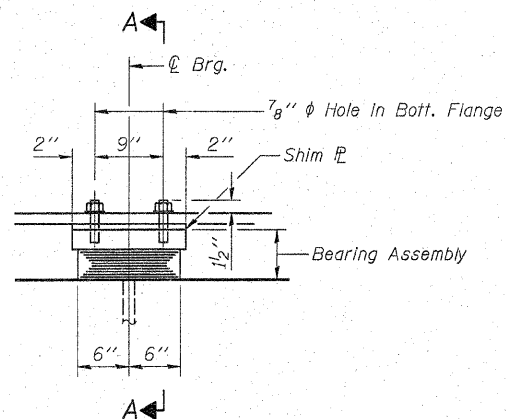
12.07.09 PM 7/22/2009 H:\projects\2945\Structural\Meridian Road\Draws from SUNDEN Files\Final Drawings\2009\1010096-64050-01-STEEL\FRMDET.dgn



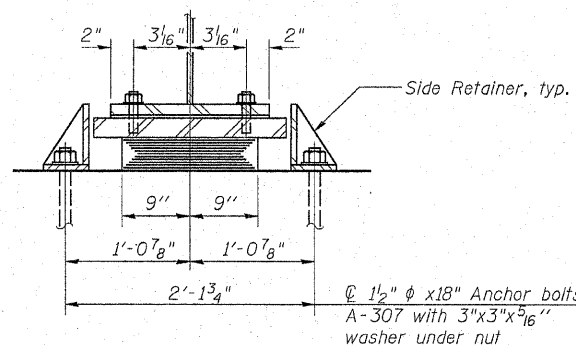
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
301	1-HBR-2F	WINNEBAGO	29 14
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62	

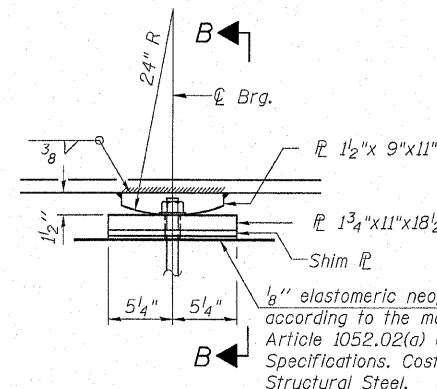
SHEET NO. 12  
27 SHEETS



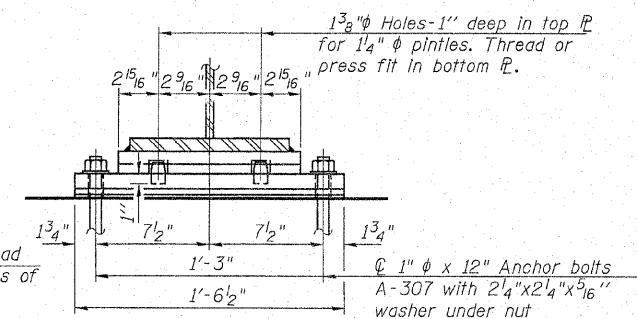
ELEVATION AT PIERS 1 & 3



SECTION A-A



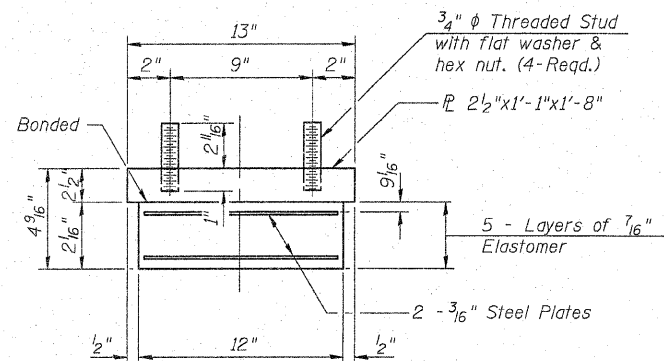
ELEVATION AT PIER 2



SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.

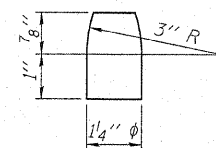
FIXED BEARING



BEARING ASSEMBLY

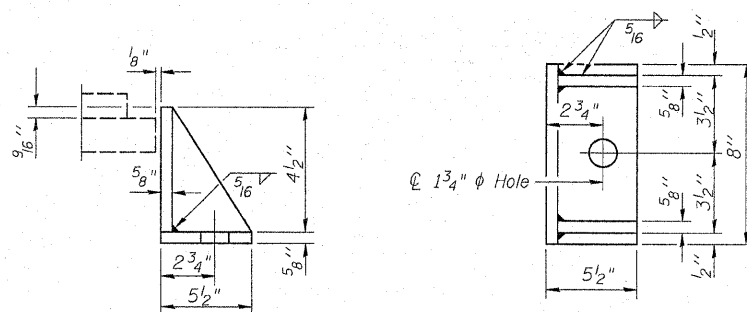
Notes:  
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Furnishing Elastomeric Bearing Assembly, Type I.  
Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Anchor Bolts not included in this contract.



PINTLE

Note:  
Shim plates shall not be placed under Bearing Assembly.  
The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 36.



SIDE RETAINER FOR PIERS 1 & 3

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Item	Unit	Total
Furnishing Elastomeric Bearing Assembly Type I	Each	12

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

11-1-06

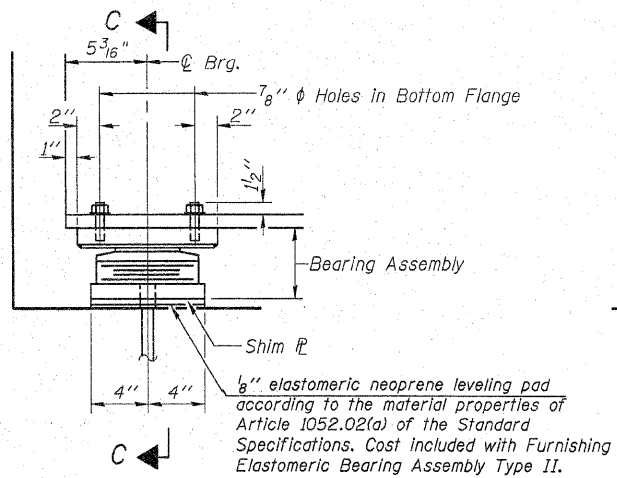
BEARING DETAILS (PIERS)  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

12/07/10 PM 7/22/2009 A:\proj\act\2945\06\US\Structural\Meridian\_Road\Draws from\_SUN\DOM\_Files\Final\Draws 1-2009\10100096-64D50-012-BEARDET AILS.dgn

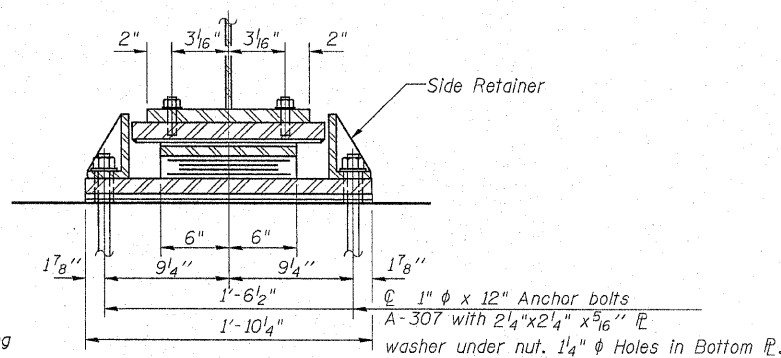
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	15
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 13  
27 SHEETS

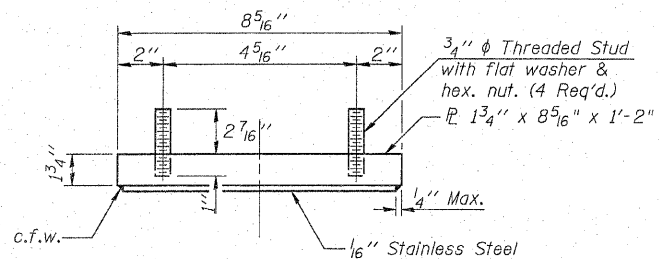


ELEVATION AT ABUT.

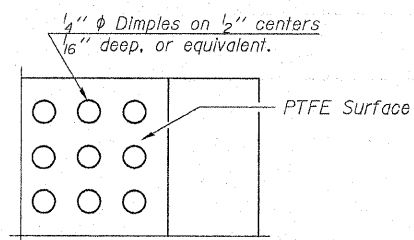


SECTION C-C

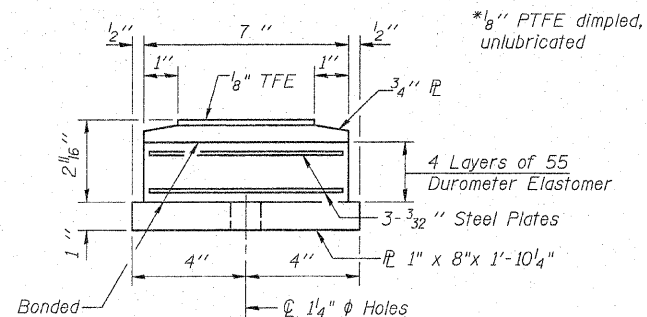
TYPE II ELASTOMERIC EXP. BRG.



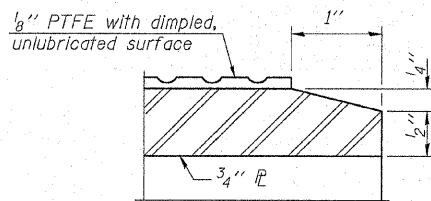
TOP BEARING ASSEMBLY



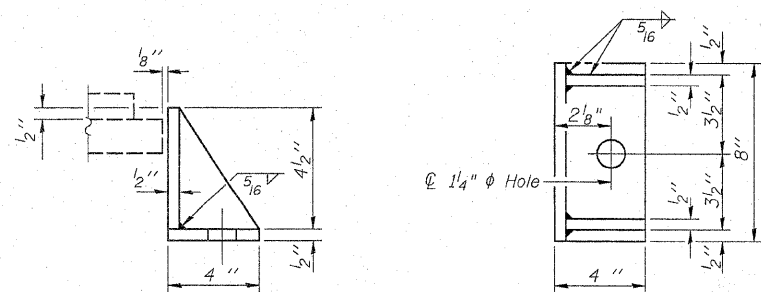
PLAN-PTFE SURFACE



BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE

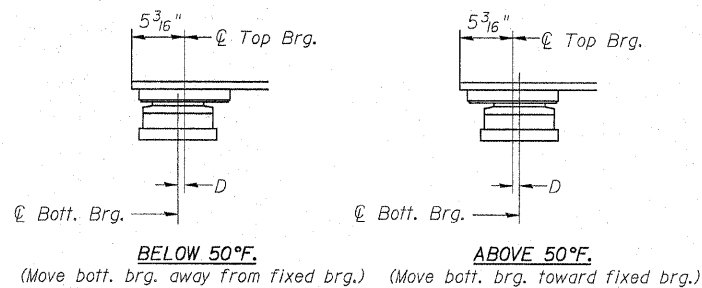


SIDE RETAINER FOR ABUTMENTS

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

11-1-06



SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

Notes:  
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Furnishing Elastomeric Bearing Assembly, Type II.  
The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.  
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.  
Two 1/8" in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.  
Anchor Bolts not included in this contract.

