

03-06-2015 LETTING ITEM 126

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FAI 55/70, FAP 805 (I-55/70, IL 161)  
SECTION 60-6BR-P, 125-BR-2-P

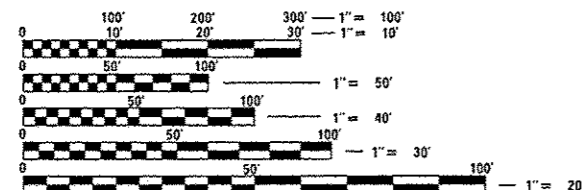
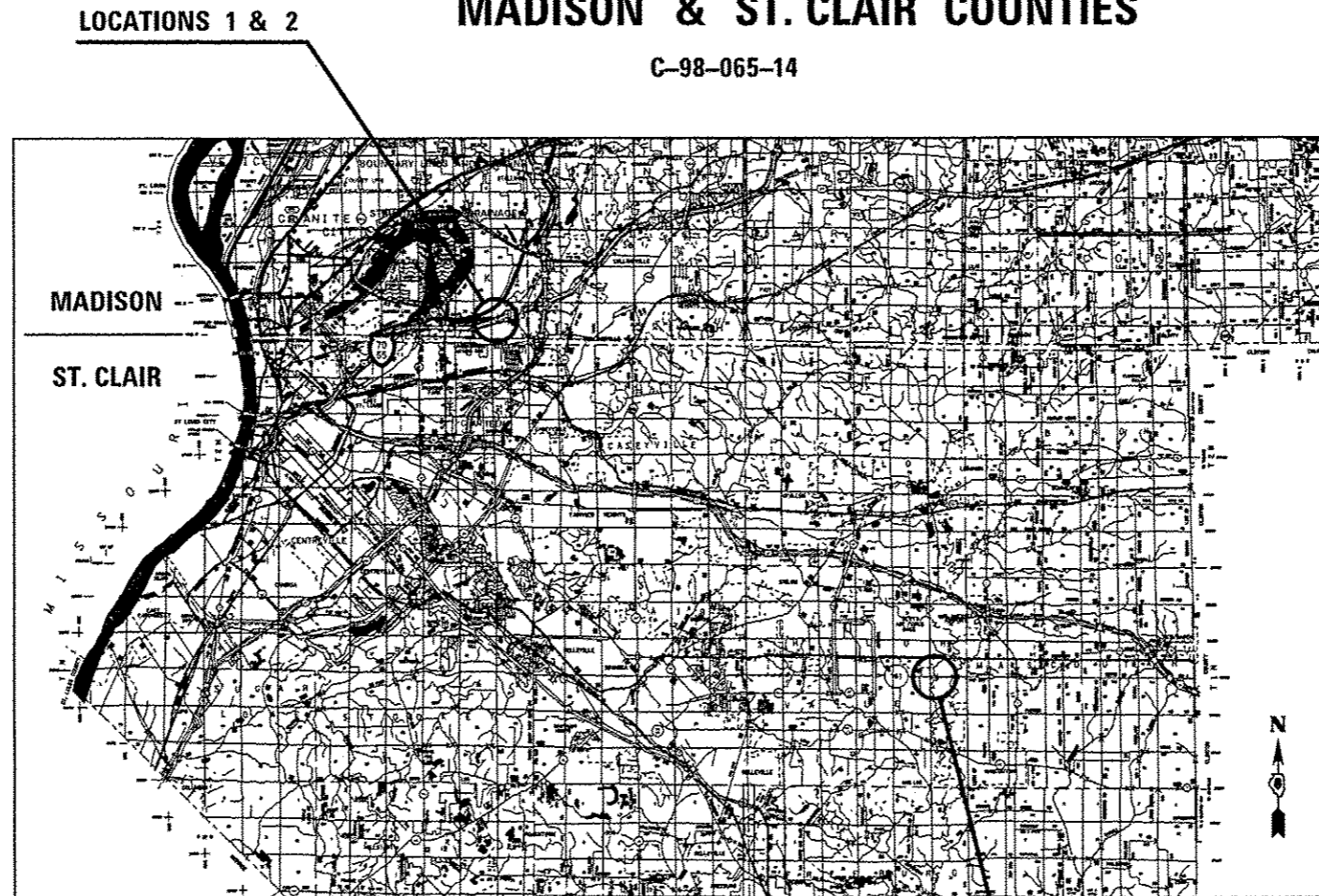
BRIDGE PAINTING  
MADISON & ST. CLAIR COUNTIES

C-98-065-14

F.A.J./P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	60-6BR-P, 125-BR-2-P	MADISON ST. CLAIR ILLINOIS	16	1
* FAI 55/70, FAP 805				
CONTRACT NO. 76H38				

FOR INDEX OF SHEETS, SEE SHEET NO. 2

	ADT & LATITUDE/LONGITUDE		
	LOCATION 1 SN 060-0010 I-55/70 EB	LOCATION 2 SN 060-0011 I-55/70 WB	LOCATION 3 SN 082-0095 IL 161
ADT (2013)	23,500	22,400	6,600
ADT (2015)	23,700	22,700	6,700
ADT (2035)	27,400	26,100	7,700
MU	11.9%	13.8%	2.3%
SU	2.8%	2.7%	5.7%
LATITUDE	38.66521779*	38.66526054*	38.52545459*
LONGITUDE	90.05659303*	90.05643958*	89.82539653*
TOWNSHIP	T3N	T3N	T1N
RANGE	R9W	R9W	R7W



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: MICHAEL PRITCHETT (618) 346-3180  
DESIGNER: BO WEDMORE (618) 346-3206

CONTRACT NO. 76H38

SCALE: NTS  
GROSS LENGTH = 890 FT. = 0.168 MILE  
NET LENGTH = 890 FT. = 0.168 MILE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED *December 11, 2014*

*John D. Baranzelli, P.E.*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

*John D. Baranzelli, P.E.*  
ENGINEER OF DESIGN AND ENVIRONMENT

*Orner Osman, P.E.*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS



GENERAL NOTES

1. LOCATION 1: SN 060-0010: LOCATED AT I-55/70 EB OVER CANTEEN CREEK
2. LOCATION 2: SN 060-0011: LOCATED AT I-55/70 WB OVER CANTEEN CREEK
3. LOCATION 3: SN 082-0095: LOCATED AT IL 161 OVER SILVER CREEK
4. 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. (1-800-892-0123 OR 811) OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
  - \* AMEREN ILLINOIS (LOC. 1,2,3)
  - \* AT&T ILLINOIS (LOC. 1,2,3)
  - \* CHARTER COMMUNICATIONS, INC. (LOC. 3)
  - \* CITY OF COLLINSVILLE (LOC. 1,2)
  - \* FRONTIER NORTH, INC. (LOC. 1,2,3)
  - \* MEDIACOM (LOC. 1,2)
  - \* MOUND PUBLIC WATER AND SEWER DISTRICT (LOC. 1,2)
  - \* McLEOD TELECOMMUNICATIONS SERVICES, INC. (LOC. 1,2)
  - \* SCOTT AIR FORCE BASE (LOC. 3)
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
6. NO OVERNIGHT LANE CLOSURES SHALL BE ALLOWED ON THE PROJECT.
7. FLAGGERS SHALL BE PRESENT DURING ALL CLOSURE HOURS INCLUDING LUNCH HOUR AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
8. ANY MISCELLANEOUS EARTHWORK, SEEDING OR NUTRIENTS REQUIRED TO COMPLETE THE PROJECT SHALL BE DONE ACCORDING TO SECTION 250 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND NOT PAID FOR SEPARATELY.
9. FOR LOCATIONS 1, 2 & 3 (SN 060-0010, 060-0011, 082-0095): 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 5 FT (MEASURED ALONG THE BEAM) OF EITHER SIDE OF DECK JOINTS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING - SSPC-SP10. THE EXTERIOR SURFACES AND BOTTOM OF THE BOTTOM FLANGE OF THE FASCIA BEAMS SHALL BE CLEANED PER COMMERCIAL GRADE POWER TOOL CLEANING - SSPC-SP15.
10. THE DESIGNATED AREAS CLEANED PER NEAR WHITE BLAST CLEANING AND PER COMMERCIAL GRADE POWER TOOL CLEANING SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. 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 GRAY, MUNSELL NO 5B 7/1.
11. A MINIMUM OF TWO AIR MONITORS WILL BE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS AT EACH SITE. SEE SPECIAL PROVISIONS FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES."
12. THE SSPC OP1 AND SSPC QP2 CERTIFICATIONS WILL BE REQUIRED FOR ALL BRIDGES.

FILE NAME * o:\p\work\p\wdot\wadmora_j\08400190\06238-ehc-plan.dgn				USER NAME = wadmora_jb				DESIGNED -		REVISED -		<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>				<b>GENERAL NOTES, INDEX OF SHEETS AND STANDARDS</b>				F.A.I/P RTE.		SECTION		COUNTY		TOTAL SHEETS		SHEET NO.	
PLOT SCALE * 100.0000' / in.				DRAWN -				REVISED -		*										60-6BR-P, 125-BR-2-P		MADISON ST. CLAIR		16		3			
PLOT DATE * 12/12/2014				CHECKED -				REVISED -		CONTRACT NO. 76H38										ILLINOIS FED. AID PROJECT									
PLOT DATE * 12/12/2014				DATE -				REVISED -		SCALE:										SHEET OF		SHEETS STA. TO STA.							

