03-03-2017 LETTING ITEM 038

INDEX OF SHEETS

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COVER SHEET GENERAL NOTES SUMMARY OF QUANTITIES MAINTENANCE OF TRAFFIC PLAN & NOTES MAINTENANCE OF TRAFFIC TYPICAL SECTIONS MAINTENANCE OF TRAFFIC SCHEDULE 10-14 EXISTING RIGHT-OF-WAY PLANS (FOR INFORMATION ONLY) 15-27 STRUCTURE PLANS

HIGHWAY STANDARDS

701428-01 001001-02 701456-04 001006 701501-06 701006-05 701901-06 701400-09 701401-10

FUNCTIONAL CLASSIFICATIONS

I-55/I-64 EB & WB CD LANES: INTERSTATE NB TUDOR-PIGGOTT RAMPS: INTERSTATE WB 1-55/1-64 TUDOR RAMP: INTERSTATE

TRAFFIC DATA

I-55/I-64 EB CD LANES: 2015 ADT = 27, 100 2017 ADT = 27,600 (EST.) SU = 2.6% MU = 6.8%POSTED SPEED = 50 MPH I-55/I-64 WB CD LANES: 2016 ADT = 15,500 2017 ADT = 15.700 (EST.) SU = 3.1% MU = 7.7% POSTED SPEED = 50 MPH

NB TUDOR-PIGGOTT RAMPS: 2015 ADT = 3,000 (EST.) 2017 ADT = 3,100 (EST.) SU = 3.3%

MU = 3.0% POSTED SPEED = 50 MPH

WB I-55/I-64 TUDOR RAMP: 2016 ADT = 1,100 2017 ADT = 1,100 (EST.) SU = 3.4% MU = 2.1%

POSTED SPEED = 50 MPH

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 TIMOTHY PADGETT, PE (618) 346-3325 PROJECT MANAGER DONALD HAYDEN, PE (618) 346-3181

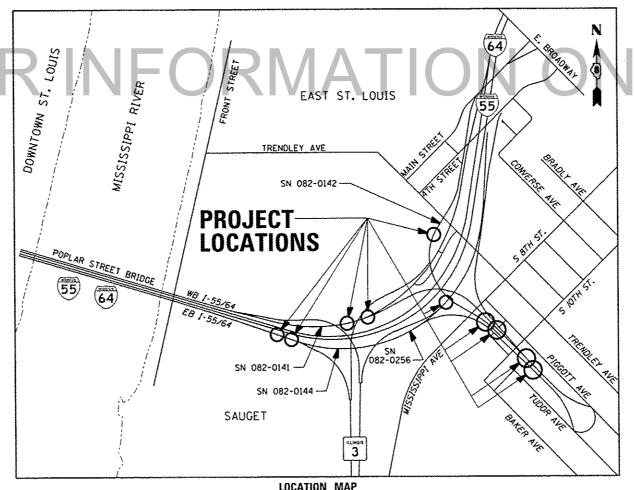
STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAI ROUTE 70 (I-55 / I-64) SECTION 82-3HVB-2R-2-B-R PROJECT ACNHPP-0070(029) EMERGENCY REPAIRS POPLAR STREET BRIDGE COMPLEX ST. CLAIR COUNTY

C-98-045-16



NOT TO SCALE

DATE SIGNED:

LICENSE EXPIRES: 11 /30 /2017

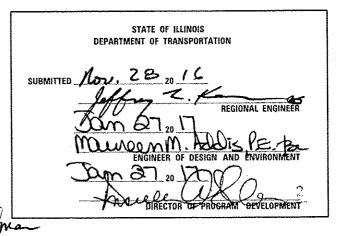
EFK Moen, LLC

Civil Engineering Design

THE SEAL SHOWN ABOVE IS VALID FOR THE FOLLOWING SHEETS ON THESE PLANS WHICH WERE PREPARED UNDER MY DIRECTION

SECTION 82-3HVB-2R-2-8-R ST. CLAIR 27 ILLINOIS CONTRACT NO. 76J68





PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 76J68

GENERAL NOTES

- 1. ALL REPAIRS DETAILED ON THESE PLANS SHALL BE CONSTRUCTED ACCORDING TO ALL CURRENT APPLICABLE IDOT POLICIES AND STANDARDS IN EFFECT ON THE DATE OF THE INVITATION FOR BIDS.
- 2. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES WITHIN THE PROJECT ARE BEFORE DIGGING. FIELD MARKING OF UTILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THR UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
- AMEREN ILLINOIS ELECTRIC & GAS
 AT&T ILLINOIS COMMUNICATIONS
 CHARTER COMMUNICATIONS CABLE TV
 CITY OF EAST ST. LOUIS LIGHTING
- . ILLINOIS AMERICAN WATER COMPANY WATER
- . LACLEDE PIPELINE COMPANY ~ PIPELINE • VERIZON BUSINESS - COMMUNICATIONS
- . ZAYO GROUP COMMUNICATIONS

MEMBERS OF J. U. L. I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY .. NON-J. U. L. I. E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

- 3. EXCEPT WHERE DESIGNATED OTHERWISE, THE LOCATIONS AND/OR DEPTHS OF UNDERGROUND UTILITIES SHOWN HAVE BEEN TAKEN FROM OFFICE RECORD INFORMATION FURNISHED BY THE UTILITY OWNERS AND MUST BE CONSIDERED APPROXIMATE.
- 4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- 5. ONLY RUBBER TIRES WILL BE ALLOWED ON THE AT-GRADE CROSSINGS.
- 6. FOR SN 082-141, SN 082-0144, AND SN 082-0256, ALL WORK WITHIN 25 FEET OF THE TRACK CENTERLINE WILL REQUIRE A UNION PACIFIC RAILROAD (UPRR) FLAGMAN.

TERMINAL RAILROAD OF ST. LOUIS GENERAL NOTES

- 1. WITHIN THESE NOTES, THE TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS SHALL BE REFERRED TO AS THE "RAILROAD".
- 2. RAILROAD REVIEW AND APPROVAL OF SHORING AT REPAIR LOCATION DS IS REQUIRED.
- 3. THE PRIMARY RAILROAD POINTS OF CONTACT FOR THIS PROJECT ARE:

ASIM RAZA CHIEF LEGAL OFFICER, DIRECTOR OF REAL ESTATE & MARKETING 415 SOUTH 18TH SUITE 200 ST. LOUIS, MO 63103 (314) 241-4729 ARAZA@TERMINALRAILROAD.COM

ERIC FIELDS, P.E. CHIEF ENGINEER (618) 451-8428 EFIELDS@TERMINALRAILROAD.COM

COMMITMENTS

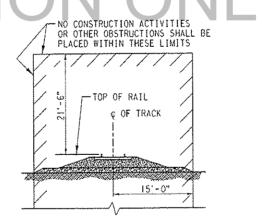
COMMITMENTS FOR THIS PROJECT ARE AS FOLLOWS:

1. NO KNOWN COMMITMENTS HAVE BEEN RECORDED AT THIS TIME.

UNION PACIFIC RAILROAD GENERAL NOTES

- 1. WITHIN THESE NOTES, THE UNION PACIFIC RAILROAD SHALL BE REFERRED TO AS THE "RAILROAD".
- 2. A CONTRACTOR'S RIGHT-OF-ENTRY PERMIT IS REQUIRED BEFORE ANY WORK CAN COMMENCE ON RAILROAD PROPERTY. THE COST TO OBTAIN THIS PERMIT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 3. ALL WORK WITHIN 25 FEET OF THE NEAREST TRACK WILL REDUIRE A RAILROAD FLAGMAN. A MINIMUM 72 HOURS NOTICE IS REQUIRED TO SCHEDULE A FLAGMAN FOR WORK. RAILROAD FLAGGING WILL BE PAID FOR ACCORDING TO ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.
- 4. RAILROAD REVIEW AND APPROVAL OF SHORING AT REPAIR LOCATION H2 IS REQUIRED.
- 5. ONLY RUBBER TIRES WILL BE ALLOWED ON THE AT-GRADE CROSSINGS.
- 6. FALSEWORK CLEARANCE SHALL COMPLY WITH THE RAILROAD'S MINIMUM CONSTRUCTION CLEARANCE ENVELOPE.
- 7. THE PRIMARY RAILROAD POINT OF CONTACT FOR THIS PROJECT IS:

JORDON ALBERS MANAGER INDUSTRY AND PUBLIC PROJECTS 100 NORTH BROADWAY **SUITE 1500** ST. LOUIS, MO 63102 (314) 331-0682 JRALBERSOUP.COM



MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

(NORMAL TO RAILROAD)

FILE NAME =	USER NAME = adintaleon	DESIGNED - BJG	REVISED -		GENERAL NOTES	F	RTE.	SECTION	COUNTY SH	HEETS NO.
SFILELS		DRAWN - BJG	REVISED -	STATE OF ILLINOIS		<u> </u>	70	82-3HVB-2R-2-B-R	ST. CLAIR CONTRACT N	27 2
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67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	0. 7	0.6	1.1	0.6
67100100	MOBILIZATION	L SUM	1	0.3	0.3	0.3	0. 1
70100205	TRAFFIC CONTROL AND PROTECTION. STANDARD 701401	EACH	4	1		2	1
70100420	TRAFFIC CONTROL AND PROTECTION. STANDARD 701411	EACH	5	2		2	1
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70100825	TRAFFIC CONTROL AND PROTECTION, STANDARD 701456	L SUM	1	0.3	0.7		
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	V V V V V V V V V V V V V V V V V V V	1			
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2	0.8	1, 2		
70107007	PAVEMENT MARKING BLACKOUT TAPE, 7"	FOOT	6313	4673	1320	55	265
70107009	PAVEMENT MARKING BLACKOUT TAPE, 9"	F00T	11868	10408		1197	263
70107016	PAVEMENT MARKING BLACKOUT TAPE, 16"	FOOT	730	730			
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SO FT	13558	11506	770	930	352
78100300	REPLACEMENT REFLECTOR	EACH	59	38		6	15
						170	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	59	38		6	15
X0325748	ACRYLIC COATING	SQ YD	282		188	80	14
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SPECIALTY I	TEM	_1	L				

90 % FEDERAL

10 % STATE

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NO.	ITEM	UNIT	QUANTITY	0014	0014	0014	0014
				S.N. 082-0141	S. N. 082-0142	S. N. 082-0144	S. N. 082-02
X0325749	FIBER WRAP	SQ FT	2540	A PART AND	1690	725	125
20001905	STRUCTURAL STEEL REPAIR	POUND	5050	4190		260	
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SO FT	1961	The state of the s	1310	587	64
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	0.4		0.4	0.2
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH			_		
20073200	TEMPONANT SHORING AND CRIBBING	EACH	11		4	5	2
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FILE NAME :

