

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 824	05-00183-00-BR	JEFFERSON	23	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99361		

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**

**PLANS FOR PROPOSED**  
**HIGHWAY BRIDGE PROGRAM**

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	SCHEDULE OF QUANTITIES
4.-5.	TYPICAL SECTIONS AND MISC. DETAILS
6.	PLAN AND PROFILE
7.	PAVEMENT MARKING SHEET
8.-15.	STATION CROSS SECTIONS
16.-22.	BRIDGE PLANS
23.	BORINGS

**HIGHWAY STANDARDS**

000001-05	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
515001-03	NAME PLATE FOR BRIDGES
542301-02	PRECAST REINFORCED CONCRETE FLARED END SECTION
630001-08	STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1, (SPECIAL) GUARDRAIL TERMINALS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701901-01	TRAFFIC CONTROL DEVICES
BLR 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL; DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 27-1	TRAFFIC BARRIER TERMINAL TYPE 5A

**UTILITIES**

**ELECTRIC:**

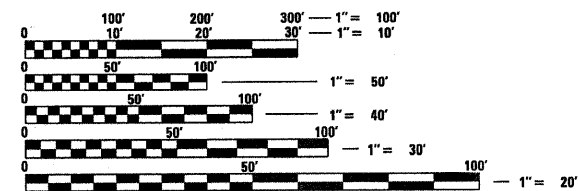
TRI-COUNTY ELECTRIC COOPERATIVE  
P.O. BOX 309  
MT. VERNON, IL 62864  
ATTN: SUE ECHOLS  
618-224-5151

**TELEPHONE:**

FRONTIER COMMUNICATIONS  
300 LONE OAK ROAD  
PADUCAH, KY 42001

**WATER:**

REND LAKE INTERCITY WATER SYSTEM  
PO BOX 907  
BENTON, IL 62812  
ATTN: ARNOLD EGGLESTON



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

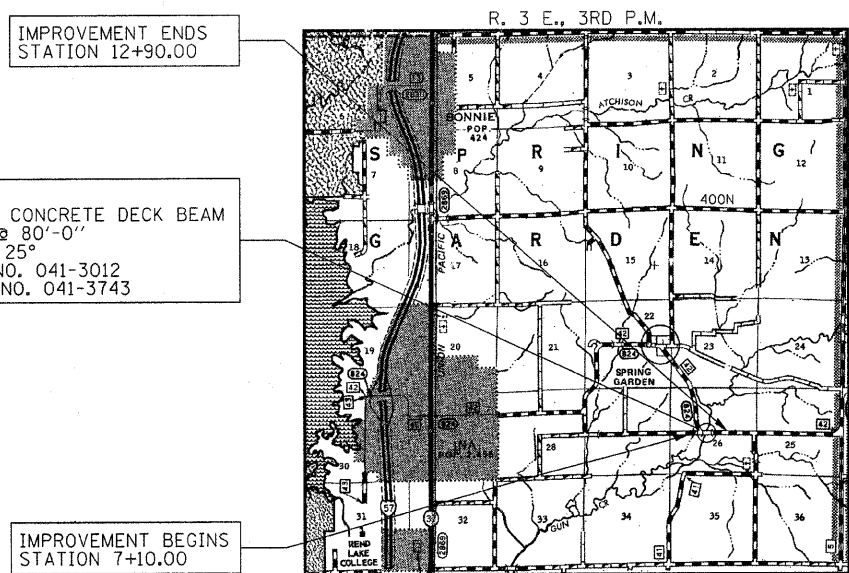
**CONTRACT NO. 99361**

**PROJECT BRS-824(104)**  
**SECTION 05-00183-00-BR**  
**JEFFERSON COUNTY**  
**FAS 824 / C.H. 42 / SPRING GARDEN ROAD**  
**PROPOSED STRUCTURE 041-3743**  
**JOB C-99-573-06**



**DESIGN DESIGNATION**

**FUNCTIONAL CLASSIFICATION:** LOCAL ROAD  
**DESIGN SPEED:** 40 MPH  
**DESIGN TRAFFIC:** 360 ADT (2008)  
**DESIGN GUIDELINES:** 3R



**LOCATION MAP**

APPROXIMATE SCALE: 0 1 MILE  
NET LENGTH OF SECTION = 580 FEET = 0.110 MILES

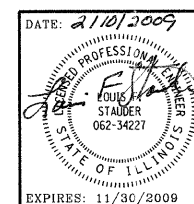


**JEFFERSON COUNTY HIGHWAY DEPT.**

APPROVED: 2-11-09 20 09  
*Steve Schmale*  
COUNTY ENGINEER

PASSED: 2-20-09 20 09  
*Robert W. Melcher*  
DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review: 2-20-09 20 09  
*Mary C. Lame*  
DEPUTY DIRECTOR OF HIGHWAYS  
REGION FIVE ENGINEER  
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

**HLR**

3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 540-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 08.0129.130 DATE: 02/06/09

SUMMARY OF QUANTITIES			
CODE No.	ITEM	CONST. CODE X081-2A	
		UNIT	TOTAL
20200100	EARTH EXCAVATION	CU YD	.30
20300100	CHANNEL EXCAVATION	CU YD	165
20400800	FURNISHED EXCAVATION	CU YD	1070
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	1000
A 25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.6
A 28101700	RIPRAP, SPECIAL	TON	360
35100100	AGGREGATE BASE COURSE, TYPE A	TON	370
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	400
40600300	AGGREGATE (PRIME COAT)	TON	1
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	75
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	275
40600990	TEMPORARY RAMP	SQ YD	50
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	95
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	7
A 44300300	AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A	SQ YD	823
48101200	AGGREGATE SHOULDERS, TYPE B	TON	245
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	30.6
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	2180
50800105	REINFORCEMENT BARS	POUND	2650
* 50900205	STEEL RAILING, TYPE S1	FOOT	170
51201600	FURNISHING STEEL PILES HP12X53	FOOT	275
51202305	DRIVING PILES	FOOT	275
51500100	NAME PLATES	EACH	1
54200439	PIPE CULVERTS, TYPE 1 RCCP 24"	FOOT	5
54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	4
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	75
* 63000003	STEEL PLATE BEAM GUARD RAIL, TYPE A, 9 FOOT POSTS	FOOT	212.5
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
* A 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
A 67100100	MOBILIZATION	L SUM	1
A 70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2230
* A 78200405	GUARDRAIL MARKERS	EACH	10
* A 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300100	PAVEMENT MARKING REMOVAL	SQ FT	158