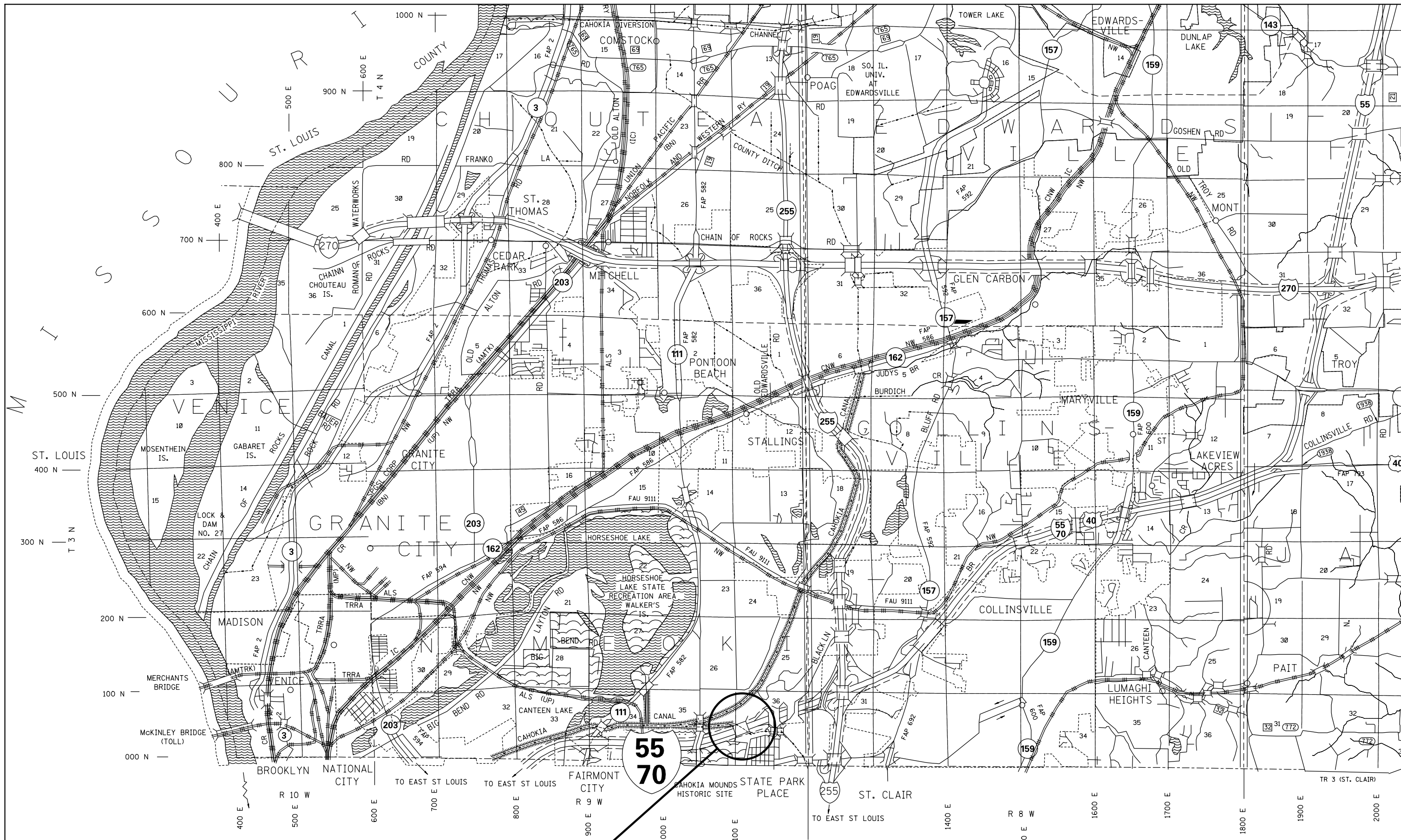
\* FAI 55/70, FAP 805

CODE NO.	ITEM	UNIT	100% STATE TOTAL QUANTITY	CONSTRUCTION CODE		
				URBAN MADISON BRIDGE	URBAN MADISON BRIDGE	URBAN ST. CLAIR BRIDGE
				0014	0014	0014
				060-0010	060-0011	082-0095
67100100	MOBILIZATION	L SUM	1	0.334	0.333	0.333
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	2	1	1	
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1		1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1			1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2	0.5	0.5	1
X7010410	SPEED DISPLAY TRAILER	CAL MO	5	2.5	2.5	
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1		
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1		1	
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	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

12

FILE NAME =	USER NAME = vadmora_jb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>			F.A.I./P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
en:\pwork\pwork\pwork\admora_jb\0400190\060638-125-plandgn	DRAWN -	REVISED -	60-68R-P, 125-BR-2-P					MADISON ST. CLAIR	16	4		
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PLOT DATE = 12/12/2014	DATE -	REVISED -	ILLINOIS FED. AID PROJECT									

\* FAI 55/70, FAP 805



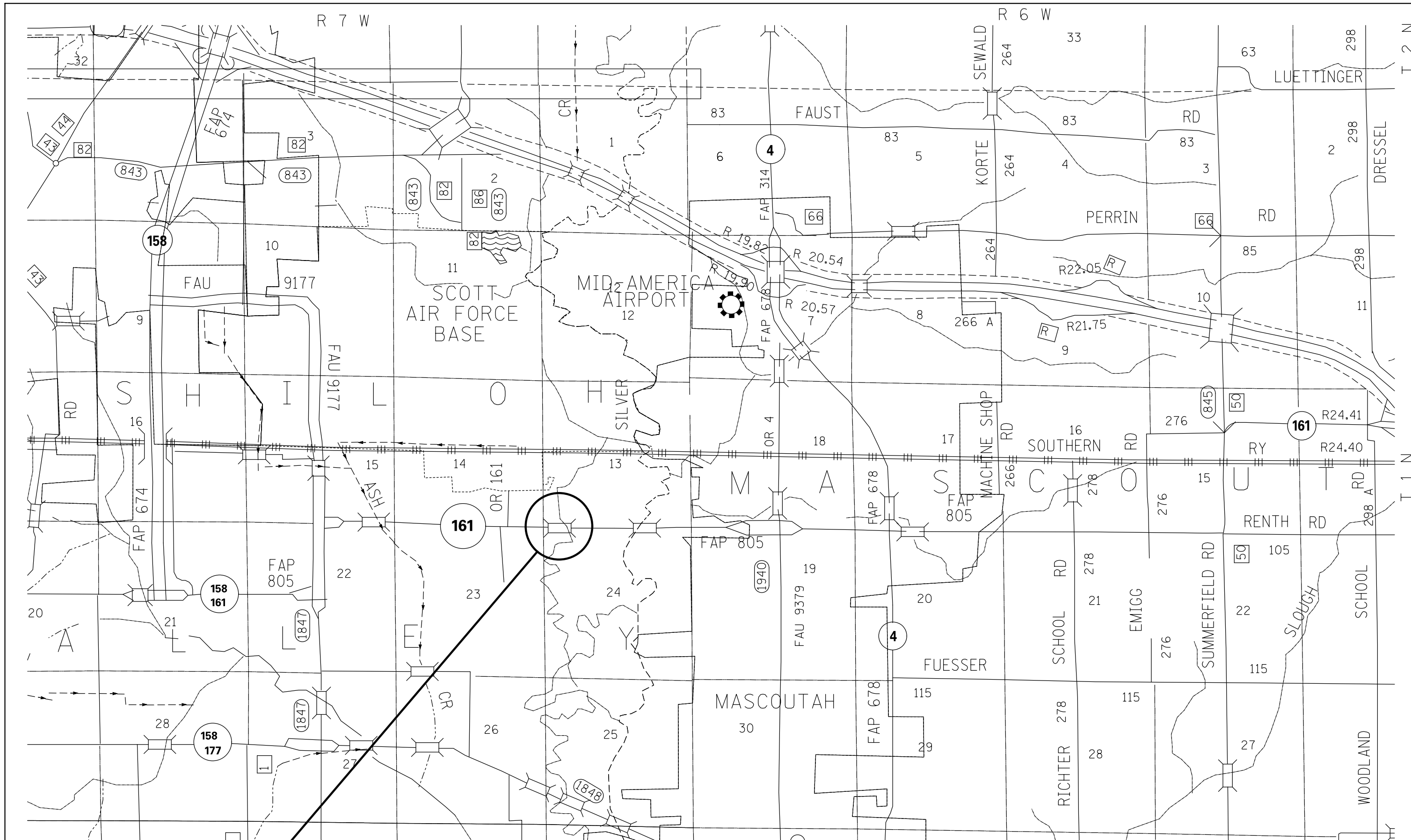
**LOCATIONS 1 & 2**  
**I-55/70 OVER CANTEEN CREEK**

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		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

SCALE: NTS	SHEET NO.	OF SHEETS	STA.	TO STA.
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* FAI 55/70, FAP 805				
F.A.I./P.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	60-6BR-P, 125-BR-2-P	MADISON ST. CLAIR	16	5
CONTRACT NO. 76H38				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



**LOCATION 3**  
**IL 161 OVER SILVER CREEK**

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	PLOT DATE = 12/12/2014	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