465

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

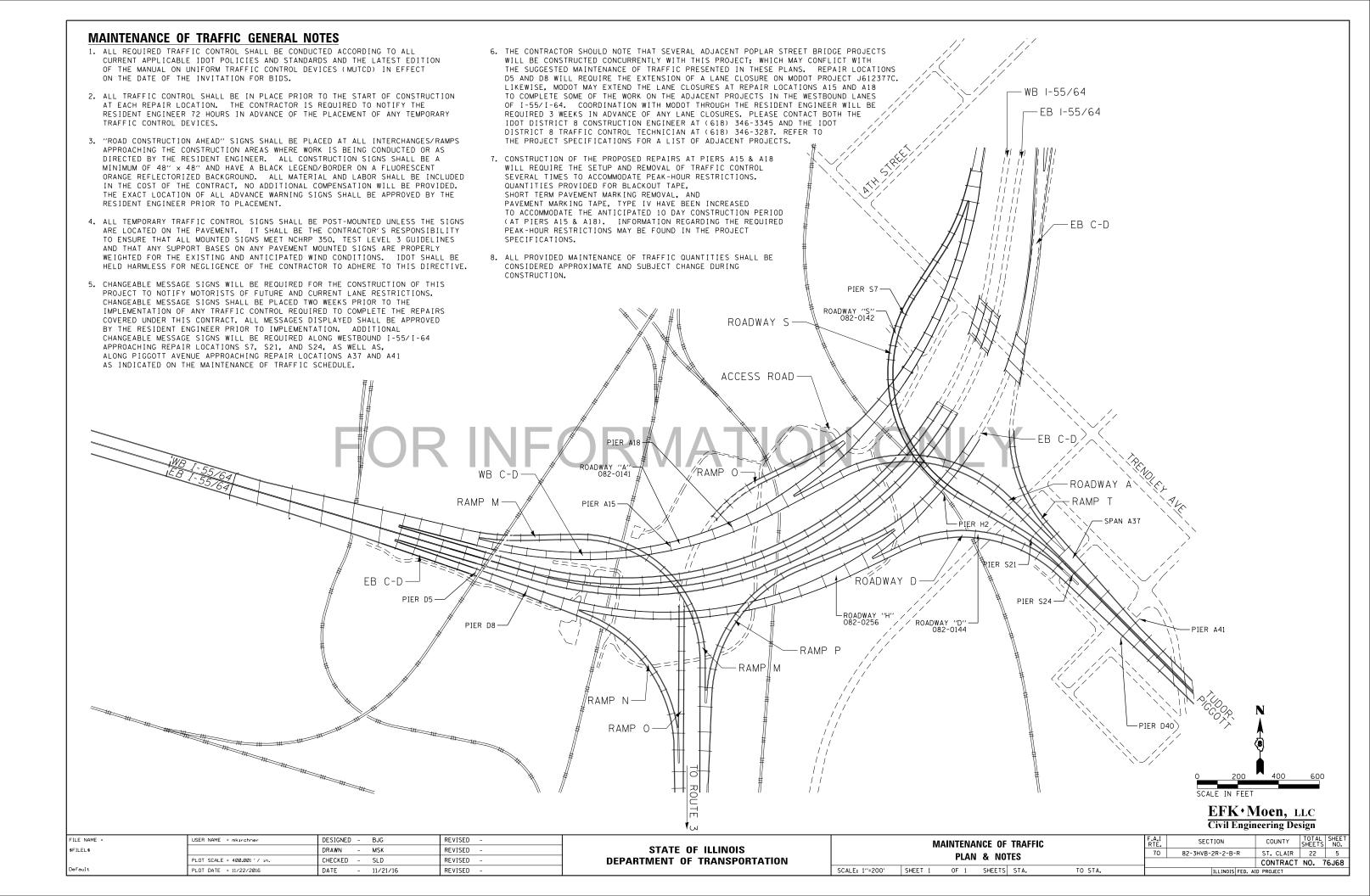
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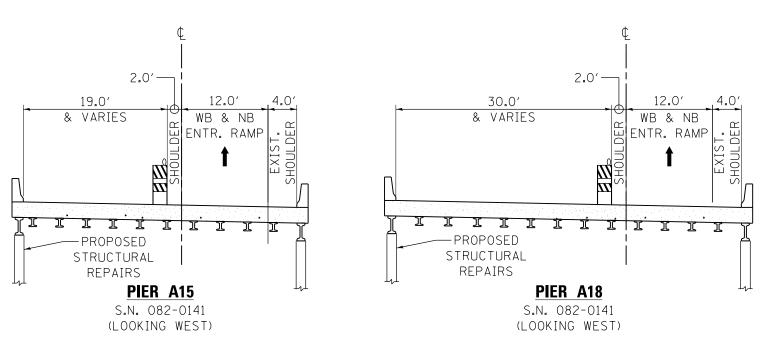
90 % FEDERAL

10 % STATE

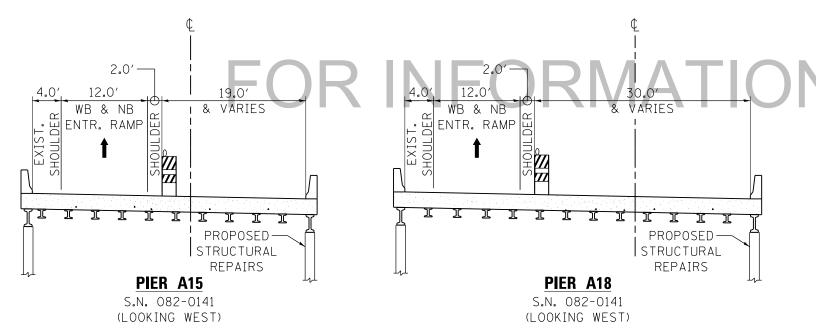
EFK Moen, LLC
Civil Engineering Design

| F.A.I. | SECTION | COUNTY | TOTAL SHEET | NO. |
| 70 | 62-3hvb-2R-2-B-R | ST. CLAIR | 27 | 4 |
| CONTRACT NO. 76J68 | ILLINOIS| FED. AID PROJECT





LEFT SIDE REPAIRS



RIGHT SIDE REPAIRS

SUGGESTED MAINTENANCE OF TRAFFIC - PIERS A15 & A18

- 1. CLOSE LEFT LANES AT BOTH REPAIR LOCATIONS (USING HIGHWAY STANDARDS 701400, 701401 & 701411).
- 2. CONSTRUCT REPAIRS ON LEFT PIERS.
- 3. CLOSE RIGHT LANES AT BOTH REPAIR LOCATIONS
- (USING HIGHWAY STANDARD 701400, 701401 & 701411).
- 4. CONSTRUCT REPAIRS ON RIGHT PIERS.
- 5. REMOVE TRAFFIC CONTROL AND RESUME NORMAL TRAFFIC PATTERNS.

NOTE:

ALL ARROWS SHOWN INDICATE DIRECTION OF TRAFFIC FLOW.

IIII PROPOSED STRUCTURAL REPAIRS PIERS D5 & D8 S.N. 082-0144 (LOOKING EAST) **RIGHT SIDE REPAIRS ONLY SUGGESTED MAINTENANCE OF TRAFFIC - PIERS D5 & D8** 1. CLOSE RIGHT LANES AT BOTH REPAIR LOCATIONS (USING HIGHWAY STANDARDS 701428, 701400, 701401, & 701411) IN CONJUNCTION WITH MODOT PROJECT NO. J6I2377C. 2. CONSTRUCT REPAIRS ON RIGHT PIERS. 3. REMOVE TRAFFIC CONTROL AND RESUME NORMAL TRAFFIC PATTERNS. 4. CONSTRUCT REPAIRS ON LEFT PIERS UNDER TRAFFIC.

2.0'-

23.0′

12.0'

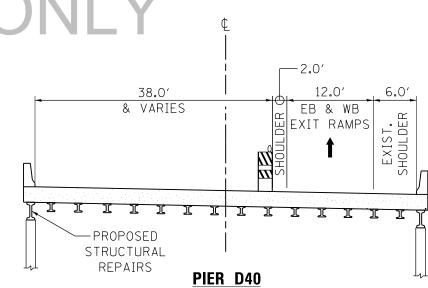
EB &

SB EXIT

RAMP

EXIST.

SHOULDER -



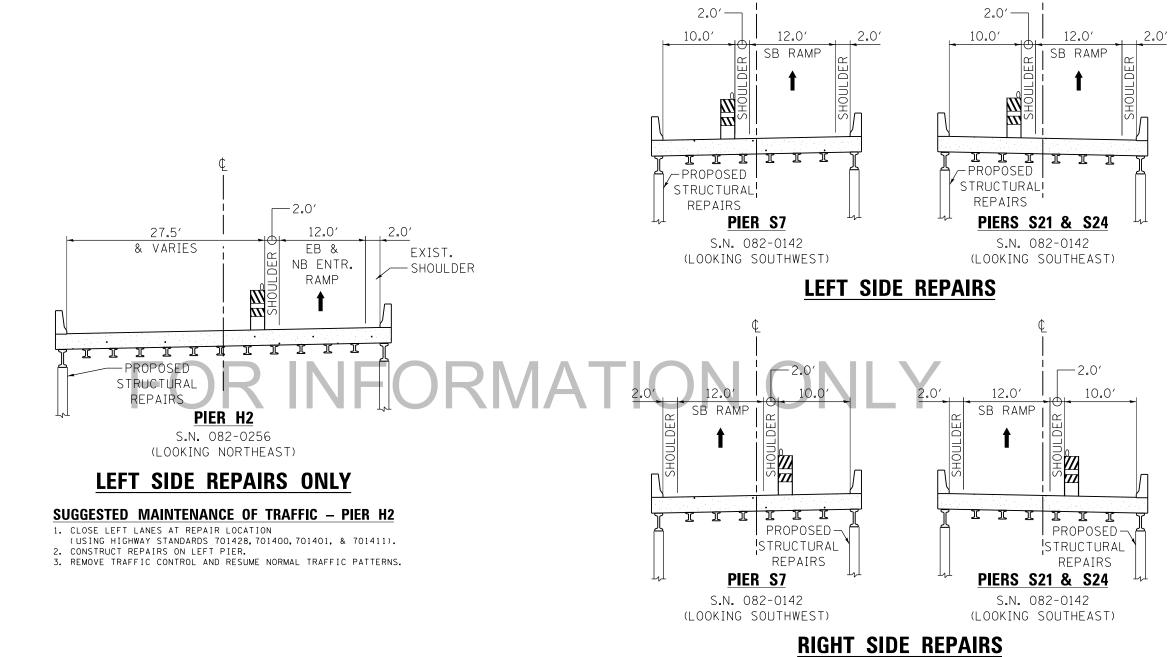
S.N. 082-0144 (LOOKING SOUTH)

LEFT SIDE REPAIRS ONLY

SUGGESTED MAINTENANCE OF TRAFFIC - PIER D40

- 1. CLOSE LEFT LANES AT REPAIR LOCATION
- (USING HIGHWAY STANDARDS 701400, 701401 & 701411).
 2. CONSTRUCT REPAIRS ON LEFT SPAN.
- 3. REMOVE TRAFFIC CONTROL AND RESUME NORMAL TRAFFIC PATTERNS.

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NOTE:

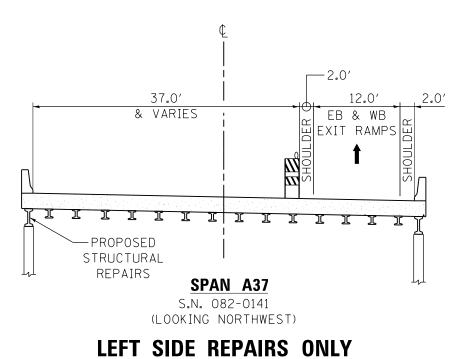
ALL ARROWS SHOWN
INDICATE DIRECTION
OF TRAFFIC FLOW.

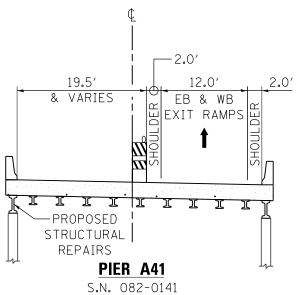
1. SHIFT TRAFFIC TO LEFT SIDE OF RAMP AT REPAIR LOCATIONS (USING HIGHWAY STANDARD 701456). 2. CONSTRUCT REPAIRS ON RIGHT PIERS. 3. SHIFT TRAFFIC TO RIGHT SIDE OF RAMP AT REPAIR LOCATIONS (USING HIGHWAY STANDARD 701456). 4. CONSTRUCT REPAIRS ON LEFT PIERS. 5. REMOVE TRAFFIC CONTROL AND RESUME NORMAL TRAFFIC PATTERN.

SUGGESTED MAINTENANCE OF TRAFFIC - PIERS S7, S21, & S24

5.	REMOVE	TRAFFIC	CONTROL	AND	RESUME	NORMAL	TRAFFIC	PATTERN.

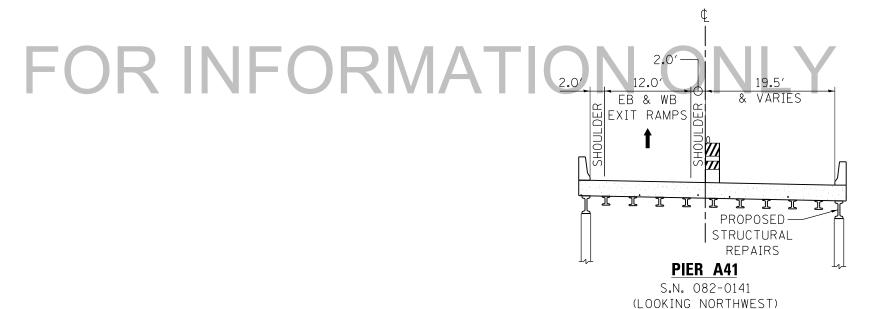
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S.N. 082-0141 (LOOKING NORTHWEST)

LEFT SIDE REPAIRS



RIGHT SIDE REPAIRS

SUGGESTED MAINTENANCE OF TRAFFIC - SPAN A37 & PIER A41

- 1. CLOSE LEFT LANE AND STRIPED MEDIAN AT REPAIR LOCATION A37 & CLOSE LEFT LANE AT REPAIR LOCATION A41 (USING HIGHWAY STANDARDS 701411, 701456, & 701501).
- 2. CONSTRUCT REPAIRS ON LEFT SIDE AT BOTH REPAIR LOCATIONS.
- 3. CLOSE RIGHT LANE AT REPAIR LOCATION A41 (USING HIGHWAY STANDARD 701456).
- 4. CONSTRUCT REPAIRS ON RIGHT SIDE AT REPAIR LOCATION A41.
- 5. REMOVE TRAFFIC CONTROL AND RESUME NORMAL TRAFFIC PATTERNS.

