

INDEX OF SHEETS 01-21-2021 LETTING ITEM 028

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11. MISCELLANEOUS DETAILS

STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701001-02	OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-05	OFF-ROAD 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
701206-05	LANE CLOSURE, 2L, 2W, NIGHT ONLY, FOR SPEEDS \geq 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701316-13	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR, FOR SPEEDS \geq 45 MPH
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

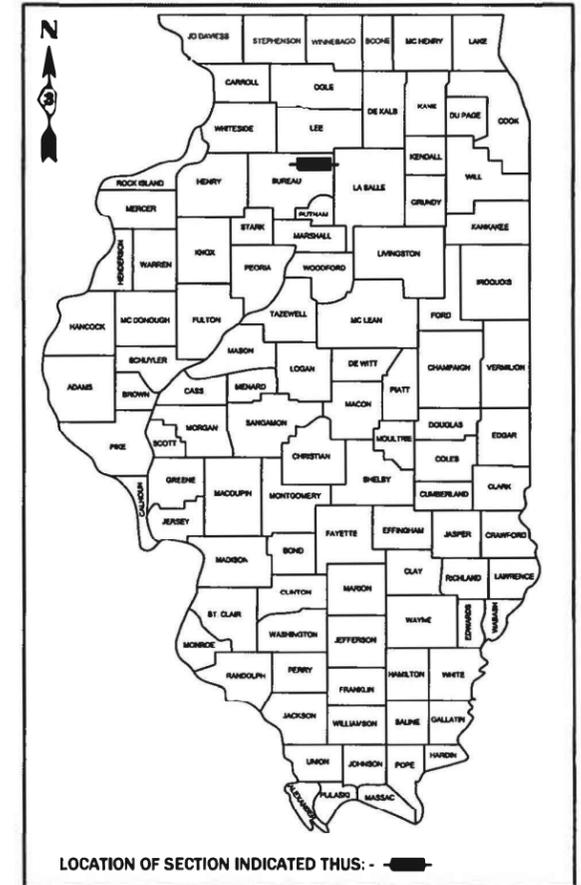
**PROPOSED
HIGHWAY PLANS**

F.A.P. ROUTE 587 (IL 92)
SECTION (140BR)BP
PROJECT: STP-UFDY(778)
BRIDGE PAINTING
BUREAU COUNTY

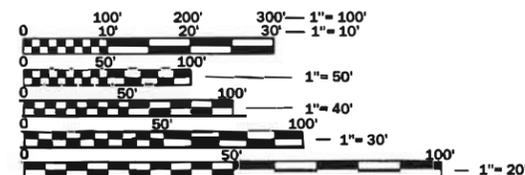
C-93-110-20

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(140BR)BP	BUREAU	11	1
		ILLINOIS	CONTRACT NO. 66L24	

