04-27-2018 LETTING ITEM 124

* 20 + 3 = 23 TOTAL SHEETS

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	1
* FAI 255 / FAP 805	ILLINOIS	CONTRACT NO. 76L40		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

FAI 255 /FAP 805 (I–255 /IL 161)
SECTION 82–6BP–1, 125BP–1
PROJECT NHPP–18P3(922)
BRIDGE PAINTING
ST. CLAIR COUNTY

C–98–194–18

D-98-051-18

LOCATION OF SECTION INDICATED THUS:–

FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA

LOCATION 1 (IL 161)
2018 ADT = 6600 (ESTIMATED)
SU = 6.9% MU = 2.6%

LOCATION 2 (MCBRIDE AVE)
2018 ADT = 775 (ESTIMATED)

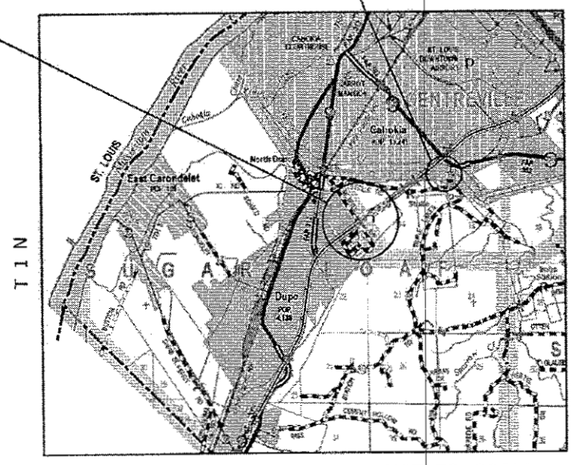
LOCATION 2 (I–255)
2018 ADT = 42900 (ESTIMATED)
SU = 2.4% MU = 14.4%

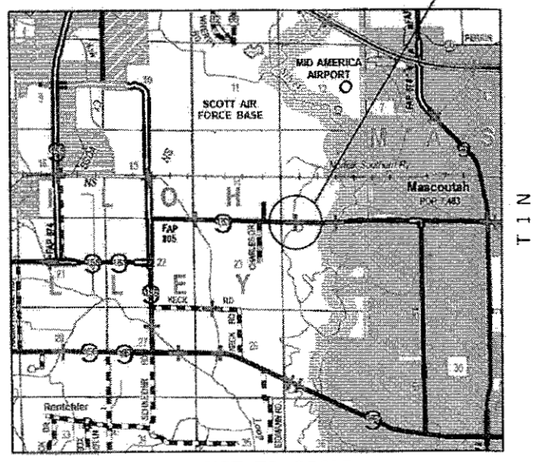
LOCATION 3 (I–255 RAMP E)
2018 ADT = 2950 (ESTIMATED)
SU = 2.8% MU = 3.1%

PROJECT LOCATION 3
I–255 RAMP E OVER BLUE WATER DITCH
SN 082–0263
STA. 106 + 97
LATITUDE: 38.54901
LONGITUDE: –90.16134

PROJECT LOCATION 1
IL 161 OVER SILVER CREEK OVERFLOW
SN 082–0094
STA. 487 + 50
LATITUDE: 38.52549
LONGITUDE: –89.83396

PROJECT LOCATION 2
I–255 OVER MCBRIDE AVENUE
SN 082–0219
STA. 493 + 05.31
LATITUDE: 38.53712
LONGITUDE: –90.18502





NOT TO SCALE

NOT TO SCALE

100' 200' 300' — 1" = 100'
10' 20' 30' — 1" = 10'
50' 100' — 1" = 50'
50' 100' — 1" = 40'
50' 100' — 1" = 30'
50' 100' — 1" = 20'

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

LOC 1 GROSS LENGTH = NET LENGTH = 129.08 FT
LOC 2 GROSS LENGTH = NET LENGTH = 86.50 FT
LOC 3 GROSS LENGTH = NET LENGTH = 828.00 FT

GROSS LENGTH = 1043.58 FT. = 0.198 MILE
NET LENGTH = 1043.58 FT. = 0.198 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Feb 2 20 18
Jeffrey L. K
REGIONAL ENGINEER
Mar 23 20 18
for ENGINEER OF DESIGN AND ENVIRONMENT
Mar 23 20 18
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: HERVE GELIN (618) 346–3179
PROJECT MANAGER: CECIL DOWNING (618) 346–3145

CONTRACT NO. 76L40

INDEX OF SHEETS

* INCLUDES SHEETS 18A, 18B AND 19A

HIGHWAY STANDARDS

000001-06
001006
701321-17
701501-06
701901-07
704001-08
BLR21-9

COMMITMENTS: NONE

PERTINENT INFORMATION

1. THE CLOSURE OF MCBRIDE AVENUE SHALL OCCUR DURING THE SUMMER SESSION OF BLUFFVIEW ELEMENTARY SCHOOL AND DUPO JR./SR. HIGH SCHOOL.

GENERAL NOTES

1. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

   SN 082-0094 (LOCATION 1)
   * CHARTER COMMUNICATIONS, INC -- CABLE TV (AERIAL AND BURIED)
   * AT&T ILLINOIS -- COMMUNICATIONS (AERIAL AND BURIED)
   * FRONTIER COMMUNICATIONS -- COMMUNICATIONS (AERIAL AND BURIED)

   SN 082-0219 (LOCATION 2)
   * CITY OF COLUMBIA -- WATER & SANITARY SEWER (BURIED)
   * AMEREN ILLINOIS -- GAS & ELECTRIC (AERIAL AND BURIED)
   * CHARTER COMMUNICATIONS, INC -- CABLE TV (AERIAL AND BURIED)
   * VILLAGE OF DUPO -- GAS (BURIED)
   * HARRISONVILLE TELEPHONE CO -- COMMUNICATIONS (AERIAL AND BURIED)
   * SUGAR LOAF TOWNSHIP SEWER SYSTEM -- SANITARY SEWER (BURIED)
   * PRAIRIE DU PONT PUBLIC WATER DISTRICT -- WATER (BURIED)
   * BUCKEYE PIPE LINE CO -- PIPELINE (BURIED)

   SN 082-0263 (LOCATION 3)
   * AT&T ILLINOIS -- COMMUNICATIONS (AERIAL AND BURIED)
   * CHARTER COMMUNICATIONS, INC -- CABLE TV (AERIAL AND BURIED)
   * AMEREN ILLINOIS -- GAS & ELECTRIC (AERIAL AND BURIED)
   * BUCKEYE PIPE LINE CO -- PIPELINE (BURIED)
   * HARRISONVILLE TELEPHONE CO -- COMMUNICATIONS (AERIAL AND BURIED)
   * VILLAGE OF CAHOKIA -- WATER & SANITARY SEWER (BURIED)
   * COMMONFIELDS OF CAHOKIA PUBLIC WATER DISTRICT -- WATER & SANITARY SEWER (BURIED)

   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.

2. THE SSPC-QP1 AND SSPC-QP2 CERTIFICATIONS WILL BE REQUIRED FOR THE BRIDGES.

3. A MINIMUM OF ONE AIR MONITOR WILL BE REQUIRED AT LOCATION ONE TO MONITOR ABRASIVE BLASTING OPERATIONS AT THIS SITE. SEE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".

4. FOR LOCATIONS 1, 2 (SN 082-0094, SN 082-0219) CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL EXISTING STEEL SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING -- SSPC-SP10. ALL EXISTING STEEL SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1-OZ/E/U. FOR LOCATION 1 (SN 082-0094), THE COLOR OF THE FINAL FINISH COAT FOR ALL SURFACES SHALL BE GRAY, MUNSELL NO 5B 7/1. FOR LOCATION 2 (SN 082-0219), THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR AND BOTTOM FLANGE OF THE FASCIA BEAMS SHALL BE REDDISH BROWN, MUNSELL NO 2.5 YR ¾.

5. FOR LOCATION 3 (SN 082-0263), CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL BEAMS, BEARINGS, AND OTHER STRUCTURAL STEEL WITHIN THE DESIGNATED AREA ON PAGE 17 OF THE PLAN SHEETS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING -- SSPC-SP10.

   THE DESIGNATED AREAS CLEANED PER NEAR WHITE BLAST CLEANING SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1-OZ/E/U. THE FINAL FINISH COLOR OF ALL CLEANED SURFACES SHALL BE REDDISH BROWN, MUNSELL NO 2.5 YR ¾.

6. ALL TURF AREAS DISTURBED BY THE CONTRACTOR SHALL BE SEEDED WITH THE APPROPRIATE EROSION CONTROL, AS DIRECTED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

7. ALL CONSTRUCTION SIGNS SHALL BE 48" X 48" FLUORESCENT ORANGE.

8. FLAGGERS SHALL BE PRESENT DURING ALL NON-SIGNALIZED CLOSURE HOURS INCLUDING LUNCH HOUR AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

9. CHANGEABLE MESSAGE SIGNS SHALL BE PLACED AT THE DIRECTION OF THE ENGINEER. CHANGEABLE MESSAGE SIGNS SHALL BE PLACED TWO WEEKS PRIOR TO THE COMMENCEMENT OF THE CONTRACT.

10. THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION-RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION, TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 2/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, GENERAL NOTES, HIGHWAY STANDARDS
COMMITMENTS AND PERTINENT INFORMATION

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

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	2
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			

| MOEI | Z001 |

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 80 FED 20 STATE URBAN BRIDGE 0047 S.N. 082-0094	90 FED 10 STATE URBAN BRIDGE 0047 S.N. 082-0219	90 FED 10 STATE URBAN BRIDGE 0047 S.N. 082-0263
67100100	MOBILIZATION	L SUM	1	0.33	0.33	0.34
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1		
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1		1	
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1		1	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6		
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	180	180		
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	75	75		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	425	425		
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
78100300	REPLACEMENT REFLECTOR	EACH	4	4		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	4		
X5060602	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1		1	
X5060603	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1			1

14

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 80 FED 20 STATE URBAN BRIDGE 0047 S.N. 082-0094	CONSTRUCTION CODE: 90 FED 10 STATE URBAN BRIDGE 0047 S.N. 082-0219	CONSTRUCTION CODE: 90 FED 10 STATE URBAN BRIDGE 0047 S.N. 082-0263
X7015005	CHANGEABLE MESSAGE SIGN	CAL DAY	95	44	51	
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	174	174		
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	60	60		
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1		
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1		
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1		1	
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1			1

6

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	DRAWN -	REVISED -	
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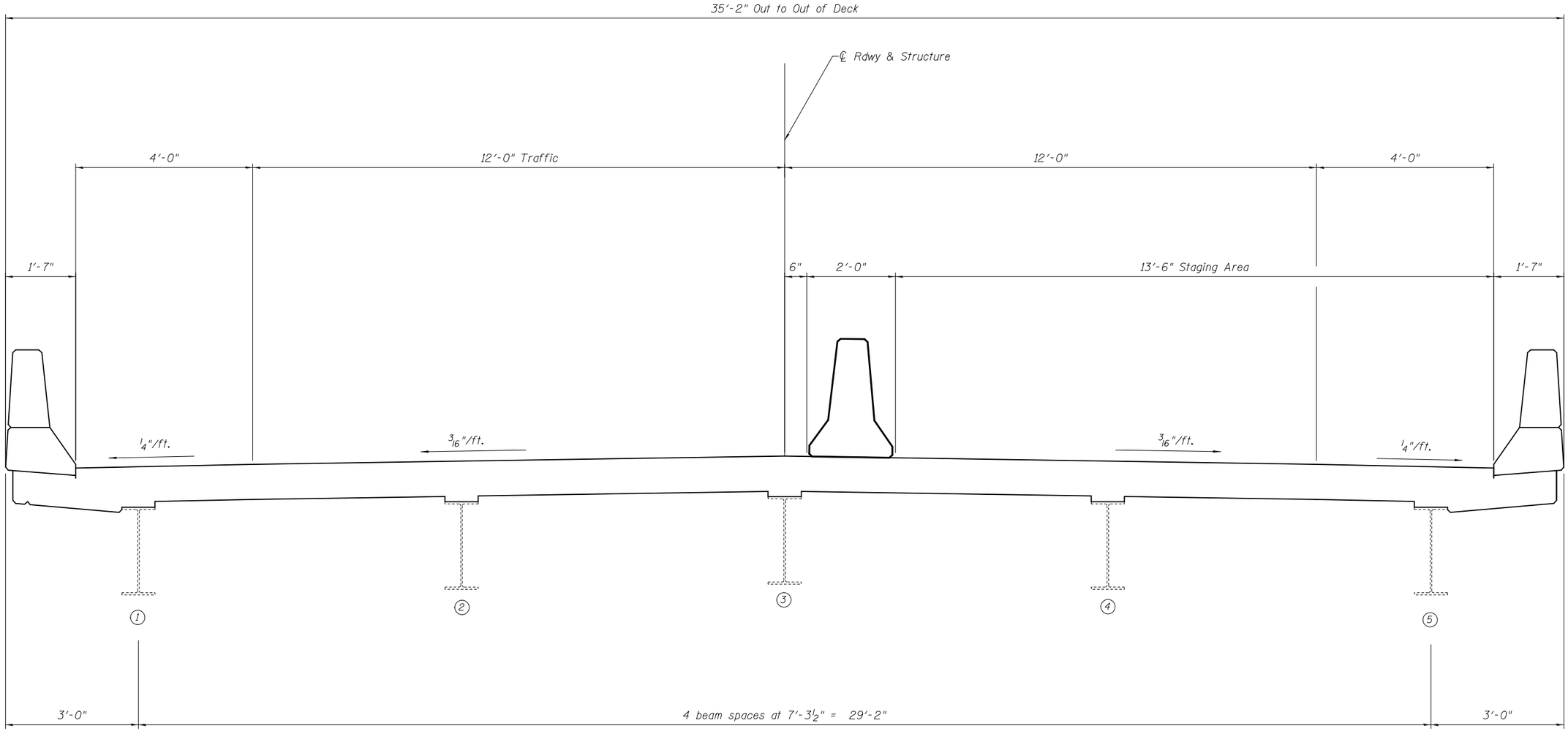
PLOT DATE = 2/1/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	4
* FAI 255/FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			



CROSS SECTION

Looking East @ Jt location

IL ROUTE 161

NOT TO SCALE

WHERE PERMANENT RRPM ARE PRESENT AND CONFLICT WITH THE REVISED TRAFFIC PATTERNS, ONLY THE REFLECTORS SHALL BE REMOVED (4 TOTAL).

CARE SHALL BE TAKEN NOT TO DAMAGE THE RRPM ON THE BRIDGE.

THE BOTTOM 6" OF THE TEMPORARY CONCRETE BARRIER SHALL BE PAINTED WITH TEMPORARY PAVEMENT MARKING CONSISTENT WITH TRAFFIC CONTROL. THIS WILL NOT BE MEASURED FOR PAYMENT BUT SHALL BE CONSIDERED AS INCLUDED IN THE COST OF TEMPORARY CONCRETE BARRIER AND NO OTHER COMPENSATION SHALL BE ALLOWED.

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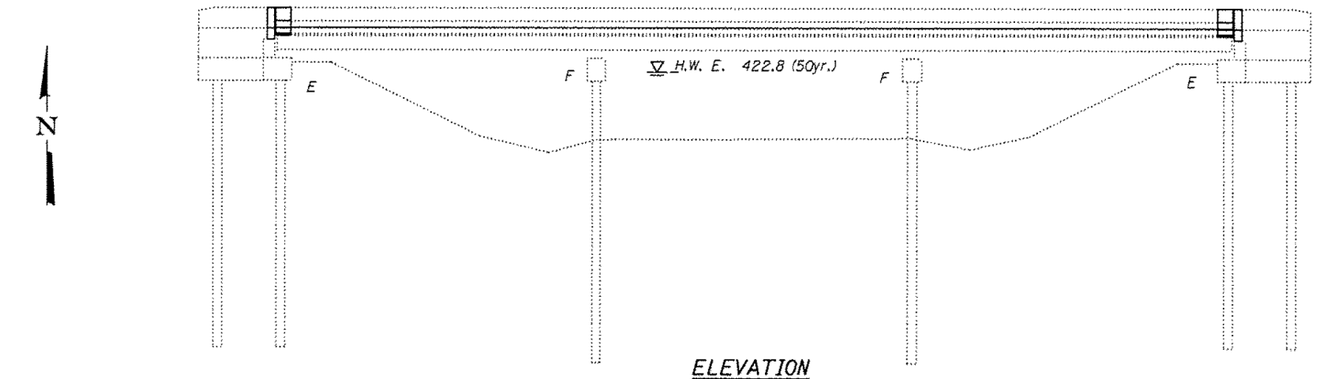
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 2/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

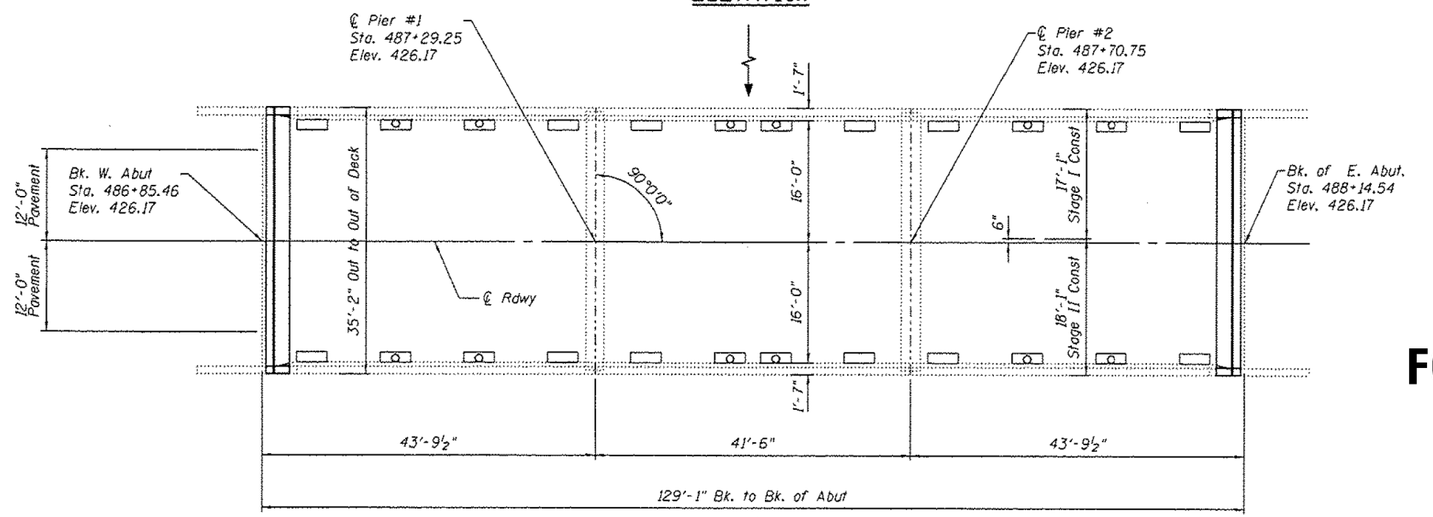
SUGGESTED STAGING TYPICAL
SN 082-0094

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

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	5
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			



ELEVATION



PLAN

NOT TO SCALE

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

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.

