01-17-2020 LETTING ITEM 091

FOR INDEX OF SHEETS, SEE SHEET NO. 2

**HIGHWAY STANDARDS:** 280001-07 701411-09 606001-07 701423-10 606301-04 701426-09 630001-12 701901--08 630301-09 704001-08 725001-01 631011-10 631031-16 780001--05 701400-09 782001-01 701402-12 782006-01 BLR 22-7

**CADD STANDARDS:** 

406101-D4 630101-D4 780001-D4

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# **STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

# PROPOSED **HIGHWAY PLANS**

**FAP ROUTE 313 (US 34)** SECTION [4HB;101VB-1]BR PROJECT NHPP –B30Z(288) **BRIDGE REHABILITATION** WARREN COUNTY

C-94-087-17







SECTION

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#### **GENERAL NOTES**

#### **AVAILABILITY OF ELECTRONIC FILES**

MicroStation and GEOPAK files of this project will be made available to the Contractor after contract award. If there is a conflict between the electronic files and the printed contract plans and documents, the printed contract plans and documents shall take precedence over the electronic files. The Contractor shall accept all risk associated with using the electronic files and shall hold the Department harmless for any errors or omissions in the electronic files and the data contained therein. Errors or delays resulting from the use of the electronic files by the Contractor shall not result in an extension of time for any interim or final completion date or shall not be considered cause for additional compensation. The Contractor shall not use, share, or distribute these electronic files except for the purpose of constructing this contract. Any claims by third parties due to use or errors shall be the responsibility of the Contractor. The Contractor shall include this disclaimer with the transfer of these electronic files to any other parties and shall include appropriate language binding them to similar responsibilities.

#### **ENVIRONMENTAL REVIEWS**

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

The required environmental resource documentation shall include the following:

- BDE Form 2290 (Waste/Use Area Review)
- Color photographs depicting the use area
- Borrow Area Entry Agreement form D4 PI0101

Prior to any waste materials being removed from the construction site the required environmental resource surveys shall be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

Please note that a minimum of four weeks shall be allowed for the District to obtain the required environmental clearances and six weeks for the required borrow site environmental clearances.

#### **CROSSING EXISTING STRUCTURES WITH EQUIPMENT**

The following structures, SN 094-0041 and SN 094-0033, may be crossed with the empty MTD. Any structures not listed above shall be verified by the resident prior to beginning work.

### **BRIDGE OVERLAY NOTIFICATION**

After placement of the bridge deck overlay, the Resident Engineer shall notify the District Bridge Maintenance Engineer of the "as constructed" milling depth and overlay thickness for updating the Illinois Highway Information System.

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BDE Form 2289 (Cultural and Natural Resources Review of Borrow Areas) A location map showing the size limits and location of the use area

### COMMITMENTS

Commitments are not to be altered without the written approval of all parties to which the commitment was made.

NO COMMITMENTS WERE MADE.

## HOT-MIX ASPHALT MIXTURE REQUIREMENTS

Mixture Use(s):	Polymer Surface Course 1.5"	Polymer Binder Course Var.	Hot-Mix Asphalt Shoulders Var		
AC/PG:	SBS or SBR 76-28	SBS or SBR 76-28	SBS or SBR 76-28		
Design Air Voids:	4.0% @ N=70	4.0% @ N=70	4.0% @ N=70		
Mixture Composition: (Mixture Gradation)	IL 9.5	IL 9.5	IL 9.5		
Friction Aggregate:	Mixture D	Mixture D	Mixture D		
Quality Management Program:	QCQA	QCQA	QCQA		

Note: 1) Individual lift thickness of each mix type will be no less than 3 times nominal maximum aggregate size and no more thn 6 times nominal maximum aggregate size, unless otherwise approved by the Engineer. 2) For design purposes, mixture weight for all mixes is determined to be 112.0 lb/s.y./in., unless otherwise noted.

3) Sublot sizes for PFP and QCP mixes will be 1000 tons, unless otherwise agreed to by the Engineer and the paving cotractor.

#### POLYMERIZED BITUMINOUS MATERIALS (TACK COAT) RATES

Surface Type	Residual Rate
Milled (HMA or PCC)	0.08 lb /sq ft
Existing Pavement	0.08 lb /sq ft
Fog Coat (between lifts)	0.08 lb /sq ft

### JOB SPECIFIC NOTES

- The existing bridge profile shall be determined and used to create the finish profile on the bridges.

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#### Luminaire Performance Table

#### Project

Date	Contract Number	Section Nur	nber	County	
11/26/19	68D86			Warren	
Marked Route N	lumber		Municipality		
US 67 & US 3	34		MONMOUTH		

#### Roadway

Lane Width	# of Lanes	Median Width	I.E.S. Surface Classification	Q-Zero Value
12 FT	2	N/A	R3	0.07

#### Structure

Structure			Number of Luminaires
Mounting Height	Arm Length	Set-Back	(Highmast & Sign Lighting Only)
45	N/A	30	N/A

#### Luminaire

Description	I.E.S. Lateral Distribution			I.E.S. Vertical Distribution			
LUMINAIRE, LED, ROADW	TYPE III		MED	MUIM			
Total Light Loss Factor (LLF) B-U-G Rating			Shields		Dimming Protocol		
0.684	U = 0		N/A		0 - 10V		

#### Layout

Spacing (to Nearest 5 ft)	Configuration (Opposite, Staggered, 1 Sided, or Median)
290	SINGLE SIDED

#### Performance

Average Illuminance, EAVE (fc)	Uniformity Ratio, EAVE/EMIN		
0.6	3.0		
Average Luminance, LAVE (cd/m <sup>2</sup> )	Uniformity Ratio, LAVE/LMIN	Uniformity Ratio, LMAX/LMIN	Veiling Luminance Ratio, Lv/Lave
N/A	N/A	N/A	0.4

#### Light Tresspass

Distance to ROW (behind pole)	Max. Horizontal Illuminance at ROW, EH	Max. Vertical Illuminance at ROW, Ev
N/A	N/A	N/A

#### Notes

1. Set-Back is from Edge of Pavement (white line) except for sign luminaires when it is vertical and horizontal distance from the sign to the luminaire.

2. Lighting calculations shall be performed with all luminaires oriented toward and perpendicular to the roadway.

3. Total Light Loss Factor (LLF) = the product of "Lumen Maintenance" (LLD) = 0.9, "Dirt Depreciation" (LDD) = 0.8, and "Equipment Factors" (EF) = 0.95.

4. Performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

Calculations are to be performed with 2 lanes in one direction only.