A - SEE SPECIAL PROVISIONS \* SPECIALTY ITEMS

### GENERAL NOTES


- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2007," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. THE REMOVAL OF THE EXISTING PAVEMENT WILL BE PAID FOR AS EARTH EXCAVATION. ALL BITUMINOUS MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER. PROPER DISPOSAL OF BITUMINOUS MATERIAL SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE CONTRACTOR SHALL CONSULT THE ENGINEER IN REGARD TO THE EXACT LENGTH OF PIPE CULVERTS AND PIPE DRAINS BEFORE ORDERING THESE ITEMS.
- THE FENCES WILL BE REMOVED BY OTHERS. CONTRACTOR SHALL NOTIFY THE ENGINEER, 5 DAYS BEFORE HIS INTENDED START DATE FOR THE FENCE TO BE RELOCATED.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.  

HOT-MIX ASPHALT	112 LBS/SQ YD/IN
RIPRAP, SPECIAL	1.75 TON/CU YD
AGGREGATE BASE COURSE	2.05 TON/CU YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE R.O.W. AS DIRECTED BY THE ENGINEER.
- USE PRIME COAT RC-70

MIXTURE REQUIREMENTS	
LOCATION(S):	FAS 824/ CH42 STA. 7+10 TO STA. 12+90.00
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE & INCIDENTAL
AC/PG:	PG 64-22
RAP % (MAX):	15%
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION: (GRADATION MIXTURE):	IL 9.5
FRICTION AGGREGATE:	MIXTURE C
MIXTURE WEIGHTS:	112 LBS \ SY \ INCH THICKNESS

MIXTURE REQUIREMENTS	
LOCATION(S):	FAS 824/ CH42 STA. 7+10 TO STA. 12+90.00
MIXTURE USE(S):	LEVELING BINDER (MACHINE METHOD)
AC/PG:	PG 64-22
RAP % (MAX):	25%
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION: (GRADATION MIXTURE):	IL 9.5
FRICTION AGGREGATE:	MIXTURE C
MIXTURE WEIGHTS:	112 LBS \ SY \ INCH THICKNESS

PAVEMENT DESIGN  
DESIGN PERIOD 20 YEARS      LOADING HS 20-44 (80,000 LBS)  
STRUCTURAL DESIGN TRAFFIC (SDT) = 2019 ( 425.00 )  
PV = 1834      SU = 25      MU = 10  
ROAD/STREET CLASSIFICATION: CLASS III  
PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE  
P = 1      S = 1      MU = 1  
TRAFFIC FACTOR      ACTUAL TF      0.07      AC TYPE  
MINIMUM TF  
PG GRADE: BINDER = 64-22      SURFACE = 64-22  
SUBGRADE SUPPORT RATING  
IBR= POOR ( STA.      TO STA.      )  
IBR= POOR ( STA.      TO STA.      )

FILE NAME = 089129-sh-t-summary.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	<b>STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>	 <b>HAMPTON, LENZINI &amp; RENWICK, INC.</b> CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS	<b>SUMMARY OF QUANTITIES &amp; GENERAL NOTES</b>	FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE =	DRAWN - D.T.M.	REVISED -	824				05-00183-00-BR	JEFFERSON	23	2	
PLOT DATE = 3/2/2009	CHECKED - S.W.M.	REVISED -	CONTRACT NO. 99361								
	DATE - 02/06/09	REVISED -	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT								

ROADWAY SCHEDULE												
LOCATION	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	AGGREGATE BASE COURSE TYPE A	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE PRIME COAT	LEVELING BINDER (MACHINE METHOD) N50	HOT MIX ASPHALT SURFACE REMOVAL BUTT-JOINT	TEMPORARY RAMP	HOT MIX ASPHALT SURFACE COURSE MIX C, N50 1.5" MIN	INCIDENTAL HOT MIX ASPHALT SURFACING	AREA REFLECTIVE CRACK CONTROL TREATMENT SYSTEM A	AGGREGATE SHOULDERS TYPE B
	21001000	35100100	40600100	40600100	40600300	40600625	40600982	40600990	40603310	40800050	44300300	48101200
	SQ YD	TON	GAL	GAL	TON	TON	SQ YD	SQ YD	TONS	TONS	SQ YD	TONS
FAS 824 (CH42)												
STA. 7+10 TO STA. 9+55	446	129	18	169	0.4	33	156	11	46		367	114
STA. 10+35 TO STA. 12+90	554	239	1	210	0.2	41	78	11	48		456	127
CR 150 N							39	28		7		
SUB TOTAL	1000	368	19	379	0.6	74	273	50	94	7	823	241
GRAND TOTAL	1000	368		398	0.6	74	273	50	94	7	823	241
USE	1000	370		400	1	75	275	50	95	7	823	245

SEEDING SCHEDULE	
LOCATION	CLASS 2 SPECIAL
	25001000 ACRE
FAS 824 /CH42	
STA 7+10 TO STA 9+55	0.30
STA 10+35 TO STA 12+90	0.30
TOTAL PROJECT	0.60


