

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	1
ILLINOIS			CONTRACT NO 78726	

C-99-033-19



FOR INDEX OF SHEETS, SEE SHEET NO. 3  
 FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4 & 5  
 FOR STRUCTURAL PAVEMENT DESIGN INFORMATION, SEE SHEET NO. NA

# PROPOSED HIGHWAY PLANS

F.A.I. ROUTE 57 (I-57)  
 SECTION D9 BRIDGE PATCH 2020-1

## TRAFFIC DATA

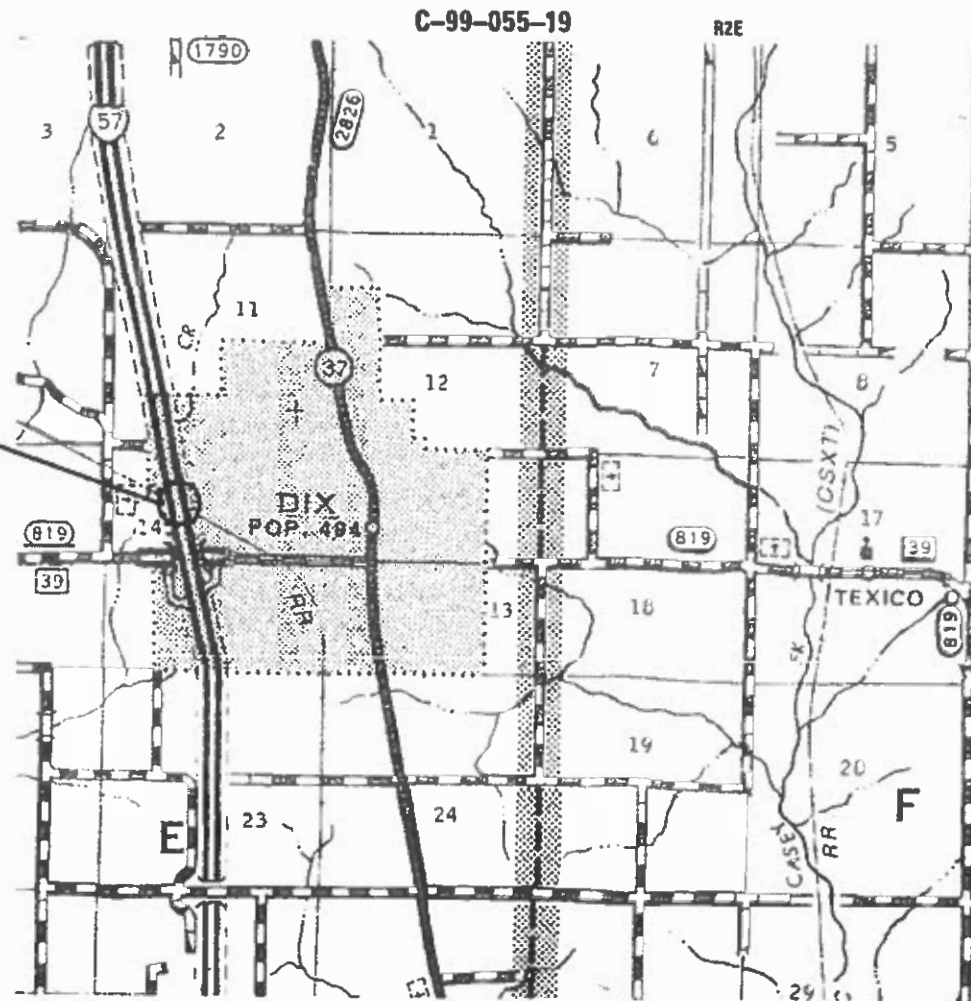
2018 ADT = 11,700  
 42.3 % TRUCKS

FULL DEPTH BRIDGE DECK PATCHING  
 JEFFERSON COUNTY

## TOWNSHIPS

ROME TOWNSHIP

SN 041-0016 I-57 NB  
 SN 041-0017 I-57 SB  
 OVER  
 NORFOLK SOUTHERN RAILROAD



GROSS LENGTH = 213 FT. = 0.04 MILES  
 NET LENGTH = 213 FT. = 0.04 MILES

DESIGN DESIGNATION : NA  
 COORDINATE SYSTEM : ILLINOIS COORDINATE SYSTEM, EAST ZONE  
 POSTED SPEED : 70 MPH

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

PROJECT ENGINEER: DAVID PICHE  
 PROJECT DESIGNER: AUSTIN HENK

CONTRACT NO. 78726

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUBMITTED 10-17-2019  
KPE  
 REGION FIVE ENGINEER  
Jan 31 2020  
[Signature]  
 ENGINEER OF DESIGN AND ENVIRONMENT  
Jan 31 2020  
[Signature]  
 DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY  
 OF THE STATE OF ILLINOIS



**INDEX OF SHEETS**

1 COVER SHEET  
 2 SIGNATURES  
 3 INDEX OF SHEETS, STANDARDS, AND GENERAL NOTES  
 4-5 SUMMARY OF QUANTITIES  
 6 GENERAL PLAN AND ELEVATION  
 7 TYPICAL SECTION STAGING  
 8 STAGE I PLAN  
 9 STAGE II PLAN  
 10 DECK PATCHING SN 041-0016  
 11 DECK PATCHING SN 041-0017  
 12 R-27 STANDARD  
 13-18 STRUCTURE INFORMATION

**GENERAL NOTES**

COMMITMENTS: NONE

**STANDARDS**

000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS  
 701101-05 OFF-RD OPERATIONS, MULTILANE, 15' TO 24' FROM PAVEMENT EDGE  
 701106-02 OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY  
 701400-09 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY  
 701402-12 LANE CLOSURE FREEWAY/EXPRESSWAY, WITH BARRIER  
 701411-09 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH  
 701901-08 TRAFFIC CONTROL DEVICES

REV. - MS

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DRAWN - CPL	CHECKED - MAS	REVISED -			57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	3	
PLOT SCALE = 100.0000' / in.	DATE - 06/11/18	REVISED -			CONTRACT NO. 78726					
PLOT DATE = 1/30/2020	DATE - 06/11/18	REVISED -			ILLINOIS   FED. AID PROJECT					
				SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	

# SUMMARY OF QUANTITIES

<b>COUNTY:</b>	<b>JEFFERSON CO</b>
<b>ROUTE:</b>	<b>I-57</b>
<b>FUNDING:</b>	<b>100% STATE</b>
<b>LOCATION:</b>	<b>RURAL</b>

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	SN 041-0016	
				0013	0017
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2	1	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2	1	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	14	14
70400100	TEMPORARY CONCRETE BARRIER	FOOT	900	450	450
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	825	412.5	412.5
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	1	1
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	1	1
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	952	476	476
X0327979	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	318	159	159
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	1,760	880	880
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	30	15	15
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	308.8	190.6	118.2

\* SPECIALTY ITEM

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# SUMMARY OF QUANTITIES - CONT

COUNTY:	JEFFERSON CO
ROUTE:	I-57
FUNDING:	100% STATE
LOCATION:	RURAL

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	SN 041-0016	SN 041-0017
				0013	0013
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	126	14.4	111.6
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	0.5	0.5

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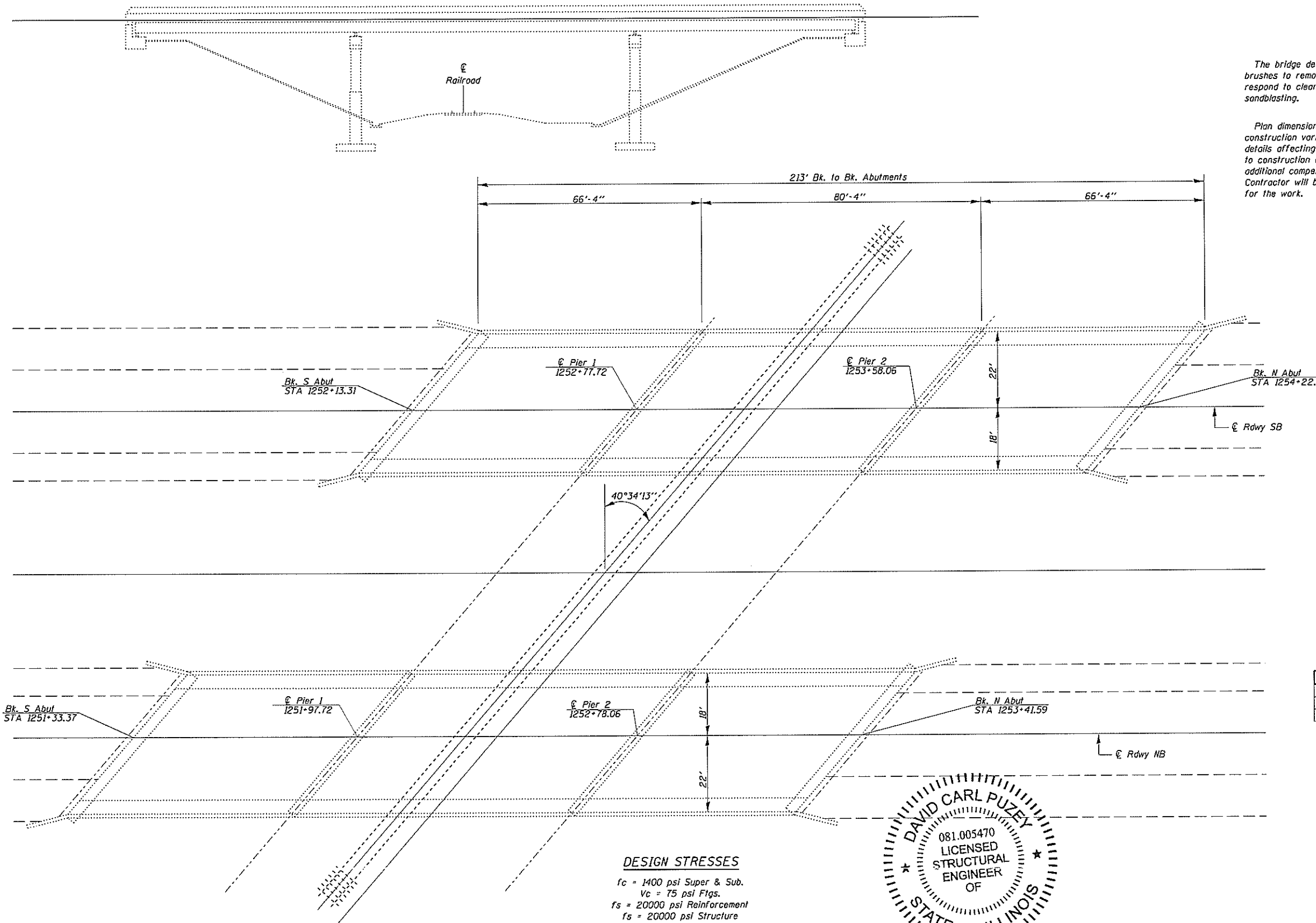
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PLOT DATE = 10/17/2019	CHECKED -	REVISED -			CONTRACT NO. 78726					
	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
				SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	

**GENERAL NOTES**

The bridge deck surface shall be cleaned with oil-free compressed air or wire brushes to remove all oil, grime, and loose particles. Surfaces that will not respond to cleaning by compressed air or wire brushes shall be cleaned by sandblasting.

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.