NOTE:

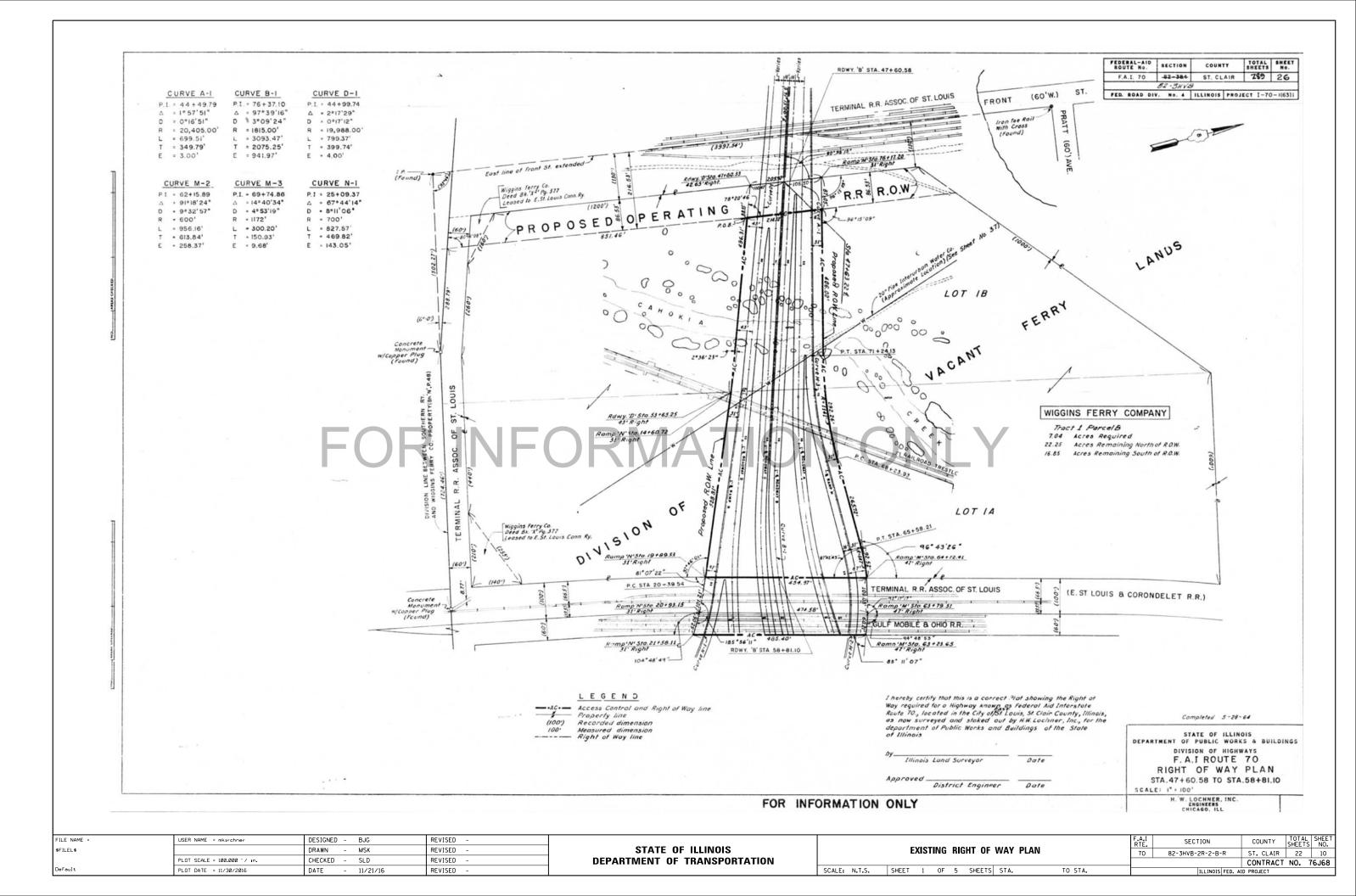
ALL ARROWS SHOWN INDICATE DIRECTION OF TRAFFIC FLOW.

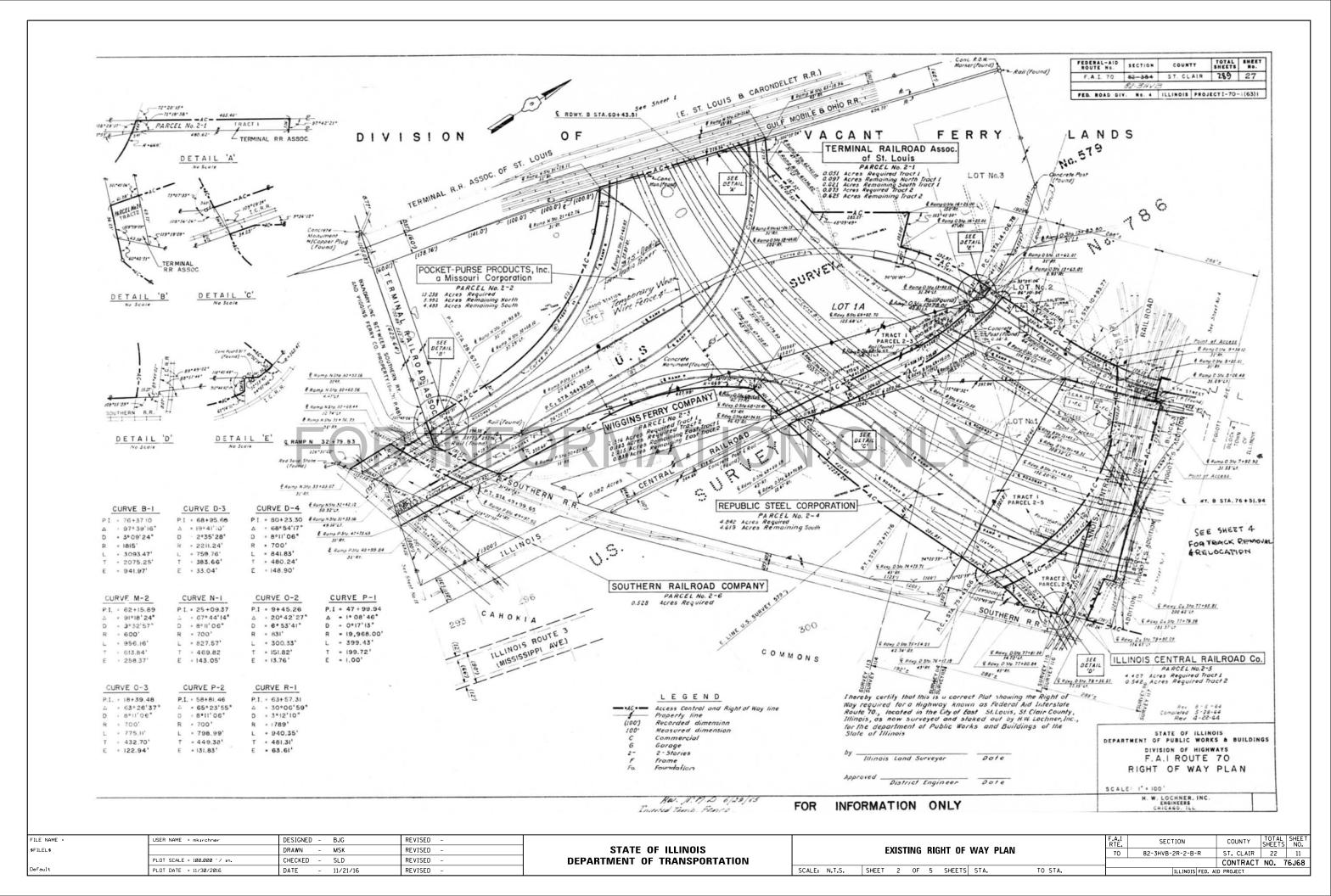
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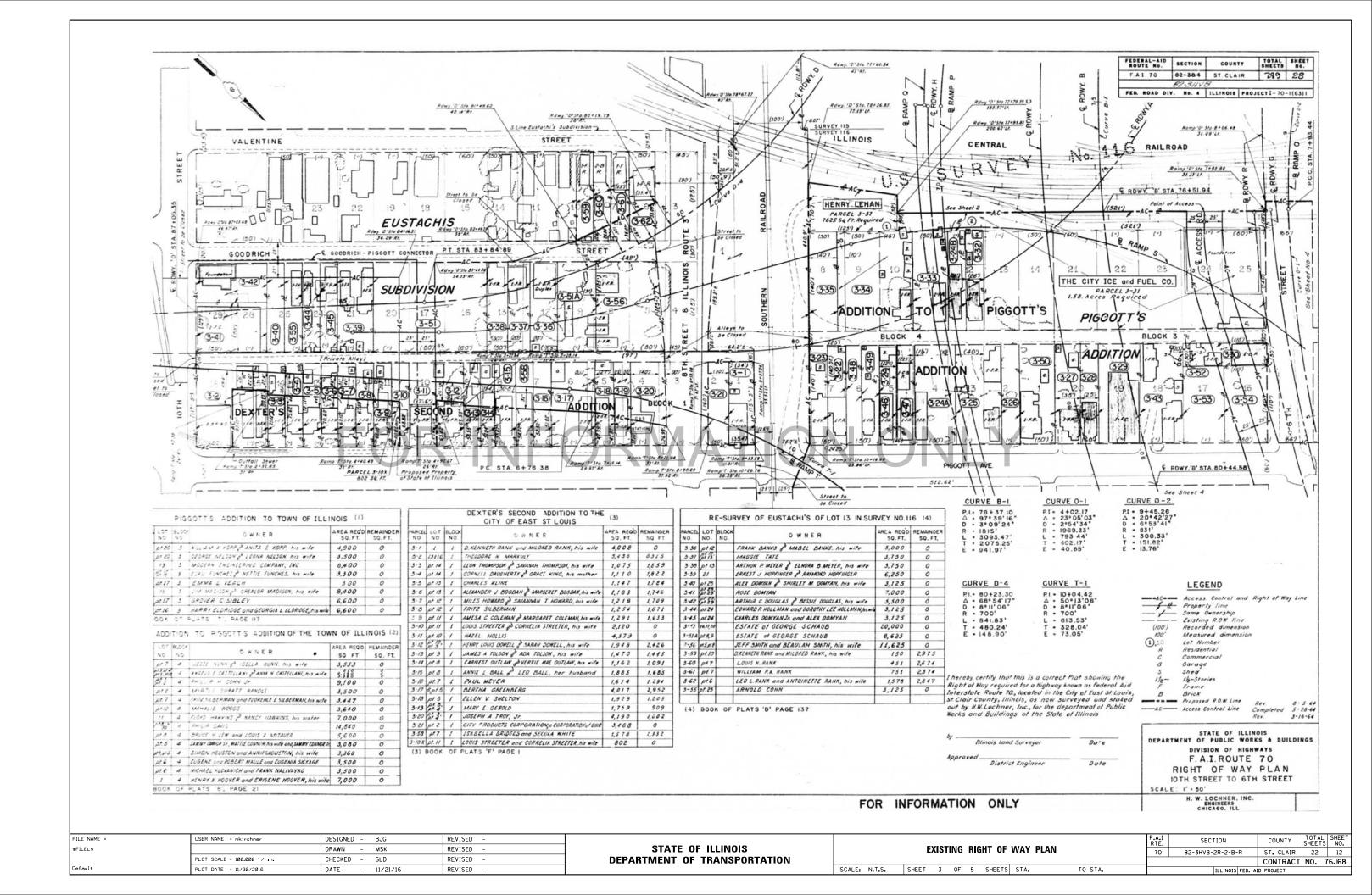
						MAINT	ENANCE OF TRA	FFIC SCHEDU	LE						
REPAIR	ENGINEERS	MOBILIZATION	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	CHANGEABLE	PAVEMENT	PAVEMENT	PAVEMENT	SHORT	PAVEMENT	REPLACEMENT	RAISED	RAILROAD
LOCATION	FIELD		CONTROL	CONTROL	CONTROL	CONTROL	MESSAGE	MARKING	MARKING	MARKING	TERM	MARKING	REFLECTOR	REFLECTIVE	PROTECTIVE
	OFFICE		&	&	&		SIGN	BLACKOUT	BLACKOUT	BLACKOUT	PAVEMENT	TAPE		PAVEMENT	LIABILITY
	TYPE		PROTECTION	PROTECTION	PROTECTION	PROTECTION		TAPE	TAPE	TAPE	MARKING	TYPE IV		MARKER	INSURANCE
	Α		STANDARD	STANDARD	STANDARD	STANDARD		7''	9"	16"	REMOVAL	8″*		REMOVAL	
			701401	701411	701456	701501									
	(CAL MO)	(L SUM)	(EACH)	(EACH)	(L SUM)	(L SUM)	(CAL MO)	(FOOT)	(F00T)	(FOOT)	(SQ FT)	(F00T)	(EACH)	(EACH)	(L SUM)
	•						SN 082-0	141							
A15 & A18	0.65	0.14	1	1				2,746**	9,278**	184**	8,807**	15,417**	17	17	0.4
A37 & A41	0.05	0.14		1	0.30		0.8	1927	1,130	546	2,699		21	21	
							SN 082-0	142							
S7	0.20	0.14			0.35		0.6	440			257				
S21 & S24	0.40	0.14			0.35		0.6	880			513				
							SN 082-0	144							
D5 & D8	0.65	0.14	1	1				21	491		380	445	3	3	0.4
D40	0.45	0.14	1	1				34	706		550	789	3	3	
							SN 082-0	256							
H2	0.60	0.14	1	1				265	263		352	448	15	15	0.2
TOTALS	3. 0	1.0	4	5	1.0	1	2.0	6, 313	11,868	730	13,558	17,099	59	59	1.0