D-93-076-20



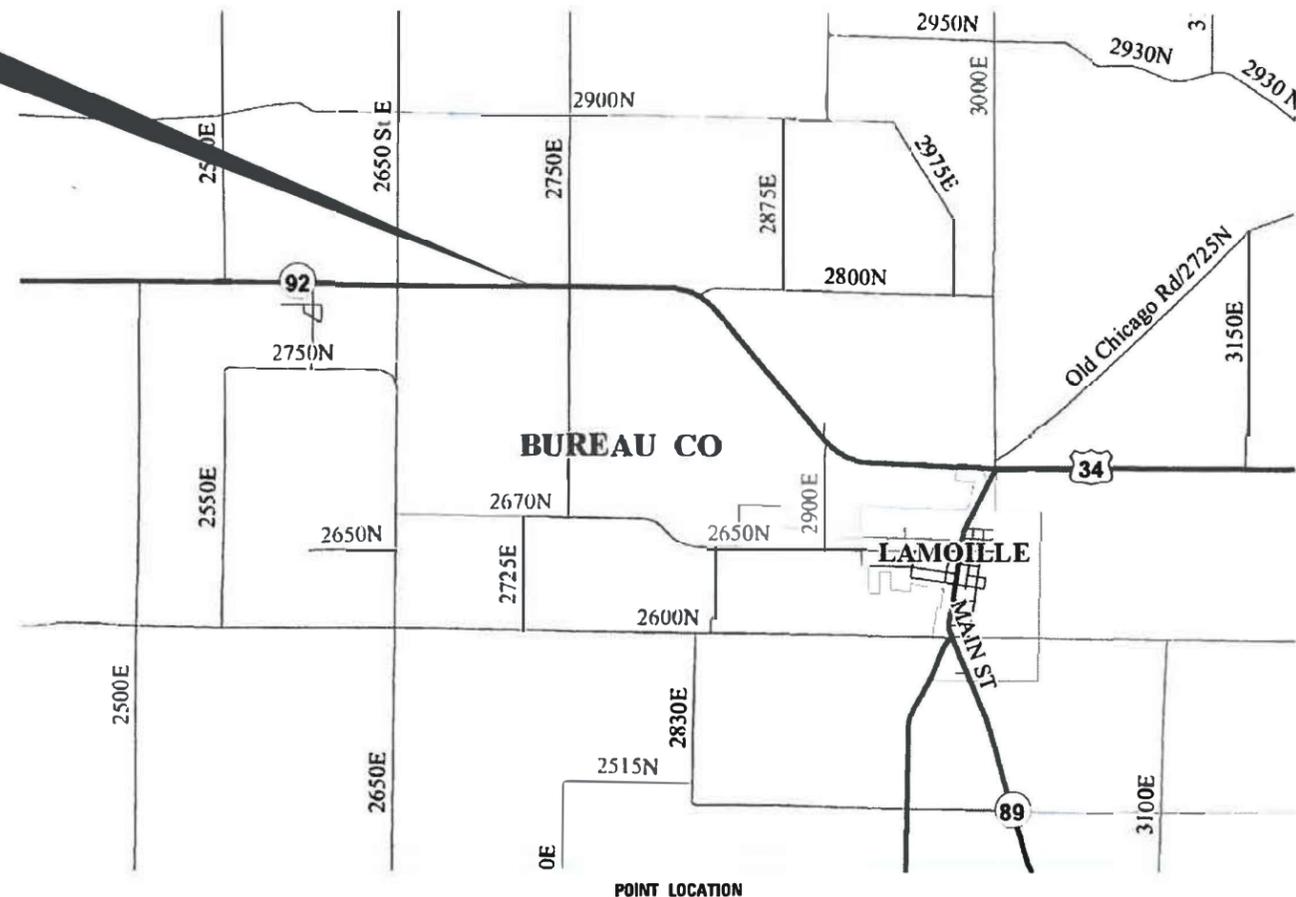
PROJECT LOCATION
STRUCTURE NO. 006-0153
CARRYING F.A.P. ROUTE 587 (IL 92)
OVER A STREAM
3.3 MILES WEST OF US ROUTE 34
IN BUREAU COUNTY



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER JOE KANNEL P.E.
UNIT CHIEF RON WOODSHANK
DISTRICT 3 NO. (815) 434-6131
CONTRACT NO. 66L24



POINT LOCATION

FUNCTIONAL CLASSIFICATION
RURAL
MINOR ARTERIAL
F.A.P. ROUTE 587 (IL 92)
2019 ADT = 675
P.V. 89.7% S.U. 5.9% M.U. 4.4%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 15, 2020
[Signature]
REGIONAL ENGINEER

December 4, 2020
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

December 4, 2020
[Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

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 WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

STRUCTURE NO. 006-0153 SHALL BE DESIGNATED AS "LOCATION 1".

THE SSPC-QP1 "PAINTING CONTRACTOR CERTIFICATIONS" WILL BE REQUIRED FOR THIS PROJECT.

CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND AS SPECIFIED BELOW.

- a) ALL EXISTING STRUCTURAL STEEL, (INCLUDING BEAMS/GIRDERS, DIAPHRAGMS, CROSS/LATERAL FRAMING, STEEL COMPONENTS OF BEARINGS, DRAINS, ANGLE BRACKETS, STEEL HANDRAILS (WHEN PRESENT) SHALL BE CLEANED PER THE REQUIREMENTS OF "NEAR WHITE BLAST CLEANING - SSPC-SP-10".
- b) ALL EXISTING STRUCTURAL STEEL, (INCLUDING BEAMS/GIRDERS, DIAPHRAGMS, CROSS/LATERAL FRAMING, STEEL COMPONENTS OF BEARINGS, DRAINS, ANGLE BRACKETS, STEEL HANDRAILS (WHEN PRESENT) SHALL BE CLEANED PER THE REQUIREMENTS OF "PAINT SYSTEM 1-OZ/E/U".
 - 1) THE FINAL FINISH COAT FOR ALL INTERIOR STRUCTURAL STEEL SHALL BE "GRAY, MUNSELL NO. 5B 7/1".
 - 2) FINISH COAT FOR EXTERIOR FACE, BOTTOM FLANGE AND BEARING ASSEMBLIES OF THE FASCIA BEAMS SHALL BE "GREEN, MUNSELL NO. 7.5G 1/2".