#### Printed 11/26/19

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LIEM     UNIT     TOTAL BURNED     TOTAL BURNED       200000     PERMETER ENDSION BARRIER     I     I       2800000     PERMETER ENDSION BARRIER     I     I       2800000     PERMETER ENDSION BARRIER     I     I       28000000     PERMETER ENDSION BARRIER     I     I       4000027     POLMERTZED BITURINOUS MATERIALS ITACK COATI     VIII     VIIII     I       4000038     POLMERTZED BITURINOUS MATERIALS ITACK COATI     VIIII     VIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			т	1	ROADWAY	
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40600990       TEMORARY RAMP       S0 Y0       934       934       934         40600990       FEMORARY RAMP       K       K       K       K         40601200       POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-9, 5, NTO       TON       K       K       K         40604162       POLYMERIZED HOT-MIX ASPHALT SUBFACE COURSE, IL-9, 5, MIX "D", NTO       TON       K       K       K       K         40604162       POLYMERIZED HOT-MIX ASPHALT SUBFACE COURSE, IL-9, 5, MIX "D", NTO       TON       K <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td></td<>						
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40603208       POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-9. 5, N70       TON       160       160         40004162       POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9. 5, MIX "D", N70       TON       110       110       110         4000500       COMBINATION CURB AND GUTTER REMOVAL       TON       100       3200       3200         44000500       COMBINATION CURB AND GUTTER REMOVAL       TON       100       144       144         4400100       TOT - MIX ASPHALT SHOULDERS       TON       100       144       144         48203100       ROT - MIX ASPHALT SHOULDERS       TON       100       144       144         100       TON       MIX       SPHAT       144       144       144         101       TON       MIX ASPHALT SHOULDERS       TON       160       160       160         101400       CONCRETE REMOVAL       TON       MIX ASPHALT SHOULDERS       TON       160       160       160         101401       CONCRETE REMOVAL       CU       TON       160       160       160       160       160       160       160       160       160       160       160       160       160       160       160       160       160       160       160 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td></td<>						
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40604162         POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9, 5, MIX "D", NTO         TON         110         110           44000500         COMBINATION CURB AND GUTTER REMOVAL         FOOT         320         320           44000500         COMBINATION CURB AND GUTTER REMOVAL         FOOT         320         320           48203100         HOT - MIX ASPHALT SHOULDERS         TON         144         144           48203100         HOT - MIX ASPHALT SHOULDERS         TON         144         144           50102400         CONCRETE REMOVAL         CU YD         16         16           50102400         CONCRETE REMOVAL         CU YD         16         16           50102400         CONCRETE SHELD         S0 YD         322         322           5015730         PROTECTIVE SHIELD         S0 YD         322         322           50300255         CONCRETE STRUCTURES         S0 YD         9.1         9.1           50300255         CONCRETE SUPERSTRUCTURE         CU YD         16         16           50300255         CONCRETE SUPERSTRUCTURE         S0 YD         2167         2167           5030026         RIDGE DECK GROOVING         S0 YD         2167         2167           50300000         PROTECTIV						
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50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4020	4020	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	154	154	
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE 1	EACH	20	20	
52100520	ANCHOR BOLTS, 1"	EACH	40	40	
60260100	INLETS TO BE ADJUSTED	EACH	8	8	
60608600	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-6.06	FOOT	320	320	
60618320	CONCRETE MEDIAN SURFACE, 6 INCH	SQ FT	1600	1600	
63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	1988	1988	
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2	2	
63100075	IRAFFIC BARRIER IERMINAL, TYPE 5A	EACH	2	2	
63100095			2	2	
53100083	TRAFFIC DANNIEN FERMINAL, FIFE 0		2	۷	
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	FACH	2	2	
	TARTIS BANNIN TENWINE, THE INSTEADED AND TARGENT		<u> </u>		
		FOOT	2184	2184	
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#### \*= SPECIALTY ITEM

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NO.			QUANTITY	80 FD 20 ST	
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67000400	ENCINEER'S EIELD DEELCE TYPE A		6	ĥ	
81000400			0	0	
					1
67100100	MOBILIZATION	L SUM	1	1	
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	1	1	
70100705		E A OLL		2	
10100325	IRAFFIC CONTROL AND PROTECTION, STANDARD 701425	EACH	2	2	
70100420	TRAFFIC CONTROL AND PROTECTION. STANDARD 701411	EACH	1	1	
			_	-	
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	2280	2280	
			1105	4405	
10101001	PAVEMENT MARKING BLACKOUT TAPE, (**	1 1001	1125	1125	
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	226	226	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	154	154	
70700150			6007	6007	
10300150	ISHUKI TERM PAVEMENT MARKING REMUVAL		6223	6223	
70300904	PAVEMENT MARKING TAPE. TYPE IV 4"	FOOT	13684	13684	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1171	1171	
10400200	KELUCATE TEMPUKARY CONCRETE BARRIER	F00T	1171	1171	
					<u> </u>

USER NAME = hudelsonme	DESIGNED -	REVISED -			F.A.P.	SECTION	COUNTY	TOTAL	SHEET
	DRAWN -	REVISED -	STATE OF ILLINOIS	CUMMADY OF OUANTITIES	•	[4HB:101VB-1]BR	WARREN	38	7
PLOT SCALE = 100.0000 '/ in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	JUNIMANT OF QUANTITIES			CONTRACT	T NO. 6	8D86
PLOT DATE = 10/23/2019	DATE -	REVISED -			• 313 / 310	) (ILLINOIS FED. AID	PROJECT		

					CONSTRUCT	ION CODE
					0013	
					ROADWAY	
	CODE			τοται	WARREN CO	
	CODE	ITEM	UNIT		URBAN	
	NO.			QUANIIIY	80 FD 20 ST	
	70600251	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	3	3	
	70600352	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	3	3	
			ĺ			
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	2	
*	78009000	MODIFIED URETHANE PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	31.2	31.2	
*	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	2402	2402	
			ĺ			
	78000000		FOOT	110	110	
*	18003008	MODIFIED URETHANE PAVEMENT MARKING - LINE 6		112	112	
*	78009008	MODIFIED URETHANE PAVEMENT MARKING - LINE 8"	FOOT	140	140	
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	10	10	
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	26	26	
*	78200011	BARRIER WALL RELFLECIORS, TYPE C	LACH	104	104	
*	78200020	CURB REFLECTORS	EACH	12	12	
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	10	10	
	X0326899	SOLAR-POWERED FLASHING BEACON ASSEMBLY (COMPLETE)	EACH	1	1	
	X4402020	CONCRETE MEDIAN SURFACE REMOVAL	SQ FT	1600	1600	
	X5030530	FLOOR DRAIN EXTENSION	<b>Б</b> ФСН	12	12	
*						

*=	SPE	CIA	LTY	ITEN	1

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	USER NAME = hudelsonme	DESIGNED -	REVISED -			F.A.P.	SECTION	COUNTY	TOTAL SHE	ET 0.
		DRAWN - REVISED - STATE OF ILLINOIS SUMMARY OF OUANTITIES			•	[4HB:101VB-1]BR	WARREN	38	8	
Р	PLDT SCALE = 100.0000 '/ in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	SUMMANT OF QUANTITIES			CONTRACT	NO. 68D	86
	PLOT DATE = 10/23/2019	DATE -	REVISED -			• 313 /	310 ILLINOIS FED. A	ID PROJECT		-

					CONSTRUC	TION CODE
					0013	
					ROADWAY	
	CODE			TOTAL	WARREN CO	
	CODE	ITEM	UNIT		URBAN	
	NO.			QUANIIIY	80 FD 20 ST	
	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1	1	
	Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	562	562	
	Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	20	20	
	Z0006012	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4 INCHES	SQ YD	2312	2312	
*	Z0007114	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES	L SUM	1	1	
*	Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1	
	Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	2312	2312	
	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	42	42	
	Z0034105	MATERIAL TRANSFER DEVICE	TON	414	414	
	Z0065730	SLOPE WALL SLURRY PUMPING	CU YD	10	10	
*	82110008	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	18	18	
*	82500330	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 240 VOLT, 60 AMP	EACH	1.0	1.0	
	83800650	BREAKAWAY DEVICE COUPLING, WITH STAINLESS STEEL SCREEN	EACH	64	64	
Ø	Z0076600	TRAINEES	HOUR	1000	1000	
Ø	Z0076604	TRAINEES - TRAINING PROGRAM GRADUATES	HOUR	1000	1000	
	*					