Joint opening shall be adjusted according to Article 520.04 of the Standard Specs. when the deck is poured at an ambient temperature other than 50° F.

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

Bridge deck concrete sealer shall be placed on top/inside faces of pararpet (full length) and wingwalls and on top of new concrete at joints.

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

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type I. Cost included with Furnishing and Erecting Structural Steel.

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

Fasteners shall be high strength bolts. Bolts $^{7}/_{8}$"ϕ, open holes $^{15}/_{16}$"ϕ, unless otherwise noted.

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".

FOR INFORMATION ONLY

INDEX OF SHEETS

SCOPE OF WORK

- Replace deck ends at abutments, hatchblocks and install strip seals
- Beam End Repair
- Scarify $^{3}/_{4}$" of existing deck and place $2^{3}/_{4}$" of microsilica overlay.
- Perform deck patching
- Eliminate floor drains within 10' of substructures and replace remaining floor drains.
- Replace rocker bearing at abutments with elastomeric bearing with steel extensions.

FLOOR DRAIN REPLACEMENT

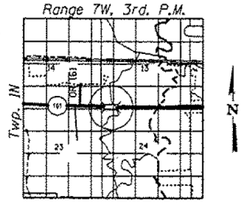
(12 Req'd)

Existing drains & adjacent concrete to be removed and replaced with 6" circular drains and full depth patch. (See sheet 6 of 11 for details.)

FLOOR DRAIN ELIMINATION

(12 Req'd)

Existing drains & adjacent concrete to be removed and replaced with full depth patch. (See sheet 6 of 11 for details.)



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	9.6
Concrete Superstructure	Cu. Yd.	10.7
Elastomeric Bearing Assembly, Type I	Each	10
Bridge Deck Concrete Sealer	Sq. Ft.	5097
Bar Splicers	Each	26
Reinforcement Bars, Epoxy Coated	Pound	1200
Preformed Joint Strip Seal	Foot	68
*Deck Slab Repair (Partial)	Sq. Yd.	300
*Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	6
Bridge Deck Microsilica Concrete Overlay, $2^{3}/_{4}$"	Sq. Yd.	434
Anchor Bolts, 1"	Each	20
Floor Drains	Each	12
Jack and Remove Existing Bearings	Each	10
Furnishing and Erecting Structural Steel	Pound	1780
Bridge Deck Scarification, $^{3}/_{4}$"	Sq. Yd.	434
Bridge Deck Grooving	Sq. Yd.	420

*The quantities of deck slab repair are estimated. The Engineer in the field shall determine the actual quantity and locations.

LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

Expires 11/30/16

DESIGNED - AYV	EXAMINED	DATE - 3/3/16	
CHECKED - ATH	PASSED	REVISED	
DRAWN - AYV	ENGINEER OF STRUCTURAL SERVICES	REVISED	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION (IL 161 over SILVER CREEK OVERFLOW)
SN 082-0094
SHEET NO. 1 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
805	125BR-3	ST. CLAIR	19	8
		CONTRACT NO. 76H99		
	ILLINOIS FED. AID PROJECT			

USER NAME = smithma	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 2/1/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS SN 082-0094

SCALE: | SHEET 1 OF 4 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	6
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			

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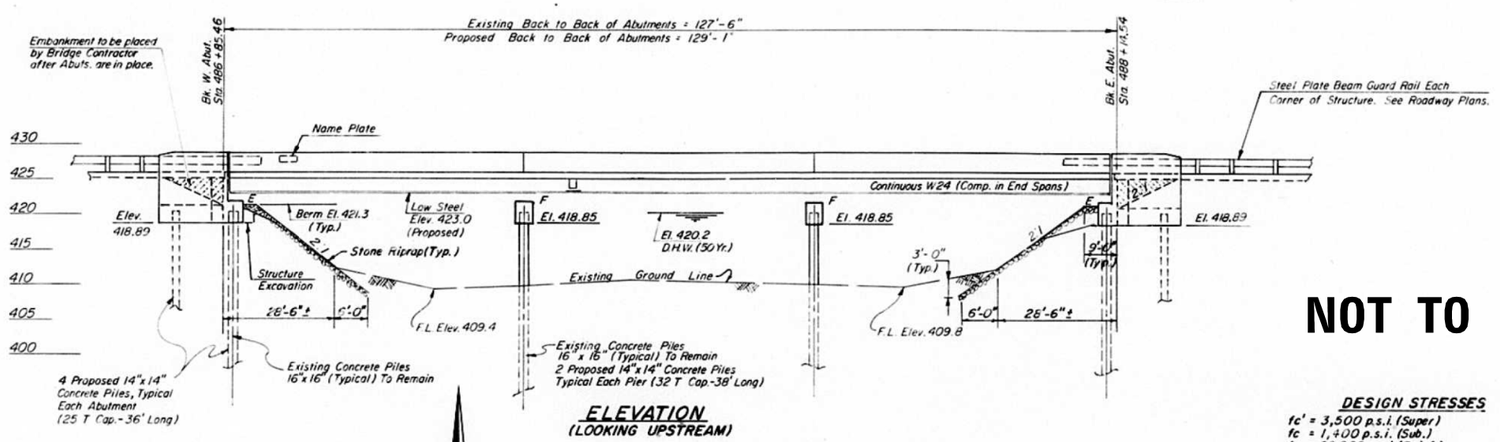
Existing Superstructure and pile bent caps to be removed.
Existing Structure built in 1932 as S.B.I. Rte. 161 Sec. 125 B, Federal Aid Project E 226 at Station 487+50.
Superstructure is reinforced concrete deck on 28" steel beams, 3-spans @ 41'-6" supported on reinforced concrete pile bents.
See Special Provisions for additional information regarding removal of existing structure.
B.M. "A" - N.E. COR. OF EAST ABUTMENT ON OVERFLOW STRUCTURE, ELEV. 425.34

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

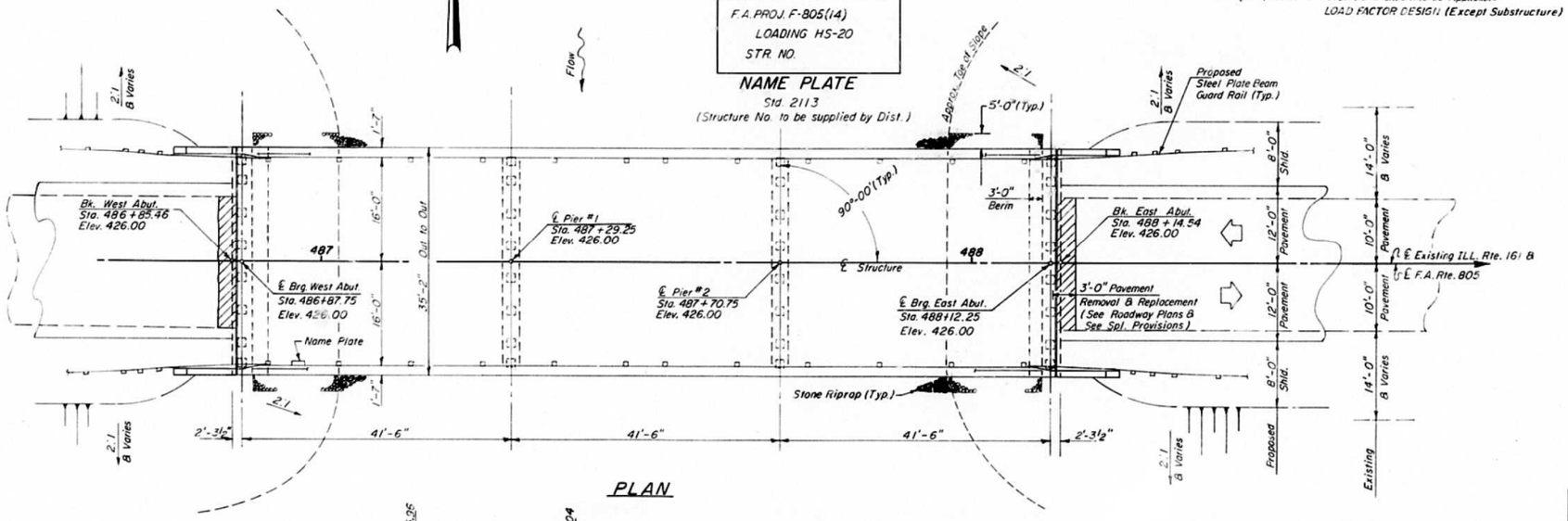
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
S.B.I. F.A. 805	125 BR	ST. CLAIR	32	6	9 SHEETS
FED. ROAD DIST NO. 7	ILLINOIS	FED. AID PROJECT			



ELEVATION
(LOOKING UPSTREAM)

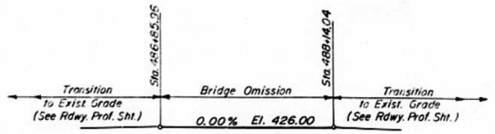
NOT TO SCALE



PLAN

NAME PLATE
Std. 2113
(Structure No. to be supplied by Dist.)

STATION 487+50
BUILT 198_ BY
STATE OF ILLINOIS
F.A. RTE. 805 SEC. 125 BR
F.A. PROJ. F-805(14)
LOADING HS-20
STR. NO.



PROFILE GRADE (F.A. RTE. 805)

DESIGNED	G.E.P.
CHECKED	D.V.K.
DRAWN	R.W.M.
CHECKED	G.E.P.

GENERAL NOTES

Calculated weight of Structural Steel = 43,600 lbs. (M-223) Grade 50
= 13,600 lbs. (M-183)

Fasteners shall be high strength bolts. Bolts 3/4", open holes 13/16", unless otherwise noted.

The basic lead silico chromate paint system shall be used for shop & field painting of Structural Steel.

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for the distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.

Protective Coat shall be applied in accordance with Article 503.12 of the Standard Specifications.

The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These Components are the tension flanges, webs and all splice plate material of the steel girders or wide flange beams.

Plan dimensions and details relative to existing structure have been taken from 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 mater ls. 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.

DESIGN STRESSES

fc' = 3,500 p.s.i. (Super)
fc = 1,400 p.s.i. (Sub.)
fy = 60,000 p.s.i. (Reinf.)
fy = 50,000 p.s.i. (M223 - Structural Steel), 36,000 p.s.i. (M183 Steel)
fs = 24,000 p.s.i (Reinf. Sub. & Parapet)
n = 9
Allowable Δ Deflection L/800
Allow 25 p.s.f. F.W.S.
Loading HS 20-44
Design Spec. 1977 AASHTO & Interims as Applicable
LOAD FACTOR DESIGN (Except Substructure)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yds.		115	115
Class X Concrete	Cu. Yds.	136.9	76.9	213.8
Furnishing & Erecting Structural Steel	L.S.	1		1
Reinforcement Bars	Lbs.	16,850	8,360	25,210
Reinforcement Bars (Epoxy Coated)	Lbs.	18,890		18,890
Concrete Piles	Lin. Ft.		440	440
Name Plate	Each	1		1
Preformed Joint Sealer (2½")	Lin. Ft.	70		70
Floor Drains	Ea.	24		24
Removal of Existing Superstructure	Ea.			1
Protective Coat	Sq. Yds.	573		573
Stud Shear Connectors	Ea.	1530		1530
Stone Riprap	Sq. Yds.		305	305
Concrete Removal	Cu. Yds.		39	39

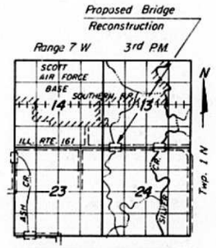
WATERWAY INFORMATION

Total Drainage Area	= 400 Sq. Mi.		
Design Discharge, Q50	= 26,265 c.f.s.	Discharge, Q100	= 29,800 c.f.s.
Main Channel Bridge, Q50	= 18,854 c.f.s.	Main Channel Bridge, Q100	= 21,275 c.f.s.
Overflow Bridge, Q50	= 7,411 c.f.s.	Overflow Bridge, Q100	= 8,525 c.f.s.
Design High Water El. (50 Yr. Fl.)	= El. 420.2	High Water El. (100 Yr. Fl.)	= El. 421.2
Created Head	= 1.6'	Created Head	= 1.6'

Reconstructed Bridge Opening at Main Channel below El. 420.2 = 2810 Sq. Ft.
Reconstructed Bridge Opening at Overflow Channel below El. 420.2 = 1000 Sq. Ft.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridge & Traffic Structures

Proposed Bridge Reconstruction



LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A. ROUTE 805 (S.B.I. RTE. 161) OVER SILVER CREEK
SECTION 125 BR
ST. CLAIR COUNTY
STA. 487+50
OVERFLOW STRUCTURE

Gregory E. Peluso
NO. 81-3312

USER NAME = smithma	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 2/1/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0094

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

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	7
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS	FED. AID PROJECT		

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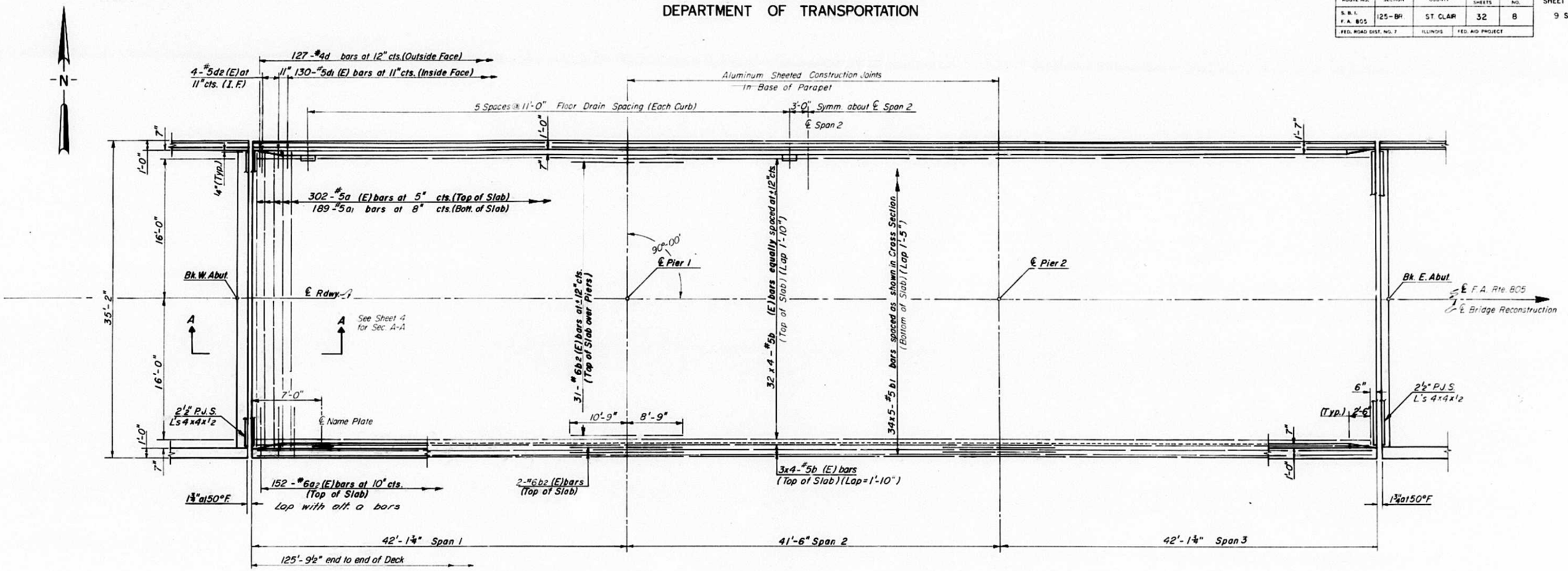
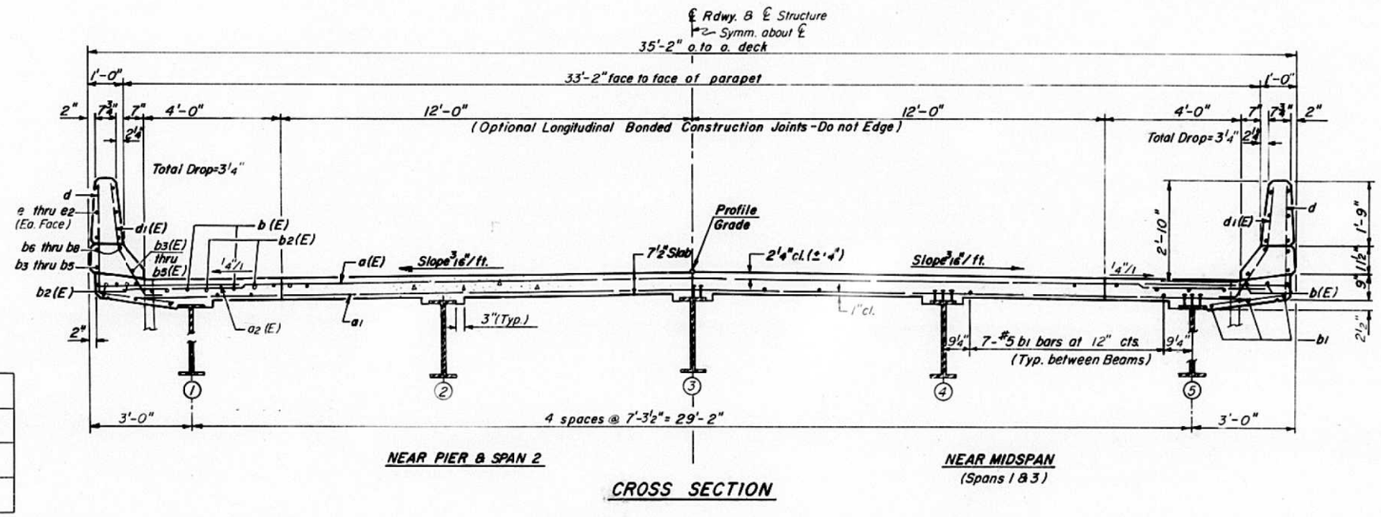
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F.A. 805	125-BR	ST. CLAIR	32	8
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 3
9 SHEETS



PLAN



CROSS SECTION

NOTES:

See Sheet No. 4 for Superstructure Details and Bill of Materials.