THE CONTRACTOR SHALL BE REQUIRED TO SECURE WASTE CONTAINERS THAT REMAIN ON THE JOB SITE. THIS WILL ENTAIL THAT ALL WASTE CONTAINERS CAN NOT BE MOVED OR OPENED DURING NON-WORKING HOURS.

WORKING DAYS SHALL BE CHARGED UNTIL THE CONTRACTOR/SUBCONTRACTOR LISCENSED TO DISPOSE OF NON-LEAD PAINT RESIDUES HAS REMOVED THE WASTE MATERIAL FROM THE JOB SITE ACCORDING TO ALL FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES. IF THE LISCENSED CONTRACTOR OR SUBCONTRACTOR FAILS TO DISPOSE OF THE NON-LEAD PAINT RESIDUES ON OR BEFORE THE SPECIFIED COMPLETION DATE, LIQUIDATED DAMAGES SHALL BE CHARGED PER CALENDAR DAY ACCORDING TO ARTICLE 108.09 OF THE STANDARD SPECIFICATIONS UNTIL SUCH TIME THAT ALL PAINT RESIDUE MATERIALS HAVE BEEN PROPERLY REMOVED AND DISPOSED OF.

COMMITMENTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE
AS BUILT INFORMATION

SUPERVISING CONSTRUCTION FIELD ENGINEER

RESIDENT ENGINEER / TECHNICIAN

START & END DATES
OF CONSTRUCTION:

INSPECTORS:

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: _____
DISTRICT STUDIES & PLANS ENGINEER

DATE: _____

EXAMINED BY: _____
DISTRICT CONSTRUCTION ENGINEER

DISTRICT MATERIALS ENGINEER

DISTRICT OPERATIONS ENGINEER

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	DRAWN -	REVISED -
PLOT SCALE = 3.9370' / mm	CHECKED -	REVISED -
PLOT DATE = 10/15/2020	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(140BR)BP	BUREAU	11	2
CONTRACT NO. 66L24				
ILLINOIS FED. AID PROJECT				

CONSTRUCTION CODE
 BRIDGE PAINTING
 80% FED. 20% STATE
 BRIDGE
 0047
 S.N. 006-0153

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70100455	TRAFFIC CONTROL AND PROTECTION, STANDARD 701206	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70400100	TEMPORARY CONCRETE BARRIER	FOOT	325	325
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	325	325
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
Δ 78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	140	140
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	70	70
X2700001	TEMPORARY RUMBLE STRIPS (SPECIAL)	EACH	6	6
X5067501	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 1	L SUM	1	1
Z0007114	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES	L SUM	1	1

Δ SPECIALITY ITEMS

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USER NAME = MARINIEJ	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES		F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 3.9370' / mm	DRAWN -	REVISED -				587	(140BR)BP	BUREAU	11	3
PLOT DATE = 10/15/2020	CHECKED -	REVISED -		SCALE:	SHEET 1 OF 2 SHEETS	STA.	TO STA.	CONTRACT NO. 66L24		
DATE -	REVISED -							ILLINOIS	FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE
				BRIDGE PAINTING
				80% FED. 20% STATE
				BRIDGE
				0047
				S.N. 006-0153
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	42	42