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	- 51 20									
	USER NAME = hudelsonme	DESIGNED -	REVISED -			F.A.P. RTF.	SECTION	COUNTY	SHEETS	SHEET NO.
		DRAWN -	REVISED -	STATE OF ILLINOIS	SUMMARY OF OUANTITIES	•	[4HB:101VB-1]BR	WARREN	38	9
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION SOMMARY OF COANTIES			CONTRAC	T NO. 6	8D86	
	PLOT DATE = 10/23/2019	DATE -	REVISED -			• 313 /	310 ILLINOIS FED. A	ID PROJECT		
						· · ·				

## REV. 12/03/19 REV. 12/02/19 REV. 11/25/19



N & S OF SN 094-0033

# EXISTING LEGEND

(A)BITUMINOUS CONCRETE PAVEMENT, 11.5'' BITUMINOUS CONCRETE PAVEMENT, 11.75" HMA OVERLAY 1.5" HMA OVERLAY 3'' HMA SHOULDERS 8" HMA SHOULDERS, 9.25" G H I COMB CONC CURB AND GUTTER M6.06 CONCRETE MEDIAN SURFACE SAND FILL FA-1 (J)GUARDRAIL ίκ` SUB-SURFACE DRAIN 4"

# PROPOSED LEGEND

- HMA SURFACE REMOVAL BUTT JOINT
- (2)POLYMERIZED HMA BINDER COURSE, IL-9.5, N70, VARIABLE DEPTH
- (3)POLYMERIZED HMA SURFACE COURSE, IL-9.5, MIX "D", N70, 1.5"
- (4)HMA SHOULDERS, 1.5″
- (5)HMA SHOULDERS, VARIABLE DEPTH
- (6)CONCRETE MEDIAN SURFACE REMOVAL
- $\overline{(7)}$ CONCRETE MEDIAN SURFACE, 6 INCH
- (8)SAND FILL FA-1
- (9)STEEL PLATE BEAM GUARDRAIL / TRAFFIC BARRIER TERMINAL
- (10)COMB. CONC. CURB & GUTTER M6.06

USER NAME = hudelsonme	DESIGNED -	REVISED -		TYPICAL SECTIONS				F.A.P RTE	SECTION	COUNTY	FOTAL SHEET SHEETS NO.	
	DRAWN -	REVISED -	STATE OF ILLINOIS						*	[4HB;101VB-1]BR	WARREN	38 10
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION						_		CONTRACT I	NO. 68D86
PLOT DATE = 10/23/2019	DATE -	REVISED -	SCALE		SHEET	OF	SHEETS STA.	TO STA.	ILLINOIS FED. AI		AID PROJECT	



# EXISTING LEGEND

(A)BITUMINOUS CONCRETE PAVEMENT, 11.5" BITUMINOUS CONCRETE PAVEMENT, 11.75" HMA OVERLAY 1.5" HMA OVERLAY 3'' HMA SHOULDERS 8" HMA SHOULDERS, 9.25" COMB CONC CURB AND GUTTER M6.06 CONCRETE MEDIAN SURFACE SAND FILL FA-1 (J)GUARDRAIL ίκ` SUB-SURFACE DRAIN 4"

# PROPOSED LEGEND

- HMA SURFACE REMOVAL BUTT JOINT
- (2)POLYMERIZED HMA BINDER COURSE, IL-9.5, N70, VARIABLE DEPTH
- (3)POLYMERIZED HMA SURFACE COURSE, IL-9.5, MIX "D", N70, 1.5"
- (4)HMA SHOULDERS, 1.5″
- (5)HMA SHOULDERS, VARIABLE DEPTH
- (6)CONCRETE MEDIAN SURFACE REMOVAL
- (7)CONCRETE MEDIAN SURFACE, 6 INCH
- (8) SAND FILL FA-1
- (9)STEEL PLATE BEAM GUARDRAIL / TRAFFIC BARRIER TERMINAL
- (10)COMB. CONC. CURB & GUTTER M6.06

-	USER NAME = hudelsonme	DESIGNED -	REVISED -				ТУР	ICAL SECTIONS		F.A.P BTE	SECTION	COUNTY	TOTAL	SHEET
		DRAWN -	REVISED -	STATE OF ILLINOIS			•••			*	[4HB;101VB-1]BR	WARREN	38	11
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION								CONTRAC	T NO. 6	3D86
	PLOT DATE = 10/23/2019	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		



TYPICAL SECTION #3 180TH AVE E OF SN 094-0041

# EXISTING LEGEND

(A)BITUMINOUS CONCRETE PAVEMENT, 11.5" BITUMINOUS CONCRETE PAVEMENT, 11.75" HMA OVERLAY 1.5" HMA OVERLAY 3'' HMA SHOULDERS 8" HMA SHOULDERS, 9.25" G H I COMB CONC CURB AND GUTTER M6.06 CONCRETE MEDIAN SURFACE SAND FILL FA-1 (J) GUARDRAIL ίκ` SUB-SURFACE DRAIN 4"

# PROPOSED LEGEND

- HMA SURFACE REMOVAL BUTT JOINT
- (2)POLYMERIZED HMA BINDER COURSE, IL-9.5, N70, VARIABLE DEPTH
- (3)POLYMERIZED HMA SURFACE COURSE, IL-9.5, MIX "D", N70, 1.5"
- (4)HMA SHOULDERS, 1.5"
- (5)HMA SHOULDERS, VARIABLE DEPTH
- (6)CONCRETE MEDIAN SURFACE REMOVAL
- (7)CONCRETE MEDIAN SURFACE, 6 INCH
- (8) SAND FILL FA-1
- (9)STEEL PLATE BEAM GUARDRAIL / TRAFFIC BARRIER TERMINAL
- (10)COMB. CONC. CURB & GUTTER M6.06

USER NAME = hudelsonme	DESIGNED -	REVISED -		TYPICAL SECTIONS						SECTION	COUNTY TOTAL SHEET SHEETS NO.
	DRAWN -	REVISED -	STATE OF ILLINOIS				*	[4HB;101VB-1]BR	WARREN 38 12		
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION								CONTRACT NO. 68D86
PLOT DATE = 10/23/2019	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS FED. A	D PROJECT

	RESURFACING & MEDIAN TABLE													
	HMA	TEMPORARY	POLY HMA	POLY HMA	POLY		MATERIAL	SHOULDER	CONCRETE	COMB CONC	CONCRETE	CONCRETE		
LOCATION	SURFACE	RAMP	BNDR CSE	SURF CSE	BIT	HMA	TRANSFER	RUMBLE	CURB &	CURB &	MEDIAN	MEDIAN	CURB	
	REMOVAL		IL9.5 N70	IL 9.5 MIX "D"	MATERIALS	SHOULDERS	DEVICE	STRIPS	GUTTER	GUTTER	SURFACE	SURFACE	REFLECTORS	
	BUTT JT		VAR	N70 1.5"	(TACK COAT)	VAR		16"	REMOVAL	TY -6.06	REMOVAL	6"		
	SQ YD	SQ YD	TON	TON	POUND	TON	TON	FOOT	FOOT	FOOT	SQ FT	SQ FT	EACH	
094-0033 North Side	267	267	0	25	352	17	42	180	0	0	0	0	0	
094-0033 South Side	267	267	0	25	352	17	42	180	0	0	0	0	0	
094-0041 West Side	534	200	80	30	770	55	165	160	160	160	320	320	6	
094-0041 East Side	534	200	80	30	770	55	165	160	160	160	1280	1280	6	
Totals	1602	934	160	110	2244	144	414	680	320	320	1600	1600	12	

