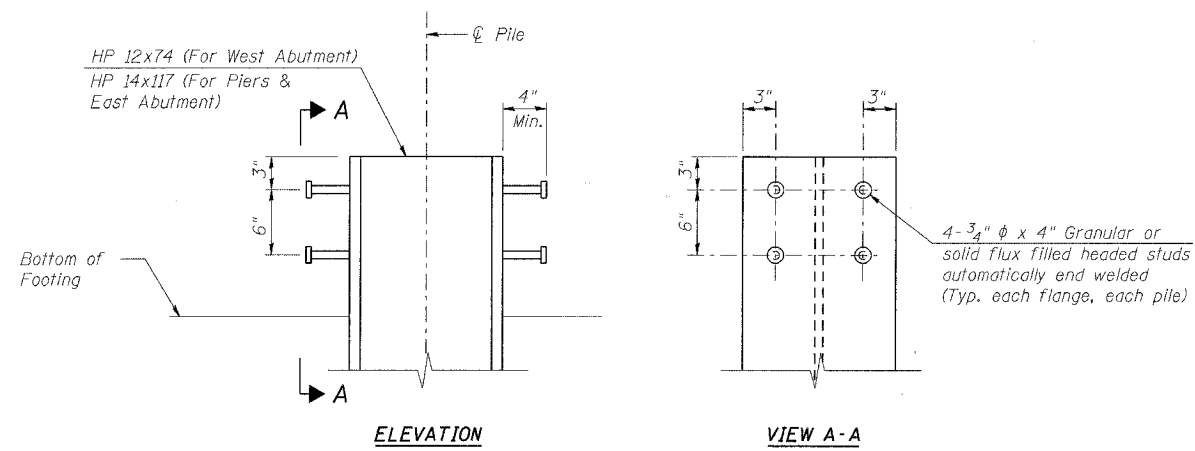


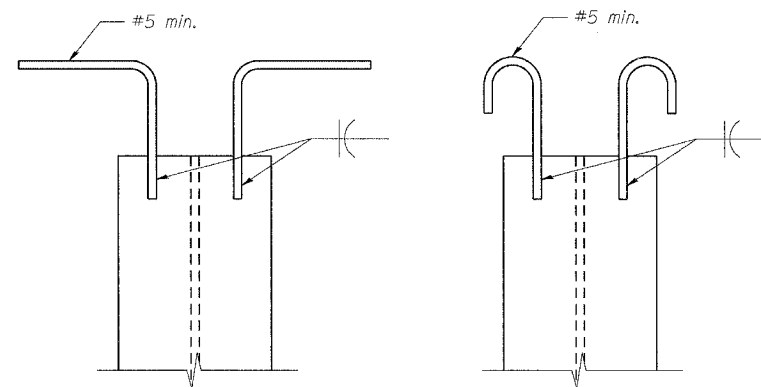
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F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	102
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S86 OF S114

CONTRACT
94450



OPTION A



OPTION B

OPTION C

NOTES:

1. Anchor Details shown are minimum requirements for Seismic conditions to develop 10% of the Pile capacity. (0.1 x A_p x 50 ksi) per AASHTO Div. 1A Article 6.4.2(C).
2. Stud weld connection to piles shall be in conformance with IDOT Standard Specifications, Art. 505.08, (m).
3. Cost of studs and/or reinforcing bar, including welding to piles shall be included with the cost of Furnishing Steel Piles of the size required.
4. Pile anchors to be provided for all piles, including those in abutment wingwalls.

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CHECKED	YS

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Chicago, Illinois 60601
312-566-0450
Job No. 3426

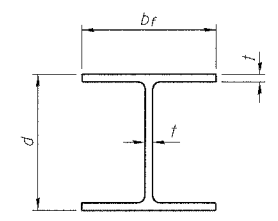
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 15/IN ROUTE 64
OVER WABASH RIVER PUBLIC WATERS
FAP 827 SECT 12Z-3, 12BR
PILE ANCHOR DETAILS

SN: 093-0021 (IL)/9502700 (IN)
WABASH CO., IL.

STA. 1036+27
DATE: JUNE 15, 2007

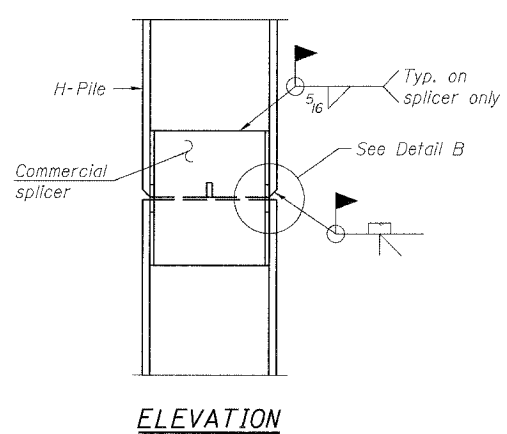
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F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	103
STA.	TO STA.			
F.H.W.A. REGION	ILLINOIS	PROJECT		

BRIDGE SHEET S87 OF S114 CONTRACT 94450

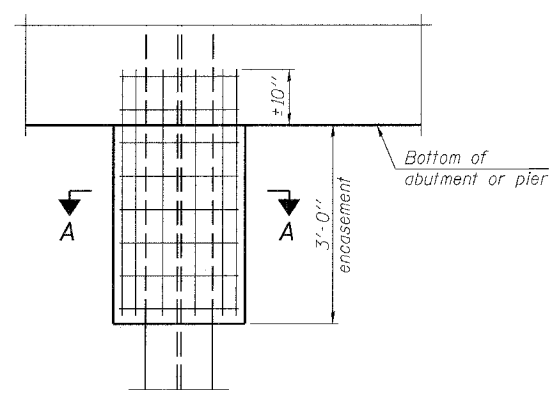


STEEL PILE TABLE

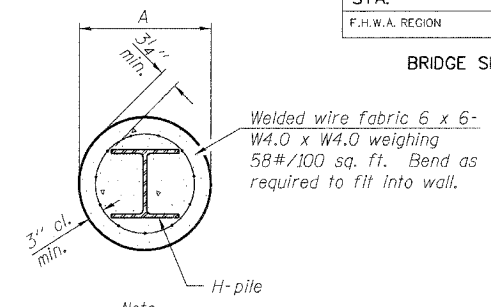
Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

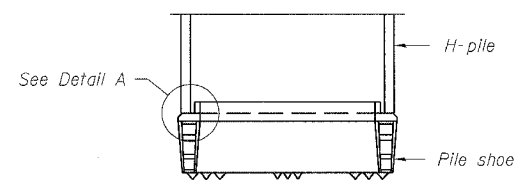


ELEVATION

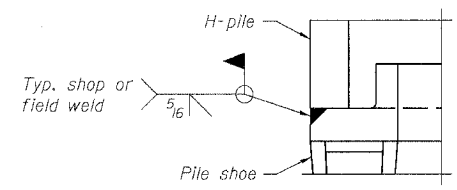


SECTION A-A

Note: Forms for encasement may be omitted when soil conditions permit.

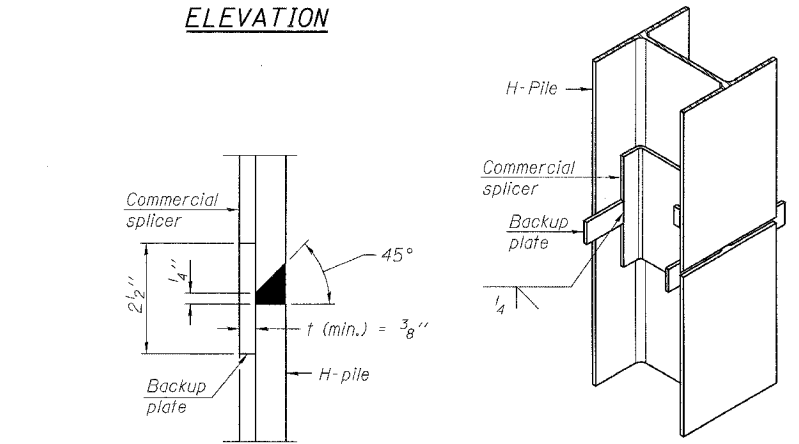


ELEVATION



DETAIL A

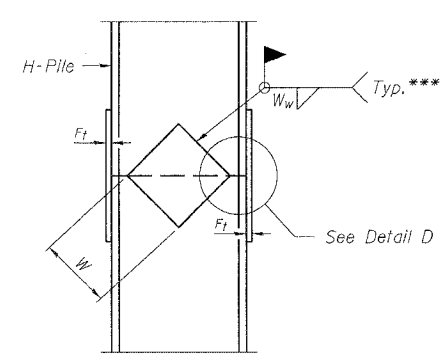
H-PILE SHOE ATTACHMENT



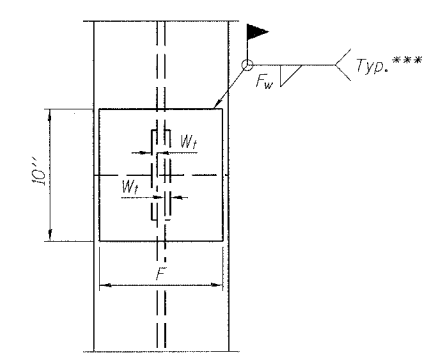
DETAIL "B"

ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

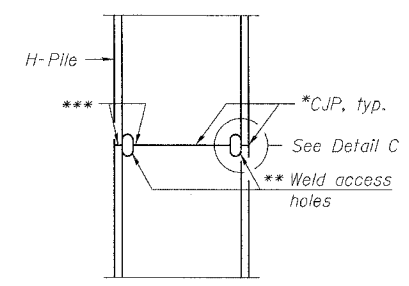


ELEVATION

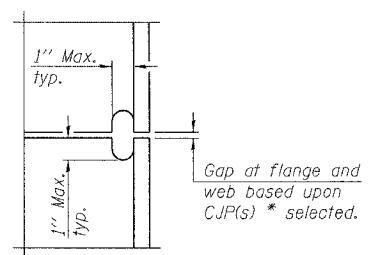


END VIEW

WELDED PLATE FIELD SPLICE

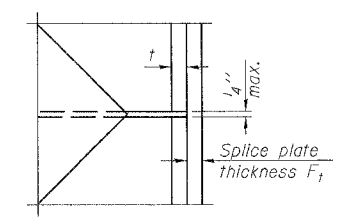


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 1/2"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 1/2"	1/2"
x89	12 1/2"	3/4"	1/2"	7 3/4"	5 1/2"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 1/2"	1/2"
HP 12x84	10"	7/8"	1/2"	6 1/2"	5 1/2"	1/2"
x74	10"	7/8"	1/2"	6 1/2"	5 1/2"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

- * Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- ** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- *** Interrupt welds 1/4" from end of each pile.

Note: The steel H-piles shall be according to AASHTO M270 Grade 50.

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ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 15/IN ROUTE 64
OVER WABASH RIVER PUBLIC WATERS
FAP 827 SECT 12Z-3, 12BR
STEEL H PILES

STA. 1036+27
DATE: JUNE 15, 2007
WABASH CO., IL.

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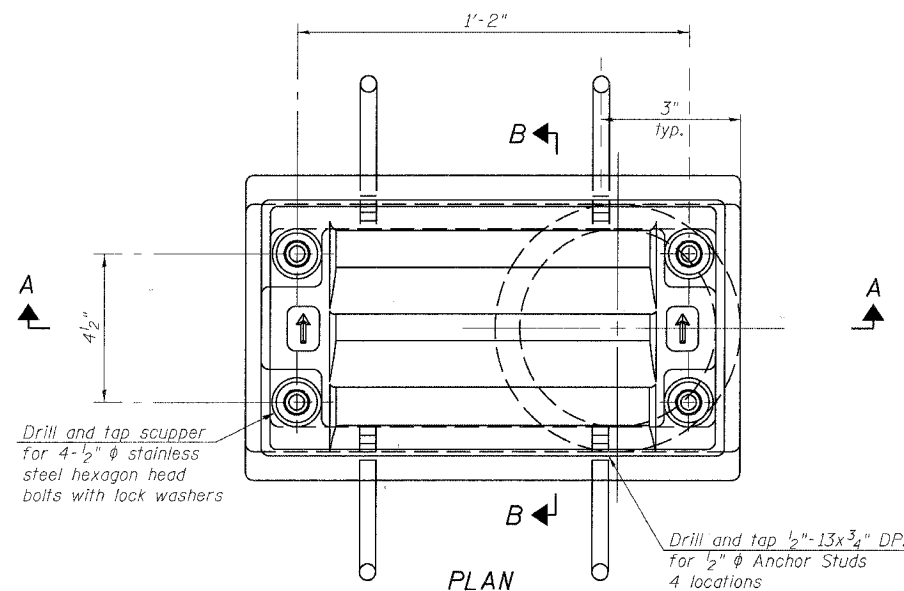
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CHECKED	HMA
DRAWN	RMG
CHECKED	CDF

F-HP 11-1-06

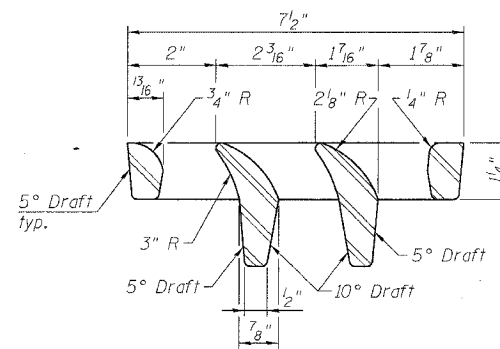
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	104
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S88 OF S114

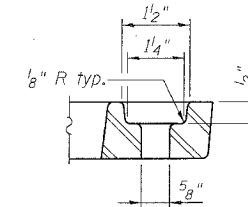
CONTRACT NO. 94450



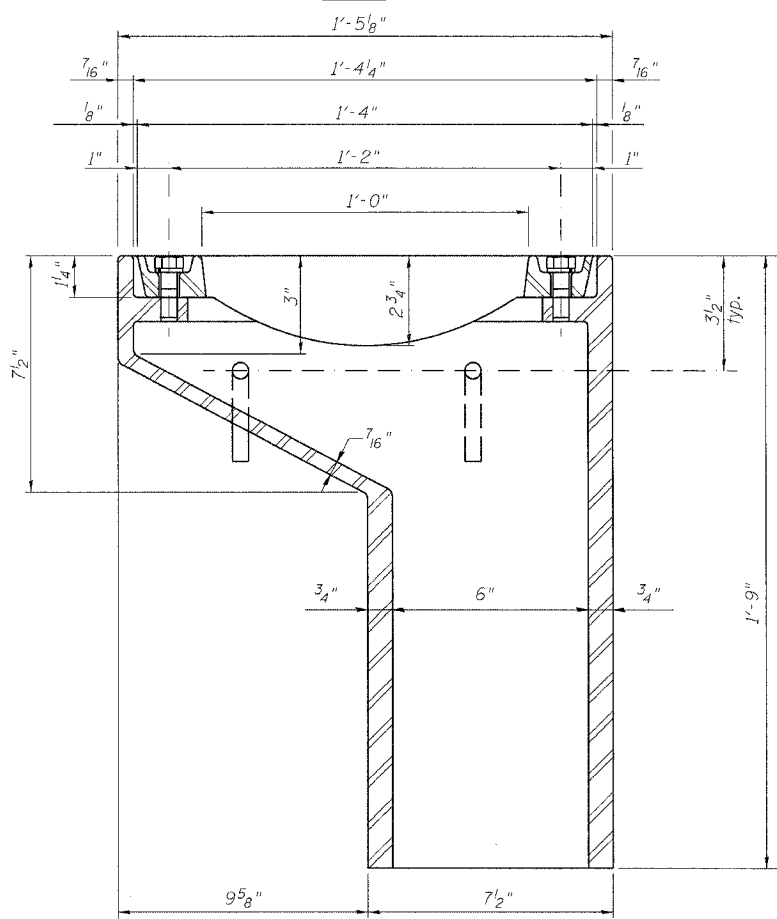
PLAN



VANE GRATE DETAIL

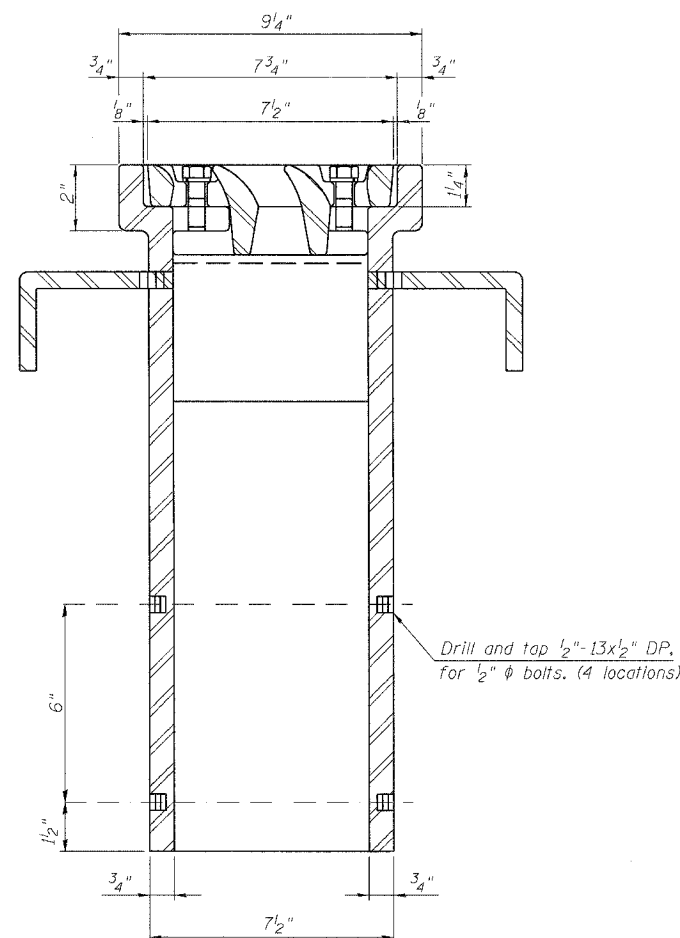


BOLT HOLE DETAIL

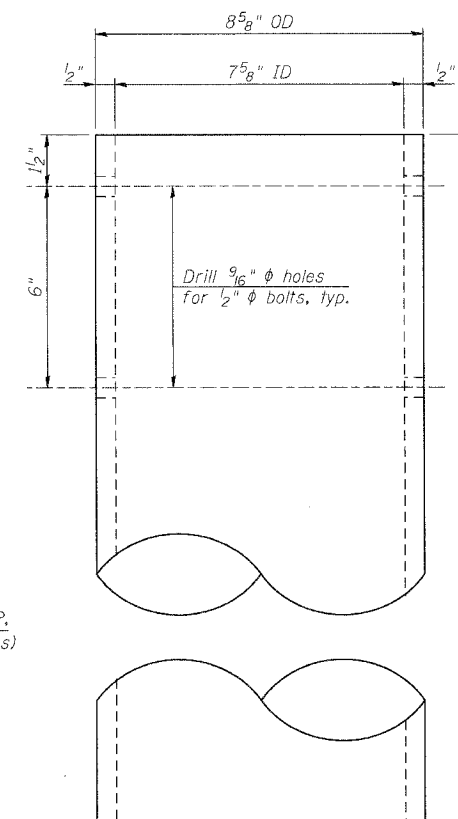


SECTION A-A

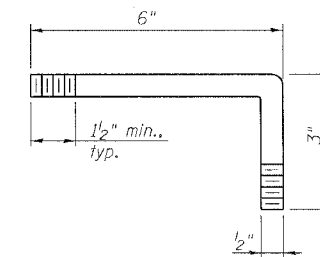
See sheet S35 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR STUD DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

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DESIGNED	WJZ
CHECKED	CDF
DRAWN	CS/RMG
CHECKED	WJZ

DS-11

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Job No. 3426

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 15/IN ROUTE 64
OVER WABASH RIVER PUBLIC WATERS
FAP 827 SECT 12Z-3, 12BR

DRAINAGE SCUPPER DETAILS DS-11

SN: 093-0021 (IL)/9502700 (IN)
WABASH CO., IL.

STA. 1036+27
DATE: JUNE 15, 2007

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	105
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	
BRIDGE SHEET S89 OF S114				CONTRACT 94450

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8

The diameter of this part is equal or larger than the diameter of bar spliced.

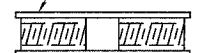
The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

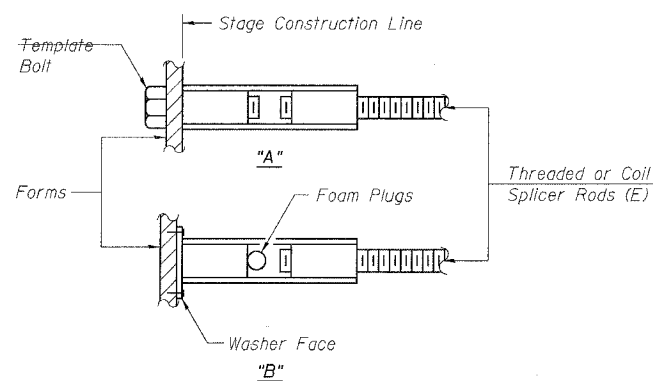
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



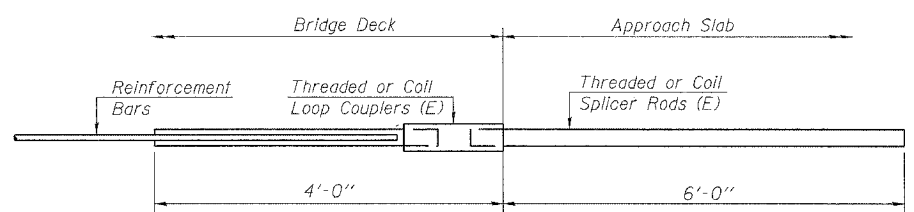
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES

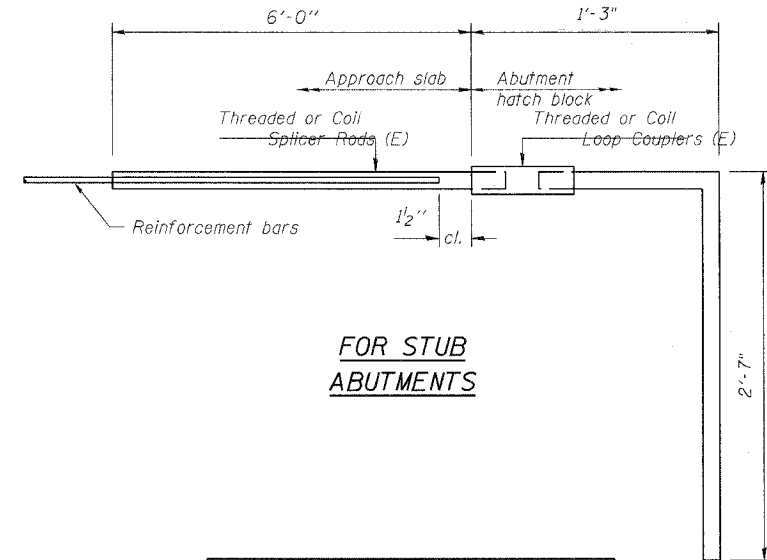
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete



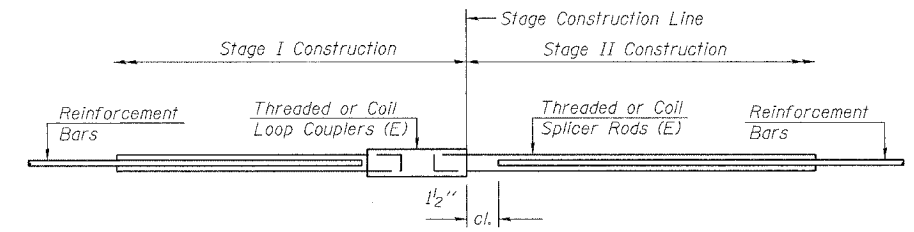
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	



FOR STUB ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	49



STANDARD

Bar Size	No. Assemblies Required	Location

ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 15/IN ROUTE 64
 OVER WABASH RIVER PUBLIC WATERS
 FAP 827 SECT 12Z-3, 12BR

BAR SPLICERS

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SN: 093-0021 (IL)/9502700 (IN) STA. 1036+27
 WABASH CO., IL. DATE: JUNE 15, 2007

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CHECKED	YS/CDF

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ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	109
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S93 OF S114 CONTRACT 94450

Bore Log

Sheet 1 of 1

Date 4/11/2002



PROJECT FAP 827
 ROUTE IL Rt. 15/IN Rt. 64
 SECTION 12BR, 12Z-3
 COUNTY Wabash - IL / Gibson - IN
 STRUCTURE NO. Exst. 093-0014 Prop. 093-0021

DESCRIPTION Wabash River Crossing
 LOCATION T1S, R12W, Section 26, SW 1/4
 DRILL METHOD CME 55/Driven HW Casing/wash bore
 HAMMER TYPE Automatic Hammer/Cathead
 Drilled By Hennes Drilling
 Checked By SCI

Boring No.	Station	Offset	Barge Deck El.	Mudline El.	Surface Water Elevation	Groundwater Elevation	First Encountered	Upon Completion	After 24 Hours	Mud Rotary Start Elevation	Depth (ft)	Qu	W
B-105	1028+77	5' Left	392.68	365.18	366.18		N/A	N/A	N/A	358.68			
Soft River SEDIMENT - El. 365.18 to El. 360.68													
Due to the current, the top 4.5 feet of HW casing (4.5-inch O.D./4.0-inch I.D.) was pushed. An additional 0.5 feet of the HW casing was driven with the automatic hammer													
SPT Sampler driven with cathead													
Loose Grey and Brown Medium to Fine SAND, trace Fine Gravel and Mollusk Shell (Portion of shell in upper portion of SPT Sampler) A-2													
Medium Dense Gray Fine to Coarse SAND, little Fine Gravel A-1-b													
Medium Dense Coarse to Fine GRAVEL A-1-a (determined by laboratory analysis)													
Sample not obtained - Diller's omission													
Medium Dense Gray Medium to Fine SAND, trace Coarse Gravel (partially blocked shoe) A-2													
Loose Gray Coarse to Fine SAND, trace Coarse Gravel A-2													
Coarse Gravel													
Gray CLAY A-7													
Hard Gray, Relatively Dry, CLAYEY SHALE													
Refer to the Rock Core Log for additional information.													

