11-5-2021 LETTING ITEM 034

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED **HIGHWAY PLANS**

FAP ROUTE 330 (US 45/52) SECTION (16BR)BRR **PROJECT NHPP-WEJ0(030) BRIDGE REPAIRS** OVER SOUTH BRANCH ROCK CREEK **KANKAKEE COUNTY**

C-93-022-22



GROSS LENGTH = 116.54 FT. = 0.022 MILE NET LENGTH = 116.54 FT. = 0.022 MILE

LICENSED 08-10-21 DATE

INDEX OF	SHEETS
SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	GENERAL NOTES
34.	SUMMARY OF QUANTITIES
5.	GENERAL PLAN AND ELEVATION
6.	PIER CAP REPAIR DETAILS
7.	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
8.	EXISTING ABUTMENTS
9.	EXISTING EXPANSION JOINTS
10.	CAUSEWAY/WORK PAD DRAWING
11.	TEMPORARY INFORMATION SIGNING

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-08	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS \geq 45 MPH
701311-03	LANE CLOSURE 2L, 2W MOVING OPFRATIONS-DAY ONLY
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS

ESCA

ESCA PROJECT NO. 1321.09

TOWNSHIP: MANTENO

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

PROJECT ENGINEER: BRAD DUNCAN, P.E. UNIT CHIEF: DARCY CARPENTER

CONTRACT NO. 66F71

0

0

0







ADT:

FUNCTIONAL CLASSIFICATION: OTHER PRINCIPAL ARTERIAL 6550 (2019), 14% TRUCKS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION August 12, 21 SUBMITTED_ ma thing DIRECTOR IGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

GENERAL NOTES

WHEELED.

2. IN USING HIGHWAY STANDARD 701321, THE STOP BAR NORTH OF THE BRIDGE SHALL BE PLACED JUST NORTH OF THE TWO FIELD ENTRANCES. BOTH FIELD ENTRANCES SHALL REMAIN OPEN DURING CONSTRUCTION. SIGNAL HEADS ARE NOT REQUIRED AT FIELD ENTRANCES. A NO RIGHT TURN SIGN (R3-1-2424) SHALL BE PLACED AT THE WEST FIELD ENTRANCE AND A NO LEFT TURN SIGN (R3-2-2424) SHALL BE PLACED AT THE EAST FIELD ENTRANCE TO PROHIBIT TURNING MOVEMENTS FROM THE ENTRANCES ONTO US 45/52 TOWARD THE BRIDGE WHILE THIS STANDARD IS BEING USED. COST IS INCLUDED IN TRAFFIC CONTROL AND PROTECTION, STANDARD 701321.

3. COMMITMENTS: NONE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT THREE AS BUILT INFORMATION

SUPERVISING CONSTRUCTION FIELD END

RESIDENT ENGINEER / TECHNICIAN

START & END DATES OF CONSTRUCTION:

INSPECTORS:

ESCA CONSULTANTS, INC.	USER NAME = nhc ESCA PROJECT NO. 1321.09	DESIGNED - ELH DRAWN - NHC	REVISED - REVISED -	STATE OF ILLINOIS		GENERAL NOT
	PLOT SCALE = 0.1667 / in.	CHECKED - ELH	REVISED -	DEPARTMENT OF TRANSPORTATION		
	PLOT DATE = 8/10/2021	DATE - 07/21	REVISED -		SCALE: NA	SHEET 1 OF 1 SHEETS

IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16, THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.17 REGARDLESS IF TRACK MOUNTED OR WHEFLED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT THREE

١G	INEER	PREPARED BY:							
			DISTRI	CT STUDIES	5 & P	LANS	ENGINEE	R	
N		DATE:							
		EXAMINED BY:							
			DISTRI	CT CONSTR	RUCTIO	DN E	NGINEER		
			DISTRI	CT MATERI	ALS E	NGIN	IEER		
			DISTRI	CT OPERAT	IONS	ENG	INEER		
			F A P RTE	SECT	ION		COUNTY	TOTAL SHEETS	SHEET NO.
101	FES		330	(16BR)BRR		KANKAKEE	11	2
TS	STA.	TO STA.			ILLINOIS	FED. A	CONTRACT D PROJECT	NO. 66	5F71

	SUMMARY OF QUANTITIES		80% FED 20% STATE
CODE			BRIDGE
NO.	ITEM	UNIT	0013
			S.N. 046-0047
50300225	CONCRETE STRUCTURES	CU YD	8.0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1050
50800515	BAR SPLICERS	EACH	12
52000005	PREFORMED JOINT SEAL 1"	FOOT	81
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
/0100450			-
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28
70300100	SHORT TERM PAVEMENT MARKING	FOOT	100
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	34
70400100	TEMPORARY CONCRETE BARRIER	FOOT	350
70400200			250
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	350
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1520