BILL OF MATERIAL

Item	Unit	Total
Furnishing Elastomeric Bearing Assembly Type II	Each	12

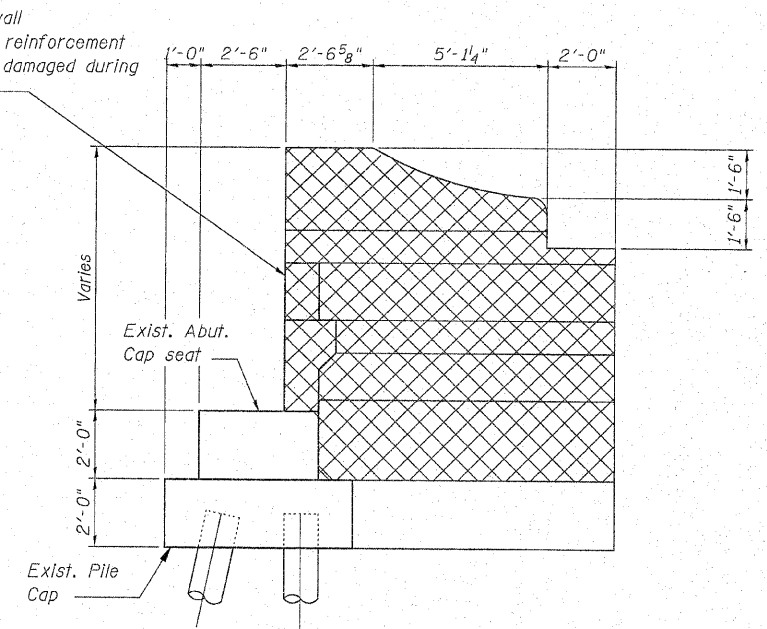
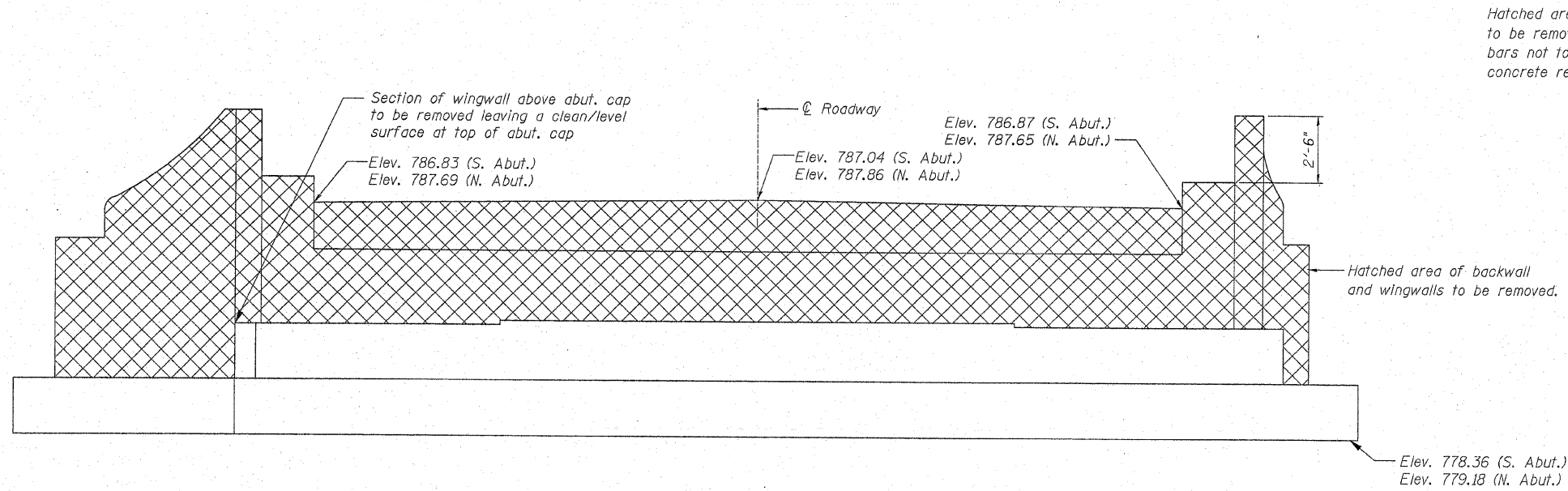
BEARING DETAILS (ABUTMENTS)  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096



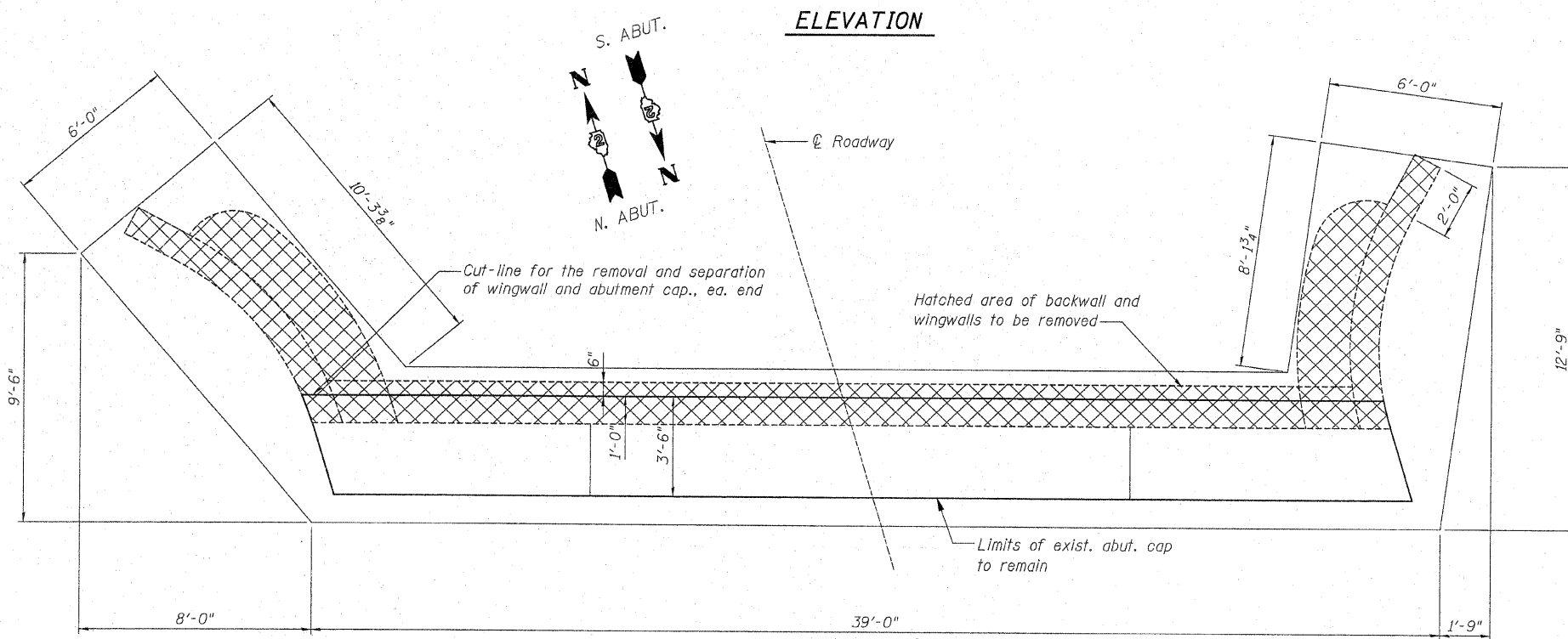
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	16
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 14  
27 SHEETS



SEC. THRU EXIST. ABUT. (TYP.)



PLAN

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

FOR INFORMATION ONLY  
EXISTING ABUTMENT AND WINGWALL  
CONCRETE REMOVAL  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

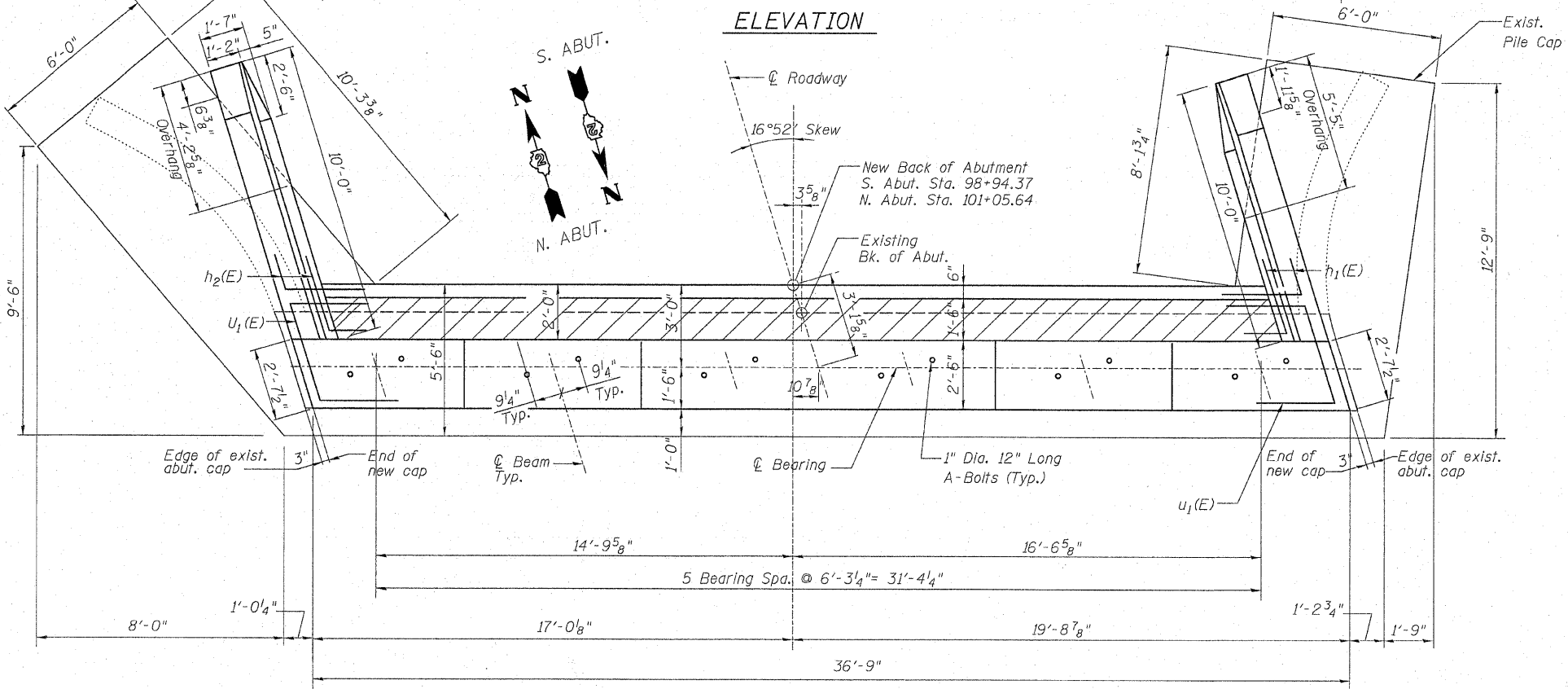
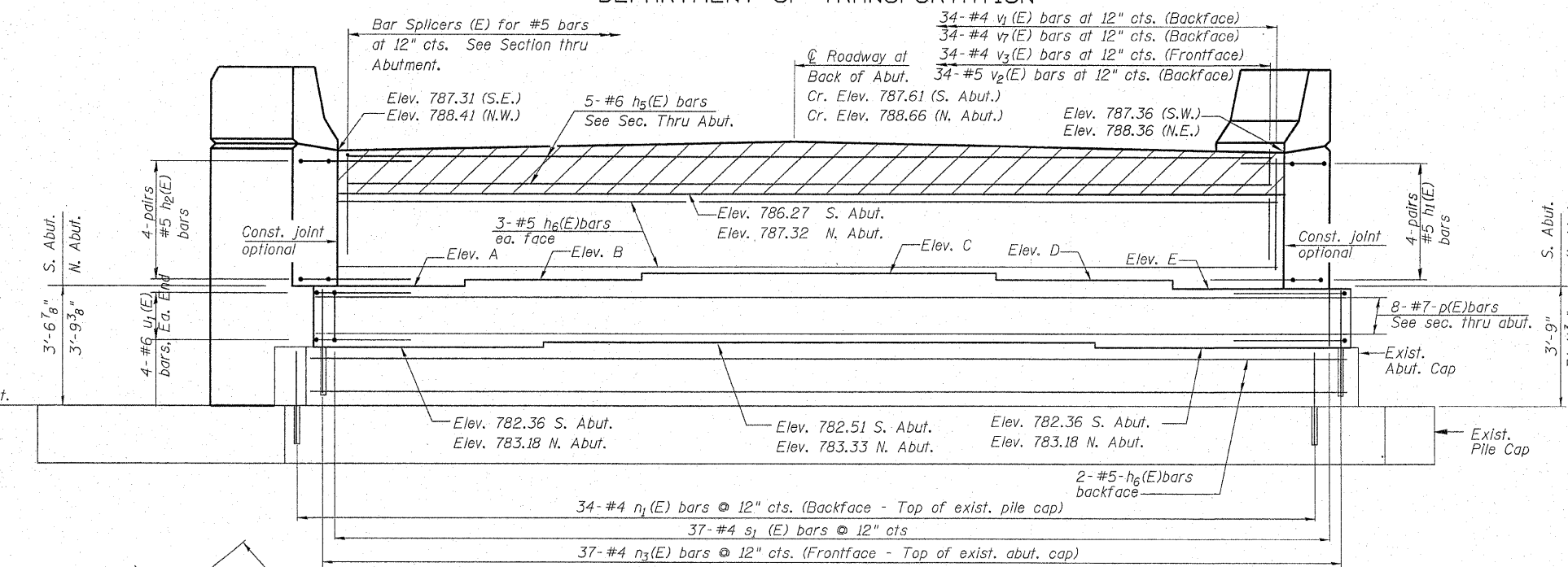
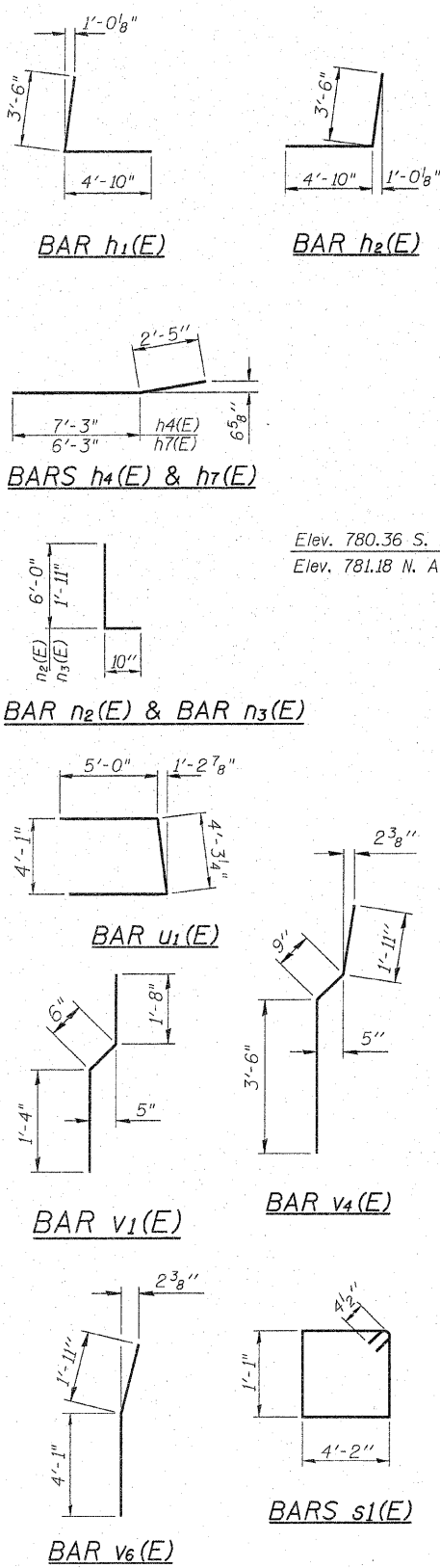
**HOH** HARRY O. HETTER ASSOCIATES, INC.  
DESIGN AND CONSULTING ENGINEERS  
55 East Jackson Blvd. Suite 600  
Chicago, IL 60604  
312-346-8121  
PROJECT NUMBER: 2945