Reinforcement Bars designated (E) shall be Epoxy Coated.

Bars indicated thus 32 x 4 - #5 etc. Indicates 32 lines of Bars with 4 lengths per line.

FOR INFORMATION ONLY

SUPERSTRUCTURE
F.A. ROUTE 805 OVER SILVER CREEK
SECTION 125 BR.
ST. CLAIR COUNTY
STA. 487+50

NOT TO SCALE

DESIGNED	G. E. P.
CHECKED	D. V. K.
DRAWN	R. W. M.
CHECKED	G. E. P.

USER NAME = smithma	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 2/1/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0094

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

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	8
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS	FED. AID PROJECT		

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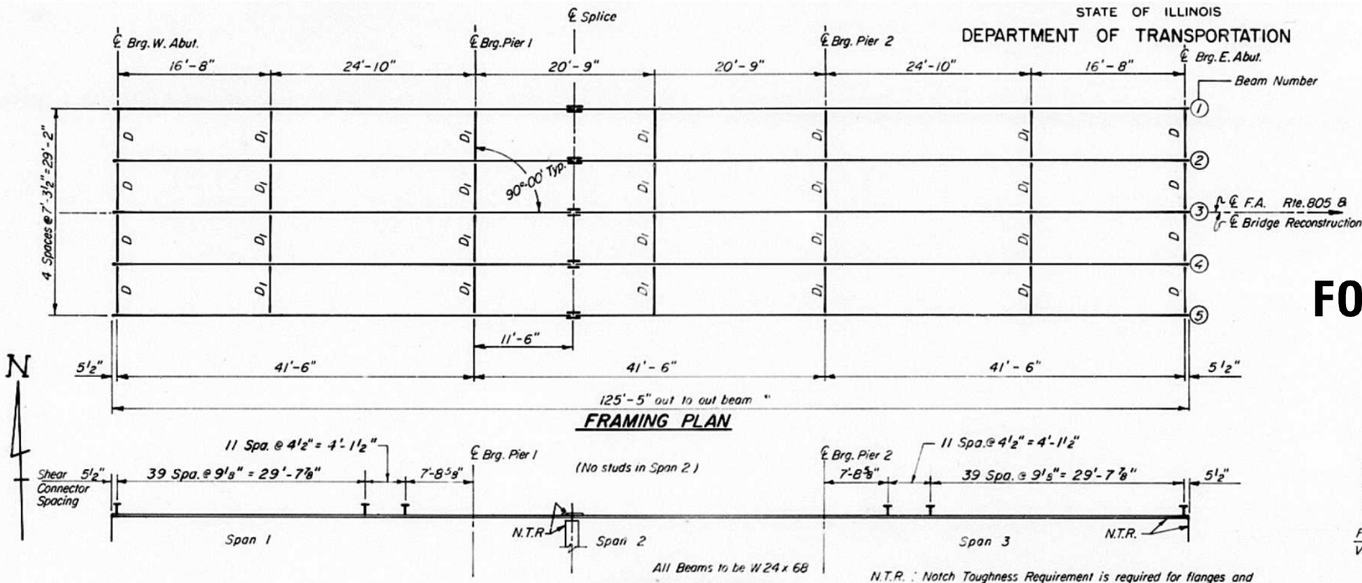
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 805	125 BR	ST. CLAIR	32	11
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

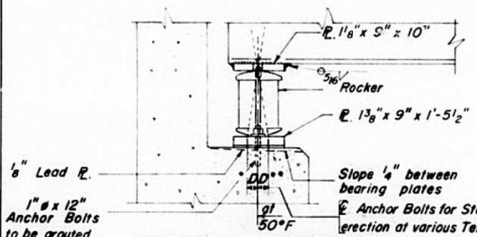
SHEET NO. 6
9 SHEETS



FRAMING PLAN

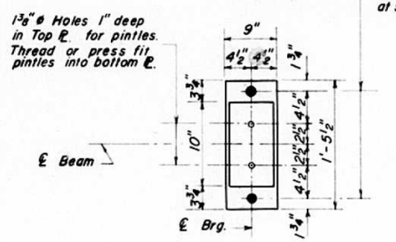
ELEVATION SHOWING SHEAR CONNECTORS

N.T.R. : Notch Toughness Requirement is required for flanges and webs of rolled beams, and web and flange splice plates.

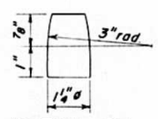


SECTION AT ABUTMENTS

*D = 1/8"/100 ft. of exp. for every 15° below the normal temp. of 50°F.
D** = 1/8"/100 ft. of exp. for every 15° above the normal temp at 50°F.

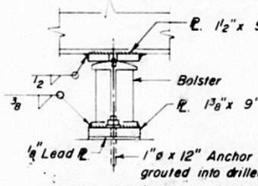


PLAN

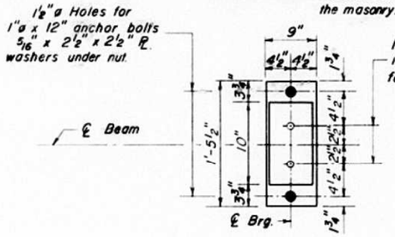


DETAIL OF PINTLE

DESIGNED	E.F.V.
CHECKED	G.E.P.
DRAWN	M.W.R.
CHECKED	G.E.P.

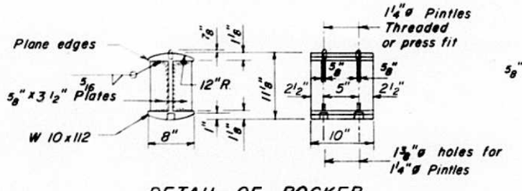


PIER #1 & #2

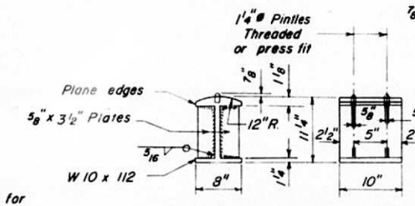


PLAN

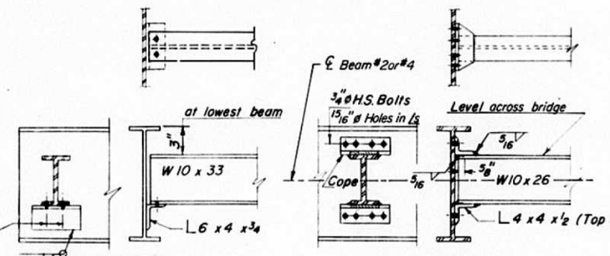
NOTE:
Brg. seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ± 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.



DETAIL OF ROCKER AT ABUTMENTS



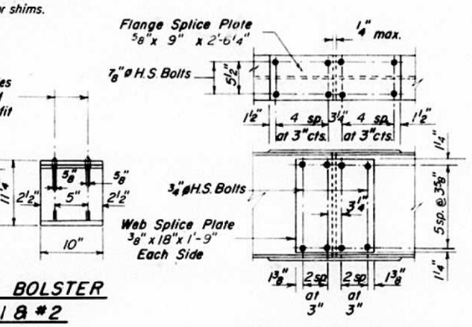
DETAIL OF BOLSTER AT PIER #1 & #2



DIAPHRAGM D
(8 Required)

DIAPHRAGM D
(20 Required)

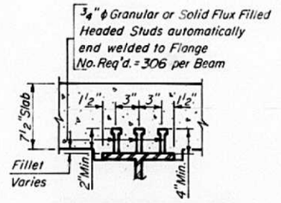
NOTE:
For ¾" ø H.S. bolts, use 15/16" ø holes in angles. Hardened washers are required over 15/16" ø holes in angles.



DETAIL OF SPLICE

NOTE:
All Beams and Splice Plates shall be M-223 Grade 50.
All other Structural Steel items including Bearing Assemblies, Diaphragms, and other miscellaneous items shall be M-193.

FOR INFORMATION ONLY



SECTION THRU SLAB

INTERIOR BEAM MOMENT TABLE

	0.4 Sp. 1	Pier	0.5 Sp. 2
Is (in⁴)	1830	1830	1830
Ic (in⁴)	6013.7	—	—
Ss (in³)	154	154	154
Sc (in³)	249	—	—
℄ (k/1)	0.777	1.101	1.101
M℄ (1k)	139.4	- 233.8	74.4
fs non-comp (ksi)	10.86 *	- 18.22	5.80
S℄ (k/1)	0.324	—	—
Ms ℄ (1k)	62.9	—	—
M℄ (1k)	604.3	- 310.3	386.4
M imp (1k)	181.4	- 93.0	115.9
Total (1k)	848.6	- 403.3	502.0
fs comp (ksi)	40.90 **	- 31.43	39.12
fs Total (ksi)	50 **	- 49.65	44.92
VR (k)	48.0	—	—

* Computed by conventional elastic beam formula.
** Computed using plastic theory - section is compact for positive moment.

INT. BEAM REACTION TABLE

	Abut.	Pier
R℄ (k)	18.5	50.1
R℄ (k)	35.9	42.1
Imp. (k)	10.9	12.6
R Total (k)	65.2	104.8

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs Total.
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs Total.
VR is the maximum ℄ + Impact shear range in span.
The load factor (1.3) [2 + 5/3 (℄ + Imp.)] is included for computing moments and stresses.

† ELEVATION TOP OF W BEAMS

Location	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5
℄ Brg. W. Abut.	425.02	425.15	425.26	425.15	425.02
℄ Brg. Pier #1	425.02	425.15	425.26	425.15	425.02
℄ Splice	425.02	425.15	425.26	425.15	425.02
℄ Brg. Pier #2	425.02	425.15	425.26	425.15	425.02
℄ Brg. E. Abut.	425.02	425.15	425.26	425.15	425.02

† For Fabrication Only

NOT TO SCALE

STRUCTURAL STEEL DETAILS
F.A. 805 OVER SILVER CREEK
SECTION 125 BR, ST. CLAIR COUNTY
STA. 487+50

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	DRAWN -	REVISED -	
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PLOT DATE = 2/1/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0094

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

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	9
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS	FED. AID PROJECT		

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	DRAWN -	REVISED -	
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PLOT DATE = 2/2/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

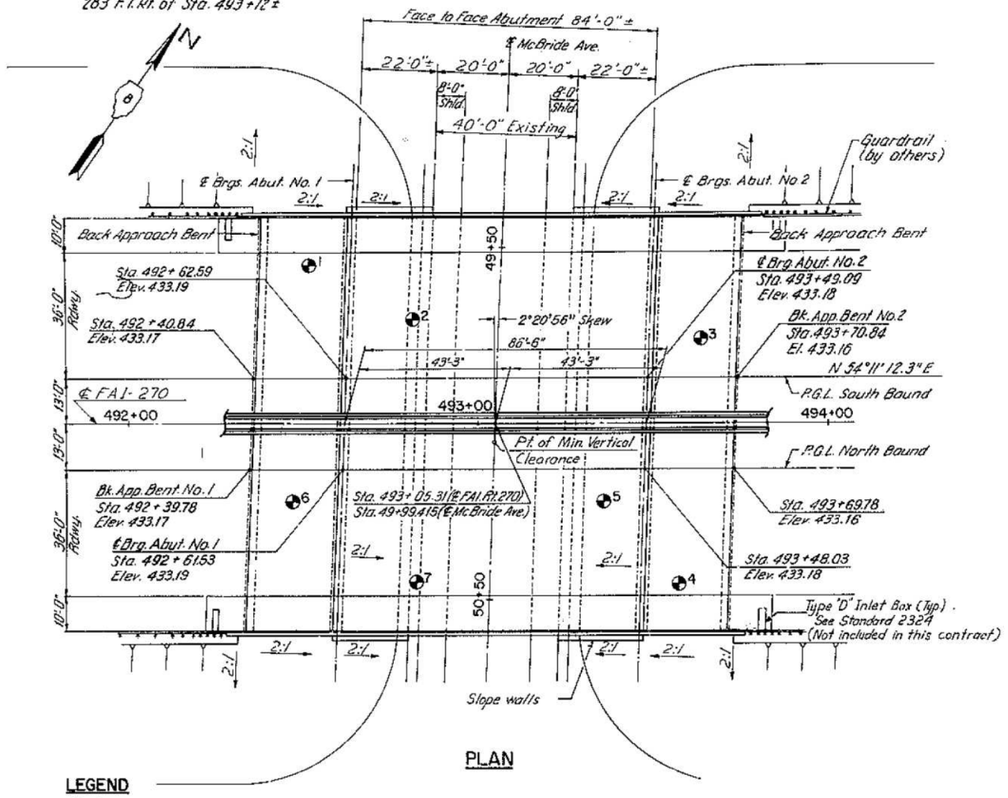
I–255 OVER MCBRIDE AVENUE
DETAILED LOCATION MAP

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

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	10
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			

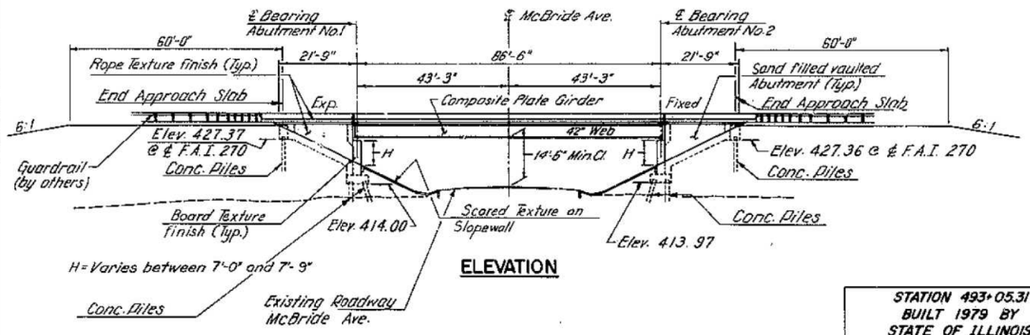
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 270	82-6HB-2	ST. CLAIR	28	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

B.M. #5 R.R. Spike in Power Pole
Elev. 414.60 on East Side of Mc.Bride Ave.
283 F.T.Rt. of Sta. 493+12 ±



PLAN

LEGEND
Boring
N.T.S. Not to Scale



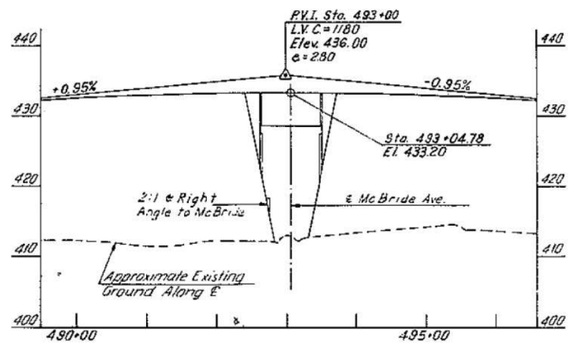
ELEVATION

STATION 493+05.31
BUILT 1979 BY
STATE OF ILLINOIS
F.A.I. RT. 270 SEC. 82-6HB-2
F.A. PROJ. I-270-7(76)
LOADING HS20 & ALT.
* STR. NO.

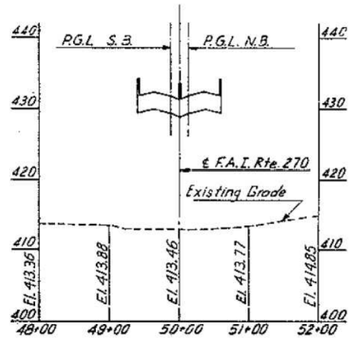
For Details of Name Plate see Std. 2113

NAME PLATE

* To be furnished by the District.



PROFILE – F.A.I. RTE. 270 (ALONG MEDIAN EDGE)



PROFILE – Mc BRIDE AVE.

DESIGN NOTES

DESIGN SPECIFICATIONS

AASHTO 1977 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES PLUS 1978 INTERIM.

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF ILLINOIS DATED JULY 1, 1976.