EARTHWORK SCHEDULE							
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	20200100 CU.YD.	20300100 CU.YD.			CU.YD.	CU.YD.	CU.YD.
FAS 824 /CH42							
STA 7+10 TO STA 9+55	20		25.00%	100.00%	15	289	-274
STA 10+35 TO STA 12+90	10		25.00%	100.00%	8	891	-883
CHANNEL EXCAVATION		165	25.00%	70.00%	87		0
TOTAL	30	165			110	1180	-1070
TOTAL USE	30	165					-1070

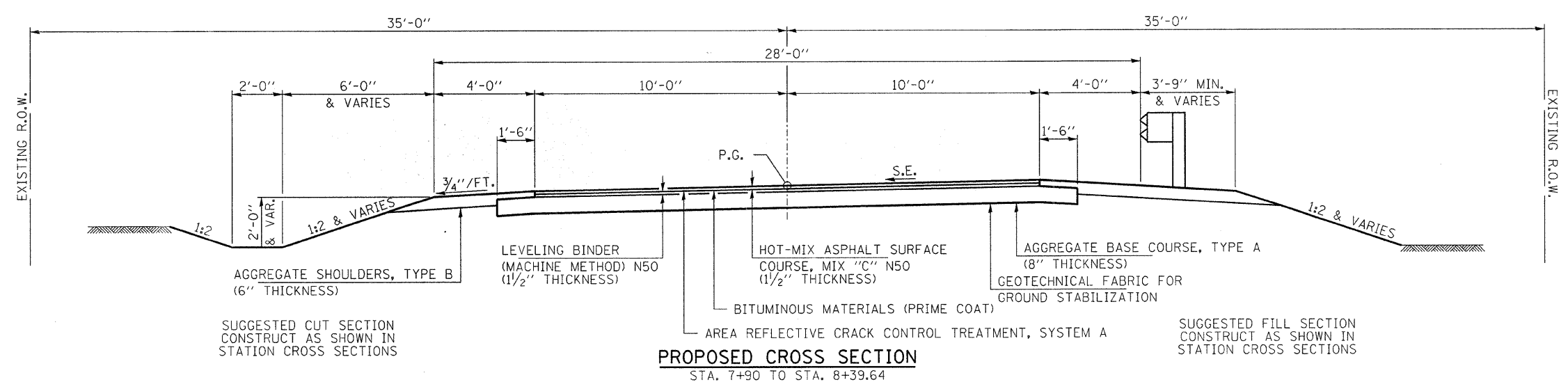
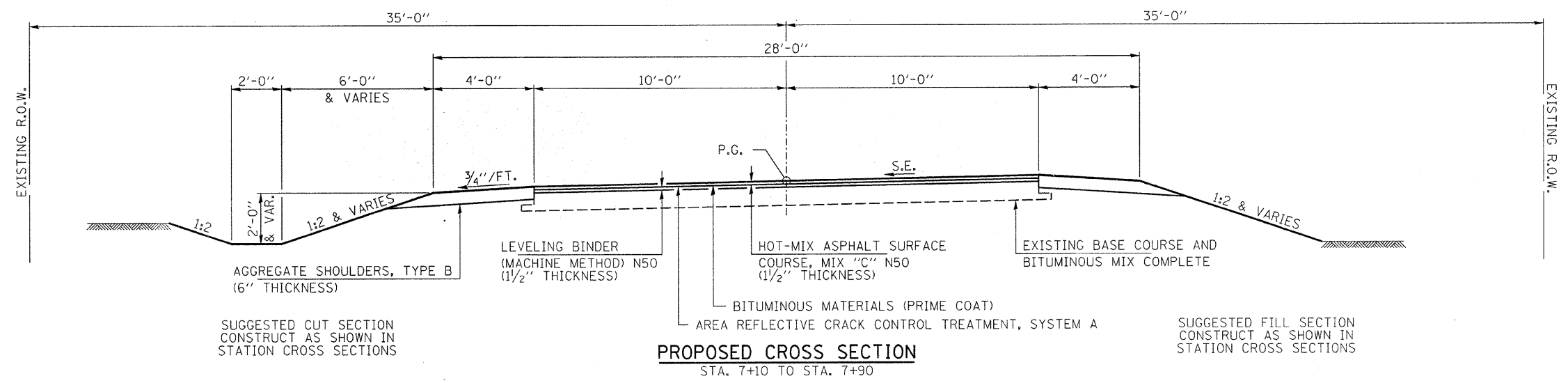
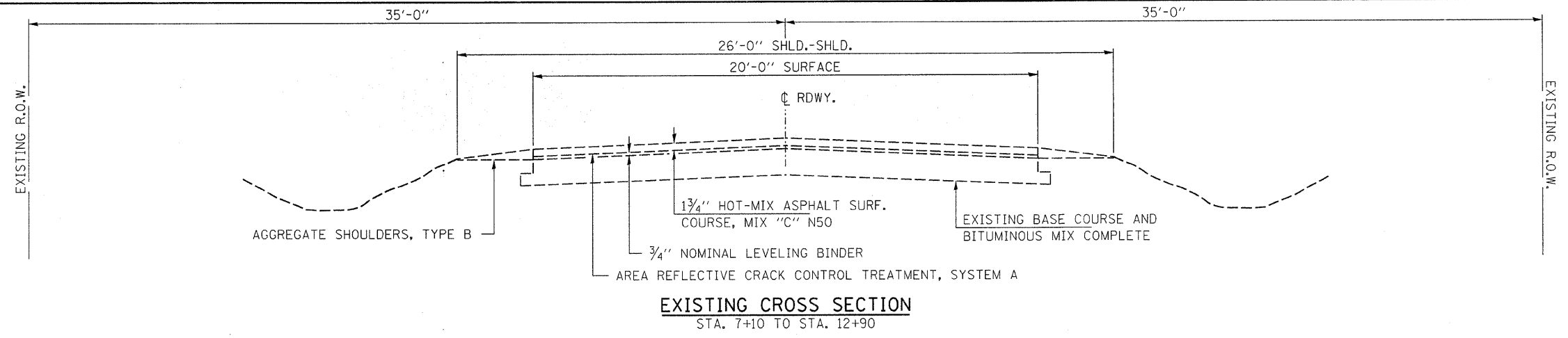
20400800 FURNISHED EXCAVATION = 1070 CU YDS