12:07:11 PM 7/22/2009 I:\proj\sect\2945\026\Structural\Meridian\_Road\Drawgs from\_SDD\DWG Files\Final Drawgs 1-2008\1010096-64D50-014-Ex1st\_ABUT\_conc\_removal.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 15 27 SHEETS
301	1-HBR-2F	WINNEBAGO	29	17	
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62			

12/07/12 PM 7/22/2009  
17:30:29  
I:\projects\2945\06\Structural\Meridian\_Road\Drawings From SDD\DWG Files\Final Dwg 1-2009\010096-64D50-015-N&S ABUTMENT 5.dgn



	S. Abut.	N. Abut.
Elev. A	783.86	784.89
Elev. B	783.96	784.99
Elev. C	784.04	785.06
Elev. D	783.94	784.96
Elev. E	783.82	784.84

BILL OF MATERIAL  
(ONE ABUTMENT)

Bar	No.	Size	Length	Shape
h1(E)	8	#5	8'-4"	└
h2(E)	8	#5	8'-4"	└
h3(E)	24	#4	9'-3"	—
h4(E)	16	#4	9'-8"	—
h5(E)	5	#6	33'-5"	—
h6(E)	8	#5	33'-5"	—
h7(E)	6	#4	8'-8"	—
h8(E)	6	#4	8'-1"	—
n(E)	42	#5	7'-5"	—
n1(E)	34	#4	3'-5"	—
n2(E)	16	#5	6'-10"	└
n3(E)	37	#4	2'-9"	└
p(E)	8	#7	36'-5"	—
s1(E)	37	#4	11'-3"	└
u1(E)	8	#6	14'-4"	└
v1(E)	34	#4	3'-6"	└
v2(E)	34	#5	3'-4"	└
v3(E)	34	#4	4'-9"	└
v4(E)	24	#5	6'-2"	└
v5(E)	32	#5	6'-1"	└
v6(E)	8	#5	6'-0"	└
v7(E)	34	#4	5'-9"	└
Concrete Structures (S)		Cu. Yd.	25.2	
Concrete Structures (N)		Cu. Yd.	26.8	
Reinforcement Bars, Epoxy Coated		Pound	3,460	
Concrete Removal		Cu. Yd.	15.6	
Concrete Sealer		Sq. Ft.	310	

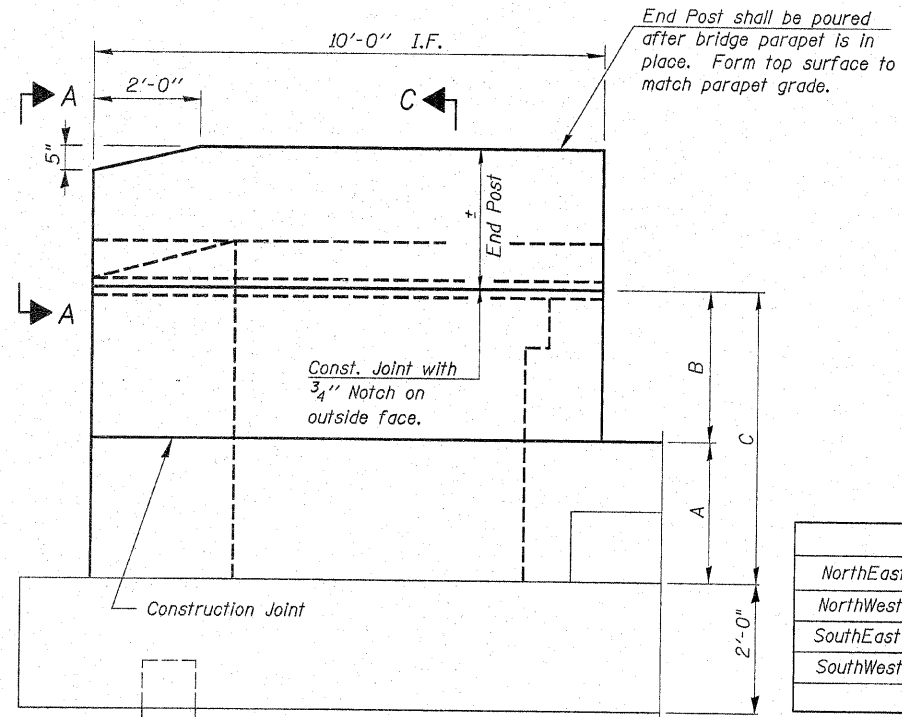
For details of Bar Splicers, see sheet 21 of 27.

FOR INFORMATION ONLY  
NORTH AND SOUTH ABUTMENTS  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

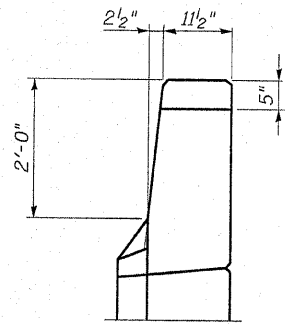
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 16 27 SHEETS
301	1-HBR-2F	WINNEBAGO	29	18	
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62			



**DIMENSIONS**

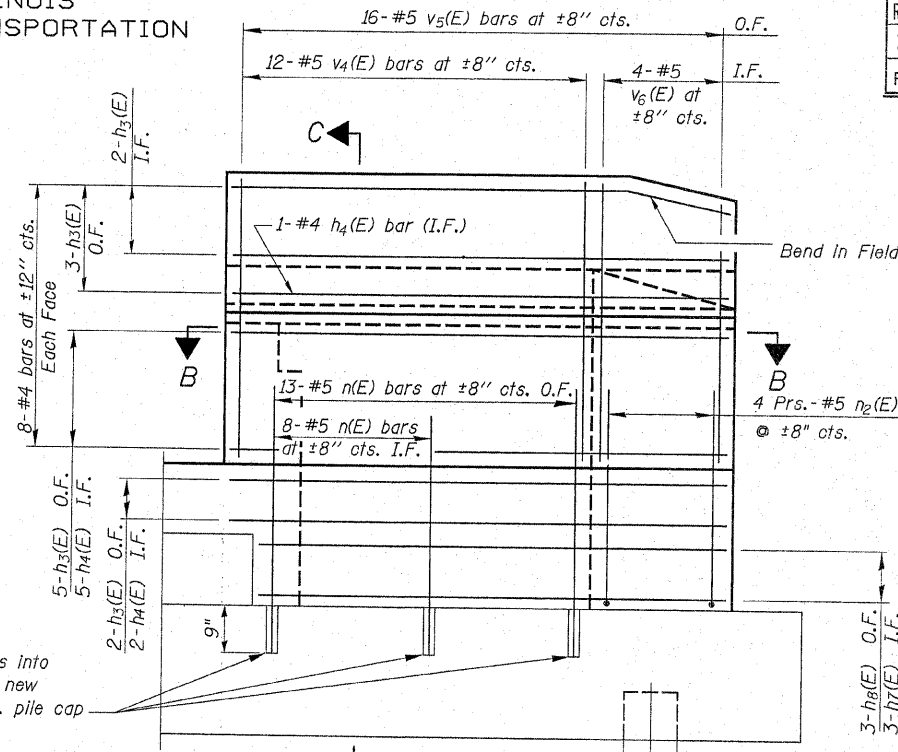
	A	B	C
NorthEast	3'-7 <sup>7</sup> / <sub>8</sub> "	3'-7 <sup>7</sup> / <sub>8</sub> "	7'-3 <sup>3</sup> / <sub>4</sub> "
NorthWest	3'-8 <sup>1</sup> / <sub>2</sub> "	3'-7 <sup>7</sup> / <sub>8</sub> "	7'-4 <sup>3</sup> / <sub>8</sub> "
SouthEast	3'-6"	3'-7"	7'-1"
SouthWest	3'-5 <sup>1</sup> / <sub>2</sub> "	3'-8"	7'-1 <sup>1</sup> / <sub>2</sub> "