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (ksf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

DESIGNED	CDF
CHECKED	ADD
DRAWN	CDF
CHECKED	ADD

Rock Core Log

Sheet 1 of 1

Date 4/12/2002



PROJECT FAP 827
 ROUTE IL Rt. 15/IN Rt. 64
 SECTION 12BR, 12Z-3
 COUNTY Wabash - IL / Gibson - IN
 STRUCTURE NO. Exst. 093-0014 Prop. 093-0021

DESCRIPTION Wabash River Crossing
 LOCATION T1S, R12W, Section 26, SW 1/4
 DRILL NO. CME 55/Driven HW
 CORE METHOD AW, Rods with Wire Line Core Barrel
 CORE BARREL TYPE/SIZE 12" Split Barrel/NX
 Drilled By Hennes Drilling
 Checked By SCI

Boring No.	Station	Offset	Barge Deck El.	Surface Water El.	Mudline El.	Core Diameter	Top of Rock El.	Begin Core El.	Depth (ft)	Qu	W
B-105	1028+77	5' Left	392.68	366.18	365.18	1.75"	345.18	344.56			
Hard, Relatively Dry, CLAYEY SHALE											
Soft to Moderately Hard, Very Fine Crystalline, Thin Bedded, Slightly Weathered, Gray LIMESTONE											
Gray SHALE											
Soft to Moderately Hard, Very Fine Crystalline, Thin Bedded, Slightly Weathered, Gray LIMESTONE											
Gray SHALE											
Soft to Moderately Hard, Very Fine Crystalline, Thin Bedded, Slightly Weathered, Gray LIMESTONE											
Boring terminated at 30.6 feet											

Color pictures of the cores
 Cores will be stored for examination until: 1/2007
 The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D 2938)

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ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 15/IN ROUTE 64
 OVER WABASH RIVER PUBLIC WATERS
 FAP 827 SECT 12Z-3, 12BR
 SOIL BORING LOGS

SN: 093-0021 (IL)/9502700 (IN) STA. 1036+27
 WABASH CO., IL. DATE: JUNE 15, 2007

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	111
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S95 OF S114 CONTRACT NO. 94450

Bore Log

Sheet 1 of 2

Date 4/15-17/2002

PROJECT FAP 827 DESCRIPTION Webash River Crossing
 ROUTE IL Rt. 15/IN Rt. 64 LOCATION T1S, R12W, Section 26, SW 1/4
 SECTION 12BR, 12Z-3 DRILL METHOD CME 55/HW & NW Casing/wash bore
 COUNTY Wabash - IL / Gibson - IN HAMMER TYPE Automatic Hammer/Cathead
 STRUCTURE NO. Exist. 093-0014 Prop. 093-0021 Drilled By Herriss Drilling
 Checked By SCI



Boring No.	Station	Offset	Barge Deck El.	Mudline El.	Depth (ft)	Surface Water Elevation: 387.68			Depth (ft)	Groundwater Elevation		
						El.	N	Qu		W	El.	N
Soft River SEDIMENT - El. 368.68 to El. 364.68												
Due to the current, the top 1.5 feet of HW casing (4.5-inch O.D./4.9-inch I.D.) settled and lower 3.5 feet of HW casing was pushed.												
					12				14			
					14				14			
					15				15			
					17				17			
					18				18			
					19				19			
					20				20			
					21				21			
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					41				41			
					42				42			
					43				43			
					44				44			
					45				45			

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 2 of 2

Date 4/15-17/2002

PROJECT FAP 827 DESCRIPTION Webash River Crossing
 ROUTE IL Rt. 15/IN Rt. 64 LOCATION T1S, R12W, Section 26, SW 1/4
 SECTION 12BR, 12Z-3 DRILL METHOD CME 55/HW & NW Casing/wash bore
 COUNTY Wabash - IL / Gibson - IN HAMMER TYPE Automatic Hammer/Cathead
 STRUCTURE NO. Exist. 093-0014 Prop. 093-0021 Drilled By Herriss Drilling
 Checked By SCI



Boring No.	Station	Offset	Barge Deck El.	Mudline El.	Depth (ft)	Surface Water Elevation: 387.68			Depth (ft)	Groundwater Elevation		
						El.	N	Qu		W	El.	N
(Cathead)												
					11				11			
					15				15			
					16				16			
					17				17			
					18				18			
					19				19			
					20				20			
					21				21			
					22				22			
					23				23			
					24				24			
					25				25			
					26				26			
					27				27			
					28				28			
					29				29			
					30				30			
					31				31			
					32				32			
					33				33			
					34				34			
					35				35			
					36				36			
					37				37			
					38				38			
					39				39			
					40				40			
					41				41			
					42				42			
					43				43			
					44				44			
					45				45			

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 1 of 3

Date 4/17-19/2002

PROJECT FAP 827 DESCRIPTION Webash River Crossing
 ROUTE IL Rt. 15/IN Rt. 64 LOCATION T1S, R12W, Section 26, SW 1/4
 SECTION 12BR, 12Z-3 DRILL METHOD CME 55/HW & NW Casing/wash bore
 COUNTY Wabash - IL / Gibson - IN HAMMER TYPE Automatic Hammer/Cathead
 STRUCTURE NO. Exist. 093-0014 Prop. 093-0021 Drilled By Herriss Drilling
 Checked By SCI



Boring No.	Station	Offset	Barge Deck El.	Mudline El.	Depth (ft)	Surface Water Elevation: 388.93			Depth (ft)	Groundwater Elevation		
						El.	N	Qu		W	El.	N
Soft River SEDIMENT - El. 369.93 to El. 364.68												
Due to the current, the top 3.0 feet of HW casing (4.5-inch O.D./4.0-inch I.D.) was pushed. An additional 5.0 feet of the HW casing was driven with the cathead.												
					24				24			
					25				25			
					26				26			
					27				27			
					28				28			
					29				29			
					30				30			
					31				31			
					32				32			
					33				33			
					34				34			
					35				35			
					36				36			
					37				37			
					38				38			
					39				39			
					40				40			
					41				41			
					42				42			
					43				43			
					44				44			
					45				45			

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

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DESIGNED	COF
CHECKED	ADD
DRAWN	COF
CHECKED	ADD

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 312-865-0450
 Job No. 3426

ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 15/IN ROUTE 64
 OVER WABASH RIVER PUBLIC WATERS
 FAP 827 SECT 12Z-3, 12BR
 SOIL BORING LOGS
 SN: 093-0021 (IL)/9502700 (IN) STA. 1036+27
 WABASH CO., IL. DATE: JUNE 15, 2007

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	113
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S97 OF S114 CONTRACT 94450

Bore Log

Sheet 1 of 3
Date 7/25-26/2002



PROJECT FAP 827
ROUTE IL Rt. 15/IN Rt. 64
SECTION 12BR, 12Z-3
COUNTY Wabash - IL / Gibson - IN
STRUCTURE NO. 093-0014

DESCRIPTION Wabash River Crossing
LOCATION T1S, R12W, Section 26, SW 1/4
DRILL METHOD CME 750/Hollow stem auger/wash bore
HAMMER TYPE Cathead
Drilled By Harris Drilling
Checked By SCI

Boring No.	Station	Offset	Depth (ft)	N	Qu (tsf)	W (%)	Surface Water Elevation		Depth (ft)	N	Qu (tsf)	W (%)
							Groundwater	Mud Rotary Start				
B-109	1037+65	Centerline					374.08	371.08				
			3		4.5	19.0			7			
			5						11			
			6						25			
			7		4.0	19.5			10			
			8						18			
			3		2.0	28.2			12			
			3						18			
			3						30			
			1		0	31.4			10			
			2						16			
			10						17			
			1		0.25	13.3			10			
			2						18			
			5						35			
			1						13			
			2						26			
			15						32			
			5						9			
			7						16			
			10						40			
			6						10			
			8						25			
			20						30			
			9						12			
			20						13			
			15						45			

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
Qu - Unconfined Compressive Strength (tsf)
W - water content (percentage of oven dry weight - %)
AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 2 of 3
Date 7/25-26/2002



PROJECT FAP 827
ROUTE IL Rt. 15/IN Rt. 64
SECTION 12BR, 12Z-3
COUNTY Wabash - IL / Gibson - IN
STRUCTURE NO. 093-0014

DESCRIPTION Wabash River Crossing
LOCATION T1S, R12W, Section 26, SW 1/4
DRILL METHOD CME 750/Hollow stem auger/wash bore
HAMMER TYPE Cathead
Drilled By Harris Drilling
Checked By SCI

Boring No.	Station	Offset	Depth (ft)	N	Qu (tsf)	W (%)	Surface Water Elevation		Depth (ft)	N	Qu (tsf)	W (%)
							Groundwater	Mud Rotary Start				
B-109	1037+65	Centerline					374.08	371.08				
			17						26			
			26						30			
			11						11			
			14						19			
			50						50			
			19						19			
			20						20			
			95						95			
			10						10			
			16						16			
			17						17			
			10						10			
			18						18			
			35						35			
			25						25			
			13						13			
			26						26			
			32						32			
			9						9			
			7						7			
			10						10			
			40						40			
			10						10			
			25						25			
			30						30			
			17						17			
			26						26			
			65						65			
			30						30			
			28						28			
			37						37			
			55						55			
			1.0						1.0			
			24.2						24.2			
			85						85			

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
Qu - Unconfined Compressive Strength (tsf)
W - water content (percentage of oven dry weight - %)
AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 3 of 3
Date 7/25-26/2002



PROJECT FAP 827
ROUTE IL Rt. 15/IN Rt. 64
SECTION 12BR, 12Z-3
COUNTY Wabash - IL / Gibson - IN
STRUCTURE NO. 093-0014

DESCRIPTION Wabash River Crossing
LOCATION T1S, R12W, Section 26, SW 1/4
DRILL METHOD CME 750/Hollow stem auger/wash bore
HAMMER TYPE Cathead
Drilled By Harris Drilling
Checked By SCI

Boring No.	Station	Offset	Depth (ft)	N	Qu (tsf)	W (%)	Surface Water Elevation		Depth (ft)	N	Qu (tsf)	W (%)
							Groundwater	Mud Rotary Start				
B-109	1037+65	Centerline					374.08	371.08				
			24						24			
			29						29			
			95						95			
			21						21			
			23.0						23.0			
			17						17			
			19						19			
			105						105			
			30						30			
			15.7						15.7			
			100						100			
			17						17			
			19						19			
			105						105			
			30						30			
			15.7						15.7			
			130						130			
			110						110			
			135						135			

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
Qu - Unconfined Compressive Strength (tsf)
W - water content (percentage of oven dry weight - %)
AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

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DESIGNED	CDP
CHECKED	ADD
DRAWN	CDP
CHECKED	ADD

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312-566-0460
Job No. 3426

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 15/IN ROUTE 64
OVER WABASH RIVER PUBLIC WATERS
FAP 827 SECT 12Z-3, 12BR
SOIL BORING LOGS

SN: 093-0021 (IL)/9502700 (IN) STA. 1036+27
WABASH CO., IL. DATE: JUNE 15, 2007

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	114
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S98 OF S114 CONTRACT 94450

Rock Core Log

Sheet 1 of 1

Date 7/26/2007



PROJECT FAP 827
 ROUTE IL Rt. 15/IN Rt. 64
 SECTION 12BR, 12Z-3
 COUNTY Wabash - IL / Gibson - IN
 STRUCTURE NO. Exist. 093-0014 Prop. 093-0021

DESCRIPTION Wabash River Crossing
 LOCATION TTS, R12W, Section 26, SW 1/4
 DRILL RIG CME 750 Drill Rig
 CORE METHOD AW Rods with Wire Line Core Barrel
 CORE BARREL TYPE/SIZE 12' Split Barrel/8X

Drilled By Harriet Drilling
 Checked By SCI

Boring No.: B-105
 Station: 1037+65
 Offset: Centerline
 Ground Surface El. 386.08

Core Diameter 1.25"
 Top of Pack El. 279.06
 Begin Core El. 277.58

Description	Depth (ft)	Core Recovered (%)	R.O.C. (%)	CORE	
				Length (ft)	Weight (lb)
Hard, Relatively Dry, Clayey SHALE	277.58			8.20	
	110			2.26	
		1	84	3.27	
				3.27	
				1.53	
	115			4.37	
				1.40	
				1.28	
				1.92	
Boring terminated at 118.5 feet.	287.58			1.25	
	120				

Color pictures of the cores
 Cores will be stored for examination until: 1/2007

DESIGNED	COF
CHECKED	ADD
DRAWN	COF
CHECKED	ADD

ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 15/IN ROUTE 64
 OVER WABASH RIVER PUBLIC WATERS
 FAP 827 SECT 12Z-3, 12BR
 SOIL BORING LOGS

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 Job No. 3426

SN: 093-0021 (IL)/9502700 (IN)
 WABASH CO., IL.

STA. 1036+27
 DATE: JUNE 15, 2007

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ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	115
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S99 OF S114 CONTRACT 94450

Bore Log Sheet 1 of 3
 Date: 7/23-24/2002
 PROJECT: FAP 827
 ROUTE: IL Rt. 15/IN Rt. 64
 SECTION: 12BR, 12Z-3
 COUNTY: Wabash - IL / Gibson - IN
 STRUCTURE NO.: 093-0014
 DESCRIPTION: Wabash River Crossing
 LOCATION: T1S, R12W, Section 26, SW 1/4
 DRILL METHOD: CME 750/Hollow stem auger/wash bore
 HAMMER TYPE: Cathead
 Drilled By: Harris Drilling
 Checked By: SCI



Boring No.:	Station:	Offset:	Depth (ft)	N	Qu (tsf)	W %	Description	Depth (ft)	N	Qu (tsf)	W %	Surface Water Elevation:
												EL
B-110	1036+85	20' Right										369.79
			6		3.0	26.9	A-7	3				369.79
			8		P			5				369.79
			8					25	9			369.79
			5		2.5	24.6	A-1-b	9				369.79
			5		P			10				369.79
			5					10				369.79
			3		0.25	26.1	A-6	10				369.79
			3		P			15				369.79
			3					30	15			369.79
			2		0.68	30.6	A-2	11				369.79
			10		B			19				369.79
			2		0	30.1	A-4	22				369.79
			2		P			36	25			369.79
			2		0.46	35.5	A-4	14				369.79
			15		B			18				369.79
			15					32				369.79
			2					12				369.79
			3					24				369.79
			5					40	34			369.79
			5					13				369.79
			10					24				369.79
			20					46				369.79
			7					17				369.79
			10					25				369.79
			8					45	30			369.79

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log Sheet 2 of 3
 Date: 7/23-24/2002
 PROJECT: FAP 827
 ROUTE: IL Rt. 15/IN Rt. 64
 SECTION: 12BR, 12Z-3
 COUNTY: Wabash - IL / Gibson - IN
 STRUCTURE NO.: 093-0014
 DESCRIPTION: Wabash River Crossing
 LOCATION: T1S, R12W, Section 26, SW 1/4
 DRILL METHOD: CME 750/Hollow stem auger/wash bore
 HAMMER TYPE: Cathead
 Drilled By: Harris Drilling
 Checked By: SCI



Boring No.:	Station:	Offset:	Depth (ft)	N	Qu (tsf)	W %	Description	Depth (ft)	N	Qu (tsf)	W %	Surface Water Elevation:
												EL
B-110	1036+85	20' Right										369.79
			12					12				369.79
			19					26				369.79
			60					313.29				369.79
			10					10				369.79
			20					20			25.0	369.79
			75		45			305.29				369.79
			20					20				369.79
			38					60				369.79
			60		46			323.29				369.79
			22					22			26.4	369.79
			26					85	36			369.79
			20					20				369.79
			26					65	38			369.79
			90									369.79

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log Sheet 3 of 3
 Date: 7/23-24/2002
 PROJECT: FAP 827
 ROUTE: IL Rt. 15/IN Rt. 64
 SECTION: 12BR, 12Z-3
 COUNTY: Wabash - IL / Gibson - IN
 STRUCTURE NO.: 093-0014
 DESCRIPTION: Wabash River Crossing
 LOCATION: T1S, R12W, Section 26, SW 1/4
 DRILL METHOD: CME 750/Hollow stem auger/wash bore
 HAMMER TYPE: Cathead
 Drilled By: Harris Drilling
 Checked By: SCI



Boring No.:	Station:	Offset:	Depth (ft)	N	Qu (tsf)	W %	Description	Depth (ft)	N	Qu (tsf)	W %	Surface Water Elevation:
												EL
B-110	1036+85	20' Right										369.79
			11					11				369.79
			16					16				369.79
			95		59			95				369.79
			285.29		100			285.29				369.79
			40		50/2.5*			40				369.79
			106		50/2.5*			106				369.79
			110					110				369.79
			135					135				369.79

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

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DESIGNED	CDF
CHECKED	ADD
DRAWN	CDF
CHECKED	ADD

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ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 15/IN ROUTE 64
 OVER WABASH RIVER PUBLIC WATERS
 FAP 827 SECT 12Z-3, 12BR
 SOIL BORING LOGS
 SN: 093-0021 (IL)/9502700 (IN) STA. 1036+27
 WABASH CO., IL. DATE: JUNE 15, 2007

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	116
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S100 OF S114 CONTRACT 94450

Bore Log Sheet 1 of 3 Date 7/31-8/1/2002

PROJECT FAP 827 DESCRIPTION Wabash River Crossing
 ROUTE IL Rt. 15/IN Rt. 64 LOCATION T1S. R12W. Section 26, SW 1/4
 SECTION 12BR, 12Z-3 DRILL METHOD CME 750/Hollow stem auger/wash bore
 COUNTY Wabash - IL / Gibson - IN HAMMER TYPE Cathead
 STRUCTURE NO. 093-0014 Drilled By Harris Drilling
 Checked By SCI



Boring No.	Station	Offset	Depth (ft)	N	Qu (tsf)	W %	Surface Water Elevation		Depth (ft)	N	Qu (tsf)	W %
							Groundwater Elevation	Mud Rotary Start Elevation				
B-111	1040+00	4' Left					371.14	368.14				
			5		4.5	23.8						
			8		4.5	23.6						
			11		P							
			2		4.5	23.6						
			5		2							
			3		3.5	23.4						
			4		P							
			3		3.5	23.4						
			5		P							
			2		3.5	23.9						
			10		3							
			2		0	32.0						
			2		P							
			1		0	30.4						
			15		2							
			3									
			5									
			6									
			3									
			5									
			6									
			3									
			6									
			3									
			6									
			2									
			5									
			9									

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log Sheet 2 of 3 Date 7/31-8/1/2002

PROJECT FAP 827 DESCRIPTION Wabash River Crossing
 ROUTE IL Rt. 15/IN Rt. 64 LOCATION T1S. R12W. Section 26, SW 1/4
 SECTION 12BR, 12Z-3 DRILL METHOD CME 750/Hollow stem auger/wash bore
 COUNTY Wabash - IL / Gibson - IN HAMMER TYPE Cathead
 STRUCTURE NO. 093-0014 Drilled By Harris Drilling
 Checked By SCI



Boring No.	Station	Offset	Depth (ft)	N	Qu (tsf)	W %	Surface Water Elevation		Depth (ft)	N	Qu (tsf)	W %
							Groundwater Elevation	Mud Rotary Start Elevation				
B-111	1040+00	4' Left					371.14	368.14				
			3									
			9									
			25		11							
			6									
			10									
			12									
			5									
			7									
			30		8							
			6									
			12									
			17									
			27									
			29									
			6									
			12									
			35		18							
			10									
			20									
			20									
			18									
			32									
			10									
			18									
			27									
			10									
			18									
			32									
			10									
			18									
			27									
			14									
			20									

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log Sheet 3 of 3 Date 7/31-8/1/2002

PROJECT FAP 827 DESCRIPTION Wabash River Crossing
 ROUTE IL Rt. 15/IN Rt. 64 LOCATION T1S. R12W. Section 26, SW 1/4
 SECTION 12BR, 12Z-3 DRILL METHOD CME 750/Hollow stem auger/wash bore
 COUNTY Wabash - IL / Gibson - IN HAMMER TYPE Cathead
 STRUCTURE NO. 093-0014 Drilled By Harris Drilling
 Checked By SCI



Boring No.	Station	Offset	Depth (ft)	N	Qu (tsf)	W %	Surface Water Elevation		Depth (ft)	N	Qu (tsf)	W %
							Groundwater Elevation	Mud Rotary Start Elevation				
B-111	1040+00	4' Left					371.14	368.14				
			14									
			24									
			27									
			14									
			21									
			25									
			17									
			26									
			28									
			75									
			14									
			21									
			25									
			100									
			125									
			30									
			50									
			105		50/5'							
			10									
			32									
			32									
			110									
			135									

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

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 Job No. 3426

ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 15/IN ROUTE 64
 OVER WABASH RIVER PUBLIC WATERS
 FAP 827 SECT 12Z-3, 12BR
 SOIL BORING LOGS

SN: 093-0021 (IL)/9502700 (IN) STA. 1036+27
 WABASH CO., IL. DATE: JUNE 15, 2007

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	120
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S104 OF S114 CONTRACT 94450

Rock Core Log

Sheet 1 of 1
Date 2/11/2002



PROJECT FAP 827 DESCRIPTION Wabash River Crossing
 ROUTE IL Rt. 15/IN Rt. 64 LOCATION TIS, R12W, Section 26, SW 1/4
 SECTION 12BR, 12Z-3 DRILL RIG CME 750 Drill Rig
 COUNTY Wabash - IL / Gibson - IN CORE METHOD AW Rods with Wire Line Core Barrel Drilled By Herries Drilling
 STRUCTURE NO. Exist. 093-0014 Prop. 093-0021 CORE BARREL TYPE/SIZE 12.5" Split Barrel/NK Checked By SCI

Boring No.:	Station:	Offset:	Ground Surface EL.	Core Diameter	Top of Rock EL.	Begin Core EL.	D E P T H (ft)	C O R E R Y (%)	R O C K Q U A L I T Y (%)	C O R E T I M E R I N G T H (min)	S T R E N G T H (ksi)	
B-113	1042+45	7.5' Left	383.35	1.75"	277.35	275.02						
Gray Clayey SHALE										3:45		
										3:15		
							1	100%	90%	2:05		
Core bit designed for coring shale did not advance below 4'-7.5"(EL. 270.21). Coloration of return water was white.										2:23		
Approx. 2" of Limestone in bottom of Run 1. Changed to a core bit designed for cutting limestone.							270.39			2:26		
Gray, soft to moderately hard, very fine crystalline, slightly to moderately weathered, dense LIMESTONE							269.89	123		0:30		
Hard, Gray Clayey SHALE										3:45		
							2	49%	33%	4:10		
							268.35			2:05		
							266.64	3	84%	56%	1:45	
Gray, soft to moderately hard, very fine crystalline, slightly to moderately weathered, dense LIMESTONE							265.19	128		1:25		
Boring terminated at 128.17 feet												

Color pictures of the cores
Cores will be stored for examination until 1/2007

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ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 15/IN ROUTE 64
 OVER WABASH RIVER PUBLIC WATERS
 FAP 827 SECT 12Z-3, 12BR
SOIL BORING LOGS
 SN: 093-0021 (IL)/9502700 (IN) STA. 1036+27
 WABASH CO., IL. DATE: JUNE 15, 2007

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	121
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S105 OF S114 CONTRACT 94450

Bore Log

Sheet 2 of 3

Date 2/11-14/2002



PROJECT FAP 827
 ROUTE IL Rt. 15/IN Rt. 64
 SECTION 12BR, 12Z-3
 COUNTY Wabash - IL / Gibson - IN
 STRUCTURE NO. Exst. 093-0014 Prop. 093-0021

DESCRIPTION Wabash River Crossing
 LOCATION T1S, R12W, Section 26, SW 1/4
 DRILL METHOD CME 750/Hollow stem auger/wash bore
 HAMMER TYPE Automatic Hammer
 Drilled By Harris Drilling
 Checked By SCI

Boring No.	Station	Offset	Depth (ft)	N	Qu (tsf)	W (%)	Description	Depth (ft)	N	Qu (tsf)	W (%)	Surface Water Elevation	
												Groundwater Elevation	
B-114	1043+55.05	Centerline											381.92
			393.42				Medium Silty Brown, Moist SILTY CLAY, little Sand						385.92
													384.92
													380.92
			1		1.0	23.7							
			3										
			4		P								
			5										
			1		0	23.7							
			5		P								
			1		0	28.3							
			1		P								
			1		0	25.0							
			1		P								
			0		0.25	26.7							
			2		P								
			1		0	24.6							
			15		P								
			4										
			4										
			3										
			4										
			5										
			7										
			8										
			7										
			8										

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 2 of 3

Date 2/11-14/2002



PROJECT FAP 827
 ROUTE IL Rt. 15/IN Rt. 64
 SECTION 12BR, 12Z-3
 COUNTY Wabash - IL / Gibson - IN
 STRUCTURE NO. Exst. 093-0014 Prop. 093-0021

DESCRIPTION Wabash River Crossing
 LOCATION T1S, R12W, Section 26, SW 1/4
 DRILL METHOD CME 750/Hollow stem auger/wash bore
 HAMMER TYPE Automatic Hammer
 Drilled By Harris Drilling
 Checked By SCI

Boring No.	Station	Offset	Depth (ft)	N	Qu (tsf)	W (%)	Description	Depth (ft)	N	Qu (tsf)	W (%)	Surface Water Elevation	
												Groundwater Elevation	
B-114	1043+55.05	Centerline											381.92
			393.42				Dense Brown and Gray Fine to Medium SAND						385.92
													384.92
													380.92
			6										
			12										
			14										
			18										
			24										
			18										
			24										
			17										
			26										
			21										
			28										
			6										
			11										
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			15										
			13										
			21										
			23										
			17										
			18										

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 3 of 3

Date 2/11-14/2002



PROJECT FAP 827
 ROUTE IL Rt. 15/IN Rt. 64
 SECTION 12BR, 12Z-3
 COUNTY Wabash - IL / Gibson - IN
 STRUCTURE NO. Exst. 093-0014 Prop. 093-0021

DESCRIPTION Wabash River Crossing
 LOCATION T1S, R12W, Section 26, SW 1/4
 DRILL METHOD CME 750/Hollow stem auger/wash bore
 HAMMER TYPE Automatic Hammer
 Drilled By Harris Drilling
 Checked By SCI

Boring No.	Station	Offset	Depth (ft)	N	Qu (tsf)	W (%)	Description	Depth (ft)	N	Qu (tsf)	W (%)	Surface Water Elevation	
												Groundwater Elevation	
B-114	1043+55.05	Centerline											381.92
			393.42										385.92
													384.92
													380.92
			5										
			8										
			10										
			17										
			26										
			21										
			23										
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			15										
			8										
			15										

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

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CHECKED	ADD

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 312-665-0450
 Job No. 3426

ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 15/IN ROUTE 64
 OVER WABASH RIVER PUBLIC WATERS
 FAP 827 SECT 12Z-3, 12BR
 SOIL BORING LOGS

SN: 093-0021 (IL)/9502700 (IN) STA. 1036+27
 WABASH CO., IL. DATE: JUNE 15, 2007

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	123
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S107 OF S114 CONTRACT 94450

Bore Log

Sheet 1 of 3
Date 2/19-22,25/02



PROJECT: FAP 827
ROUTE: IL Rt. 15/IN Rt. 64
SECTION: 12BR, 12Z-3
COUNTY: Wabash - IL / Gibson - IN
STRUCTURE NO.: Exist. 093-0014 Prop. 093-0021

DESCRIPTION: Wabash River Crossing
LOCATION: T1S, R12W, Section 26, SW 1/4
DRILL METHOD: CME 750/Hollow stem auger/wash bore
HAMMER TYPE: Automatic Hammer

Drilled By: Harris Drilling
Checked By: SCI

Boring No.	Station	Offset	Depth (ft) El.	N	Qu t/ft	W %	Description	Surface Water Elevation	Groundwater Elevation	First Encountered	Upon Completion	After 24 Hours	Collapse	Mud Rotary Start Elevation	Depth (ft) El.	N	Qu t/ft	W %	Description
A-4	1046+05	0.5' Right	2				Soft Brown, Moist Clayey SILT, some Sand	379.51	379.51	379.51	380.76	382.68	382.68	379.01	6				Gravelly @ 21 feet to 23 feet as observed during drilling
			1	0.07	17.8	25	6												
A-5	1046+05	0.5' Right	2				Medium Stiff Brown, Moist SILTY CLAY	379.51	379.51	379.51	380.76	382.68	382.68	379.01	8				Medium Dense Brown Fine to Coarse SAND, some Fine Gravel and trace Coarse Gravel
			3	0.20	21.2	9													
A-2	1046+05	0.5' Right	2				Very Loose Brown Fine SAND, some Silt and Clay	379.51	379.51	379.51	380.76	382.68	382.68	379.01	10				Gravelly @ 71 feet to 73.5 feet as observed during drilling
			1			13													
A-4	1046+05	0.5' Right	0				Soft Brown, Wet CLAYEY SILT, some Sand	379.51	379.51	379.51	380.76	382.68	382.68	379.01	8				Poor Sample Recovery (1.25' - Coarse GRAVEL (1 specimen) and Fine Brown SAND adhering to the coarse gravel
			1	0	22.5	9													
A-4	1046+05	0.5' Right	0				Soft Brown and Grey, Moist CLAYEY SILT	379.51	379.51	379.51	380.76	382.68	382.68	379.01	10				Medium Dense Brown and Gray Fine to Coarse SAND, little Fine Gravel and Coal
			1	0	25.2	11													
A-2	1046+05	0.5' Right	1				Loose Brown Fine SAND, some Silt	379.51	379.51	379.51	380.76	382.68	382.68	379.01	11				Gravelly @ 71 feet to 73.5 feet as observed during drilling
			2		24.1	12													
A-2	1046+05	0.5' Right	15				Medium Dense Brown Fine to Medium SAND	379.51	379.51	379.51	380.76	382.68	382.68	379.01	11				Poor Sample Recovery (1.25' - Coarse GRAVEL (1 specimen) and Fine Brown SAND adhering to the coarse gravel
			7			12													
A-1-b	1046+05	0.5' Right	6				some Fine Gravel	379.51	379.51	379.51	380.76	382.68	382.68	379.01	11				Hard, Relatively Dry, Grey Clayey SHALE
			7			13													
A-2	1046+05	0.5' Right	4				Medium Dense Brown Fine to Coarse SAND, little Fine Gravel	379.51	379.51	379.51	380.76	382.68	382.68	379.01	11				Refer to the Rock Core Log for additional information.
			5			12													
A-1-b	1046+05	0.5' Right	6				Medium Dense Brown Fine to Medium SAND	379.51	379.51	379.51	380.76	382.68	382.68	379.01	11				Hard, Relatively Dry, Grey Clayey SHALE
			7			13													
A-1-b	1046+05	0.5' Right	6				some Fine Gravel	379.51	379.51	379.51	380.76	382.68	382.68	379.01	11				Refer to the Rock Core Log for additional information.
			7			13													