			TRAFFIC CO	ONTROL AND ST	AGING				
	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TEMPORARY	RELOCATE	BARRIER	IMPACT ATTENUATORS	IMPACT ATTENUATORS
	CONTROL &	CONTROL &	CONTROL &	CONTROL &	CONCRETE	TEMPORARY	WALL	TEMPORARY	RELOCATE
LOCATION	PROTECTION	PROTECTION	PROTECTION	PROTECTION	BARRIER	CONCRETE	REFLECTORS	(NON-REDIRECT,	(NON-REDIRECT,
	STD 701402	STD 701411	STD 701423	(SPECIAL)		BARRIER	TYPE C	NARROW) TL 3	NARROW) TL 3
	EACH	EACH	EACH	L SUM	FOOT	FOOT	EACH	EACH	EACH
WB US 34 & SN 094-0033 - STAGE 1	0	0	1	0	461	0	40	1	0
WB US 34 & SN 094-0033 - STAGE 2	0	0	I	0	0	461	40	0	1
094-0041 AND DETOUR ROUTES	0	0	0	1	0	0	0	0	0
NB US 67 UNDER SN 094-0041 -STAGE 1	1	1	0	0	355	0	20	1	0
NB US 67 UNDER SN 094-0041 -STAGE 2	I	I	0	0	0	355	52	0	1
SB US 67 UNDER SN 094-0041 -STAGE 1	0	0	1	0	355	0	20	1	0
SB US 67 UNDER SN 094-0041 -STAGE 2	0	0			0	355	32	0	1
TOTALS	1	1	2	1	1171	1171	104	3	3

			PAVEMENT MARI	KINGS - STAG	ING AND FIN	AL					
	PAVEMENT	PAVEMENT	PAVEMENT	SHORT	SHORT	RAISED	RAISED	MODIFIED	MODIFIED	MODIFIED	MODIFIED
	MARKING	MARKING	MARKING	TERM	TERM	REFLECTIVE	REFL PVT	URETHANE	URETHANE	URETHANE	URETHANE
LOCATION	BLACKOUT	BLACKOUT	TAPE	PAVEMENT	PVT MKG	PAVEMENT	MARKER	PVT MKG	PVT MKG	PVT MKG	PVT MKG
	TAPE, 5"	TAPE, 7"	4"	MARKINGS	REMOVAL	MARKERS	REMOVAL	LINE 4"	LINE 6"	LINE 8"	LTR SYM
	FOOT	FOOT	FOOT	FOOT	SQ FT	EACH	EACH	FOOT	FOOT	FOOT	SQ FT
WB US 34 & SN 094-0033 - STAGE 1	430	375	2422	0	1206	0	0	0	0	0	0
WB US 34 & SN 094-0033 - STAGE 2	430	0	2422	0	987	0	0	0	0	0	0
WB US 34 & SN 094-0033 - FINAL	0	0	0	85	29	6	6	890	112	0	0
US 34 / 180TH AVE / SN 094-0041 - FINAL	0	0	0	69	23	4	4	1512	0	140	31.2
NB US 67 UNDER SN 094-0041 -STAGE 1	355	375	2210	0	1104	0	0	0	0	0	0
NB US 67 UNDER SN 094-0041 -STAGE 2	355	0	2210	0	885	0	0	0	0	0	0
SB US 67 UNDER SN 094-0041 -STAGE 1	355	375	2210	0	1104	0	0	0	0	0	0
SB US 67 UNDER SN 094-0041 -STAGE 2	355	0	2210	0	885	0	0	0	0	0	0
TOTALS	2280	1125	13684	154	6223	10	10	2402	112	140	31.2

USER NAME = hudelsonme	DESIGNED -	REVISED -				SCHED	OULE OF QUANTITES		F.A.P RTE	SECTION	COUNTY	TOTAL	SHEET
	DRAWN -	REVISED -	STATE OF ILLINOIS						*	[4HB;101VB-1]BR	WARREN	38	13
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION				l		* 310/	313	CONTRAC	T NO. (	68D86
PLOT DATE = 10/23/2019	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		

INLETS TO BE ADJUSTED	
LOCATION	EACH
SN 094-0033 NW APPROACH SHLDR	1
SN 094-0033 NE APPROACH SHLDR	1
SN 094-0033 SW APPROACH SHLDR	1
SN 094-0033 SE APPROACH SHLDR	1
SN 094-0041 NW APPROACH SHLDR	1
SN 094-0041 NE APPROACH SHLDR	1
SN 094-0041 SW APPROACH SHLDR	1
SN 094-0041 SE APPROACH SHLDR	1
TOTAL	8

ENGINEER'S FIELD OFFICE, TYPE A								
LOCATION	CAL MO							
JOBSITE	6							
TOTAL	6							

MOBILIZATION								
LOCATION	L SUM							
JOBSITE	1							
TOTAL	1							

CHANGEABLE MESSAGE SIGN	
LOCATION	CAL DA
EB US 34	185
180th Ave	7
NB US 67	7
SB US 67 / WB US 34	7
Ramps (4 signs x 5 days each)	20
TOTAL	226

Note: There will be a total of eight (8) signs

SOLAR-POWERED FLASHING BEACON ASSEMBLY	(COMPLE
LOCATION	L SUM
IL 94 / IL 164 SIGN JUST S OF INTERSECTION	1
OF IL 94 AND IL 164	
TOTAL	1

THE BEACON SHALL BE INSTALLED BEFORE THE CLOSURE OF 094-0041. THE BEACON IS PERMANENT AND SHALL NOT BE REMOVED WHEN THE DETOUR SIGNING IS REMOVED

			GUARD	RAIL AND EROSION	CONTROL TABLE (SI	N 094-0033)				
		PERIMETER	STEEL PLATE	TRAFFIC BARRIER	TRAFFIC BARRIER	TRAFFIC BARRIER		TERMINAL	GUARDRAIL	GUARDRAIL
	GUARDRAIL	EROSION	BEAM GUARD	BARRIER	BARRIER	BARRIER	TRAFFIC BARRIER	MARKER	REFLECTORS	AGGREGATE
LOCATION	REMOVAL	BARRIER	RAIL, TYPE A,	TERMINAL	TERMINAL	TERMINAL	TERMINAL, TYPE 1	DIRECT	TYPE A	EROSION
			6 FOOT POSTS	TYPE 2	TYPE 5	TYPE 6	(SPECIAL) TANGENT	APPLIED		CONTROL
	FOOT	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH	EACH	TON
094-0033 SOUTHEAST QUADRANT	418	451	400	1	1	0	0	0	5	108
094-0033 SOUTHWEST QUADRANT	418	451	400	1	1	0	0	0	5	108
094-0033 NORTHWEST QUADRANT	993	1025	912.5	0	0	1	1	1	12	254
094-0033 NORTHEAST QUADRANT	355	388	275	0	0	1	1	1	4	92
TOTALS	2184	2315	1987.5	2	2	2	2	2	26	562

USER NAME = hudelsonme	DESIGNED -	REVISED -		SCHEDULE OF QUANTITES						F A P RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET
	DRAWN -	REVISED -	STATE OF ILLINOIS						*	[4HB;101VB-1]BR	WARREN	38	14	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION							* 310/3	13	CONTRAC	T NO. 6	8D86
PLOT DATE = 12/4/2019	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED.	AID PROJECT		

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USER NAME = hudelsonme	DESIGNED -	REVISED -	STATE OF HUNDIS	1		PROJE	3
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION				
PLOT DATE = 10/24/2019	DATE -	REVISED -		SCALE:	SHEET	OF	