**TOTAL BILL OF MATERIAL**

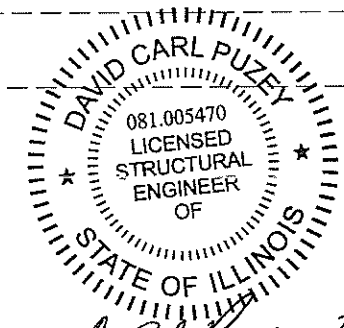
ITEM	UNIT	QUANTITY
Deck Slab Repair (Partial)	Sq. Yd.	126
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	309

**SCOPE OF WORK**

Deck Slab Repair (Partial)  
Deck Slab Repair (Full Depth Type II).

**DESIGN STRESSES**

$f_c = 1400$  psi Super & Sub.  
 $V_c = 75$  psi Flgs.  
 $f_s = 20000$  psi Reinforcement  
 $f_s = 20000$  psi Structure  
 $n = 10$



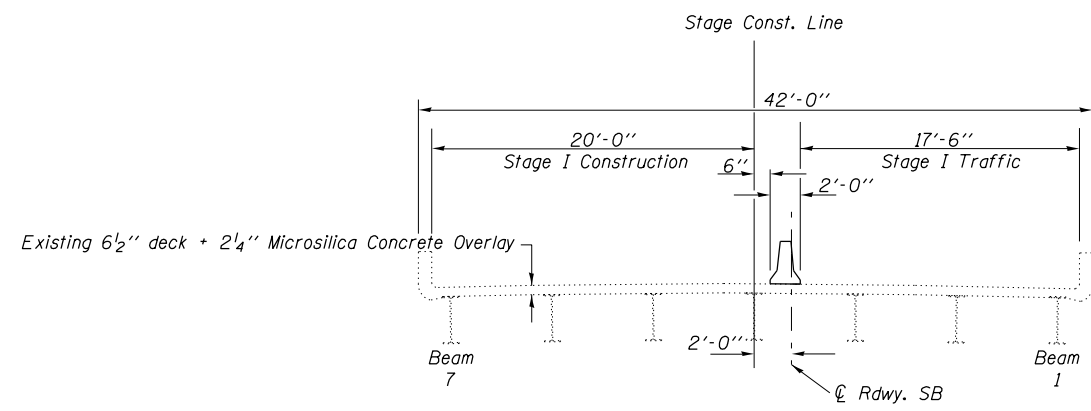
*David Carl Puzey 2/1/2020*  
*Expires 11/30/2020*

BRIDGE REPAIR  
I-57 OVER SOUTHERN RR  
JEFFERSON COUNTY  
D9 BRIDGE PATCH 2020-1  
SN 041-0016  
SN 041-0017

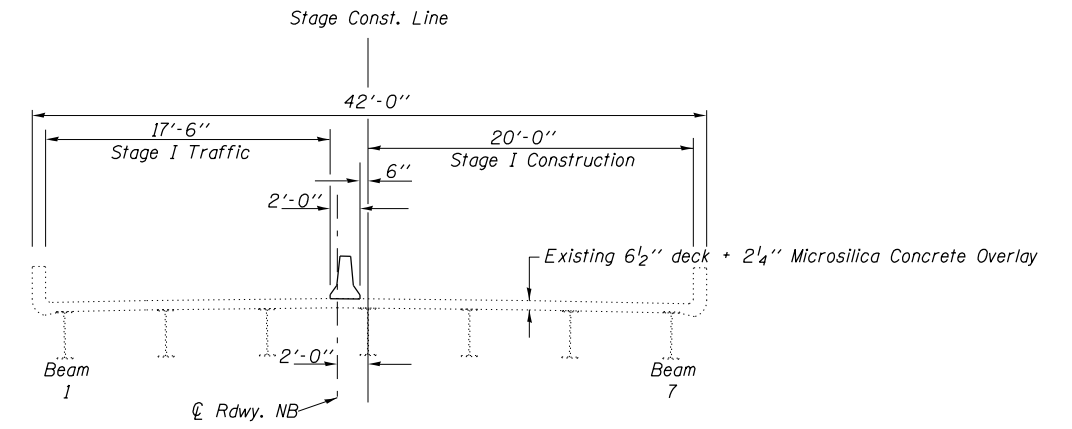
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Stage I

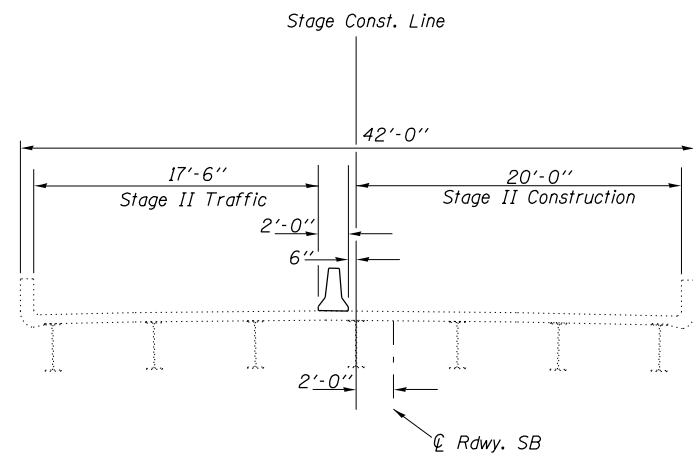


SN 041-0017

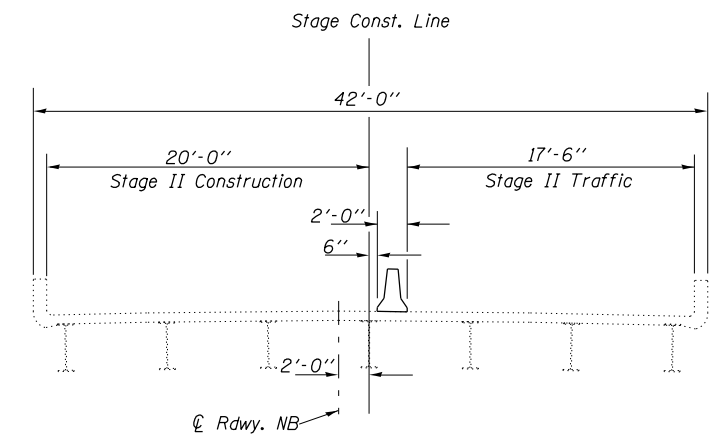


SN 041-0016

Stage II



SN 041-0017



SN 041-0016

All Sections Looking North

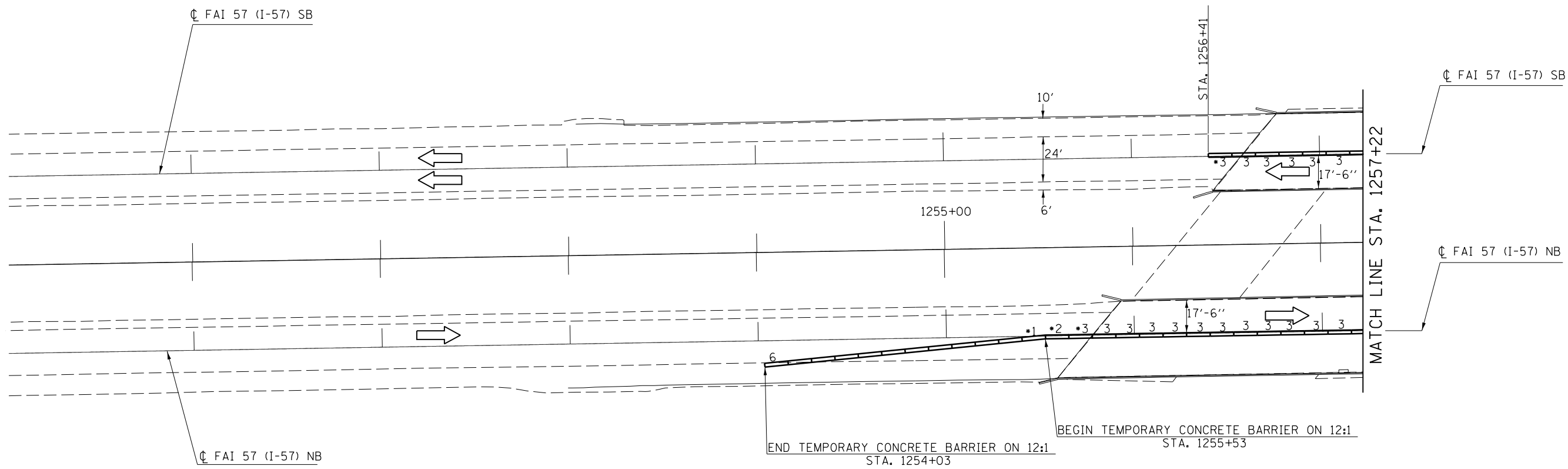
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

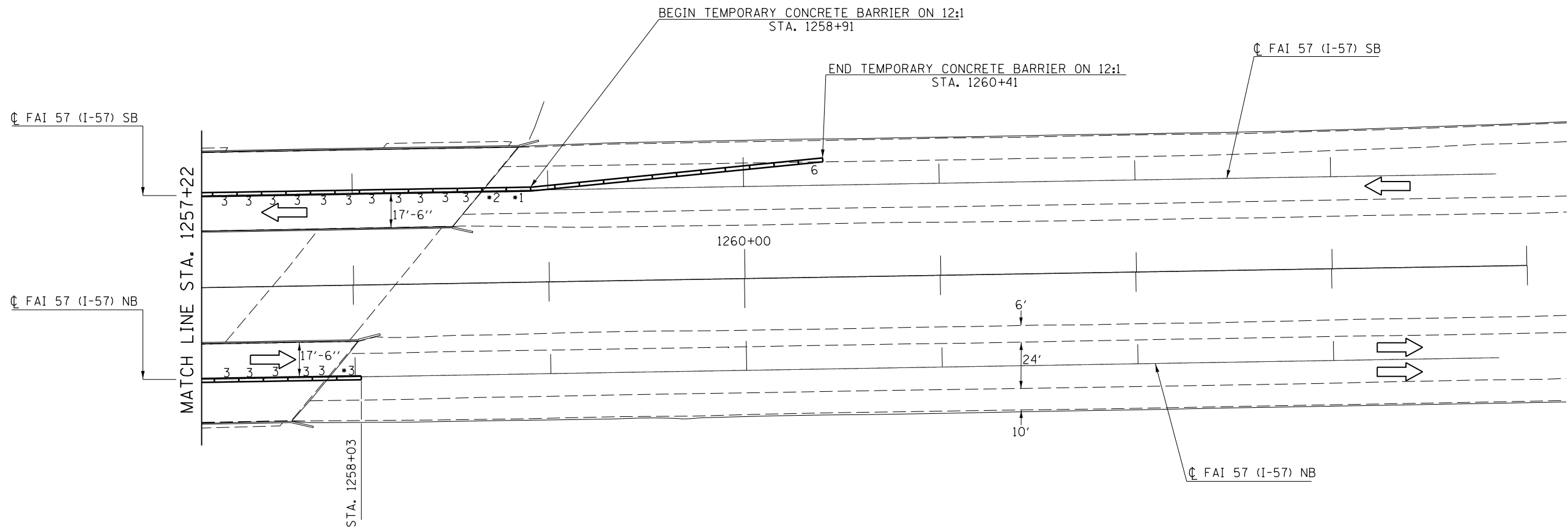
**TYPICAL SECTION STAGING**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	7
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78726	



Note: \* Paid for as Pining Temporary Concrete Barrier, Each. Cost of other pins included in Temporary Concrete Barrier. The 6 pins at the approach end of the installation not paid for per Supplemental Specs Section 704.