*= SPECIALTVITEM

8C A	USER NAME = nhc	DESIGNED - ELH	REVISED -					
SCA	ESCA PROJECT NO. 1321.09	DRAWN - NHC	REVISED -	STATE OF ILLINOIS				
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	DEPARTMENT OF TRANSPORTATION				
	PLOT DATE = 8/10/2021	DATE - 07/21	REVISED -		SCALE: NA			



SHEET	1 OF 2 SHEETS	STA.	TO STA.		ILLINOIS FED. A	
				330	(16BR)BRR	KANKAKEE 11 3 CONTRACT NO. 66F71
	SUMMARY OF QUA	ANTITIES		F.A.P. RTE.	SECTION	COUNTY TOTAL SHEET SHEETS NO.
FOOT	1520					
EACH	2					
EACH	2					
FOOT	350					
FOOT	350					
FOOT	250					
וז עָנ	54					
SQ FT	34					
	100					
FOOT	100					
CAL DA	28					
EACH	1					
L SUM	1					
EACH	1					
L SUM	1					
FOOT	81					
EACH	12					
POUND	1050					
CU YD	8.0					
	S.N. 046-0047					
UNIT	BRIDGE 0013					
	80% FED 20% STATE					
	80% FFD					

	SUMMARY OF QUANTITIES 80% FED 20% STATE					
			20% STATE			
CODE	ITEM	UNIT	BRIDGE 0013			
NO.	11 LIVI	UNIT	S.N. 046-0047			
			5.141 040 0047			
Z0001905	STRUCTURAL STEEL REPAIR	POUND	2460			
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	45			
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	42			

ESCA	USER NAME = nhc	DESIGNED -	ELH
	ESCA PROJECT NO. 1321.09 PLOT SCALE = 0.1667 ' / in.	DRAWN - CHECKED -	NHC ELH
	PLOT SCALE = 0.1667 ' / in. PLOT DATE = 8/10/2021	CHECKED - DATE -	ELH 07/21

FSCA	USER NAME = nhc	DESIGNED - ELH	REVISED -			
ESCA CONSULTANTS, INC.	ESCA PROJECT NO. 1321.09	DRAWN - NHC	REVISED -	STATE OF ILLINOIS		SUMMARY OF QUANTITIES
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	DEPARTMENT OF TRANSPORTATION		
	PLOT DATE = 8/10/2021	DATE - 07/21	REVISED -		SCALE: NA	SHEET 2 OF 2 SHEETS STA.

NTITIES		A.P. RTE. 330	SECTION (16BR)BRR	COUNTY	TOTAL SF SHEETS 1	HEET HOO4

EXISTING STRUCTURE:

SN 046-0047 was constructed in 1967 as FA-45, Section 16-BR. The bridge had a PPC deck beam superstructure on concrete piers and abutments on spread footings. In 2005, the three-span structure was rehabilitated as FAP 330, Section 16BR. The superstructure was replaced with PPC deck beams with a concrete wearing surface, and the abutments and piers were repaired. The existing bridge is 116'-6 1/2" long back-to-back of abutments and 40'-0" wide out-to-out of superstructure.

The bearing seats shall be restored and the pier caps widened at both piers. The abutments and expansion joints shall be repaired. Traffic to be maintained utilizing stage construction.

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. 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 work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- 3. 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 operations shall be replaced using an approved bar splicer or anchorage system. Cost included in Concrete Structures.
- 4. The quantity of Concrete Structures includes an estimated quantity to replace spalled areas and loose or delaminated areas that are removed from the existing piers. The limits of concrete removal will be determined in the field by the Engineer, except in no case shall the removal go deeper than six inches. The Contractor shall use extreme care during concrete removal so as not to damage the PPC deck beams. The cost of concrete removal is included in Concrete Structures.
- 5. Self-consolidating Class SI concrete shall be used at the pier caps.
- 6. The proposed reinforcement and threaded bars have been located to clear existing reinforcement and dowel rods based on the information provided on existing bridge plans. Small location adjustments may be made as approved by the Engineer; however, adjustments may lead to other conflicts since the piers contain dowel rods from multiple deck beam superstructures.
- 7. Concrete removal shall not begin until after traffic has been shifted to the opposite side of the bridge. Stage I traffic control shall remain in place until the Stage I concrete has cured and Stage I channels have been installed. Stage II traffic control shall remain in place until the Stage II concrete has cured and Stage II channels have been installed. The Contractor shall coordinate the work to avoid placing heavy construction loads on PPC deck beams with reduced support at the piers.
- 8. Structural Repair of Concrete (Depth Equal To Or Less Than 5 Inches) shall be used to repair the abutments as determined in the field by the Engineer,
- 9. The gland component in the preformed joint seal expansion joint at each abutment shall be replaced. Paid for as Preformed Joint Seal 1".