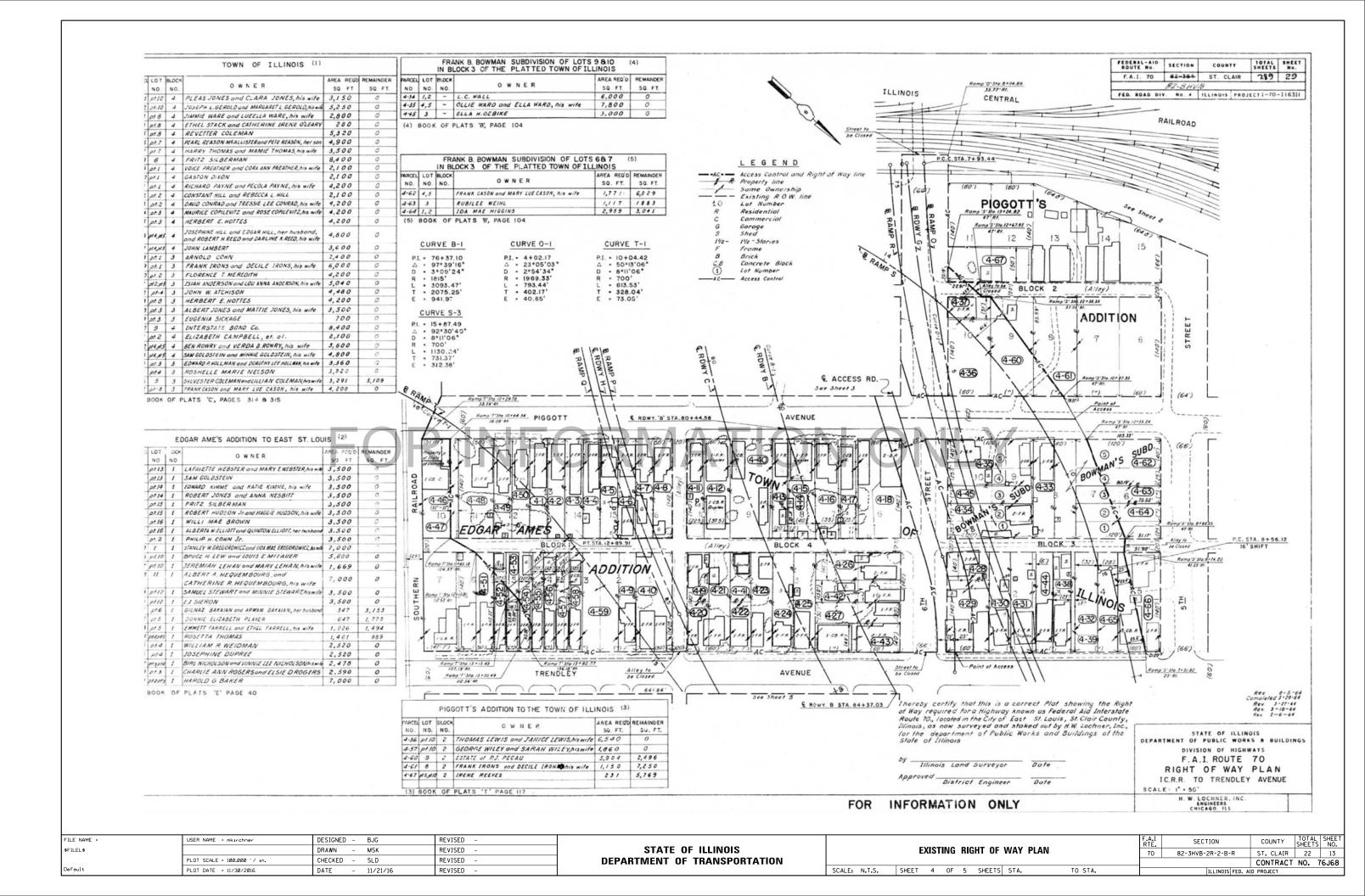
• QUANTITY INCLUDED IN APPROPRIATE TRAFFIC CONTROL & PROTECTION PAY ITEM PER ARTICLE 703.07 OF THE STANDARD SPECIFICATIONS.
•• QUANTITY INCLUDES 10 APPLICATIONS (FOR DAILY SETUP & REMOVAL OF IDOT HIGHWAY STANDARD 701411 TO ACCOMMODATE PEAK-HOUR RESTRICTIONS).

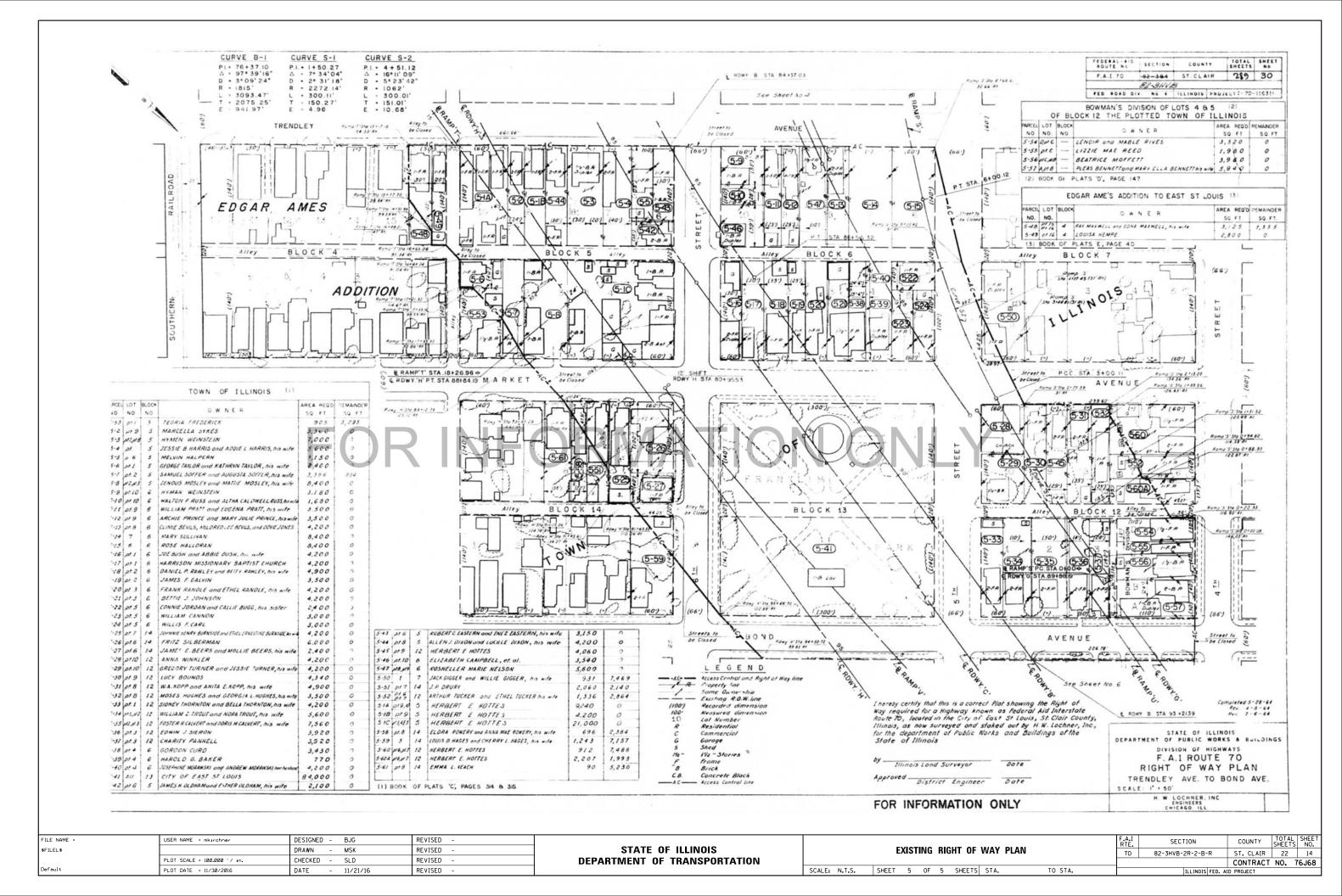
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Default	PLOT DATE = 11/23/2016	DATE - 11/21/16	REVISED -		SCALE: N.A.	SHEET 1 OF 1 SHEETS STA.	TO STA.		ILLINOIS FED. A	AID PROJECT	