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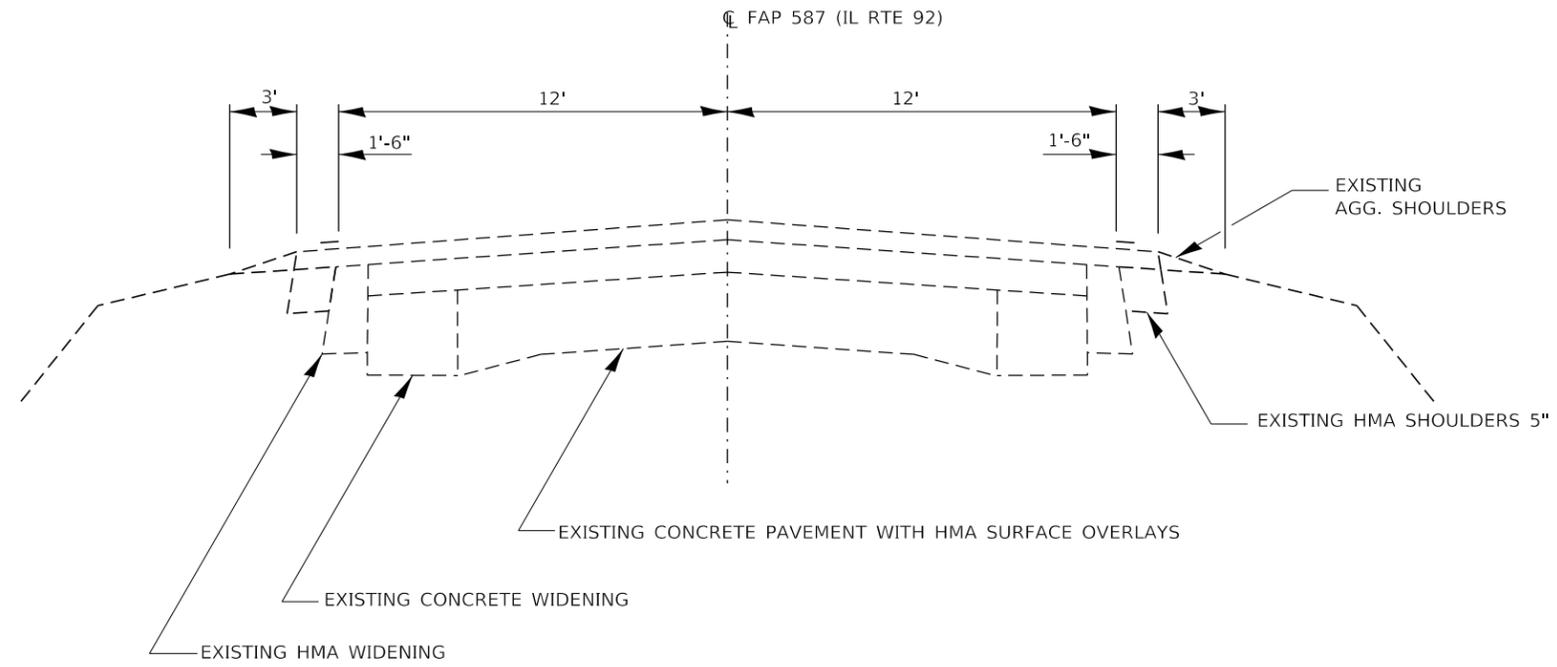
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	DRAWN -	REVISED -
PLOT SCALE = 3.9370' / mm	CHECKED -	REVISED -
PLOT DATE = 10/15/2020	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARU OF QUANTITIES

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(140BR)BP	BUREAU	11	4
				CONTRACT NO. 66L24
				ILLINOIS FED. AID PROJECT



TYPICAL SECTION

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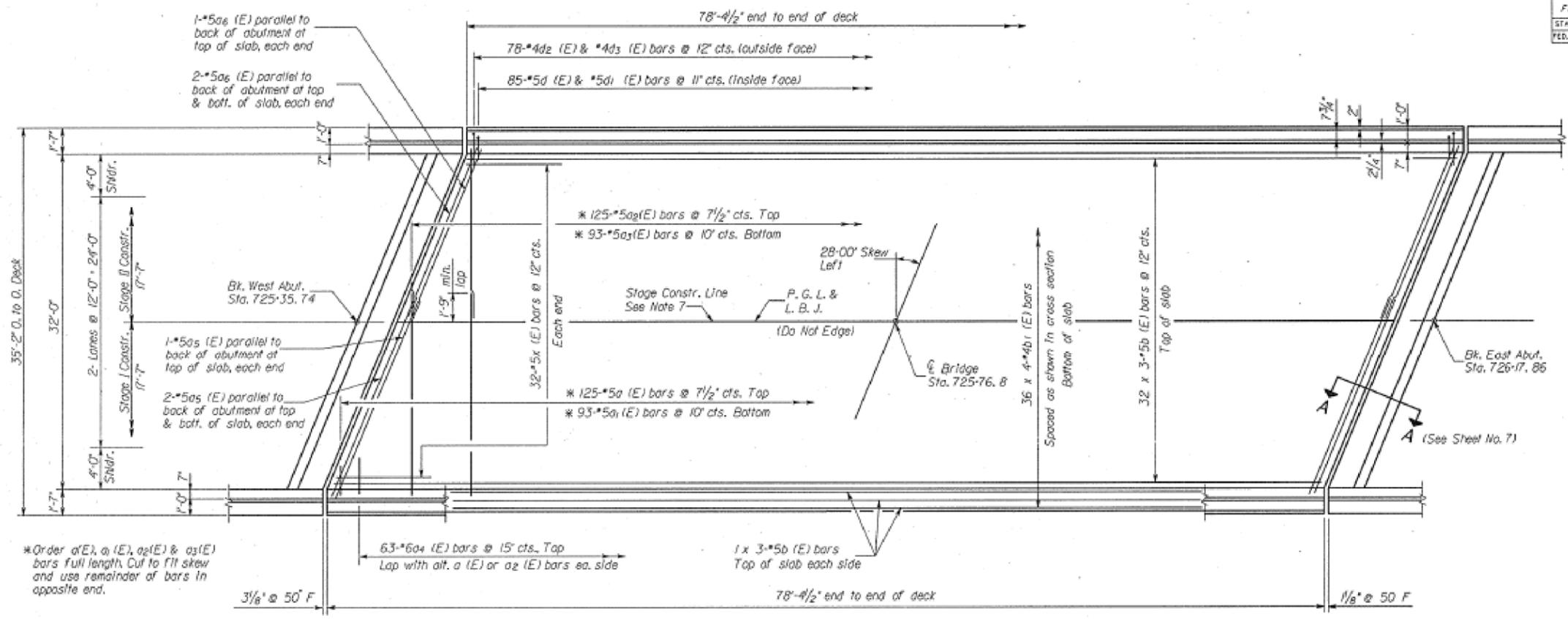
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	DRAWN -	REVISED -
PLOT SCALE = 3.9370' / mm	CHECKED -	REVISED -
PLOT DATE = 10/15/2020	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTION