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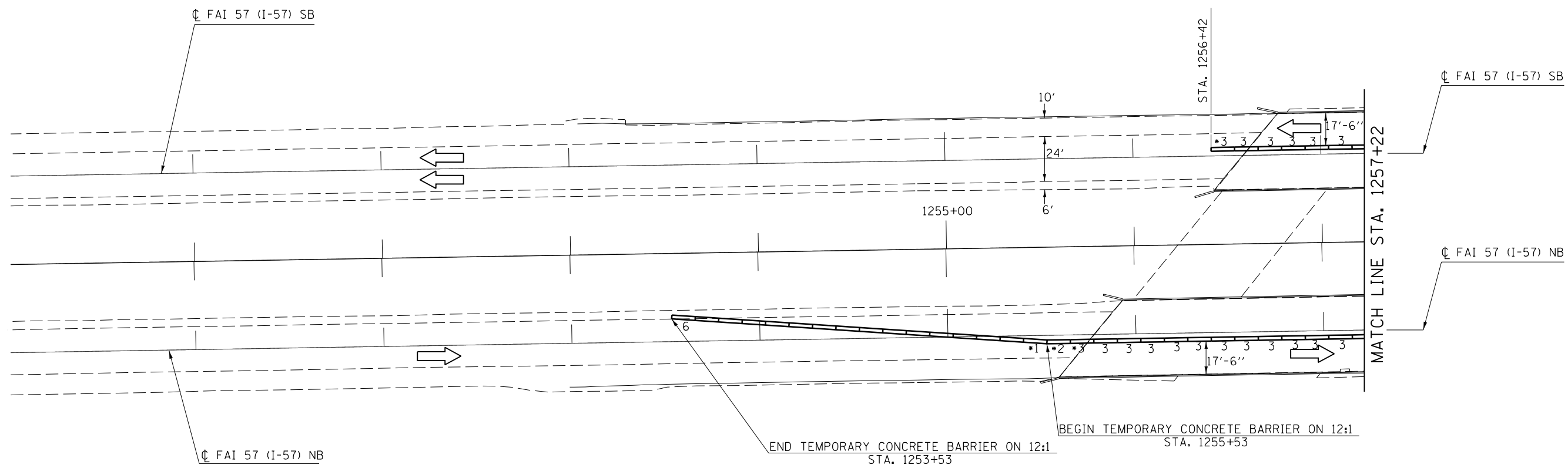
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

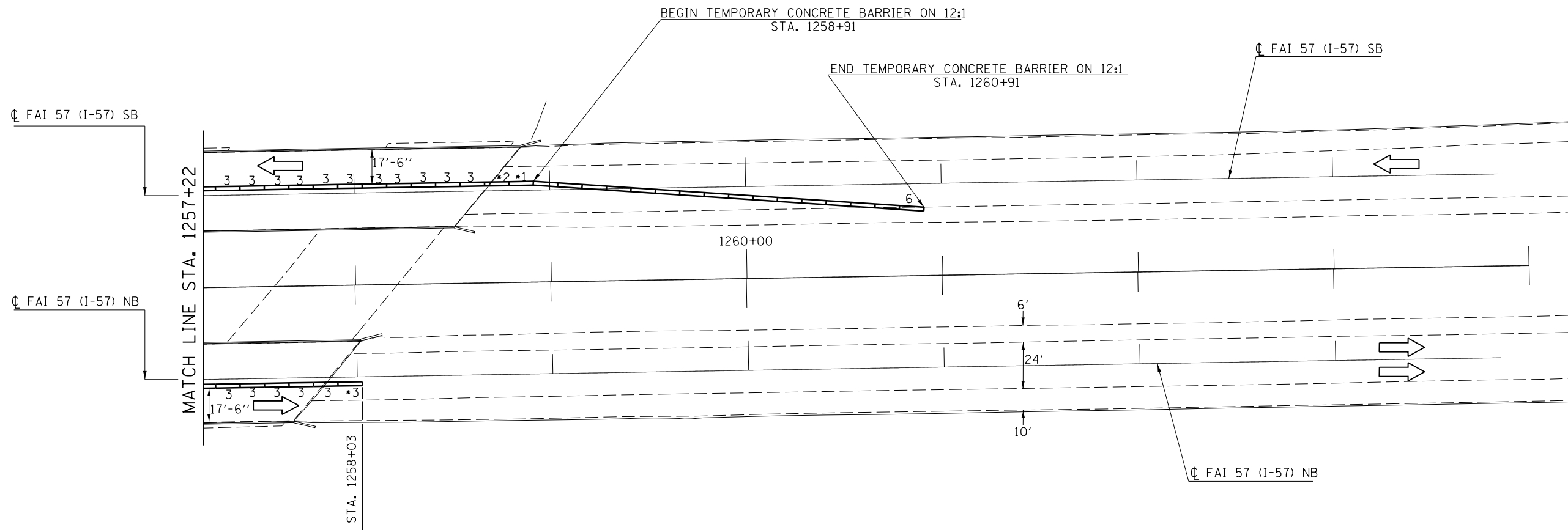
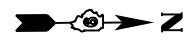
<b>STAGE 1</b>				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	8
CONTRACT NO. 78726				
ILLINOIS FED. AID PROJECT				





Note: \* Paid for as Pining Temporary Concrete Barrier, Each. Cost of other pins included in Temporary Concrete Barrier. The 6 pins at the approach end of the installation not paid for per Supplemental Specs Section 704.



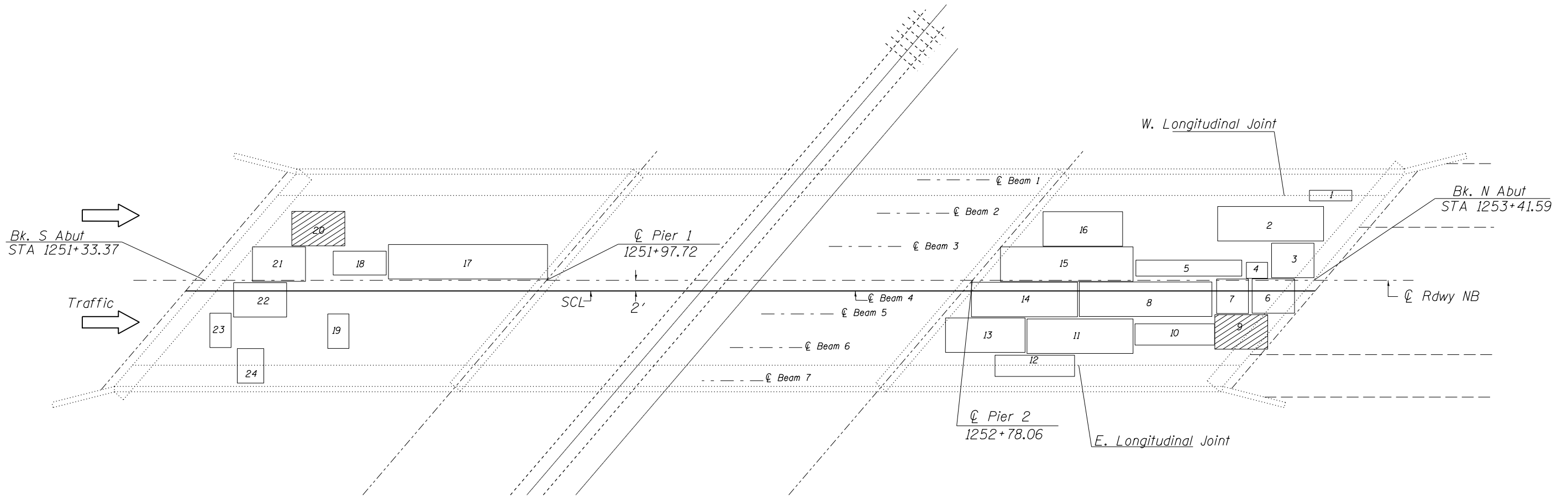
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PLOT DATE = 1/30/2020	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**



<b>STAGE 2</b>				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	9
CONTRACT NO. 78726				
ILLINOIS FED. AID PROJECT				



SN 041-0016					
Number	Length (ft)	Width (ft)	Area (sq yds)	Full	Partial
1	2.0	8	1.8	X	
2	6.5	20	14.4	X	
3	6.5	8	5.8	X	
4	3.0	4	1.3	X	
5	3.0	20	6.7	X	
6	6.5	8	5.8	X	
7	6.5	6	4.3	X	
8	6.5	25	18.1	X	
9	6.5	10	7.2		X
10	4.0	15	6.7	X	
11	6.5	20	14.4	X	
12	4.0	15	6.7	X	
13	6.5	15	10.8	X	
14	6.5	20	14.4	X	
15	6.5	25	18.1	X	
16	6.5	15	10.8	X	
17	6.5	30	21.7	X	
18	4.5	10	5.0	X	
19	6.5	4	2.9	X	
20	6.5	10	7.2		X
21	6.5	10	7.2	X	
22	6.5	10	7.2	X	
23	6.5	4	2.9	X	
24	6.5	5	3.6	X	

Legend

-  Full
-  Partial



Notes: Deck sounding was performed in February 2019.

The Resident Engineer will determine final patch locations and quantities in the field before bridge deck patching operations begin.

The Engineer shall show actual locations of deck repairs on As-built Plans.

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 Deck Slab Repair (Full Depth, Type II).

Bill of Material

ITEM	UNIT	QUANTITY
Deck Slab Repair (Partial)	Sq. Yd.	14.4
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	190.6

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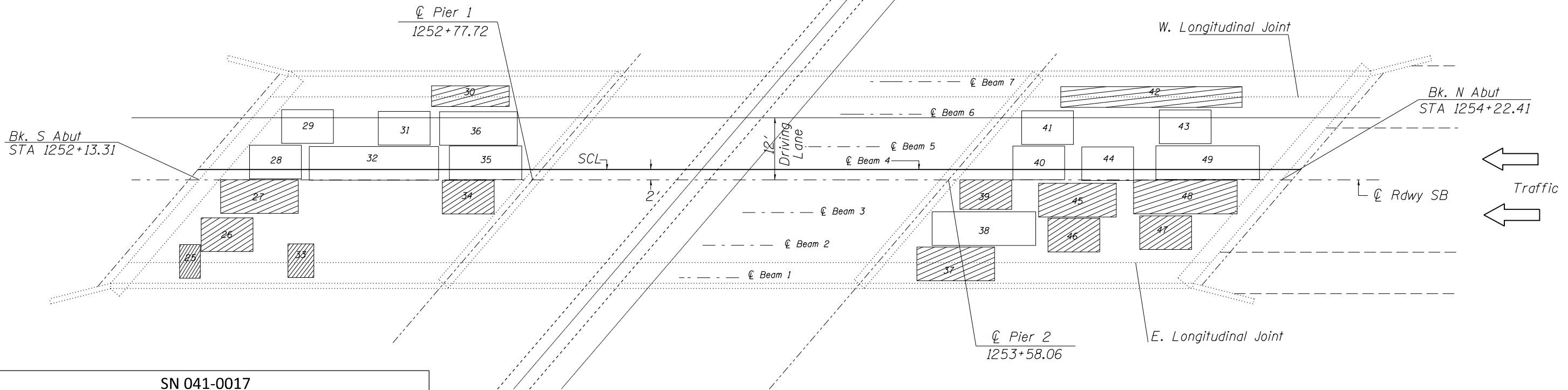
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SN 041-0016 Deck Patching**

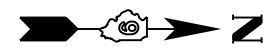
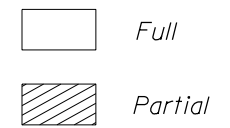
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	10
			CONTRACT NO. 78726	
ILLINOIS FED. AID PROJECT				



SN 041-0017					
Number	Length (ft)	Width (ft)	Area (sq yds)	Full	Partial
25	6.5	4	2.9		X
26	6.5	10	7.2		X
27	6.5	15	10.8		X
28	6.5	10	7.2	X	
29	6.5	10	7.2	X	
30	4.0	15	6.7		X
31	6.5	10	7.2	X	
32	6.5	25	18.1	X	
33	6.5	5	3.6		X
34	6.5	10	7.2		X
35	6.5	14	10.1	X	
36	6.5	15	10.8	X	
37	6.5	15	10.8		X
38	6.5	20	14.4	X	
39	6.5	10	7.2		X
40	6.5	10	7.2	X	
41	6.5	10	7.2	X	
42	4.0	35	15.6		X
43	6.5	10	7.2	X	
44	6.5	10	7.2	X	
45	6.5	15	10.8		X
46	6.5	10	7.2		X
47	6.5	10	7.2		X
48	6.5	20	14.4		X
49	6.5	20	14.4	X	

*Legend*



Notes: Deck sounding was performed in February 2019.