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
Qu - Unconfined Compressive Strength (t/ft)
W - water content (percentage of oven dry weight - %)
AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 2 of 3
Date 2/19-22,25/02



PROJECT: FAP 827
ROUTE: IL Rt. 15/IN Rt. 64
SECTION: 12BR, 12Z-3
COUNTY: Wabash - IL / Gibson - IN
STRUCTURE NO.: Exist. 093-0014 Prop. 093-0021

DESCRIPTION: Wabash River Crossing
LOCATION: T1S, R12W, Section 26, SW 1/4
DRILL METHOD: CME 750/Hollow stem auger/wash bore
HAMMER TYPE: Automatic Hammer

Drilled By: Harris Drilling
Checked By: SCI

Boring No.	Station	Offset	Depth (ft) El.	N	Qu t/ft	W %	Description	Surface Water Elevation	Groundwater Elevation	First Encountered	Upon Completion	After 24 Hours	Collapse	Mud Rotary Start Elevation	Depth (ft) El.	N	Qu t/ft	W %	Description
A-2	1046+05	0.5' Right	4				Medium Dense Brown and Gray Fine to Coarse SAND, little Fine Gravel	379.51	379.51	379.51	380.76	382.68	382.68	379.01	4				(determined by laboratory analysis)
			13			22													
A-2	1046+05	0.5' Right	8				Medium Dense Brown and Gray Fine to Coarse SAND, little Fine Gravel	379.51	379.51	379.51	380.76	382.68	382.68	379.01	8				Gravelly @ 71 feet to 73.5 feet as observed during drilling
			13			22													
A-2	1046+05	0.5' Right	9				Medium Dense Brown and Gray Fine to Coarse SAND, little Fine Gravel and Coal	379.51	379.51	379.51	380.76	382.68	382.68	379.01	9				Poor Sample Recovery (1.25' - Coarse GRAVEL (1 specimen) and Fine Brown SAND adhering to the coarse gravel
			12			26													
A-2	1046+05	0.5' Right	5				Medium Dense Brown and Gray Fine to Coarse SAND, trace Fine Gravel	379.51	379.51	379.51	380.76	382.68	382.68	379.01	5				Gravelly @ 71 feet to 73.5 feet as observed during drilling
			11			20													
A-2	1046+05	0.5' Right	5				Medium Dense Brown and Gray Fine to Coarse SAND, trace Fine Gravel	379.51	379.51	379.51	380.76	382.68	382.68	379.01	5				Poor Sample Recovery (1.25' - Coarse GRAVEL (1 specimen) and Fine Brown SAND adhering to the coarse gravel
			11			20													
A-1-b	1046+05	0.5' Right	6				Dense Brown Fine SAND, some Fine Gravel and trace Coarse Gravel	379.51	379.51	379.51	380.76	382.68	382.68	379.01	6				Gravelly @ 71 feet to 73.5 feet as observed during drilling
			11			20													
A-1-b	1046+05	0.5' Right	10				Medium Dense Brown and Gray Fine to Coarse SAND, some Fine Gravel and trace Coal	379.51	379.51	379.51	380.76	382.68	382.68	379.01	10				Poor Sample Recovery (1.25' - Coarse GRAVEL (1 specimen) and Fine Brown SAND adhering to the coarse gravel
			12			20													
A-2	1046+05	0.5' Right	10				Dense Brown Fine SAND, some Fine Gravel	379.51	379.51	379.51	380.76	382.68	382.68	379.01	10				Gravelly @ 71 feet to 73.5 feet as observed during drilling
			12			20													
A-2	1046+05	0.5' Right	10				Dense Gray Fine SAND, little Coe A-2	379.51	379.51	379.51	380.76	382.68	382.68	379.01	10				Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
			12			20													

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
Qu - Unconfined Compressive Strength (t/ft)
W - water content (percentage of oven dry weight - %)
AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 3 of 3
Date 2/19-22,25/02



PROJECT: FAP 827
ROUTE: IL Rt. 15/IN Rt. 64
SECTION: 12BR, 12Z-3
COUNTY: Wabash - IL / Gibson - IN
STRUCTURE NO.: Exist. 093-0014 Prop. 093-0021

DESCRIPTION: Wabash River Crossing
LOCATION: T1S, R12W, Section 26, SW 1/4
DRILL METHOD: CME 750/Hollow stem auger/wash bore
HAMMER TYPE: Automatic Hammer

Drilled By: Harris Drilling
Checked By: SCI

Boring No.	Station	Offset	Depth (ft) El.	N	Qu t/ft	W %	Description	Surface Water Elevation	Groundwater Elevation	First Encountered	Upon Completion	After 24 Hours	Collapse	Mud Rotary Start Elevation	Depth (ft) El.	N	Qu t/ft	W %	Description
A-7	1046+05	0.5' Right	16				Very Dense Brown Fine to Coarse SAND, some Fine Gravel and trace Coarse Gravel	379.51	379.51	379.51	380.76	382.68	382.68	379.01	16				(determined by laboratory analysis)
			28			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	115				(determined by laboratory analysis)
			116			36													
A-7	1046+05	0.5' Right	115				Hard, Relatively Dry, Grey Clayey SHALE	379.51	379.51	379.51	380.76	382.68	382.68	379.01	11				

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	126
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S110 OF S114 CONTRACT 94450

Bore Log

Sheet 1 of 3

Date 2/28, 3/1, 5, 6/2002



PROJECT FAP 827 DESCRIPTION Wabash River Crossing
 ROUTE IL Rt. 15/IN Rt. 64 LOCATION T1S, R12W, Section 26, SW 1/4
 SECTION 12BR, 12Z-3 DRILL METHOD CME 750/Hollow stem auger/wash bore
 COUNTY Wabash - IL / Gibson - IN HAMMER TYPE Automatic Hammer
 STRUCTURE NO. Exst. 093-0014 Prop. 093-0021 Drilled By Harris Drilling
 Checked By SCI

Boring No.	Station	Offset	Depth (ft) EL.	N	Qu t/ft	W %	Surface Water Elevation											
							Groundwater Elevation	First Encountered	Upon Completion	After 48 Hours/Collapse								
B-118	1048+45	25' Right	390.90				345.40											
			387.90															
			385.40															
			382.90															
			380.40															
			377.90															
			375.90															
			350.40															
			323.90															

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (t/ft)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 2 of 3

Date 2/28, 3/1, 5, 6/2002



PROJECT FAP 827 DESCRIPTION Wabash River Crossing
 ROUTE IL Rt. 15/IN Rt. 64 LOCATION T1S, R12W, Section 26, SW 1/4
 SECTION 12BR, 12Z-3 DRILL METHOD CME 750/Hollow stem auger/wash bore
 COUNTY Wabash - IL / Gibson - IN HAMMER TYPE Automatic Hammer
 STRUCTURE NO. Exst. 093-0014 Prop. 093-0021 Drilled By Harris Drilling
 Checked By SCI

Boring No.	Station	Offset	Depth (ft) EL.	N	Qu t/ft	W %	Surface Water Elevation											
							Groundwater Elevation	First Encountered	Upon Completion	After 48 Hours/Collapse								
B-118	1048+45	25' Right	390.90				345.40											
			345.40															
			318.90															
			338.90															
			333.90															
			310.90															
			328.90															
			323.90															

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (t/ft)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 3 of 3

Date 2/28, 3/1, 5, 6/2002



PROJECT FAP 827 DESCRIPTION Wabash River Crossing
 ROUTE IL Rt. 15/IN Rt. 64 LOCATION T1S, R12W, Section 26, SW 1/4
 SECTION 12BR, 12Z-3 DRILL METHOD CME 750/Hollow stem auger/wash bore
 COUNTY Wabash - IL / Gibson - IN HAMMER TYPE Automatic Hammer
 STRUCTURE NO. Exst. 093-0014 Prop. 093-0021 Drilled By Harris Drilling
 Checked By SCI

Boring No.	Station	Offset	Depth (ft) EL.	N	Qu t/ft	W %	Surface Water Elevation											
							Groundwater Elevation	First Encountered	Upon Completion	After 48 Hours/Collapse								
B-118	1048+45	25' Right	390.90				300.40											
			300.40															
			273.90															
			290.90															
			310.90															
			328.90															
			323.90															

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (t/ft)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

m:\proj\3426\stage-2\structures\design\sub\sbst020.dgn

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DESIGNED	CDF
CHECKED	ADD
DRAWN	CDF
CHECKED	ADD

benesch

alfred benesch & company
 Engineers - Surveyors - Planners
 225 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450
 Job No. 3426

ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 15/IN ROUTE 64
 OVER WABASH RIVER PUBLIC WATERS
 FAP 827 SECT 12Z-3, 12BR
 SOIL BORING LOGS

SN: 093-0021 (IL)/9502700 (IN) STA. 1036+27
 WABASH CO., IL. DATE: JUNE 15, 2007

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	129
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S113 OF S114 CONTRACT NO. 94450

Bore Log

Sheet 1 of 3



PROJECT: FAP 827
 ROUTE: IL Rt. 15/IN Rt. 64
 SECTION: 12BR, 12Z-3
 COUNTY: Wabash - IL / Gibson - IN
 STRUCTURE NO.: Exist. 093-0014 Prop. 093-0021

DESCRIPTION: Wabash River Crossing
 LOCATION: T1S, R12W, Section 26, SW 1/4
 DRILL METHOD: CME 750/Hollow stem auger/wash bore
 HAMMER TYPE: Automatic Hammer

Date: 3/7-11-13/2002
 Drilled By: Harris Drilling
 Checked By: SCI

Boring No.: SCI ABUT. 2 Station: 1050+85 Offset: Centerline	Depth (ft) EL.	N	Qu (tsf)	W %	Surface Water Elevation: 390.68	Groundwater Elevation: 381.68	First Encountered: 381.68	Upon Completion: 386.93	After 5 Days: 386.51/Collapse: 387.01	Mud Rotary Start Elevation: 377.18	Depth (ft) EL.	N	Qu (tsf)	W %
	390.10													
	387.68													
	365.18													
	362.68													
	360.18													
	357.68													
	355.18													
	352.68													
	350.18													
	347.68													
	345.18													
	342.68													
	340.18													
	337.68													
	335.18													
	332.68													
	330.18													
	327.68													
	325.18													
	323.68													

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 2 of 3



PROJECT: FAP 827
 ROUTE: IL Rt. 15/IN Rt. 64
 SECTION: 12BR, 12Z-3
 COUNTY: Wabash - IL / Gibson - IN
 STRUCTURE NO.: Exist. 093-0014 Prop. 093-0021

DESCRIPTION: Wabash River Crossing
 LOCATION: T1S, R12W, Section 26, SW 1/4
 DRILL METHOD: CME 750/Hollow stem auger/wash bore
 HAMMER TYPE: Automatic Hammer

Date: 3/7-11-13/2002
 Drilled By: Harris Drilling
 Checked By: SCI

Boring No.: SCI ABUT. 2 Station: 1050+85 Offset: Centerline	Depth (ft) EL.	N	Qu (tsf)	W %	Surface Water Elevation: 390.68	Groundwater Elevation: 381.68	First Encountered: 381.68	Upon Completion: 386.93	After 5 Days: 386.51/Collapse: 387.01	Mud Rotary Start Elevation: 377.18	Depth (ft) EL.	N	Qu (tsf)	W %
	345.18													
	342.68													
	340.18													
	337.68													
	335.18													
	333.68													
	331.18													
	329.68													
	327.68													
	325.18													
	323.68													

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

Bore Log

Sheet 3 of 3



PROJECT: FAP 827
 ROUTE: IL Rt. 15/IN Rt. 64
 SECTION: 12BR, 12Z-3
 COUNTY: Wabash - IL / Gibson - IN
 STRUCTURE NO.: Exist. 093-0014 Prop. 093-0021

DESCRIPTION: Wabash River Crossing
 LOCATION: T1S, R12W, Section 26, SW 1/4
 DRILL METHOD: CME 750/Hollow stem auger/wash bore
 HAMMER TYPE: Automatic Hammer

Date: 3/7-11-13/2002
 Drilled By: Harris Drilling
 Checked By: SCI

Boring No.: SCI ABUT. 2 Station: 1050+85 Offset: Centerline	Depth (ft) EL.	N	Qu (tsf)	W %	Surface Water Elevation: 390.68	Groundwater Elevation: 381.68	First Encountered: 381.68	Upon Completion: 386.93	After 5 Days: 386.51/Collapse: 387.01	Mud Rotary Start Elevation: 377.18	Depth (ft) EL.	N	Qu (tsf)	W %
	300.18													
	276.18													
	275.18													
	270.18													
	265.18													
	260.18													
	255.18													
	250.18													
	245.18													
	240.18													
	235.18													
	230.18													
	225.18													
	220.18													
	215.18													
	210.18													
	205.18													
	200.18													
	195.18													
	190.18													
	185.18													
	180.18													
	175.18													
	170.18													
	165.18													
	160.18													
	155.18													
	150.18													
	145.18													
	140.18													
	135.18													

Standard Penetration Test (N-value) - Blows per foot to drive 2-inch O.D. split spoon sampler 12-inches with a 140# Hammer falling 30-inches. Failure Type: B-Bulge; S-Shear; P-Penetrometer Test; E-Estimated
 Qu - Unconfined Compressive Strength (tsf)
 W - water content (percentage of oven dry weight - %)
 AASHTO Designations are estimated unless otherwise noted and determined by laboratory analysis

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DESIGNED	CDF
CHECKED	ADD
DRAWN	CDF
CHECKED	ADD

benesch

alfred benesch & company
 Engineers - Surveyors - Planners
 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450
 Job No. 3426

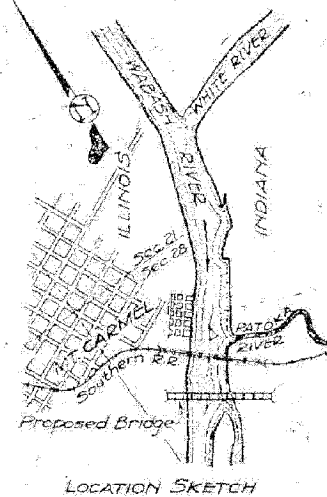
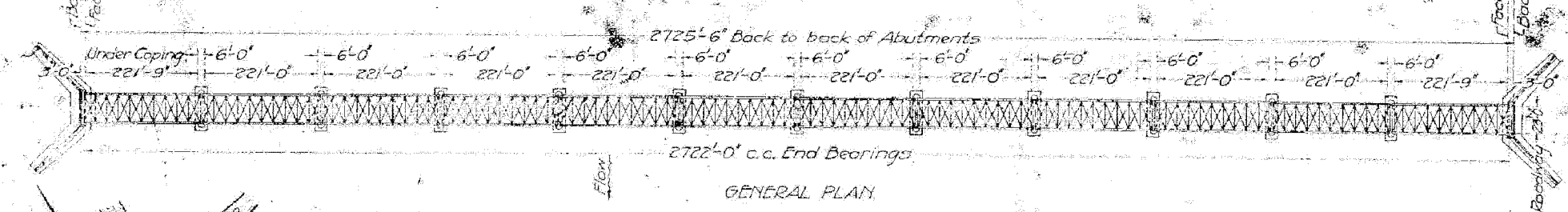
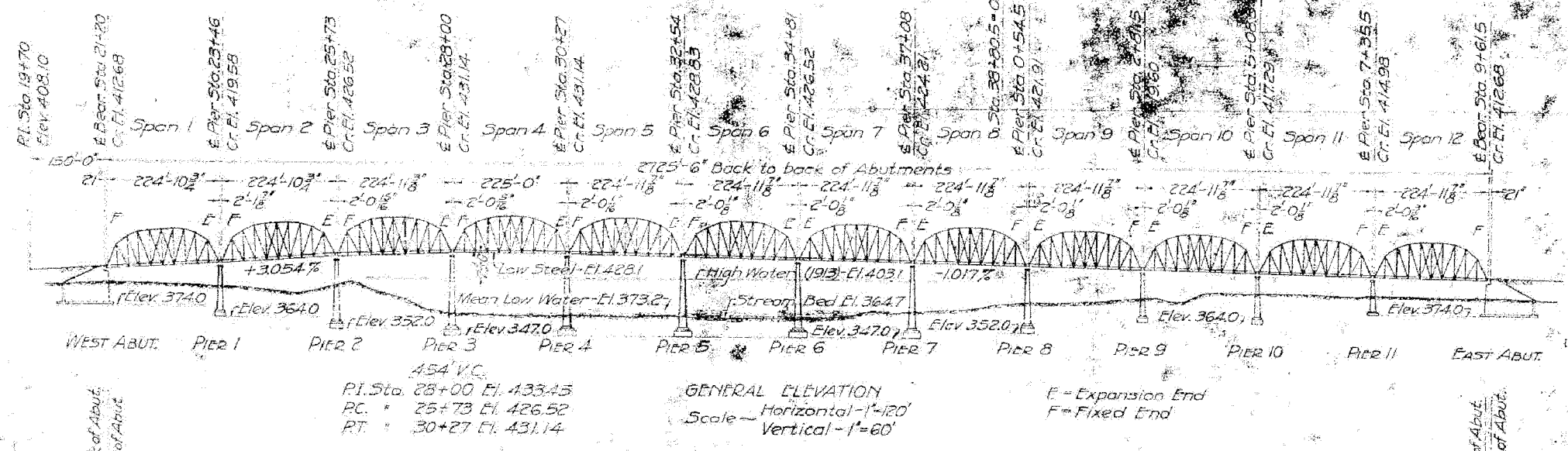
ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 15/IN ROUTE 64
 OVER WABASH RIVER PUBLIC WATERS
 FAP 827 SECT 12Z-3, 12BR
 SOIL BORING LOGS

SN: 093-0021 (IL)/9502700 (IN) STA. 1036+27
 WABASH CO., IL. DATE: JUNE 15, 2007

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	131
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS PROJECT		

B.M.-Mt. Carmel at S.W. side of Court House on S.E. wing on West
Wall in Wall Bronze Tablet stamped 465 Elev. 464.86 U.S.G.S.B.M.

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



TOTAL BILL OF MATERIAL

ITEM	STEEL SUPERSTR.	PIERS	ABUTS.	TOTALS
Class A Concrete - Cu. Yds.		3913.3		3913.3
Class X Concrete - Cu. Yds.	1303.3		1111.7	2415.0
Reinforcement Bars - Lbs.	194970	97320	115180	407470
Structural Steel - Lbs.	5379820			5379820
Untreated Piling - 30'-0" long Lin. Ft.		42360	5940	48300
Untreated Piling - 20'-0" long Lin. Ft.			3960	3960
Name Plates		?		?
Steel Castings - Lbs.	87100			87100

COMPUTED BY *JNS-SBA*
 CHECKED BY *JNS-SBA*
 DRAWN BY *JNS-SBA*
 EXAMINED *Dec 20, 1939*
 PASSED *[Signature]*
 APPROVED *[Signature]*
 Revised *8-2-30 10-4-30*

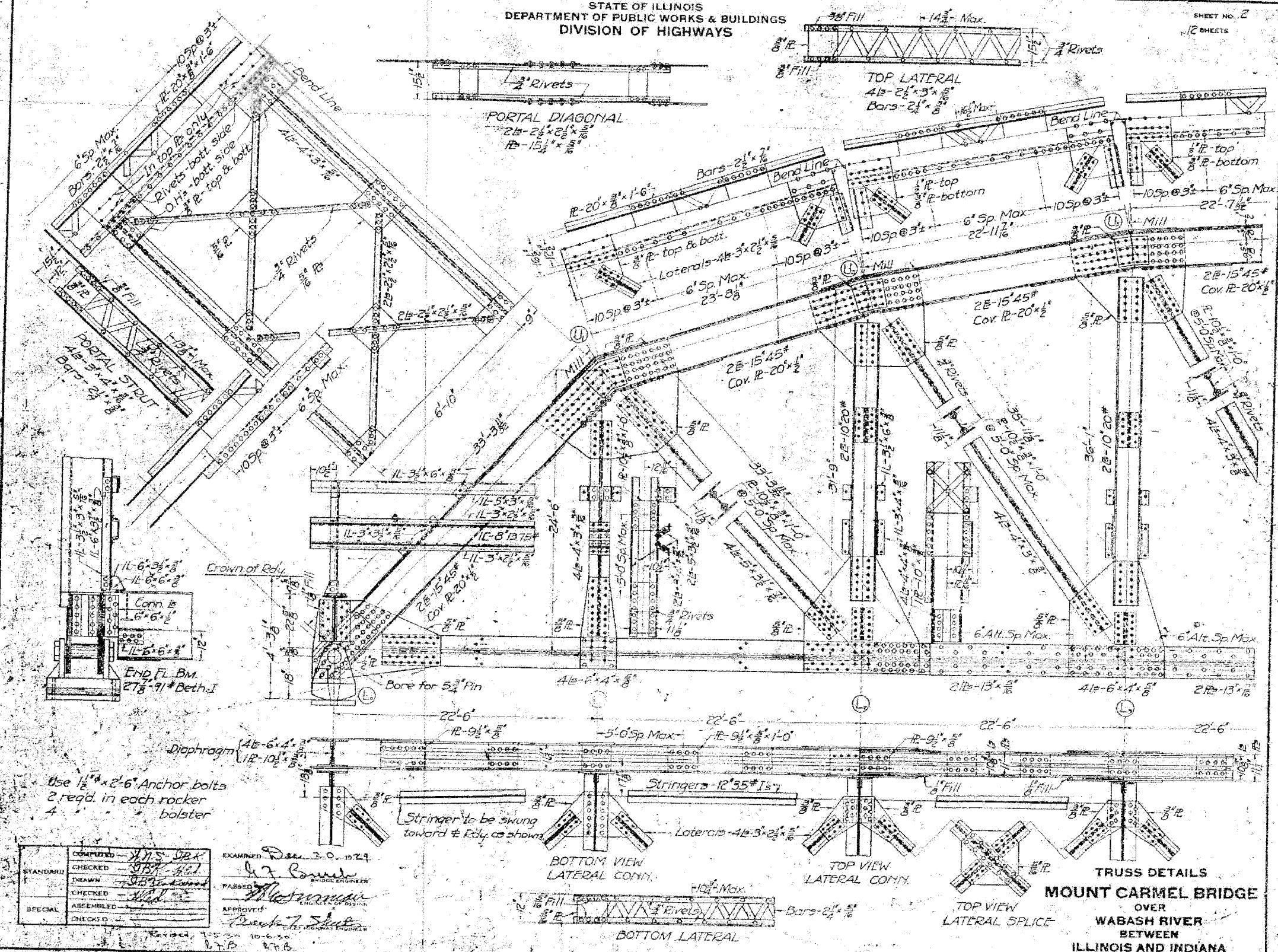
FOR INFORMATION ONLY

GENERAL ELEVATION AND PLAN
 MOUNT CARMEL BRIDGE
 OVER
 WABASH RIVER
 BETWEEN
 ILLINOIS AND INDIANA

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	132
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS		

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

SHEET NO. 2
12 SHEETS



FOR INFORMATION ONLY

use 1/2" x 2-6" Anchor bolts
2 reqd. in each rocker
bolster

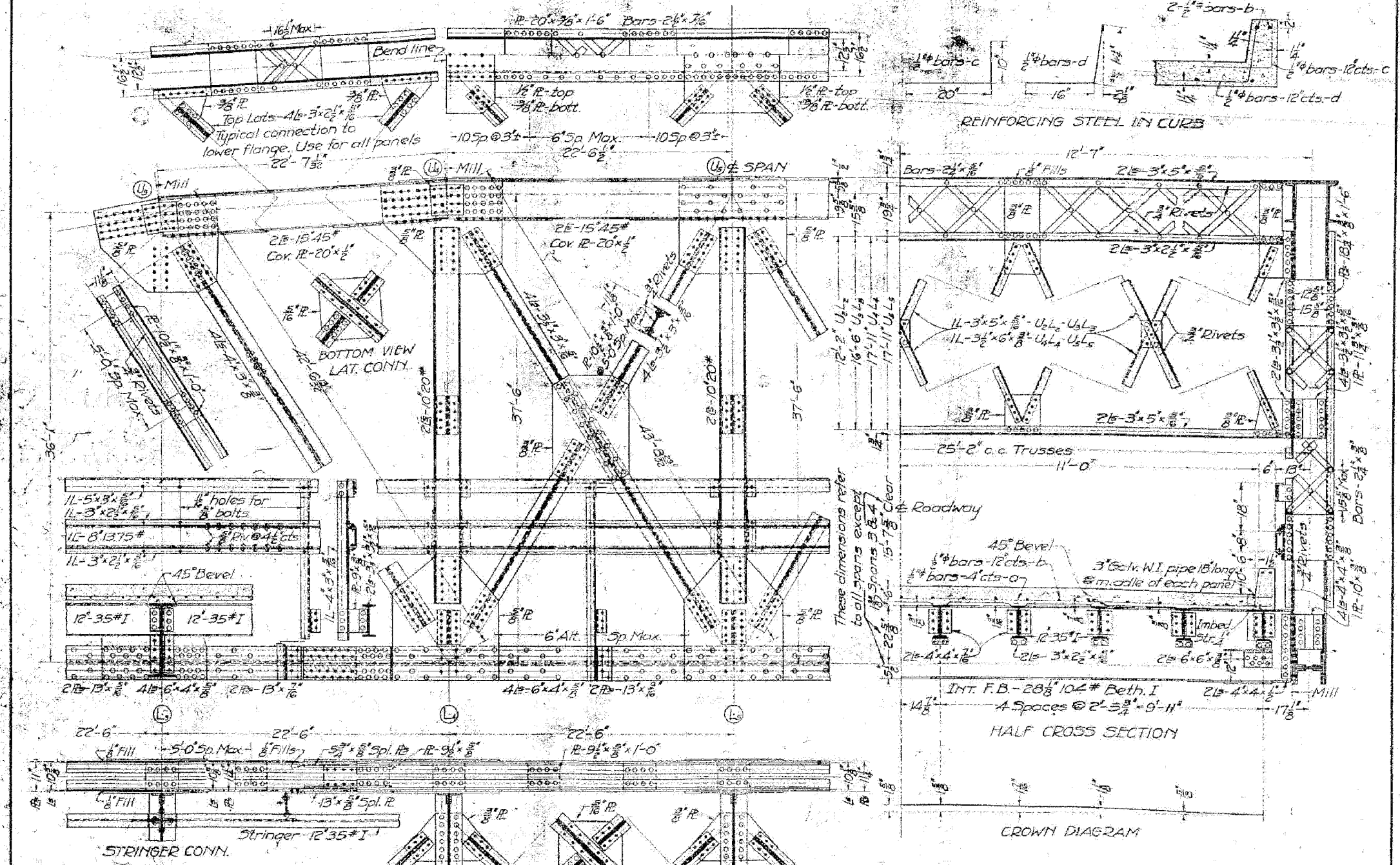
COMPLETED	— J.N.S. DBK	EXAMINED	Dec 30, 1929
CHECKED	— J.B. HET	DESIGNED	— J. B. HET
DRAWN	— J.B. HET	PASSED	— J. B. HET
CHECKED	— J.B. HET	APPROVED	— J. B. HET
SPECIAL	ASSEMBLED		
	CHECKED		

TRUSS DETAILS
MOUNT CARMEL BRIDGE
OVER
WABASH RIVER
BETWEEN
ILLINOIS AND INDIANA

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	133
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS PROJECT		

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

SHEET NO. 3
12 SHEETS



COMPUTED	BY S. S. S.
CHECKED	BY J. H. H.
DRAWN	BY J. H. H.
CHECKED	BY J. H. H.
SPECIAL	ASSEMBLED
	CHECKED

EXAMINED Dec 20, 1929
APPROVED
FOR INFORMATION ONLY

BOTT. VIEW
LAT. CONN.
BOTTOM VIEW
LATERAL SPLICE
BOTTOM VIEW
LATERAL CONN.