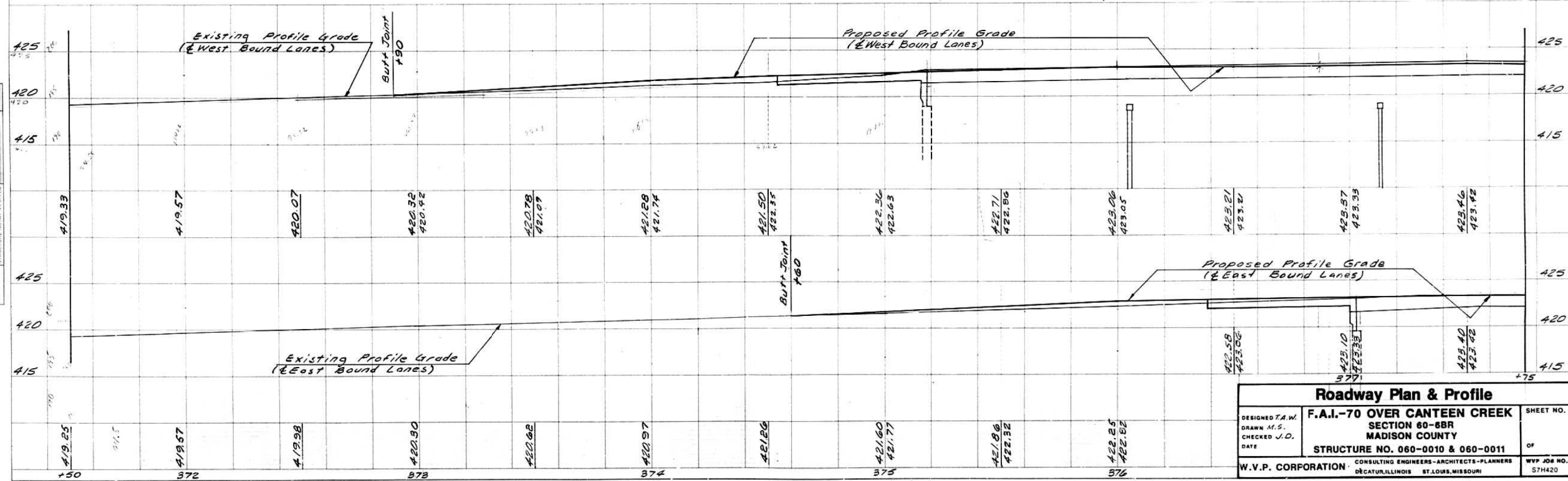
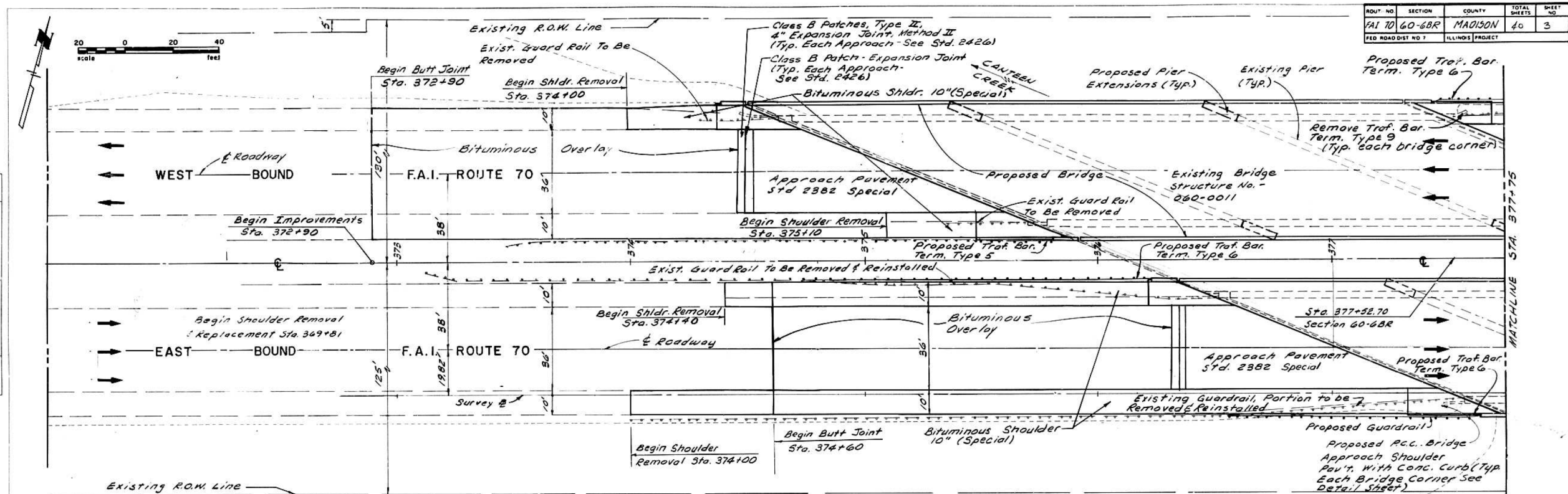
**LOCATION MAP FOR**  
**LOCATION 3**

SCALE: NTS      SHEET NO.      OF SHEETS      STA.      TO STA.

\* FAI 55/70, FAP 805

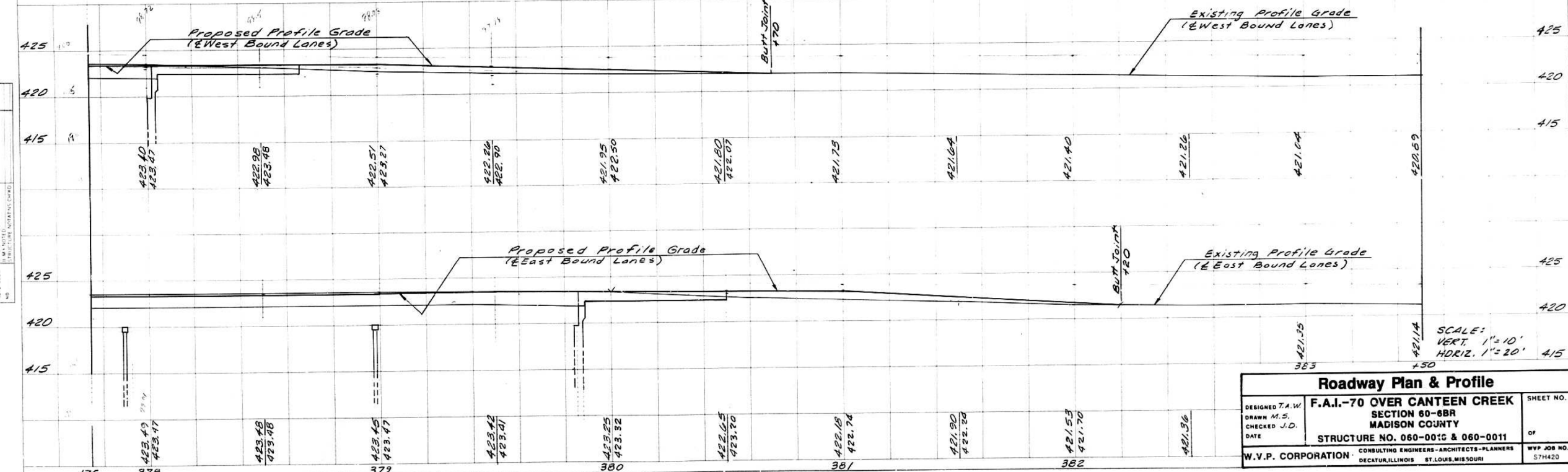
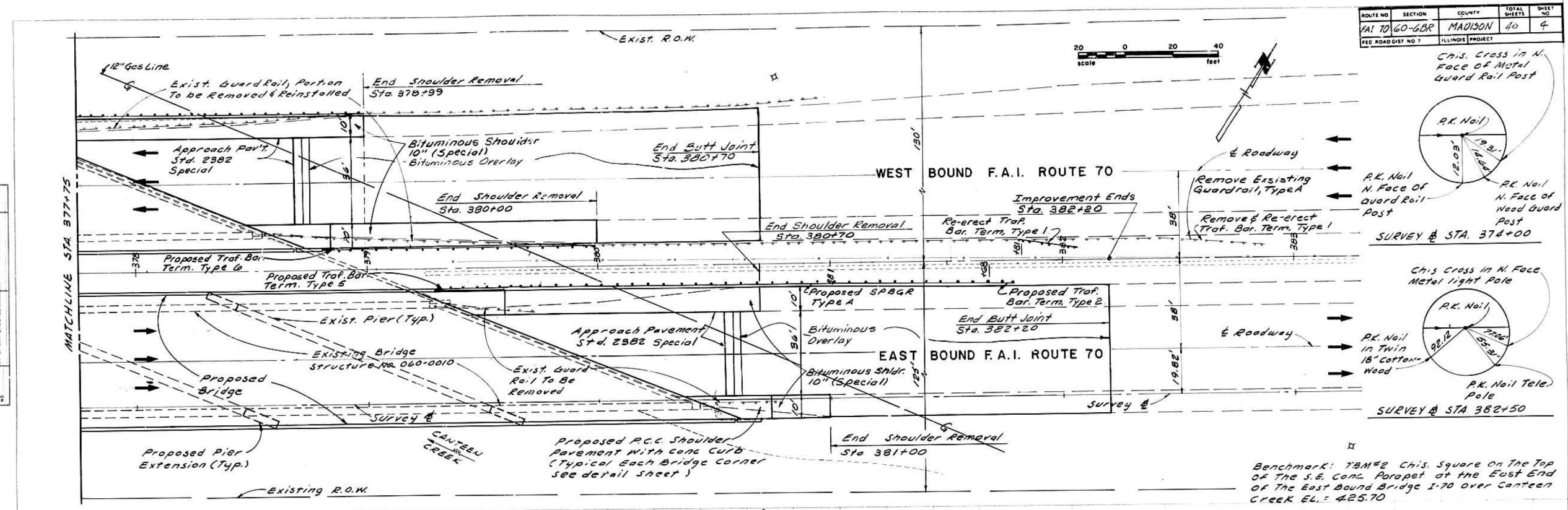
F.A.I./P.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
• 60-6BR-P, 125-BR-2-P		MADISON ST. CLAIR	16	6
CONTRACT NO. 76H38				
FED. ROAD DIST. NO.      ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY



FILE NAME =	USER NAME = wedmore_jb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LOCATIONS 1 &amp; 2 REFERENCE SHEETS</b>	SCALE:	SHEET NO. OF SHEETS STA. TO STA.	* FAI 55/70, FAP 805				
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	PLOT DATE = 12/12/2014	CHECKED -	REVISED -					60-6BR-P, 125-BR-2-P	MADISON ST. CLAIR	ILLINOIS	16	7
		DATE -	REVISED -					STRUCTURE NO. 060-0010 & 060-0011	CONTRACT NO. 76H38	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

FOR INFORMATION ONLY



Roadway Plan & Profile			
DESIGNED T.A.W.	F.A.I.-70 OVER CANTEEN CREEK	SHEET NO.	
DRAWN M.S.	SECTION 60-6BR	NO.	
CHECKED J.D.	MADISON COUNTY	OF	
DATE	STRUCTURE NO. 060-0015 & 060-0011	WVP JOB NO.	
W.V.P. CORPORATION		CONSULTING ENGINEERS-ARCHITECTS-PLANNERS	574420
DECATUR, ILLINOIS		ST. LOUIS, MISSOURI	

FILE NAME =	USER NAME = wedmore_jb	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LOCATIONS 1 & 2 REFERENCE SHEETS	SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	* FAI 55/70, FAP 805	F.A.I./P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 100.0000' / 1"		CHECKED -	REVISED -			FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT								
PLOT DATE = 12/12/2014		DATE -	REVISED -													