CULVERT SCHEDULE				
LOCATION	TYPE	EXIST SIZE	PIPE CULVERTS TYPE 1 RCCP 24"	PRECAST REINFORCED CONCRETE FLARED END SECTION 24"
			54200439 FOOT	54213669 EACH
FAS 824 (CH42)				
CL STA. 11+24.41	AR	24" RCCP	5	2
CL STA. 11+73.78	AR	24" RCCP		2
TOTAL			5	4

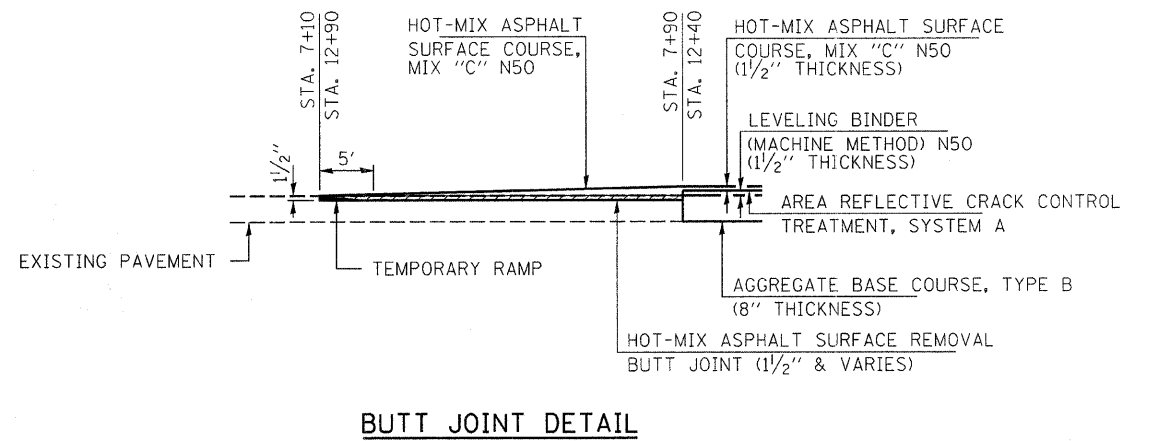
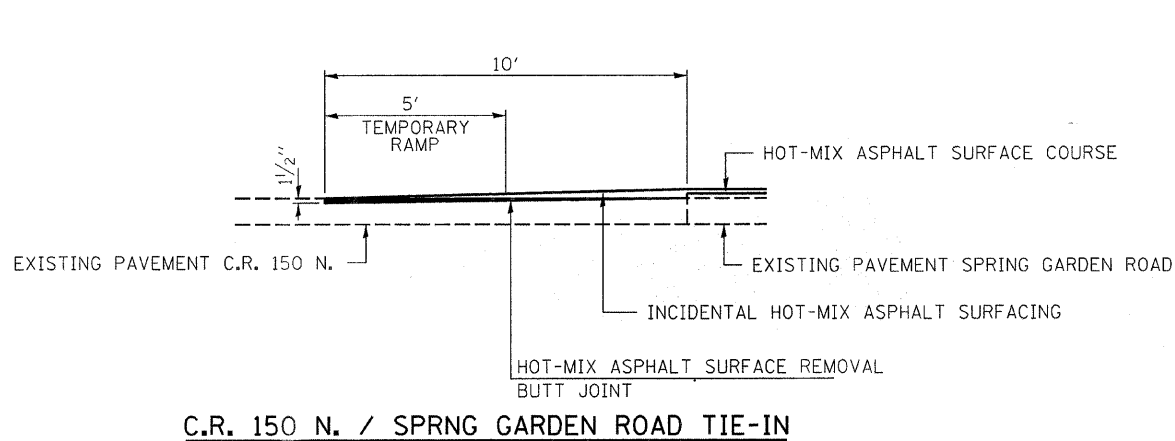
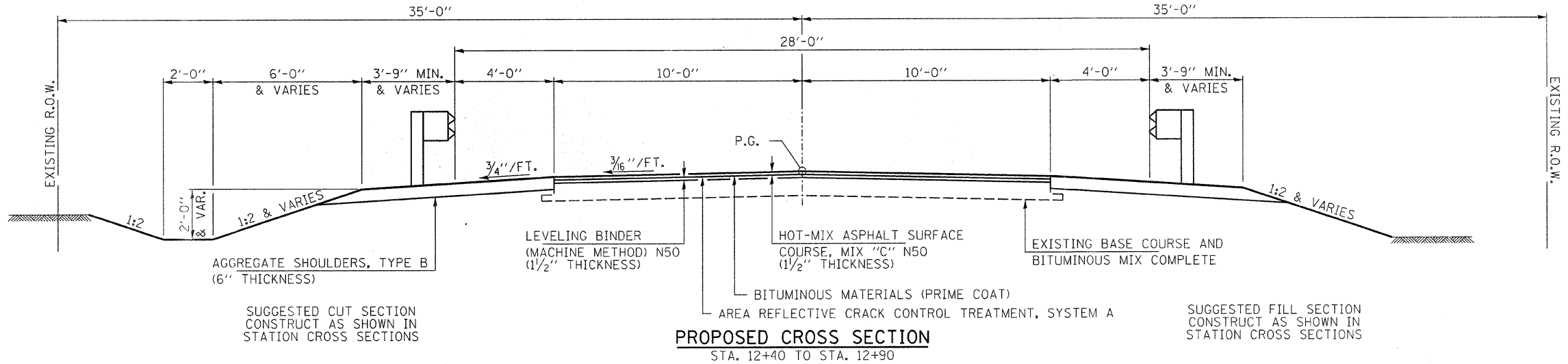
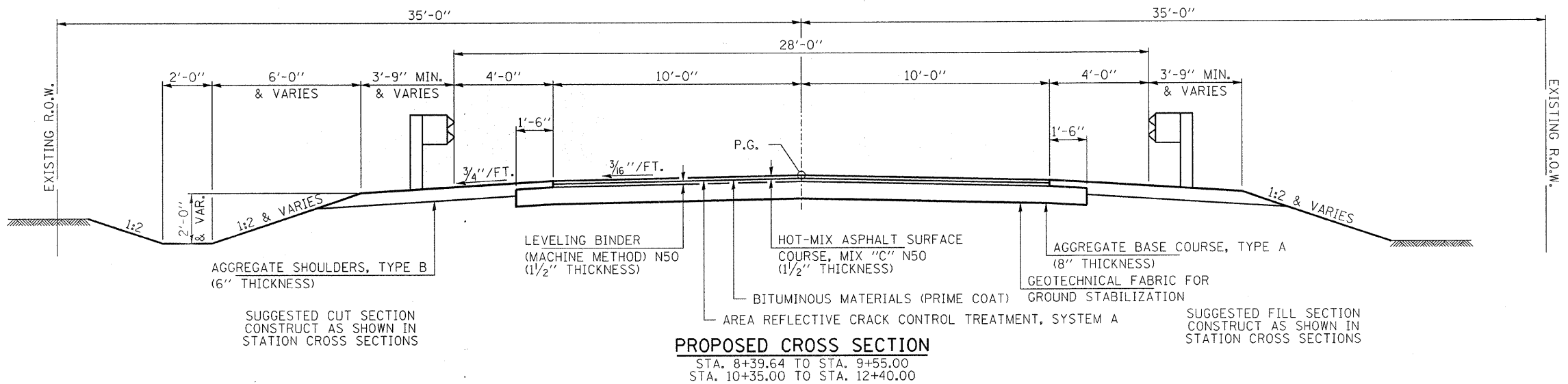
PAVEMENT MARKING SCHEDULE			
LOCATION	THERMOPLASTIC PAVEMENT MARKING PERMANENT		PAVEMENT MARKING REMOVAL
	4" SINGLE WHITE EDGE LINE	4" SOLID YELLOW CENTERLINE	
	78000200		78300100
	FOOT	FOOT	SQ FT
FAS 824 (CH42) SPRING GARDEN ROAD			
LT. STA. 7+10 TO LT. STA. 12+90	580		47
LCL. STA. 7+10 TO LCL. STA. 12+90		580	47
RCL. STA. 7+10 TO RCL. STA. 12+90		580	47
RT. STA. 8+00 TO RT. STA. 12+90	490		17
SUBTOTAL	1070	1160	158
TOTAL	2230		158