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(140BR)BP	BUREAU	11	5
CONTRACT NO. 66L24				
ILLINOIS FED. AID PROJECT				



DECK PLAN

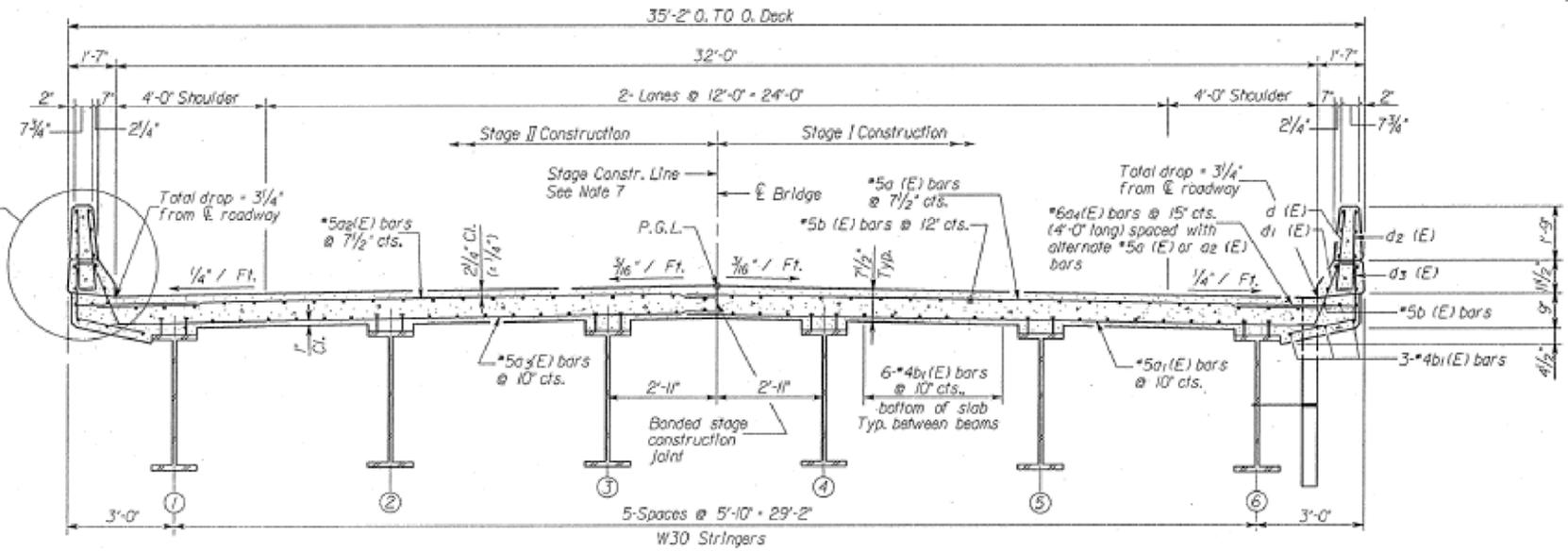
NOTE: See Sheet No. 1 for location of floor drains