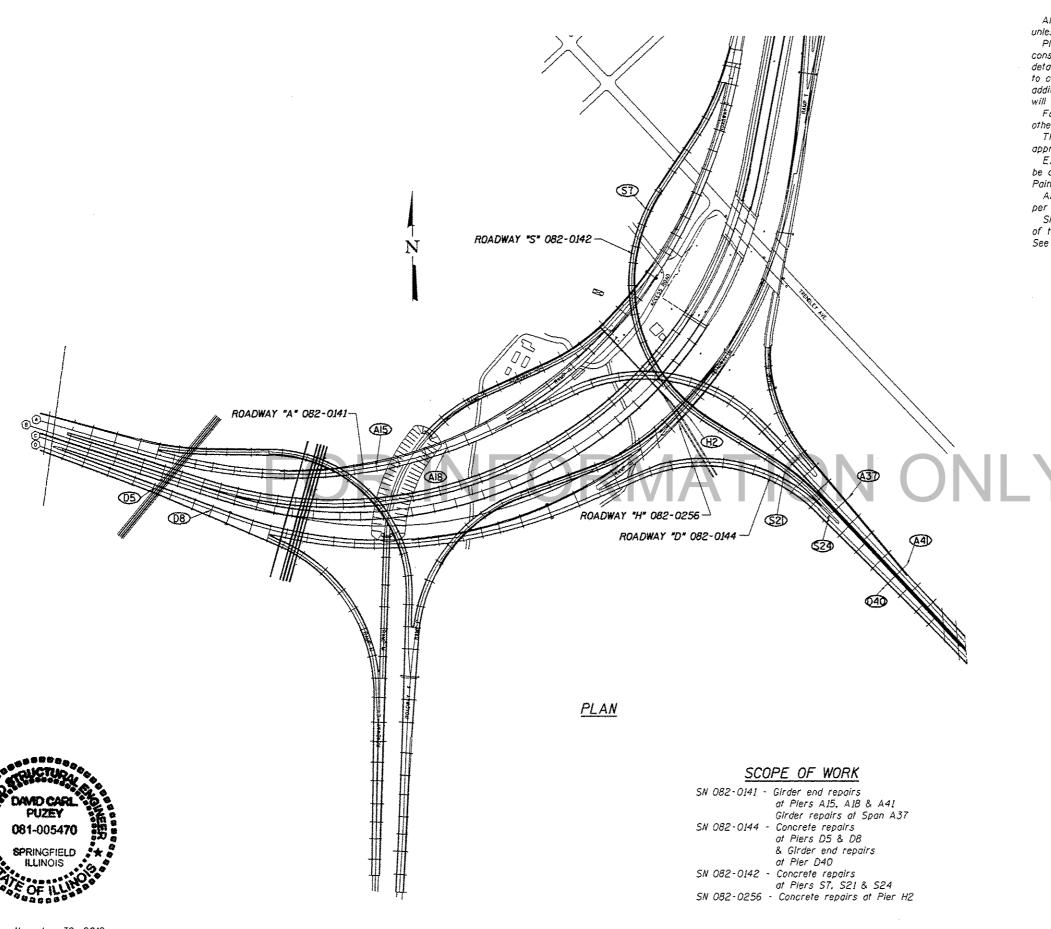












GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

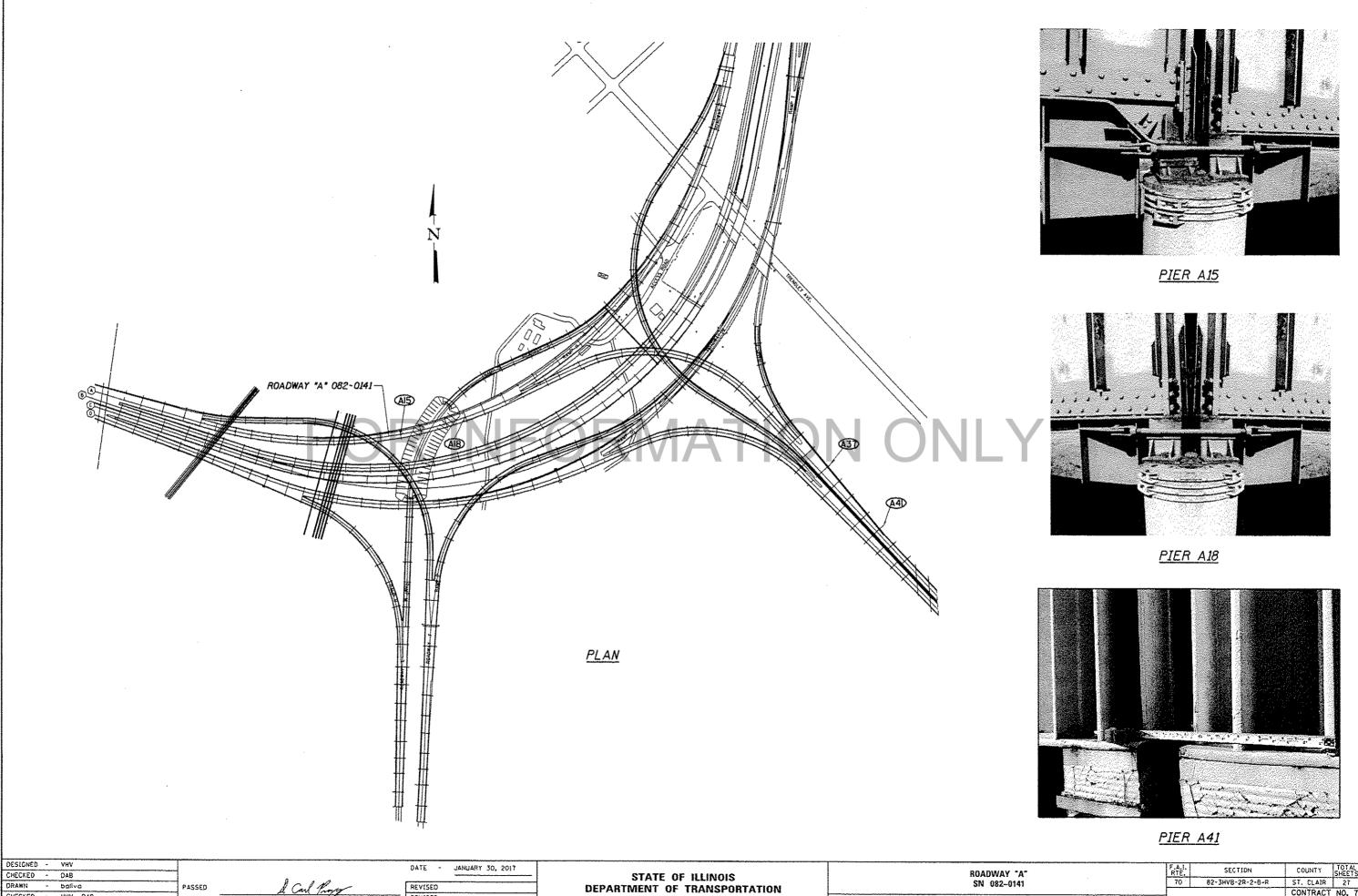
All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300. Type 1. Cost included with Structural Steel Repair.

Shotcrete is only allowed for the Structural Repair of Concrete on the underside of the cross beams. Column repairs to be completed using Formed Concrete. See Special Provisions.

TOTAL BILL OF MATERIAL

[TEM :	UNIT	OUANTITY
Structural Steel Repair	Lbs.	5050
Structural Repair of Concrete Depth≤5"	Sq. Ft.	1961
Temporary Shoring & Cribbing	Each	11
Fiber Wrap	Sq. Ft.	2540
Acrylic Coating	Sq. Yd.	282
Column Tensioned Strands	Each	4

DESIGNED - V+Ch H J G L Z
CHECKED - V+Ch H J G

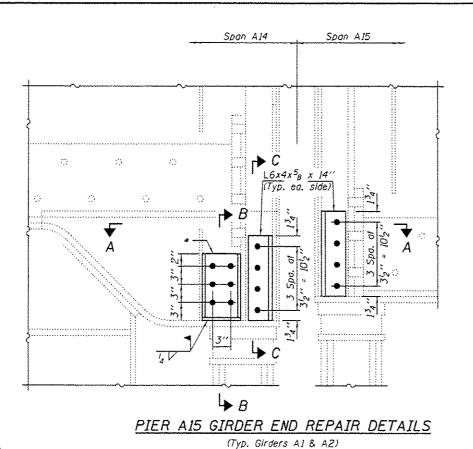


REVISED REVISED

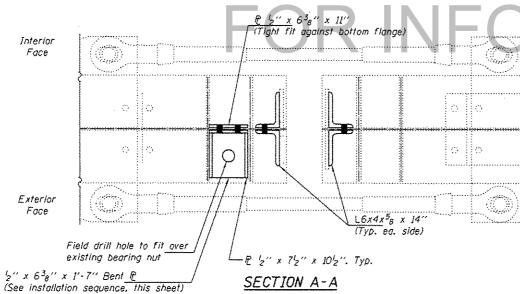
DRAWN - bolivo CHECKED - VHV DAB

PASSED

SHEET NO. 2 OF 13 SHEETS

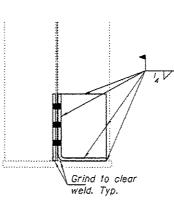


* 1 2" \times 6 3 8" \times 1'-7" Bent £ Exterior face £ 1 2" \times 6 3 8" \times 11" Interior face

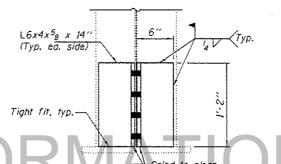


INSTALLATION SEQUENCE

- D Install bent plate over bearing nut.
- Bolf bent plate to web and weld outstanding leg to bottom flange.
- 3) Install $\frac{1}{2}$ " x $7\frac{1}{2}$ " x $10\frac{1}{2}$ " plate tight against bent plate and stiffener.
- 4) Field weld ${}^{l}_{2}{}^{\prime\prime}$ x $7{}^{l}_{2}{}^{\prime\prime}$ x $10{}^{l}_{2}{}^{\prime\prime}$ plate to bent plate and stiffener.

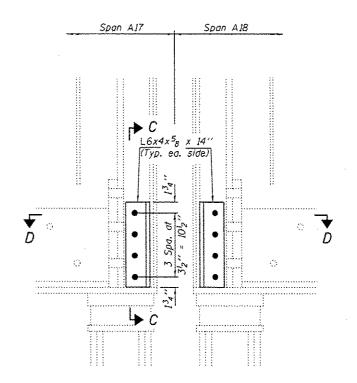


SECTION B-B



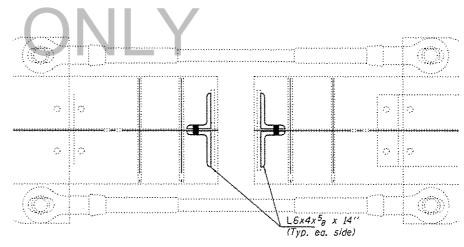
Grind to clear weld. Typ.

SECTION C-C

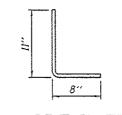


PIER A18 GIRDER END REPAIR DETAILS

(Typ. Girders A1 & A2)



SECTION D-D



BENT PLATE

R '2'' x 638'' x 1'-7''
(2 Required)

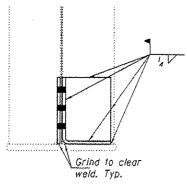
BILL OF MATERIAL

ITÉM	UNIT	QUANTITY
Structural Steel Repair	Pound	480

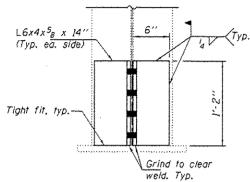
DESIGNED - VHV ROADWAY "A" BEAM REPAIR DETAILS COUNTY TOTAL SHEE DATE -JANUARY 30, 2017 SECTION CHECKED - DAB DRAWN - Kyle STATE OF ILLINOIS PIER A15 & PIER A18 -2R-2-8-R ST. CLAIR 27 17

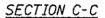
CONTRACT NO. 76J68

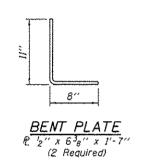
[ILLINOIS] FEO. AID PROJECT 82-3HV8-2R-2-8-R - Kyle M. Steffen /bolivo REVISED PASSED **DEPARTMENT OF TRANSPORTATION** SN 082-0141 SHEET NO. 3 OF 13 SHEETS CHECKED - VHV DAB REVISED



SECTION B-B

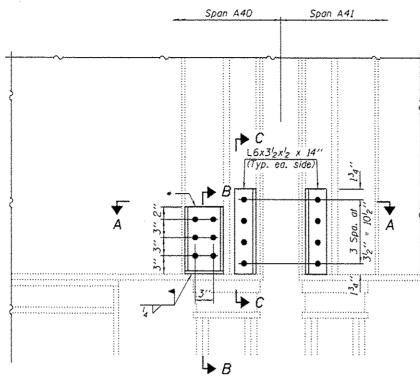






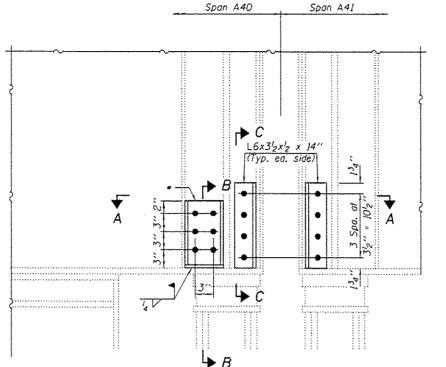
INSTALLATION SEQUENCE

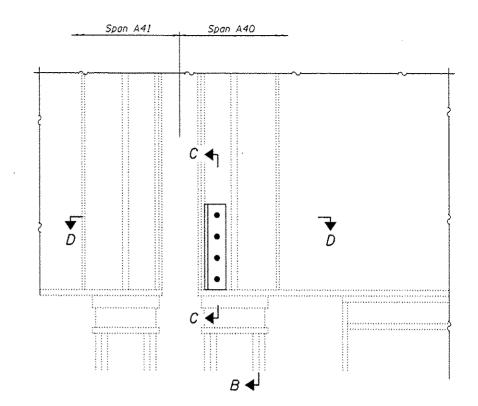
- 1) Install bent plate over bearing nut.
- 2) Bolt bent plate to web and weld outstanding
- | leg to bottom flange.
 | 3) | Install | 2" x 7|2" x 10|2" plate tight against bent plate and stiffener.
- 4) Field weld 2" x 72" x 102" plate to bent plate and stiffener.