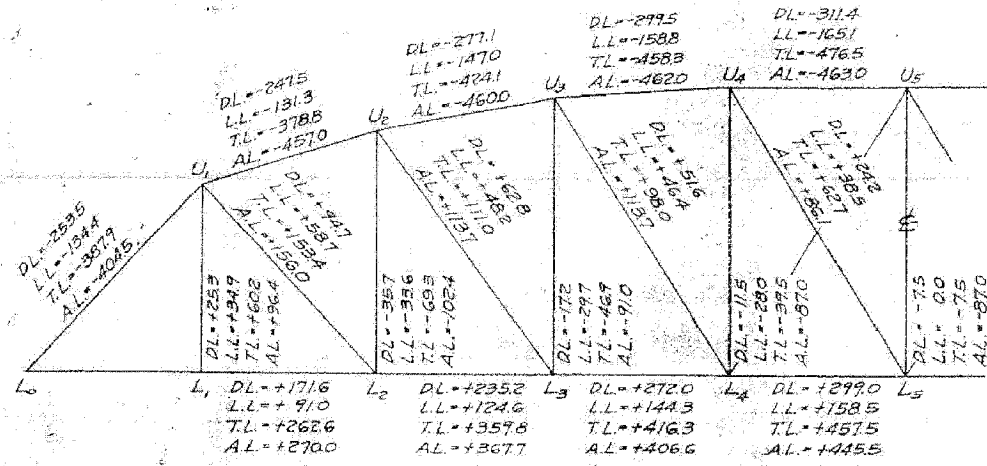
Note - See sheet 4 for floor-beam connections and vertical clearances for Spans 3 and 4. Other details of spans 3 and 4 are the same as shown on sheets 2 and 3 for all other spans.

TRUSS DETAILS
MOUNT CARMEL BRIDGE
OVER
WABASH RIVER
BETWEEN
ILLINOIS AND INDIANA

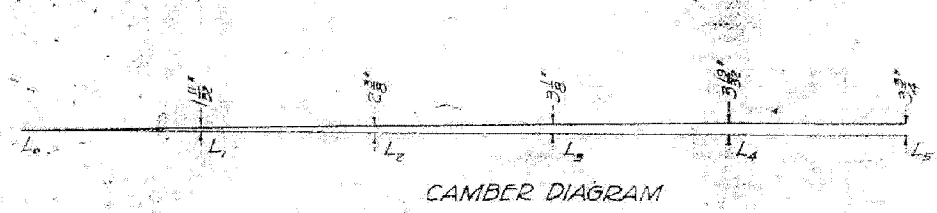
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	134
STA.		TO STA.		

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

SHEET NO. 4
12 SHEETS



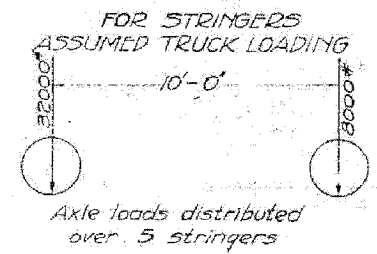
STRESS DIAGRAM
Stresses are in thousands of pounds



CAMBER DIAGRAM

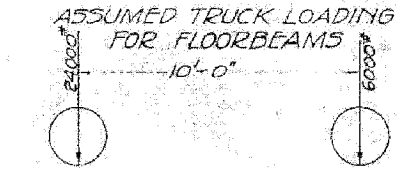
NOTATION
 DL = Stress due to weight of steel and floor system.
 LL = Stress due to uniform live load of 85#/ft² of roadway.
 TL = Total stress = DL + LL.
 AL = Maximum allowable stress.

ALLOWABLE UNIT STRESSES
 Tension - 16000 #/in²
 Compression - 16000 - 12%, but not to exceed 14000 #/in²
 Bending - 16000 #/in² on extreme fiber of built up or rolled sections, 24000 #/in² on extreme fiber of pins.
 Shearing - 10000 #/in² on shop rivets & pins, 8000 #/in² on field rivets and bolts.
 Bearing - 20000 #/in² on shop riv. and pins, 16000 #/in² on field riv. & bolts.



STRINGERS

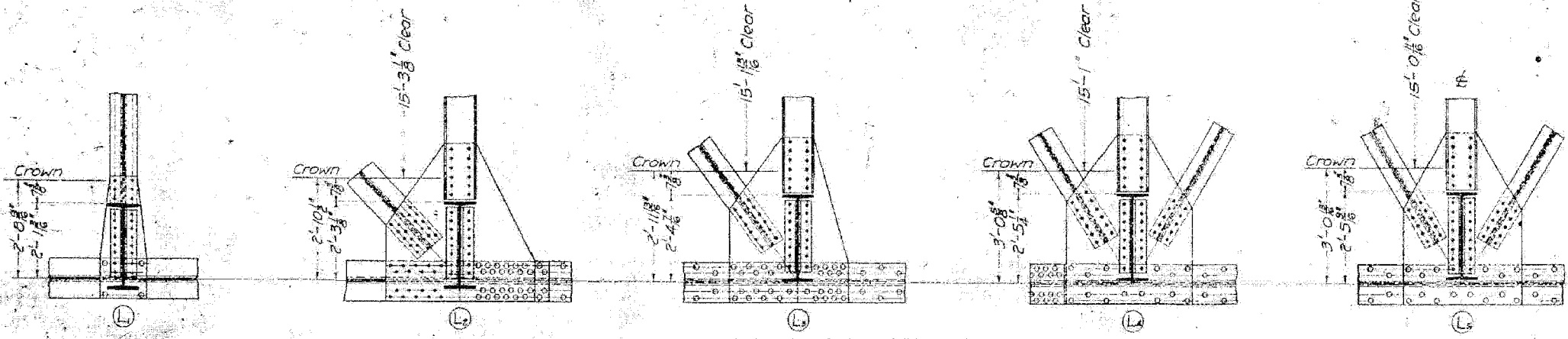
DL End Shear	2500 #
LL "	7290 #
Total "	9790 #
DL Moment	14100 #'
LL "	37350 #'
Total "	51450 #'



FLOORBEAMS

DL End Shear	25960 #	16630 #
LL "	34900 #	27350 #
Total "	60860 #	43980 #
DL Moment	165800 #'	106130 #'
LL "	222620 #'	174500 #'
Total "	388420 #'	280630 #'

LOADING FOR TRUSSES - 85 #/ft² of Roadway.



ELEVATION OF LOWER CHORD SHOWING FLOORBEAM CONNECTIONS FOR SPANS 3 & 4. REMAINDER SIMILAR TO OTHER SPANS.

COMPUTED	W.S. - J.P.C.	EXAMINED	Dec. 20, 1929
CHECKED	G.B.A.	BRIDGE ENGINEER	
DRAWN	J.P.C.		
CHECKED	J.P.C.		
ASSEMBLED		APPROVED	
CHECKED			

Revised 9-5-30 10-6-30
K.T.D. K.T.D.

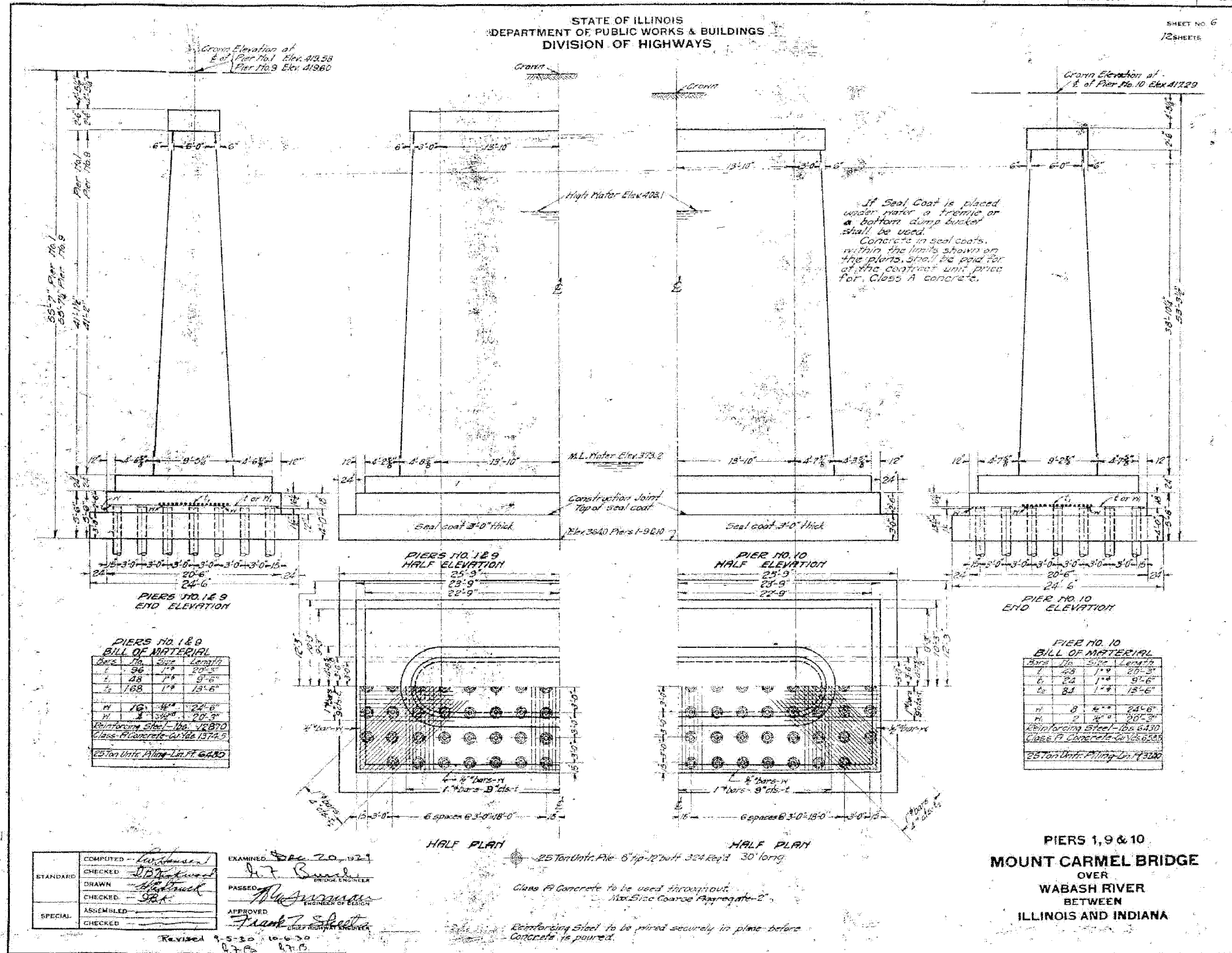
FOR INFORMATION ONLY

STRESS SHEETS
MOUNT CARMEL BRIDGE
OVER
WABASH RIVER
BETWEEN
ILLINOIS AND INDIANA

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	136
STA.	TO STA.		PROJECT	
F.H.W.A. REGION	ILLINOIS			

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

SHEET NO. 6
12 SHEETS



FOR INFORMATION ONLY

COMPUTED: *[Signature]*
CHECKED: *[Signature]*
DRAWN: *[Signature]*
CHECKED: *[Signature]*
ASSEMBLED: *[Signature]*
CHECKED: *[Signature]*

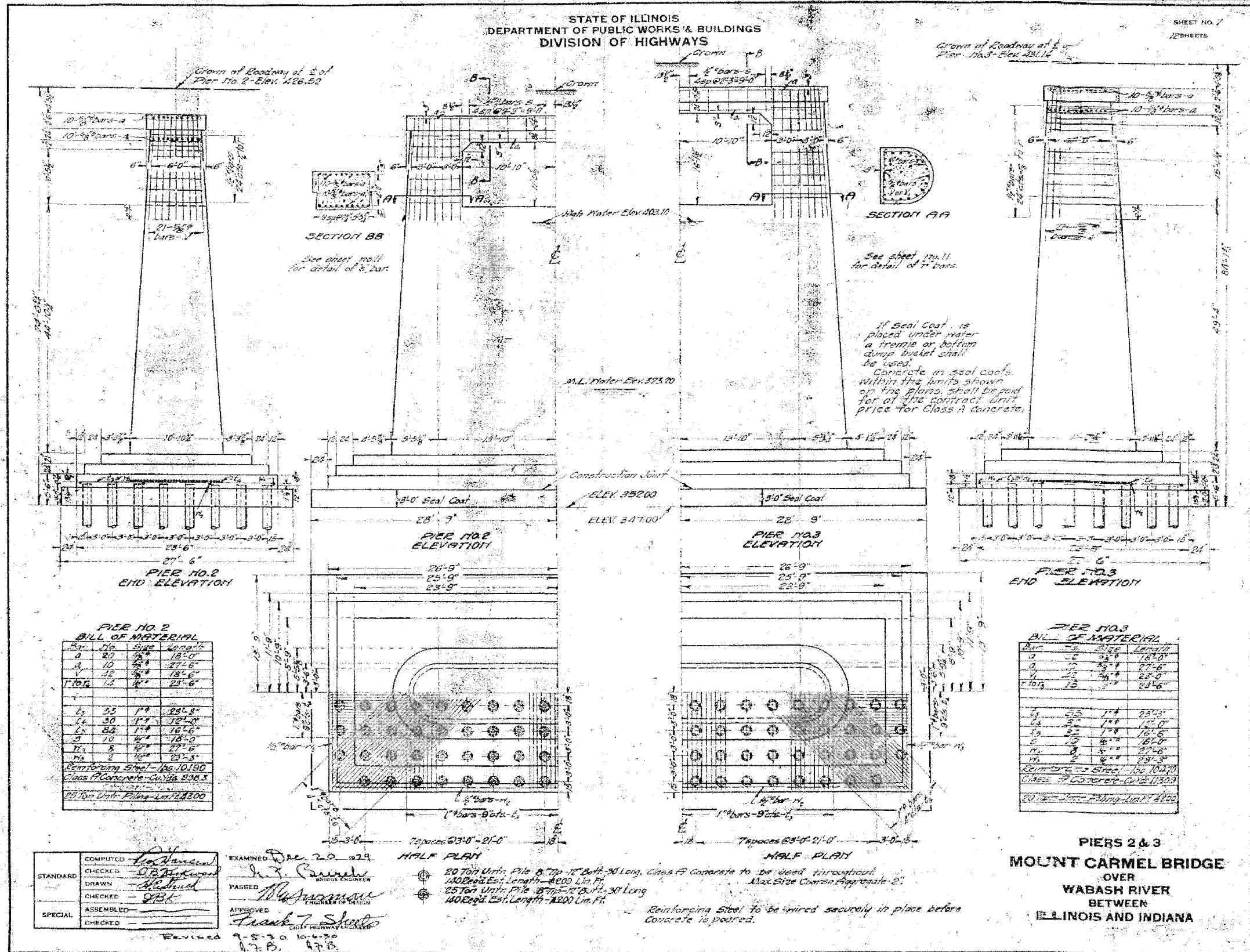
EXAMINED: *[Signature]* 10-20-30
BRIDGE ENGINEER
PASSED: *[Signature]*
APPROVED: *[Signature]*
CHIEF HIGHWAY ENGINEER

Class A Concrete to be used throughout.
Max Size Coarse Aggregate - 2"
Reinforcing Steel to be pinned securely in place before
Concrete is poured.

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	137
STA.	TO STA.		PROJECT	
F.H.W.A. REGION	ILLINOIS			

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

SHEET NO. 7
12 SHEETS



FOR INFORMATION ONLY

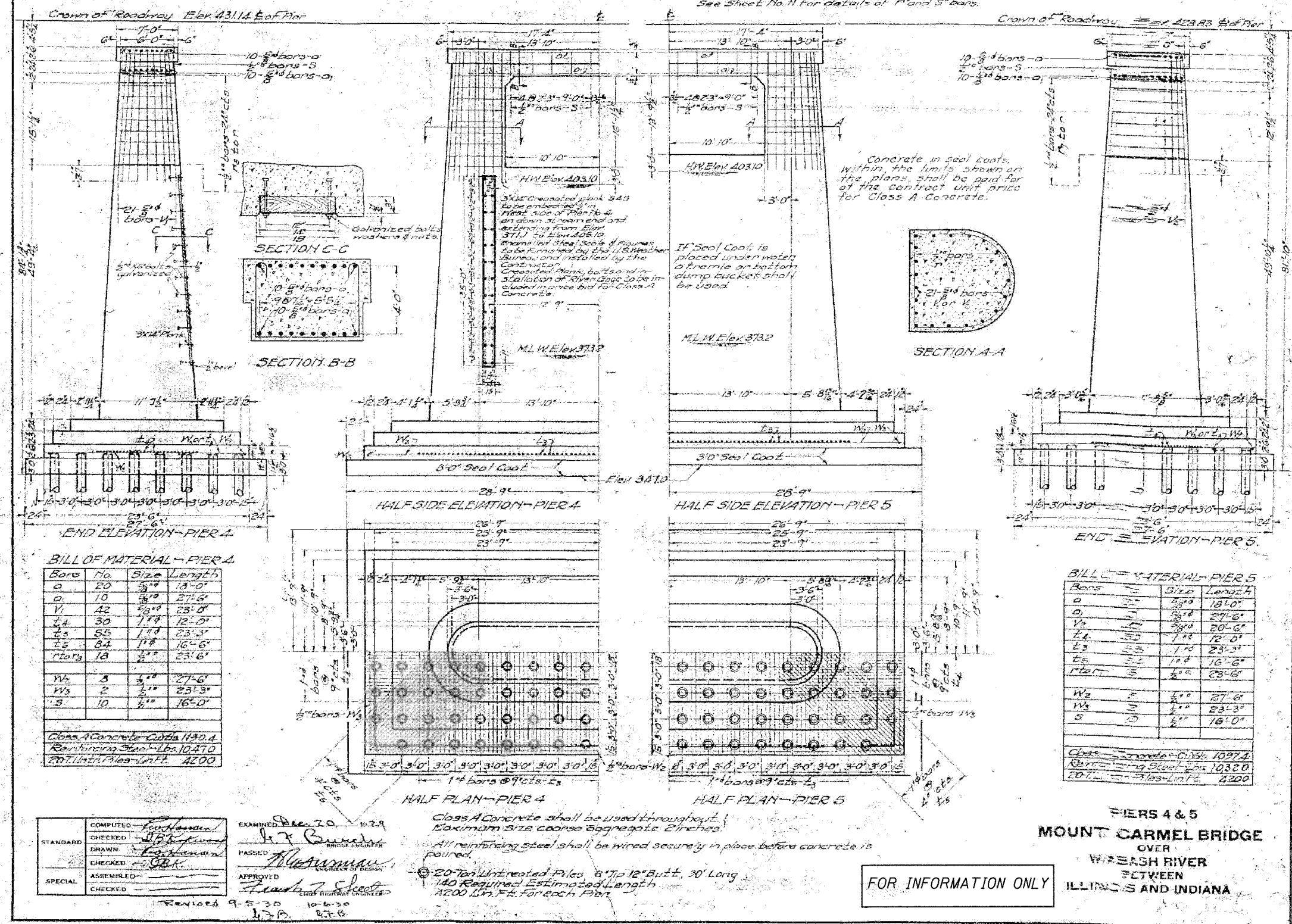
COMPUTED	Checked
CHECKED	Checked
DRAWN	Checked
CHECKED	Checked
ASSEMBLED	Checked
SPECIAL	Checked

EXAMINED Dec 20 1929
PASSED
APPROVED
Revised 9-5-30 10-6-30
J.P. J.P.

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	138
STA.	TO STA.			
F.H.W.A. REGION	ILLINOIS		PROJECT	

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

SHEET NO. 8
12 SHEETS



BILL OF MATERIAL - PIER 4

Bars	No.	Size	Length
a	20	5/8"	18'-0"
o	10	3/4"	27'-6"
v1	42	7/8"	23'-0"
v2	30	1/2"	12'-0"
v3	55	1/2"	23'-3"
v4	84	1/2"	16'-6"
W1	18	3/4"	23'-6"
W2	3	5/8"	27'-6"
W3	2	1/2"	23'-3"
S	10	1/2"	16'-0"

Class A Concrete - Cube 1490.4
Reinforcing Steel - Lbs. 10,470
20-Ton Untreated Piles - L.F. 4200

BILL OF MATERIAL - PIER 5

Bars	No.	Size	Length
a	20	5/8"	18'-0"
o	10	3/4"	27'-6"
v1	42	7/8"	23'-0"
v2	30	1/2"	12'-0"
v3	55	1/2"	23'-3"
v4	84	1/2"	16'-6"
W1	18	3/4"	23'-6"
W2	3	5/8"	27'-6"
W3	2	1/2"	23'-3"
S	10	1/2"	16'-0"

Class A Concrete - Cube 1097.4
Reinforcing Steel - Lbs. 10,320
20-Ton Untreated Piles - L.F. 4200

COMPUTED: [Signature]
CHECKED: [Signature]
DRAWN: [Signature]
CHECKED: [Signature]
SPECIAL: [Signature]

EXAMINED: Dec 70
PASSED: [Signature]
APPROVED: [Signature]

Revised 9-5-30
10-6-30

Class A Concrete shall be used throughout.
Maximum size coarse aggregate 2 inches.
All reinforcing steel shall be wired securely in place before concrete is poured.
20-Ton Untreated Piles 8" to 12" Butt, 30' Long
140 Required Estimated Length
4200 L.F. for each Pier

FOR INFORMATION ONLY

PIERS 4 & 5
MOUNT CARMEL BRIDGE
OVER
WABASH RIVER
BETWEEN
ILLINOIS AND INDIANA

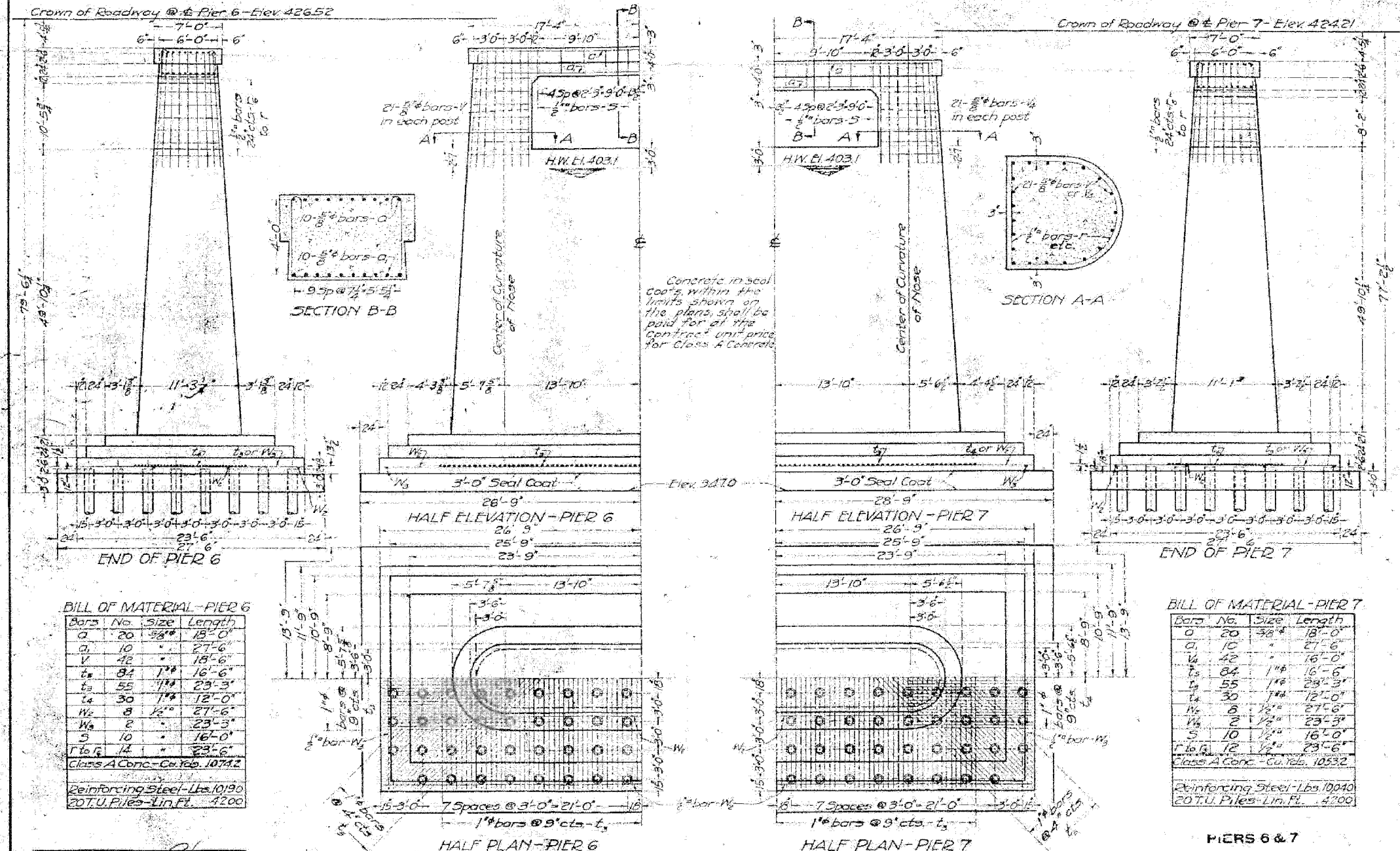
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	139
STA.	TO STA.			
F.H.W.A. REGION	ILLINOIS	PROJECT		

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

SHEET NO. 9
12 SHEETS

All reinforcing steel shall be wired securely in place before concrete is poured. See sheet 11 for details of "r" and "s" bars.

If Seal Coat is placed under water, a tremie or bottom-dump bucket shall be used.



BILL OF MATERIAL - PIER 6

Bars No.	Size	Length
0	20 5/8"	18'-0"
01	10	27'-6"
V	42	18'-6"
t ₂	84	16'-6"
t ₃	55	23'-3"
t ₄	30	12'-0"
W ₂	8	27'-6"
W ₃	2	23'-3"
S	10	16'-0"
T to G	12	23'-6"

Class A Conc. - Cu. Yds. 10742
Reinforcing Steel - Lbs. 10190
20 T.U. Piles - Lin. Ft. 4200

BILL OF MATERIAL - PIER 7

Bars No.	Size	Length
0	20 5/8"	18'-0"
01	10	27'-6"
V	42	18'-6"
t ₂	84	16'-6"
t ₃	55	23'-3"
t ₄	30	12'-0"
W ₂	8	27'-6"
W ₃	2	23'-3"
S	10	16'-0"
T to G	12	23'-6"

Class A Conc. - Cu. Yds. 10532
Reinforcing Steel - Lbs. 10040
20 T.U. Piles - Lin. Ft. 4200

FOR INFORMATION ONLY

COMPUTED: [Signature]
CHECKED: [Signature]
DRAWN: [Signature]
CHECKED: [Signature]
ASSEMBLED: [Signature]
CHECKED: [Signature]

EXAMINED: [Signature] 1929
PASSED: [Signature]
APPROVED: [Signature]
Revised 9-5-30 10-6-30
J.P. 870

Class A Concrete shall be used thruout.
Maximum size of coarse aggregate 2 inches.