**WING WALL ELEVATION**  
Showing Dimensions



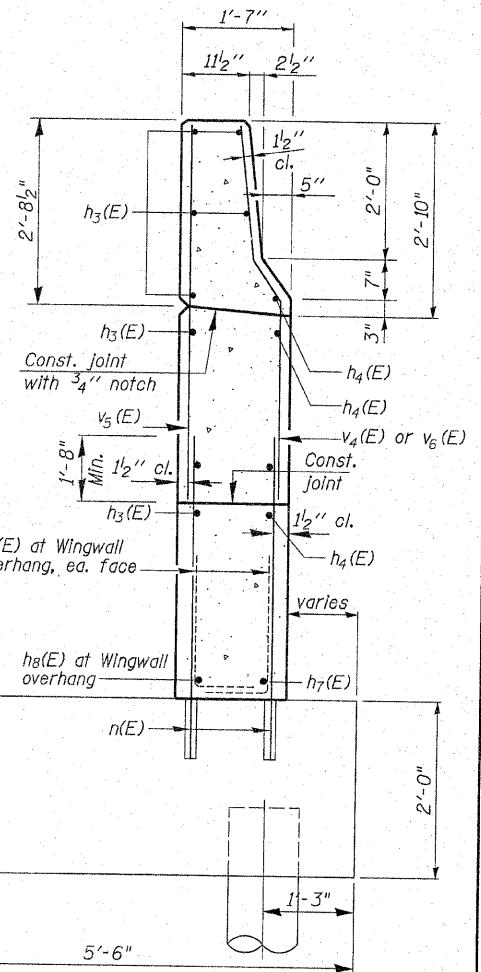
VIEW A-A

Epoxy Grout n(E) bars into exist. pile cap where new wingwalls sit on exist. pile cap

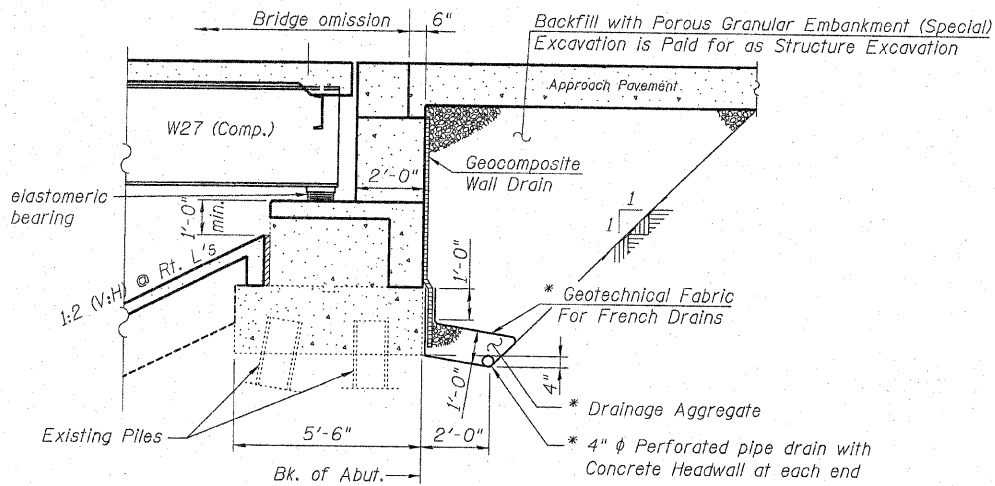


**WING WALL ELEVATION**  
Showing Reinforcement

Note  
O.F. = Outside Face  
I.F. = Inside Face



SECTION C-C

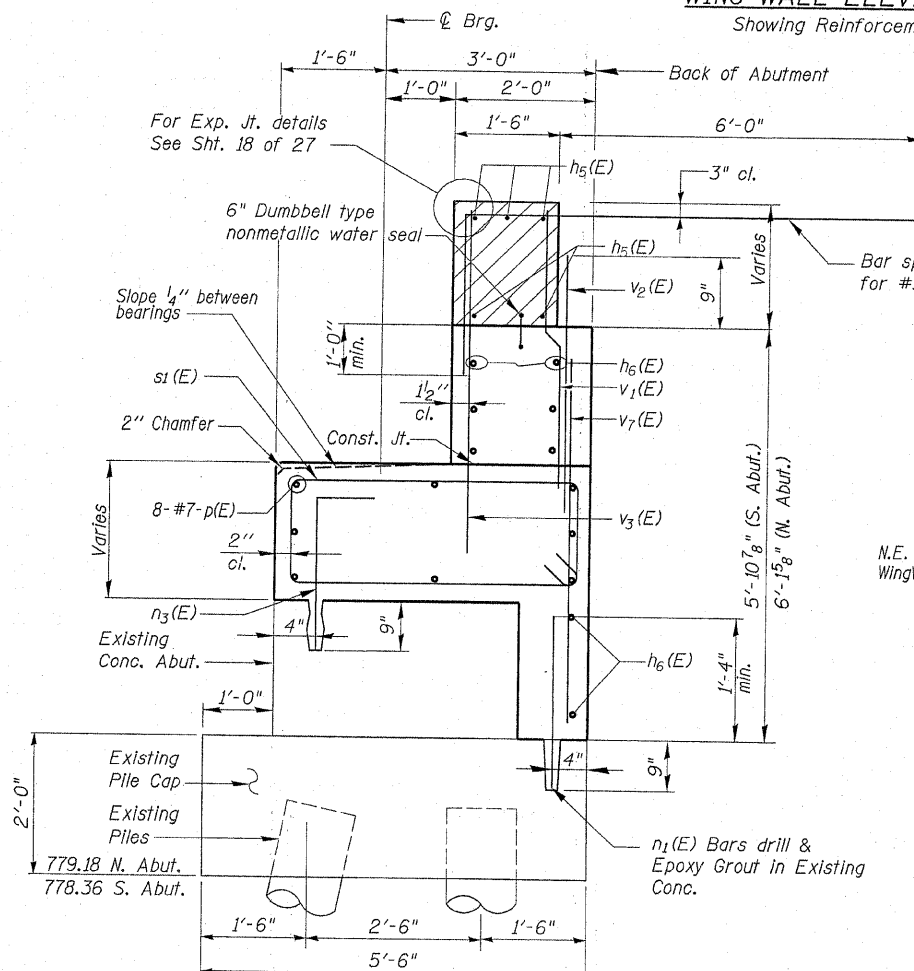


**SECTION THRU PILE SUPPORTED STUB ABUTMENT**  
(Horiz. dim. @ Rt. L's)

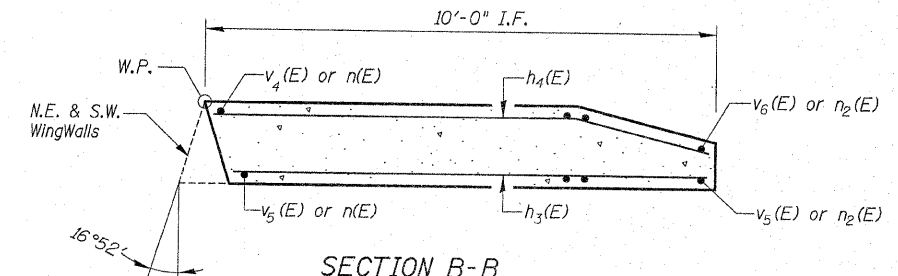
Note:  
All drainage system components shall extend parallel to the abutment backwall until they intersect the wingwalls. The pipe shall be carefully extended under the existing wingwall pile cap. Existing piles shall be located, and not be damaged in the process of drilling the drainage pipe through. The pipe shall extend until intersecting the side slopes and drain into concrete headwalls. Excavated spaces below the pilecap shall be packed with Porous Granular Embankment (Special). (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

Notes:  
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.  
Space reinforcement in cap to miss anchor bolts.  
Pour steps monolithically with cap.  
Quantity of concrete in end post included with Concrete Superstructure on sheet 9 of 27.



SEC. THRU ABUT.



SECTION B-B  
(N.W. & S.E. WINGWALL SHOWN)

FOR INFORMATION ONLY  
**ABUTMENT DETAILS**  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2 F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

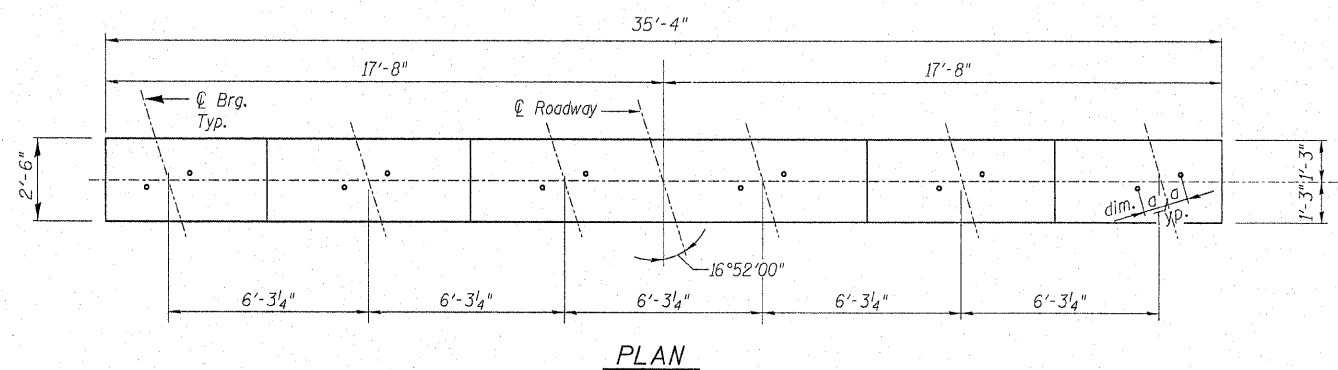
12.07.13 PM 7/22/2009 I:\projects\2945\DGMS Structural\Meridian Road\Draws From SD\06\Files\Final Drawg 1-2009\1010096-64P50-016-ABUTDET.MLS.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

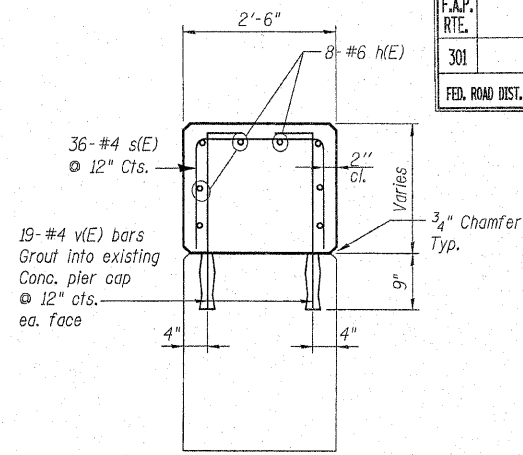
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	19
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 17  
27 SHEETS

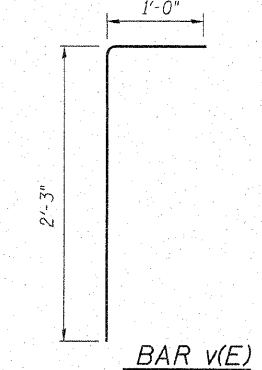
Notes:  
Space reinforcement in cap to miss anchor bolts.  
Four steps monolithically with cap.