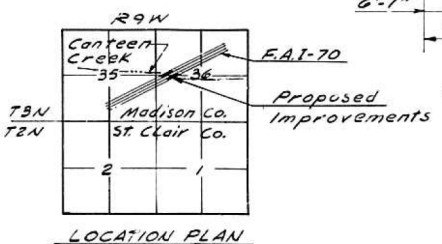
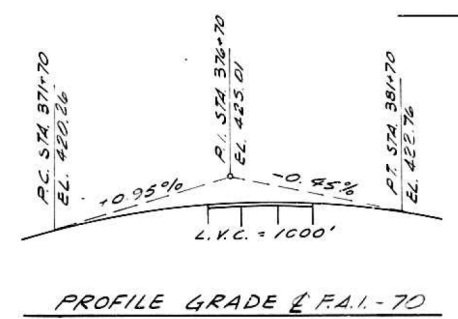
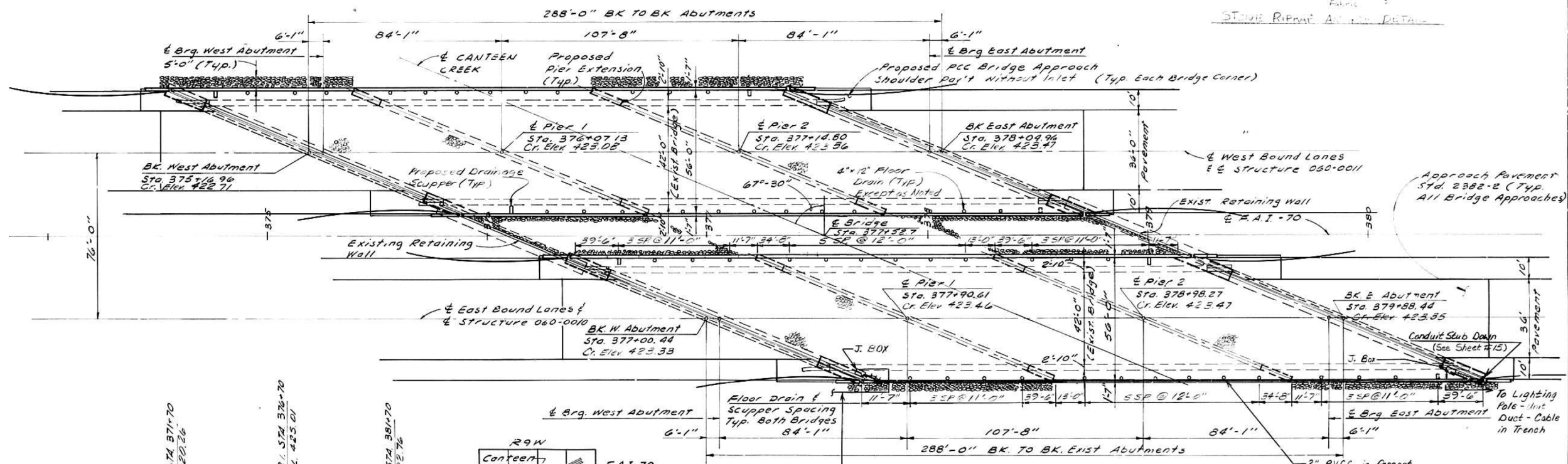
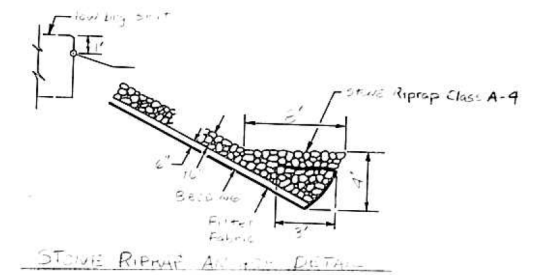
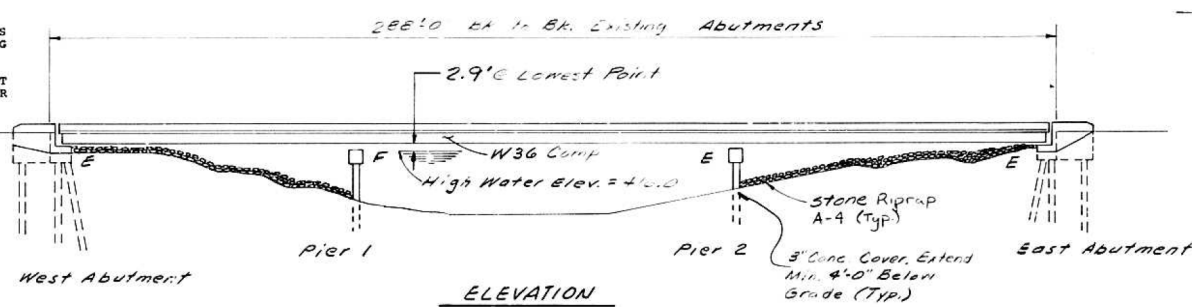
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FAI 70	60-6BR	MADISON	40	12
NO ROAD-DIST NO		ILLINOIS PROJECT		

**EXISTING STRUCTURE:**  
 CONSTRUCTED IN 1960 AS F.A.I. ROUTE 70 SECTION 60-6B AT STA. 377 + 52.7. THE DUAL BRIDGES ARE 275' - 10" LONG AND CONSIST OF 3 SPAN (84' - 1", 107' - 8", 84' - 1") CONTINUOUS BEAMS, 40' - 8" ROADWAYS, 2'-3" - 6" CURB WITH METAL RAIL. THE SUPER-STRUCTURE IS STEEL WIDE FLANGE BEAM WITH REINFORCED CONCRETE DECK. THE SUBSTRUCTURE IS PILE BENT ABUTMENTS AND PIERS.

**BENCHMARK**  
 A CHISELED SQUARE ON THE SOUTH WEST CONCRETE WING-WALL OF THE WEST BOUND F.A.I. - 70 BRIDGE OVER CANTEN CREEK. ELEVATION = 424.48

**DESIGN SPECIFICATIONS**  
 1983 AASHTO: 1984, 1985, 1986, 1987, 1988 INTERIM SPECIFICATIONS.  
**LOADING HS 20-44 & AIT MILITARY LOADING**  
 25#/SQ. FT. FOR FUTURE WEARING SURFACE.  
**DESIGN STRESSES**  
 F'c = 3,500 PSI  
 Fy = 60,000 PSI (REINF.)  
 Fy = 36,000 PSI (STRUCT.) (AASHTO M 183)  
 Fy = 33,000 PSI (STRUCT. EXISTING)

EXISTING BRIDGES ARE TO BE WIDENED. EXISTING DECK TO BE REMOVED AND REPLACED. EXISTING EXTERIOR BEAMS TO BE REPLACED AND ADDITIONAL EXTERIOR BEAMS TO BE ADDED. NEW ELASTOMERIC BEARINGS AT ABUTMENTS TO BE INSTALLED. EXISTING ROCKER BEARINGS AT PIERS TO BE REUSED. NEW ROCKER BEARINGS INSTALLED AT PIERS FOR NEW BEAMS. SUBSTRUCTURE TO BE WIDENED, UTILIZING NEW PILES AT PIERS AND NEW PILES IN ADDITION TO EXISTING PILES (OF EXISTING RETAINING WALLS) AT ABUTMENTS. CONSTRUCTION WILL BE STAGED AND TWO LANES OF TRAFFIC WILL BE MAINTAINED ON EACH STRUCTURE AT ALL TIMES. STRUCTURES 060-0010 (EAST BOUND) AND 060-0011 (WEST BOUND). SALVAGE ALL INTERIOR BEAMS AND ROCKER BEARINGS AT PIERS.



**APPROVED**  
 FOR STRUCTURAL ADEQUACY ONLY  
 John W. Clark  
 Registered Structural Engineer



General Plan & Elevation		SHEET NO.
F.A.I.-70 OVER CANTEN CREEK		1
SECTION 60-6BR		
MADISON COUNTY		OF 27
STRUCTURE NO. 060-0010 & 060-0011		
W.V.P. CORPORATION		WVP JOB NO.
CONSULTING ENGINEERS-ARCHITECTS-PLANNERS		S7H420
DECATUR, ILLINOIS ST. LOUIS, MISSOURI		

Rev. 11/20/89 REV 11/22/89

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		DATE -	REVISED -

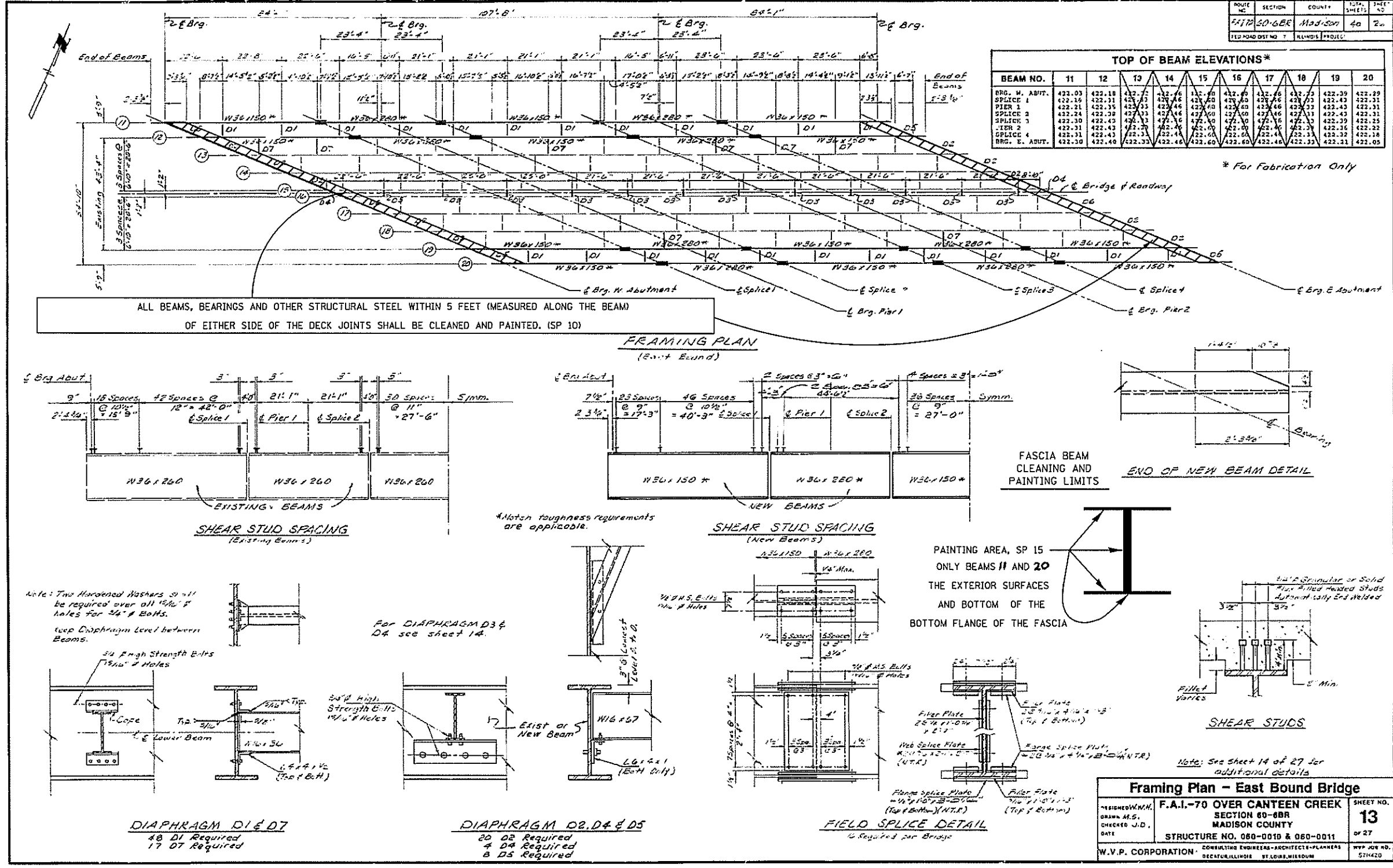
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