The Resident Engineer will determine final patch locations and quantities in the field before bridge deck patching operations begin.

The Engineer shall show actual locations of deck repairs on As-built Plans.

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 Deck Slab Repair (Full Depth, Type II).

*Bill of Material*

ITEM	UNIT	QUANTITY
Deck Slab Repair (Partial)	Sq. Yd.	111.6
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	118.2

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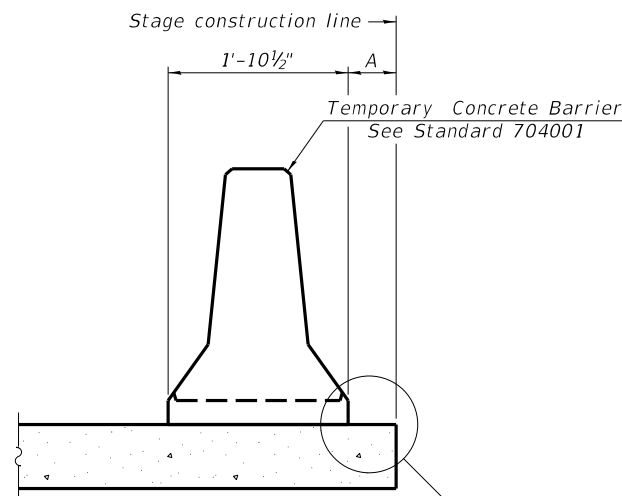
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SN 041-0017 Deck Patching**

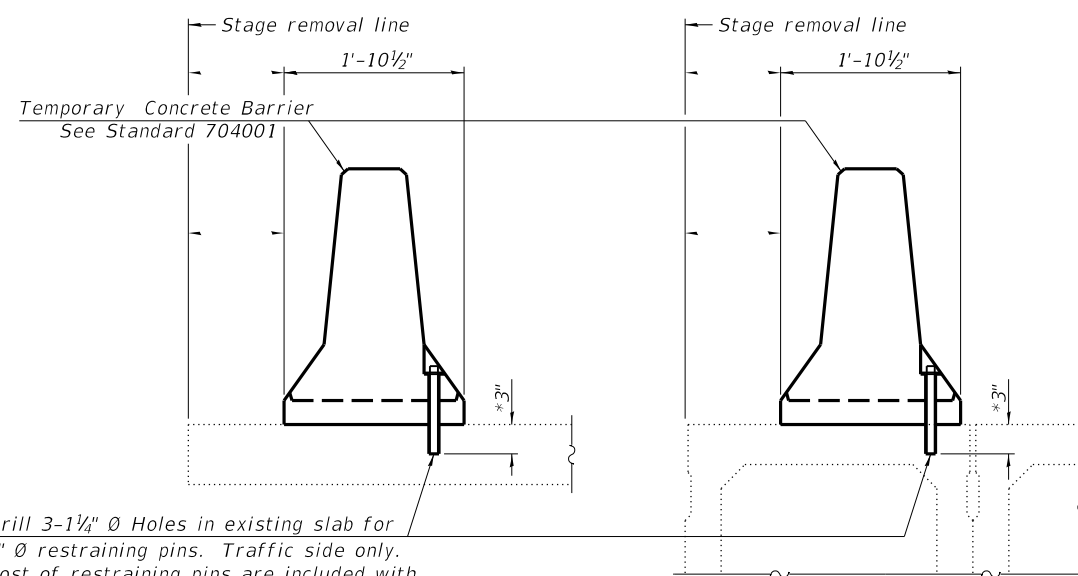
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	11
CONTRACT NO. 78726			ILLINOIS FED. AID PROJECT	



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1". See Detail I, II or III

NEW SLAB OR NEW DECK BEAM

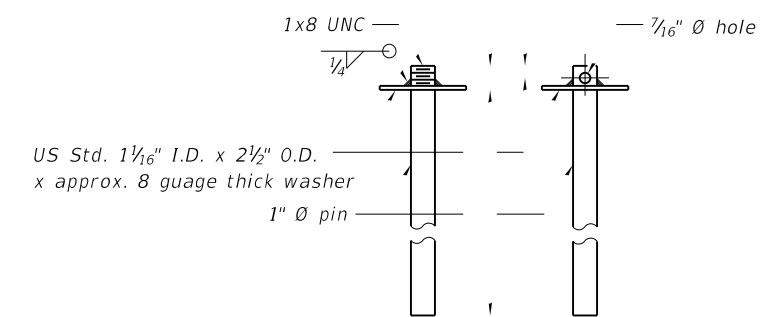


Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

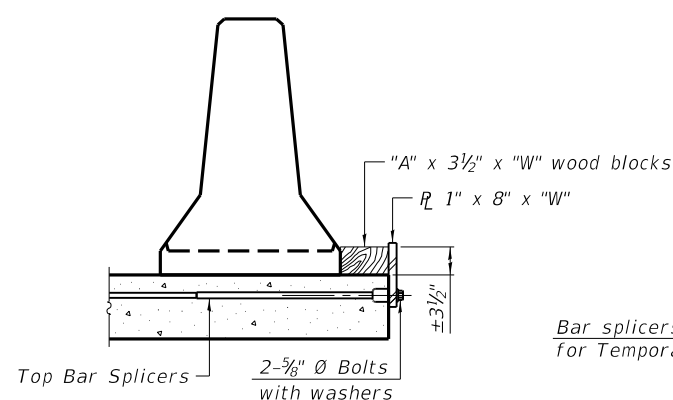
EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

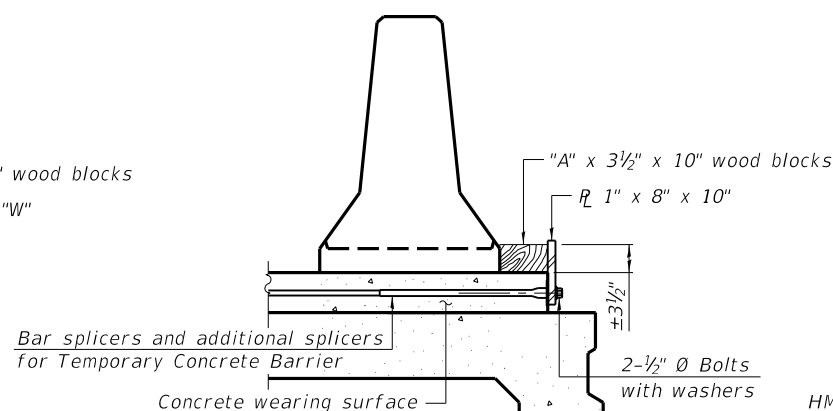


RESTRAINING PIN

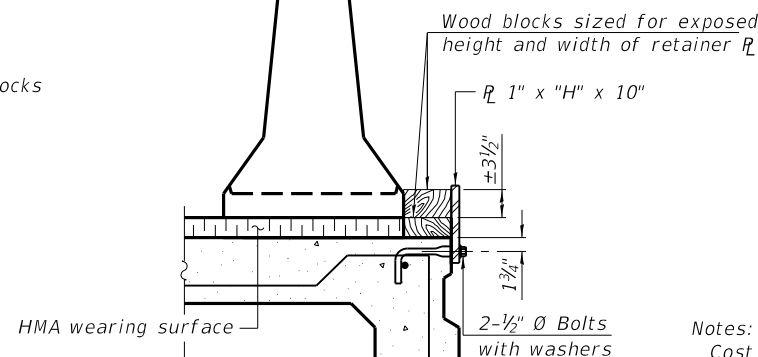
\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.



DETAIL I



DETAIL II

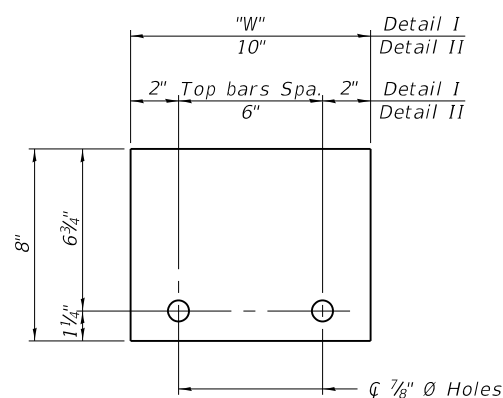


DETAIL III

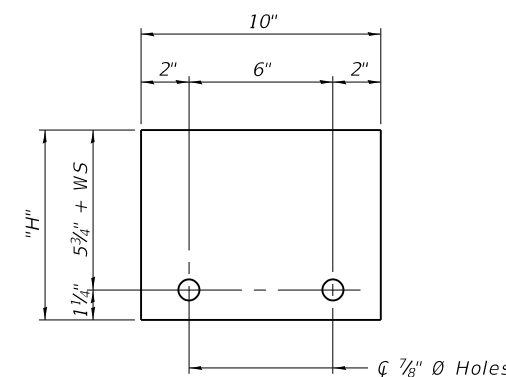
BAR SPLICER FOR #4 BAR - DETAIL III

Notes:  
 Cost of retainer assembly is included with Temporary Concrete Barrier.  
 A retainer assembly shall be located at the approximate center of each temporary concrete barrier.  
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.  
 When the 'A' dimension is less than 1 1/2", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.  
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.  
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.