GUARDRAIL SCHEDULE					
LOCATION	STEEL PLATE BEAM GUARDRAIL TYPE A 9 FOOT POSTS	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)	TRAFFIC BARRIER TERMINAL TYPE 5A	TERMINAL MARKER DIRECT APPLIED	GUARDRAIL MARKERS
	63000003 FOOT	63100167 EACH	63100075 EACH	78201000 EACH	78200405 EACH
FAS 824 (CH42)					
RT. STA. 7+97.72 TO RT. STA. 9+51.61	87.5	1	1	1	
LT. STA. 8+773.28 TO LT. STA. 9+64.67	25	1	1	1	
RT. STA. 10+25.33 TO RT. STA. 11+16.72	25	1	1	1	
LT. STA. 10+38.39 TO LT. STA. 11+79.78	75	1	1	1	
RT. STA. 7+97.72 TO RT. STA. 11+16.72					5
LT. STA. 8+773.28 TO LT. STA. 11+79.78					5
TOTAL	212.5	4	4	4	10

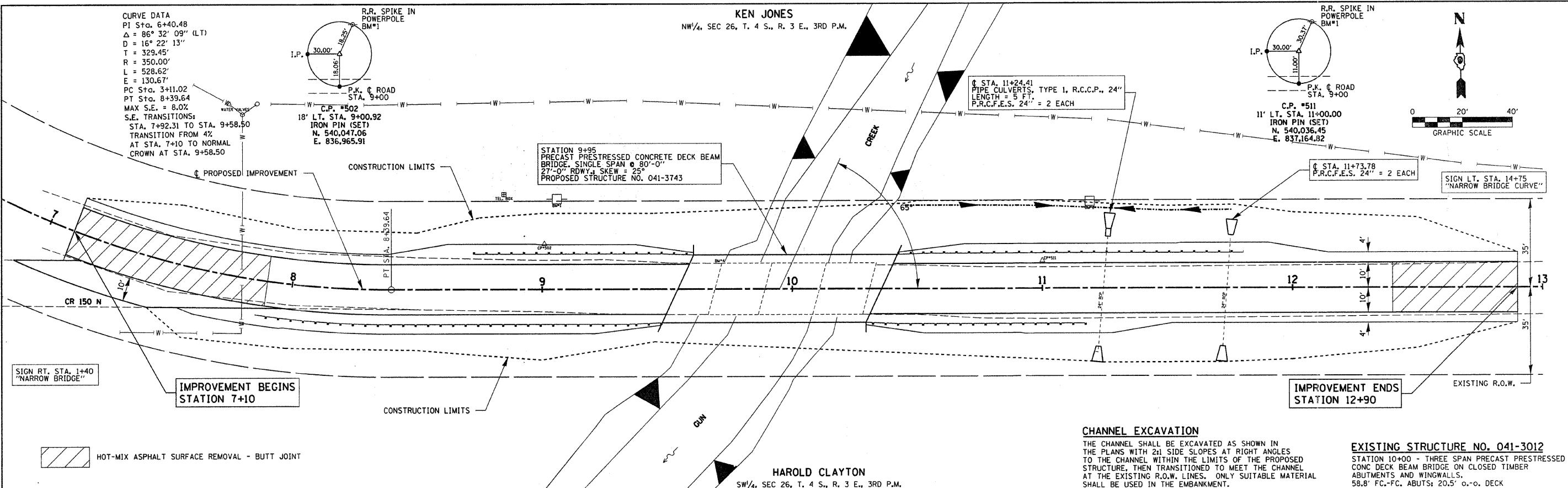
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		DRAWN - D.T.M.	REVISED -				824 05-00183-00-BR	JEFFERSON	23	3
		CHECKED - S.W.M.	REVISED -				CONTRACT NO. 99361			
		DATE - 02/06/09	REVISED -				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			