DESIGN CRITERIA

LIVE LOAD - HS 20-44 AND ALTERNATE LOADING
LATERAL LOAD 30 P.C.F. EQUIVALENT FLUID PRESSURE BEFORE APPROACH SLAB IS POURED
40 P.C.F. EQUIVALENT FLUID PRESSURE THEREAFTER

25 P.S.F. ALLOWANCE FOR FUTURE WEARING SURFACE

ALL SPANS COMPOSITE IN POSITIVE MOMENT AREA

ALLOWABLE LIVE LOAD PLUS IMPACT DEFLECTION = $\frac{\text{SPAN LENGTH}}{800}$ (ASSUMING ENTIRE DECK TO ACT AS UNIT)

DESIGN STRESSES

REINFORCED CONCRETE - LOAD FACTOR DESIGN
F'c = 3500 P.S.I., Vc = 56.2 P.S.I., n = 9

REINFORCEMENT
F'y = 60,000 P.S.I. (GRADE 60)

STRUCTURAL STEEL
Fs = 20,000 P.S.I.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUB.	TOTAL
SAND BACKFILL	CU. YD.	–	754	754
CLASS X CONCRETE	CU. YD.	557.7	671.6	1229.3
PRECAST CONCRETE PLANK	SQ. FT.	454	–	454
STRUCTURAL STEEL	L. SUM	1	–	1
STUD SHEAR CONNECTORS	EACH	4224	–	4224
REINFORCEMENT BARS	POUND	69,200	66,530	135,730
REINFORCEMENT BARS (EPOXY COATED)	POUND	53,260	–	53,260
PROTECTIVE COAT	SQ. YD.	1605	–	1605
CONCRETE PILES	LIN. FT.	–	7732	7732
TEST PILE CONCRETE	EACH	–	4	4
NAME PLATES	EACH	1	–	1
SLOPE WALL 4 - INCH	SQ. YD.	–	672	672
PREFORMED JOINT SEALER (2½")	LIN. FT.	242	–	242

FOR INFORMATION ONLY

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Carl E. Thuerman Jr.
Engineer of Bridge & Traffic Structures

NOT TO SCALE

Sheet SI of SI7

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6HB-2
F.A.I. ROUTE 270 OVER McBRIDE AVENUE
PLAN & ELEVATION
County: St. Clair
Date: December, 1978
Drawn By: E.M.K.
Checked By: P.C.K.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 2/1/2018	DATE -	REVISED -

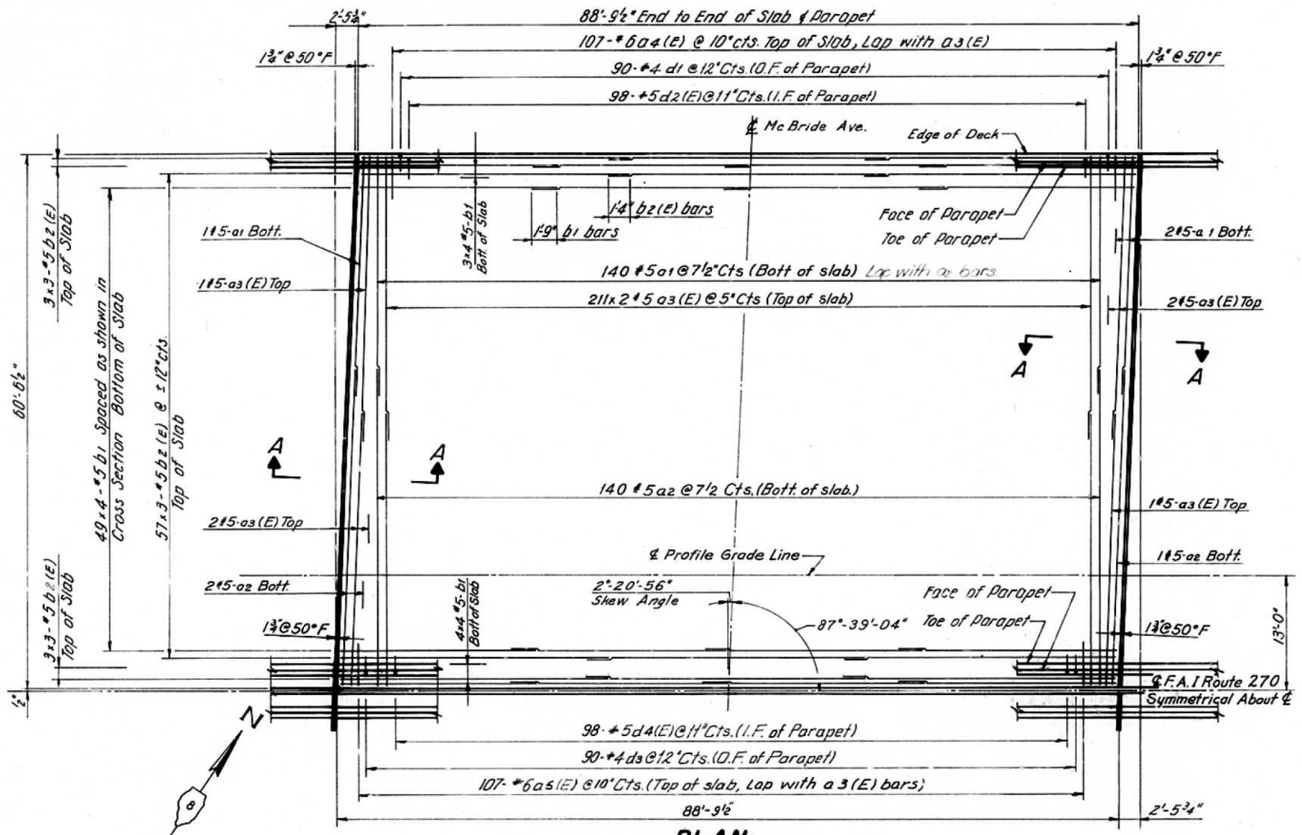
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 0219

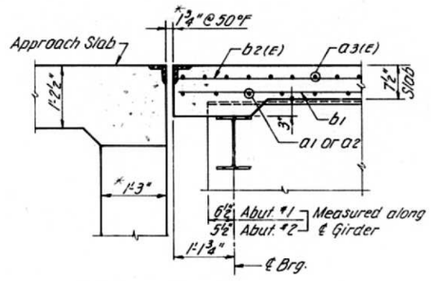
SCALE: | SHEET 1 OF 5 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	11
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 270	82-6HB-2	ST. CLAIR	28	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

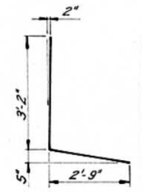


PLAN

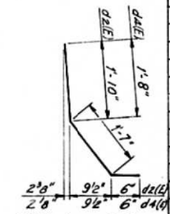


SECTION A-A

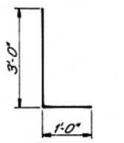
* At Fr. ℄.



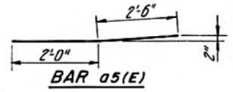
BAR d1



BAR d2(E) & d4(E)



BAR d3

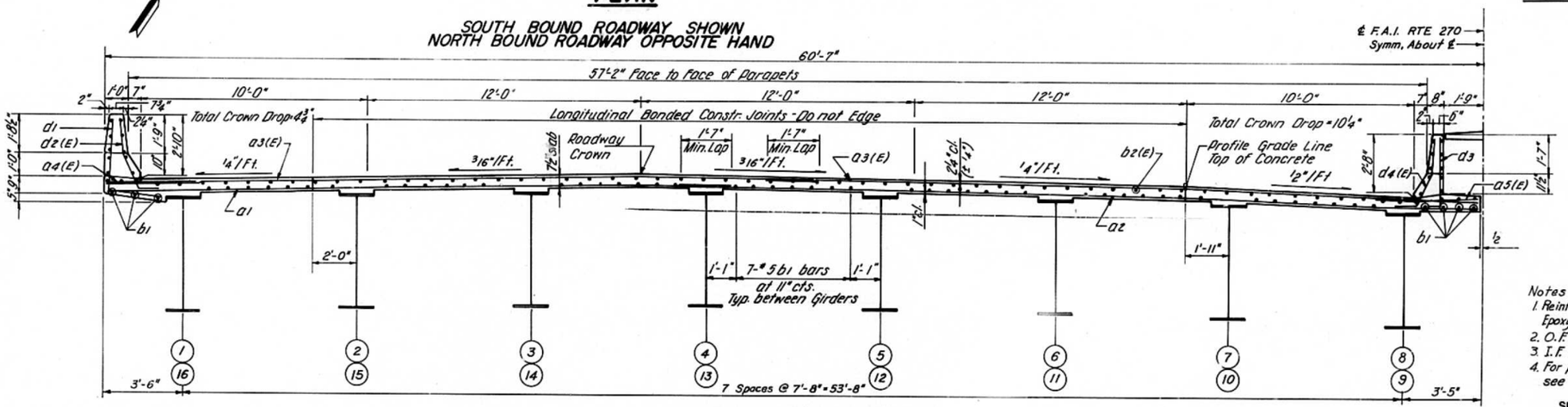


BAR a5(E)

BILL OF MATERIAL
North and South Bound Roadways

BAR	NO	SIZE	LENGTH	SHAPE
a1	286	#5	27'-3"	—
a2	286	#5	34'-9"	—
a3(E)	856	#5	31'-0"	—
a4(E)	214	#6	4'-6"	—
a5(E)	214	#6	4'-6"	⌒
b1	448	#5	23'-6"	—
b2(E)	390	#5	30'-5"	—
b3	12	#5	30'-5"	—
b5	24	#8	31'-4"	—
d1	180	#4	5'-11"	⌐
d2(E)	196	#5	3'-11"	⌐
d3	180	#4	4'-0"	⌐
d4(E)	196	#5	3'-9"	⌐
e1	120	#4	17'-6"	—
Reinforcement Bars			Lbs.	34,460
Reinforcement Bars (Epoxy Coated)			Lbs.	44,510
Class X Concrete			Cu.Yds.	302.2

Bars indicated thus 57x3-#5 etc. indicates 57 lines of bars with 3 lengths per line.



DECK CROSS SECTION

Notes:
1. Reinforcement designated (E) shall be Epoxy Coated. See special provisions.
2. O.F. = Outside face.
3. I.F. = Inside face.
4. For parapet details see sheet S6.

Sheet S5 of S17

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6HB-2
F.A.I. ROUTE 270 OVER McBRIDE AVENUE
DECK PLAN & SECTION
County: St. Clair
Date: December, 1978
Drawn By:
Checked By: P.C.K.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

NOT TO SCALE

FOR INFORMATION ONLY

USER NAME = smithma	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 2/1/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0219

SCALE: | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	12
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS	FED. AID PROJECT		

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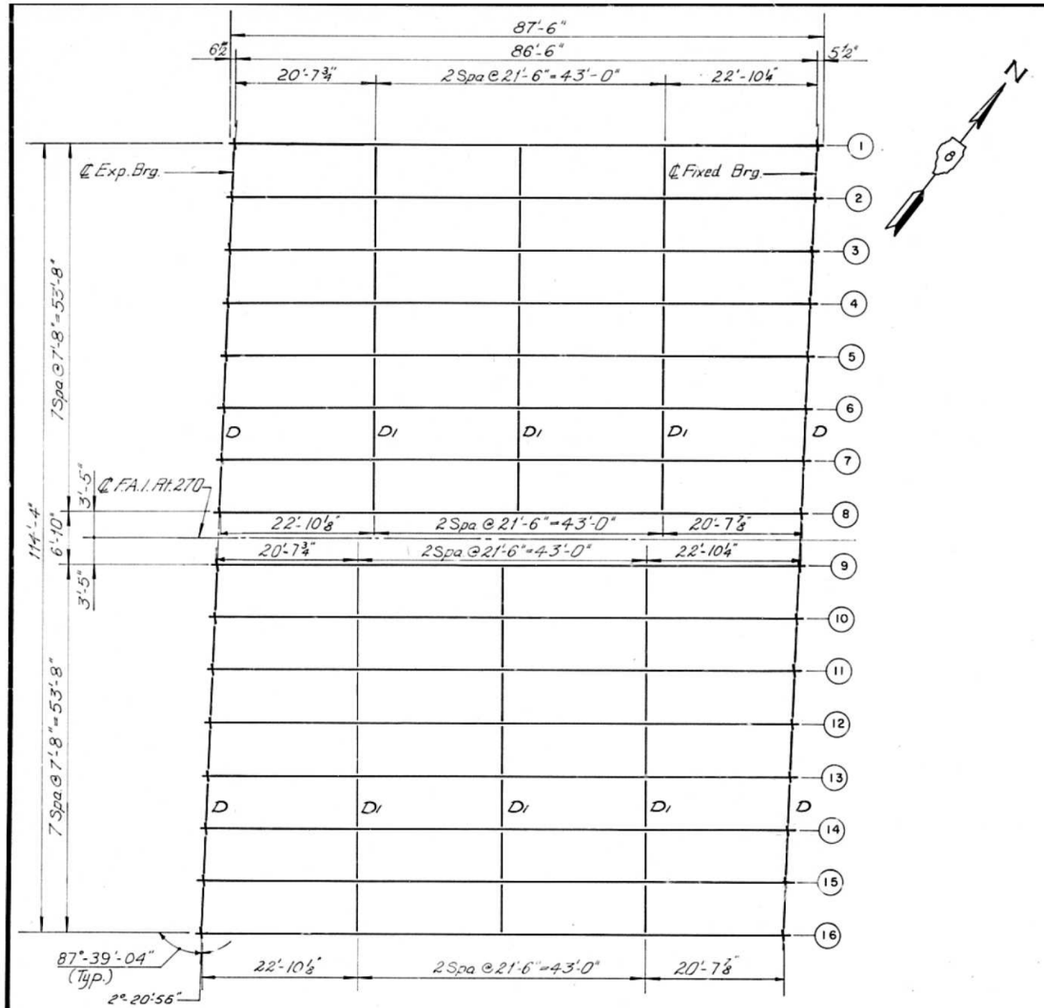
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 270	82-6HB-2	ST. CLAIR	28	15
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FRAMING PLAN

NOT TO SCALE

FOR INFORMATION ONLY

BEAM PROPERTIES, MOMENTS & STRESSES

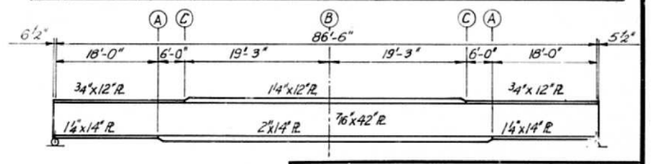
		FASCIA			INTERIOR		
		A	B	C	A	B	C
	I_s	14200	21900	17100	14231	21900	17138
	$S_{s,bot}$	790	1200	1120	790	1200	1120
	$S_{s,top}$	550	810	590	550	810	590
n=27	I_c	27000	37000	34100	27421	37434	34678
n=27	$S_{c,bot}$	970	1410	1390	984	1420	1422
n=27	$S_{c,top}$	1660	1940	1700	1701	1983	1700
n=9	I_c	37500	51600	49900	38326	52665	50930
n=9	$S_{c,bot}$	1060	1520	1500	1068	1536	1521
n=9	$S_{c,top}$	4400	4580	4300	4717	4805	4523
	D_{ℓ} (k/l)	1.067	1.067	1.067	0.942	0.942	0.942
	$M_{D_{\ell}}$ (ik)	650	1000	790	570	880	700
	fs-non-comp	9.87	10.02	8.46	8.66	8.80	7.50
	$S_{D_{\ell}}$ (k/l)	0.275	0.275	0.275	0.275	0.275	0.275
	$M_{S_{D_{\ell}}}$ (ik)	170	260	210	170	260	210
	$M_{L_{\ell}}$ (ik)	574	833	688	615	898	736
	M_{imp} (ik)	136	197	162	145	212	174
	TOTAL (ik)	880	1290	1060	930	1370	1120
	fs-comp	10.13	10.32	8.57	10.71	11.00	9.27
	$f_{s\,TOTAL}$ (ksi)	20.00	20.34	17.03	19.37	19.67	16.45
	VR (k)		51.6			55.5	

REACTIONS

	FASCIA	INTERIOR
$R_{D_{\ell}}$	47.3	41.9
$R_{S_{D_{\ell}}}$	11.8	11.8
$R_{L_{\ell}}$	41.8	44.9
R_{Imp}	9.9	10.6
$R_{s,tot}$	110.8	103.2

LEGEND

- f_s - Stress in Steel (KSI)
- VR - Maximum ℄ + Impact shear range in span used to determine shear connector spacing.
- R - Reaction (kip)
- I_s - Moment of Inertia of Steel Section (in^4)
- I_c - Moment of Inertia of Transformed Section (in^4)
- S_s - Section Modulus Refered to Steel (in^3)
- S_c - Section Modulus Refered to Concrete (in^3)
- D_{ℓ} - Dead Load
- L_{ℓ} - Live Load
- I_{mp} - Impact
- $S_{D_{\ell}}$ - Superimposed Dead Load
- tot - Total
- bot - Bottom
- top - Top



Sheet S9 of S17

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6HB-2
F.A.I. ROUTE 270 OVER
McBRIDE AVENUE
FRAMING PLAN & STEEL STRESSES
County: St. Clair
Date: December, 1978
Drawn By:
Checked By: P.C.K.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
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PLOT DATE = 2/1/2018	DATE -	REVISED -	