20 Ton Untreated Piles 12" butt 6" tip - 30' long
140 Required Est. Length = 4200 Lin. Ft. for each pier.

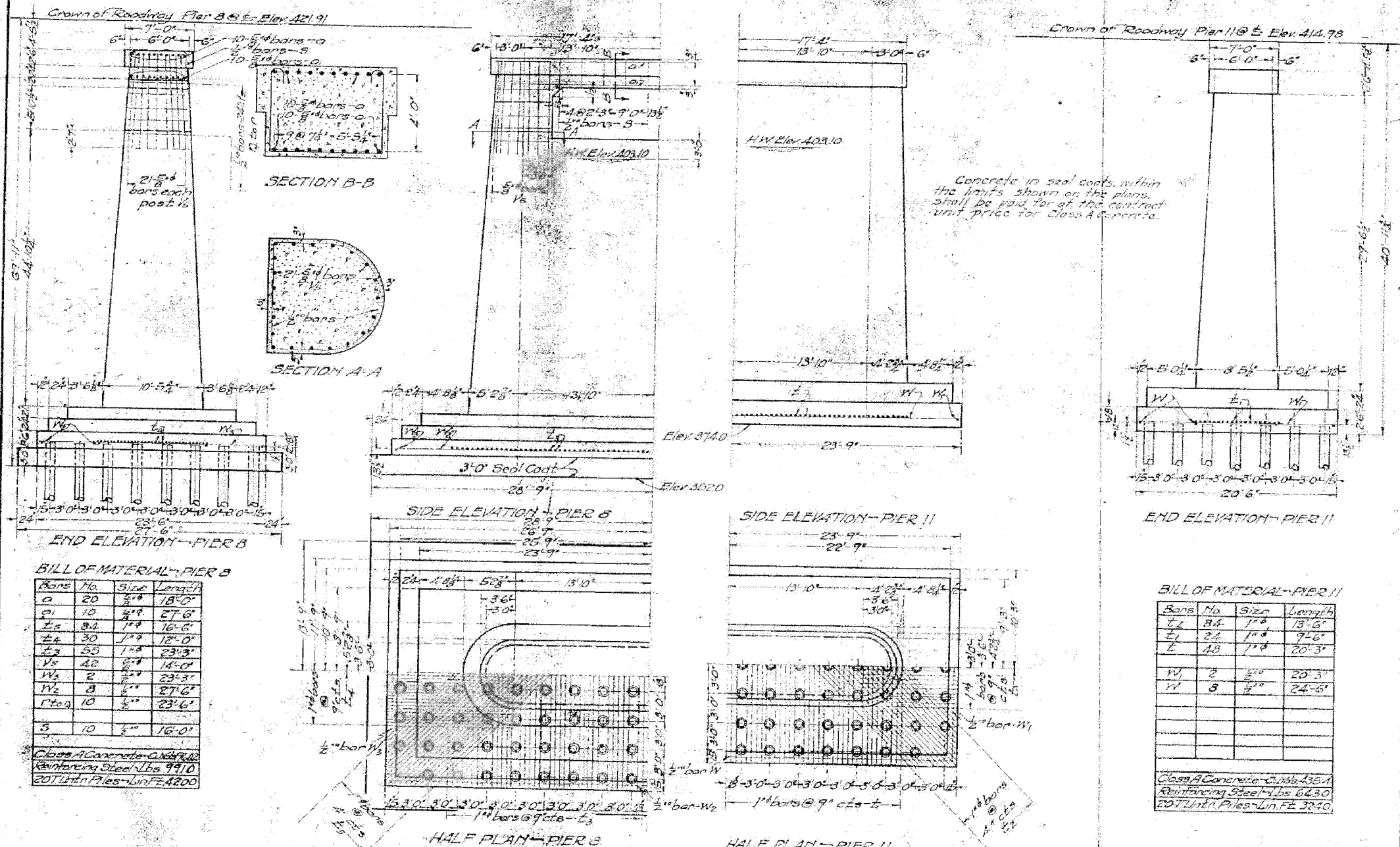
PIERS 6 & 7
MOUNT CARMEL BRIDGE
OVER
WABASH RIVER
BETWEEN
ILLINOIS AND INDIANA

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	140
STA.	TO STA.			
F.H.W.A. REGION	ILLINOIS	PROJECT		

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

SHEET NO. 10
12 SHEETS

See Sheet No. 11 for details of 7 and 5' bars.



Concrete in seal coats within the limits shown on the plans shall be paid for at the contract unit price for Class A concrete.

BILL OF MATERIAL - PIER 8

Bars No.	Size	Length
a	20	18'-0"
a1	10	27'-6"
a2	84	16'-6"
a3	30	12'-0"
a4	55	23'-3"
a5	42	14'-0"
a6	2	23'-3"
a7	8	27'-6"
a8	10	23'-6"
b	10	16'-0"

Class A Concrete - Cubic Yds. 42.0
Reinforcing Steel - Lbs. 9910
20' Untr. Piles - Lin. Ft. 4800

BILL OF MATERIAL - PIER 11

Bars No.	Size	Length
b1	84	13'-6"
b2	22	9'-6"
b3	18	20'-3"
b4	8	20'-3"
b5	8	24'-6"

Class A Concrete - Cubic Yds. 35.4
Reinforcing Steel - Lbs. 6630
20' Untr. Piles - Lin. Ft. 3240

FOR INFORMATION ONLY

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DRAWN	— [Signature]
CHECKED	— [Signature]
SPECIAL ASSEMBLED	—
CHECKED	—

EXAMINED Dec 20 1929
[Signature]
PASSED [Signature]
APPROVED [Signature]
Revised 9-5-30 10-6-30 478

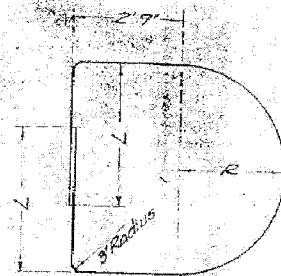
Class A Concrete shall be used throughout.
Maximum size coarse aggregate 2 inches.
All reinforcing steel shall be wired securely in place before concrete is poured.
20' Untr. Piles - 5" Tip 12" Bull 248 Required. Est. length of pile 30'
If Seal Coat is placed under water, a tremie or bottom dump bucket shall be used.

PIERS 8 & 11
MOUNT CARMEL BRIDGE
OVER
WABASH RIVER
BETWEEN
ILLINOIS AND INDIANA

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	141
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS PROJECT		

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

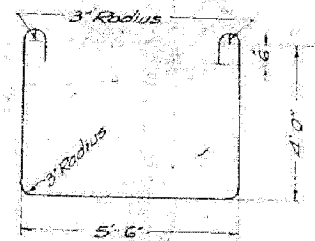
SHEET NO. 11
12 SHEETS



DETAIL OF 1" BAR

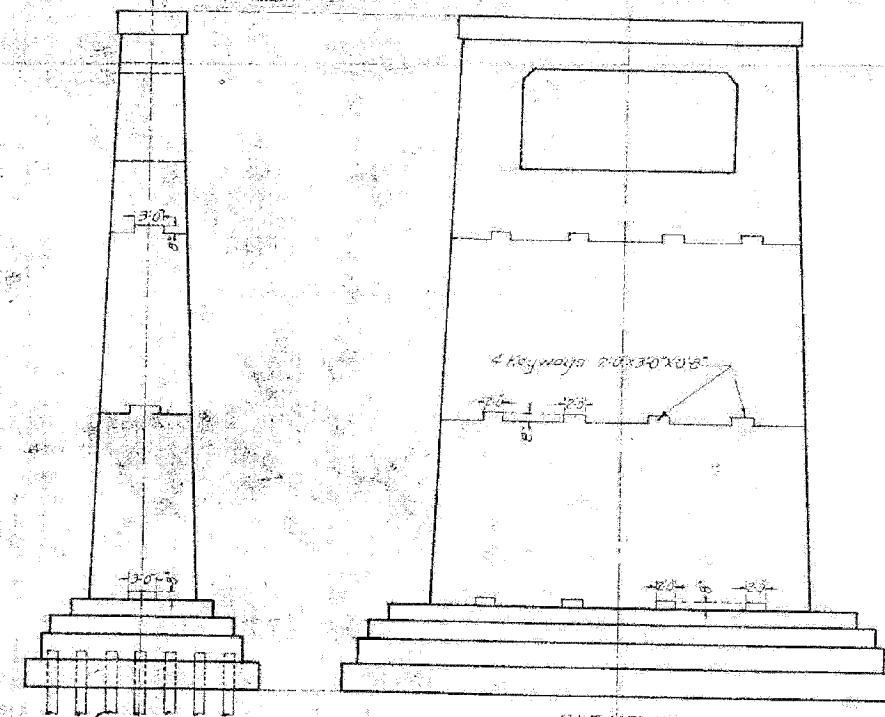
Bar	L	R	Length
1	4'-6"	2'-10"	23'-6"
2	4'-8"	2'-11"	23'-6"
3	4'-3"	3'-0"	23'-6"
4	4'-2"	3'-1"	23'-6"
5	4'-0"	3'-2"	23'-6"
6	3'-10"	3'-3"	23'-6"
7	3'-9"	3'-4"	23'-6"
8	3'-7"	3'-5"	23'-6"
9	3'-6"	3'-6"	23'-6"

Pier	Use	2	3	4	5	6	7	8	9
2	Use	2	3	4	5	6	7	8	9
3
4
5
6
7
8



DETAIL OF 3" BAR

Use 10-3" bars in each of
Piers 2-3-4-5-6-7-8



END VIEW

ELEVATION

DETAIL OF KEYWAYS
To be used at all construction joints in piers.

COMPUTED	RAN
CHECKED	JBY
DRAWN	W. G. ...
CHECKED	...
ASSEMBLED	...
CHECKED	...

EXAMINED	Dec 22, 1929
PASSED	...
APPROVED	...

Revised 4-5-20 10-6-30
J.T.C. J.T.C.

FOR INFORMATION ONLY

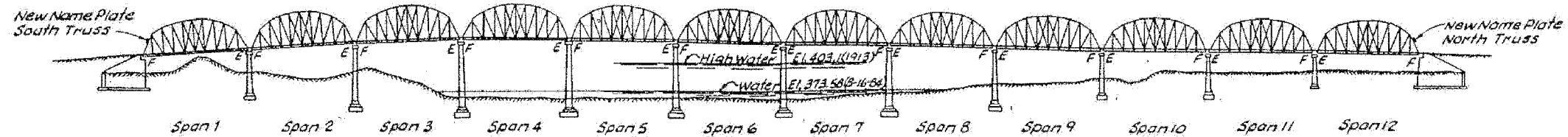
MOUNT CARMEL BRIDGE
OVER
WABASH RIVER
BETWEEN
ILLINOIS AND INDIANA

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	143
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS PROJECT		

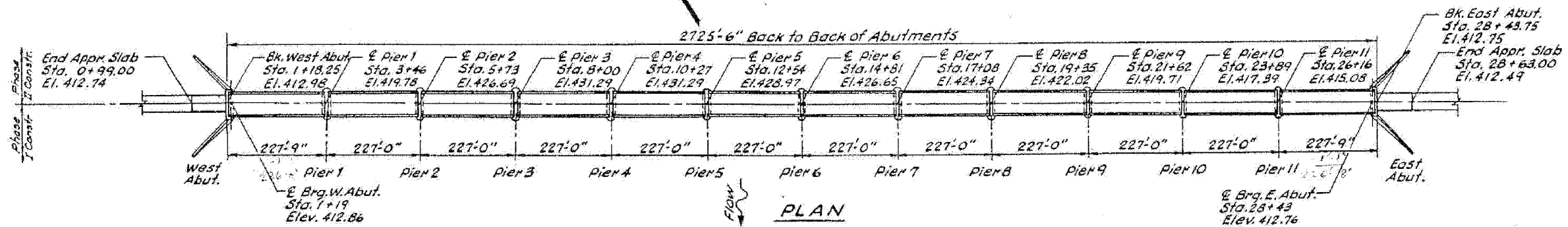
Existing Structure: Built in 1932. Consists of 12 thru-truss spans with a concrete deck on concrete piers and abutments.
Structure #093-0014
Existing Dimensions: 2725'-6" End to End, 26'-10" Out to Out
Bench Mark: See Sheet 3.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	143



E = Expansion End
F = Fixed End



This is an alteration plan. For details of existing bridge see original plans by State of Illinois, Division of Highways and shop detail plans by Vincennes Bridge Co.

GENERAL NOTES (BRIDGE)

FASTENERS SHALL BE HIGH STRENGTH BOLTS 7/8" DIAMETER, OPEN HOLES 15/16" DIAMETER, UNLESS OTHERWISE NOTED.

THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

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

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.

THE COST OF DRILLING THE HOLES AND GROUTING IN THE REINFORCEMENT BARS DETAILED SHALL BE INCIDENTAL TO THE COST OF REINFORCEMENT BARS.

ALL EXISTING STRUCTURAL STEEL SHALL BE CLEANED BY METHOD 1 AND PAINTED WITH THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM.

THE TOTAL ESTIMATED AMOUNT OF STRUCTURAL STEEL TO BE CLEANED AND PAINTED IS 2701 TONS.

TOTAL BILL OF MATERIAL			
ITEM	UNITS	SUPER.	SUBTR.
RYLET REPLACEMENT	EACH	3,300	3,300
DRAINAGE SCUPPERS	EACH	480	480
JACKING AND CRIBBING	EACH	24	24
NEOPRENE EXPANSION JOINT 4"	LIN. FT.	240	240
REINFORCED NEOPRENE EXPANSION JOINT TREATMENT	LIN. FT.	23	23
PREFORMED JOINT SEAL 2 1/2"	LIN. FT.	48	48
EPDXY CRACK SEALING	LIN. FT.	1,000	1,000
EPDXY MORTAR REPAIR	CU. FT.	30	30
REMOVAL OF EXISTING CONCRETE DECK	L. SUM	1	1**
CONCRETE REMOVAL	CU. YD.	1	1
REMOVE EXPANSION BEARINGS	EACH	24	24
PROTECTIVE COAT	SO. YD.	7,150	7,150
CLASS 2 CONCRETE	CU. YD.	1,462.1	1,462.1
STRUCTURAL STEEL REPAIR	LB.	402,378	402,378*
STUD SHEAR CONNECTORS	EACH	36,000	36,000
200 TON EXPANSION BEARING	EACH	24	24
CLEANING AND PAINTING STEEL BRIDGE	L. SUM	1	1
REINFORCEMENT BARS	LB.	110	110
REINFORCEMENT BARS (EPDXY COATED)	LB.	252,740	252,740
STEEL RAILING, TYPE T-1	LIN. FT.	5,400	5,400
NAME PLATES	EACH	2	2
Bridge Neutral Removal	CU. YD.	5430	5430

* CALCULATED WEIGHT OF STRUCTURAL STEEL REMOVED = 402,378 LBS. (INCIDENTAL TO STRUCTURAL STEEL REPAIR)
** INCLUDES APPROXIMATELY 1,245 CU. YD. CONCRETE DECK REMOVAL AND 82,100 LBS. OF CAST STEEL EXPANSION JOINT CASTINGS

STATION 14+81
RECONSTRUCTED 1938 BY
STATE OF ILLINOIS
F.A. RT. 827 SEC. 12Z-3, 12BR
F.A. PROJ. BHF-827(2)
LOADING H520
STR. NO. 093-0014

NAME PLATE
For Details See Std. 2113

STAGING INFORMATION

ONE LANE TRAFFIC SHALL BE MAINTAINED THROUGHOUT THE REMOVAL AND REPLACEMENT OF THE CONCRETE DECK AND THE REHABILITATION AND PAINTING OF THE STRUCTURAL STEEL EXCEPT AS NOTED. SEE STAGE CONSTRUCTION DETAILS ON SHEETS 5 & 6.

DESIGN STRESSSES
(NEW CONSTRUCTION)
f_c = 3,500 psi
f_y = 60,000 psi (REINFORCEMENT)
f_t = 18,150 psi (STRUCTURAL STEEL EXISTING)
f_t = 20,000 psi (STRUCTURAL STEEL NEW)

DESIGN SPECIFICATIONS
1983 AASHTO & 1984 INTERMS.

DESIGN LOADING
H520-44 (REHABILITATED BRIDGE)

ALLOW 254/50 FT. FOR FUTURE WEARING SURFACE.

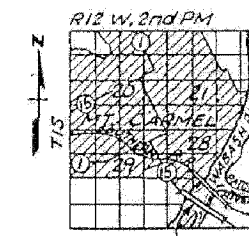
APPROVED
FOR STRUCTURAL ADEQUACY (GIL)

James J. Rayburn
Member of Bridges and Structures



Robert O. Amble

HAZELBET & ZODAL
CONSULTING ENGINEERS
FILE NO.
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CHECKED BY: [Signature]
APPROVED BY: [Signature]



LOCATION SKETCH

FOR INFORMATION ONLY

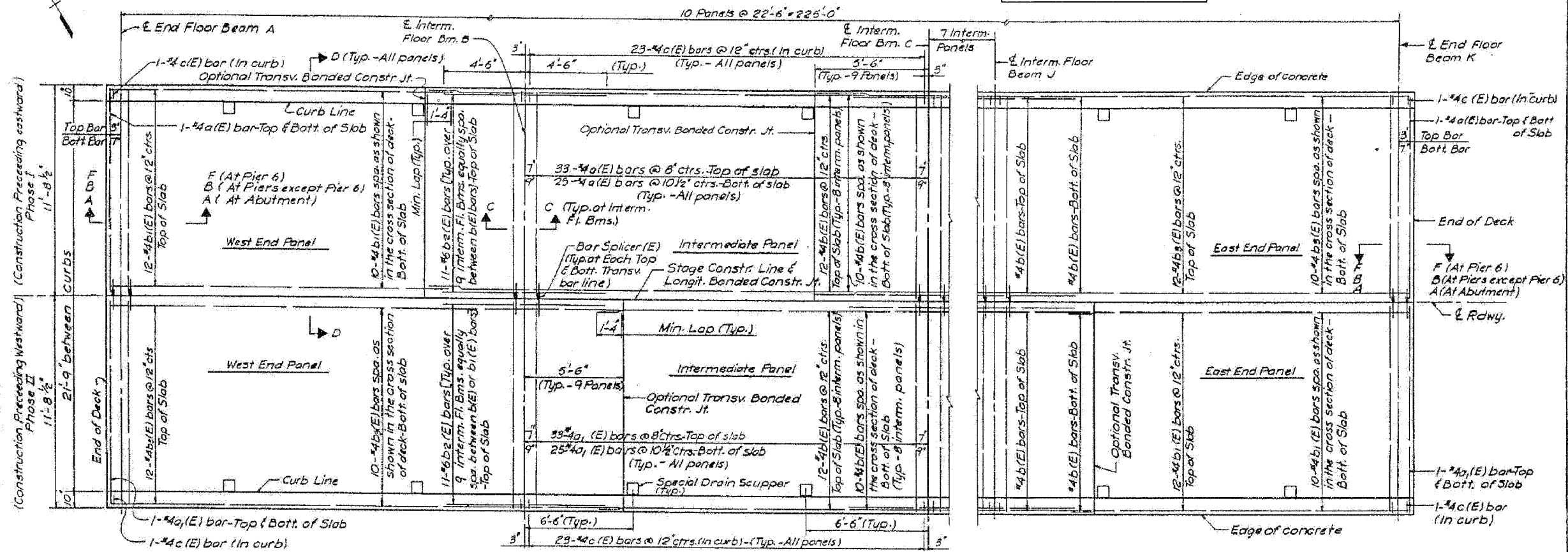
MT. CARMEL BRIDGE OVER
WABASH RIVER
GENERAL PLAN AND ELEVATION
FA ROUTE 827 (IL 15) SECTION (HB142) BR
WABASH COUNTY

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	144
STA.	TO STA.			
F.H.W.A. REGION	ILLINOIS		PROJECT	

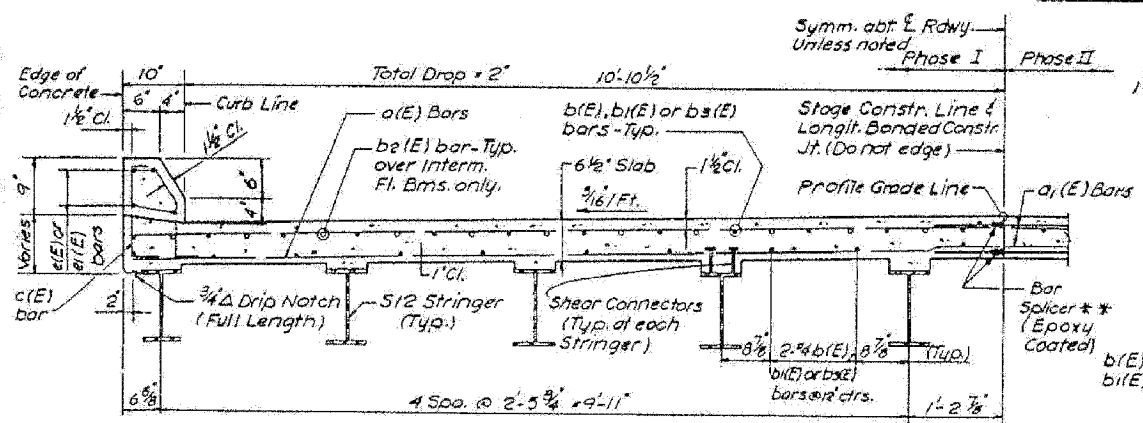
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY

SHEET NO.	SECTION	QUANTITY	TOTAL SHEETS	SHEET NO.
12Z-3, 12BR	WABASH	31	13	7
SHEETS 25				

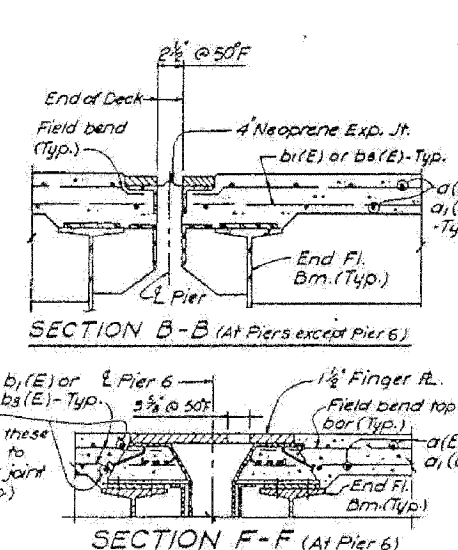
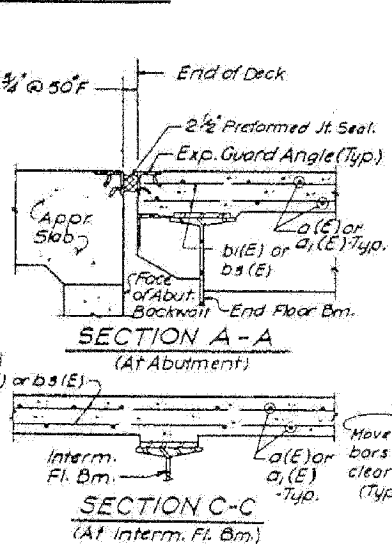


PLAN (Typ. - All Spans)



HALF DECK CROSS SECTION D-D

** Lapped bars at this location shall be tied with double the number of ties normally used.



- NOTES:
- Reinforcement bars designated (E) shall be epoxy coated.
 - All exposed edges of concrete to have 3/4" chamfer.
 - See Sht. 14 for special Drain Scupper Details.
 - See Sht. 15 for Bar Splicer Details.
 - See Sht. 18 for Neoprene Exp. Jt. Details.
 - See Sht. 20 for 2 1/2" Preformed Jt. Seal Details.
 - Concrete deck inserts are required for anchorage of Temporary Bridge Railing & Temporary Crossover Bridging. For details, see Sheet 5.

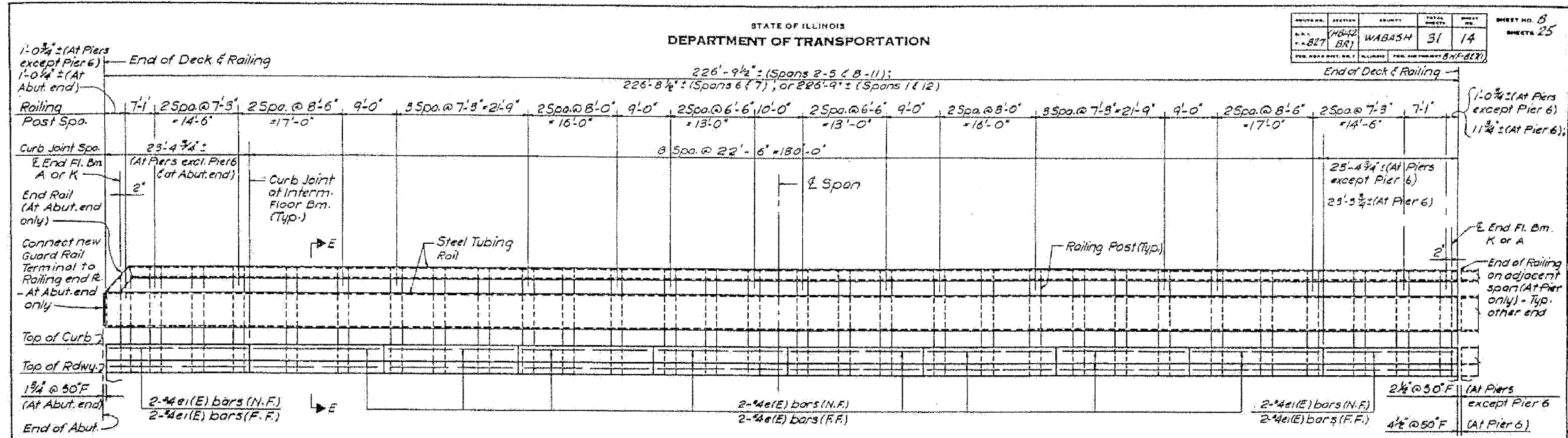
Work Sheets 13 & 14 together

DECK REINFORCEMENT
FA ROUTE 827 (IL 15) SECTION (HBI42) BR
WABASH COUNTY

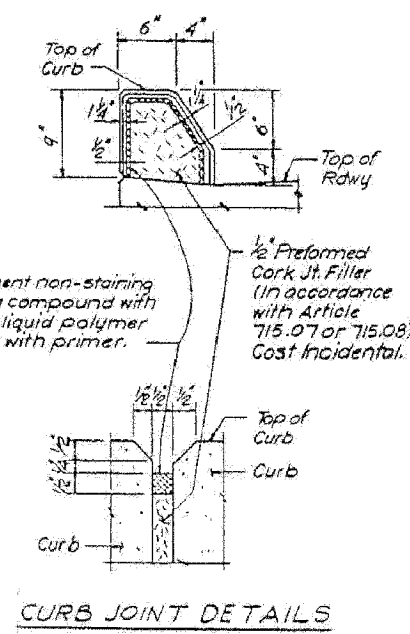
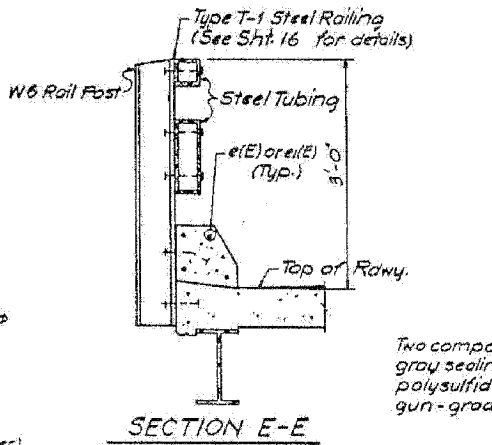
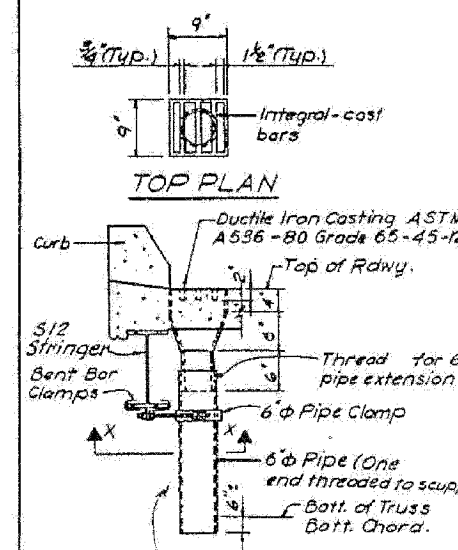
HAZELT & ERDAL
CONSULTING ENGINEERS
FILE NO.
DRAWN BY HKN/EJL
CHECKED BY GJV
APPROVED BY JH

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	145
STA.	TO STA.			
F.H.W.A. REGION	ILLINOIS	PROJECT		

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH	31	14

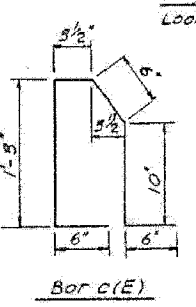
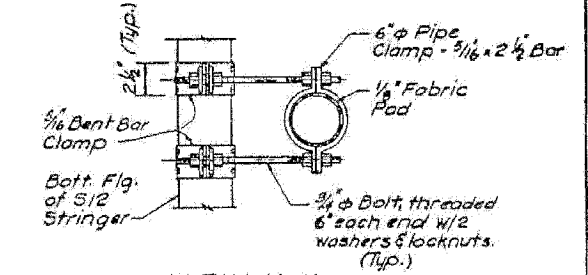


INSIDE ELEVATION OF CURB & RAILING
(Typ. - All Spans)