STEEL RETAINER R 1" x 8" x "W"  
(Detail I and II)



STEEL RETAINER R 1" x "H" x 10"  
(Detail III)

1/30/2020 10:38:13 AM

R-27 2-17-2017

DESIGNED -	EXAMINED	DATE -
CHECKED -	ENGINEER OF BRIDGE DESIGN	
DRAWN -	PASSED	REVISED -
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
STRUCTURE NO. 041-0016(17)

SHEET OF SHEETS

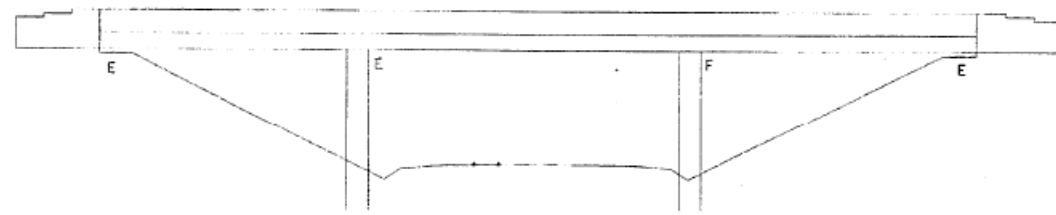
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	12
CONTRACT NO. 78726				
ILLINOIS FED. AID PROJECT				

# FOR INFORMATION ONLY

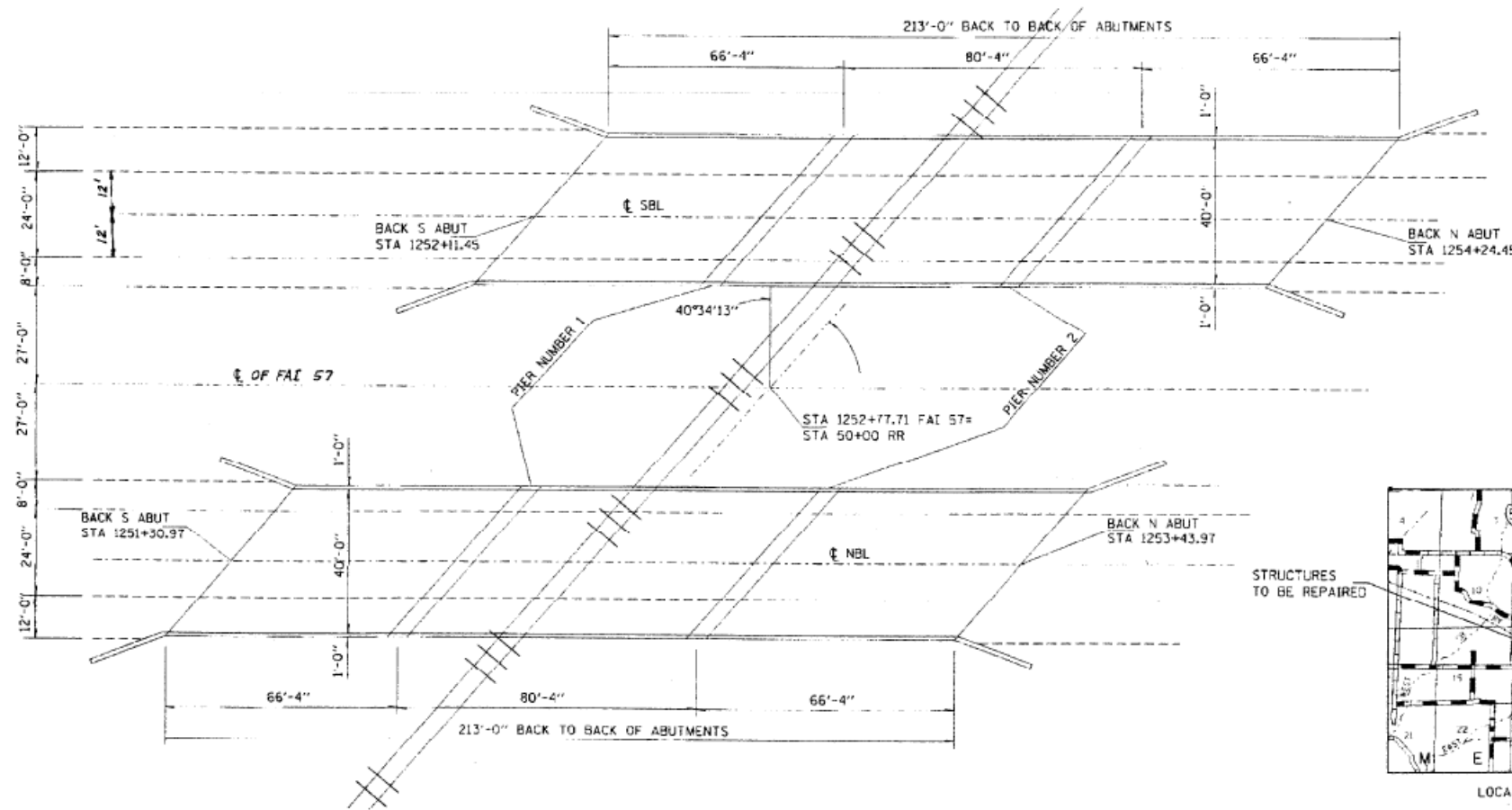
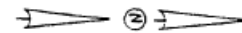
FILE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	041-4-01-4-1-RS-1	JEFFERSON	36	27
FED. AID PROJ. NO. 7		ILLINOIS	FED. AID PROJECT NO.	

TOTAL BILL OF MATERIAL-SECTION(41-4VB)BR		
ITEM	UNIT	TOTAL
PLUG EXISTING DECK DRAIN	EACH	20
BAR SPLICERS	EACH	48
BR. DK. MICROSILICIA CONCRETE OVERLAY	SQ YD	1835
CONC BR DECK SCAR 1/2"	SQ YD	1835
DECK SLAB REPAIR ( FULL DEPTH TYPE 2 )	SQ YD	33
DECK SLAB REPAIR ( PARTIAL )	SQ YD	178
REINFORCEMENT BARS ( EPOXY COATED )	POUND	5280
BIT CON SURF REM ( ASBESTOS )	SQ YD	1870
CONCRETE REMOVAL	CU YD	20.4
NEOPRENE EXPANSION JOINT 2"	FOOT	216
CONCRETE SUPERSTRUCTURES	CU YD	20.4
JACK AND REPOSITION BEARINGS	EACH	28
BRIDGE DECK GROOVING	SQ YD	1835
FORMED CONCRETE REPAIR <= 5 INCHES	SQ YD	20

\* ESTIMATED QUANTITIES ONLY, ACTUAL QUANTITIES TO BE DETERMINED BY THE ENGINEER.



ELEVATION



PLAN



LOCATION SKETCH

## GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM THE EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD 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 THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

EXISTING REINFORCEMENT BARS SHALL BE CLEANED AND USED FOR NEW CONSTRUCTION.

(COST INCIDENTAL TO REINFORCEMENT BARS) (EPOXY COATED).

ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO CLASSIFICATION M270 GR 36.

EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THE ZINC RICH PRIMER.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42, OR M-53 GRADE 60.

EXISTING HANDRAIL POSTS WHICH MUST BE REMOVED TO ACCOMPLISH NEW CONSTRUCTION SHALL BE SALVAGED, STORED AND REINSTALLED IN THEIR ORIGINAL CONFIGURATION.

FOR JACK AND REPOSITION BEARINGS SEE BEARING ALIGNMENT DETAIL.

MICROSILICIA CONCRETE OVERLAY SHALL BE 2 1/4" IN THICKNESS.

ALL PAINTED SURFACES MARRED DURING RECONSTRUCTION SHALL BE REPAINTED.

THE PAINT ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD.

INORGANIC ZINC RICH PRIMER/ACRYLIC/ACRILIC PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED. THE COLOR OF THE ACRYLIC FINISH COAT SHALL BE INTERSTATE GREEN, MUNSELL NO. 7.5 G 4/8. SEE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING METAL STRUCTURES".

EXISTING STRUCTURAL STEEL SHALL ONLY BE CLEANED AND PAINTED AS REQUIRED BY THE APPLICABLE PORTIONS OF THE SPECIAL PROVISIONS, "CLEANING AND PAINTING ADJACENT AREAS OF EXISTING STEEL STRUCTURES".

THE EXACT LOCATION AND QUANTITY OF FORMED CONCRETE REPAIR LESS THAN FIVE INCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

TEMPORARY CONCRETE BARRIERS TO BE INSTALLED AS SHOWN IN THE SUMMARY OF QUANTITIES ARE LOCATED AT THE I.D.O.T. MAINTENANCE YARD IN EFFINGHAM COUNTY. THE YARD IS LOCATED APPROXIMATELY ONE MILE WEST OF EFFINGHAM ON US ROUTE 40. A MINIMUM OF 48 HOURS NOTICE WILL BE REQUIRED TO ARRANGE FOR PICKUP AND/OR RETURN OF THE BARRIERS. STATE MAINTENANCE FORCES WILL NOT LOAD OR UNLOAD THE BARRIERS.

JEFFERSON COUNTY  
STA 1252+77.71  
I-57 OVER SOUTHERN RY  
SN 041-0016 NBL  
SN 041-0017 SBL

Rev. GENERAL PLAN AND ELEVATION, SEC (41-4VB)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN SHEET

USER NAME = henkas	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2020	DATE -	REVISED -

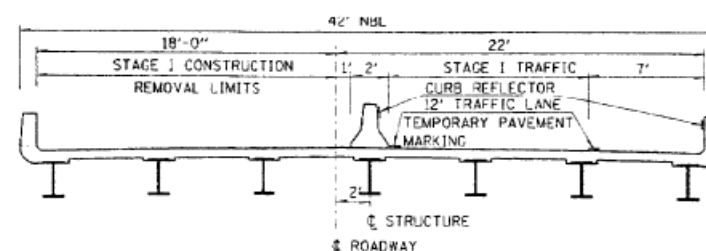
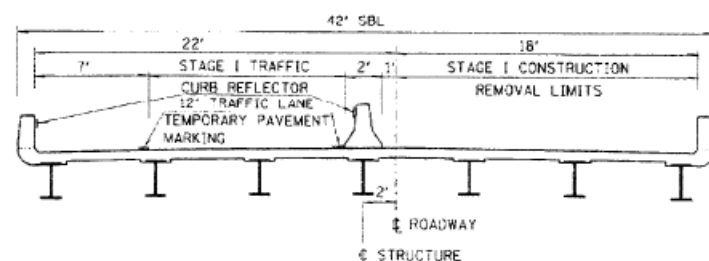
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	13
				CONTRACT NO. 78726
ILLINOIS		FED. AID PROJECT		

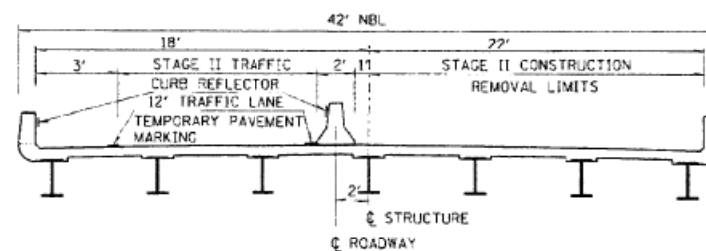
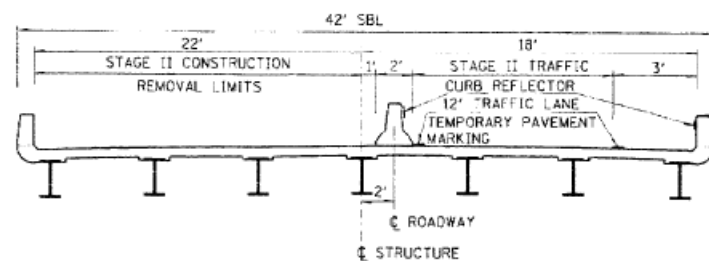
# FOR INFORMATION ONLY

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57 (41-4.41-6-11-RS-1)	JEFFERSON	36	28
FED. AID PROJ. NO.	ILLINOIS	FED. AID PROJECT NO.	