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		DRAWN - D.T.M.	REVISED -				824	05-00183-00-BR	JEFFERSON	23	4	
		CHECKED - S.W.M.	REVISED -				STA. TO STA.		CONTRACT NO. 99361			
		DATE - 02/06/09	REVISED -				SCALE:		SHEET NO. 1 OF 2 SHEETS		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

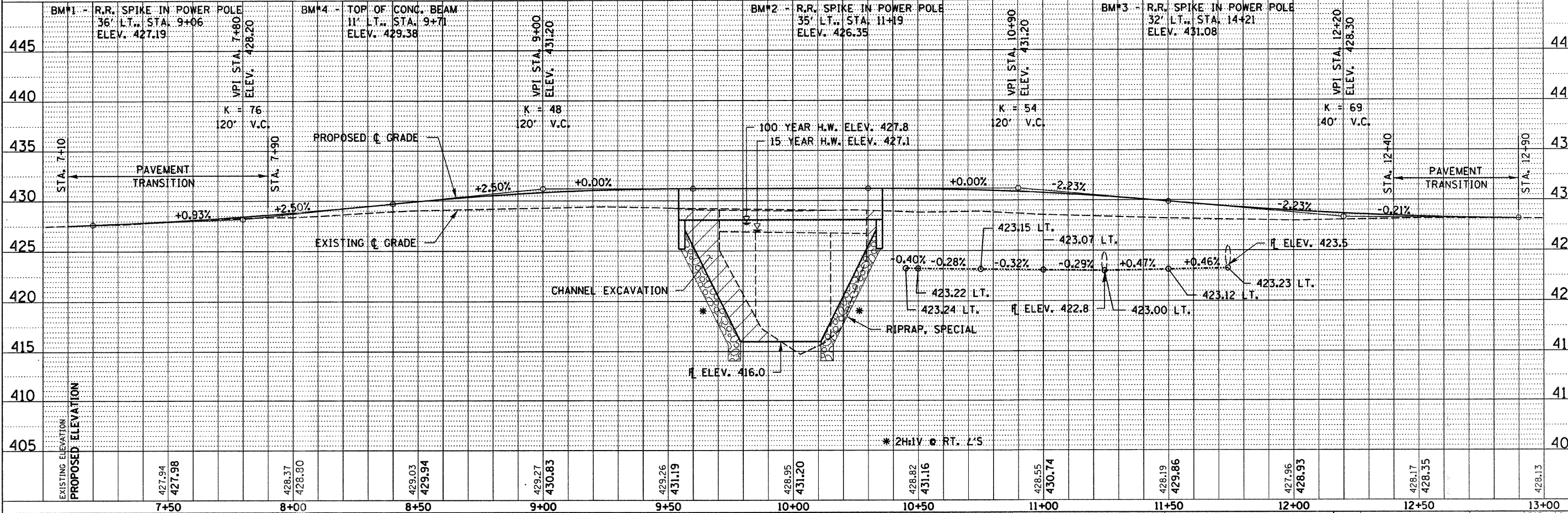


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PLOT SCALE =	DRAWN - D.T.M.	REVISED -	824				05-00183-00-BR	JEFFERSON	23	5	
PLOT DATE = 2/6/2009	CHECKED - S.W.M.	REVISED -	CONTRACT NO. 99361								
	DATE - 02/06/09	REVISED -	ILLINOIS FED. AID PROJECT								

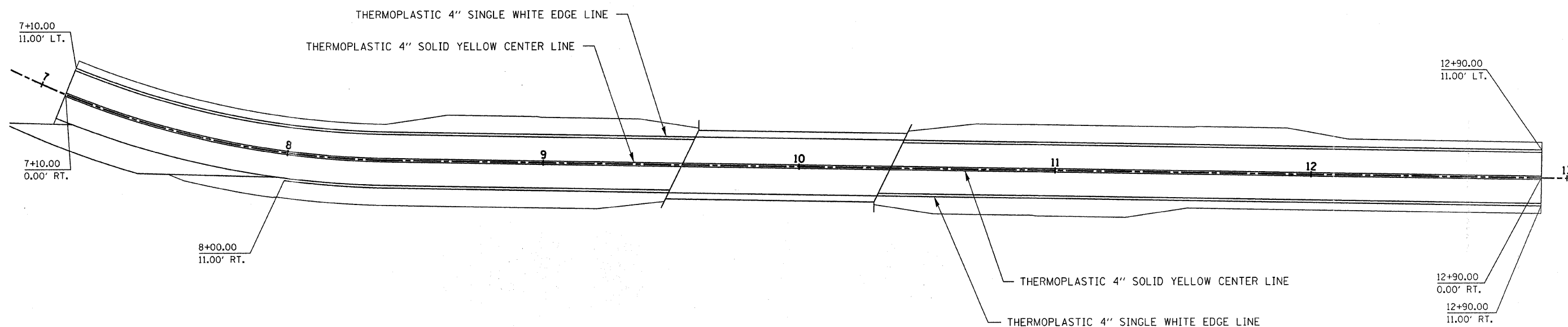
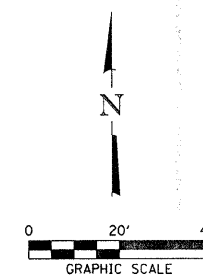