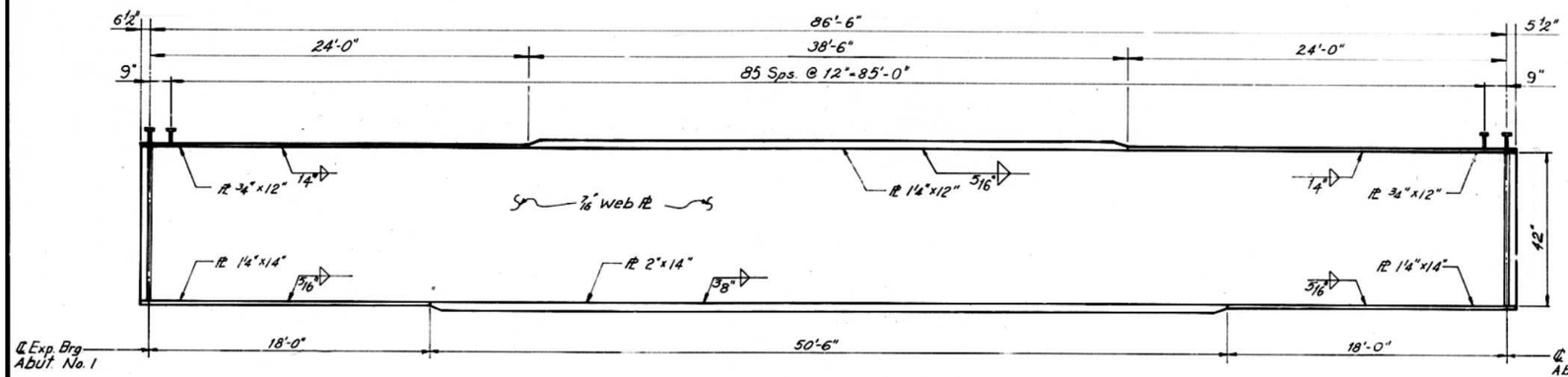
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0219

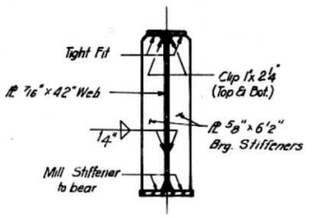
SCALE: | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	13
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			

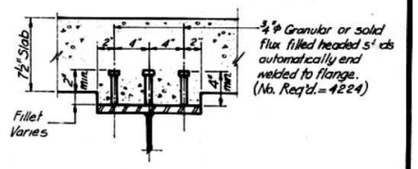
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI. 270	82-6HB-2	ST. CLAIR	28	16
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



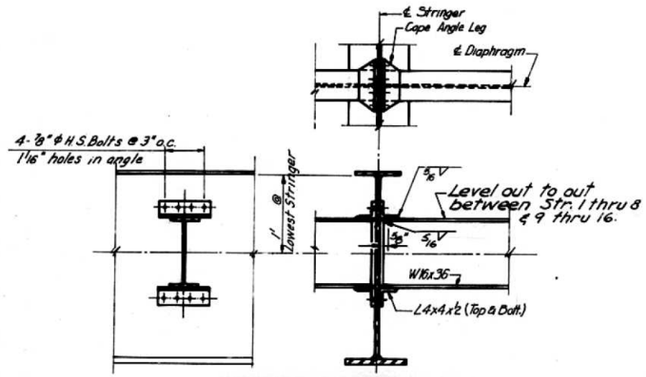
STRINGER ELEVATION



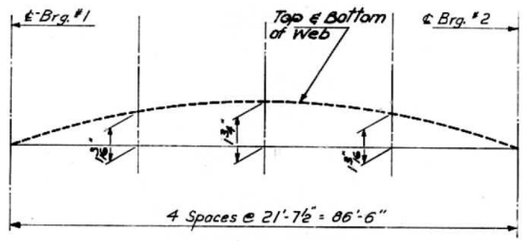
SECTION AT ABUTMENT



SECTION A-A

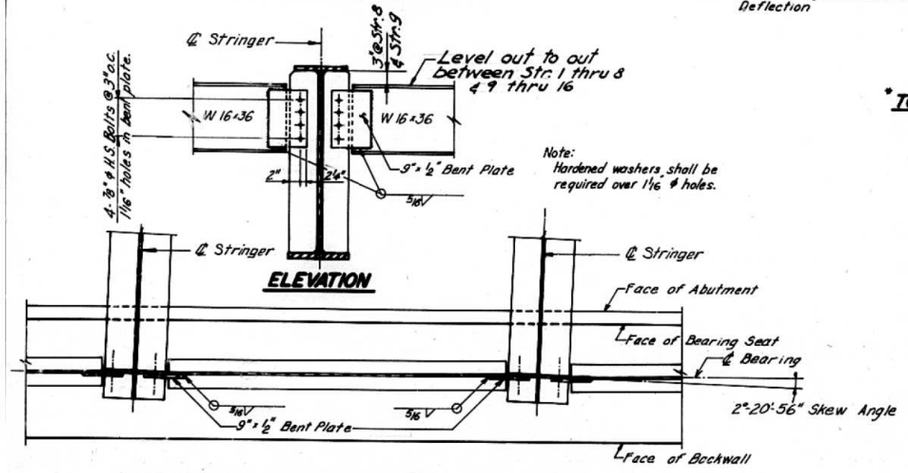


INTERIOR DIAPHRAGM (D1)



CAMBER DIAGRAM

Note: Camber Diagram includes total Dead Load Deflection

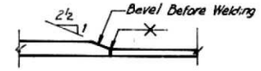


CONNECTION DETAIL FOR END DIAPHRAGMS (D)

***TOP OF WEB ELEVATIONS AT ℄ OF BEARINGS**

STRINGER	Brg. No. 1	Brg. No. 2
1	432.54	432.53
2	432.70	432.69
3	432.82	432.81
4	432.85	432.84
5	432.73	432.72
6	432.58	432.57
7	432.38	432..1
8	432.06	432.05
9	432.06	432.05
10	432.38	432.37
11	432.58	432.57
12	432.73	432.72
13	432.85	432.84
14	432.82	432.81
15	432.70	432.69
16	432.54	432.53

* For Fabrication only



TYPICAL FLANGE SPLICE DETAIL

FOR INFORMATION ONLY

NOT TO SCALE

Sheet S10 of S17

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F. A. I. ROUTE 270
SECTION 82-6HB-2
F.A.I. ROUTE 270 OVER McBRIDE AVENUE
GIRDER ELEVATION & DETAILS
County: St. Clair
Date: December, 1978
Drawn By:
Checked By: P. C. K.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
FILE NAME: pw:\\IL084EBIDNTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 8\Projects\87614O\CADData\CADsheets\87614O-sht-details.dgn

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	DRAWN -	REVISED -
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PLOT DATE = 2/1/2018	DATE -	REVISED -

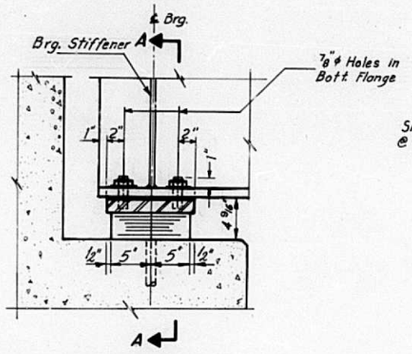
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082–0219

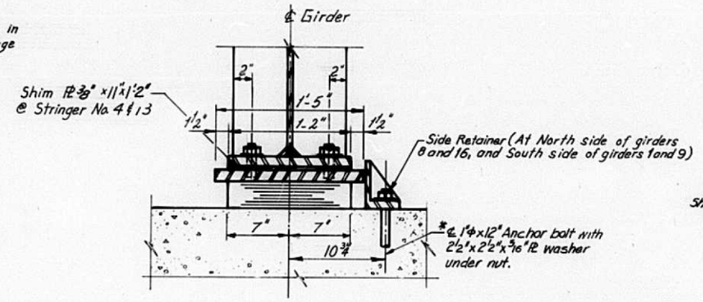
SCALE: | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	14
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS	FED. AID PROJECT		

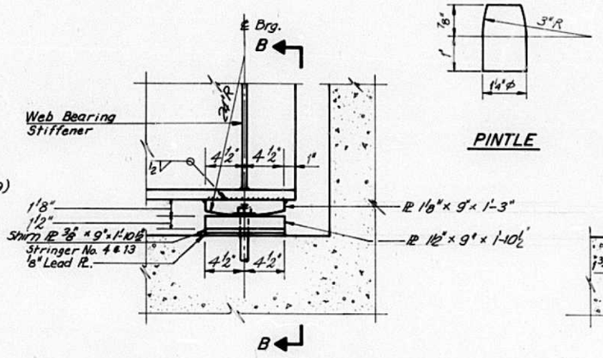
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.- 270	82-6HB-2	St. Clair	28	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



ELEVATION AT ABUTMENT NO. 1

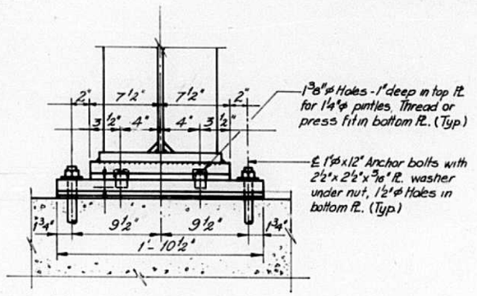


SECTION A-A



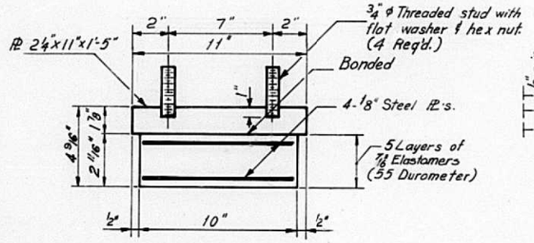
ELEVATION AT ABUTMENT NO. 2

PINTLE

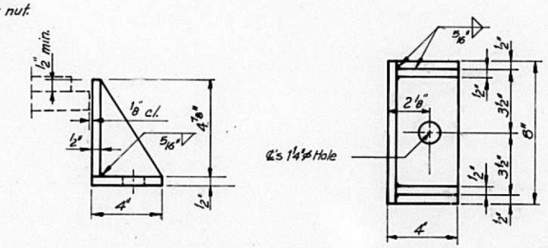


SECTION B-B

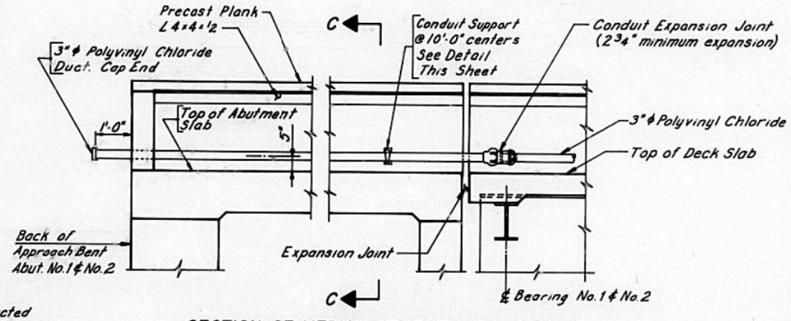
FIXED BEARING



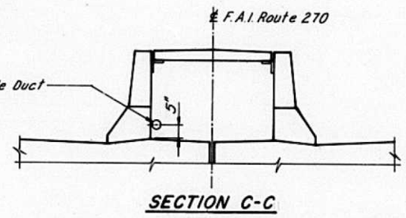
BEARING ASSEMBLY



SIDE RETAINER



SECTION OF MEDIAN AT ABUT. NO. 1 & NO. 2



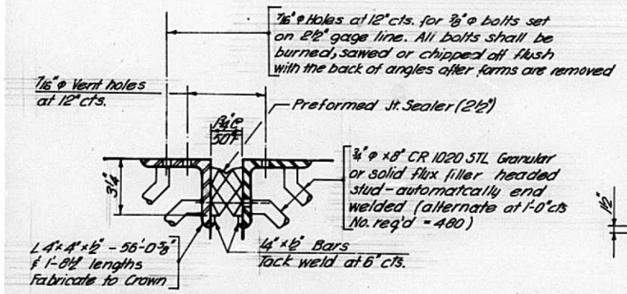
SECTION C-C

POLYVINYL CHLORIDE CONDUIT DETAILS

Notes:
1. 3" ϕ Polyvinyl Chloride Duct shall be Schedule 40 (EPC 40 PVC) and shall comply with NEMA TC-2. It shall be U.L. listed.
2. Conduit supports shall be galvanized.
3. Conduit, conduit supports and conduit expansion jt. shall be considered incidental to the cost of this structure.

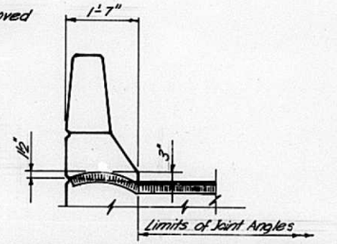
TYPE I ELASTOMERIC EXPANSION BRG.

Note: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry.



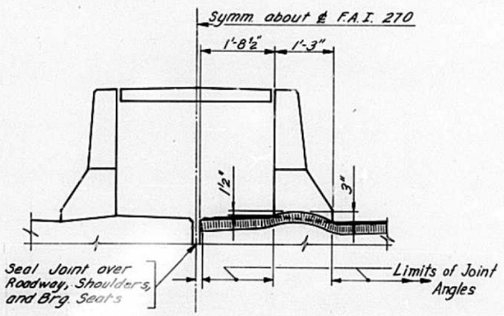
CROSS SECTION @ 50° F

Dimensions are at Right Angles

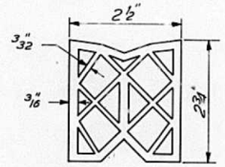


Limits of Joint Angles

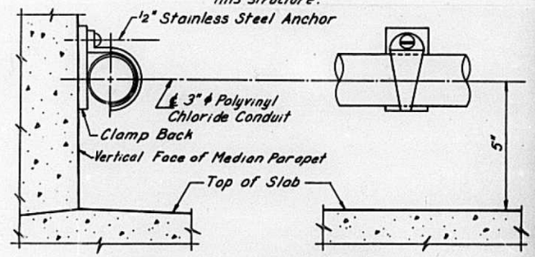
SEALER TREATMENT AT OUTSIDE PARAPET



SEALER TREATMENT AT MEDIAN



PREFORMED JOINT SEALER (2 1/2")



CONDUIT SUPPORT DETAIL
(At 10'-0" Centers)

PREFORMED JOINT SEALER

NOT TO SCALE

FOR INFORMATION ONLY

Sheet Sll of SI7

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6HB-2
F.A.I. ROUTE 270 OVER McBRIDE AVENUE
BEARING DETAILS & EXPANSION DEVICES
County: St. Clair — Drawn By:
Date: December, 1978 — Checked By: P.C.K.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
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	DRAWN -	REVISED -
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PLOT DATE = 2/1/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0219

SCALE: | SHEET 5 OF 5 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	15
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS	FED. AID PROJECT		

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	DRAWN -	REVISED -	
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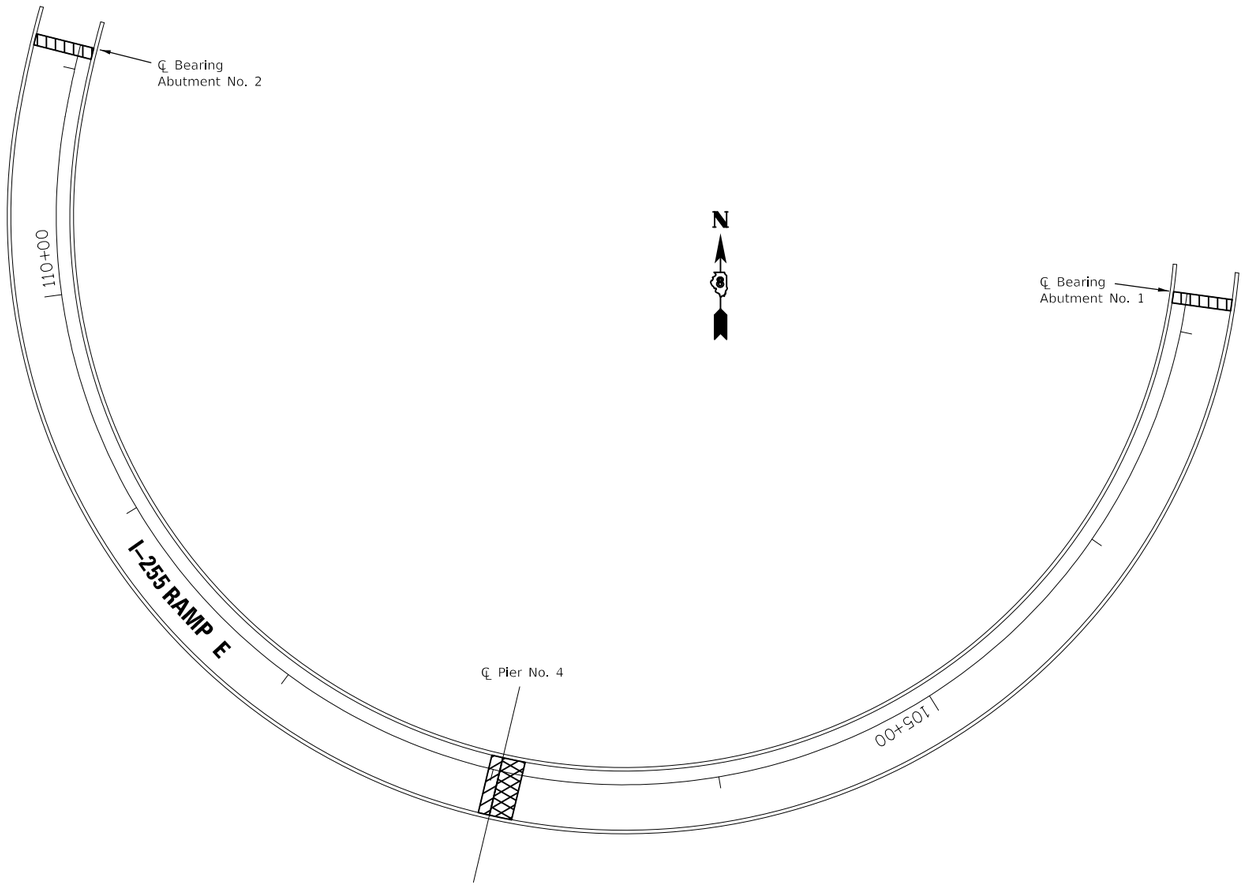
PLOT DATE = 2/2/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I–255 RAMP E OVER BLUE WATER DITCH
DETAILED LOCATION MAP

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

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	16
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			



ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN 5 FEET (MEASURED ALONG THE BEAM) ON THE SIDE OF THE DECK JOINT DELINEATED SHALL BE CLEANED AND PAINTED. (SP 10)

ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN 10 FEET (MEASURED ALONG THE BEAM) ON THE SIDE OF THE DECK JOINT DELINEATED SHALL BE CLEANED AND PAINTED. (SP 10)

NOT TO SCALE

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PLOT DATE = 2/2/2018	DATE -	REVISED -	

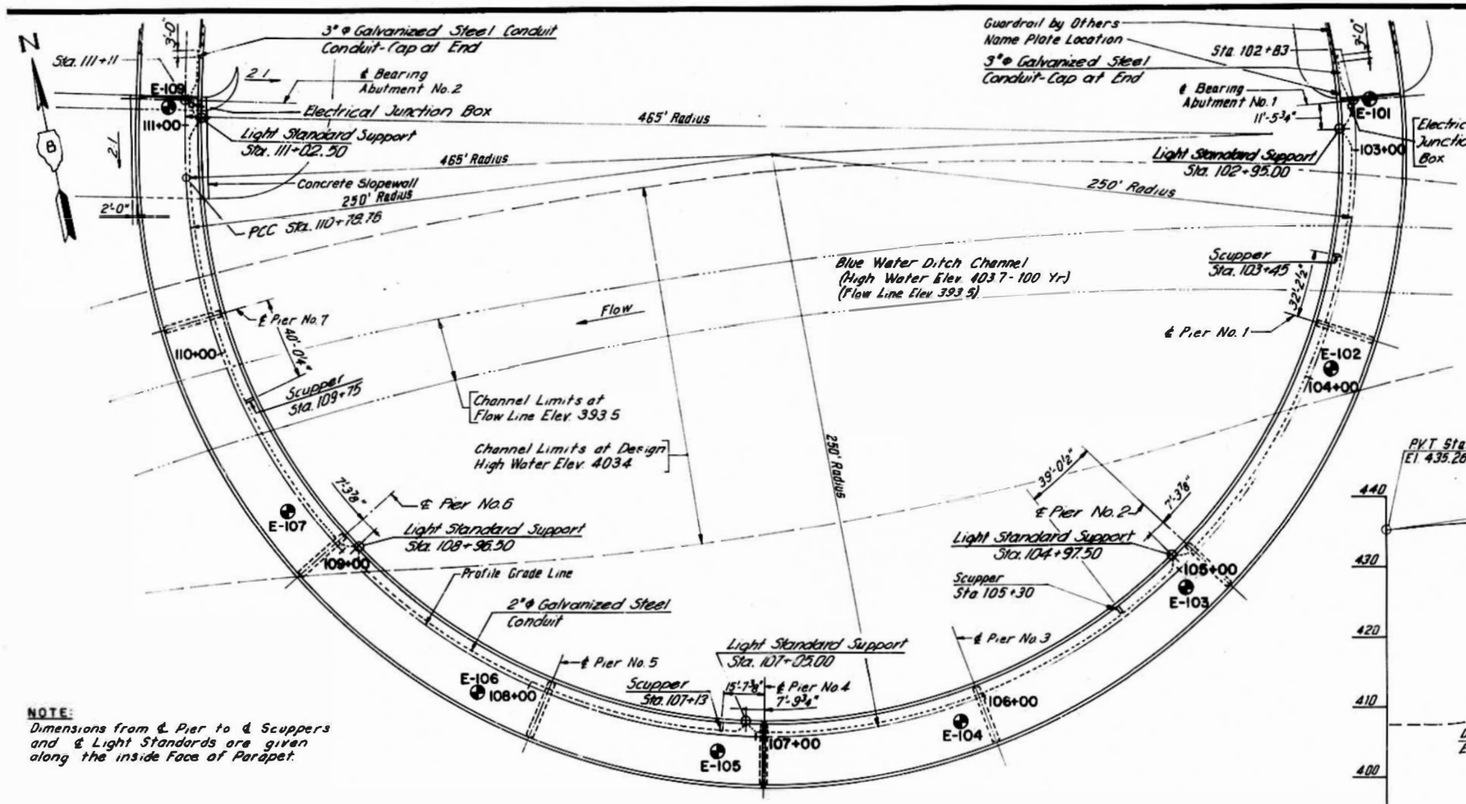
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE PAINTING DETAIL SN 082–0263

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

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	17
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I-270	82-6B	ST. CLAIR	40	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTE:
Dimensions from ℄ Pier to ℄ Scuppers and ℄ Light Standards are given along the inside face of Parapet.

NOTE:
BM.#2-SQ. CUT IN N.W. CORNER OF WEST CONCRETE MOUNTING FOR STEEL FLOOD GATES ACROSS TRIPLE LAKES ROAD, SOUTH OF ILL. RTE. 157 ELEV. 431.934

PLAN

NOT TO SCALE

TOTAL BILL OF MATERIAL

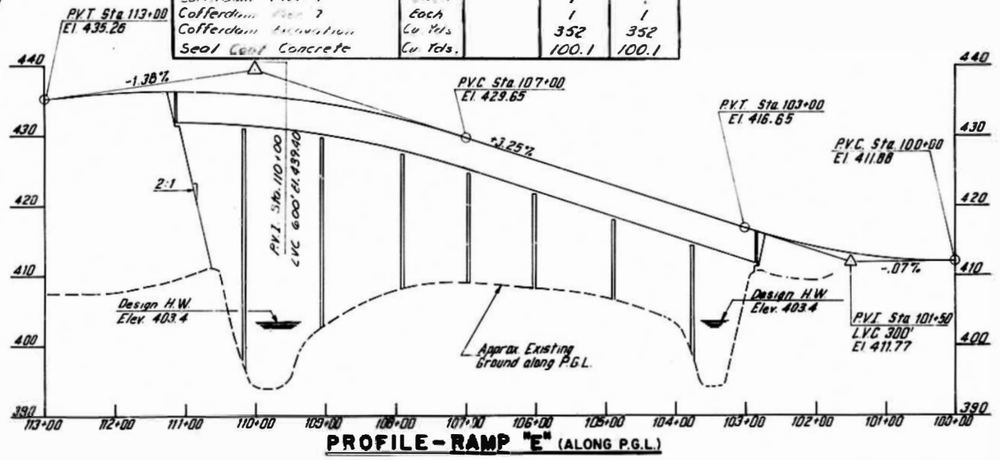
ITEM	UNIT	SUPER.	SUB.	TOTAL
Bearing Assembly Special	Each	40		40
STRUCTURE EXCAVATION	CU.YD.		551	551
CLASS X CONCRETE	CU. YD.	813.3	674.7	1488.0
STRUCTURAL STEEL	L. SUM	1		1
STUD SHEAR CONNECTORS	EACH	5076		5076
REINFORCEMENT BARS	POUND	89,020	55,500	144,520
REINFORCEMENT BARS (EPOXY COATED)	POUND	138,320		138,320
PROTECTIVE COAT	SQ.YD.	2461		2461
CONCRETE PILES	LIN. FT.		5829	5829
DRAIN SCUPPER	EACH	4		4
TEST PILE CONCRETE	EACH		9	9
NAME PLATES	EACH	1		1
SLOPE WALL 4 - INCH	SQ. YD.		171	171
NEOPRENE EXPANSION JOINT 4"	LIN.FT.	56		56
NEOPRENE EXPANSION JOINT 6½"	LIN.FT.	28		28
GALVANIZED STEEL CONDUIT ATTACHED TO STRUCTURE 2"	LIN.FT.	832		832
GALVANIZED STEEL CONDUIT ATTACHED TO STRUCTURE 3"	LIN.FT.	42		42
Cofferdam Pier 1	Each		1	1
Cofferdam Pier 7	Each		1	1
Cofferdam Excavation	Cu Yds		352	352
Seal Coat Concrete	Cu Yds.		100.1	100.1

STATION 106+97.00
BUILT 1980 BY
STATE OF ILLINOIS
F.A.I. RT. 270 SEC. 82-6B
F.A. PROJ. I-270-7(197)
LOADING HS20 & ALT.
*STR. NO.

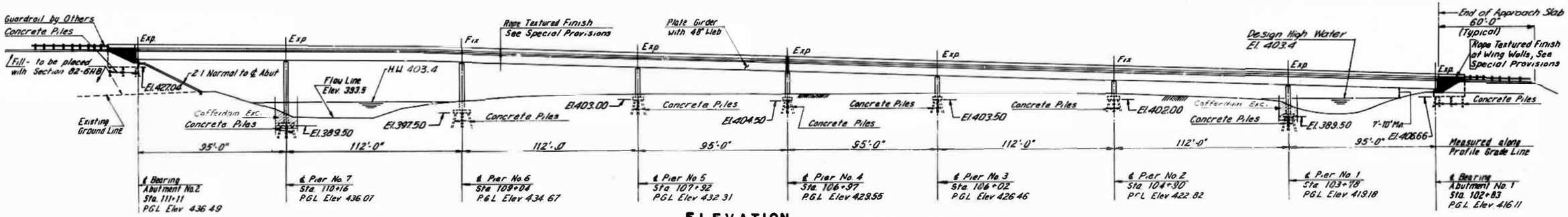
For Details of Name Plate see Std. 2113

NAME PLATE

* To be Provided by the District.



PROFILE - RAMP "E" (ALONG P.G.L.)



ELEVATION

Note: 3'-0" Thick Seal Coat Based On Water Elev. 398.5. When water Elev. exceeds 398.5 cofferdams should be flooded.

WATERWAY DATA

REQUIRED FOR:
BLUE WATERS DITCH

DRAINAGE AREA	8192	ACRES
Q50	650	C.F.S.
Q100	650	C.F.S.
FLOOD OF RECORD (YEAR)	N.A.	
DESIGN HWE	403.4	
100 YEAR HWE	403.7	
ALL TIME HWE	N.A.	
EXISTING OPENING BELOW DESIGN HWE	682.0	SQ.FT.
EFFECTIVE (REQUIRED) HYDRAULICS OPENING BELOW DESIGN HWE	682.0	SQ.FT.
PROPOSED HYDRAULICS OPENING BELOW DESIGN HWE	682.0	SQ.FT.
HYDRAULICS OPENING BELOW 100 YEAR HWE	700.0	SQ.FT.
CREATED HEAD FOR Q50	NEGLIGIBLE	
CREATED HEAD FOR Q100	NEGLIGIBLE	

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Carl E. Thurnauer Jr.
Engineer of Bridge & Traffic Structures

FOR INFORMATION ONLY

Sheet SI of S30

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
PLAN AND ELEVATION
County: St. Clair
Date: May 1979
Drawn By: M.J.K.
Checked By: C.D.S.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois
Rev. 2-4-80

MODEL: Default
FILE NAME: pw:\\IL084B1DNTFG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 8\Projects\8976L40\CADData\CADsheets\08976L40-sht-detail.dgn

USER NAME = smithma	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 2/1/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0263

SCALE: | SHEET 1 OF 6 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	18
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			

MOMENT TABLE
(COMPOSITE IN POSITIVE MOMENT AREAS)

		GIRDER A				GIRDER B			
		0.4 SPAN 1 0.6 SPAN 4 0.4 SPAN 5 0.6 SPAN 8	PIER 1 PIER 3 PIER 5 PIER 7	0.5 SPAN 2 0.5 SPAN 3 0.5 SPAN 6 0.5 SPAN 7	PIER 2 PIER 6	0.4 SPAN 1 0.6 SPAN 4 0.4 SPAN 5 0.6 SPAN 8	PIER 1 PIER 3 PIER 5 PIER 7	0.5 SPAN 2 0.5 SPAN 3 0.5 SPAN 6 0.5 SPAN 7	PIER 2 PIER 6
Is	(in^4)	34744	67032	28717	61326	23204	55613	21814	50059
Ic	(in^4)	65219		84010		62442		57025	
Ss	(in^3)	1659	2483	1753	2292	1194	2099	1065	1907
Sc	(in^3)	2394		2395		1605		1433	
DL	(k/l)	1.038	1.038	1.073	1.073	0.977	0.977	0.989	0.989
MDL - bending	(k)	917	1711	527	1360	585	1407	344	1208
fs non-comp.	(ksi)	5.9	8.3	3.6	7.1	5.9	8.0	3.9	7.6
SDL	(k/l)	0.373	0.373	0.373	0.373	0.373	0.373	0.373	0.373
MSDL - bending	(k)	362	584	285	501	270	463	209	430
MLL - bending	(k)	1306	1122	1934	1140	852	810	814	860
MIMP-bending	(k)	289	228	272	232	190	168	168	178
Mcomp-bending	(k)	1977	1934	1891	1873	1312	1441	1191	1468
fs - comp.	(ksi)	9.9	9.3	9.5	9.8	9.8	8.2	10.0	9.2
fs - warping (D.L)	(ksi)	1.2	1.2	0.8	1.0	1.3	1.0	1.1	0.9
fs-warping (S.D.L)	(ksi)	0.4	0.4	0.4	0.3	0.5	0.3	0.5	0.2
fs-warping (L.L.)	(k-si)	1.9	1.1	2.1	1.4	2.1	0.8	2.6	1.0
fs-warping (TOTAL)	(k-si)	3.5	2.7	3.3	2.7	4.0	2.1	4.3	2.1
fs-TOTAL	(ksi)	19.3	20.3	16.4	19.6	19.7	18.3	18.2	18.9
VR	(k)	79.2		80.8		64.1		61.9	

REACTION TABLE

		GIRDER A				GIRDER B			
		ABUT. #1 ABUT. #2	PIER 1 PIER 3 PIER 5 PIER 7	PIER 2 PIER 6	PIER 4	ABUT. #1 ABUT. #2	PIER 1 PIER 3 PIER 5 PIER 7	PIER 2 PIER 6	PIER 4
RDL	(k)	67.3	163.9	146.7	66.4	45.9	189.6	180.8	44.9
RLL	(k)	47.4	69.3	69.1	47.3	42.7	77.9	81.4	42.6
IMP	(k)	10.4	14.1	14.1	10.4	9.5	16.1	16.8	9.5
RTOTAL	(k)	125.1	247.3	229.9	124.1	98.1	283.6	279.0	97.0

* From Span 4 only

** From Span 4 only

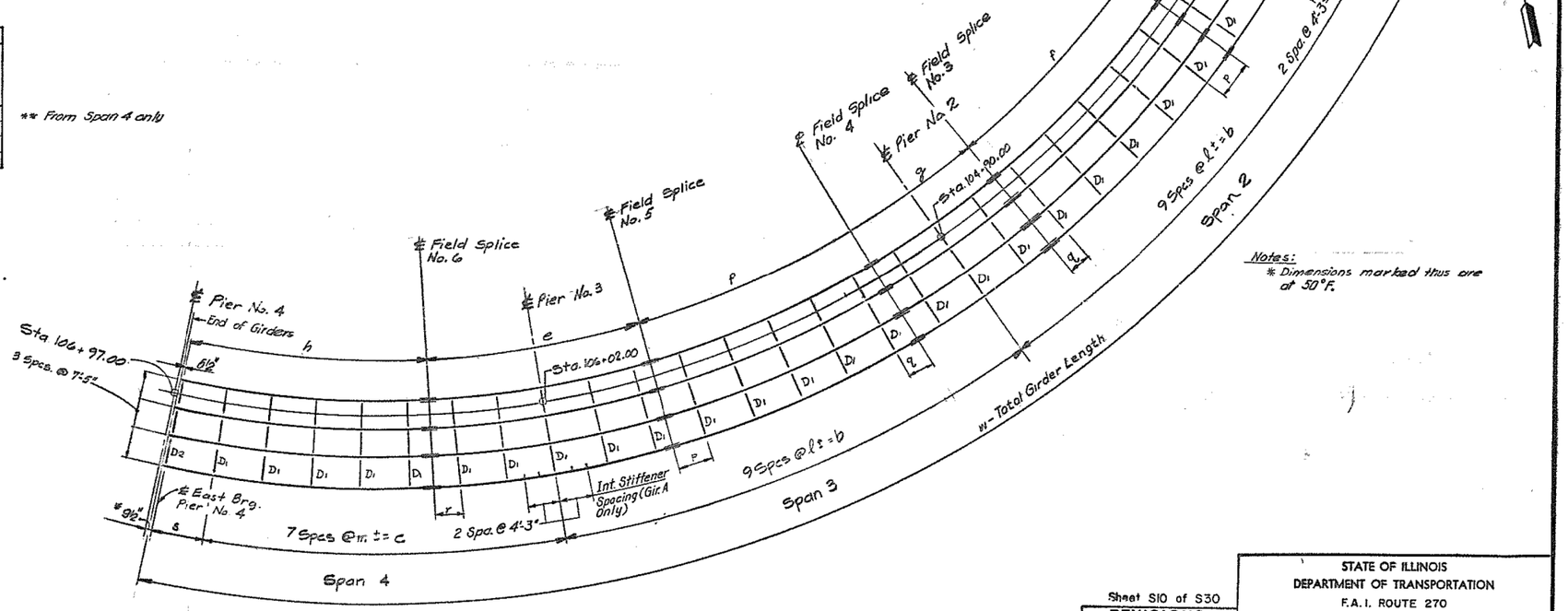
Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs-non-comp.
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs-comp.
VR is the maximum L+I impact shear range in span used to determine shear connector spacing.