## STAGE I CONSTRUCTION



## STAGE II CONSTRUCTION



JEFFERSON COUNTY  
 STA 1252+77.71  
 I-57 OVER SOUTHERN RY  
 SN 041-0016 NBL  
 SN 041-0017 SBL

STAGE CONSTRUCTION SECTION (41-4VB)

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING PLAN SHEET

USER NAME = henkas	DESIGNED -	REVISED -
PLOT SCALE = 100,000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/30/2020	CHECKED -	REVISED -
	DATE -	REVISED -

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	14
ILLINOIS			FED. AID PROJECT	

CONTRACT NO. 78726

MODEL: Default  
 FILE: hmkc\_p04publcamroom.dwg  
 PROJECT: 9\Projects\78726\04publcamroom.dwg  
 OFFICE: District 9  
 DATE: 1/30/2020

# FOR INFORMATION ONLY

F.A.I. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	36	29
FED. AID PROJ. NO.				

BILL OF MATERIAL				
ITEM	UNIT	NBL	SBL	TOTAL
BAR SPLICERS	EACH	24	24	48
REINFORCEMENT BARS (EPOXY CT)	POUND	2640	2640	5280
CONCRETE REMOVAL	CU YD	10.2	10.2	20.4
NEOPRENE EXPANSION JOINT 2"	FOOT	108	108	216
CONCRETE SUPER STRUCTURES	CU YD	10.2	10.2	20.4

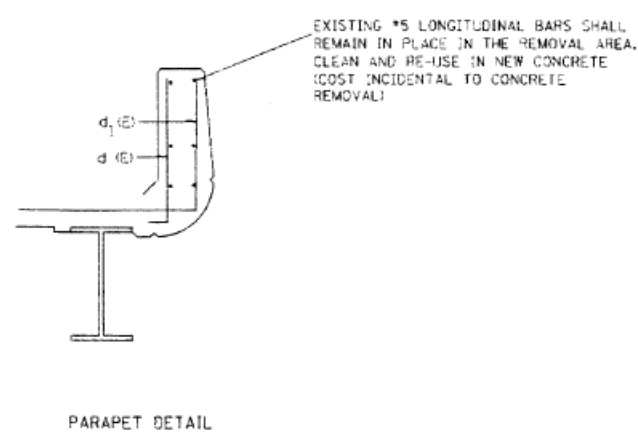
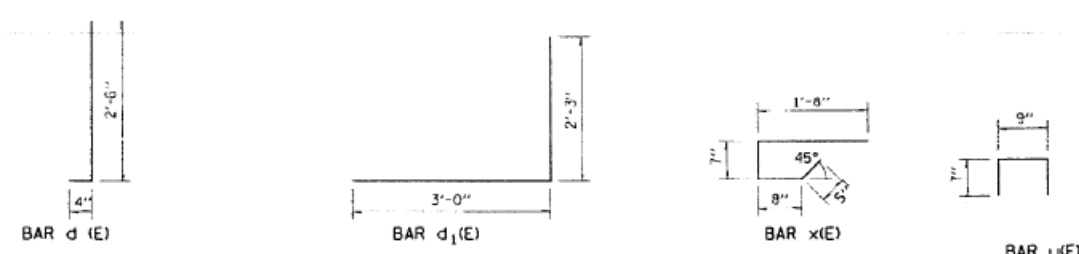
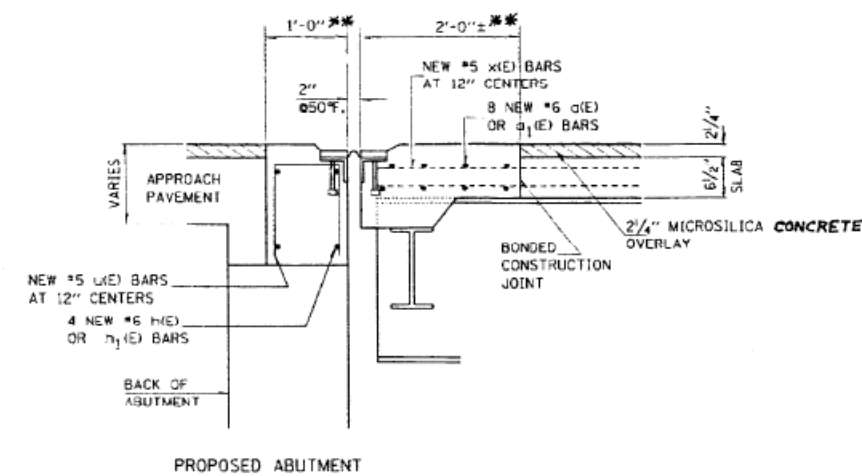
BAR LIST, ONE STRUCTURE				
BAR	NO.	SIZE	LENGTH	SHAPE
a (E)-STAGE I	16	#6	24'-11"	
a (E)-STAGE II	16	#6	30'-3"	
n (E)-STAGE I	8	#6	23'-11"	
n (E)-STAGE II	8	#6	29'-3"	
d (E)-STAGE I	4	#5	2'-10"	
d (E)-STAGE II	4	#5	2'-10"	
d1 (E)-STAGE I	4	#5	5'-3"	
d1 (E)-STAGE II	4	#5	3'-3"	
x (E)-STAGE I	50	#5	3'-4"	
x (E)-STAGE II	62	#5	3'-4"	
u (E)-STAGE I	48	#5	1'-11"	
u (E)-STAGE II	60	#5	1'-11"	

(E) DENOTES EPOXY COATED

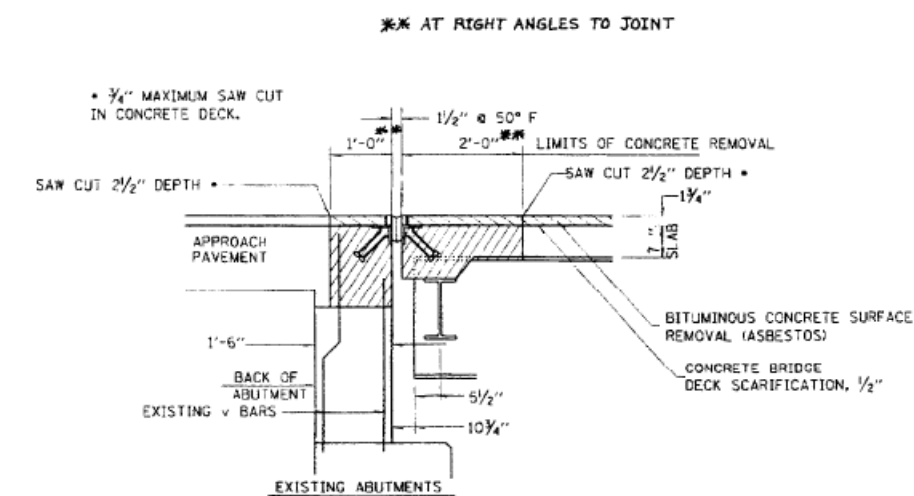
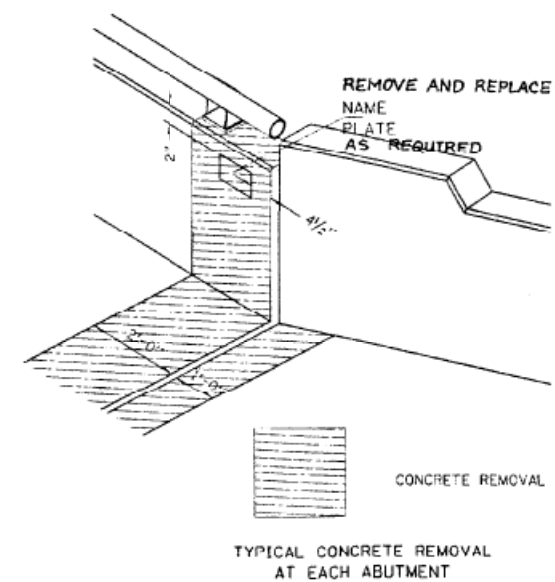
SOUTHERN R.R.  
BUILT 1966 BY  
STATE OF ILLINOIS  
F.A.I. 57 SEC 41-4VB  
STA 1252+77.71  
LOADING HS 20 & ALT.

NAME PLATE  
SEE STD. 2113-4

EXISTING LONGITUDINAL BARS SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONCRETE.



EXISTING #5 LONGITUDINAL BARS SHALL REMAIN IN PLACE IN THE REMOVAL AREA. CLEAN AND RE-USE IN NEW CONCRETE (COST INCIDENTAL TO CONCRETE REMOVAL)



SN 041-0016, SN 041-0017 BAR LISTS AND JOINT DETAILS SECTION (41-4VB)

REVISED

MODEL: Default  
FILE: hmkc:pub\hmkc\p\illinois\p\p\DOT\Documents\DOT\_Offices\Illinet\9\Projects\78726\CADD\Drawings\978726-Sheets.dgn

USER NAME = henkas	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/30/2020	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN SHEET