SHEETS

CATION		F.A.P RTE	SECTION			COUNTY	TOTAL SHEETS	SHEET NO.	
		*	[4HB;101VB-1]BR			WARREN	38	15	
						CONTRACT	NO. 68	3D86	
S	STA.	TO STA.			ILLINOIS F	ED. AI	ID PROJECT		



LOT DATE = 10/23/2019

DATE

REVISED

S.N. 094 SHEET SHEETS OF

SCALE:

16
8D86
5



MEDIAN SURFACE REMOVAL = 1280 FT CONCRETE MEDIAN SURFACE 6" = 1280 FT LT CURB & GUTTER REMOVAL = 80 FT LT COMB. CONC. CURB & GUTTER M6.06 = 80 FT RT CURB & GUTTER REMOVAL = 80 FT RT COMB. CONC. CURB & GUTTER M6.06 = 80 FT 180TH AVE



NOT TO SCALE

ROVEMENTS 04–0041		F.A.P RTE		SECT	TION		COUNTY	TOTAL SHEETS	SHEET NO.	
		*	[4HB;101VB-1]BR			2	WARREN	38	17	
		* 310	/313				CONTRACT	NO. 6	8D86	
5	STA.	TO STA.				ILLINOIS	FED. AI	D PROJECT		



#### GENERAL NOTES

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. Synthetic fibers shall be added to the Bridge Deck Latex Concret Overlay. See

SN 094-0033 (SB)

SN 094-0024 (NB)

ITEM	UNIT	QUANTITY
Protective Coat	Sq. Yd.	862
Bridge Deck Scarification, ¾"	Sq. Yd.	862
Bridge Deck Latex Concrete Overlay, 21/4"	Sq. Yd.	862
Bridge Deck Grooving	Sq. Yd.	814
Protective Shield	Sq. Yd.	322

### TOTAL BILL OF MATERIAL

\* On new concrete overlay only.

D ELEVATION	F.A.P. RTE.	SECTION [4HB;101VB-1]BR		COUNTY	TOTAL	SHEET NO.
OVER BNSF RR	310			WARREN	38	18
033				CONTRAC	T NO. 680	086
SHEETS		ILLINOIS	FED. AI	PROJECT		





DESIGNED - VHV	EXAMINED	Imot A All II	DATE - NOVEMBER 27, 2019		CROSS SECTION & OVERLAY DETAILS	F A P RTE	SECTION	COUNTY	TOTAL SHEET	SHEET
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES		STATE OF ILLINOIS	SN 004 0022	310	[4HB;101VB-1]BR	WARREN	38	19
DRAWN - daburdell	PASSED	& Carl Know	REVISED -	DEPARTMENT OF TRANSPORTATION	511 094-0035			CONTRAC	T NO. 68	3D86
CHECKED - VHV JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 2 OF 2 SHEETS	ILLINOIS FED.		JD PROJECT		



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#### GENERAL NOTES

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. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will hot damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Reinforcement bars designated (E) shall be epoxy coated.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than

Synthetic fibers shall be added to the Bridge Deck Latex Concrete Overlay, see Special Provisions.

Cleaning and painting of the existing strutural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams, bearings and other structural steel within 10 feet (measured along the beam) of either side of deck joints shall be cleaned per Near White Blast Cleaning (SSPC-SP10). The exterior surfaces and bottom of the bottom flange of the fascia beams shall be cleaned per Commercial Grade Power Tool Cleaning (SSPC-SP15).

The designated areas cleaned per Near White Blast Cleaning (SSPC-SP10) and per Commercial Grade Power Tool Cleaning (SSPC-SP15) shall be painted according to the requirements of Zinc rich / Epoxy / Urethane. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No 58 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue (Munsell No. 10B 3/6).

Containment of cleaning residue is required to control nuisance dust. See Special Provisions.

SSPC QP1 Certification is required for this Contract. Work to be completed under road closure.

#### TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	16.0
Concrete Structures	Cu. Yd.	9.1
Concrete Superstructure	Cu. Yd.	16.0
Preformed Joint Strip Seal	Foot	154
Reinforcement Bars, Epoxy Coated	Pound	4020
Bridge Deck Scarification, ¾"	Sq. Yd.	1450
Bridge Deck Latex Conc. Overlay, 21/4"	Sq. Yd.	1450
Bridge Deck Grooving	Sq. Yd.	1353
Protective Coat	Sq. Yd.	1450
Structural Repair of Concrete $(Depth \leq 5'')$	Sq. Ft.	42
Floor Drain Extensions	Each	12
Jack and Remove Existing Bearings	Each	20
Elastomeric Bearing Assembly, Type I	Each	20
Anchor Bolts, 1"Ø	Each	40
Slope Wall Slurry Pumping	Cu. Yd.	10
Containtment and Disposal of Non-Lead Paint Cleaning Residue	L. Sum	1
Cleaning and Painting Steel Bridge No. 1	L. Sum	1

\* Apply to new concrete and overlay only.

ELEVATION	F.A RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
U.S. RIE 67	45	[4H8;101V8-1]BR	WARREN	38	20			
1	CONTRACT NO. 68D							
HEETS	LLINCIS   FED, AID PROJECT							





LS - EAST ABUTMENT		SEC.	TION		COUNTY	TOTAL SHEETS	SHEET NO.
041	45	[4HB;101VB-1]BR			WARREN	38	22
041					CONTRACT	NO. 680	086
) SHEETS			ILLINOIS	FED. A	D PROJECT		



LS - WEST ABUTMENT	F.A. RTE	SECTION			COUNTY	TOTAL SHEETS	SHEET NO.
041		[4HB;101VB-1]BR			WARREN	38	23
0+1					CONTRACT	NO. 680	086
SHEETS			ILLINOIS	FED. A	D PROJECT		





### SECTION THRU MEDIAN



DESIGNED - VHV	EXAMINED	I inot A A a lat	DATE - NOVEMBER 27, 2019		IOINT REPLACEMENT DETAILS	F.A.	SECTION	COUNTY	SHEETS	. SHEF
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES		STATE OF ILLINOIS		45	[4HB:101VB-11BR	WARREN	38	24
DRAWN - Venkat Reddy	PASSED	Carl Prince	REVISED -	DEPARTMENT OF TRANSPORTATION	SN 094-0041		[	CONTRACT	T NO. 68	8D86
CHECKED - VHV JSB	]	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 5 OF 9 SHEETS		ILLINOIS FED	AID PROJECT		



### <u>BILL OF MATERIAL</u> (2 ABUTS. & 1 PIER)

Bar	No. Size		Length	Shape
a(E)	36 #6		30'-0''	
a1(E)	8	#6	4'-0''	
a2(E)	24	#6	27'-0''	
a3(E)	6	#5	15'-11''	
a4(E)	a4(E) 6 #5			
d(E)	12 #5		3'-0''	L
d1(E)	12	#5	2'-7''	$\sim$
d2(E)	12	#4	3'-0''	
d3(E)	12	#4	4'-1''	
Concrete	Removal	Cu.Yd.	16.0	
Concrete	Superstr	Cu.Yd.	16.0	
Reinforce Epoxy Co	ment Bar ated	Pound	2910	



Notes:

The strip seal shall be made continuous and shall have a minimum thickness of  $\frac{1}{4}$ ". 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 locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4<sup>1</sup>/<sub>2</sub>" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

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

The Maximum space between locking edge rail segments shall be  $\frac{3}{16}$ " and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

34" F-shape barrier shown, 42" F-shape similar as noted. The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



WELDED RAIL



#### LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

#### BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	154

STRIP SEAL		SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
041	45	[4HB;101VB-1]BR			WARREN	38	25
071 	1				CONTRACT	NO. 68E	086
SHEETS			ILLINOIS	FED. A	D PROJECT		



	DEACTIONS
BFAM	REACTIONS

R₽	(K)	56.9
R 4	(K)	51.7
Imp.	(K)	10.7
R (Total)	(K)	119.3

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust

Min. jack capacity = 45 Tons. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.