***TOP OF WEB ELEVATIONS

GIRDER / LOCATION	A	B	C	D
Abut. #1	416.77	416.19	415.60	415.02
F.S. #1	418.81	418.25	417.69	417.12
Pier #1	419.68	419.11	418.55	417.99
F.S. #2	420.64	420.08	419.52	418.95
F.S. #3	422.60	422.04	421.47	420.91
Pier #2	423.34	422.78	422.21	421.65
F.S. #4	424.08	423.52	422.95	422.39
F.S. #5	425.99	425.42	424.86	424.30
Pier #3	426.96	426.39	425.83	425.27
F.S. #6	427.82	427.26	426.69	426.13
℄ East Brg. Pier #4	430.18	429.60	429.02	428.44

*** For Fabrication Only

GIRDER / On P.G.L.	A	B	C	D
R 250'-0"	248'-1½"	246'-8½"	245'-3½"	245'-10½"
a 95'-0"	101'-10⅝"	99'-0 13/16"	96'-3"	93'-5 3/16"
b 112'-0"	120'-1 7/16"	116'-9 3/16"	113'-5 11/16"	110'-1 13/16"
c 82'-5 3/16"	88'-4⅞"	85'-11⅝"	83'-6 9/16"	81'-0⅞"
d 68'-6"	73'-5⅝"	71'-5⅜"	69'-4 13/16"	67'-4 7/16"
e 56'-4"	60'-5"	58'-8 15/16"	57'-0⅞"	55'-4 13/16"
f 59'-4¾"	63'-8 7/16"	61'-11 5/16"	60'-2⅜"	58'-5 1/16"
g 45'-6⅜"	48'-10"	47'-5¾"	46'-1 5/16"	44'-9⅜"
h 67'-8½"	72'-8⅛"	70'-7 1/16"	68'-7⅝"	66'-6 5/16"
k 11'-10½"	12'-8 13/16"	12'-4⅝"	12'-0⅜"	11'-8⅛"
l 12'-5 5/16"	13'-4 3/16"	12'-11¾"	12'-7 5/16"	12'-2⅞"
m 11'-9 5/16"	12'-7 9/16"	12'-3⅜"	11'-11 9/16"	11'-7"
n 2'-9"	2'-11⅜"	2'-10 7/16"	2'-9 7/16"	2'-8 7/16"
P 7'-6"	8'-0½"	7'-9⅞"	7'-7 3/16"	7'-4½"
q 2'-1 7/16"	2'-2 3/16"	2'-2 5/16"	2'-1 3/16"	2'-1 1/16"
r 2'-11⅜"	3'-1 15/16"	3'-0 7/16"	2'-11 13/16"	2'-10 9/16"
s 11'-9 5/16"	12'-8¼"	12'-3¾"	11'-11 5/16"	11'-6 13/16"
w	444'-4⅝"	432'-1⅛"	419'-9⅜"	407'-6½"



Notes:
* Dimensions marked thus are at 50°F.

NOT TO SCALE

FOR INFORMATION ONLY

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-270	82-6B	ST. CLAIR	40	19
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Sheet S10 of S30

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
FRAMING PLAN-I & STEEL STRESSES
County: St. Clair — Drawn By: L.Sz.
Date: May 1979 — Checked By: R.A.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

USER NAME = smithma	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 3/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0263

SCALE: | SHEET 2 OF 6 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	18A
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
ILLINOIS	FED. AID PROJECT			

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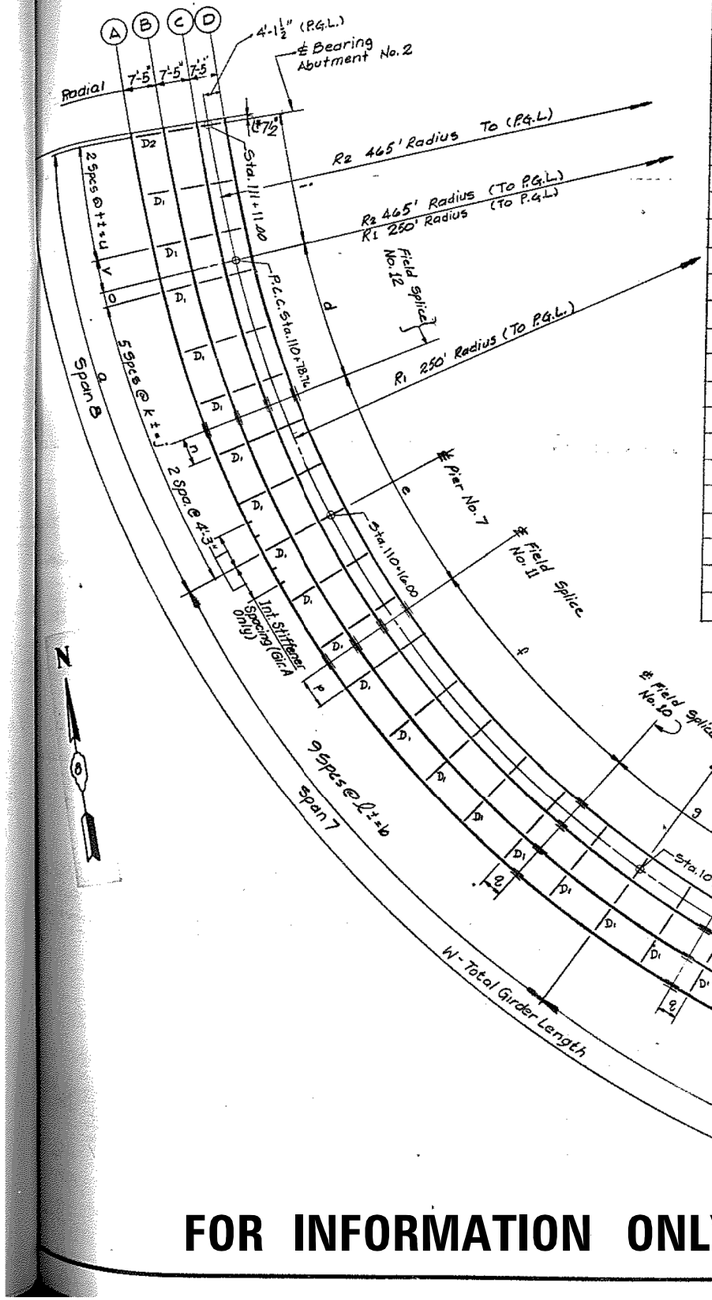

GIRDER	On P.G.L.	A	B	C	D
R_1	250'-0"	268'-1½"	260'-8½"	253'-3½"	245'-10½"
R_2	465'-0"	483'-1½"	475'-8½"	468'-3½"	460'-10½"
a	95'-0"	100'-9 11/16"	98'-5 7/16"	96'-0 9/16"	93'-8 9/16"
b	112'-0"	120'-1 7/16"	116'-9 9/16"	113'-5 11/16"	110'-1 13/16"
c	82'-5 7/16"	88'-4 7/8"	85'-11 9/16"	83'-6 5/16"	81'-0 7/8"
d	36'-3 1/8"	38'-10 3/4"	37'-9 3/4"	36'-8 13/16"	35'-7 9/16"
e	56'-4"	60'-5"	58'-8 15/16"	57'-0 7/8"	55'-4 13/16"
f	59'-4 3/4"	63'-8 7/16"	61'-11 5/16"	60'-2 3/16"	58'-5 1/16"
g	45'-6 3/8"	48'-10"	47'-5 3/4"	46'-1 5/8"	44'-9 3/8"
h	67'-8½"	72'-8 5/8"	70'-7 9/16"	68'-7 5/16"	66'-6 15/16"
i	32'-2 7/16"	33'-5 15/16"	32'-11 13/16"	32'-5 5/8"	31'-11 7/16"
j	59'-4½"	63'-8 3/16"	61'-11"	60'-1 7/8"	58'-4 3/4"
k	11'-10½"	12'-8 13/16"	12'-4 5/8"	12'-0 3/8"	11'-8 1/8"
l	12'-5 5/16"	13'-4 3/4"	12'-11 3/4"	12'-7 5/16"	12'-2 7/8"
m	11'-9 5/16"	12'-7 9/16"	12'-3 3/8"	11'-11 3/16"	11'-7"
n	2'-9"	2'-11 3/8"	2'-10 9/16"	2'-9 7/8"	2'-8 7/16"
o	3'-4 5/8"	3'-7 9/16"	3'-6 3/8"	3'-5 1/8"	3'-3 15/16"
p	7'-6"	8'-0½"	7'-9 7/8"	7'-7 3/16"	7'-4½"
q	2'-1 7/16"	2'-3 3/8"	2'-2 5/8"	2'-1 7/8"	2'-1 7/16"
r	2'-11 3/8"	3'-1 15/16"	3'-0 7/8"	2'-11 13/16"	2'-10 13/16"
s	11'-9 5/16"	12'-8 1/4"	12'-3 3/4"	11'-11 5/16"	11'-6 13/16"
t	11'-10½"	12'-4 1/16"	12'-1 13/16"	11'-11½"	11'-9¼"
u	23'-9"	24'-8 1/16"	24'-3 9/16"	23'-11"	23'-6 1/2"
v	8'-5 7/8"	8'-9 1/8"	8'-8 1/4"	8'-6 5/8"	8'-5"
w		443'-3 11/16"	431'-5 5/8"	419'-7½"	407'-9 7/16"

MOMENT TABLE
(COMPOSITE IN POSITIVE MOMENT AREAS)

		GIRDER C				GIRDER D			
		04 SPAN 1 06 SPAN 4 04 SPAN 5 06 SPAN 8	PIER 1 PIER 3 PIER 5 PIER 7	05 SPAN 2 05 SPAN 3 05 SPAN 6 05 SPAN 7	PIER 2 PIER 6	04 SPAN 1 06 SPAN 4 04 SPAN 5 06 SPAN 8	PIER 1 PIER 3 PIER 5 PIER 7	05 SPAN 2 05 SPAN 3 05 SPAN 6 05 SPAN 7	PIER 2 PIER 6
Is	(in⁴)	19054	44608	19054	36622	17440	39259	17440	36622
Ic	(in⁴)	51246		51246		45256		45256	
Ss	(in³)	916	1716	916	1429	786	1525	786	1429
Sc	(in³)	1261		1261		1087		1087	
DL	(k/l)	0.943	0.943	0.957	0.957	0.903	0.903	0.919	0.919
Mdl - bending	(l-k)	398	1111	313	878	332	1031	267	965
fs non-comp	(k-si)	5.2	7.8	4.1	7.4	5.1	8.1	4.1	8.1
SDL	(k/l)	0.373	0.373	0.373	0.373	0.373	0.373	0.373	0.373
Mdl - bending	(l-k)	204	352	187	299	163	303	161	302
Mll - bending	(l-k)	630	605	637	550	612	570	613	585
Mimp - bending	(l-k)	143	127	133	115	140	121	130	124
Mcomp - bending	(l-k)	977	1084	957	964	915	994	904	1011
fs - comp.	(ksi)	9.3	7.6	9.1	8.1	10.1	7.8	10.0	8.5
fs warping (D.L)	(ksi)	1.3	1.0	1.1	1.0	1.3	1.0	1.2	1.0
fs - warping (S.D.L)	(ksi)	0.6	0.2	0.6	0.2	0.6	0.2	0.6	0.2
fs - warping (L.L.)	(ksi)	2.2	0.8	2.4	0.9	2.4	0.8	2.6	0.9
fs - warping (total)	(ksi)	4.1	2.0	4.1	2.1	4.3	2.0	4.4	2.1
fs - TOTAL	(ksi)	18.6	17.4	17.3	17.6	19.5	17.9	18.5	18.7
VR	(k)	56.2		59.5		50.1		52.5	

REACTION TABLE

	GIRDER C				GIRDER D			
	ABUT. #1 ABUT. #2	PIER 1 PIER 3 PIER 5 PIER 7	PIER 2 PIER 6	** PIER 4	ABUT. #1 ABUT. #2	PIER 1 PIER 3 PIER 5 PIER 7	PIER 2 PIER 6	** PIER 4
RDL (k)	39.5	146.6	122.6	39.2	33.2	159.4	136.2	33.3
RLL (k)	40.6	63.9	60.5	40.6	35.6	63.2	64.2	35.7
IMP (k)	9.2	13.4	12.7	9.2	8.2	13.4	13.7	8.2
R TOTAL (k)	89.3	223.9	195.8	89.0	77.0	236.0	234.1	77.2

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs - non-comp.
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs - comp.
VR is the maximum ℓ + Impact shear range in span used to determine shear connector spacing.

*** TOP OF WEB ELEVATIONS

GIRDER / LOCATION	A	B	C	D
℄ West Brg. Pier #4	430.24	429.65	429.07	428.49
F.S. #7	432.10	431.54	430.98	430.42
Pier #5	432.80	432.24	431.68	431.12
F.S. #8	433.53	432.97	432.40	431.84
F.S. #9	434.18	434.22	433.66	433.10
Pier #6	435.18	434.62	434.06	433.50
F.S. #10	435.55	434.99	434.42	433.86
F.S. #11	436.28	435.72	435.16	434.60
Pier #7	436.56	435.99	435.43	434.87
F.S. #12	436.75	436.18	435.62	435.06
Abut. #2	437.15	436.56	435.98	435.40

*** For Fabrication Only

Notes:
* Dimensions marked thus are at 50°F.
** From Span 5 only

NOT TO SCALE

FOR INFORMATION ONLY

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-270	82-6B	ST. CLAIR	40	20
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Sheet SII of S30

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
FRAMING PLAN - 2 & STEEL STRESSES
County: St. Clair — Drawn By: L.Sz.
Date: May 1979 — Checked By: R.A.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

USER NAME = smithma	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 3/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0263

SCALE: | SHEET 3 OF 6 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	18B
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS FED. AID PROJECT			

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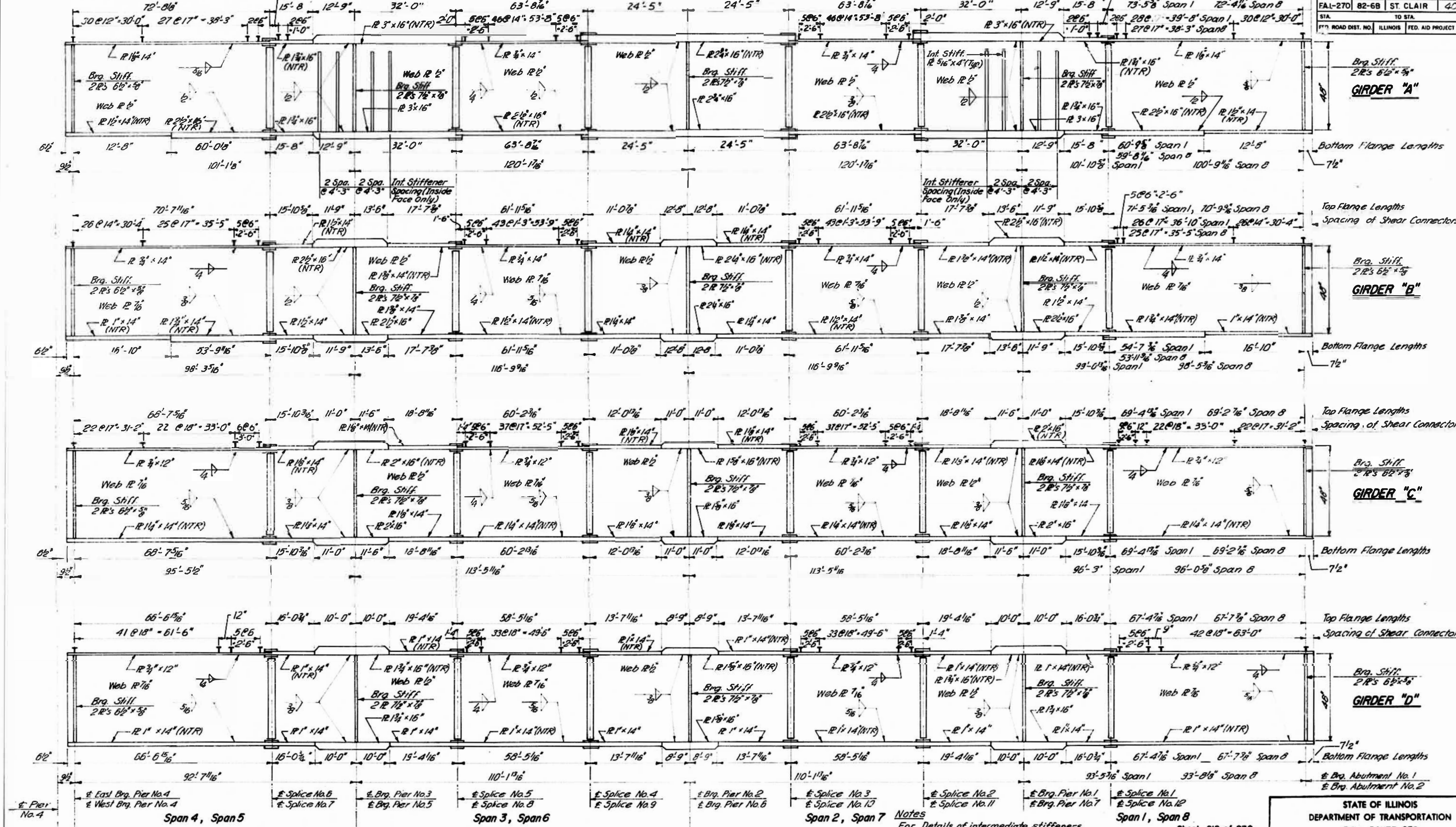
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-270	82-6B	ST. CLAIR	40	21

STA. TO STA.

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT



ELEVATIONS OF GIRDERS

Notes

For Details of intermediate stiffeners See Sheet S14 of S30

NTR designates those flange plates subject to supplemental requirements for notch toughness.

All web plates are subject to supplemental requirements for notch toughness.