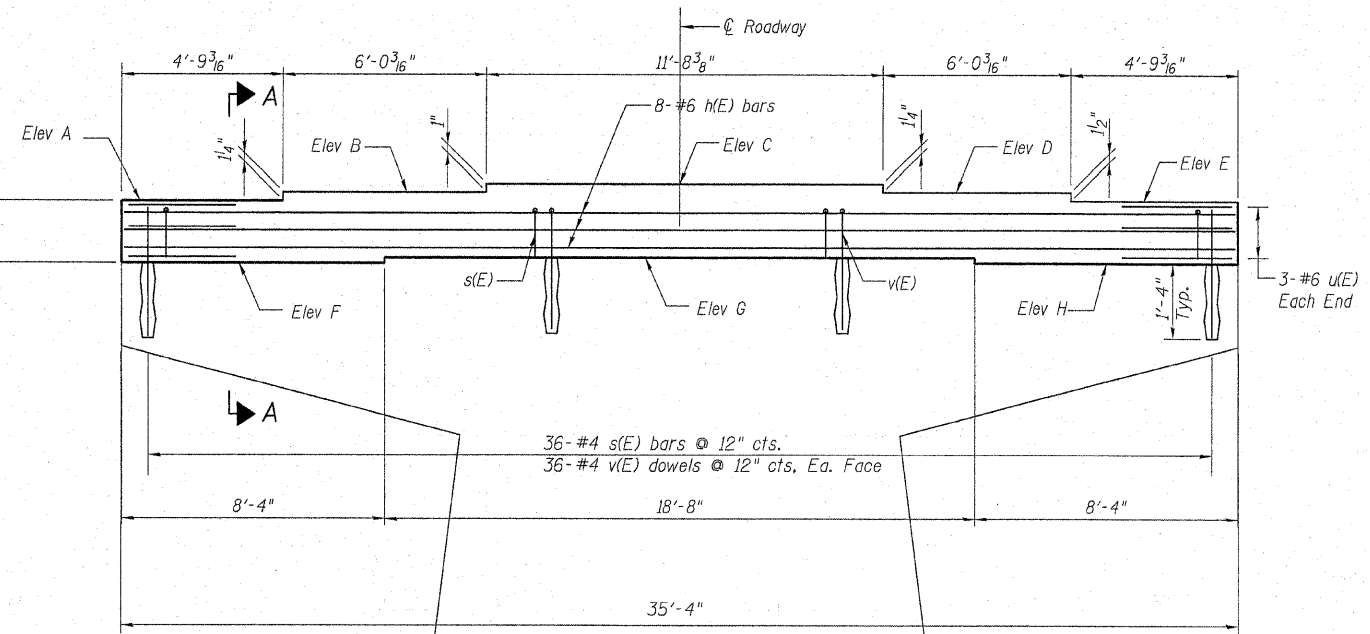
PLAN



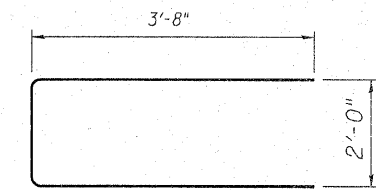
SECTION A-A



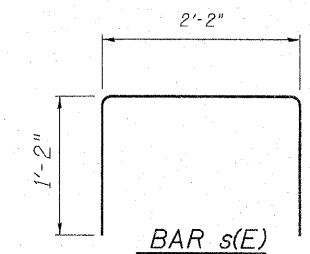
BAR v(E)



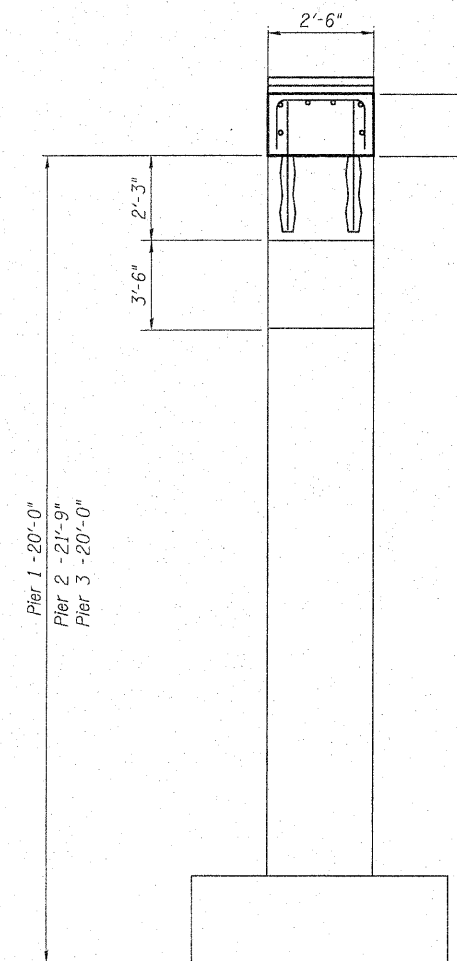
ELEVATION  
(Looking North)



BAR u(E)



BAR s(E)



END VIEW

BILL OF MATERIAL (ONE PIER)

Bar	No.	Size	Length	Shape
h(E)	8	#6	35'-0"	—
s(E)	36	#4	4'-6"	□
u(E)	6	#6	9'-4"	—
v(E)	72	#4	3'-3"	—
Concrete Structures			Cu. Yd.	4.2
Reinforcement Bars, Epoxy Coated			Pound	770.0

	Pier 1	Pier 2	Pier 3
Elev. A	784.17	784.57	784.76
Elev. B	784.27	784.67	784.86
Elev. C	784.35	784.74	784.93
Elev. D	784.25	784.64	784.83
Elev. E	784.13	784.52	784.71
Elev. F	782.80	782.62	782.33
Elev. G	782.95	782.78	782.49
Elev. H	782.80	782.62	782.33
dim. a	1'-0 <sup>7</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>2</sub> "	1'-0 <sup>7</sup> / <sub>8</sub> "

FOR INFORMATION ONLY  
PIER DETAILS (1, 2 & 3)  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2 F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

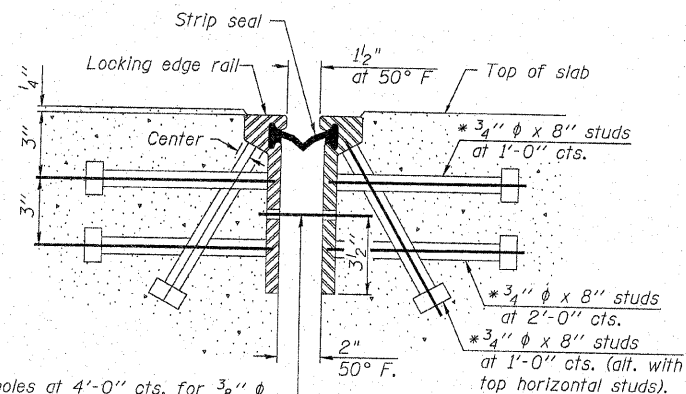
DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

12:07:44 PM 7/22/2009 I:\proj\2945\GIS\Structural\Meridian\_Road\Draws from SDNDGM Files\Final Drawings I-2009\100096-6\1050-017-PIERDET AILS.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

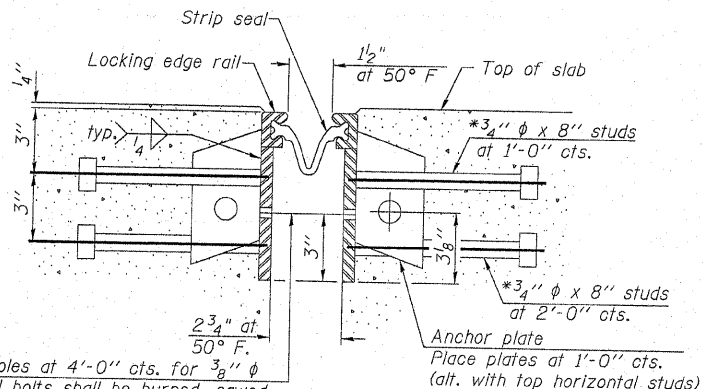
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 18 27 SHEETS
301	1-HBR-2F	WINNEBAGO	29	20	
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT NO. 64F62		

\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU  
ROLLED RAIL JOINT



7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU  
WELDED RAIL JOINT

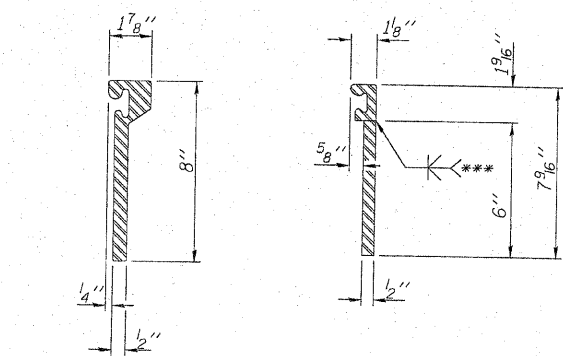
Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

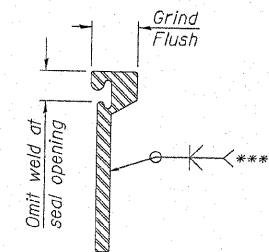
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.



ROLLED  
EXTRUDED RAIL      WELDED RAIL

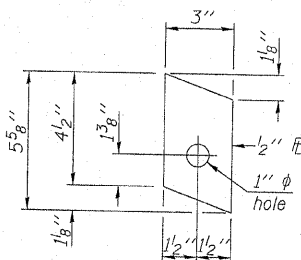


\*\*\*Back gouge not required if complete joint penetration is verified by mock-up.

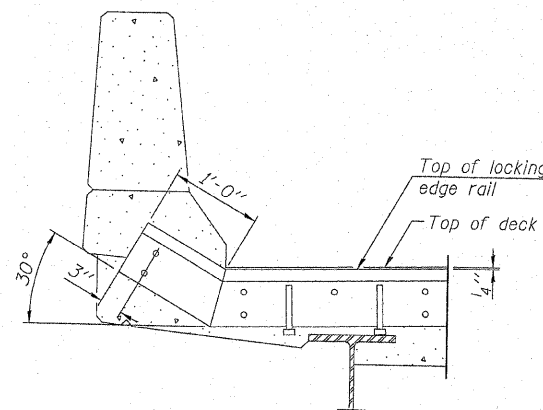
LOCKING EDGE  
RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

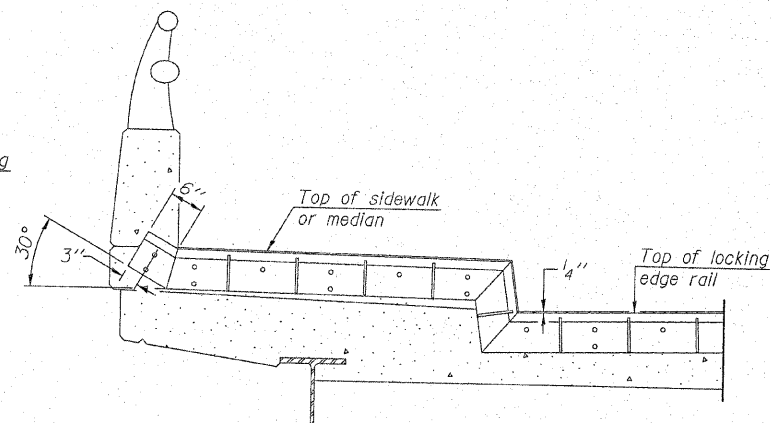
LOCKING EDGE RAILS



ANCHOR PLATE  
(for welded rail)



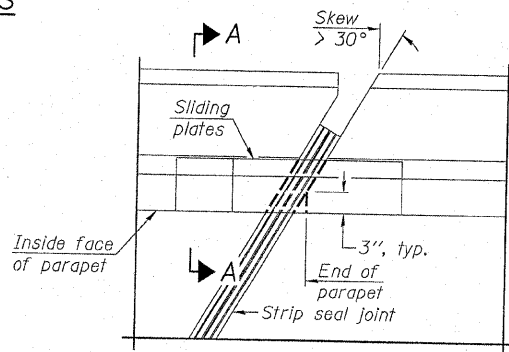
AT PARAPET



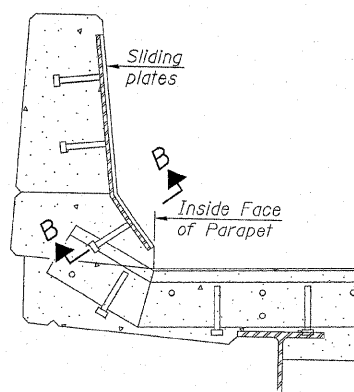
AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS

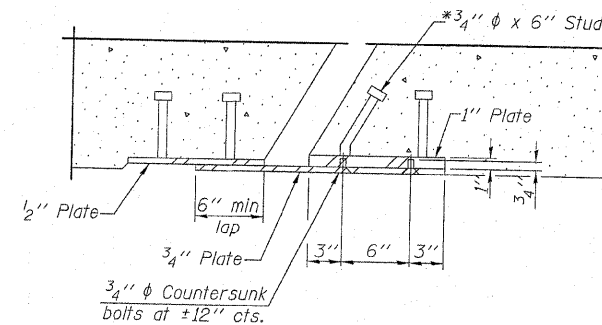


PLAN



SECTION A-A

POINT BLOCK DETAILS  
(for skews > 30°)