# 2<sup>1</sup>/<sub>8</sub>" [---- @ 1<sup>1</sup>/<sub>4</sub>"Ø Hole €≺Tvp -(+) 2 5½" 1/2"

SIDE RETAINER B Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (36 required)

5½''

 $\frac{1}{2}''$ 

CHECKED - JSB       ENGINEER OF STRUCTURAL SERVICES       45 [4HB;101VB-1]BR       WAREN       38 26         DRAWN       daburdell       PASSED       Active for the structural services       Revised -       CONTRACT NO. 68086         CHECKED - VHV       JSB       Revised on percess and structures       Revised -       Revised -       CONTRACT NO. 68086	DESIGNED - VHV	EXAMINED	Imot A All 4	DATE - NOVEMBER 27, 2019		BEARING DETAILS	F.A. RTE	SECTION	COUNTY TOTAL SHEET SHEETS NO.
DRAWN - daburdell PASSED A Conference on Structures Revised - CONTRACT NO. 68D86	CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES			SN 094-0041	45 [	[4HB;101VB-1]BR	WARREN 38 26
	DRAWN - daburdell	PASSED	& Carl Prayey	REVISED -	DEPARTMENT OF TRANSPORTATION	517 034 0041			CONTRACT NO. 68D86
	CHECKED - VHV JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 7 OF 9 SHEETS		ILLINOIS FED. A	D PROJECT



#### EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

#### BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	20
Jack and Remove Existing Bearings	Each	20
Anchor Bolts, 1"Ø	Each	40





\_\_\_\_\_

\* Epoxy grout n(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.





Bar	No.	Size	Length	Shape
h(E)	28	#5	10'-6''	
n(E)	112	#5	2'-5''	
s(E)	48	10'-3''		
Concrete	Structur	Cu. Yd.	9.1	
Reinforce	ment Bar	Pound	1110	
L DOXY CO	aleu I Danain			
Structura Concrete to or Les	і кераіг (Depth E s Than 5	Sq. Ft.	42	

BILL OF I	MATERIAL
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				-		-	
EXTENSIONS	F.A RTE	SECTION		COUNTY	TOTAL SHEETS	SHEET NO	
141	45	[4HB;101VB-1]BR			WARREN	38	27
					CONTRACT	NO 68L	)86
SHEETS			ILLINOIS	FED. AIL	D PROJECT		
				_			



See TABLE Span I

R 12°x4-

40

R 14' x I'NTR-

sp D

or N.Abut.

Shear Stud Spacing

<u>A 3 4 54 exterior</u> face beams A J only. See Defail A. sheet IL <u>End of</u> Girder

4 - Spa. @ 1/2" cts. =

12 - 5 R 44'X Y'N.T.R.-5

32 3pa 8 8 6











DESIGNED - VHV CHECKED - JSB	EXAMINED	ENGINEER OF TRUCTURAL SERVICES	DATE - NOVEMBER 27, 2019	STATE OF ILLINOIS	FOR INFORMATION ONLY - EXIS
DRAWN - daburdell	PASSED	Cash Cash	REVISED -	DEPARTMENT OF TRANSPORTATION	SN 094-00
CHECKED - VHV JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 9 OF 9



# **DETOUR PLAN SHEETS**

USER NAME = hudelsonme	DESIGNED -	REVISED -		DETOUR PLAN SHEETS					F.A.P BTE	SECTION	COUNTY	TOTAL	SHEET NO.
	DRAWN -	REVISED -	STATE OF ILLINOIS			DEIOC			*	[4HB;101VB-1]BR	WARREN	38	29
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION						* 310/313	3	CONTRAC	T NO. 6	8D86
PLOT DATE = 10/23/2019	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		



# **DETOUR PLAN NOTES:**

ALL SIGNS SHALL BE GROUND POST MOUNTED EXCEPT WHERE NOT POSSIBLE-RESIDENT ENGINEER'S DISCRETION.

SIGN LOCATIONS MAY NEED RELOCATED FOR VISIBILITY/ OTHER SIGN CONFLICTS.

ROUTE SIGNS SHALL CONFORM TO STANDARD ROUTE SIGNS. EAST/WEST SHALL BE BLACK ON WHITE. OTHER STREET

DESIGNATIONS SHALL BE BLACK ON WHITE-6 INCH LETTER HEIGHT.

A MINIMUM 21 DAY NOTICE- IN WRITING-SHALL BE GIVEN TO THE RESIDENT ENGINEER AND TRAFFIC OPERATIONS ENGINEER (ANNA GHIDINA) PRIOR TO CLOSING OF THE BRIDGE.

TYPICAL SIGN SPACING SHALL BE 500' ON TWO LANE ROADS, 1000' ON NB US 67, 350' ON SB US 67, AND 200' ON RESIDENTIAL

STREETS.

#### **TEMPORARY RUMBLE STRIPS**

TEMPORARY RUMBLE STRIPS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS (THREE RUMBLE STRIPS EACH LOCATION FOR A TOTAL OF TWELVE RUMBLE STRIPS): - NB IL 94 SOUTH OF IL 94 / IL 164 INTERSECTION

- SB IL 94 NORTH OF IL 94 / IL 164 INTERSECTION
- NB IL 135 SOUTH OF IL 135 / IL 164 INTERSECTION
- SB IL 135 NORTH OF INTERSECTION OF IL 135 / IL 164.

TEMPORARY RUMBLE STRIPS SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (SPECIAL).

# **DETOUR PLAN SHEETS**

USER NAME = hudelsonme	DESIGNED -	REVISED -				DETOU	R PLAN SHEETS		F.A.P RTE	SECTION	COUNTY	TOTAL	SHEET NO.
	DRAWN -	REVISED -	STATE OF ILLINOIS						*	[4HB;101VB-1]BR	WARREN	38	30
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION						* 310/313	}	CONTRACT	T NO. 68	D86
PLOT DATE = 12/4/2019	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		



# **DETOUR PLAN SHEETS**

USER NAME = hudelsonme	DESIGNED -	REVISED -				DETOL	JR PLAN	SHEETS		F A P RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -								*	[4HB;101VB-1]BR	WARREN	38	31
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION							* 310/313	3	CONTRACT	T NO. 68	D86
PLOT DATE = 10/23/2019	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. /	AID PROJECT		



### CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

	Ι	ALER RATES	
SPECIAL NOTE	ELEMENT	MAINLINE INTERSTATES &	ALL
NUMBER		4-LANE EXPRESSWAYS	OTHERS
1	BUTT JOINT	1:480	1:240
_	TAPER RATE		
2	TEMPORARY RAMP	1:80	1:40
	TAPER RATE		

TABLE A TAPER RATES



CASE 2 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

01-01-9	7 RENUM. C-23.01, NEW REVISION BOX	P. 08-2	1-13 MAJOR MODIFICATIONS	R.D.				F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
04-01-9	7 CORRECTION TO DEPTH	A. 04-1	2-16 MINOR CORRECTIONS	R.D.	STATE OF ILLINOIS	BUTT JOINTS		•	[4HB;101VB-1]BR	WARREN	38	32
09-15-0	5 REVISED DESIGNER NOTE N	A.A. 02-14	-17 ADDED NOTE 5	R.D.	DEPARTMENT OF TRANSPORTATION		SHT. 1 OF 3	* 310/31	13	CONTRAC	CT NO. 68	JD86
10-16-0	5 REVISED TO 2007 SPEC.	A. 07-16	-19 Wording and Spelling corrections	R.D.		NOT TO SCALE	CADD STD. 406101-D4	FED. ROAD	DIST. NO. ILLINOIS FED.	ID PROJECT		

#### GENERAL NOTES

1. The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.

2. The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.

3. The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.

4. The length of butt joint is based on the taper rate times change in cold milling depth within the butt joint pay limits, unless otherwise indicated.