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Structures	Cu. Yd.	8.0
Reinforcement Bars, Epoxy Coated	Pound	1050
Bar Splicers	Each	12
Structural Steel Repair	Pound	2460
Structural Repair of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq. Ft.	45
Preformed Joint Seal 1"	Foot	81







S. Abut. Pier ELEVATION





6'-6" clearance on 05/19/2021

NEW CONSTRUCTION

DESIGNED - ELH 07/21 REVISED JSER NAME = nnc ESCA ESCA PROJECT NO. 1321.09 CHECKED - RDP 07/21 REVISED OT SCALE = 0:2 " / in DRAWN NHC 09/21 REVISED SHEET 1 OF 3 SHEETS PLOT DATE = 9/22/2021 CHECKED - ELH 09/21 REVISED

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PIER REPAIR SCOPE OF WORK

- Setup TC&P 701321 to shift traffic to the NB lane of US 45/52.
- Perform cap repair at Pier 1 and Pier 2 under SB lane. 2. Adjust TC&P 701321 to shift traffic to the SB lane of US 45/52. 3.
- 4. Perform cap repair at Pier 1 and Pier 2 under NB lane.
- 5. Remove TC&P 701321 and restore two-lane, two-way traffic.



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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.

Threaded splicer bar length = min. lap length + $1\frac{1}{2}$ " + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

(All components shall be provided from one supplier)

Location	Bar size	No. assemblies required	Minimum Iap length
pier caps	#4	12	2'-11"



TODIV	BSD-1	1-1-2020								
ΤOT	ESCA	USER NAME = nhc	DESIGNED - ELH 05/21	REVISED -		BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS	F.A.P.	SECTION	COUNTY T	TOTAL SHEET
AME :	USER NAME = nhc ESCA PROJECT NO. 1321.09	CHECKED - RDP 05/21	REVISED -	STATE OF ILLINOIS		330	(16BR)BRR	KANKAKEE	11 7	
DEL		PLOT SCALE = 0:2 ':" / in.	DRAWN - NHC 05/21	REVISED -	DEPARTMENT OF TRANSPORTATION	STRUCTURE NO. 046–0047			CONTRACT N	VO. 66F71
PILE	Left Mo	PLOT DATE = 8/10/2021	CHECKED - RDP 05/21	REVISED -		SHEET 3 OF 3 SHEETS		ILLINOIS	FED. AID PROJECT	

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STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
NA		

Notes:

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications. See approved list of bar splicer assemblies and mechanical splicers for alternatives.



TO STA. ILLINOIS FED. AID PROJEC





	USER NAME = nhc	DESIGNED - D3	REVISED -		CAUSEWAY/WORK PAD DRAWING	F A P RTF	SECTION	COUNTY TOTAL SHEET	
		CHECKED - D3	REVISED -	STATE OF ILLINOIS		330	(16BR)BRR	KANKAKEE 11 10	
	PLOT SCALE = 0:2 ':" / in.	DRAWN - D3	REVISED -	DEPARTMENT OF TRANSPORTATION	STRUCTURE NO. 046–0047			CONTRACT NO. 66F71	
-	PLOT DATE = 8/10/2021	CHECKED - D3	REVISED -	SHEET 1 OF 1 SHEETS			ILLINOIS FED. AID PROJECT		



TEMPORARY INFORMATION SIGNING

NOTES:

- 1. USE 6" D BLACK LETTERING ON FLUORESCENT ORANGE BACKGROUND.
- ERECT SIGNS AT LOCATIONS IN ADVANCE OF THE "ROAD CONSTRUCTION AHEAD" SIGNS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN () WITH INSTALLED PANEL () A MINIMUM OF ONE WEEK PRIOR TO THE START OF THE LANE CLOSURE.
- 4. REMOVE PANEL ON THAT DATE.
- 5. SEE SPECIAL PROVISION "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
- 6. WILL BE PAID FOR PER SQ FT AS "TEMPORARY INFORMATION SIGNING". EACH SIGN = 21 SQ FT AND THE DATE PANEL WILL NOT BE MEASURED SEPARATELY FOR PAYMENT.

720-8

CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - ELH	REVISED -	STATE OF ILLINOIS				SECTION	COUNTY TOTAL SHEET SHEETS NO.
	ESCA PROJECT NO. 1321.09	DRAWN - NHC	REVISED -		TEMPORARY INFORMATION SIGNING		330	(16BR)BRR	KANKAKEE 11 11
	PLOT SCALE = 0.1667 / in	CHECKED - ELH	REVISED -	DEPARTMENT OF TRANSPORTATION					CONTRACT NO 66F71
	PLOT DATE = 8/10/2021	DATE - 07/21	REVISED -		SCALE: NA	SHEET 1 OF 1 SHEETS STA. TO STA.		ILLINOIS FED. A	ID PROJECT