* FAI 55/70, FAP 805		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT
F.A.I./P R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	60-6BR-P, 125-BR-2-P	MADISON ST. CLAIR	16	9
		CONTRACT NO. 76H38		

FOR INFORMATION ONLY

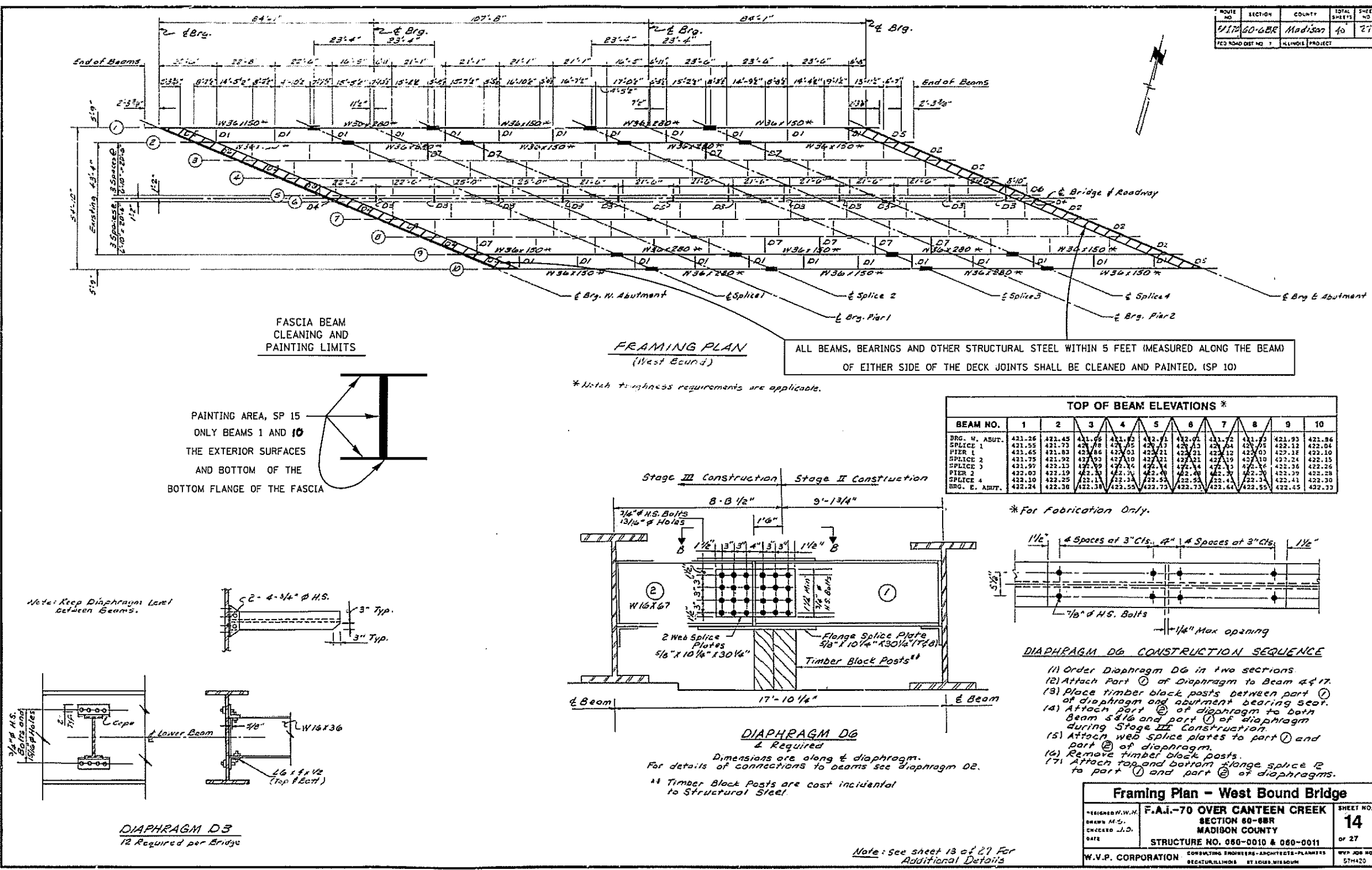
QUALITY & PERFORMANCE



FOR INFORMATION AND PROPOSED DATA

FILE NAME =	USER NAME = wdmara_jb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LOCATIONS 1 &amp; 2 REFERENCE SHEETS</b>	SCALE:	SHEET NO. OF SHEETS STA. TO STA.	* FAI 55/TO/FAP 805		F.A.I./P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6h38-shr-plan.dgn	6h38-shr-plan.dgn	DRAWN -	REVISED -					60-6BR-P, 125-BR-2-P	MADISON ST. CLAIR	16	10			
PLOT SCALE = 1/8" = 1'-0"	1/8" = 1'-0"	CHECKED -	REVISED -					STRUCTURE NO. 060-0010 & 060-0011	MADISON ST. CLAIR	CONTRACT NO. 76H38				
PLOT DATE = 12/12/2014	12/12/2014	DATE -	REVISED -					W.V.P. CORPORATION CONSULTING ENGINEERS-ARCHITECTS-PLANNERS	ILLINOIS	FED. AID PROJECT				

FOR INFORMATION AND PROPOSED DATA

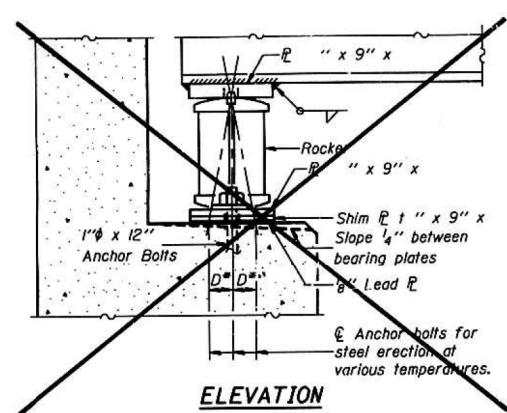


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	PLOT DATE = 12/12/2014	DATE -	REVISED -					W.V.P. CORPORATION	ILLINOIS	FED. AID PROJECT		

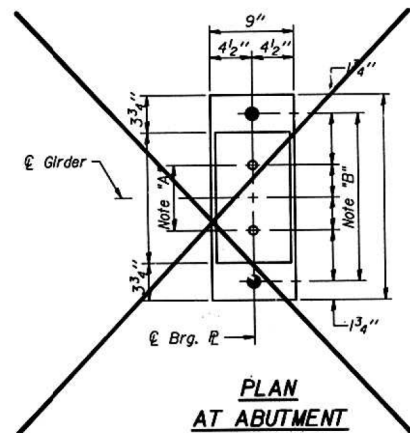
\* FAI 55/70, FAP 805



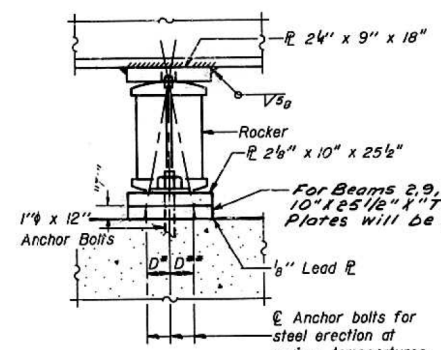
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F-170	60-6BR	Madison	40	30
FED. ROAD DIST. NO.	ILLINOIS PROJECT			



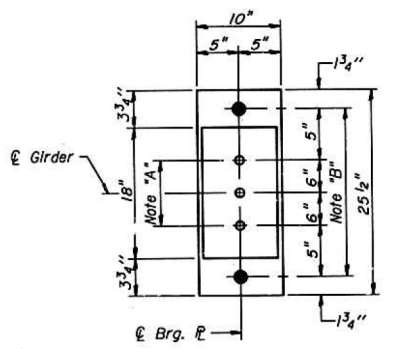
**ELEVATION**



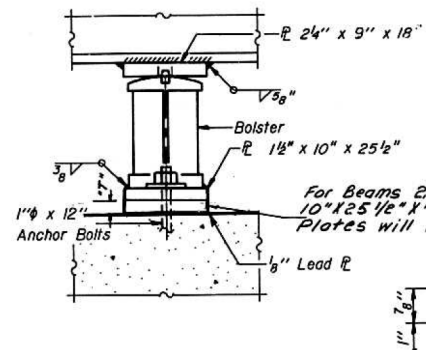
**PLAN AT ABUTMENT**



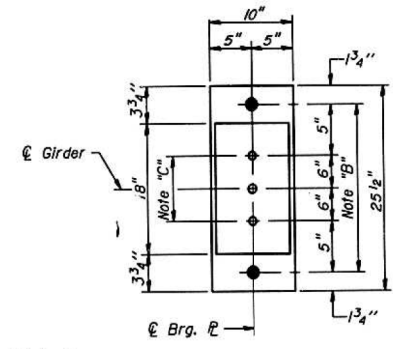
**ELEVATION**



**PLAN AT PIER 2**



**ELEVATION**



**PLAN AT PIER 1**

**BEARING ASSEMBLY DETAILS**

Note "A"  
1 3/8" Holes-1" deep in top flange for 1 1/4" Pintles. Thread or press fit pintles in bottom flange.