MINIMUM BAR LAPS

*4 Bar	• 1'-5"
*5 Bar	• 1'-9"
*6 Bar	• 2'-1"
*8 Bar	• 3'-8"

NOTES:

- See Sheet No. 8 for superstructure details and Bill of Materials.
- Reinforcement bars designated (E) shall be epoxy coated.
- Bars indicated thus 20x3*5 etc. indicates 20 lines of bars with 3 lengths per line.
- Floor drains shall be located clear of all Diaphragms.
- See Sheet No. 8 for parapet reinforcement.
- See Sheet No. 8 for parapet elevations.
- Lapped bars at the banded stage construction line shall be tied with double the number of ties normally used.
- Banded construction joints shall be in accordance with Art. 504.13(a)(2) of the Standard Specs.



TYPICAL CROSS SECTION
(Looking up Station)

REVISIONS

NO.	BY	DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 92 OVER UNNAMED DITCH
F. A. RTE. 587 SECTION 140-BR
STATION 725+76.80
BUREAU COUNTY STRUCTURE NO. 006-0153
SUPERSTRUCTURE

DESIGNED BY: J.J.F.
DRAWN BY: G.L.D.
CHECKED BY: F.J.P.
APPROVED BY: F.J.P.

CMT
CRANFORD MURPHY & TULLY, INC.
CONSULTING ENGINEERS

SCALE: NONE
DATE: 3/90
JOB NO.: 8766-03
SHEET 10 OF 21 SHEETS

USER NAME = MARINEJ	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 3.9370' / mm	CHECKED -	REVISED -
PLOT DATE = 10/15/2020	DATE -	REVISED -

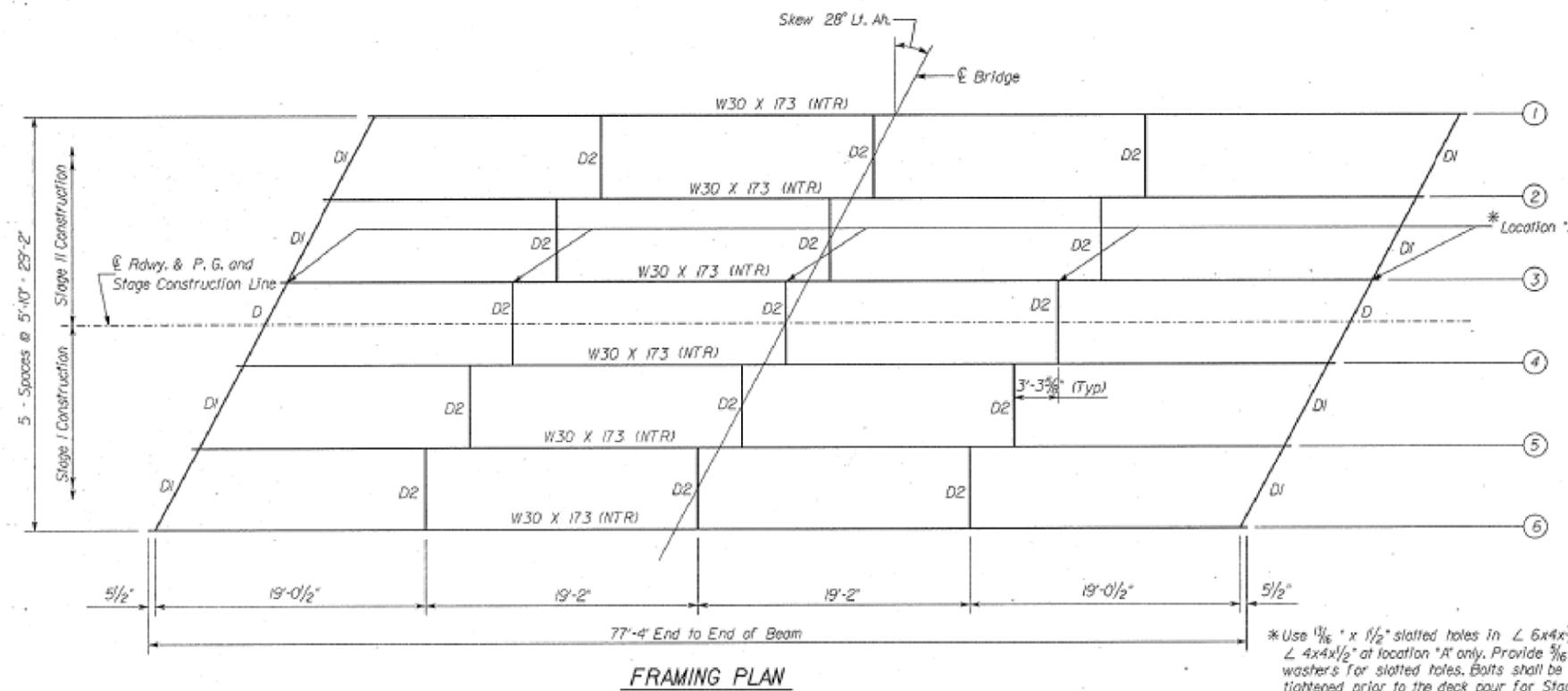
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS FOR STRUCTURE NO. 006-0153
"FOR INFORMATION ONLY"