5. Temporary ramps are paid for separately and not included in the cost of the butt joints.



## CASE 3 : HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING) TIE-IN TO EXISTING BITUMINOUS TAPER



					F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET
		STATE OF ILLINOIS	BUTT JOINTS		•	[4HB;101VB-1]BR	WARREN	38	33
		DEPARTMENT OF TRANSPORTATION		SHT. 2 OF 3	* 310/313		CONTRAC	CT NO. (	58D86
			NOT TO SCALE	CADD STD. 406101-D4	FED. ROAD D	IST. NO. ILLINOIS FED.	AID PROJECT		



Prop. Hot Mix Asphalt surf. removal (cold milling) per plans.

\_\_\_\_\_

\_\_\_\_\_

		F.A.P RTE.	SEC	TION	COUNTY	TOTAL SHEETS	SHEET NO.
NIS		•	[4HB;10	1VB-13BR	WARREN	38	34
	SHT. 3 OF 3	* 310	/313		CONTRAC	T NO. 6	8D86
	CADD STD. 406101-D4	FED. RO	DAD DIST. NO.	ILLINOIS FED.	AID PROJECT		



01-26-17 REVISED

R.D.

#### GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

- 2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
- 3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.
- 4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
- 5. The Contractor shall have the option of placing the guardrail before or filled and the aggregate returned to line and grade.
- 6. Materials shall meet the following requirements:
- A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.
- B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.

NOT TO SCALE



1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.

after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be

50'-0" (15.2m) typ.

\_\_\_\_Match proposed shoulder material (HMA or Aggregate) 18//18// ∕∦∕

Guardrail Aggregate Erosion Control

	F.A.P RTE	SEC	TION	COUNTY	TOTAL SHEETS	SHEET NO.
IRUL IREAIMENIS	•	[4HB <b>:</b> 10	1VB-1]BR	WARREN	38	35
SHT. 1 OF 2	* 310	/313		CONTRACT	NO. 6	8D86
CADD STD. 630101-D4	FED. RO	DAD DIST. NO.	ILLINOIS FED. A	D PROJECT		





08-02 ADD CROSSWALK DMNS. WITH T.S.

M.A.

**DEPARTMENT OF TRANSPORTATION** NOT TO SCALE

	F.A.P RTE.	SEC	TION	COUNTY	TOTAL SHEETS	SHEET NO.
MARKINGS	•	[4HB <b>;</b> 10	1VB-13BR	WARREN	38	37
SHT. 1 OF 2	* 310	/313		CONTRACT	NO. 6	8D86
CADD STD. 780001-D4	FED. RC	AD DIST. NO.	ILLINOIS FED. AI	D PROJECT		



IGE	CONTINUOUS	(Includes Width Transitions for Median and Left Turn Lane Introductions)
km∕h)	50' (15m)	15′ (5m)
km∕h)	75' (23m)	20′ (6m)
ו)	150' (46m)	30' (9m)

				F.A.P RTE.	SEC	TION	COUNTY	TOTAL SHEETS	SHEET NO.
MARKINGS				•	[4HB;10	1VB-13BR	WARREN	38	38
SHT. 2			HT. 2 OF 2	* 310	/313		CONTRACT	NO. 6	8D86
	CADD	STD.	780001-D4	FED. RC	AD DIST. NO.	ILLINOIS FED.	AID PROJECT		

ITEM DESCRIPTION	UNIT
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH
LIGHTING CONTROLLER, PEDESTAL MOUNTED, 240VOLT, 60AMP	EACH
BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH

ROUTE	LOCATION	ex. Luminaire Mounting Height	EX. LUMINAIRE TYPE AND WATTAGE	ex. Luminaire Voltage	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	
US 67	US 34/180TH AVE.	45 FT. (POLES)	HPS, 250W, MULTIMOUNT	240 VOLT	18	FURNI EX. TE AND II FUSEI WIRIN HIGHV

FILE NAME =	USER NAME = \$USER\$	DESIGNED -	REVISED -			
\$FILEL\$		DRAWN -	REVISED -	STATE OF ILLINOIS	OV OV	ERHEAD LIGHTING SCHED
	PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION		
	PLOT DATE = \$DATE\$	DATE -	REVISED -		SCALE:	

IES
TOTAL QTY.
18.0
1.0
64.0

# NOTES

IISH 1 FT. ARM AND INSTALL ON ENON TOP LIGHT POLES, FURNISH INSTALL NEW SURGE ARRESTOR, HOLDER, FUSES, AND LUMINAIRE NG IN ACCORDANCE WITH WAY STANDARD 821101-02

					LIGHTING SH	EET 1 O	F 6
DULE OF QUANTITIES		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		310	[448-101VB-118P	WARREN	Z	х	
		313		CONTRACT	NO. 6	8D86	
	STA.	TO STA.		ILLINOIS FED. AID PROJECT			

	CONSTRUCTION NOTES
1.	EXISTING UTILITY LOCATION INFORMATION IS NOT SHOWN ON THE PLAN SHEETS. THE CONTRACTOR SHALL FIELD VERIFY
	AND PRIVATELY OWNED FACILITIES PRIOR TO THE INSTALLATION OF ANY COMPONENTS. THE CONTRACTOR SHALL VERIF
	AND TERRAIN PRIOR TO COMMENCING WORK ON THE PROJECT.
2.	THE LOCATION OF ALL UTILITIES AND PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIVATELY OWNED FACILITIES FIELD FA
	COMPONENTS.
3.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING IDOT ELECTRICAL FACILITIES AT HIS/HER OWN EXPE
	CONTRACTOR SHALL ALSO BE LIABLE FOR ANY DAMAGE TO IDOT FACILITIES RESULTING FROM INACCURATE LOCATING.
4.	ELECTRICAL WORK SHALL CONFORM WITH NATIONAL, STATE, AND LOCAL CODES.
5.	THE CONTRACTOR SHALL PROVIDE ELECTRICAL CABLE SLACK IN ACCORDANCE WITH ARTICLE 873.03 UNLESS SPECIFIED
6.	ALL SURPLUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICAT
7.	ANY MAINTENANCE OF EXISTING ELECTRICAL FACILITIES WILL BE CONSIDERED EXTRA WORK IN ACCORDANCE WITH AR
	SPECIFICATIONS.
8.	THE EXISTING LIGHTING SHALL REMAIN IN OPERATION DURING THE INSTALLATION OF THE PROPOSED LUMINAIRES.
9.	REMOVAL OF EXISTING ITEMS (LUMINAIRES, WIRING, ETC.) WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDE
	PROPOSED ITEMS. THE CONTRACTOR SHALL DISPOSE OF ALL ITEMS OFF THE RIGHT OF WAY.
10.	THE CONTRACTOR SHALL FURNISH AND INSTALL NEW FUSEHOLDERS, FUSES, SURGE ARRESTORS, AND WIRING FOR EAC
	WITH HIGHWAY STANDARD 821101-02. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE PROPOSED LU
11.	THE CONTRACTOR SHALL REMOVE HPS LAMPS FROM THE EXISTING FIXTURES PRIOR TO DISPOSAL. THE HPS LAMP SHALL
	RECYCLING FACILITY. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE PROPOSED LUMINAIRES.
12.	THE CONTRACTOR SHALL FURNISH 1 FT. GALVANIZED STEEL LUMINAIRE ARMS AND INSTALL THEM ONTO THE EXISTING TE
	OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE PROPOSED LUMINAIRES.
13.	THE CONTRACTOR SHALL FURNISH AND INSTALL NEW STAINLESS STEEL OR PERFORATED ALUMINUM SCREENING AROUNI
	CONTRACTOR SHALL REMOVE THE EXISTING SCREEN AND DISPOSE OF IT OFF THE RIGHT OF WAY. THE PROPOSED SCRE
	ON THE TOP AND BOTTOM OF THE BREAK-AWAY COUPLINGS TO PREVENT RODENT ENTRY AND NO GAPS IN EXCESS OF 0.
	COST OF THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SC
14.	THE CONTRACTOR SHALL REMOVE THE BREAKAWAY COUPLINGS FROM THE EXISTING LIGHT POLES. THE CONTRACTOR S
	BREAKWAY COUPLINGS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL FU
	OTHER ITEMS REQUIRED FOR INSTALLATION OF THE BREAKAWAY COUPLINGS. THE COST OF THIS WORK SHALL BE INCLU
	"BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN".