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	71

FOR INFORMATION ONLY  
PREFORMED JOINT STRIP SEAL  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2 F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

EJ-SSJ

10-1-08

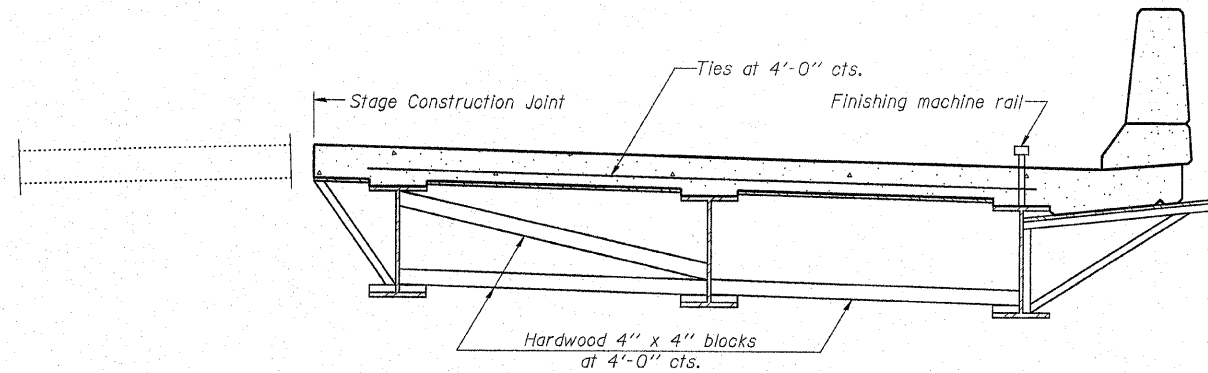
12:07:15 PM  
 7/12/2009  
 H:\proj\2945\001\Struct\Meridian\_Road\Draws from SD\NDGM Files\Final Drawings I-20\09\010096-64D50-018-EXP\JOINT.dgn



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

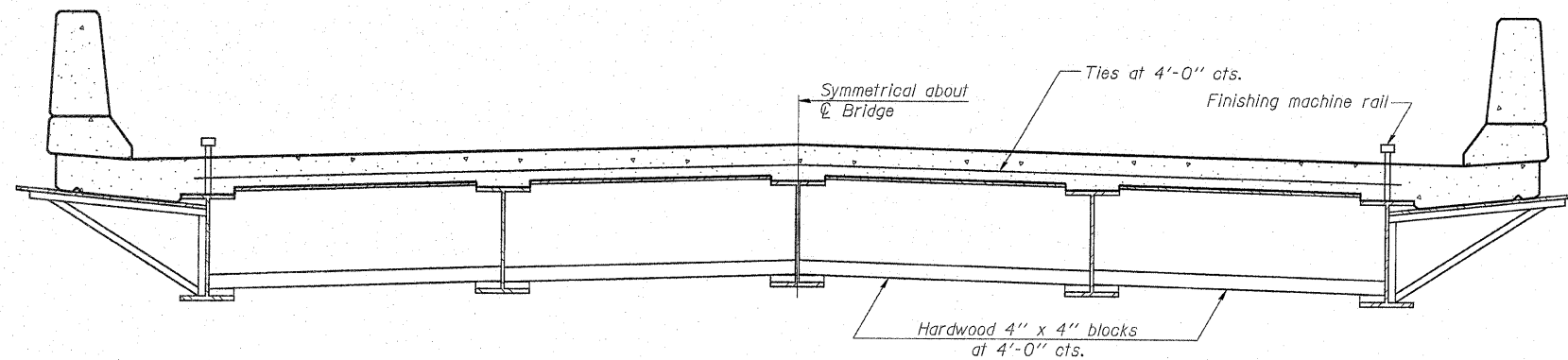
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	21
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 19  
27 SHEETS



FORM BRACES FOR  
STAGE CONSTRUCTION

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.  
The finishing machine rails shall be placed on the top flange of the exterior beams.  
The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.  
For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



FORM BRACES FOR  
STANDARD CONSTRUCTION

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

SB-1 11-1-06

FOR INFORMATION ONLY  
CANTILEVER FORMING BRACKETS  
FOR SUPERSTRUCTURES WITH  
W27 BEAMS AND SMALLER  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

**HOH**

HARRY D. HETTER-ASSOCIATES, INC.  
DESIGN AND CONSULTING ENGINEERS

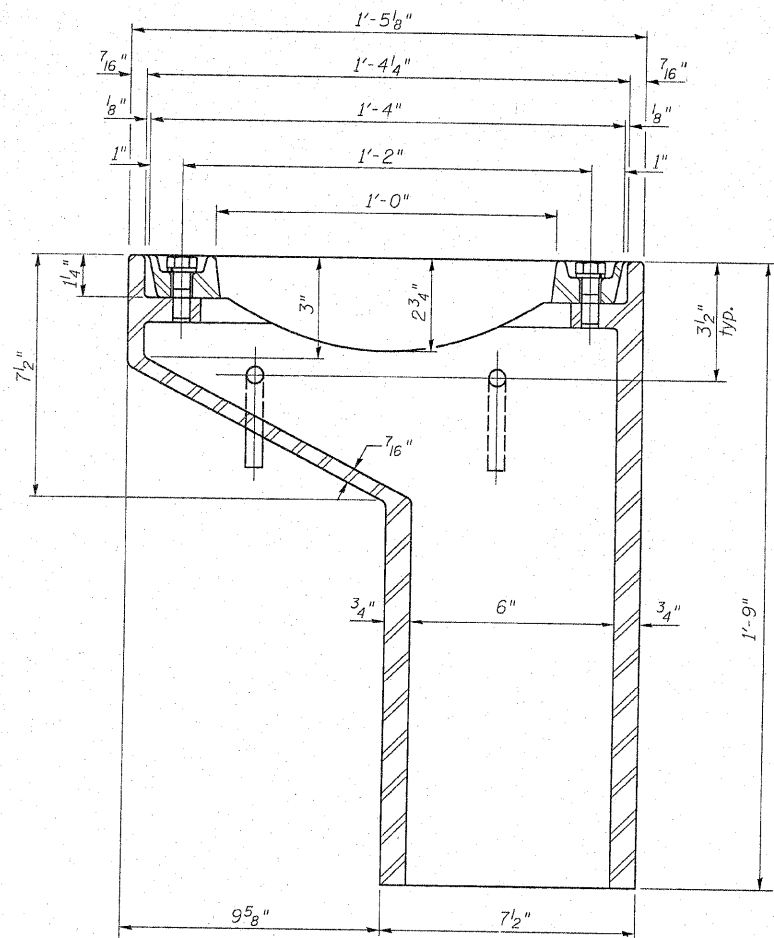
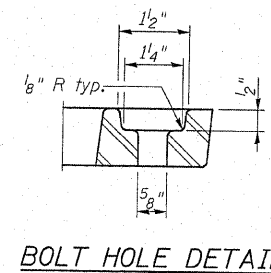
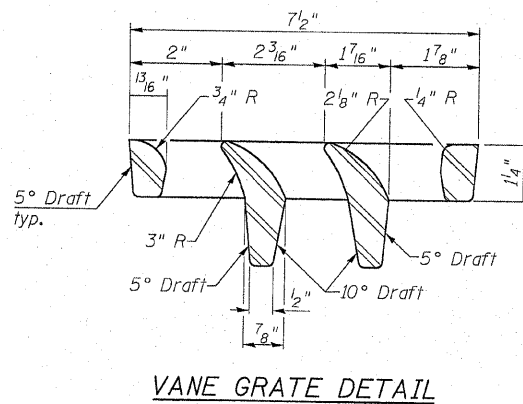
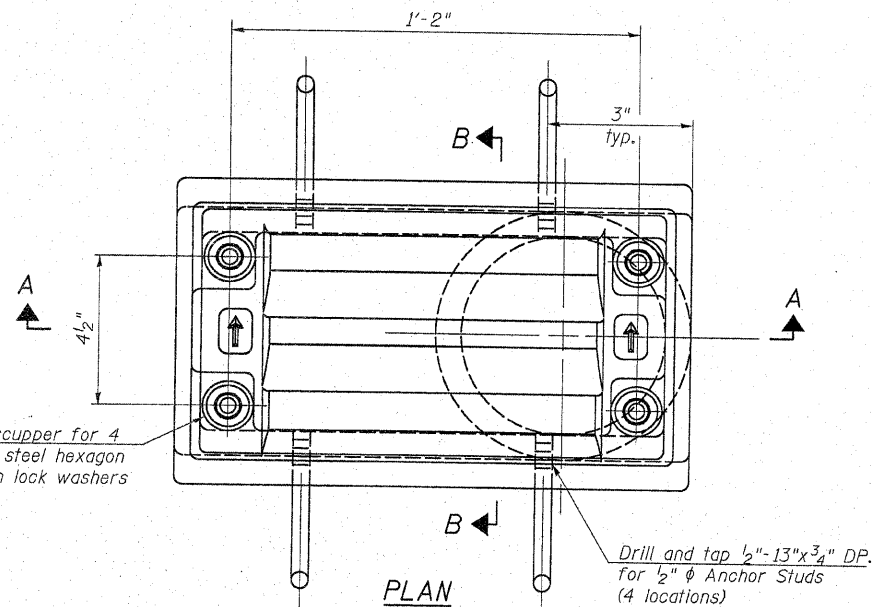
15 East Jackson Blvd.  
Suite 600  
Chicago, IL 60604  
312-346-8131

PROJECT  
NUMBER  
2945

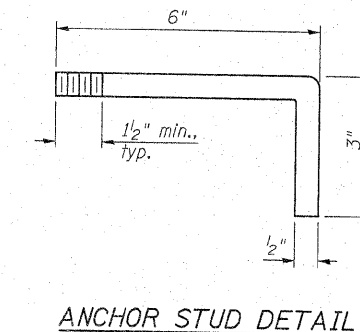
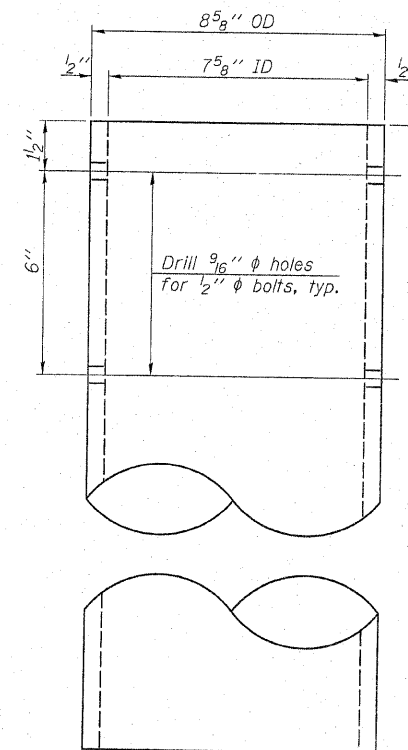
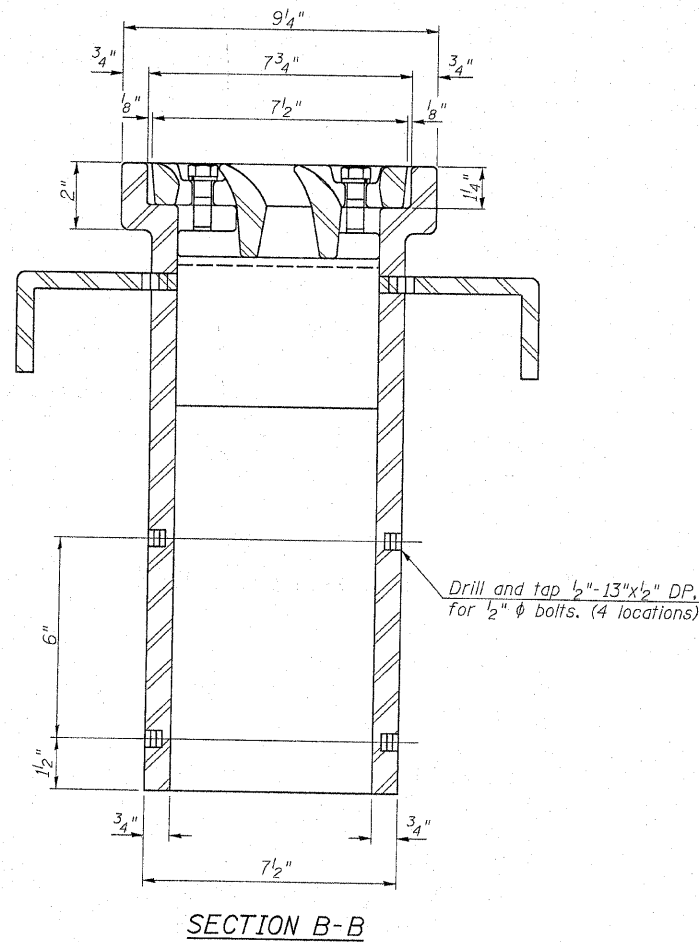
12:07:15 PM 7/22/2009 A:\proj\sect\2945\DCMS\Structural\Meridian\_Road\Drawgs from\_SDD\DEN\_Files\Final Drawgs 1-2009\1010096-64D50-019-CANTILEVER FORMING BRACKET 5.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 20 27 SHEETS
301	1-HBR-2F	WINNEBAGO	29	22	
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62			