PIER A41 GIRDER END REPAIR DETAILS

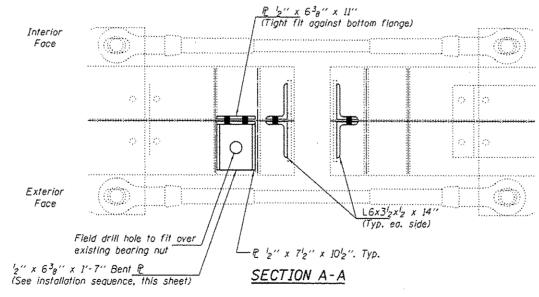
(6³8" x 1'-7" Bent & Exterior face " x 6³8" x 11" Interior face

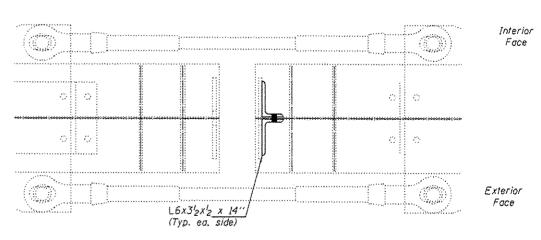




PIER A41 GIRDER END REPAIR DETAILS

(Typ. Inside Face Girder A2)



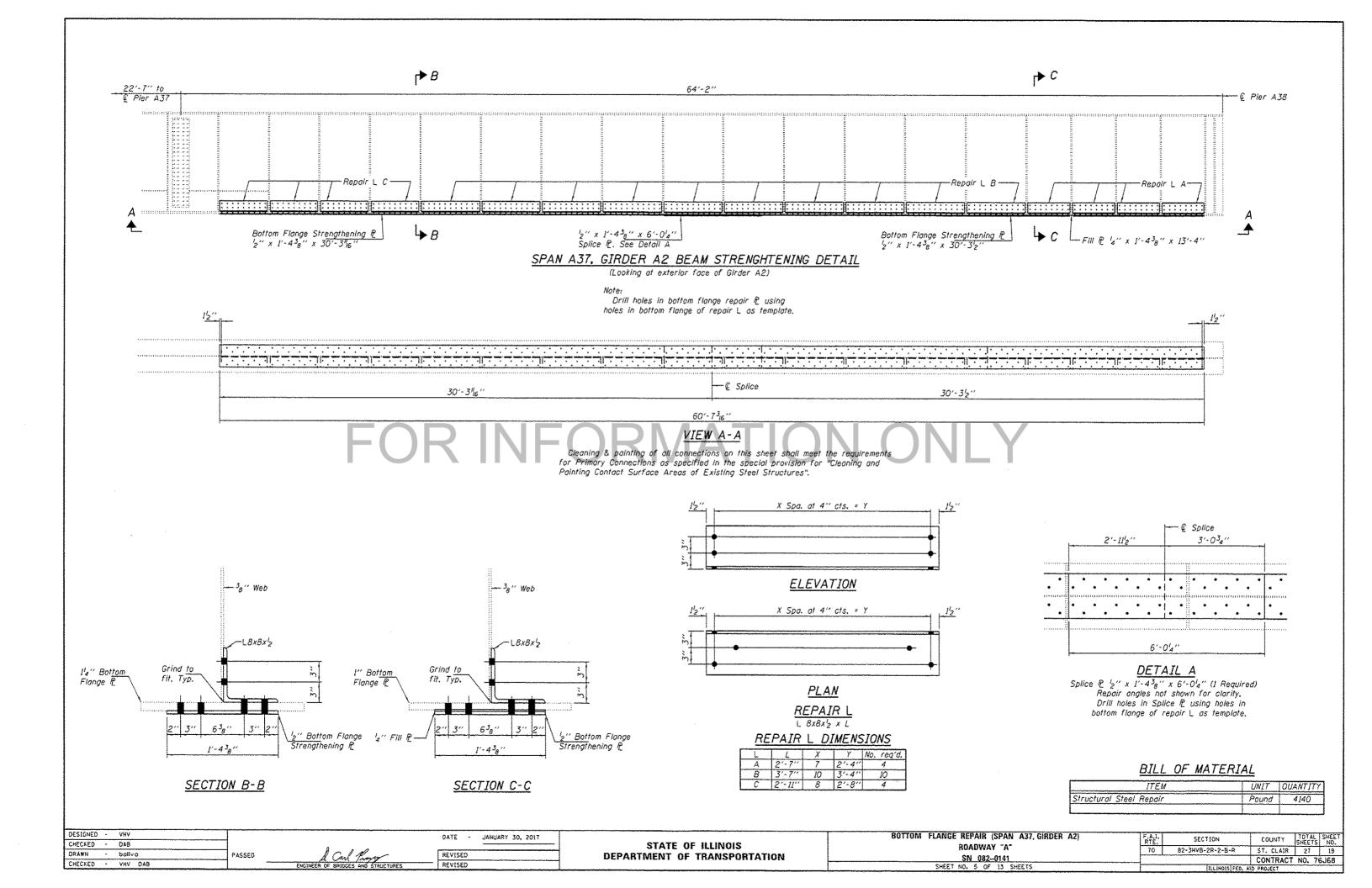


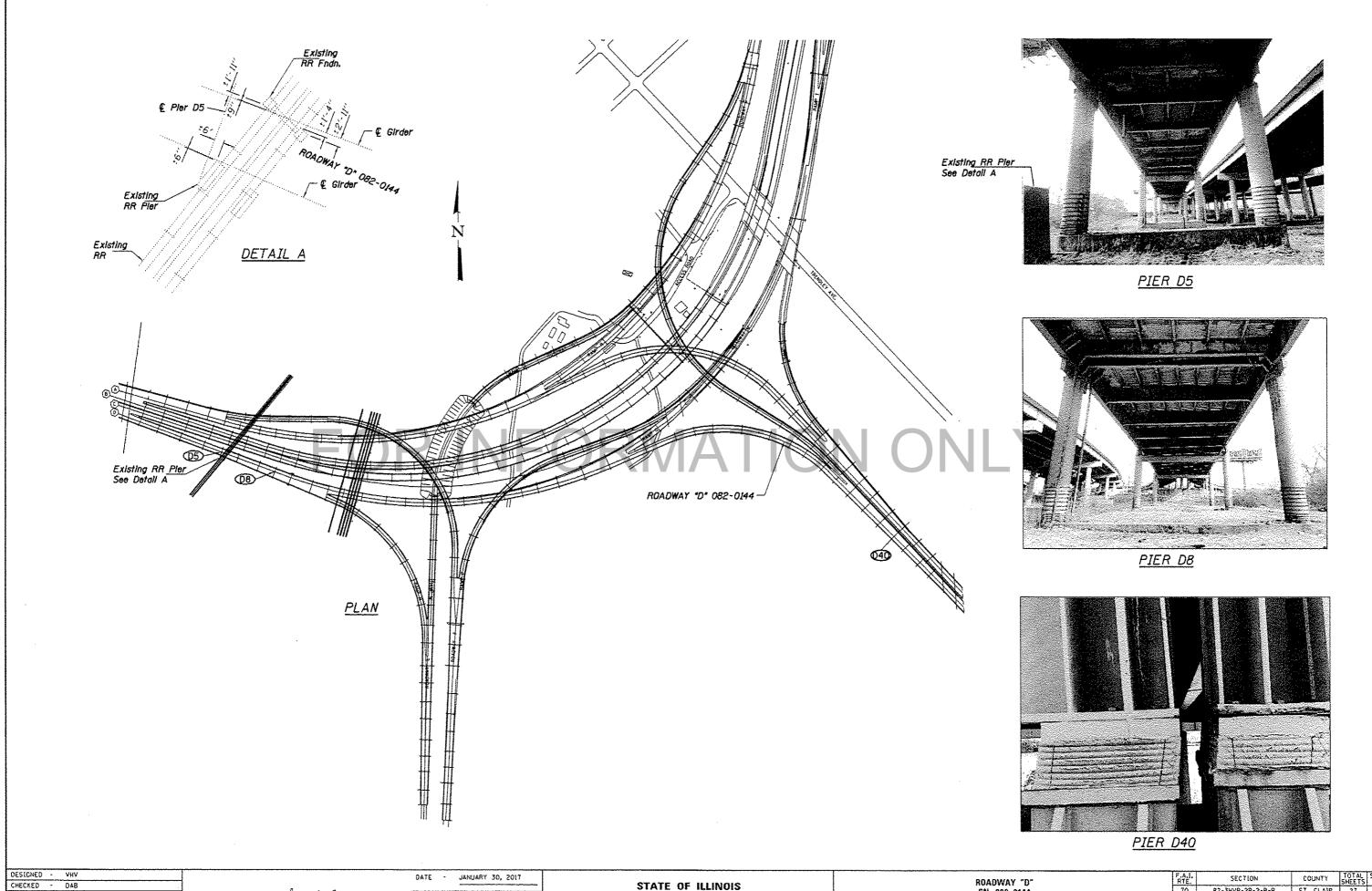
SECTION D-D

BILL OF MATERIAL

ITEM	UNIT	OUANTITY
Structural Steel Repair	Pound	170

CUECKEG DID		
CHECKED - DAB STATE OF ILLINOIS DRAWN - Kyle M Stoffed (horizon passed) PER DESCRIPTION OF THE PASSED	PIER A41	TRE. SECTION COUNTY SHEETS NO.
ORAWN - Kyle M. Steffen / Dalivo PASSED A Can France REVISED DEPARTMENT OF TRANSPORTATION CHECKED - VHV DAB ENGINEER OF BRIDGES AND STRUCTURES REVISED	SN 082-0141 SHEET NO. 4 OF 13 SHEETS	CONTRACT NO. 76J68





DESIGNED - VHV

CHECKED - DAB

CRAWN - Dalivo

CHECKED - VHV DAB

DATE JANUARY 30, 2017

STATE OF ILLINOIS

BOADWAY "D"
SHEET NO. STATE OF ILLINOIS

SN 082-0144

ROADWAY "D"
SHEET NO. SO 82-3HVB-2R-2-B-R ST. CLAIR 27, 20

DEPARTMENT OF TRANSPORTATION

COUNTY TOTAL SHEET NO. SHEET NO. SO 82-3HVB-2R-2-B-R ST. CLAIR 27, 20

DEPARTMENT OF TRANSPORTATION

CHECKED - VHV DAB

STATE OF ILLINOIS

BOADWAY "D"
SHEET NO. SO 82-3HVB-2R-2-B-R ST. CLAIR 27, 20

COUNTRACT NO. 76J6B

SHEET NO. 6 OF 13 SHEETS

FIGURER OF BRIDGES AND STRUCTURES

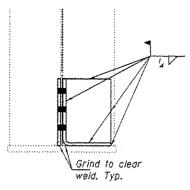
ROADWAY "D"
SHEET NO. SHEET NO. SO 13 SHEETS

FIGURER OF BRIDGES AND STRUCTURES

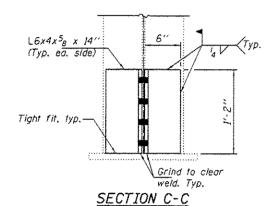
ROADWAY "D"
SHEET NO. SHEET NO. SO 13 SHEETS

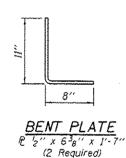
FIGURER OF BRIDGES AND STRUCTURES

FIGURER OF BRIDGES AN



SECTION B-B





INSTALLATION SEQUENCE

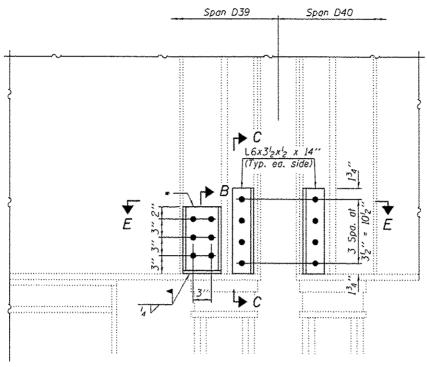
Interior

Face

Exterior

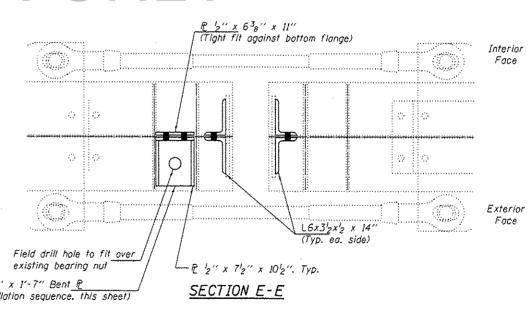
Face

- 3) Install 2" x 72" x 102" plate tight against bent plate and stiffener.
- bent plate and stiffener.