Note "B"  
1 1/2" Holes for 1" Anchor Bolts-5/16" x 2 1/2" x 2 1/2" flange washer under nut.

Note "C"  
1 3/8" Holes-1" deep in top flange only for 1 1/4" Pintles.

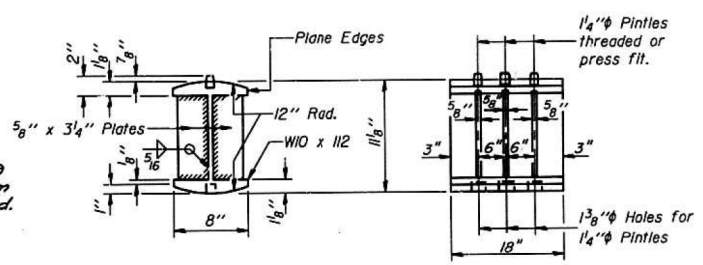
**NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS**

- a.) D\* (Side of brg. away from fixed brg.)  
D\* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50° F.
- D\*\* (Side of brg. toward fixed brg.)  
D\*\* = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50° F.
- b.) After girders have been erected and dimensions D\* & D\*\* determined, holes shall be drilled and anchor bolts shall be installed as shown on Sheet # of All fixed anchor bolts may be built into the masonry.

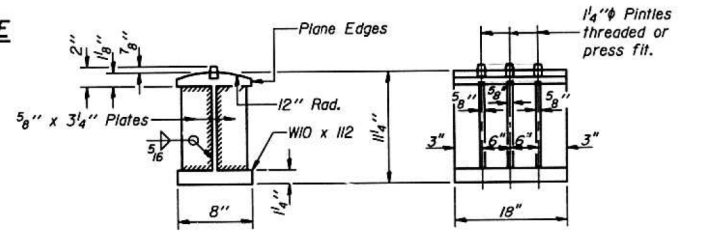
	0.4 Sp.	Pier	0.5 Sp.	Pier	0.6 Sp.
Is (in <sup>4</sup> )					
Ic (in <sup>4</sup> )					
Ss (in <sup>3</sup> )					
Sc (in <sup>3</sup> )					
Z (in <sup>3</sup> )					
W (K/ft.)					
MR (K)					
MsE (K/ft.)					
MsE (K)					
Mt (K)					
M (Imp) (K)					
S <sub>3</sub> (Mt+I) (K)					
Ma (K)					
Mu (K)					
FsE non-comp (k.s.l.)					
FsE comp (k.s.l.)					
Fs <sub>3</sub> (Mt+I) (k.s.l.)					
Fs (Overload) (k.s.l.)					
Fs (Total) (k.s.l.)					
VR (K)					

	Abut.	Pier	Pier	Abut.
RR (K)				
Rt (K)				
Imp. (K)				
R (Total) (K)				

Is and Ss are the moment of inertia and section modulus of the steel section used in computing Is (Total & Overload).  
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).  
VR is the maximum live load + impact shear range in span.  
Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite area.  
Ma (Applied Moment) = 1.3MR + MsE + S<sub>3</sub>(Mt+I).  
Mu is the Full Plastic Moment Capacity for Compact, Braced section.  
Fs (Overload) is the sum of the stresses due to MR + MsE + S<sub>3</sub>(Mt+I).  
Fs (Total) is the sum of the stresses due to 1.3MR + MsE + S<sub>3</sub>(Mt+I).



**ROCKER**



**BOLSTER**

Beam	7"
2	3"
9	4.2"
12	3.12"
19	4.08"

Beam	7"
2	3"
9	3.32"
12	4.08"
19	3.24"

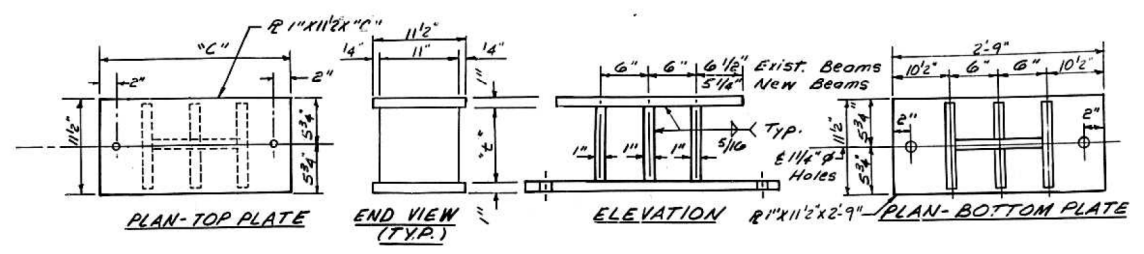
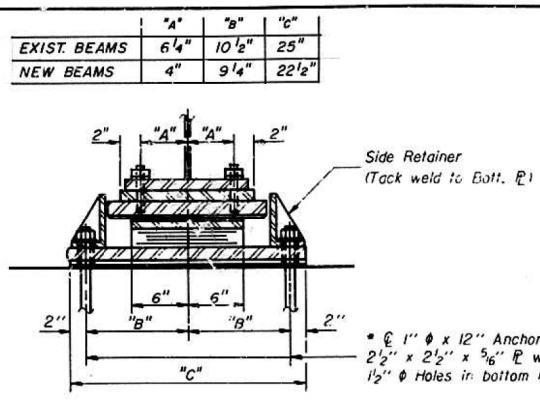
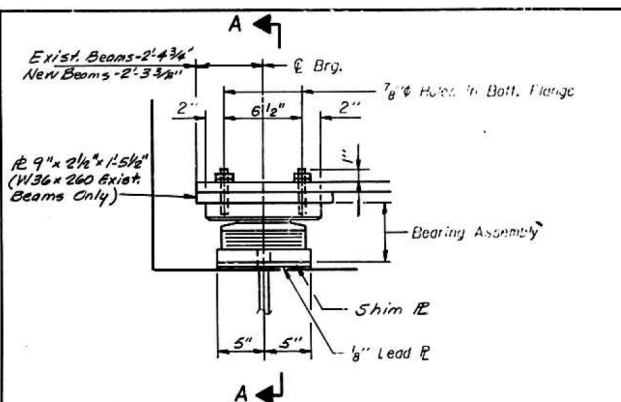
**Bearing Details - Piers 1 and 2**

DESIGNED: W.V.P.	<b>F.A.I.-70 OVER CANTEN CREEK</b> SECTION 60-6BR MADISON COUNTY STRUCTURE NO. 060-0010 & 060-0011	<b>SHEET 17</b> OF 27
DRAWN: M.S.		
CHECKED: J.D.		
DATE:		
W.V.P. CORPORATION	CONSULTING ENGINEERS-ARCHITECTS-PLANNERS	WVP JOB NO. 57H420

FOR INFORMATION ONLY

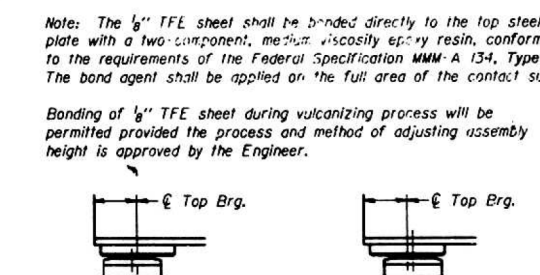
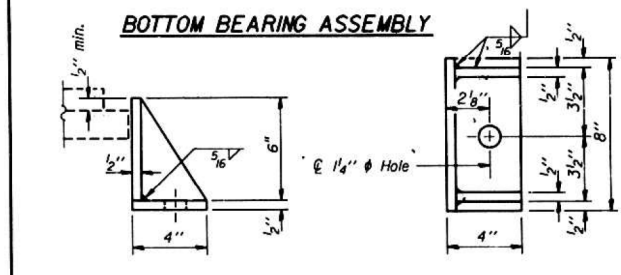
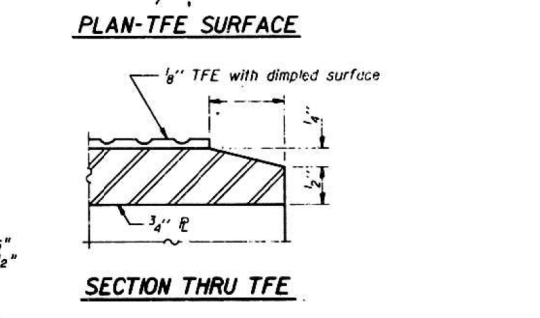
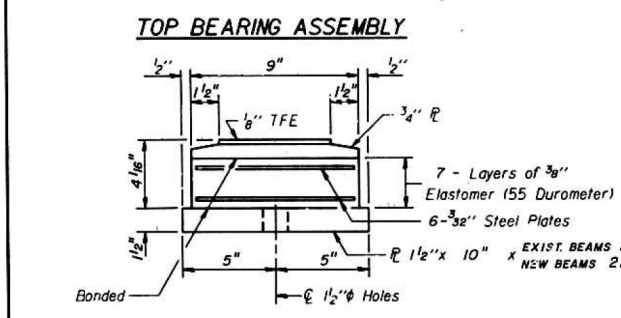
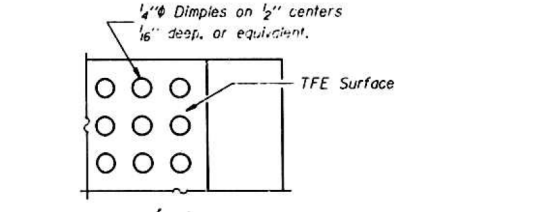
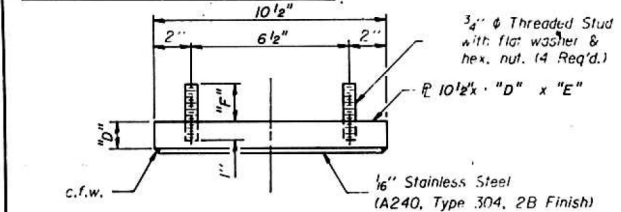
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	60-6BR	Madison	40	31
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				



	"d"	"e"	"f"
EXIST. BEAMS	1 7/8"	1 1/2"	5 1/2"
NEW BEAMS	1 3/4"	1 1/4"	2"