See sheet 9 of 27 for scupper location relative to parapet.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	2

FOR INFORMATION ONLY  
DRAINAGE SCUPPER, DS-11  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

12:07:16 PM 7/22/2009 h:\proj\acts\2945\Structural\Meridian Road\Draws from SDNDGN Files\Final Drawgs I-2009\1010096-64F62-020-DRAINAGESCUPPER.dgn



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	23
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

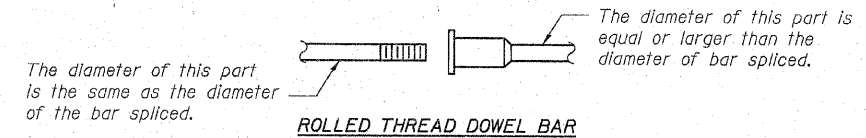
SHEET NO. 21  
27 SHEETS

**NOTES**

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.  
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.  
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity =  $1.25 \times f_y \times A_s$   
(Tension in kips)
  - ② Minimum \*Pull-out Strength =  $0.66 \times f_y \times A_s$   
(Tension in kips)
- Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_s$  = Tensile stress area of lapped reinforcement bars.  
\* = 28 day concrete

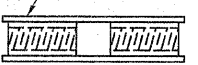
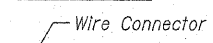
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



ROLLED THREAD DOWEL BAR



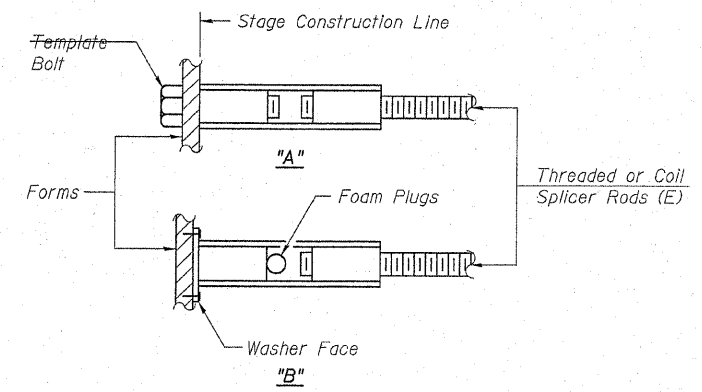
\*\* ONE PIECE



WELDED SECTIONS

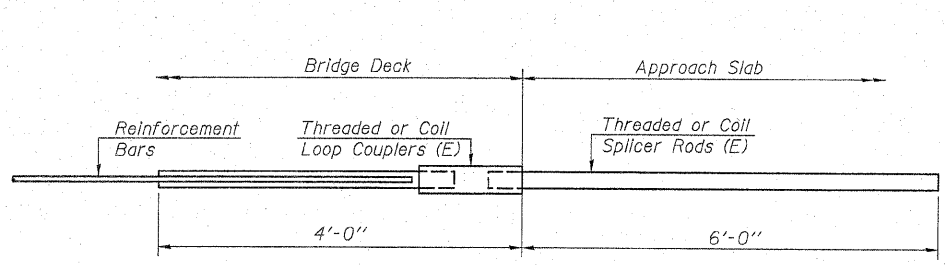
**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



**INSTALLATION AND SETTING METHODS**

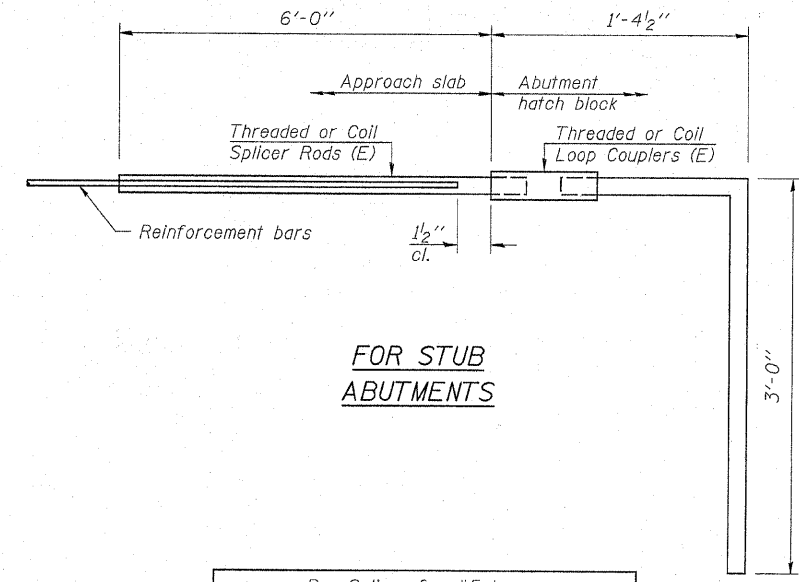
"A" : Set bar splicer assembly by means of a template bolt.  
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
(E) : Indicates epoxy coating.



**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

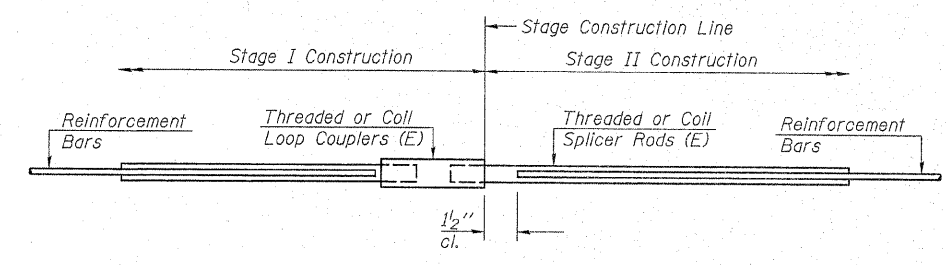
Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO



**FOR STUB ABUTMENTS**

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 66



**STANDARD**

Bar Size	No. Assemblies Required	Location

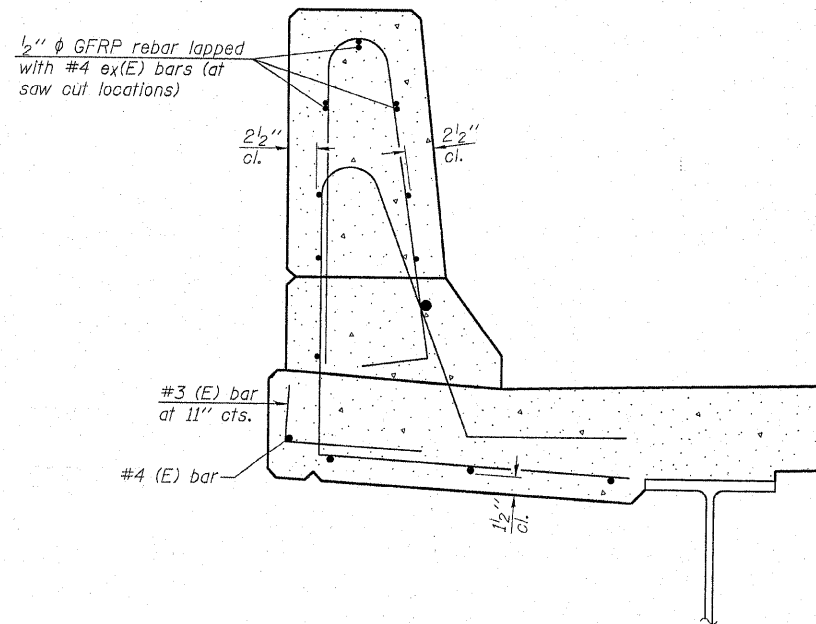
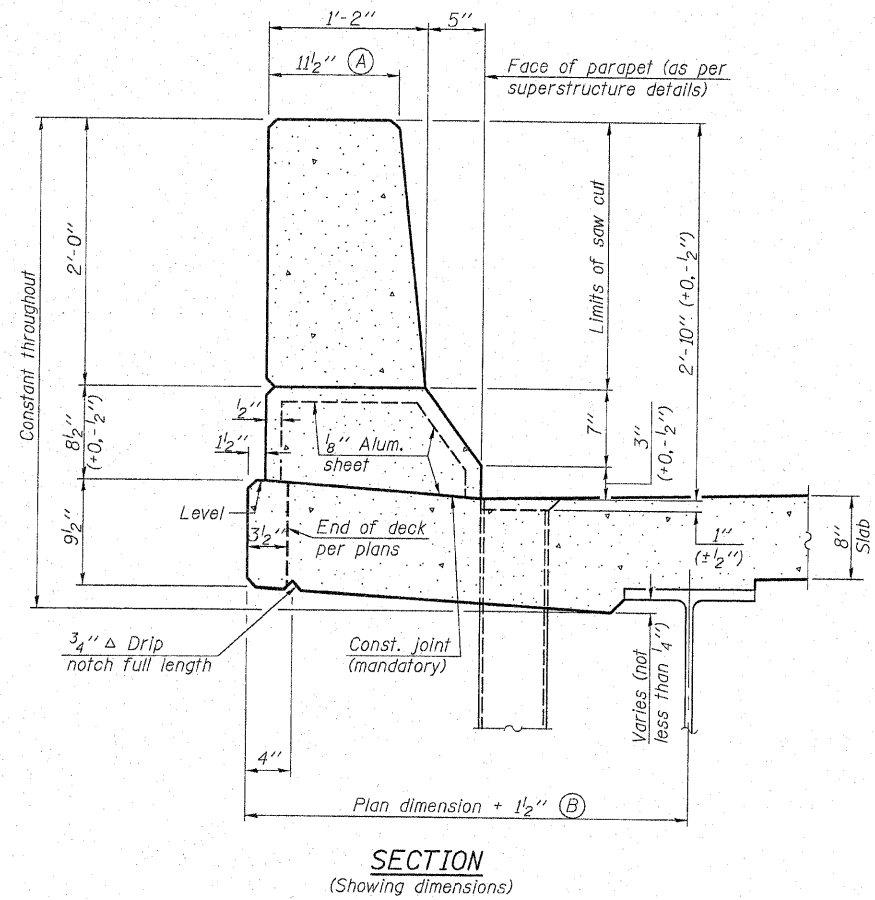
FOR INFORMATION ONLY  
BAR SPLICER ASSEMBLY DETAILS  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

12:07:17 PM 7/22/2009 I:\proj\facts\2945\CGMS\Structural\Meridian\_Road\Draws from SDD\DKH\_Files\Final Drawings\1-2009\N00096-6-4050-021-BAR\_SPLICER\_DETAILS.dgn

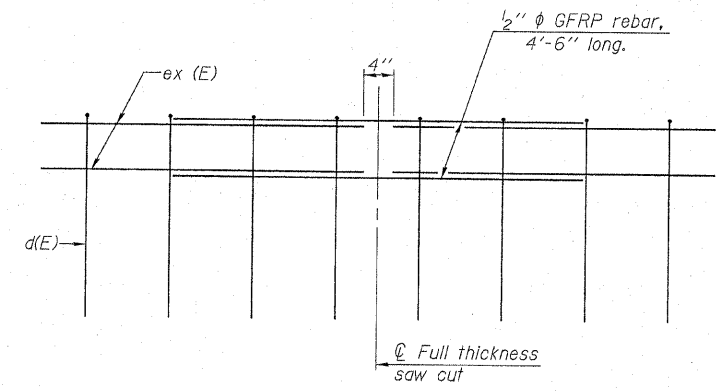
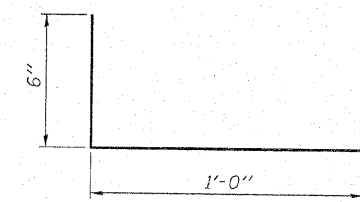
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	24
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 22  
27 SHEETS



**GENERAL NOTES**  
All dimensions shall remain the same as shown on contract plans, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. of parapet.  
Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.