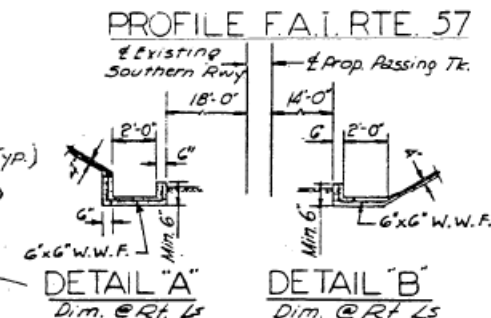
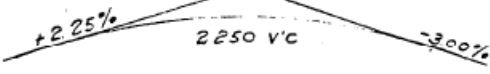
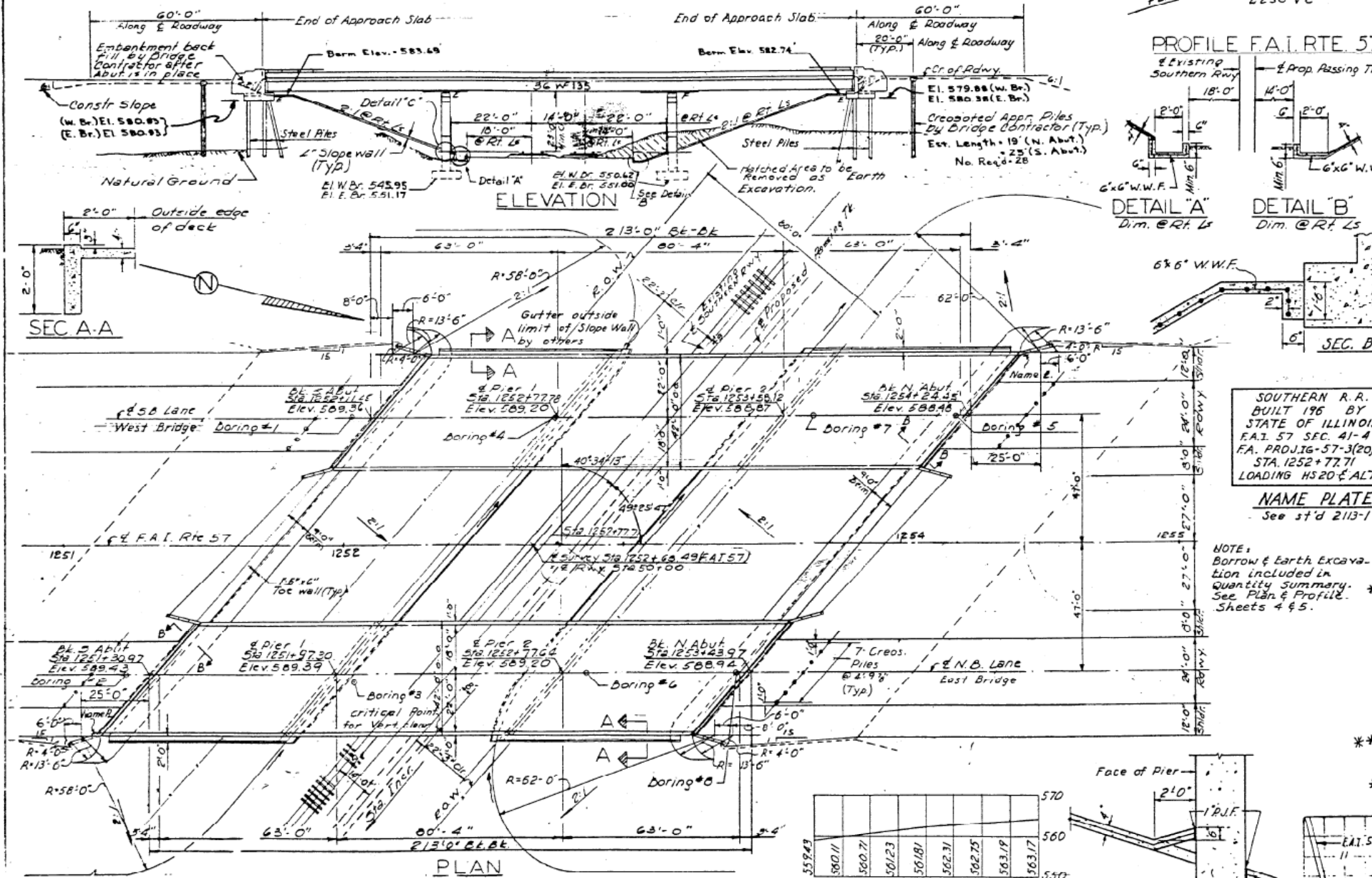
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	15
CONTRACT NO. 78726				
ILLINOIS FED. AID PROJECT				

A.M. 6" Spike in 8" persimmon 125' Rt Sta 1252+04  
 Elev. 564.68  
 No Existing Structure.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	41-4VB	JEFFERSON	18	16
PROJECT NO. 76-57-3(20)103				

# FOR INFORMATION ONLY



**GENERAL NOTES**  
 Coarse aggregate to be used in parapet handrails and end post must be absolutely free of chert, flint, limonite, lignite and soft sandstone.  
 The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.  
 Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58" per 100 sq. ft.  
 All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. designation A-36.  
 The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.  
 Expansion guards are included in the quantity of Structural Steel. Estimated weight 2,870 lbs.  
 Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of the Standard Specifications.

The contractor shall drive one steel test pile each at the North Abutment (E. Bridge) and South Abutment (W. Bridge) as directed by the Engineer before ordering the remainder of piles.

Excavation for portions of structures in the embankments shall not be classified.

Permanent forms will not be permitted in forming the concrete deck.

SOUTHERN R.R.  
 BUILT 196 BY  
 STATE OF ILLINOIS  
 F.A.I. 57 SEC. 41-4VB  
 F.A. PROJ.IG-57-3(20)  
 STA. 1252+77.71  
 LOADING H520 & ALT.

NAME PLATE  
 See std 2113-1

**TOTAL BILL OF MATERIAL**

Item	Unit	Super.	Sub	Total
Class A Excavation for Structures	Cu. Yds.		953	953
Class X Concrete	Cu. Yds.	462.1	671.6	1133.7
Structural Steel	Lbs.	489,350		489,350
Aluminum Handrail	Lin. Ft.	835		835
Reinforcement Bars	Lbs.	123,390	71,210	194,600
Creosoted Piles (up to 20')	Lin. Ft.		266	266
Creosoted Piles (20' to 38')	Lin. Ft.		350	350
Steel Piles (B&P 36)	Lin. Ft.		1554	1554
Test Piles Steel (B&P 36)	Each		2	2
Slope Wall (4')	Sq. Yds.		2,633	2,633
Protective Coat	Sq. Yds.	2.164		2.164
Bridge Seat Sealant	Lump Sum			1
Name Plates	Each		2	2

\* Includes Excavation for Slope Wall!  
 \*\* At Abutments Only

**GENERAL PLAN ELEVATION**

PROJ.IG-57-3(20)103

F.A.I. 57 OVER SOUTHERN R.W.Y.

F.A.I. RTE 57 SEC. 41-4VB

JEFFERSON COUNTY

STA. 1252+77.71

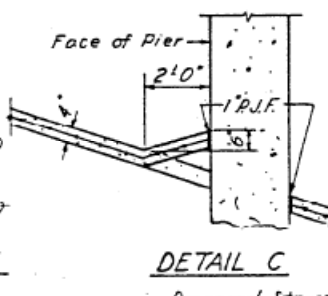
LOCATION PLAN

Nov 13 1964  
 SIGNED: J. Emery  
 CHECKED: J. M. P.S.  
 DRAWN: W.E. Bauman  
 DATE: 1/30/2020

**DESIGN STRESSES**

f<sub>c</sub> = 1400 psi. Super. & Sub.  
 f<sub>v</sub> = 75 psi. Ftgs.  
 f<sub>s</sub> = 20,000 psi. Reinf.  
 f<sub>s</sub> = 20,000 psi. Struct.  
 n = 10  
 Loading H320-44 & ALT.

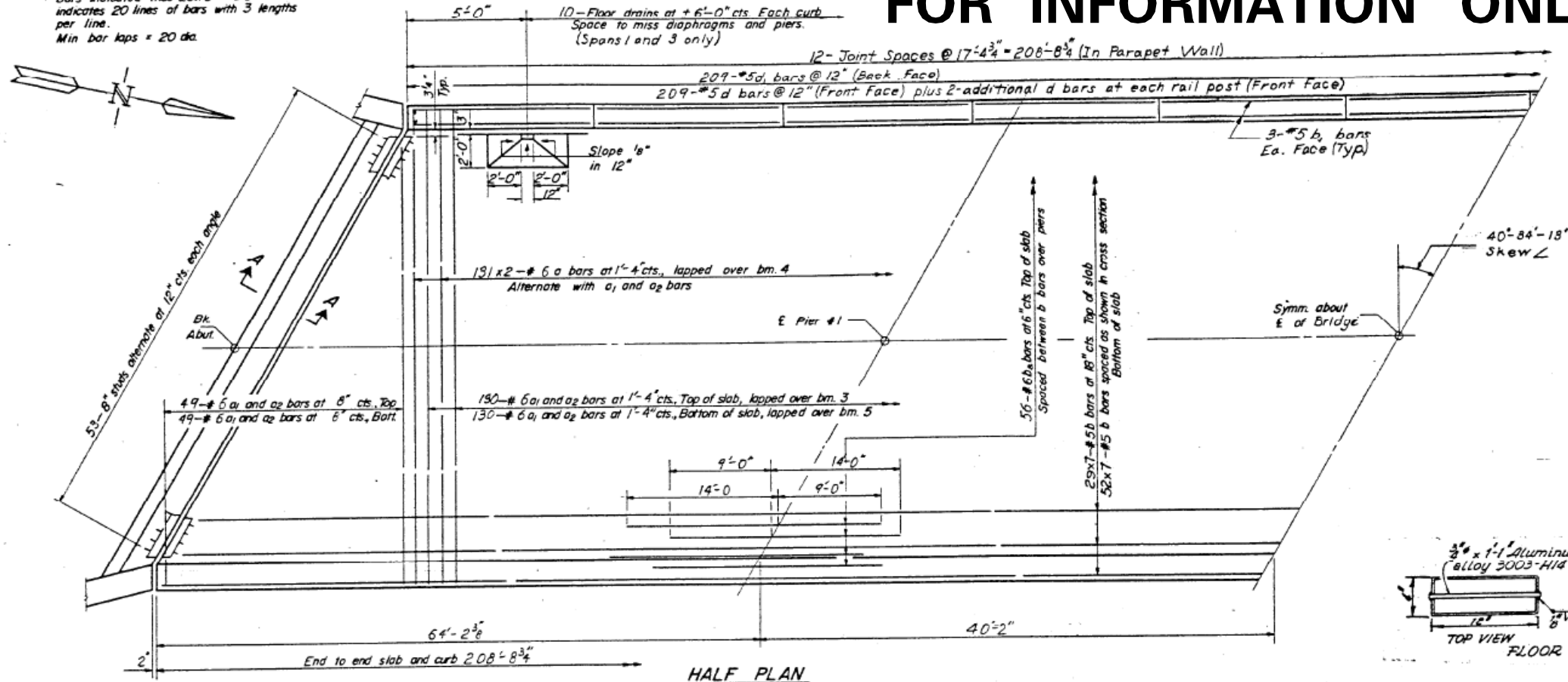
**PROFILE EXISTING R.W.Y. TRACK**





# FOR INFORMATION ONLY

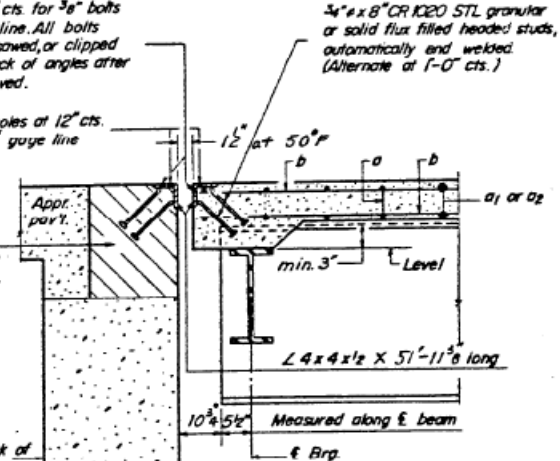
Note:  
Order a<sub>1</sub> and a<sub>2</sub> bars full length, cut to fit skew and use remainder of bars in opposite end.  
Bars indicated thus 20x3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.  
Min bar laps = 20 dia.



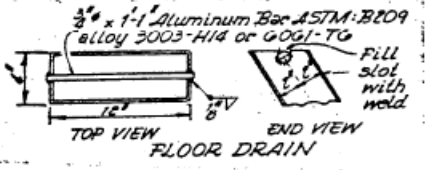
$\frac{1}{8}''$  holes at 12" cts. for  $\frac{3}{8}''$  bolts set on 2 1/2" gage line. All bolts shall be burned, sawed, or clipped off flush with back of angles after forms are removed.

$\frac{1}{8}''$  vent holes at 12" cts. set on 18" gage line

Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with superstructure.