DATE
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SUBMITTED
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NOTE BOOK
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DATE
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NOTE BOOK
NO.
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FILE NAME =	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS	HAMPTON, LENZINI & RENWICK, INC.	PLAN & PROFILE	FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888129-sht-pp1.dgn		DRAWN - D.T.M.	REVISED -	JEFFERSON COUNTY HIGHWAY DEPARTMENT	CIVIL & STRUCTURAL ENGINEERS	SPRING GARDEN ROAD	824	05-00183-00-BR	JEFFERSON	23	6
		CHECKED - S.W.M.	REVISED -		LAND SURVEYORS						
		DATE - 10/20/08	REVISED -								
					SCALE: 1" = 20'	STA. 7+00 TO STA. 13+00			ILLINOIS FED. AID PROJECT	CONTRACT NO. 99361	



FILE NAME = 000129-sh1-pvntmrk.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
		DRAWN - TWK	REVISED -
	PLOT SCALE =	CHECKED - S,W,M.	REVISED -
	PLOT DATE = 2/6/2009	DATE - 02/06/09	REVISED -

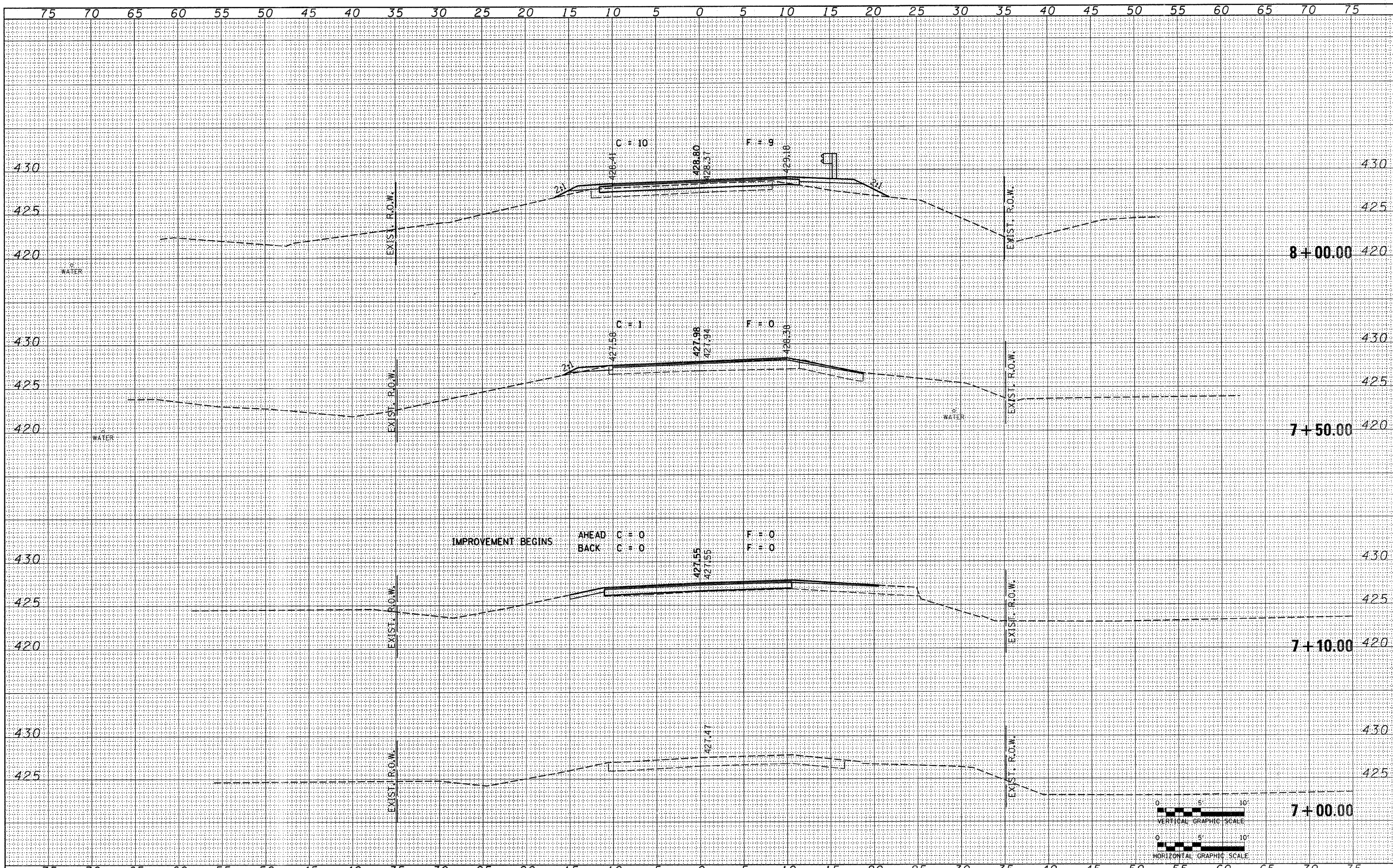
**STATE OF ILLINOIS  
JEFFERSON COUNTY HIGHWAY DEPARTMENT**

**HLR** HAMPTON, LENZINI & RENWICK, INC.  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

**PAVEMENT MARKINGS**

SCALE:	SHEET NO. 1 OF 2 SHEETS	STA.	TO STA.
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FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
824	05-00183-00-BR	JEFFERSON	23	7
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 99361		