BILL OF MATERIAL

BAR	Phase I	Phase II	Total	SIZE	LENGTH	SHAPE
a(E)	3504	3504	7008	4	11'-2"	—
Q1(E)	3504	3504	7008	4	11'-5"	—
b(E)	2112	2112	4224	4	24'-0"	—
b1(E)	264	264	528	4	19'-0"	—
b2(E)	1188	1188	2376	6	9'-0"	—
b3(E)	264	264	528	4	28'-6"	—
c(E)	2784	2784	5568	4	3'-11"	□
e(E)	384	384	768	4	22'-3"	—
e1(E)	96	96	192	4	23'-0"	—
				Reinforcement Bars (Epoxy coated)	Lbs.	251,240
				Class X Concrete	Cu.Yds.	1,462.1



HAZLET & ERDAL
CONSULTING ENGINEERS
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APPROVED BY: [Signature]

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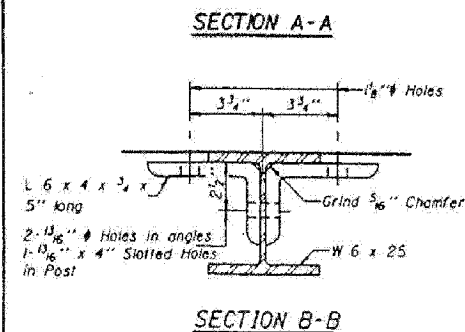
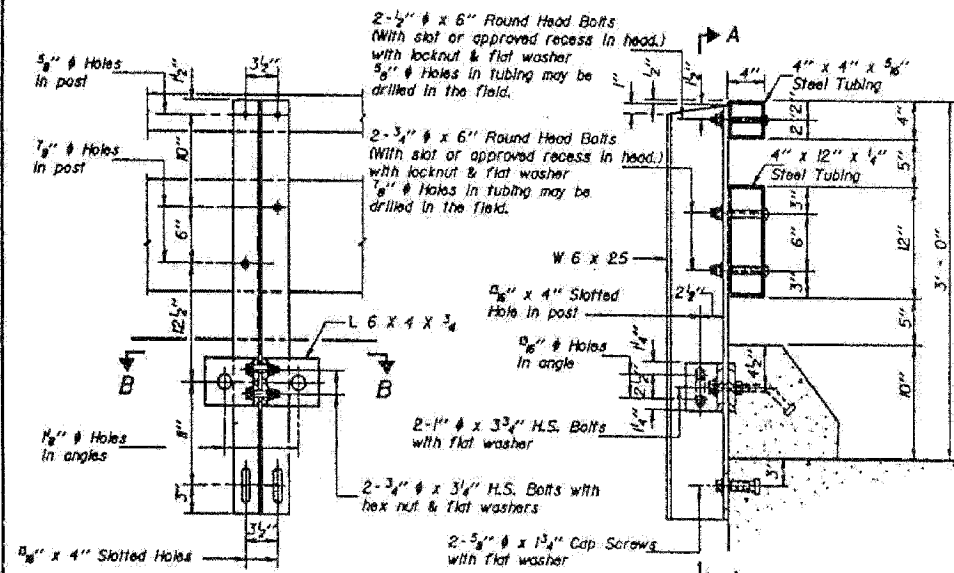
DECK DETAILS
EA ROUTE 527 (IL15) SECTION (HB142) BR
WABASH COUNTY

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	146
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

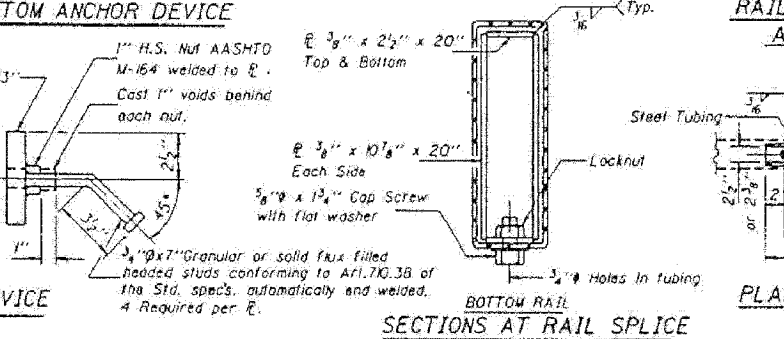
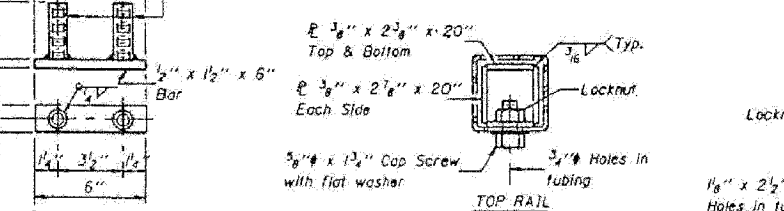
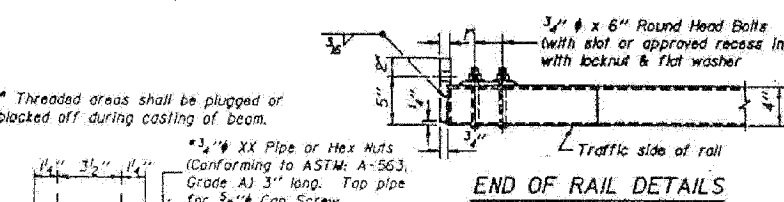
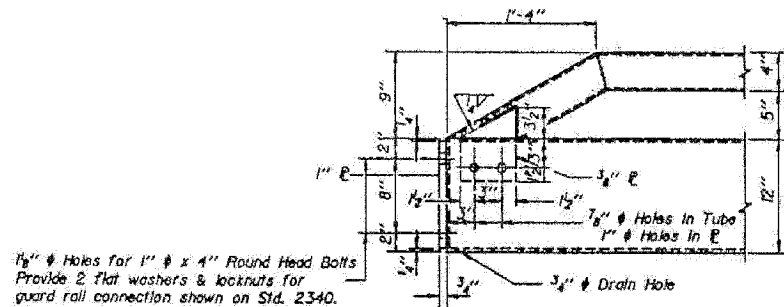
PROJECT NO.	SECTION	SHEET NO.	SHEET TOTAL
827	12Z-3, 12BR	31	16
PROJECT NAME: WABASH COUNTY			
PROJECT NO.: 94450			

FOR INFORMATION ONLY



DESIGNED
CHECKED
DRAWN
CHECKED

R-24A 12-31-84 0'-0" Maximum Post Spacing



NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M-183 except posts and angles shall conform to AASHTO M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-184.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-11 and ASTM A-385. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lined foot for STEEL RAILING, TYPE T-1.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or piece 3/8 inch fabric bearing pad between the post and concrete.

The 3/4 inch high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 507.04(g)(3) of the Standard Specifications. The 1 inch high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 3/8 inch cap screws in bottom of posts shall be tightened to a snug fit only.

For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-5/8 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing.

**CURB & RAIL
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a		#6		
Reinforcement Bars				Lbs.
Class X Concrete				Cu. Yds.
Steel Railing Type T-1				Lin. Ft. 5450

**TYPE T-1
STEEL RAILING**

FA ROUTE 827 (IL-15) SECTION (HBI42) BR
WABASH COUNTY

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	148
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS PROJECT		

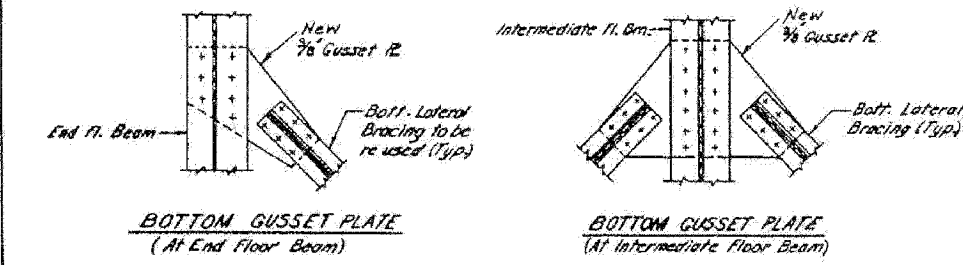
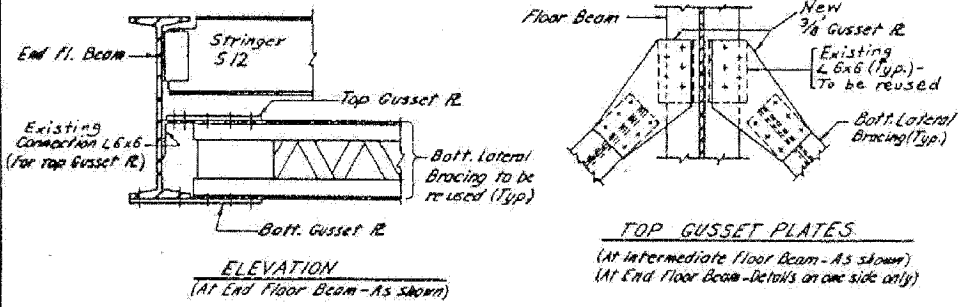
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	148
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

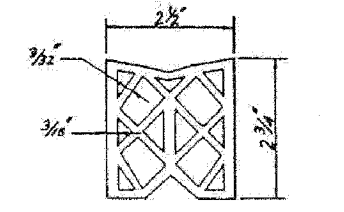
TABLE OF BOTTOM LATERAL BRACING-GUSSET PLATE REPLACEMENT

Span	Panel/Location (Direction)	Gusset Pl.
1	DE/SE	Top
2	AB/SH	Bottom
	AB/NW	Bottom
	CD/NW	Bottom
	CD/SE	Bottom
	HI/NW	Bottom
3	JK/SW	Top
	JK/NE	Bottom
4	JK/SE	Top & Bottom
5	AB/NW	Top
	AB/SE	Top
6	AB/NW	Top
	AB/SH	Top & Bottom
	JK/NE	Top
	JK/SE	Top & Bottom
7	AB/NW	Top
8	CD/SE	Bottom
9	AB/NW	Top
	AB/SH	Top
10	AB/NE	Bottom
11	AB/SH	Top & Bottom
	JK/NE	Top & Bottom
	JK/SE	Top & Bottom
12	AB/NW	Top & Bottom
	AB/SH	Top & Bottom

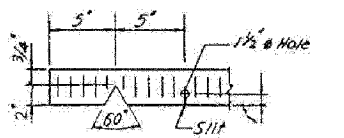
For Panel/Location (Direction), see Sheet 9.



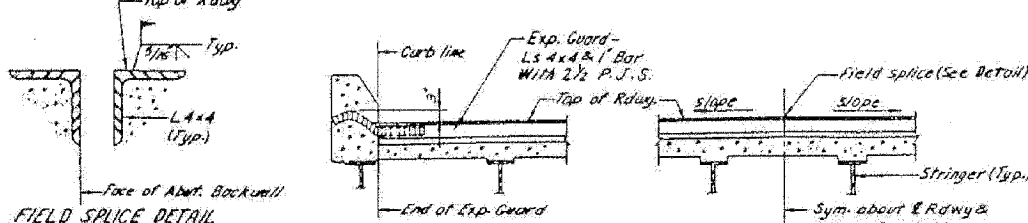
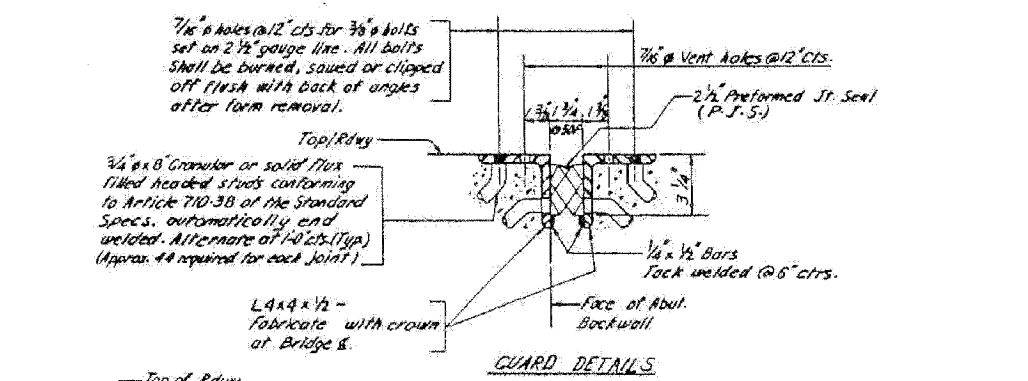
BOTTOM LATERAL BRACING-GUSSET PLATE DETAILS
(New replacement gusset plates to match existing plates in shape, size and hole location. See Table of Gusset Plate Replacement.)



PREFORMED JOINT SEAL (2 1/2)



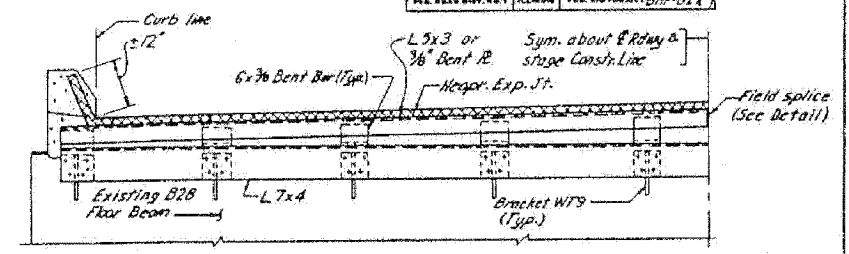
SEAL CUT-OUT



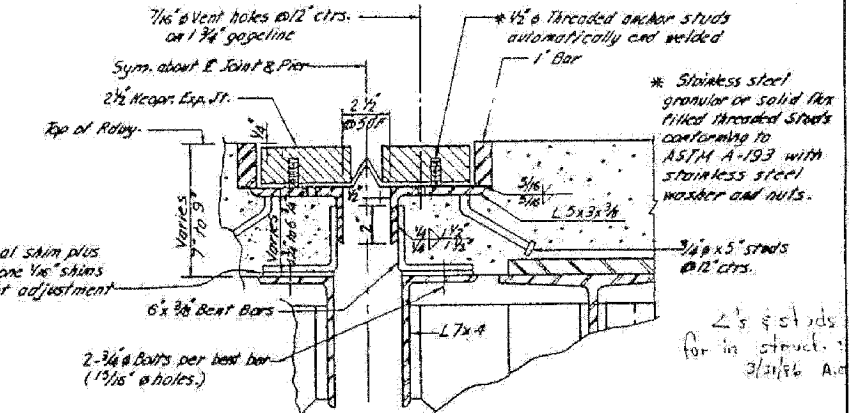
FIELD SPICE DETAIL (As shown - At Abutments) (Similar - At Piers)

GUARD ELEVATION

EXPANSION GUARD AT ABUTMENTS



EXPANSION JOINT ELEVATION AT PIERS 1-11 EXCEPT 6 (Fabricate with crown at Bridge #)



EXPANSION JOINT DETAILS AT PIERS 1-11 EXCEPT 6

WELDING PROCEDURE FOR FLOOR BEAM COVER PLATES ON TRUSSES
(SEE SPECIAL PROVISIONS FOR ADDITIONAL ROAD CLOSURE RESTRICTIONS)

1. PREPARE SURFACES.
2. CLAMP BOTTOM COVER PLATE IN POSITION AND PREHEAT COVER PLATE AND FLOOR BEAM TO 150°F.
3. STOP ALL TRAFFIC.
4. USING TWO WELDERS, ONE ON EACH SIDE OF BEAM, WORK FROM CENTER OF BEAM TOWARDS ENDS, WELDING 3/16" FILLET WELD 3" LONG ON 2-3/4" CENTER.
5. ALLOW WELDS TO COOL FOR ONE MINUTE AFTER SURFACE IS BLACK.
6. OPEN DECK TO TRAFFIC TO ALLOW ALL ACCUMULATED TRAFFIC TO CLEAR.
7. STOP ALL TRAFFIC.
8. STARTING FROM CENTER AND USING A WELDER ON EACH SIDE, THE 2'-0" GAPS BETWEEN THE 3" WELDS SHALL BE FILLED IN USING THE BLOCK OR STEP SHIP SYSTEM. ALLOW EACH BLOCK TO COOL THOROUGHLY BEFORE MAKING ADJACENT WELDS. THE ORIGINAL 3" WELDS SHALL BE CHIPPED PRIOR TO MAKING EACH 2'-3" WELD PASS. WELD ENDS OF PLATE. AFTER EACH WELD HAS COOLED, ALLOW ACCUMULATED TRAFFIC TO CLEAR.
9. HALVES OF A TOP COVER PLATE MAY BE WELDED USING THE SAME PROCEDURE OUTLINED ABOVE. THE SECOND HALF SHALL BE 'VEE' WELDED TO THE FIRST PLATE AT THE CENTERLINE OF THE BEAM BEFORE THE 3" LONGITUDINAL WELDS ARE MADE. FINALLY, WELD THE ENDS OF THE PLATE.

NOTE: IF MAXIMUM ROAD CLOSURE LIMIT OF 30 MINUTES IS REACHED, WELDING SHALL BE STOPPED AND WELDS ALLOWED TO COOL. ACCUMULATED TRAFFIC SHALL THEN BE ALLOWED TO CLEAR BEFORE RESUMING WELDING. COVER PLATE CLAMPS ARE TO REMAIN IN PLACE WHILE TRAFFIC IS ALLOWED TO CLEAR.

Work sheets 19-21 together.

FOR INFORMATION ONLY

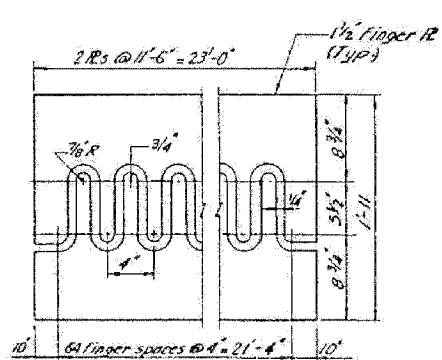
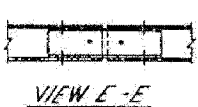
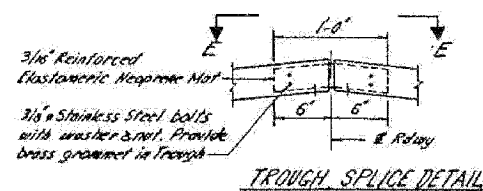
STRUCTURAL STEEL DETAILS
FA ROUTE 827 (IL) SECTION (WB142) BR
WABASH COUNTY

HAZLET & BRDAL
CONSULTING ENGINEERS
FILE NO.
DRAWN BY S.E.H.P.
CHECKED BY G.W.
APPROVED BY J.P.

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	149
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

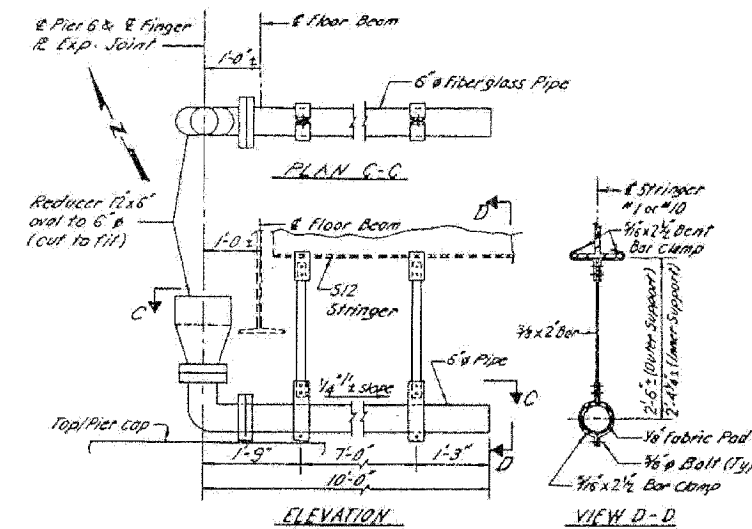
ITEM	NEW STRG. (S12x31.0)	EXIST. STRG. (S12x33)	END FL. DIM. (REINFORCED)	WATERM. FL. DIM. (REINFORCED)
*I _s (in. ⁴)	218.0	227.0	6192.0	7628.0
*I _c (in. ⁴)	979.0	926.0	-	-
*S _s (in. ³)	36.4	37.8	417.0	506.6
*S _c (in. ³)	69.2	73.96	-	-
D.L. (KIP)	0.201	0.201	0.09	0.104
M _{DL} (K)	14.8	14.9	88.7	167.5
I _s (in. ⁴ /ft)	4.9	4.7	2.6	4.0
M _{LL+I} (K)	36.9	36.9	354.6	380.4
M _{max} (K)	15.8	15.8	106.4	114.1
M _{LL+I} (K)	52.7	52.7	461.0	494.5
I _s (in. ⁴ /ft)	9.1	8.8	13.3	11.7
I _s (in. ⁴ /ft)	14.0	13.9	15.9	15.7
*VR (K)	10.3	12.9	-	-

* I_s & S_s are the moment of inertia & section modulus of steel section.
 I_c & S_c are the moment of inertia & section modulus of composite section.
 VR is the max. LL+I shear range in span, used to determine shear connector spacing.

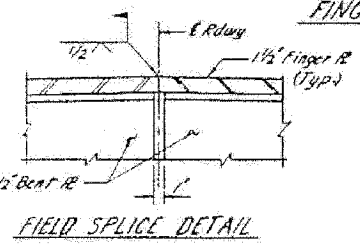
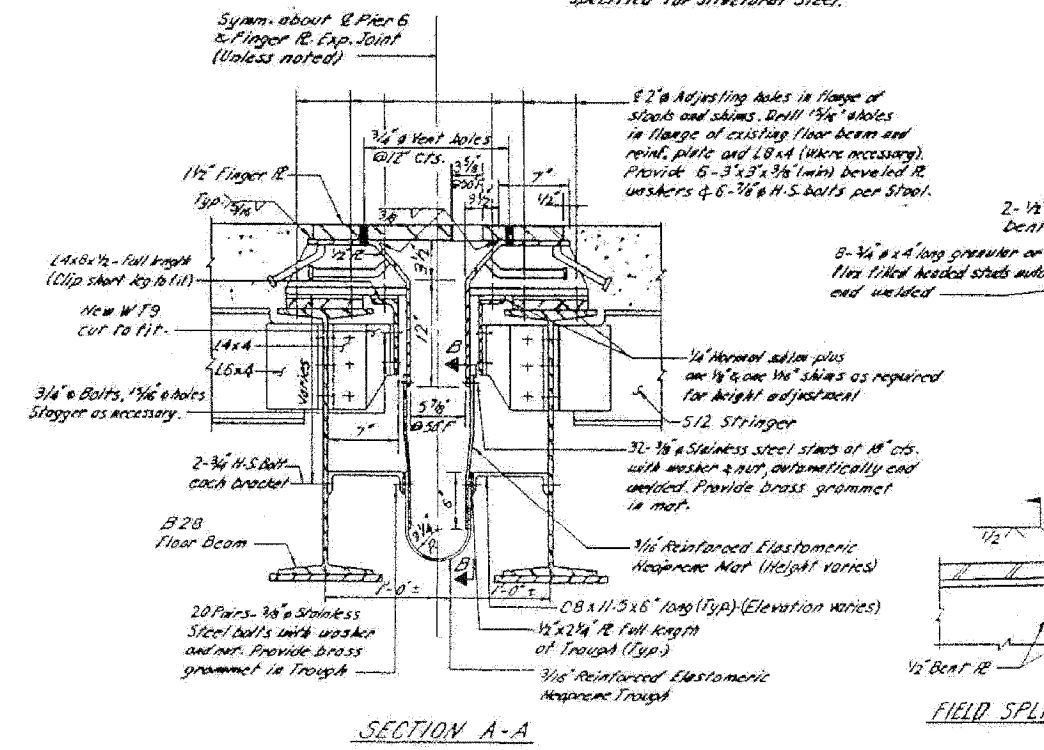
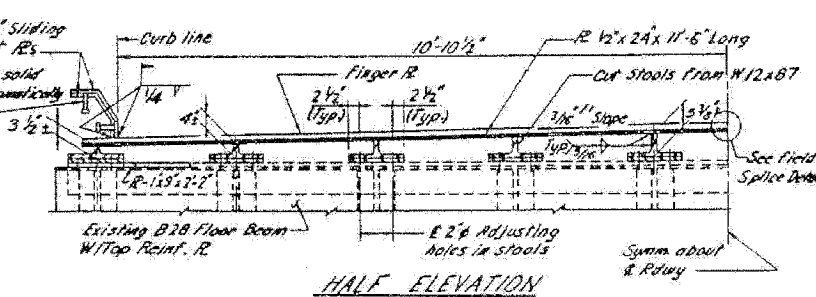
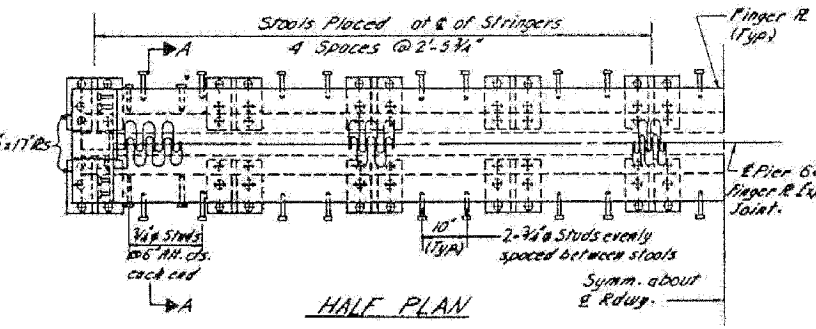
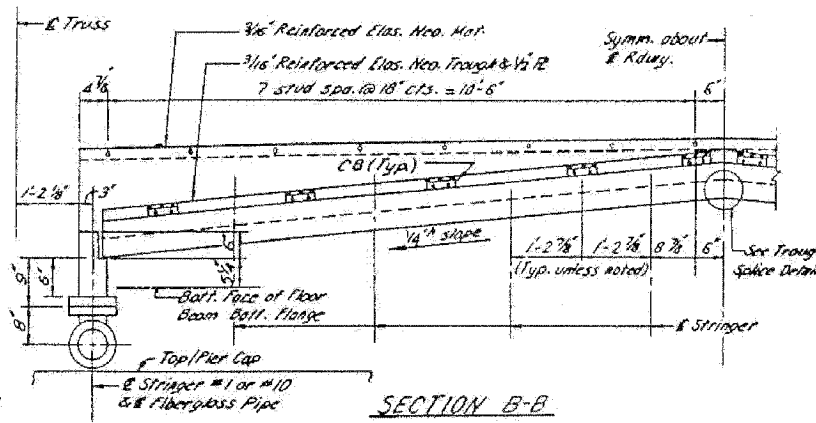


HAZELET + ERDAL, INC.
 CONSULTING ENGINEERS
 FILE NUMBER
 DRAWN BY J.B.D./S.O./
 CHECKED BY G.H.C./
 APPROVED BY

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION



NOTE:
 Fiberglass pipe shall conform to ASTM D2995, with short time rupture strength and tensile stress of 30,000 p.s.i. minimum.
 The exterior surface of the fiberglass pipe shall be painted in accordance with the paint system specified for Structural Steel.