L6x32x2 x 14' (Typ. ed. side) **₽** B PIER D40 GIRDER END REPAIR DETAILS

PIER D40 GIRDER END REPAIR DETAILS $^{\prime}2^{\prime\prime}$ x $6^{3}8^{\prime\prime}$ x 1^{\prime} -7 $^{\prime\prime}$ Bent \Re Exterior face \Re $^{\prime}2^{\prime\prime}$ x $6^{3}8^{\prime\prime}$ x $11^{\prime\prime}$ Interior face

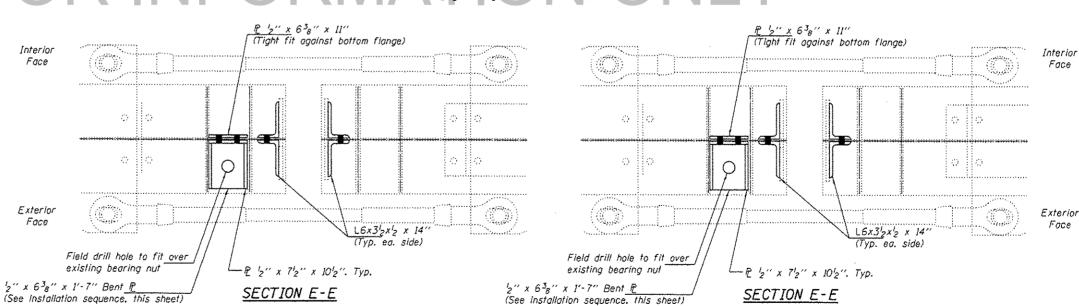


(Typ. Inside Face Girder D2)

Span D40

Span D39

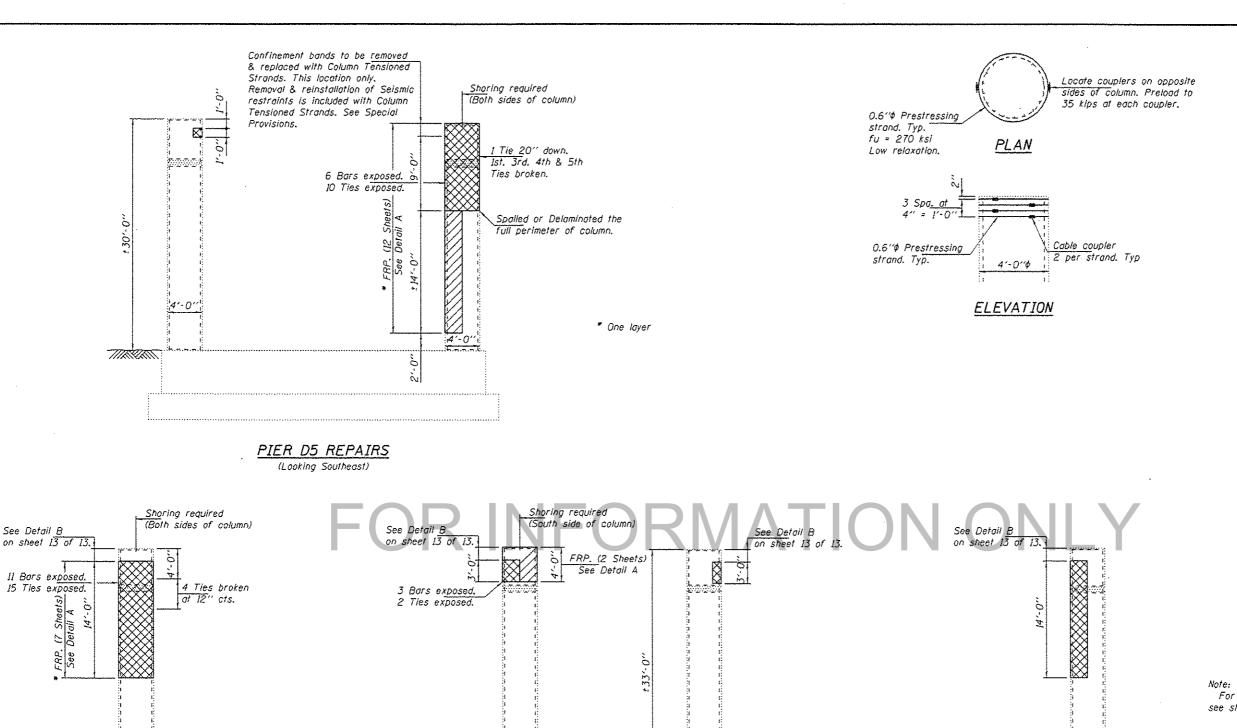
- 1) Install bent plate over bearing nut.
- 2) Bolt bent plate to web and weld outstanding leg to bottom flange.
- 4) Field weld 2" x 712" x 1012" plate to

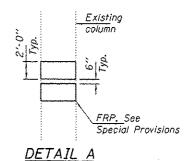


BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	260

DESIGNED - VHV	DATE - JANUARY 30, 2017		ROADWAY "D" BEAM REPAIR DETAILS	F.A.I. SECTION COUNTY TOTAL SHEET
CHECKED - DAB		STATE OF ILLINOIS	PIER D40	70 R2-3HVR-2R-2-R-R ST CLAIR 27 21
ORAWN - Kyle M. Steffen / bolivo PASSED A Can	REVISED	DEPARTMENT OF TRANSPORTATION	SN 082-0144	CONTRACT NO. 76J68
CHECKED - VHV DAB ENGINEER OF BRIDGES A	AND STRUCTURES REVISED		SHEET NO. T OF 13 SHEETS	ILLINOIS FED. AID PROJECT





Note: For Pier Repair Details, see sheet 9 of 13.

PIER D5

4'-0"

PIER D8

REA	CTI	ON TABLE	AT	
TEA	1PQR	ARY SHOP	RING	
		Span D4	Span D5	
Q	(k)	102.0	78.0	
4_	(k)	57.0	46.0	
Imp.	(k)	12.0	11.0	
Total	(k)	171.0	135.0	

REACTION TABLE AT TEMPORARY SHORING					
		Span D7	Span D8		
<u>Q</u> ((k)	78.0	78.0		
4 ('k)	46.0	46.0		
Imp. (k)	11.0	11.0		
Total (k)	135.0	135.0		

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete Depth≤5"	Sq. Ft,	587
Temporary Shoring & Cribbing	Each	5
Fiber Wrap	Sq. Ft.	725
Acrylic Coating	Sq. Yd.	80
Column Tensioned Strands	Each	4

DATE - JANUARY 30, 2017

A'-0"

REVISED

PIER D8 REPAIRS

(Looking Northwest)

4'-0"

PASSED

DESIGNED - VHV

CHECKED - DAB

DRAWN - Kyle M. Steffen

CHECKED - VHV DAB

Spalled Concrete with exposed bars.

Delaminated Concrete

7//2/1/2/11

PIER D8 REPAIRS

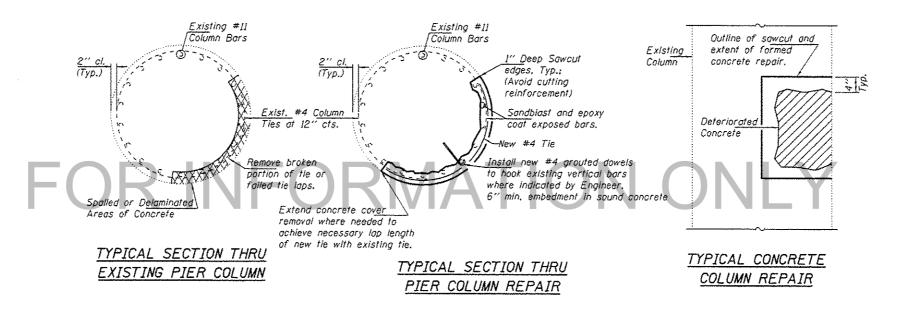
(Looking Southeast)

F.A.I. SECTION COUNTY TOTAL SHEETS NO.

70 82-3HVB-2R-2-B-R ST. CLAIR 27 22

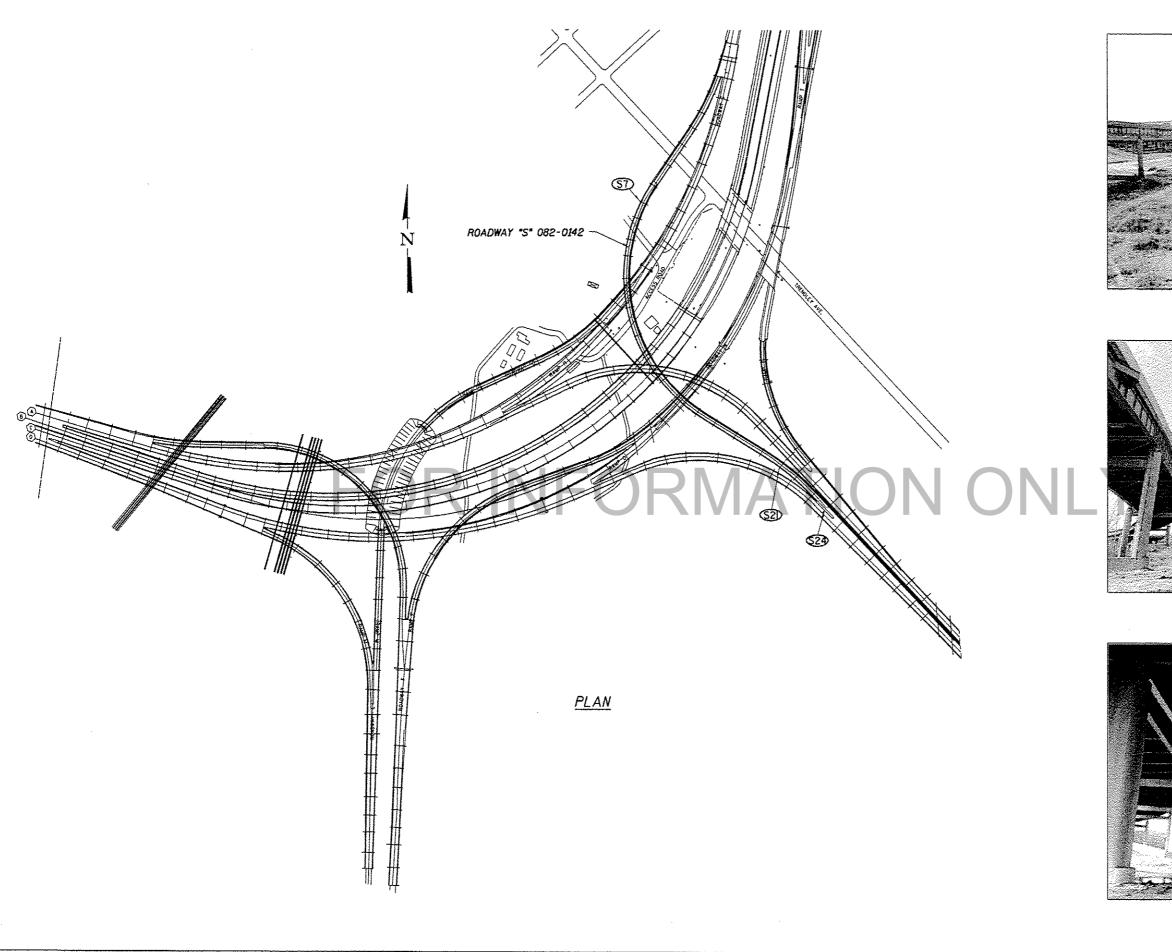
CONTRACT NO. 76J68

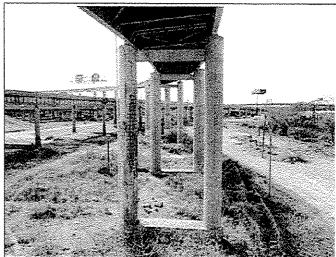
BLINDISIFED AID PROJECT



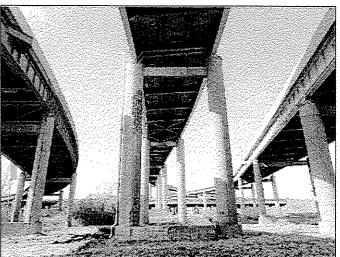
MINIMUM BAR LAP #4 bar = 1'-10"

DESIGNED - VHV CHECKED - DAB	DATE - JANUARY 30, 2017	STATE OF ILLINOIS	PIER REPAIR LOCATIONS	F.A.I. SECTION	COUNTY TOTAL SHEET NO.
DRAWN - Kyle M. Steffen PASSED & Call Player CHECKED - VMV DAB	REVISED	DEPARTMENT OF TRANSPORTATION	ROADWAY "D" SN 082-0144	70 82-3HVB-2R-2-B-R	ST, CLAIR 27 23 CONTRACT NO. 76J68
CHECKED 71 DAG ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 9 OF 13 SHEETS	ILLINOIS FED. A	AID PROJECT