Sheet S12 of S30

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
GIRDER ELEVATIONS
County: St. Clair — Drawn By: L.Sz.
Date: May 1979 — Checked By: R.A.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FOR INFORMATION ONLY

NOT TO SCALE

USER NAME = smithma	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 2/1/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0263

SCALE: SHEET 4 OF 6 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	19
* FAI 255 / FAP 805		CONTRACT NO. 76L40		

ILLINOIS FED. AID PROJECT

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FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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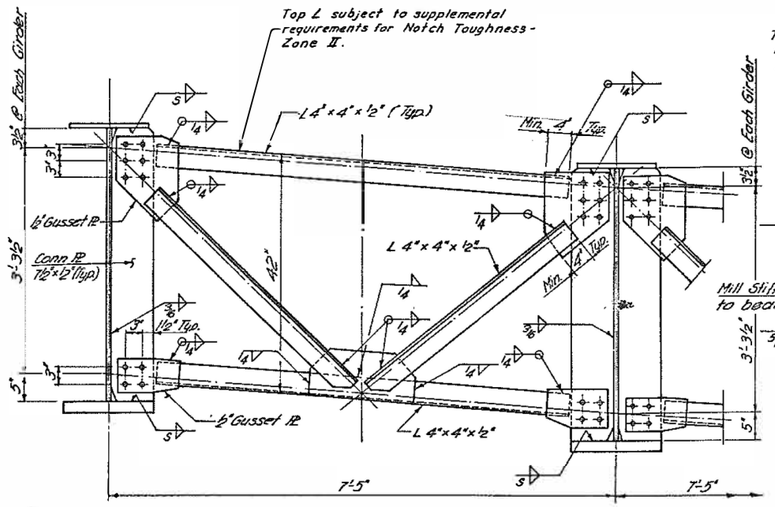
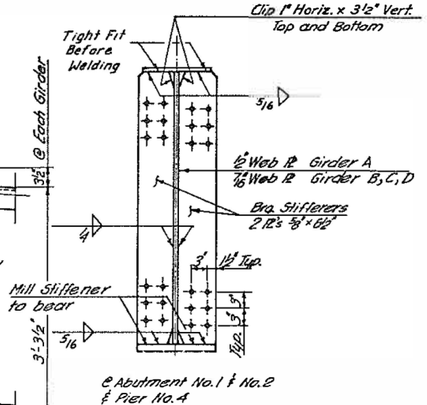
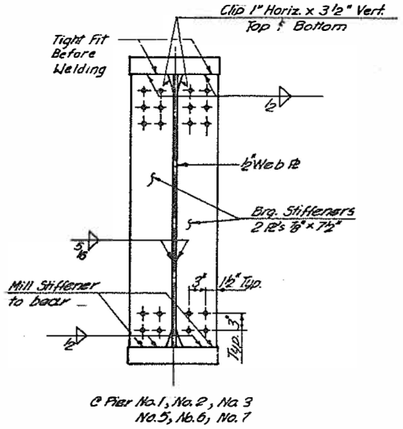
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

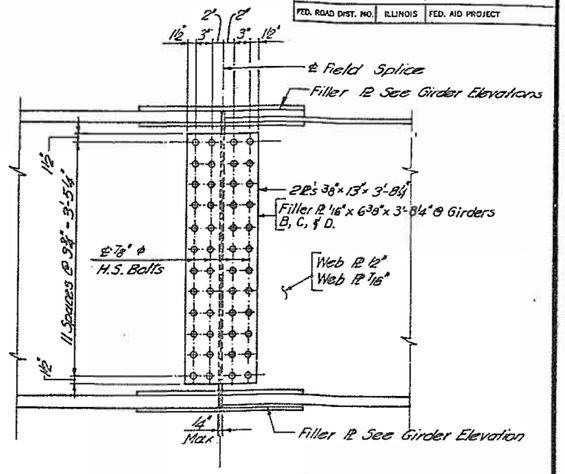


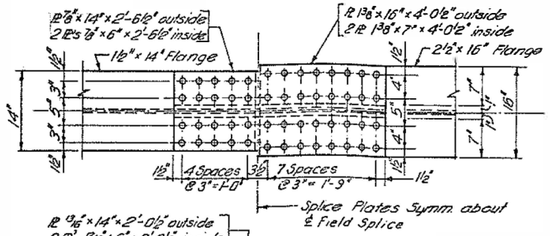
INTERMEDIATE DIAPHRAGM - DI

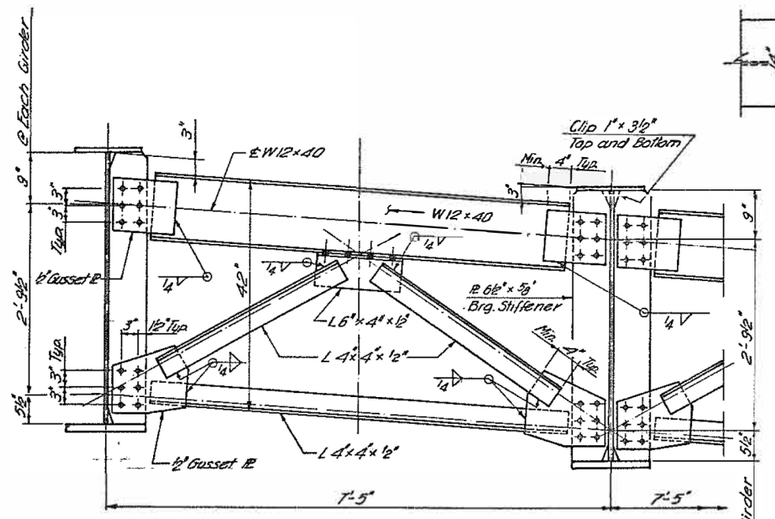




BEARING STIFFENER DETAILS







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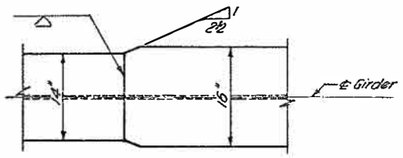
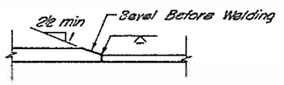
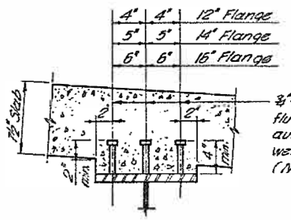


VARIABLE FLANGE WIDTH

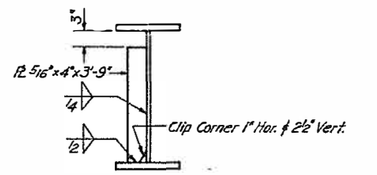


VARIABLE FLANGE THICKNESS

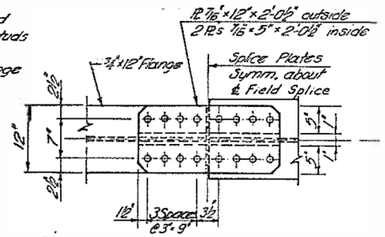
WELDED FLANGE SPLICE DETAILS

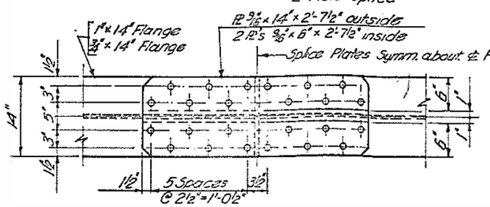


SHEAR STUD DETAILS



INTERMEDIATE STIFFENER DETAIL





FIELD SPLICE DETAILS

Note: Use ⅞" ø High Strength Bolts for diaphragms and Field Splices, with 15/16" ø holes in gusset plates and 15/16" ø holes in Conn. plates. Hardened washers shall be required over holes in gusset plates.
Use 13/16" ø holes in Splice Plates.

WELD SIZE = S - TABLE	
Material Thickness of Thicker Part Joined (Inches)	Minimum Fillet Weld Size = S (Inches)
Over ½" to ¾"	¼
Over ¾" to 1½"	5/16
Over 1½" to 2¼"	⅜
Over 2¼" to 6"	½

Note: All splice plates except filler plates are subject to supplemental requirements for Notch Toughness - Zone 2.

Flange splice plates are based on the flange on the midspan side of splice.

NOT TO SCALE

FOR INFORMATION ONLY

Sheet S14 of S30

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH

STRUCTURAL STEEL DETAILS

County: St. Clair
Date: May 1979
Drawn By: L.Sz.
Checked By:

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
FILE NAME: pw:\\IL084:EIDUNTEG:il.mos.gov:PWDOT\Documents\IDOT Offices\District 8\Projects\D8761.40\CADData\CADsheets\D8761.40-sht-details.dgn

USER NAME = smithma	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0263

SCALE: | SHEET 5 OF 6 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	19A
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
	ILLINOIS	FED. AID PROJECT		

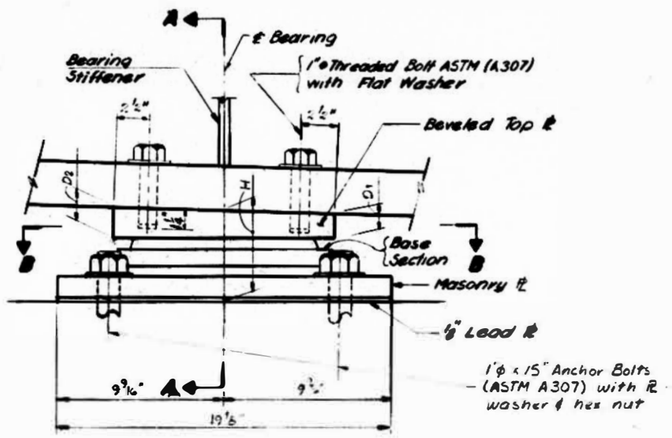
COUNTY	SHEETS	NO.
ST. CLAIR	40	24

FAI-270 | 82-6B | ST. CLAIR | 40 | 24

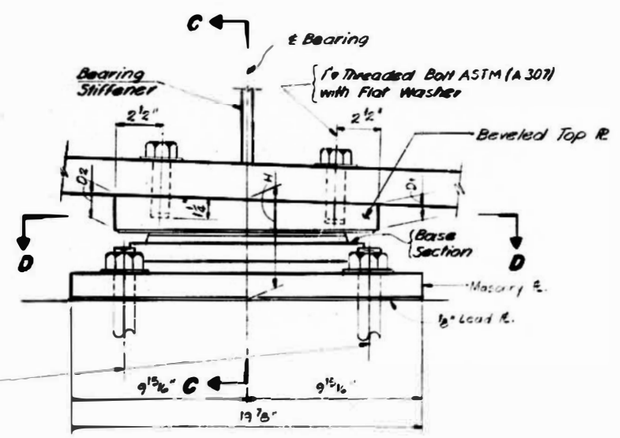
STA. | TO STA.

F.A.I. RTE. | SECTION | COUNTY | SHEETS | NO.

F.A.P. RTE. | DIST. NO. | ILLINOIS | FED. AID PROJECT



ELEVATION



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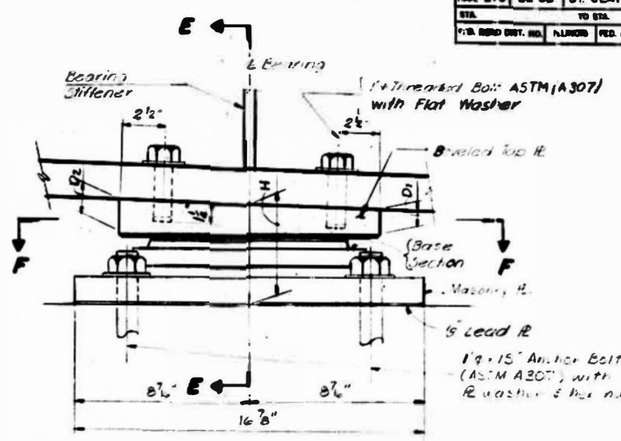

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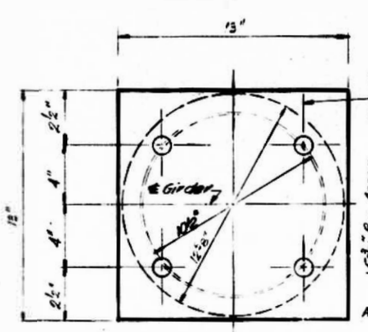
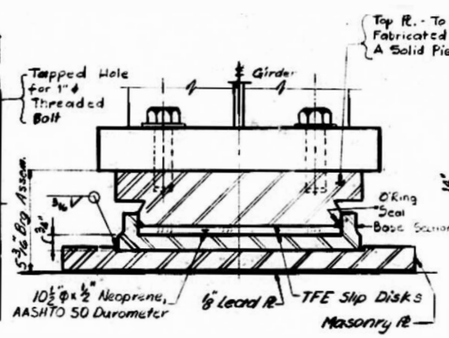
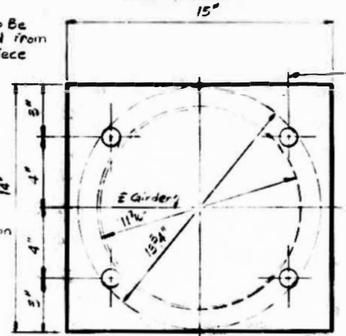


SECTION B-B

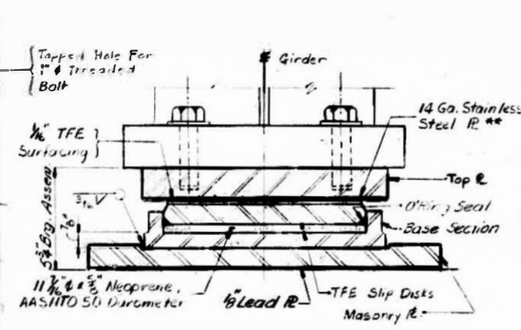


SECTION A-A

FIXED TYPE BEARING
(18 Bearings Required)

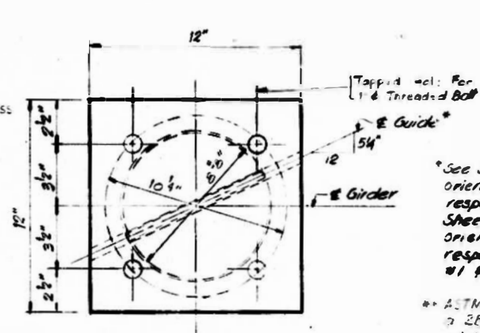


SECTION D-D



SECTION C-C

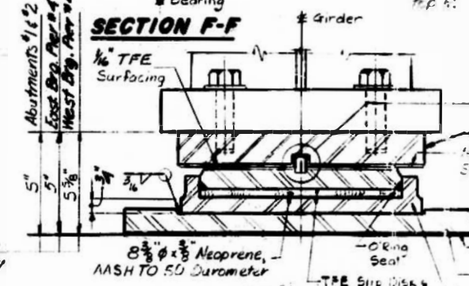
FREE MOVING TYPE BEARING
(16 Bearings Required)



*See Sheet SE5 for orientation of Guide with respect to Pier #1 See Sheets SI6 and SI8 for orientation of Guides with respect to Abutments #1 & #2

** ASTM A-240 Type 304 with a 2B finish rolled and stress relieved to the top ℝ

SECTION F-F



SECTION E-E

GUIDED TYPE BEARING
(16 Bearings Required)

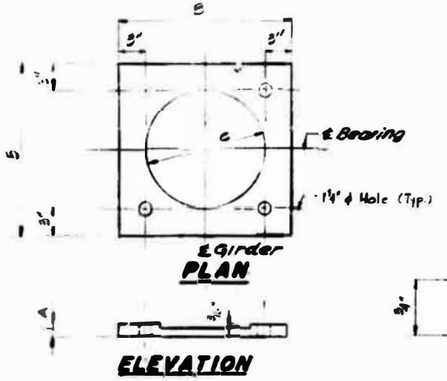
Location	Bearing Type	Design Load	DIMENSIONS W	Masonry Plate B	A	C	Top Plate D1	D2
			℄ ℄ Bearg.					
Abut #1	Guided	150K	5"	16 7/8"	1 1/8"	9 1/2"	1 7/16"	1 15/16"
Pier #1	Free	300K	5 3/4"	19 1/8"	1 5/16"	13 7/8"	1 1/2"	2"
Pier #2	Fixed	260K	5 3/16"	19 1/4"	1 1/4"	12 3/4"	1 7/16"	1 15/16"
Pier #3	Free	300K	5 3/4"	19 7/8"	1 5/16"	13 7/8"	1 1/2"	2"
Pier #4 East Brg.	Guided	150K	5"	16 7/8"	1 1/8"	9 1/2"	1 7/16"	1 15/16"
Pier #4 West Brg.	Guided	150K	5 5/8"	16 7/8	1 1/8"	9 1/2"	2 1/16"	2 7/16
Pier #5	Free	300K	5 3/4"	19 7/8"	1 5/16"	13 7/8"	1 5/16"	1 15/16
Pier #6	Fixed	260K	5 3/16"	19 1/4"	1 1/4"	12 3/4"	1 1/2"	1 3/4"
Pier #7	Free	300K	5 3/4"	19 7/8"	1 5/16"	13 7/8"	1 1/16"	1 13/16"
Abut #2	Guided	150K	5"	16 7/8"	1 1/8"	9 1/2"	1 5/8"	1 5/8

NOTES:

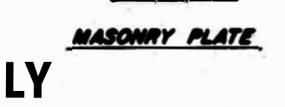
1"ϕ threaded bolts thru the girder flanges shall extend into the beveled top ℝ a minimum of 1". Holes in the top ℝ shall be a minimum of 1 1/8" deep.

All steel plates in bearings shall conform to the requirements of AASHTO M222.

Base Section shall be fabricated from a solid piece

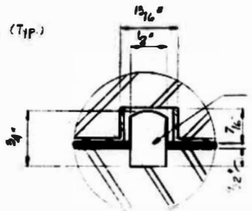


PLAN



ELEVATION

MASONRY PLATE



DETAIL 1

NOT TO SCALE

FOR INFORMATION ONLY

Sheet SI5 of S30

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
R.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH

BEARING DETAILS

County: St. Clair
Date: May 1979
Drawn By: LTJ.
Checked By: R.A.

HNTB
ENGINEERS INC.
Chicago, Illinois

MODEL: Default
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PLOT DATE = 2/1/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAIL SN 082-0263

SCALE: | SHEET 6 OF 6 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-6BP-1, 125BP-1	ST. CLAIR	20	20
* FAI 255 / FAP 805		CONTRACT NO. 76L40		
		ILLINOIS	FED. AID PROJECT	