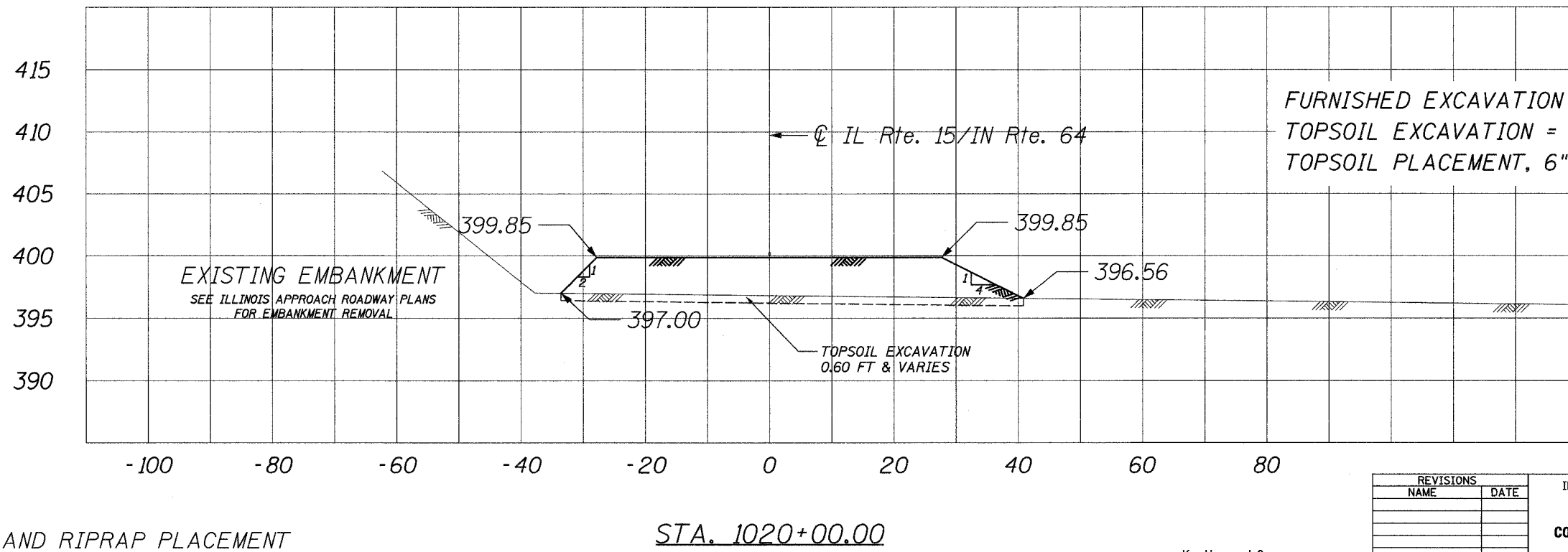
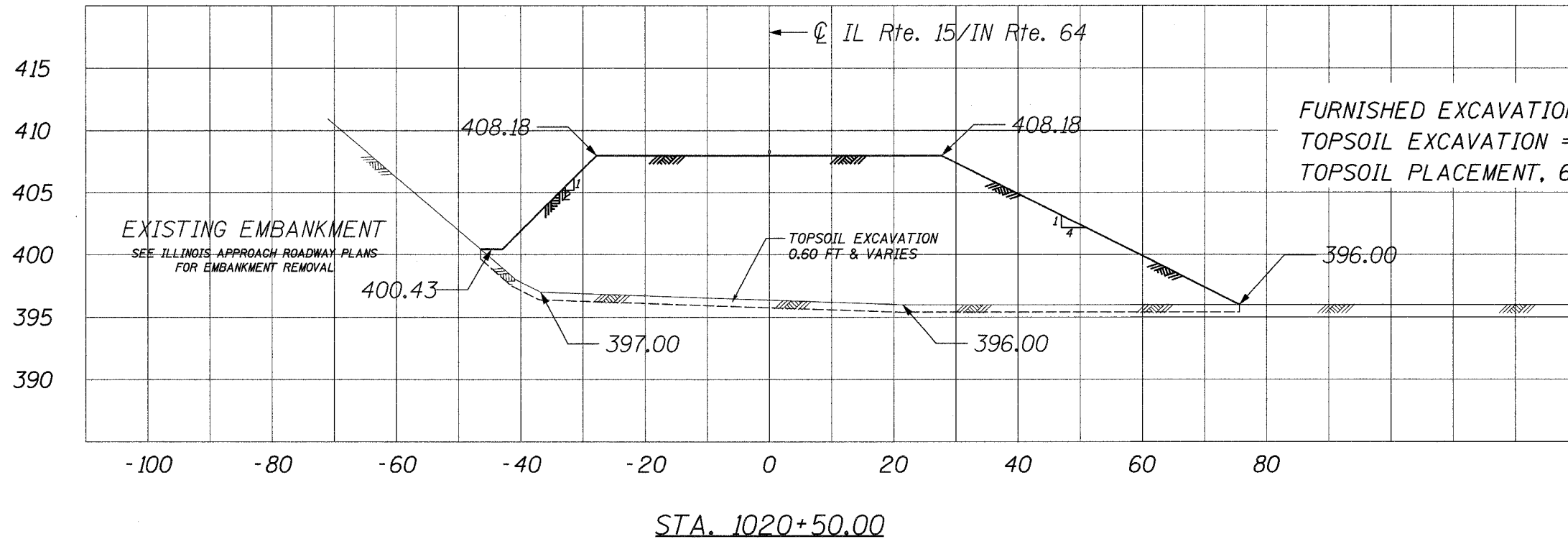


FOR INFORMATION ONLY

STRUCTURAL STEEL DETAILS
 F.A. ROUTE 827 (IL 15) SECTION (HB142) BR
 WABASH COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 827	HB142 BR	WABASH	31	21
25 SHEETS				

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
827	127-3, 128R	WABASH, IL GIBSON, IN	158	150
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



NOTE: GRADING AND RIPRAP PLACEMENT SHALL BE COORDINATED WITH THE ILLINOIS ROADWAY CONTRACTOR.

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Job No. 3428

REVISIONS	
NAME	DATE

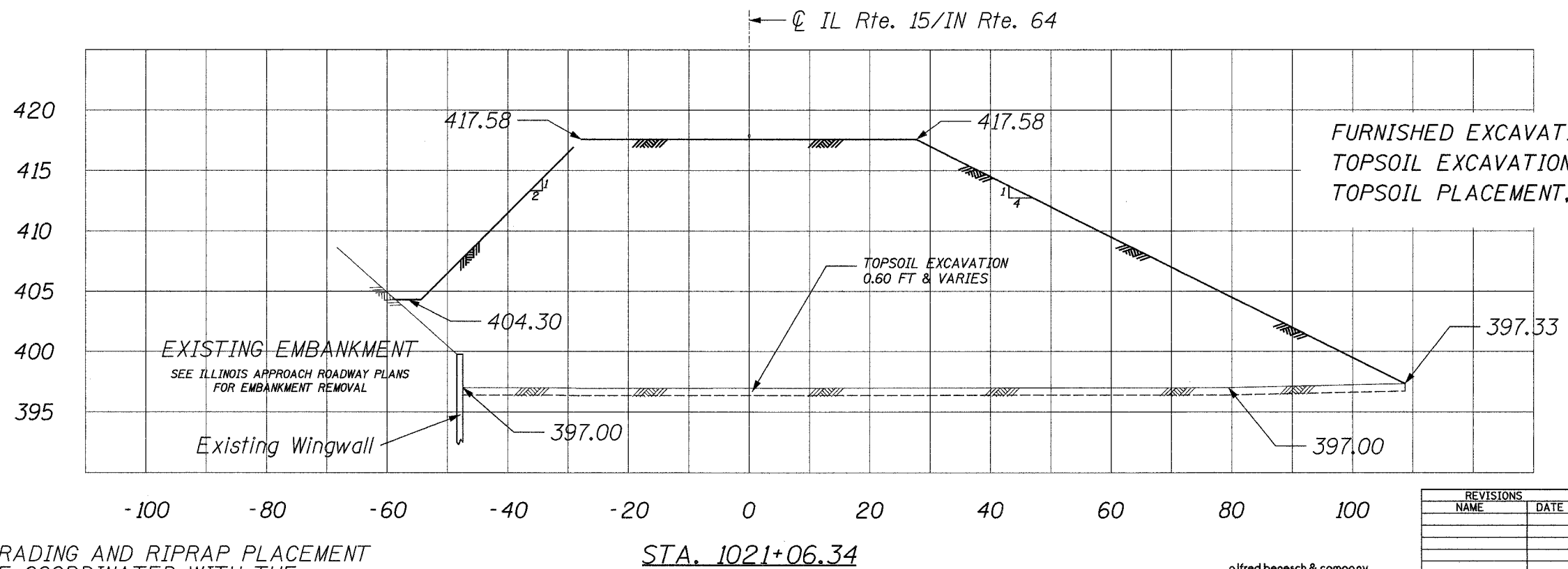
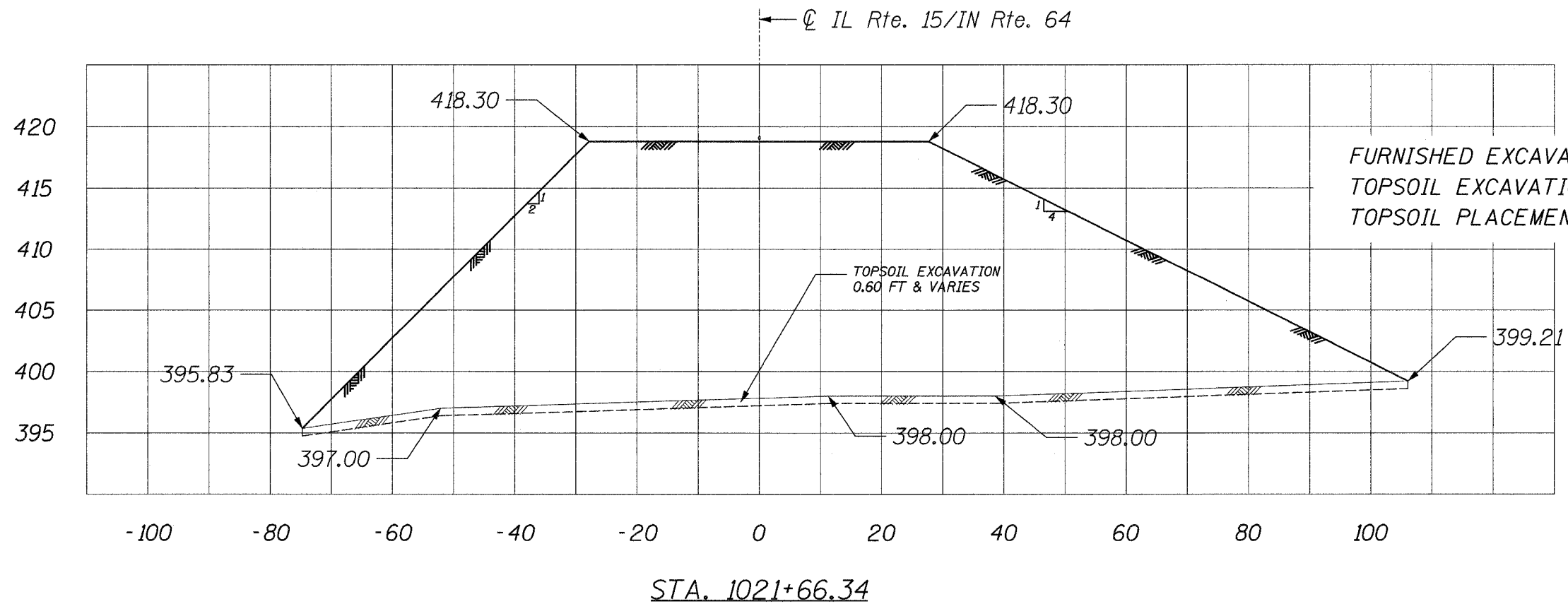
ILLINOIS DEPARTMENT OF TRANSPORTATION

**CONSTRUCTION BERM CROSS-SECTIONS
WEST ABUTMENT**

SCALE: VERT. 1"=20'
HORIZ. 1"=10'
DATE 06/15/07

DRAWN BY MAC
CHECKED BY RDC

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	151
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT _____		



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NAME	DATE

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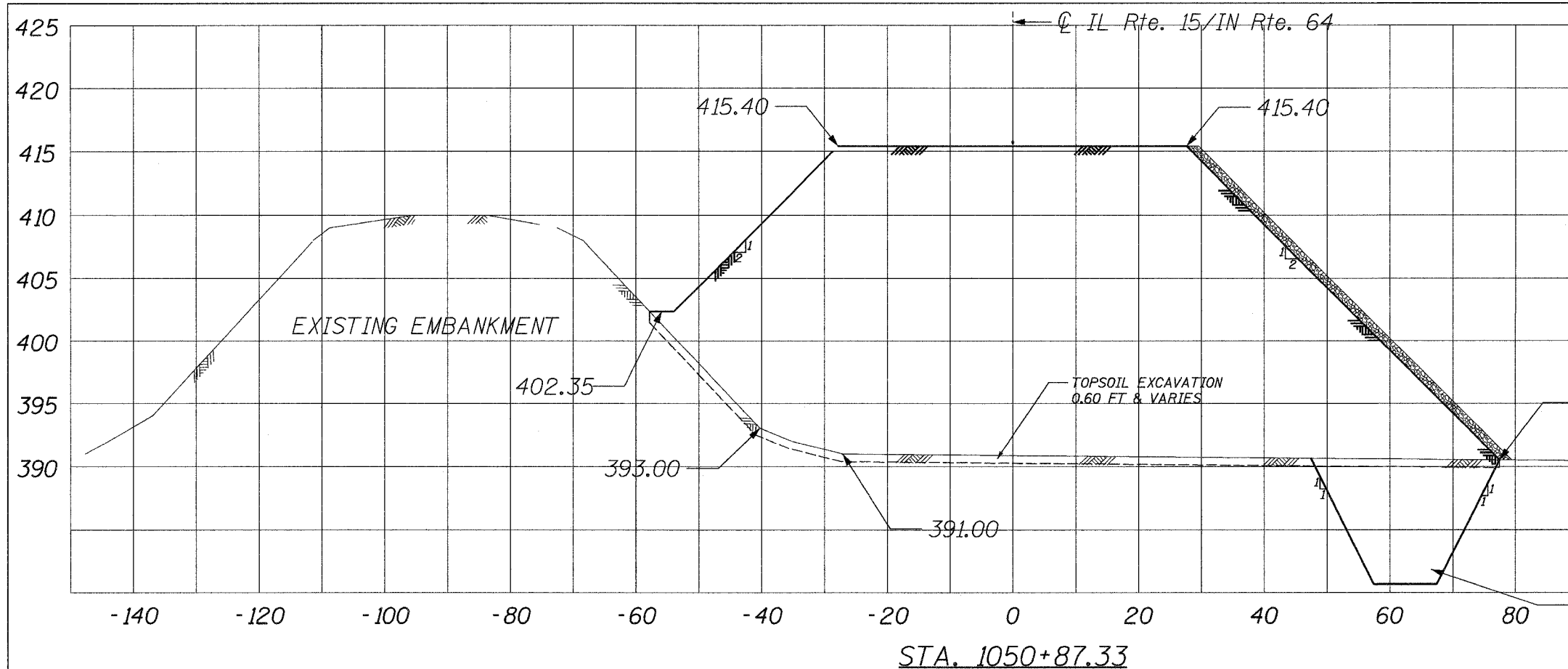
**CONSTRUCTION BERM CROSS-SECTIONS
WEST ABUTMENT**

SCALE: VERT. 1"=20'
HORIZ. 1"=10'
DATE 06/15/07

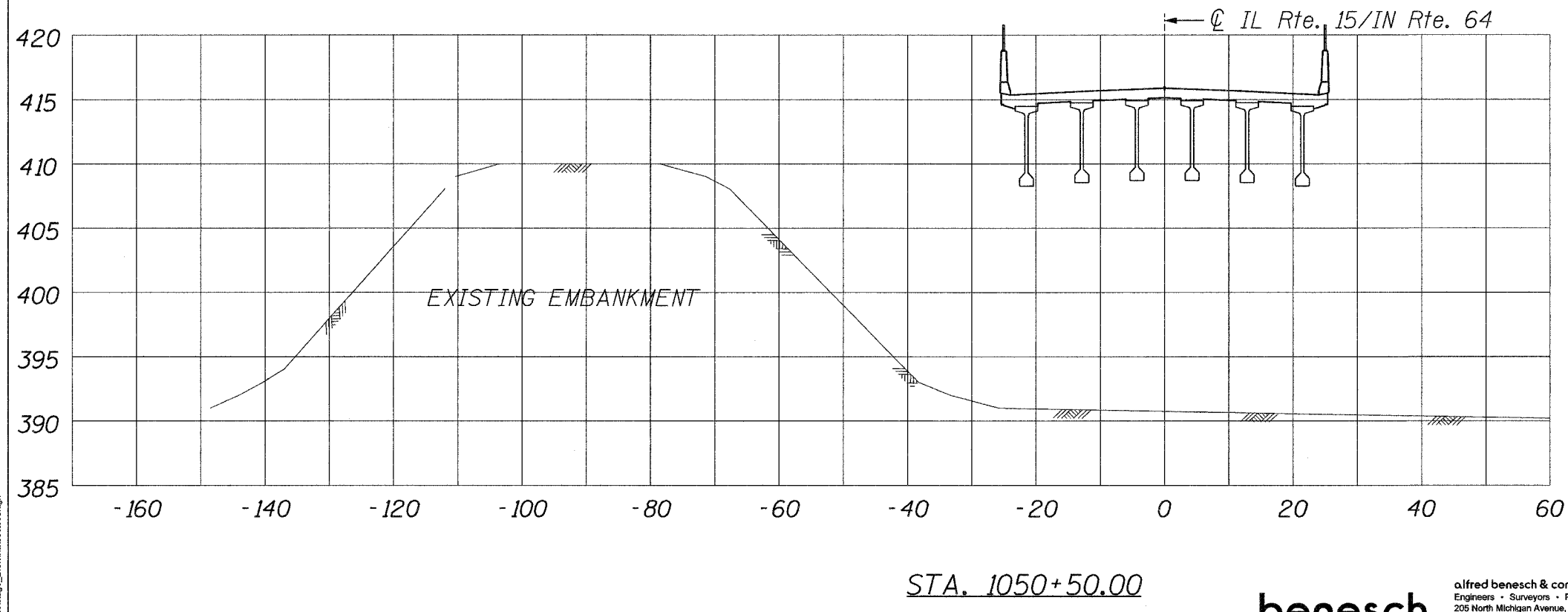
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CHECKED BY RDC

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	152
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FURNISHED EXCAVATION = 2390 SQ. FT.
 TOPSOIL EXCAVATION = 85 SQ. FT.
 TOPSOIL PLACEMENT, 6" = 60 SQ. FT.



EARTH EXCAVATION & PGE FOR KEYWAY



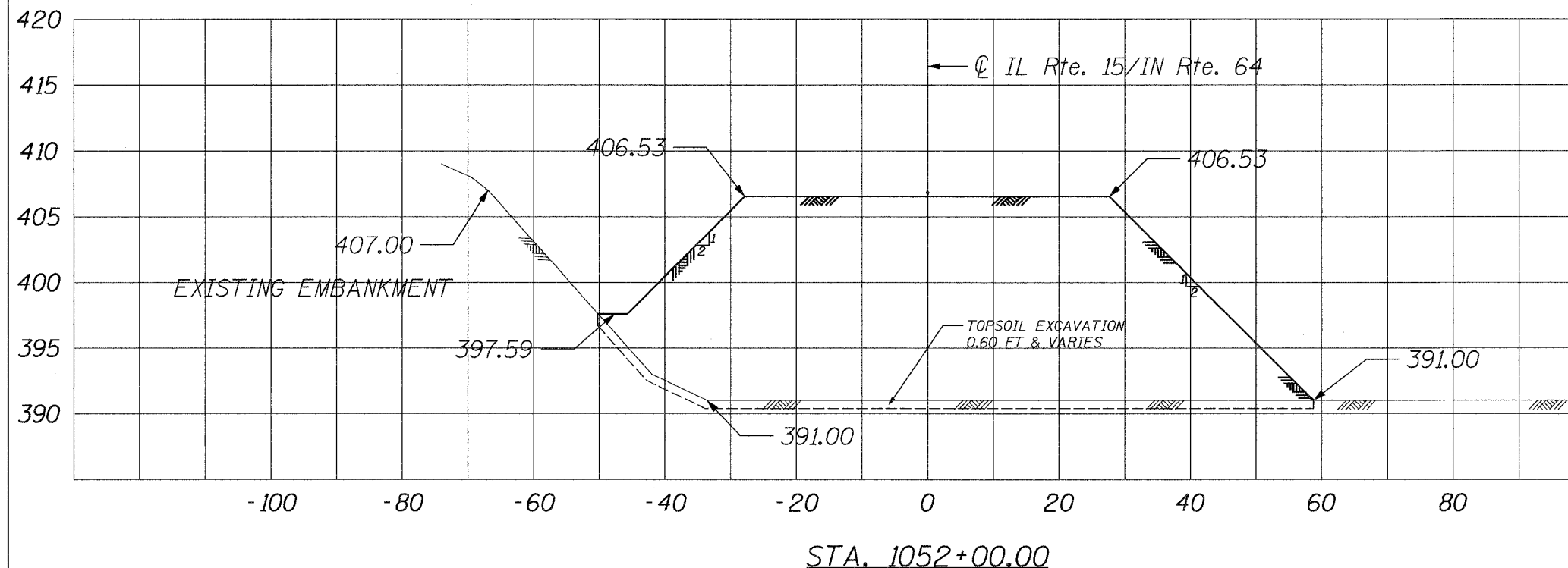
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**CONSTRUCTION BERM CROSS-SECTIONS
 EAST ABUTMENT**
 SCALE: VERT. 1"=20'
 HORIZ. 1"=10'
 DATE 06/15/07
 DRAWN BY MAC
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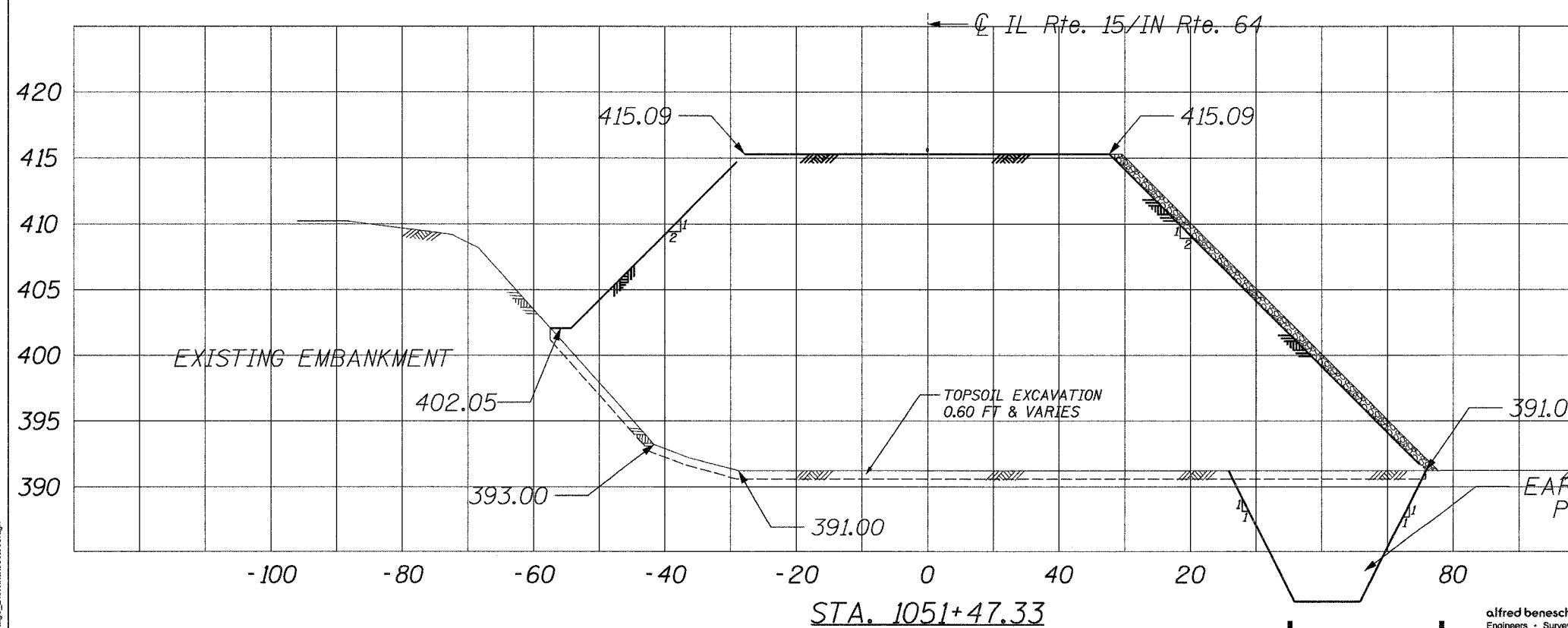
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CONTRACT NO. 94450				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	153
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



FURNISHED EXCAVATION = 1320 SQ. FT.
 TOPSOIL EXCAVATION = 70 SQ. FT.
 TOPSOIL PLACEMENT, 6" = 40 SQ. FT.



FURNISHED EXCAVATION = 2330 SQ. FT.
 TOPSOIL EXCAVATION = 85 SQ. FT.
 TOPSOIL PLACEMENT, 6" = 55 SQ. FT.

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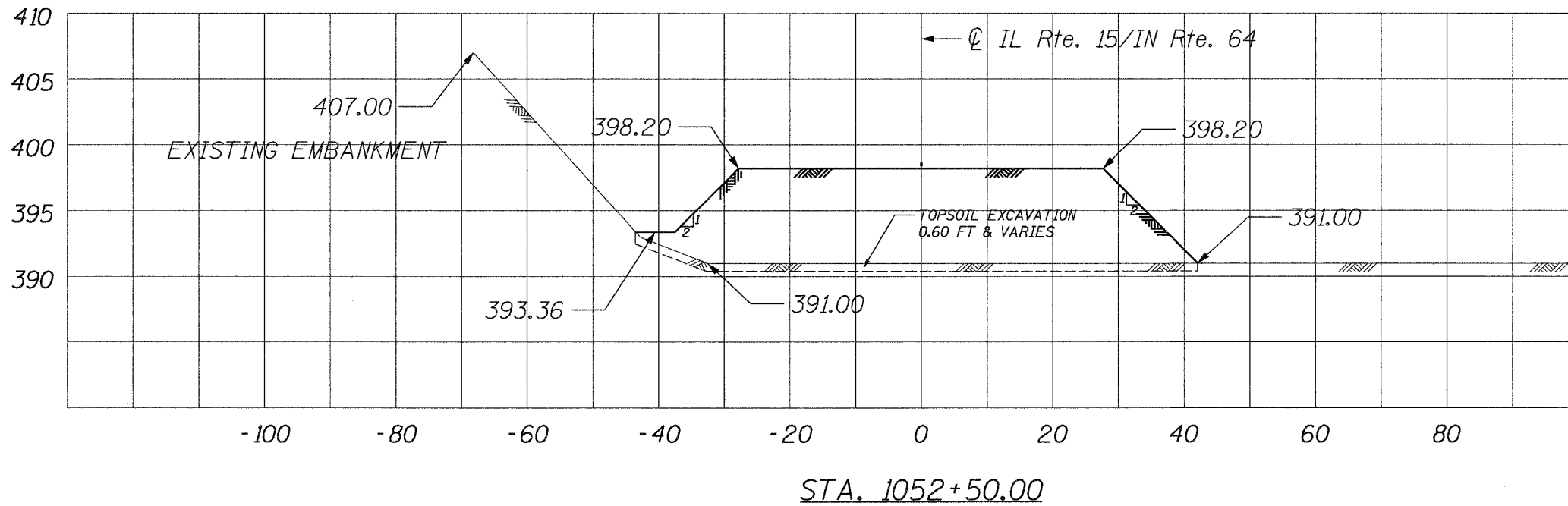
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**CONSTRUCTION BERM CROSS-SECTIONS
 EAST ABUTMENT**
 SCALE: VERT. 1"=20'
 HORIZ. 1"=10'
 DATE 06/15/07
 DRAWN BY MAC
 CHECKED BY RDC

F.A.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	154
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FURNISHED EXCAVATION = 530 SQ. FT.
 TOPSOIL EXCAVATION = 55 SQ. FT.
 TOPSOIL PLACEMENT, 6" = 25 SQ. FT.