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(140BR)BP	BUREAU	11	8
CONTRACT NO. 66L24			ILLINOIS FED. AID PROJECT	

SCALE: SHEET 2 OF 4 SHEETS STA. TO STA.

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INTERIOR BEAM MOMENT TABLE

	MIDSPAN
I_s (in ⁴)	8200
I_c (in ⁴)	18,763
S_s (in ³)	539
S_c (in ³)	732
ϕ (K/ft)	0.770
$M \phi$ (K)	562
$S \phi$ (K/ft)	0.286
$M_s \phi$ (K)	209
$M \phi$ (K)	584
M (Imp) (K)	146
$\frac{5}{8} S$ (M ϕ · I) (K)	1217
M_a (K)	2584
$f_s \phi$ non-comp (ksf)	12.5
$f_s \phi$ (comp) (ksf)	3.8
$f_s \phi$ (L · I) (ksf)	20.0
f_s (overload) (ksf)	36.3
f_s (total) (ksf)	47.2
V_r (K)	51.8

NOTES

I_s and S_s are the moment of Inertia and section modulus of the steel section used in computing f_s (total and overload).

I_c and S_c are the moment of Inertia and section modulus of the composite section used in computing f_s (total and overload).

V_r is the maximum ϕ - impact shear range in span.

f_s (total) is the sum of the stresses due to 1.3 [$M \phi$ · $M_s \phi$ · $\frac{5}{8} S \phi$ (M ϕ · I)].

f_s (overload) is the sum of the stresses due to $M \phi$ · $M_s \phi$ · $\frac{5}{8} S \phi$ (M ϕ · I).

$M \phi$ - Moment due to dead loads on non-composite section.

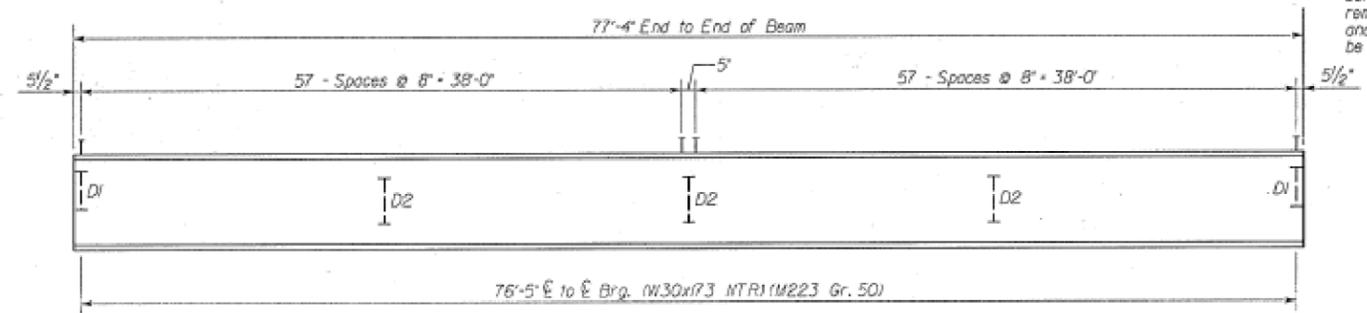
$M_s \phi$ - Moment due to dead loads on composite section.

$M \phi$ - Moment due to live load on composite section.

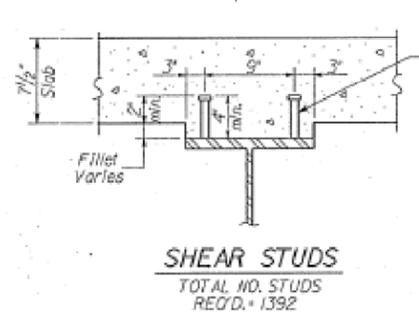
I - Live load Impact.

M_a (Applied Moment) · 1.3 [$M \phi$ · $M_s \phi$ · $\frac{5}{8} S \phi$ (M ϕ · I)].