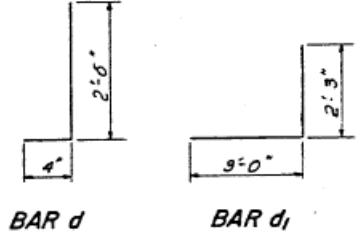
SECTION A-A



3/4" x 1-1/4" Aluminum Bar ASTM B209 alloy 3003-H14 or 6061-T6

Fill slot with weld

FLOOR DRAIN



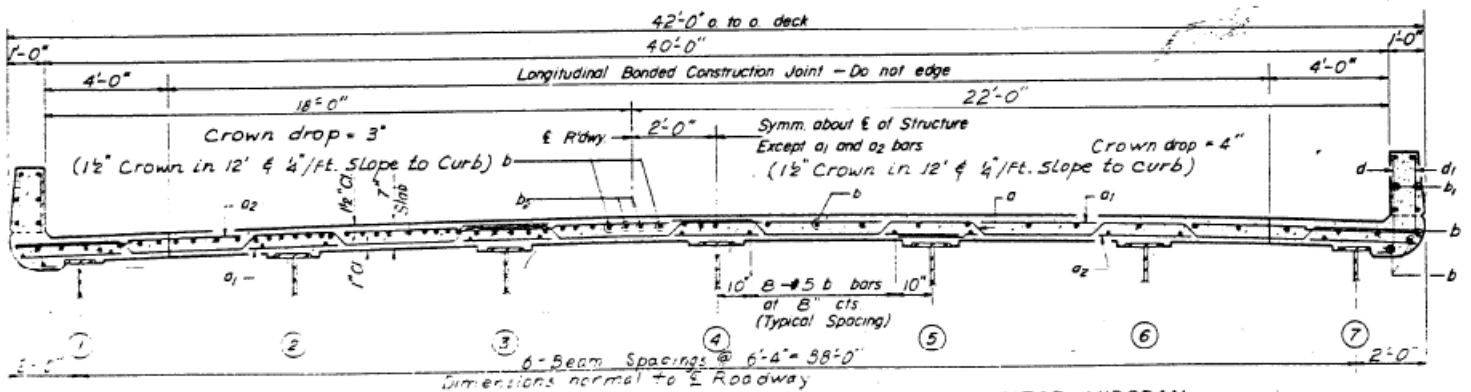
BAR d, BAR d1

### FOR 2 BRIDGES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	524	#6	25'-5"	~
a <sub>1</sub>	716	#6	28'-0"	~
a <sub>2</sub>	716	#6	15'-3"	~
b	1134	#5	30'-9"	~
b <sub>1</sub>	288	#5	17'-0"	~
b <sub>2</sub>	224	#6	23'-0"	~
d	1044	#5	2'-10"	J
d <sub>1</sub>	836	#5	5'-3"	J
Class X Concrete			Cu. Yd.	462.1
Reinforcement Bars			Lbs.	123,390
Structural Steel				49,348

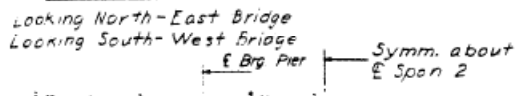
\* Weight of bearing assemblies with head & shim plates and anchor bolts are included as structural steel. Est. Weight = 15,510 lbs.

SUPERSTRUCTURE  
F.A.I. RT. 57 SEC 41-4VB  
OVER SOUTHERN RAILWAY  
JEFFERSON COUNTY  
STA. 1252 +77.71



NEAR PIERS

NEAR MIDSPAN



STANDARD FILLET DETAIL

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheets #8 & 9. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 2, minus slab thickness, equals the fillet heights "t" above top of beams.

DEAD LOAD DEFLECTION DIAGRAM

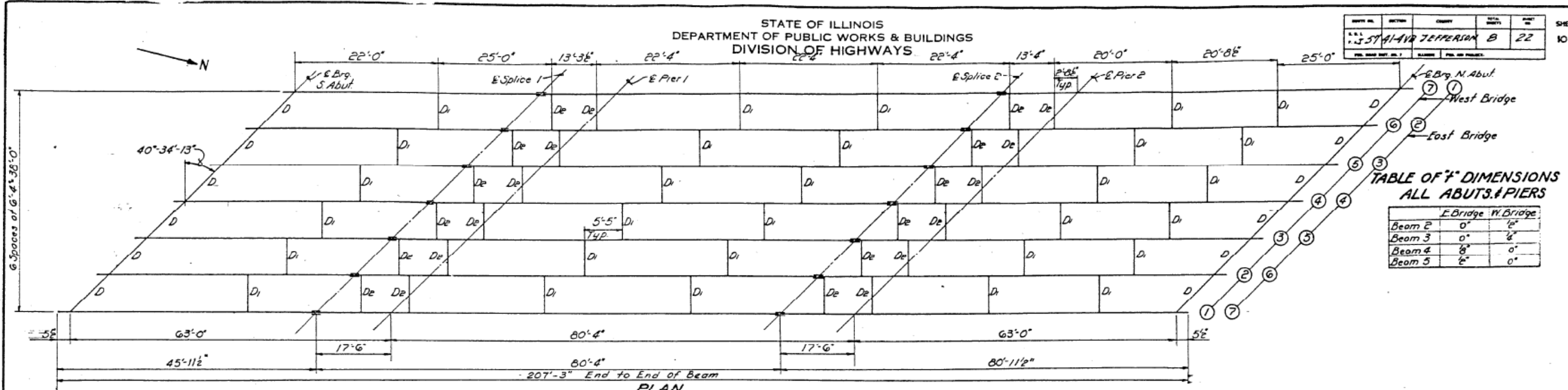
(Includes weight of concrete only)  
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets #8 & 9.

DESIGNED: E. Engler  
DRAWN: J. P. [unclear]  
CHECKED: S. E.  
DATE: 11-15-62

Model: Default  
File: 57-41-4VB-DRAWING-DIVISION OF HIGHWAYS-ROADS-0978726-SHEETS.dwg  
Project: 78726  
Drawing: 978726-CADD-DATA-CADD-SHEETS-0978726-SHEETS.dwg

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

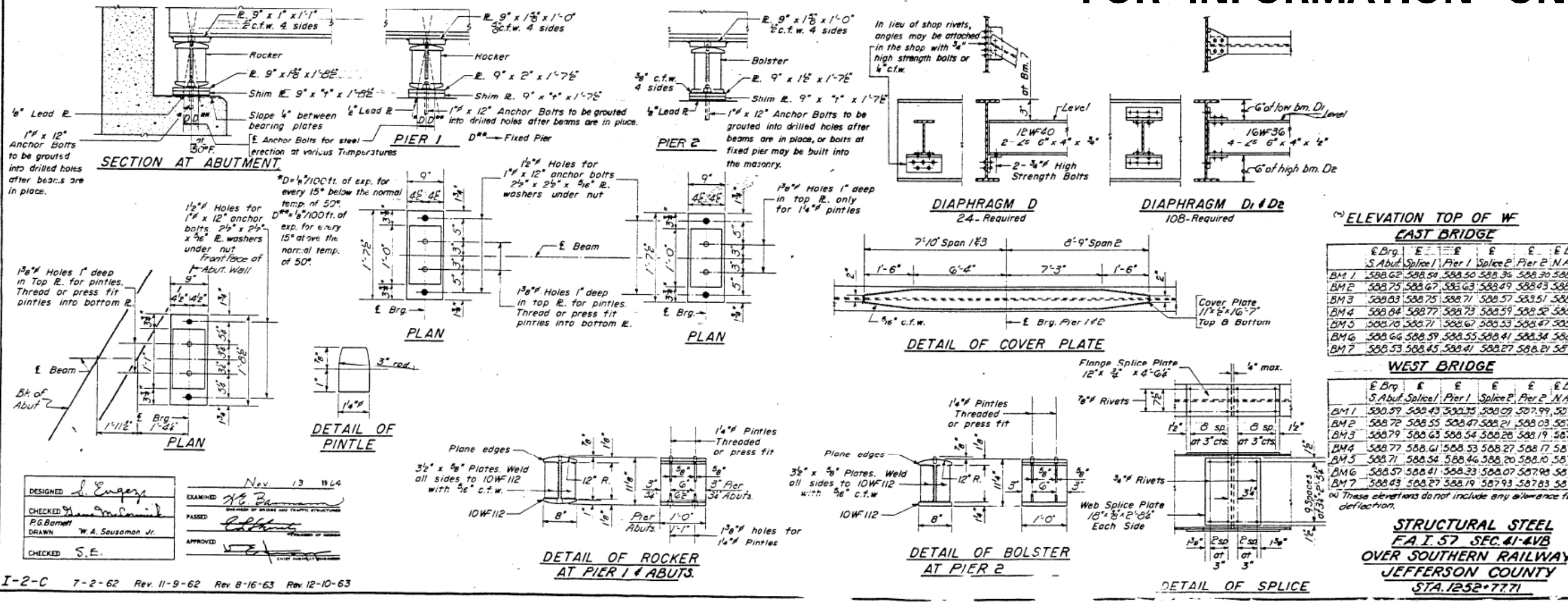
DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11-57-41-VB	JEFFERSON	B	22	3



**TABLE OF " DIMENSIONS ALL ABUTS. & PIERS**

	E. Bridge	W. Bridge
Beam 2	0"	1/2"
Beam 3	0"	1/2"
Beam 4	8"	0"
Beam 5	6"	0"

**FOR INFORMATION ONLY**



**ELEVATION TOP OF WF EAST BRIDGE**

Beam	E. Brq. S. Abut.	E. Splice 1	E. Pier 1	E. Splice 2	E. Pier 2	E. Brq. N. Abut.
BM 1	588.62	588.58	588.50	588.36	588.30	588.07
BM 2	588.75	588.67	588.63	588.49	588.43	588.20
BM 3	588.03	588.75	588.71	588.57	588.51	588.20
BM 4	588.84	588.77	588.73	588.59	588.52	588.30
BM 5	588.70	588.71	588.67	588.53	588.47	588.24
BM 6	588.66	588.59	588.55	588.41	588.34	588.12
BM 7	588.53	588.45	588.41	588.27	588.21	587.98

**ELEVATION TOP OF WF WEST BRIDGE**

Beam	E. Brq. S. Abut.	E. Splice 1	E. Pier 1	E. Splice 2	E. Pier 2	E. Brq. N. Abut.
BM 1	589.59	588.43	588.35	588.09	587.99	587.64
BM 2	588.72	588.55	588.47	588.21	588.03	587.77
BM 3	588.79	588.63	588.54	588.28	588.19	587.84
BM 4	588.77	588.61	588.53	588.27	588.17	587.82
BM 5	588.71	588.54	588.46	588.20	588.10	587.76
BM 6	588.57	588.41	588.33	588.07	587.93	587.63
BM 7	588.43	588.27	588.19	587.93	587.83	587.48

*(\*) These elevations do not include any allowance for deflection.*

**STRUCTURAL STEEL  
F.A.I. 57 SEC. 41-VB  
OVER SOUTHERN RAILWAY  
JEFFERSON COUNTY  
STA. 1252+77.1**

DESIGNED	<i>L. Engert</i>	EXAMINED	<i>Nov. 13 1964</i>
CHECKED	<i>P.G. Bennett</i>	PASSED	<i>[Signature]</i>
DRAWN	<i>W.A. Sauseman Jr.</i>	APPROVED	<i>[Signature]</i>
CHECKED	<i>S.E.</i>		

I-2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN SHEET

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE PATCH 2020-1	JEFFERSON	18	18

CONTRACT NO. 78726

SCALE: SHEET OF SHEETS STA. TO STA.