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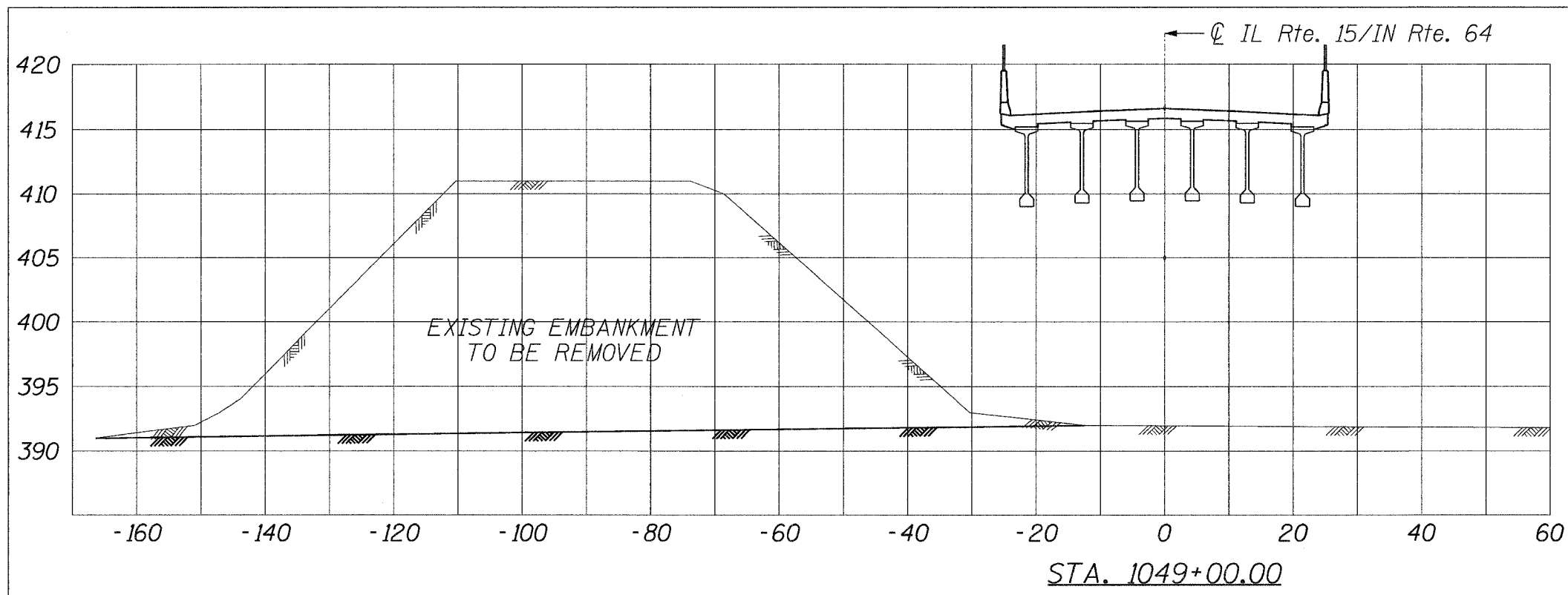
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**CONSTRUCTION BERM CROSS-SECTIONS
 EAST ABUTMENT**

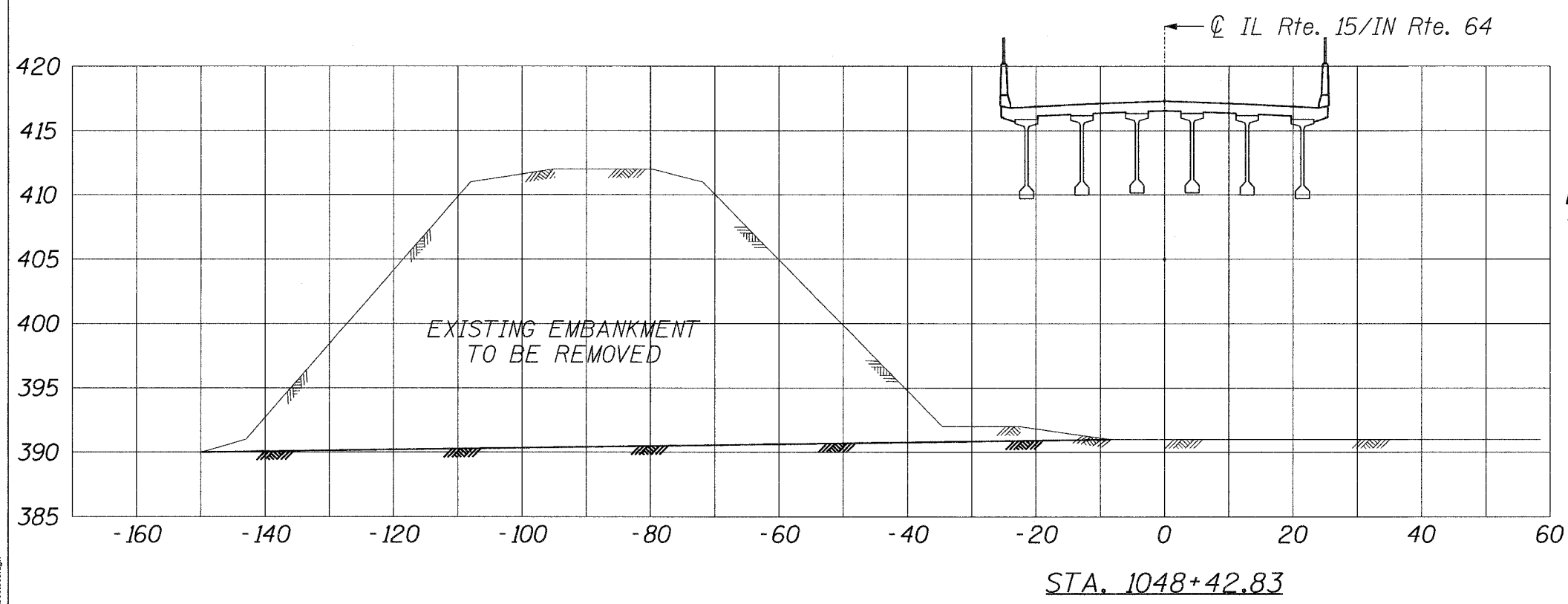
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 DATE 06/15/07

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 CHECKED BY RDC

CONTRACT NO. 94450				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
827	127-3, 12BR	WABASH, IL GIBSON, IN	158	155
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT _____		



EARTH EXCAVATION = 1670 SQ. FT.
TOPSOIL PLACEMENT, 6" = 80 SQ. FT.



EARTH EXCAVATION = 1650 SQ. FT.
TOPSOIL PLACEMENT, 6" = 70 SQ. FT.

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

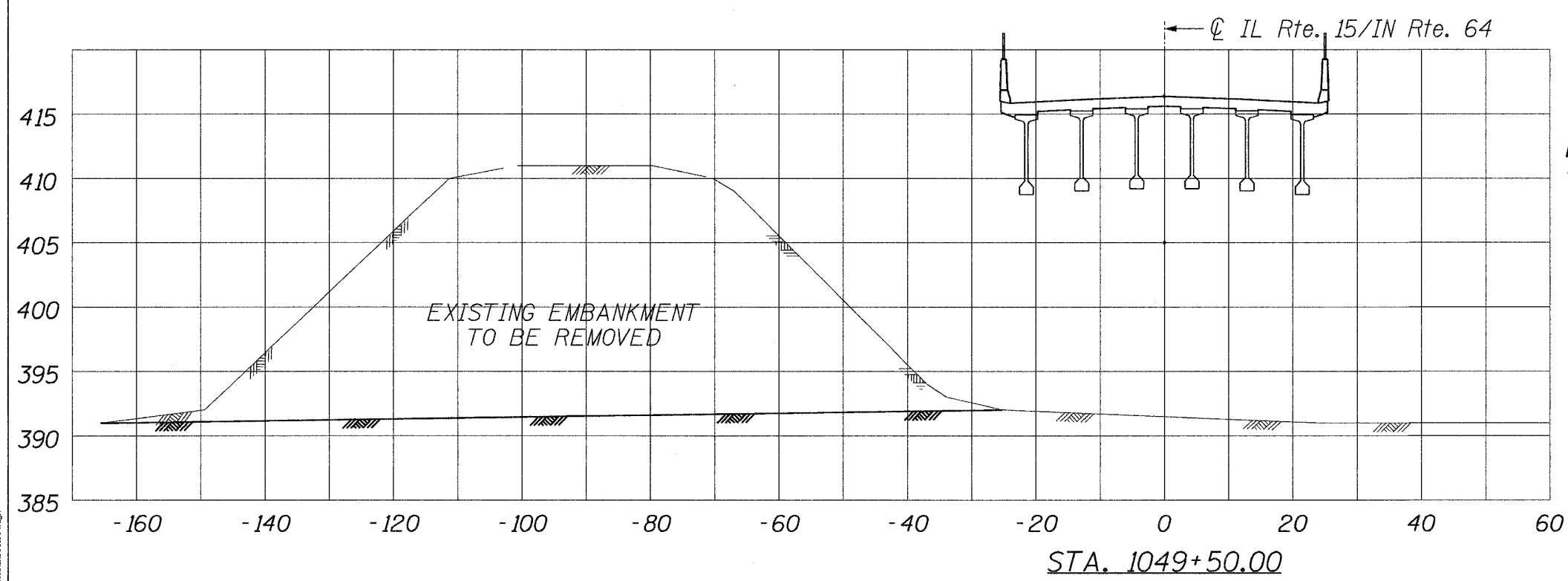
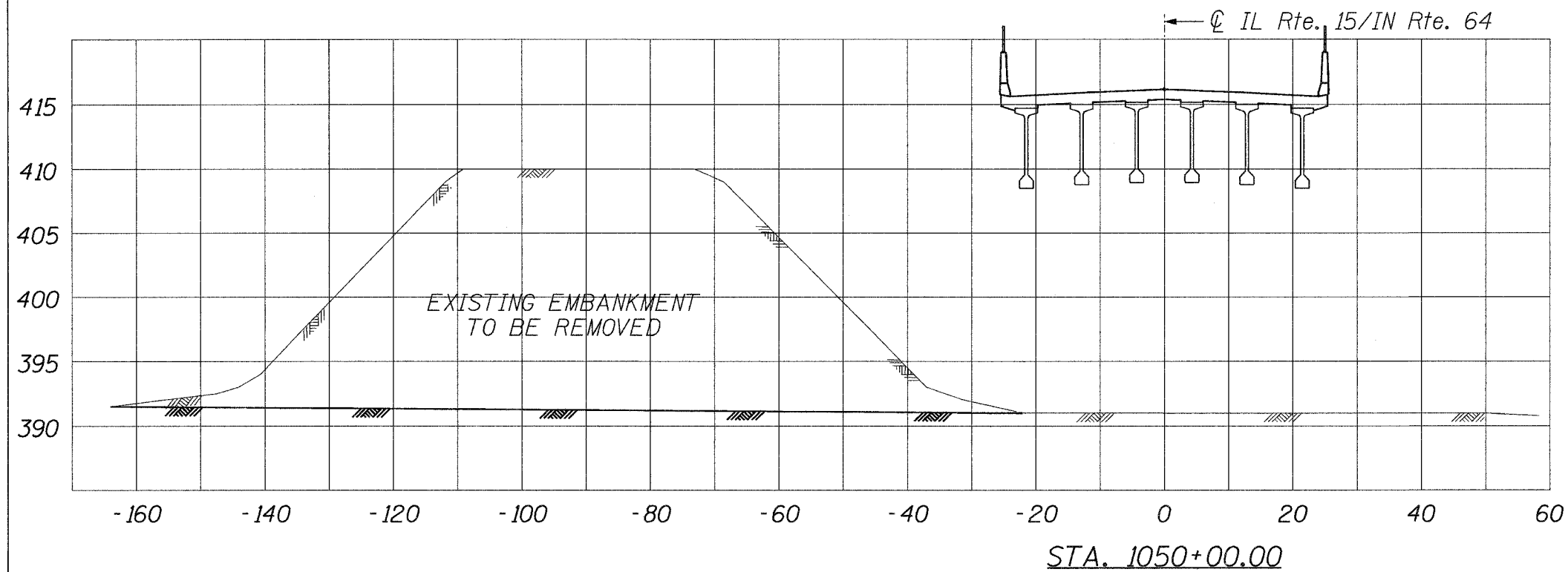
**PROPOSED CROSS-SECTIONS
EAST ABUTMENT**

SCALE: VERT. 1"=20'
 HORIZ. 1"=10'

DATE 06/15/07

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CONTRACT NO. 94450				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	156
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____	ILLINOIS	FED. AID PROJECT		



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REVISIONS	
NAME	DATE

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**PROPOSED CROSS-SECTIONS
EAST ABUTMENT**

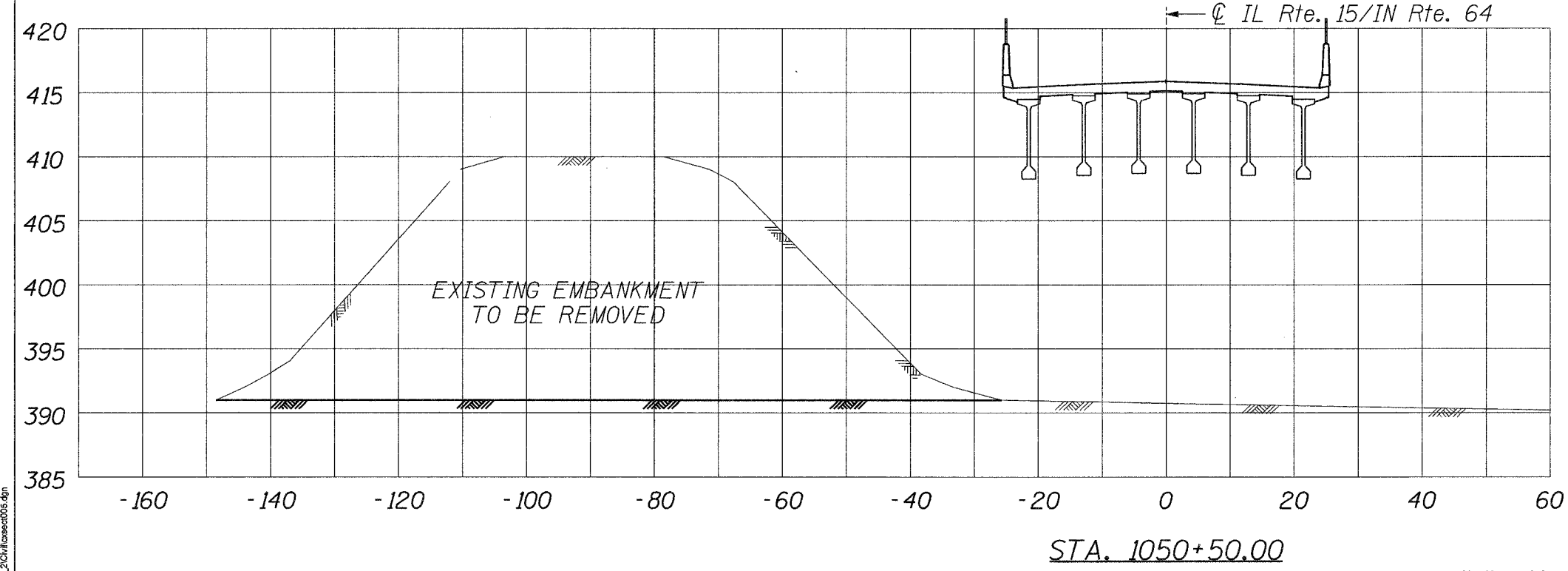
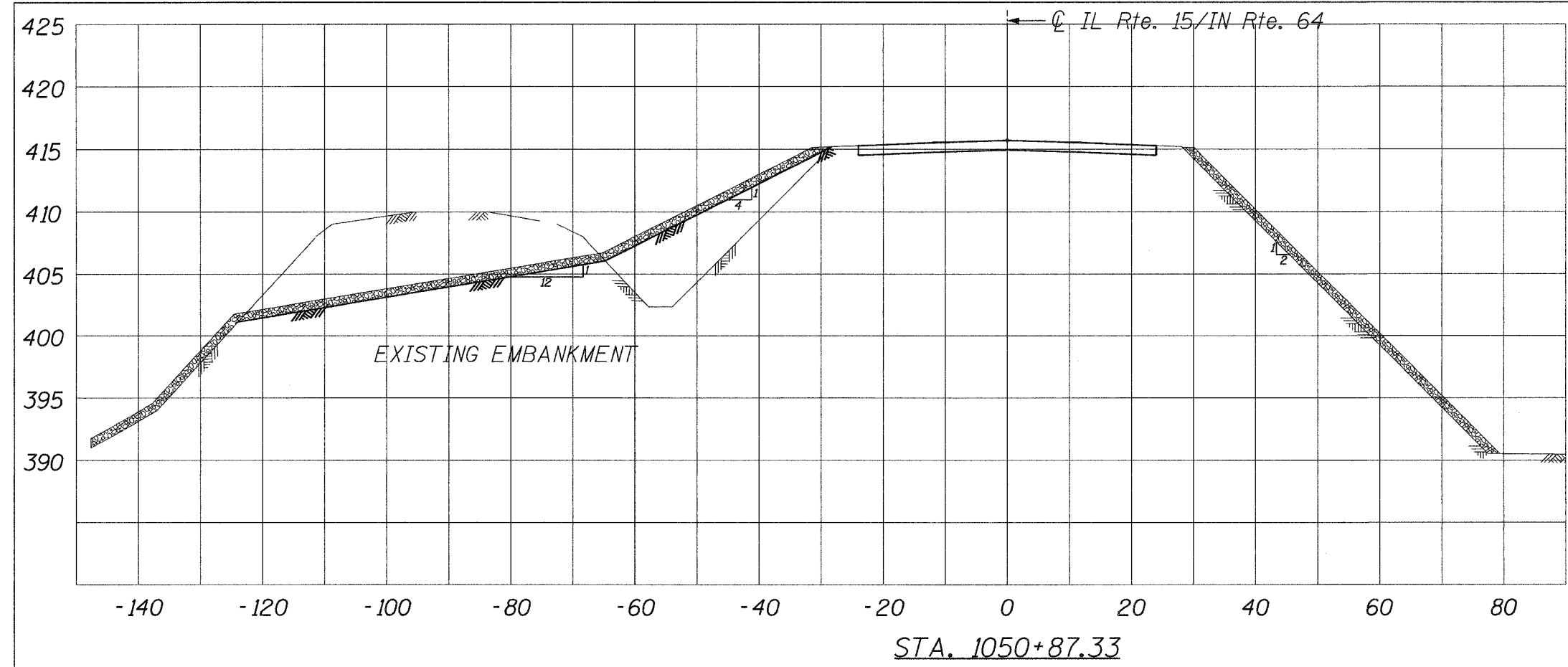
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 HORIZ. 1"=10'

DATE 06/15/07

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 CHECKED BY RDC

F.A.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
627	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	157
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

EARTH EXCAVATION = 310 SQ. FT.
 FURNISHED EXCAVATION = 125 SQ. FT.
 TOPSOIL EXCAVATION = 20 SQ. FT.
 TOPSOIL PLACEMENT, 6" = 50 SQ. FT.



EARTH EXCAVATION = 1450 SQ. FT.
 TOPSOIL PLACEMENT, 6" = 65 SQ. FT.

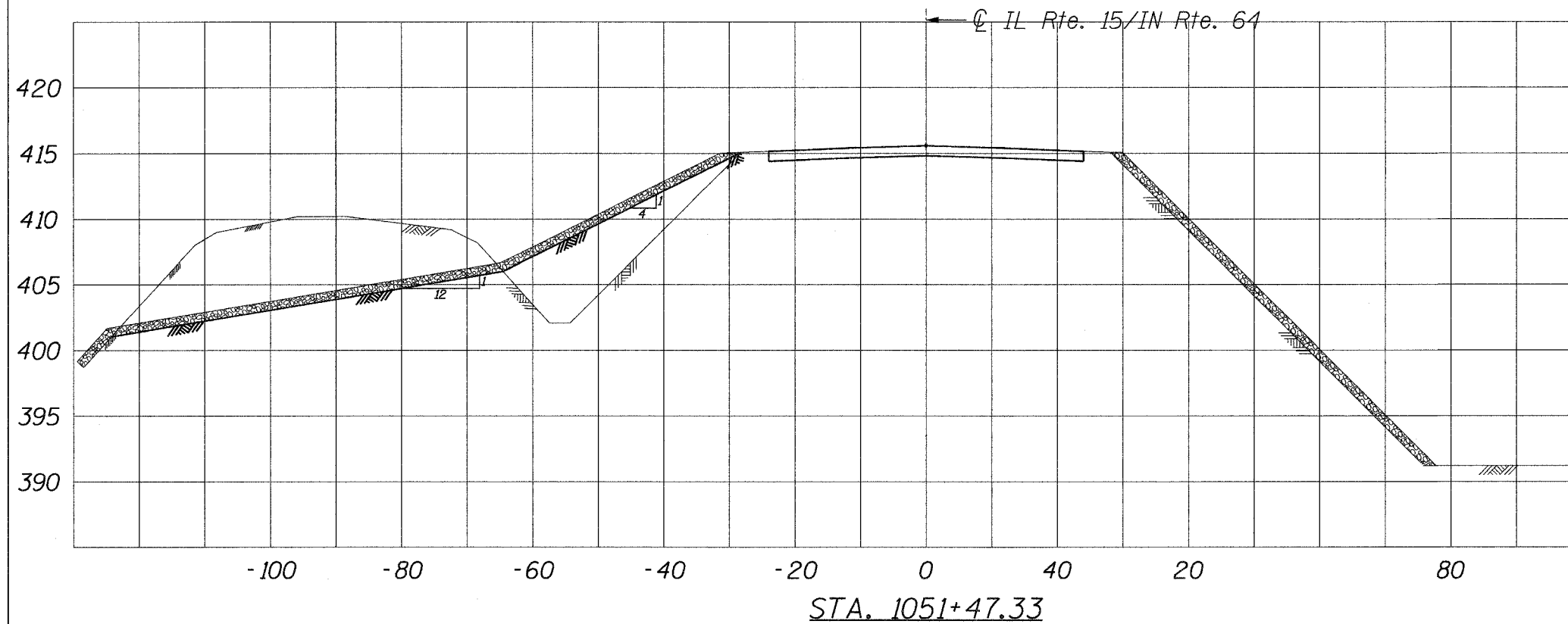
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**PROPOSED CROSS-SECTIONS
 EAST ABUTMENT**
 SCALE: VERT. 1"=20'
 HORIZ. 1"=10'
 DATE 06/15/07
 DRAWN BY MAC
 CHECKED BY RDC

F.A.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	158
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



EARTH EXCAVATION = 320 SQ. FT.
 FURNISHED EXCAVATION = 125 SQ. FT.
 TOPSOIL EXCAVATION = 20 SQ. FT.
 TOPSOIL PLACEMENT, 6" = 51 SQ. FT.

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**PROPOSED CROSS-SECTIONS
 EAST ABUTMENT**

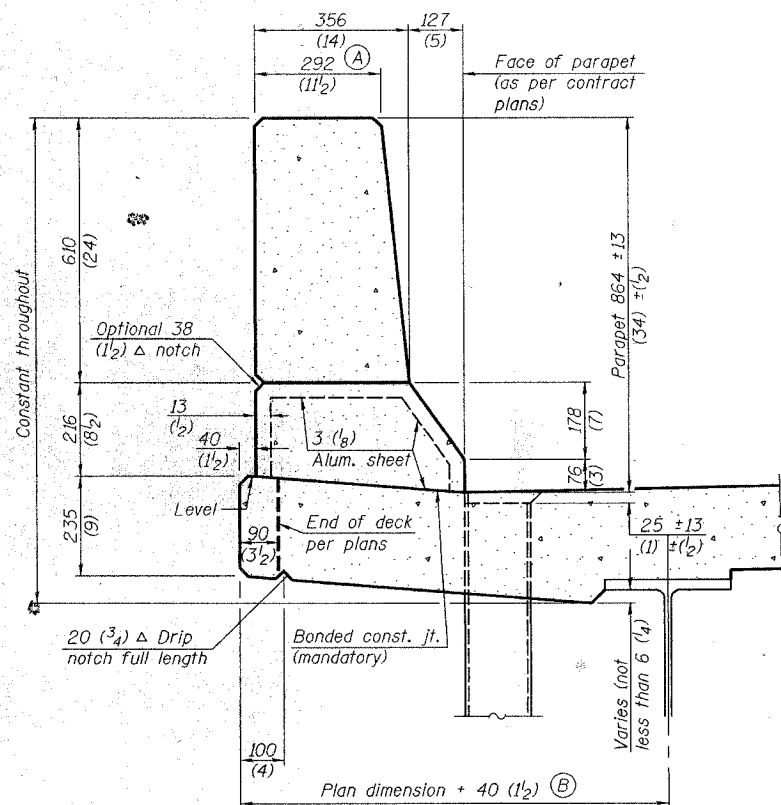
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 DATE 06/15/07

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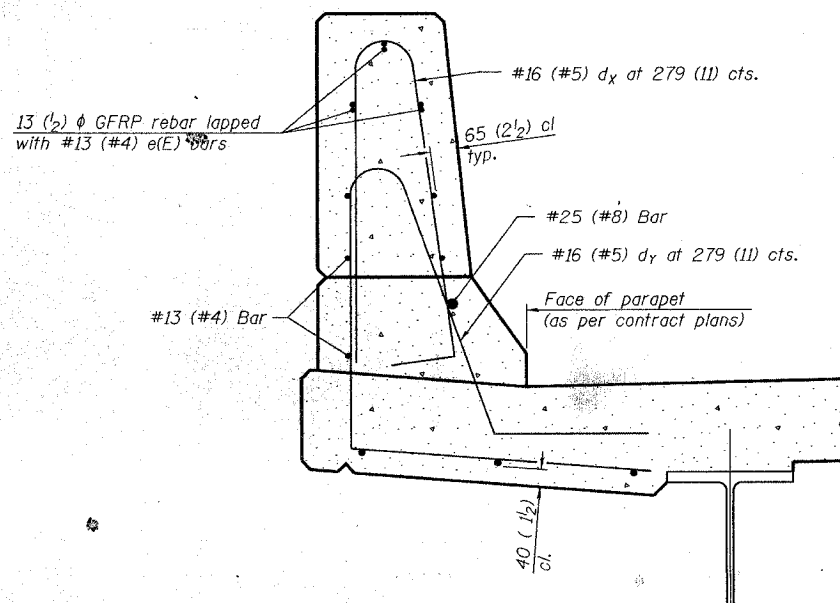
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F&P NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
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FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

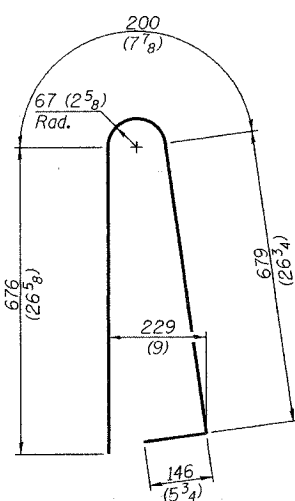
Contract # 94450



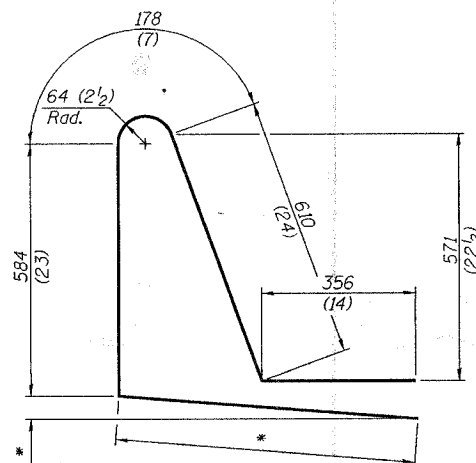
SECTION
(Showing dimensions)



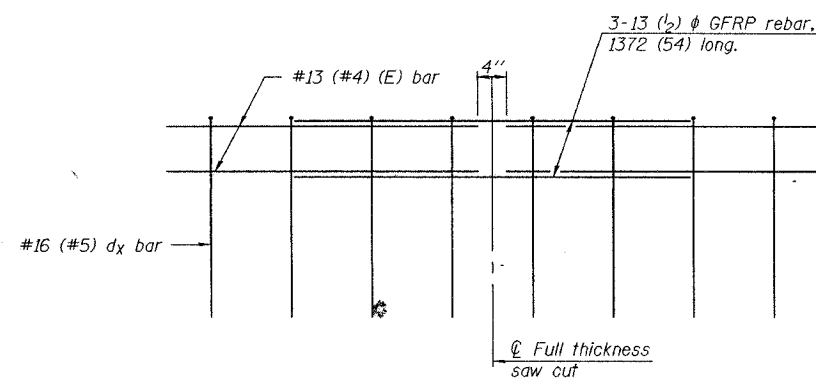
SECTION
(Showing required reinforcement)



BAR d_x(e)



BAR d_y(e)
* Per contract plans



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section)

GENERAL NOTES
All dimensions shall remain the same as shown on contract plans, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B= 0.0422 m³/m (.0165 cu. yds./ft.) of parapet. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all other locations. Adjust/add joint locations to maintain 3 to 6 meter (10 to 20 foot) spacing.

**CONCRETE PARAPET
SLIPFORMING OPTION**