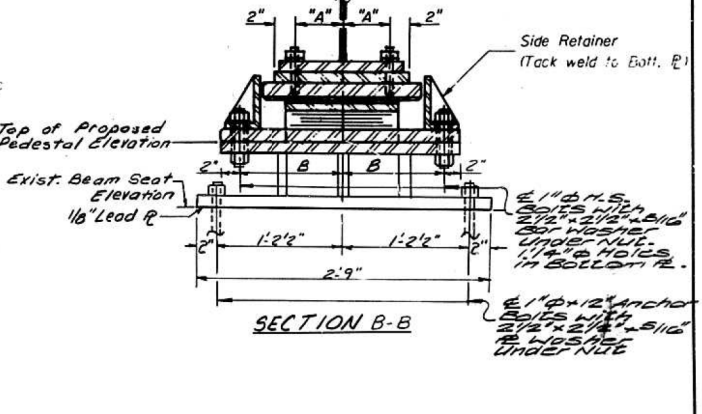
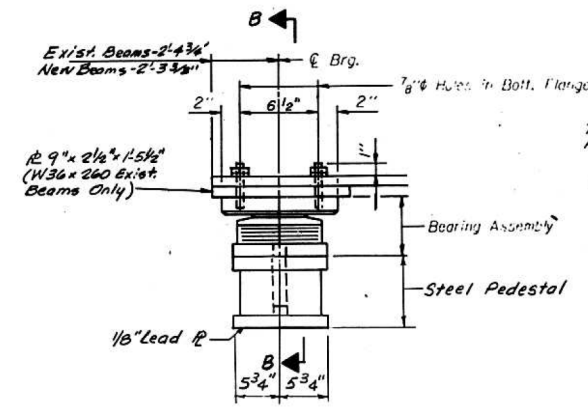
**TYPE II TFE ELASTOMERIC EXP. BRG.**



Note: Burn off existing anchor bolts flush with existing concrete surface, grind smooth and seal with epoxy. New anchor bolts shall be installed in accordance with B5 P-11.

Beam No.	2	3	4	5	6	7	8	9	12	13	14	15	16	17	18	19
East Abut.	6 5/8"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	6 1/4"	8 1/4"	5 1/2"	5 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	6 3/8"

	"a"	"b"	"c"
EXIST. BEAMS	6 1/4"	10 1/2"	25"
NEW BEAMS	4"	9 1/4"	22 1/2"



**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	20

**Bearing Details - East Abutments**

DESIGNED W.W.H.	F.A.I.-70 OVER CANTEN CREEK	SHEET NO.
DRAWN M.S.	SECTION 60-6BR	18
CHECKED J.D.	MADISON COUNTY	OF 27
DATE	STRUCTURE NO. 060-0010 & 060-0011	
W.V.P. CORPORATION - CONSULTING ENGINEERS-ARCHITECTS-PLANNERS		WVP JOB NO.
DECATUR, ILLINOIS ST. LOUIS, MISSOURI		57H420

Note: New Steel Pedestals, Side Retainers, and Anchor Bolts are Included in Furnishing & Erecting Structural Steel. Weight of Structural Steel for the Pedestals = 3100 LBS.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	OF
F.A. 805	125BR-1	ST. CLAIR	32	15	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

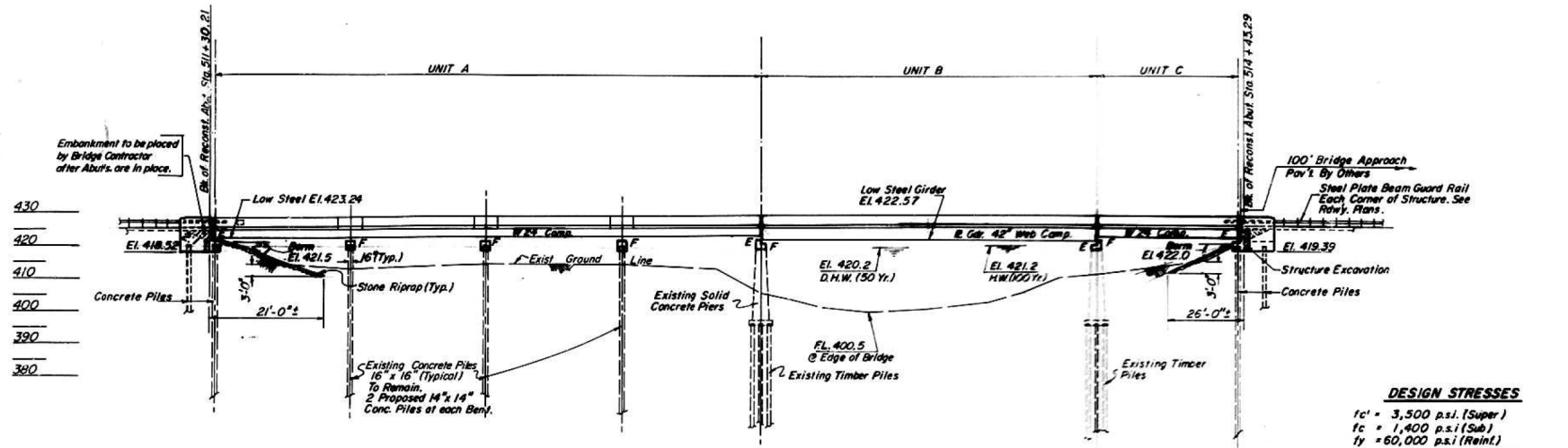
Existing Structure built in 1933 as S.B.I. Rte. 161 Sec. 125-C at Station 512+87.75. Superstructure is concrete slab on steel I-beams, 4 spans West of main 100' steel truss and one span East of truss. Substructure is reinforced concrete pile-cap construction; main piers are tapered plain concrete type. Portions of abutments and piers to be removed and reconstructed by the Bridge Contractor. See Special Provisions.

B.M. "B" - CHISELED SQ. ON S.E. COR. OF WEST ABUT. ELEV. 425.46

GENERAL NOTES

Calculated weight of Structural Steel = 124,400 lbs. (M-223, Gr. 50)  
= 60,600 lbs. (M-183)

- Fasteners shall be high strength bolts. Bolts  $\frac{3}{4}$ " open holes  $\frac{1}{8}$ " unless otherwise noted.
- The basic lead silico chromate paint 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 materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Expansion bolts shall consist of self drilling expansion anchors and  $\frac{3}{4}$ "  $\times$  12" hooked bolts.



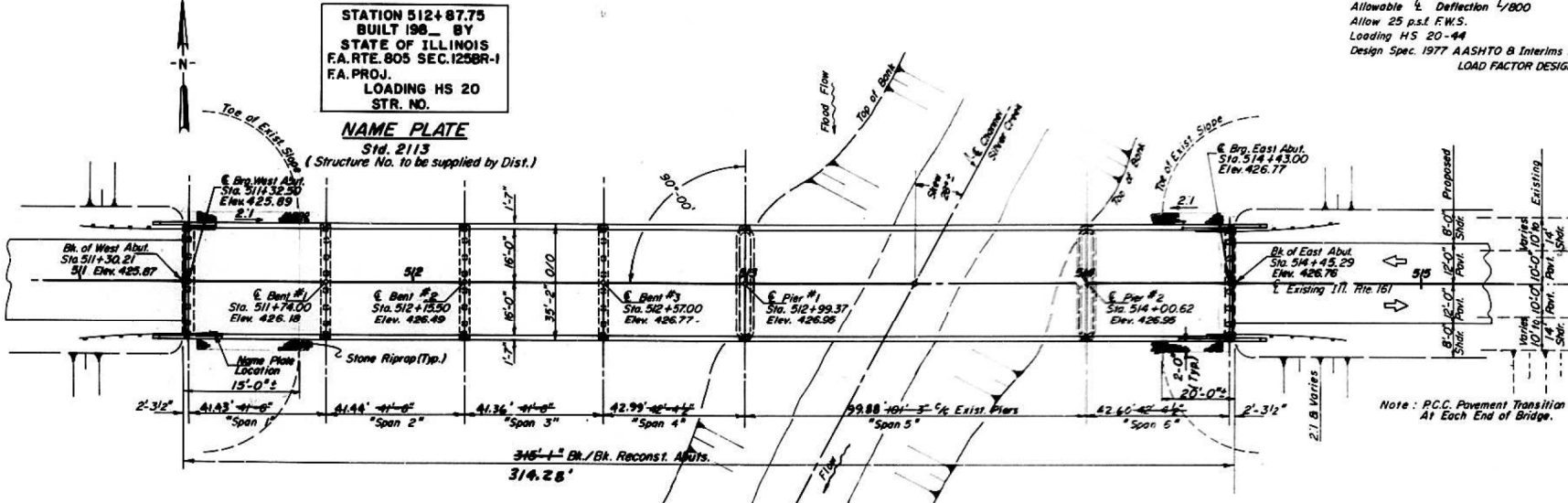
ELEVATION  
(LOOKING UPSTREAM)

DESIGN STRESSES

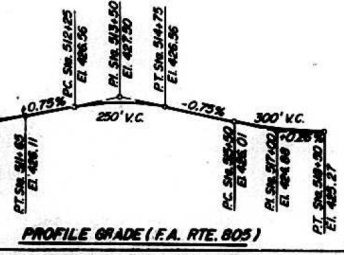
- $f_c = 3,500$  p.s.i. (Super)
- $f_c = 1,400$  p.s.i. (Sub)
- $f_y = 60,000$  p.s.i. (Reinf.)
- $f_y = 50,000$  p.s.i. (M 223 Grade 50 Structural Steel)
- $f_y = 36,000$  p.s.i. (M 183 - Structural Steel)
- $f_s = 24,000$  p.s.i. (Reinf. Sub. & Parapet)
- Allowable  $\delta$  Deflection  $\frac{1}{800}$
- Allow 25 p.s.f. F.W.S.
- Loading HS 20-44
- Design Spec. 1977 AASHTO & Interims 1978 & 1979 as Applicable
- LOAD FACTOR DESIGN (Except Substructure)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yds.		82	82
Class X Concrete	Cu. Yds.	307.2	119.5	426.7
Structural Steel	L.S.	1		1
Reinforcement Bars	Lbs.	36,920	12,240	49,160
Reinforcement Bars (Epoxy Coated)	Lbs.	50,840		50,840
Concrete Piles	Lin. Ft.		520	520
Name Plate	Each	1		1
Preformed Joint Sealer (2" $\times$ 2")	Lin. Ft.	105		105
Preformed Joint Sealer (4" $\times$ 4")	Lin. Ft.	35		35
Protective Coat	Sq. Yds.	1380		1380
Expansion Bolts $\frac{3}{4}$ " Dia.	Each		120	120
Stone Riprap	Sq. Yds.		219	219
Removal Of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yds.		73.0	73.0
Floordrains	Each	58		58
Stud Shear Connectors	Each	5,025		5,025



PLAN

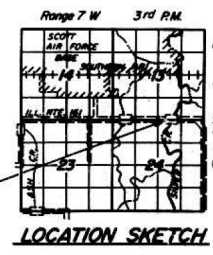


PROFILE GRADE (F.A. RTE. 805)

WATERWAY INFORMATION

- Total Drainage Area = 400 Sq. Mi.
- Design Discharge, Q90 = 26,265 c.f.s.
- Main Channel Bridge, Q50 = 18,854 c.f.s.
- Overflow Bridge, Q50 = 7,411 c.f.s.
- Design High Water El. (50 Yr. FL.) = El. 420.2
- Created Head = 1.6'
- Discharge, Q100 = 29,800 c.f.s.
- Main Channel Bridge, Q100 = 21,275 c.f.s.
- Overflow Bridge, Q100 = 8,525 c.f.s.
- High Water El. (100 Yr. FL.) = El. 421.2
- 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.