FOR INFORMATION ONLY  
CONCRETE PARAPET SLIPFORMING OPTION  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2 F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

12:07:18 PM 7/22/2009 h:\pro\jects\2945\DGMS\Structural\Meridian\_Road\Draws From\_SDN\06H\_Files\Final Drawg +2009\1010096\64D50-022-PARAPET\_SLIPFORMING.dgn





STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	27
FED. ROAD DIST. NO. 7		ILLINOIS CONTRACT NO. 64F62		

SHEET NO. 25  
27 SHEETS

Page 1 of 2



### SOIL BORING LOG

Date 5/8/07

ROUTE FA 194 DESCRIPTION P92-095-07 Meridian Road over Bypass 20 LOGGED BY W. Garza  
SECTION \_\_\_\_\_ LOCATION Winnebago Twp. - 12 SW, SEC. , TWP. 26N, RNg. 11E  
COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	DE	BL	UC	MO	Surface Water Elev.	DE	BL	UC	MO
Station	P	OW	S	I	ft	P	OW	S	I
	T	S	Qu	S	Stream Bed Elev.	H	S	Qu	T
	H								
BORING NO. <u>B-3</u>					Groundwater Elev.: First Encounter <u>79.8</u> ft Upon Completion _____ ft After _____ Hrs.				
Station <u>11+50</u>									
Offset <u>9.00ft Lt CL</u>									
Ground Surface Elev. <u>99.80</u> ft	(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)
7" Asphalt, 8" Concrete				10.0			5		
					VERY STIFF gray SILTY CLAY		8	3.9	23.0
							13	B	
	97.30								
STIFF tan LOAM		5					4		
		2	1.1	10.0			5	2.1	28.0
	95.80		4	B			8	B	
SOFT tan SANDY LOAM		1					3		
		0	0.4	11.0			5	2.0	23.0
	93.30		2	P			7	B	
VERY STIFF tan LOAM		3					2		
		7	2.9	18.0			4	1.3	21.0
	90.80		10	B			6	P	
VERY STIFF tan SANDY LOAM		7					9		
		9	2.3	11.0			11		
	88.30		15	S			18		
STIFF tan SANDY LOAM		3							
		6	2.0	9.0					
	85.80		7	S					
STIFF redish brown LOAM		2					11		
		5	1.6	14.0			9		23.0
	83.30		7	P			6		
VERY STIFF gray LOAM with GRAVEL		6					2		
		7	2.9	20.0			3	0.5	24.0
	80.80		21	B			5	P	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)



### SOIL BORING LOG

Page 2 of 2

Date 5/8/07

ROUTE FA 194 DESCRIPTION P92-095-07 Meridian Road over Bypass 20 LOGGED BY W. Garza  
SECTION \_\_\_\_\_ LOCATION Winnebago Twp. - 12 SW, SEC. , TWP. 26N, RNg. 11E  
COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	DE	BL	UC	MO	Surface Water Elev.	DE	BL	UC	MO
Station	P	OW	S	I	ft	P	OW	S	I
	T	S	Qu	S	Stream Bed Elev.	H	S	Qu	T
	H								
BORING NO. <u>B-3</u>					Groundwater Elev.: First Encounter <u>79.8</u> ft Upon Completion _____ ft After _____ Hrs.				
Station <u>11+50</u>									
Offset <u>9.00ft Lt CL</u>									
Ground Surface Elev. <u>99.80</u> ft	(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)
LOOSE tan fine SAND				1					
				2					
				3					
	58.30								
	55.80								
MEDIUM tan SAND & GRAVEL				1					
				5					
				6					
	53.30								
	50.80								
Wash				31					
VERY DENSE tan well-cemented SAND & GRAVEL				100/9'					
	48.30								
Hard Drilling									
	45.80								
	55								
VERY DENSE tan SAND with LIMESTONE fragments				100/2'					
	43.30								
End of Boring									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)

FOR INFORMATION ONLY  
SOIL BORING LOGS  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO

**HOH** HARRY G. HEFFER ASSOCIATES, INC.  
DESIGN AND CONSULTING ENGINEERS  
55 East Jackson Blvd.  
Suite 800  
Chicago, IL 60604  
312-346-8131  
PROJECT NUMBER: 2945

12:07:31 PM  
7/22/2009  
h:\proj\jevis\2945\DGNS\Structura\Meridian\_Road\Drawgs From SD\JGDN Files\Final Drawgs I-2009\1010096-64D50-025-SBLDG653.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	28
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT NO. 64F62	

SHEET NO. 26  
27 SHEETS



**SOIL BORING LOG**

Page 1 of 2  
Date 5/17/07

ROUTE FA 194 DESCRIPTION P92-095-07 Meridian Road over Bypass 20 LOGGED BY W. Garza  
SECTION LOCATION Winnebago Twp. - 12 SW. SEC. TWP. 26N. RNG. 11E  
COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST
Station	H	W	S	T	ft	H	W	S	T
BORING NO.	(ft)	(/6")	(tsf)	(%)	ft	(ft)	(/6")	(tsf)	(%)
B-4	9+65				79.50				
	49.00ft Lt CL				67.7				
	80.20								
MEDIUM brown LOAM			0.8	14.0					
			P						
STIFF brown SILTY CLAY LOAM	77.70								
	76.20		1.3	21.0					
			P						
MEDIUM brown SANDY LOAM									
	73.20			11.0					
DENSE tan ROCK, weathered LIMESTONE									
	71.20								
MEDIUM tan moist SAND, medium GRAVEL									
	68.70								
MEDIUM tan fine SAND									
	66.20								
MEDIUM tan fine SAND									
	63.70								
	61.20								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO



**SOIL BORING LOG**

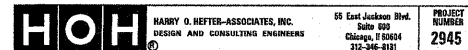
Page 2 of 2  
Date 5/17/07

ROUTE FA 194 DESCRIPTION P92-095-07 Meridian Road over Bypass 20 LOGGED BY W. Garza  
SECTION LOCATION Winnebago Twp. - 12 SW. SEC. TWP. 26N. RNG. 11E  
COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST
Station	H	W	S	T	ft	H	W	S	T
BORING NO.	(ft)	(/6")	(tsf)	(%)	ft	(ft)	(/6")	(tsf)	(%)
B-4	9+65				79.50				
	49.00ft Lt CL				67.7				
	80.20								
Wash									
MEDIUM tan fine SAND									
	38.70								
	36.20								
Wash									
VERY DENSE tan SAND with medium GRAVEL									
	33.70								
Wash									
VERY DENSE gray SILT with TILL									
	31.20		4.4	19.0					
			S						
DENSE gray CLAY LOAM TILL									
	28.70		5.4	15.0					
			S						
End of Boring									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)

FOR INFORMATION ONLY  
SOIL BORING LOGS  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2 F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096





STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	1-HBR-2F	WINNEBAGO	29	29
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 64F62		

SHEET NO. 27  
27 SHEETS



Illinois Department of Transportation  
Division of Highways  
Illinois Department of Transportation/D-2

SOIL BORING LOG

Page 1 of 2

Date 5/18/07

ROUTE FA 194 DESCRIPTION P92-095-07 Meridian Road over Bypass 20 LOGGED BY W. Garza  
SECTION LOCATION Winnebago Twp. - 12 SW, SEC. TWP. 26N, RNG. 11E  
COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST
Station	H	S	Qu	T	ft	H	S	Qu	T
	(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)
BORING NO. B-5					Surface Water Elev. _____ ft				
Station 10+58					Stream Bed Elev. 79.50 ft				
Offset 26.00ft Lt CL					Groundwater Elev.: First Encounter 65.5 ft ▼				
Ground Surface Elev. 80.50 ft					Upon Completion Wash _____ ft				
					After _____ Hrs. _____ ft				
Shoulder					MEDIUM tan fine SAND				
STIFF gray SILTY CLAY			1.3 P	24.0					
STIFF brown SILTY CLAY LOAM	78.00	2							
		4	1.5 P	26.0					
	76.50	5							
MEDIUM brown SILTY CLAY with SAND lens		2			STIFF tan SILT with SAND lens		4		
		4	0.6 B	26.0			5	0.4 P	25.0
	74.00						6		
STIFF brown SANDY LOAM with SAND lens		4			MEDIUM tan fine SAND		2		
		3	1.1 P	16.0			5		
	71.00						6		
DENSE SAND & GRAVEL		7			MEDIUM tan medium SAND		5		
		20					8		
	69.00	13					12		
	66.50								
LOOSE/MEDIUM brown fine SAND		8			MEDIUM tan medium coarse SAND with medium GRAVEL		8		
		5					11		
	64.00	5					16		
	61.50								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)

DESIGNED	GUN / OAO
CHECKED	FCO
DRAWN	TCS / GUN
CHECKED	FCO



Illinois Department of Transportation  
Division of Highways  
Illinois Department of Transportation/D-2

SOIL BORING LOG

Page 2 of 2

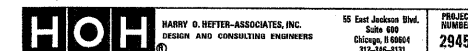
Date 5/18/07

ROUTE FA 194 DESCRIPTION P92-095-07 Meridian Road over Bypass 20 LOGGED BY W. Garza  
SECTION LOCATION Winnebago Twp. - 12 SW, SEC. TWP. 26N, RNG. 11E  
COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST
Station	H	S	Qu	T	ft	H	S	Qu	T
	(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)
BORING NO. B-5					Surface Water Elev. _____ ft				
Station 10+58					Stream Bed Elev. 79.50 ft				
Offset 26.00ft Lt CL					Groundwater Elev.: First Encounter 65.5 ft ▼				
Ground Surface Elev. 80.50 ft					Upon Completion Wash _____ ft				
					After _____ Hrs. _____ ft				
VERY DENSE gray well-cemented SAND & medium GRAVEL		40							
		100/9							
	39.00								
Wash VERY DENSE gray well-cemented SAND		33							
		42							
	36.50	36							
Wash VERY DENSE gray well-cemented SAND		100/4							
	34.00								
End of Boring									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)

FOR INFORMATION ONLY  
SOIL BORING LOGS  
MERIDIAN ROAD OVER US 20  
F.A.P. 301 (US 20) - SEC. 1-HBR-2F  
WINNEBAGO COUNTY  
STATION 100+00  
STRUCTURE NO. 101-0096



PROJECT NUMBER 2945

12:07:41 PM  
7/22/2009  
h:\proj\2945\Drawings\Structural\Meridian Road\Drawings From SDVDGN Files\Final Drawings I-2009\1010096-64F62-027-SBLOGS5.dgn