FILE NAME =	USER NAME = \$USER\$	DESIGNED -	REVISED -			
\$FILEL\$		DRAWN -	REVISED -	STATE OF ILLINOIS		LIGHTING CONSTRUC
	PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION		
	PLOT DATE = \$DATE\$	DATE -	REVISED -		SCALE:	

# Y THE LOCATION OF ALL UTILITIES FY EXISTING FIELD CONDITIONS

IOR TO THE INSTALLATION OF ANY

ENSE IF REQUIRED. THE

D OTHERWISE.

TION.

RTICLE 109.04 OF THE STANDARD

D IN THE UNIT BID PRICES FOR THE

CH LUMINAIRE IN ACCORDANCE UMINAIRES.

L BE DISPOSED OF AT A CERTIFIED

NON TOP LIGHT POLES. THE COST

ID AN EXISTING LIGHT POLE. THE EEN SHALL BE SECURELY BANDED .25 INCH WILL BE ALLOWED. THE CREEN".

SHALL FURNISH AND INSTALL NEW URNISH ALL HARDWARE AND UDED IN THE PAY ITEM

 
 LIGHTING SHEET 2 OF 6

 F.A.P. RTE.
 SECTION
 COUNTY
 TOTAL SHEET
 SHEET SHEET

 310 313
 [4HB;101VB-1]BR
 WARREN
 Z
 X

 STA.
 TO STA.
 ILLINOIS | FED. AID PROJECT



FILE NAME =	USER NAME = howalder	DESIGNED -	REVISED -		PROPOSED I	IIMINAIRE AND RREAKAV			F.A.P.	SECTION	COUNTY	TOTAL	L SHEET
0:\common\GEN\Transfer - bureaus\68D86	- US 67 & US 34 Overhead Lighting Addendum	NG BANN US 67 & US 34 Lighting Addend∟	RE₩35ED25-19).dgn	STATE OF ILLINOIS			ENUIC INTER		310		WARREN	Z	X
	PLOT SCALE = 38.0588 '/ in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	03	01/34 & US 34/1601H AV		CHANGE	313	L4HB:IOIVB-IJBR	CONTR	ACT NO.	68D86
	PLOT DATE = 11/30/2019	DATE -	REVISED -		SCALE:		STA.	TO STA.		ILLINOI	FED. AID PROJECT		

	3 O	20	1	
CONT DEACH	PEDM 24	<u>OV 60</u>		



#### Luminaire Performance Table

#### Project

Date	Contract Number	Section Nur	nber	County	
11/14/19	68D86	N/A		Warren	
Marked Route N	umber		Municipality		
US 34/67 & L	JS 34/180 Ave.		City of Monmouth		

#### Roadway

Lane Width	# of Lanes	Median Width	I.E.S. Surface Classification	Q-Zero Value
12 ft	2	0 FT	R3	0.07

#### Structure

Structure		Number of Luminaires	
Mounting Height	Arm Length	Set-Back	(Highmast & Sign Lighting Only)
45'	1'	30'	N/A

#### Luminaire

Description		I.E.S. Lateral Distribution		I.E.S	I.E.S. Vertical Distribution		
Roadway Output Designation H		Type III		Medium			
Total Light Loss Factor (LLF) B-U-G Rating			Shields		Dimming Protocol		
0.684	U = 0		N/A		0-10V		

#### Layout

Spacing (to Nearest 5 ft)	Configuration (Opposite, Staggered, 1 Sided, or Median)
280 ft	1 sided

280 ft

#### Performance

Average Illuminance, EAVE (fc)	Uniformity Ratio, EAVE/EMIN		1
0.9	3.0:1		
Average Luminance, LAVE (cd/m <sup>2</sup> )	Uniformity Ratio, LAVE/LMIN	Uniformity Ratio, LMAX/LMIN	Veiling Luminance Ratio, Lv/Lave
0.6	3.5:1	6.0:1	0.3:1

#### Light Tresspass

Distance to ROW (behind pole)	Max. Horizontal Illuminance at ROW, E⊢	Max. Vertical Illuminance at ROW, E <sub>⊻</sub>

N/A	N/A	N/A
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#### Notes

1. Set-Back is from Edge of Pavement (white line) except for sign luminaires when it is vertical and horizontal distance from the sign to the luminaire.

 Lighting calculations shall be performed with all luminaires oriented toward and perpendicular to the roadway.
 Total Light Loss Factor (LLF) = the product of "Lumen Maintenance" (LLD) = 0.9, "Dirt Depreciation" (LDD) = 0.8, and "Equipment" Factors" (EF) = 0.95.

4. Performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

Calculations shall be performed with 2 lanes in each direction with a 0' wide median

#### Printed 11/30/19

										LIGHTING S	SHEET 4 OF 6
FILE NAME =	USER NAME = \$USER\$	DESIGNED -	REVISED -				ANCE TARIE	F.A.P. SECTION	Cr	JUNTY	TOTAL SHEET
\$FILEL\$		DRAWN -	REVISED -	STATE OF ILLINOIS				310	W	ARREN	Z X
	PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	03	5 34/67 & US 34/1801H AV	ENUE INTERCHANGE	313 [4HB:101VB-1]	JR	CONTRACT	T NO. 68D86
	PLOT DATE = \$DATE\$	DATE -	REVISED -		SCALE:		STA. TO STA.	I	LLINOIS FED. AIT	PROJECT	-



-	USEN NAME - #USEN#	DESIGNED -	REVIJED -		1	PROPOSED LIGHTING
		DRAWN -	REVISED -	STATE OF ILLINOIS	1	
	PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	US	34⁄67 & US 34⁄180T
	PLOT DATE = \$DATE\$	DATE -	REVISED -		SCALE:	

(Total of four 20A 2-Pole breakers required) (Includes two spare circuit breakers)

	LIGHTING SHEET 5 OF 6								
NTROLLER DETAIL VENUE INTERCHANGE		F.A.P. RTE	SECTION	С	COUNTY		SHEET NO.		
		310		. W	ARREN	Z	х		
		313		·	CONTRACT NO. 68D86				
	STA. TO STA.		ILLI	INOIS FED. AI	PROJECT				