FRAMING PLAN

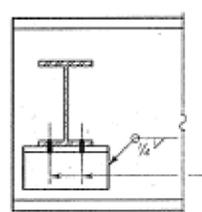


BEAM ELEVATION



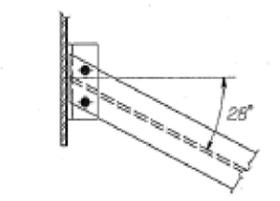
SHEAR STUDS

TOTAL NO. STUDS
REQ'D. = 1392



DIAPHRAGM D1

10 - Required (M183)



DIAPHRAGM D2

15 - Required (M183)

Note: Two hardened washers shall be required over all 1/2" holes. All contact surfaces of joints shall be free of paint or lacquer.

NOTE: Members designated "INTR" shall conform to the supplemental requirements for Notch Toughness, Zone 2.

* Use 1/8" x 1/2" slotted holes in L 6x4x3/4" & L 4x4x1/2" at location "A" only. Provide 3/16" plate washers for slotted holes. Bolts shall be finger-tightened prior to the deck pour for Stage II Construction. Tighten bolts after deck is poured, removing & reinstalling of bolts for diaphragms D1 and D2 at Beam 3 for Stage II Construction shall be cost incidental to "Structural Steel".

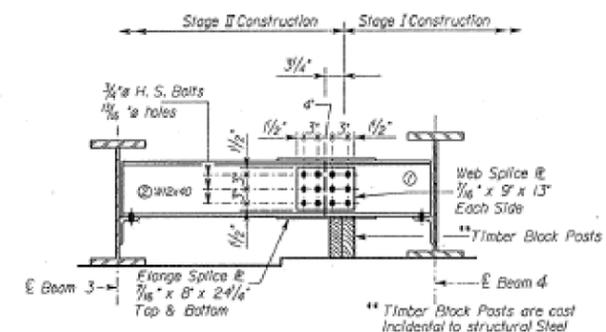
TOP OF BEAM ELEVATIONS *

LOCATION	Elevation Beam #1	Elevation Beam #2	Elevation Beam #3	Elevation Beam #4	Elevation Beam #5	Elevation Beam #6
E Bearing West Abutment	794.59	794.69	794.77	794.76	794.66	794.55
Midspan	794.69	794.79	794.87	794.86	794.76	794.65
E Bearing East Abutment	794.79	794.89	794.97	794.96	794.86	794.75

* For Fabrication only

INTERIOR BEAM REACTION TABLE

	ABUTMENTS
$R \phi$ (K)	40.8
$R \phi$ (K)	41.4
Imp (K)	10.4
R total (K)	92.6



DIAPHRAGM D

2 - Required

Dimensions are along E diaphragm. For details of connections to beam see diaphragm D1

DIAPHRAGM D CONSTRUCTION SEQUENCE

- 1.) Order diaphragm D in two sections.
- 2.) Attach part ① of diaphragm to Beam 4 and top flange splice plate during Stage I Construction.
- 3.) Place Timber Block Posts between part ① of diaphragm and abutment bearing seat.
- 4.) Attach part ② to both Beam 3 and part ① of diaphragm during Stage II Construction.
- 5.) Attach web splice plates to part ① and part ② of diaphragms.
- 6.) Remove Timber Block Posts.
- 7.) Attach bottom flange splice plate to part ① and part ② of diaphragms.

REVISIONS		
NO.	BY	DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL. ROUTE 92 OVER UNNAMED DITCH.
F. A. RTE. 587 SECTION 140-BR
STATION 725+76.80
BUREAU COUNTY STRUCTURE NO. 006-0153
FRAMING PLAN AND DETAILS

DESIGNED BY: JJP
DRAWN BY: GLD
CHECKED BY: FJP
APPROVED BY: FJP

SCALE: NONE
JOB NO.: 8766-03
DATE: 3/90
SHEET 13 OF 21 SHEETS

CMT
CONSULTING ENGINEERS
2000 W. WASHINGTON ST., SUITE 100
SPRINGFIELD, ILL. 62761-1000

USER NAME = MARINEJ	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 3.9370' / mm	CHECKED -	REVISED -
PLOT DATE = 10/15/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS FOR STRUCTURE NO. 006-0153
"FOR INFORMATION ONLY"

SCALE: SHEET 3 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(140BR)BP	BUREAU	11	9
			CONTRACT NO. 66L24	
		ILLINOIS	FED. AID PROJECT	