LOCATION SKETCH

APPROVED  
FOR STRUCTURAL ADEQUACY ONLY  
*[Signature]*  
Engineer of Bridge & Traffic Structures

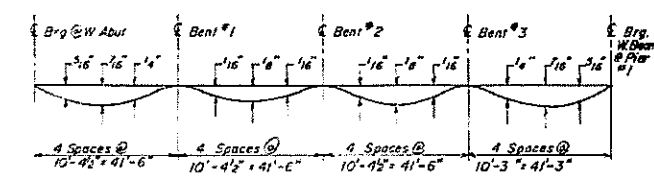
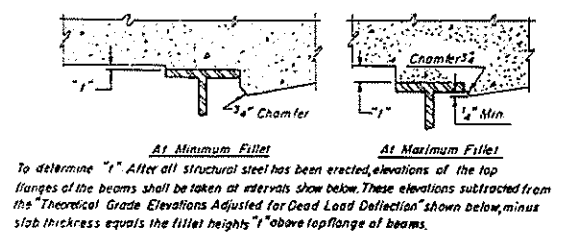
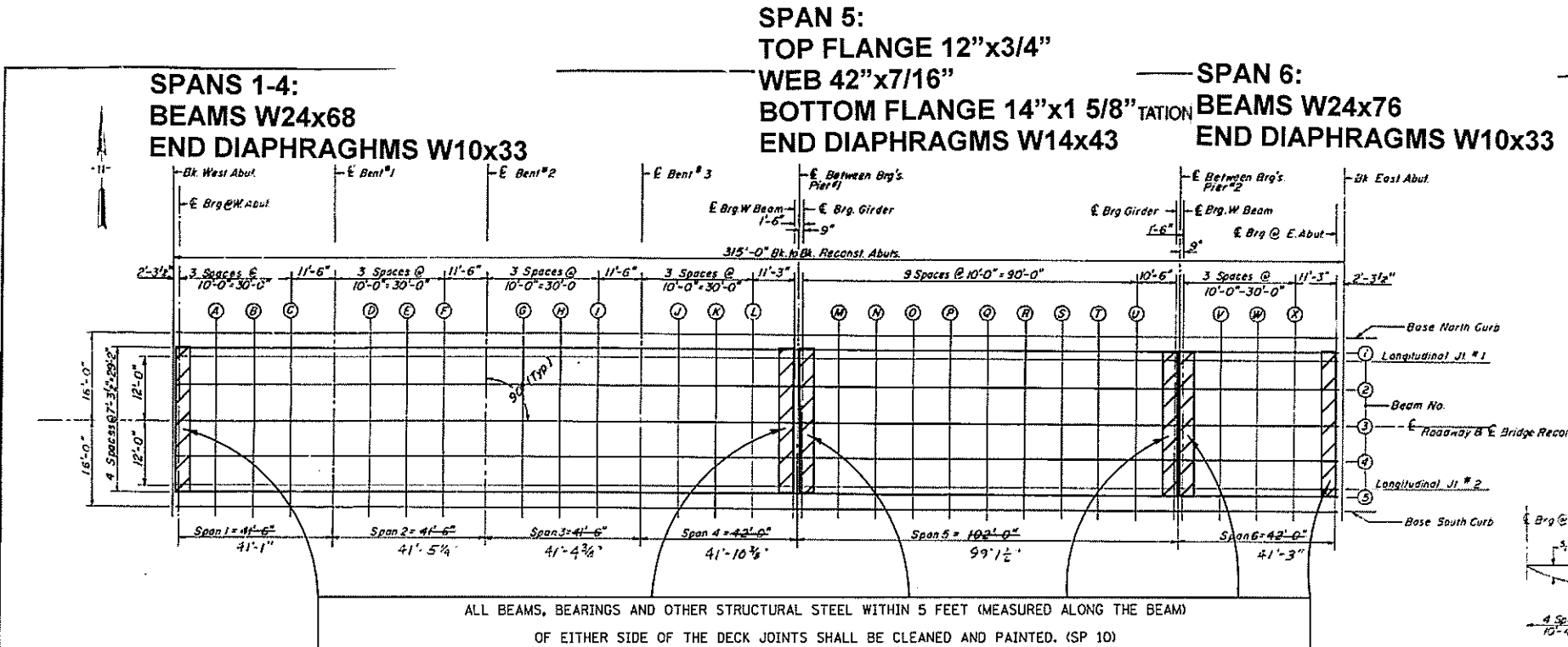
GENERAL PLAN & ELEVATION  
F.A. ROUTE 805 (S.B.I. RTE. 161) OVER  
SILVER CREEK  
SECTION 125 BR-1  
ST. CLAIR COUNTY  
STA. 512+87.75  
MAIN CHANNEL CROSSING

Rev 10-81

FOR INFORMATION ONLY

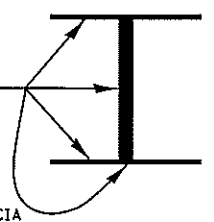
FOR INFORMATION AND PROPOSED DATA

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 OF 14 SHEETS
F.A. 805	125 BR-1	ST. CLAIR	32	16	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



**FASCIA BEAM CLEANING AND PAINTING LIMITS**

PAINTING AREA, SP 15 ONLY BEAMS 1 AND 5 THE EXTERIOR SURFACES AND BOTTOM OF THE BOTTOM FLANGE OF THE FASCIA



LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
DK W ABUT	CURB	51130+21.0	14.000	425.502	425.402
	1 OR 5	51130+21.0	14.583	425.631	425.631
	JOINT	51130+21.0	12.000	425.685	425.685
	2 OR 4	51130+21.0	7.292	425.759	425.759
E BRG. W ABUT	CURB	51132+50.0	16.000	425.614	425.614
	1 OR 5	51132+50.0	14.583	425.645	425.645
	JOINT	51132+50.0	12.000	425.699	425.699
	2 OR 4	51132+50.0	7.292	425.773	425.773
A	CURB	51142+50.0	16.000	425.681	425.708
	1 OR 5	51142+50.0	14.583	425.710	425.737
	JOINT	51142+50.0	12.000	425.764	425.791
	2 OR 4	51142+50.0	7.292	425.837	425.865
B	CURB	51152+50.0	16.000	425.749	425.785
	1 OR 5	51152+50.0	14.583	425.778	425.814
	JOINT	51152+50.0	12.000	425.832	425.868
	2 OR 4	51152+50.0	7.292	425.906	425.942
C	CURB	51162+50.0	16.000	425.821	425.843
	1 OR 5	51162+50.0	14.583	425.851	425.872
	JOINT	51162+50.0	12.000	425.904	425.926
	2 OR 4	51162+50.0	7.292	425.978	425.999
BENT 1	CURB	51174+00.0	16.000	425.907	425.907
	1 OR 5	51174+00.0	14.583	425.937	425.937
	JOINT	51174+00.0	12.000	425.990	425.990
	2 OR 4	51174+00.0	7.292	426.044	426.044
D	CURB	51184+00.0	16.000	425.983	425.985
	1 OR 5	51184+00.0	14.583	426.012	426.015
	JOINT	51184+00.0	12.000	426.066	426.068
	2 OR 4	51184+00.0	7.292	426.139	426.142

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
E	CURB	51194+00.0	16.000	426.058	426.088
	1 OR 5	51194+00.0	14.583	426.087	426.097
	JOINT	51194+00.0	12.000	426.141	426.151
	2 OR 4	51194+00.0	7.292	426.214	426.224
F	CURB	51204+00.0	16.000	426.133	426.140
	1 OR 5	51204+00.0	14.583	426.162	426.169
	JOINT	51204+00.0	12.000	426.216	426.223
	2 OR 4	51204+00.0	7.292	426.289	426.297
BENT 2	CURB	51215+00.0	16.000	426.219	426.219
	1 OR 5	51215+00.0	14.583	426.248	426.248
	JOINT	51215+00.0	12.000	426.302	426.302
	2 OR 4	51215+00.0	7.292	426.376	426.376
G	CURB	51225+50.0	16.000	426.294	426.300
	1 OR 5	51225+50.0	14.583	426.324	426.330
	JOINT	51225+50.0	12.000	426.377	426.383
	2 OR 4	51225+50.0	7.292	426.451	426.457
H	CURB	51235+50.0	16.000	426.366	426.377
	1 OR 5	51235+50.0	14.583	426.395	426.406
	JOINT	51235+50.0	12.000	426.449	426.459
	2 OR 4	51235+50.0	7.292	426.523	426.533
I	CURB	51245+50.0	16.000	426.432	426.436
	1 OR 5	51245+50.0	14.583	426.461	426.468
	JOINT	51245+50.0	12.000	426.515	426.519
	2 OR 4	51245+50.0	7.292	426.588	426.593
BENT 3	CURB	51257+00.0	16.000	426.500	426.503
	1 OR 5	51257+00.0	14.583	426.529	426.539
	JOINT	51257+00.0	12.000	426.583	426.583
	2 OR 4	51257+00.0	7.292	426.657	426.657

Notes: CURB refers to base of North or South curb  
 JOINT refers to Length Bonded Construction Joint #1 or #2  
 P.G. refers to Profile Grade Elev.

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