PIER ST

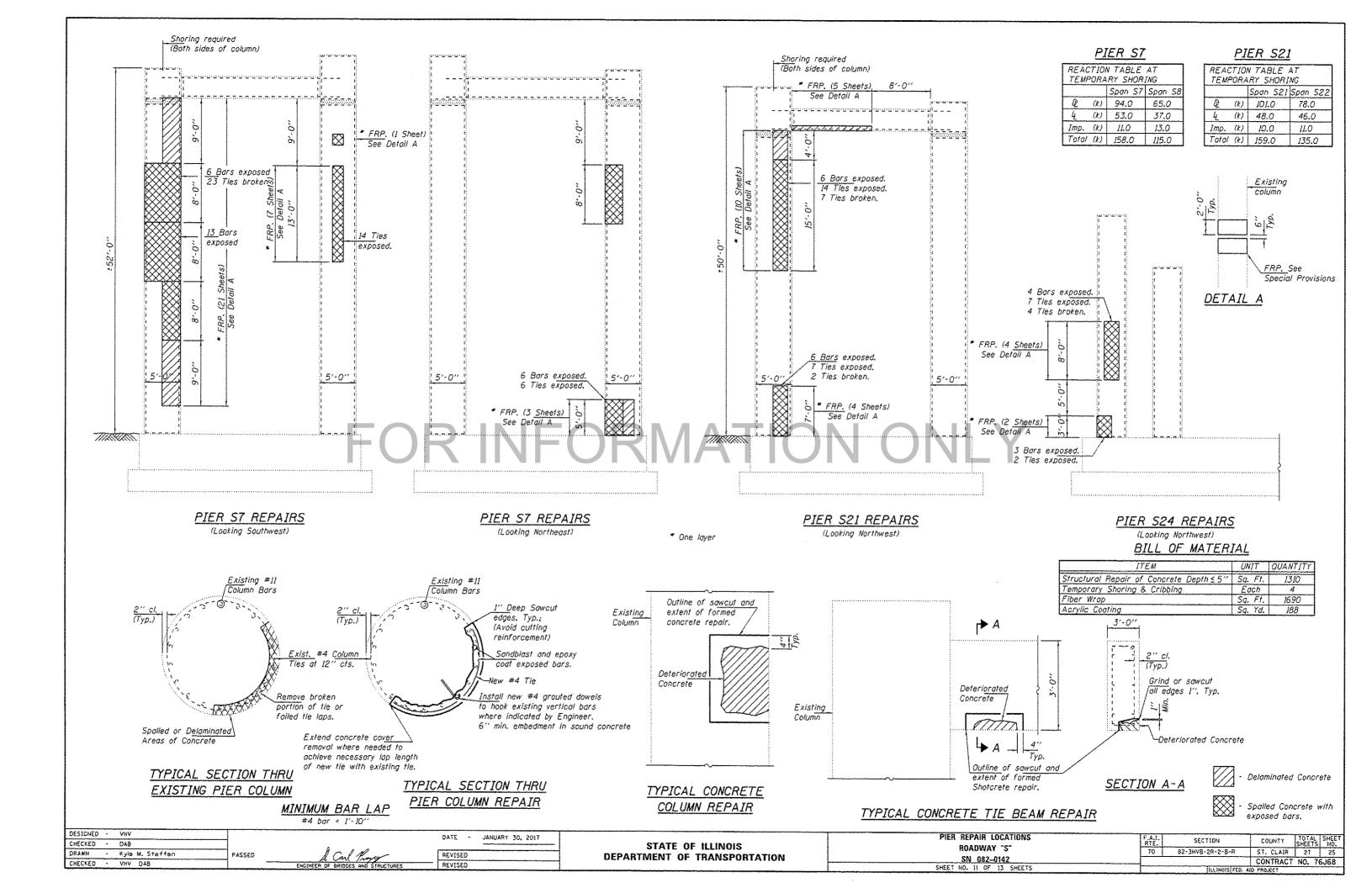


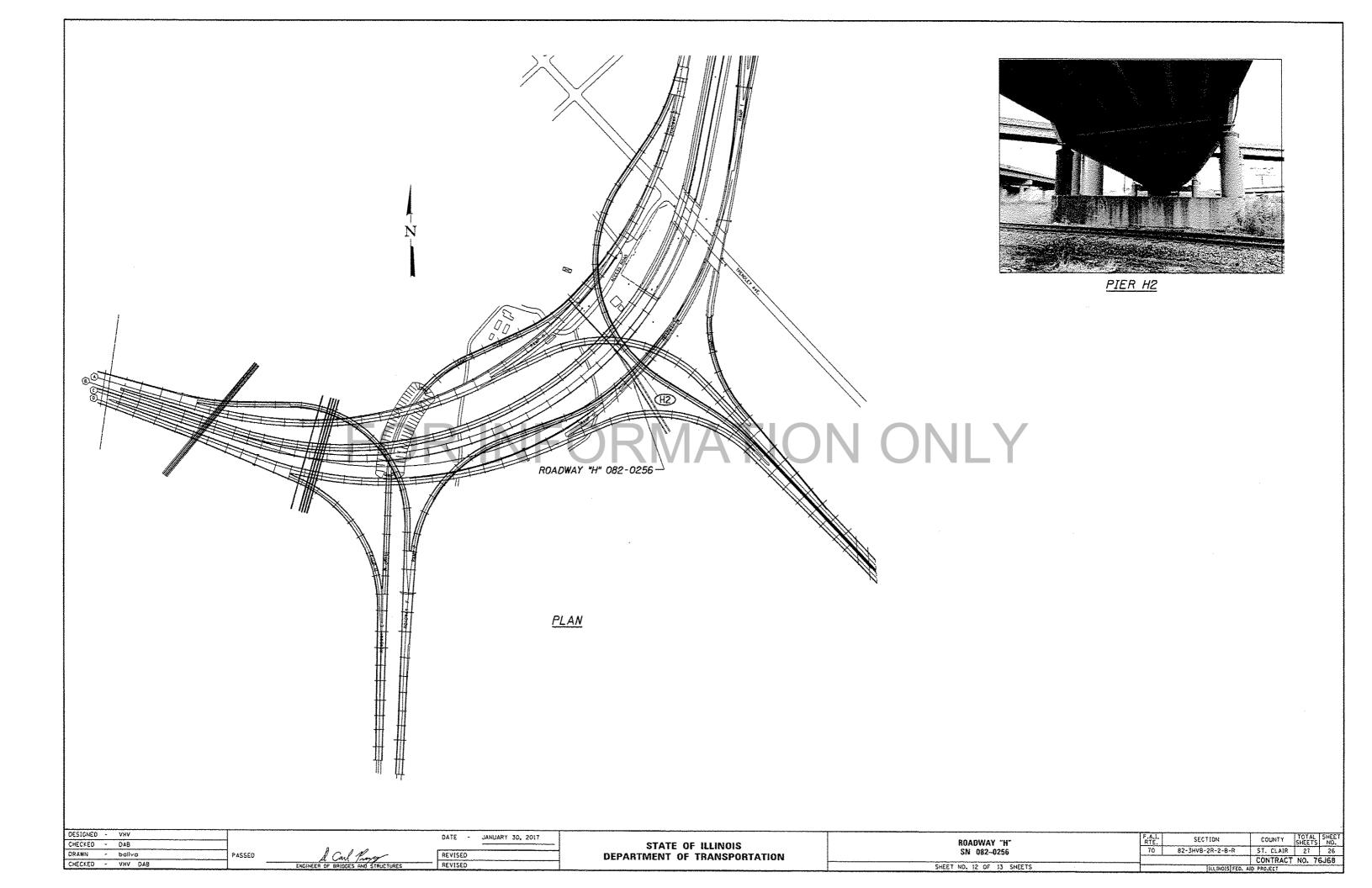
PIER S21

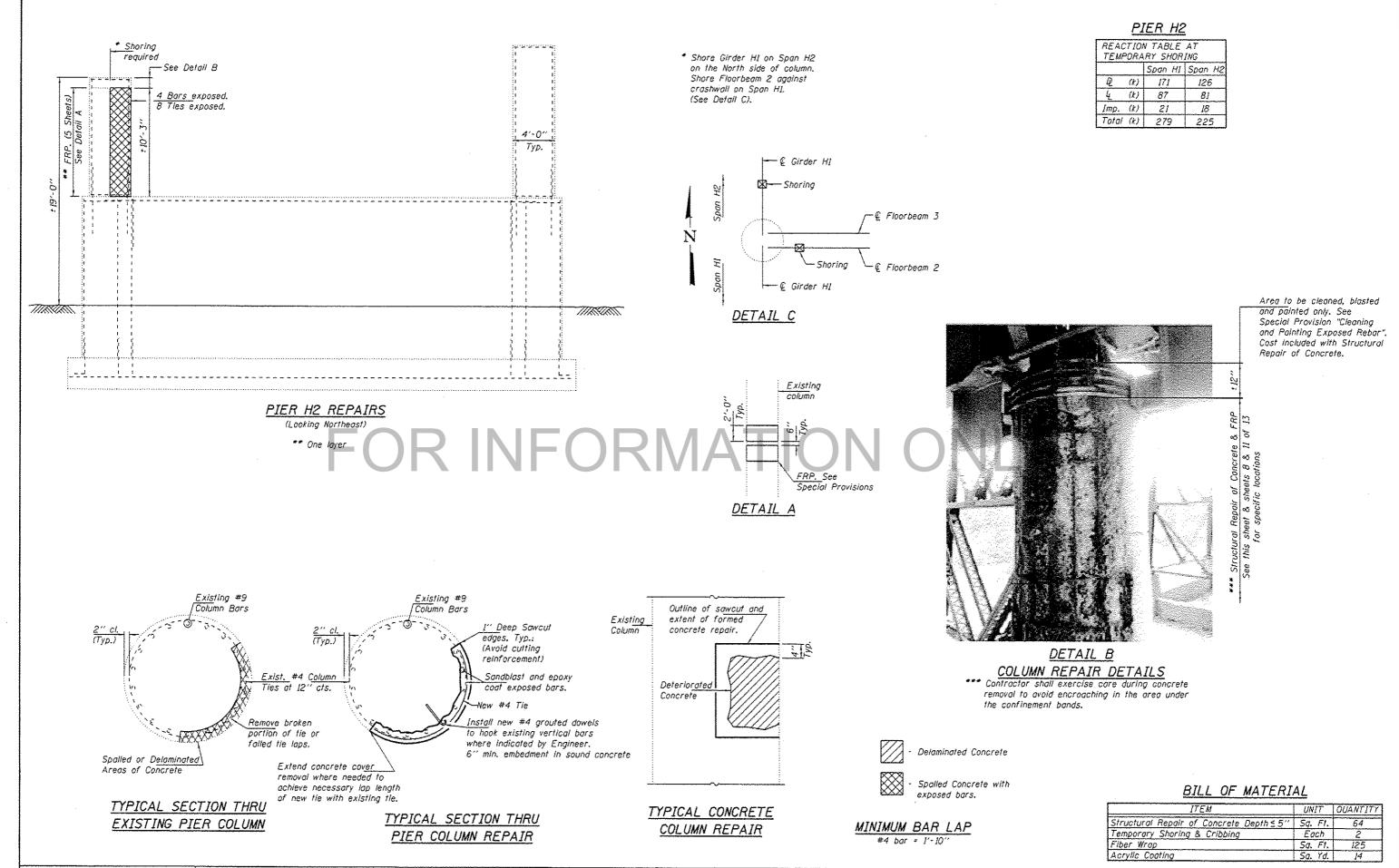


PIER S24

DESIGNED - VHV CHECKED - DAB	DATE - JANUARY 30, 2017	STATE OF ILLINOIS	ROADWAY "S"	F.A.J. SECTION	COUNTY TOTAL SHEET SHEETS NO.
DRAWN - bolivo PASSED	I Carl Roger REVISED	DEPARTMENT OF TRANSPORTATION	SN 082-0142	70 82-3HVB-2R-2-B-R	ST. CLAIR 27 24
CHECKED - VHV DAB -	ENGINEER OF BRIDGES AND STRUCTURES REVISEO		SHEET NO. 10 OF 13 SHEETS	ILLIHOIS FED.	AID PROJECT







COUNTY TOTAL SHEET NO.

-R ST. CLAIR 27 27

CONTRACT NO. 76J68

FEO. AID PROJECT DESIGNED - VHV PIER REPAIR LOCATIONS DATE ~ JANUARY 30, 2017 F.A.I. RTÉ. 70 SECTION CHECKED - DAB STATE OF ILLINOIS ROADWAY "H" 82-3HV8-2R-2-B-R DRAWN - Kyle M. Steffen PASSED REVISED **DEPARTMENT OF TRANSPORTATION** SN 082-0256 SHEET NO. 13 OF 13 SHEETS REVISED