DATE	BY

DATE	BY

FILE NAME =	088129-shr-sxa.dgn
USER NAME =	
PLOT SCALE =	
PLOT DATE =	2/6/2009

DESIGNED -	J.W.F.	REVISED -	
DRAWN -	D.T.M.	REVISED -	
CHECKED -	S.W.M.	REVISED -	
DATE -	10/20/08	REVISED -	

**STATE OF ILLINOIS**  
**JEFFERSON COUNTY HIGHWAY DEPARTMENT**

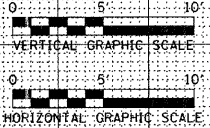
**HLR** HAMPTON, LENZINI & RENWICK, INC.  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

SCALE: 1" = 5'

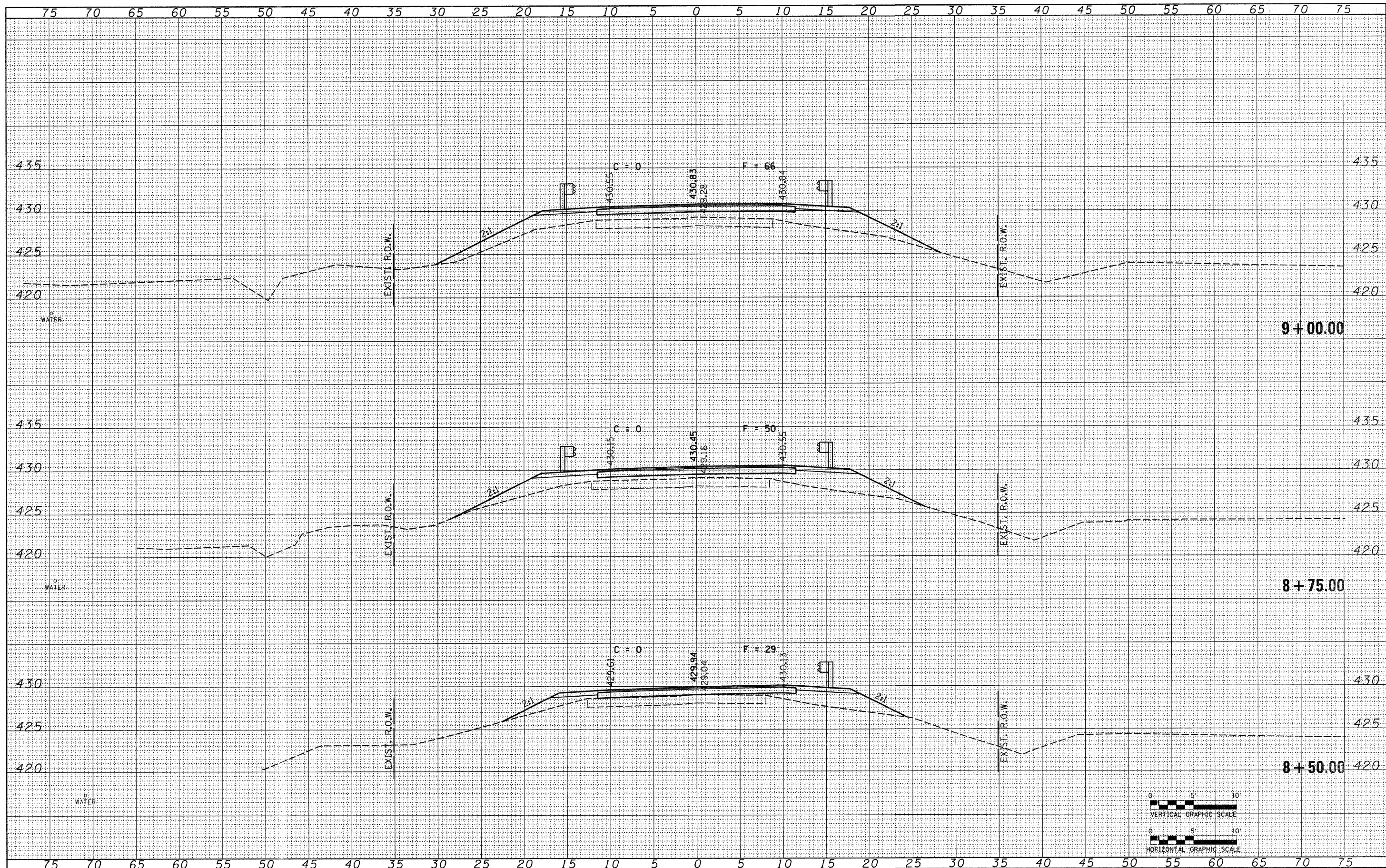
**CROSS SECTIONS**  
**SPRING GARDEN ROAD**

STA. 7+00.00 TO STA. 8+00.00

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
824	05-00183-00-BR	JEFFERSON	23	8
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 99361		

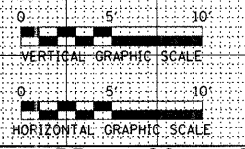






DATE	BY

DATE	BY



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	DRAWN - D.T.M.	REVISED -
PLOT SCALE =	CHECKED - S.W.M.	REVISED -
PLOT DATE = 2/6/2009	DATE - 10/20/08	REVISED -

STATE OF ILLINOIS  
JEFFERSON COUNTY HIGHWAY DEPARTMENT

**HLR**  
HAMPTON, LENZINI & RENWICK, INC.  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

SCALE: 1" = 5'

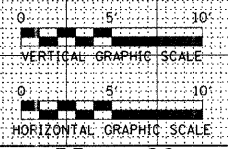
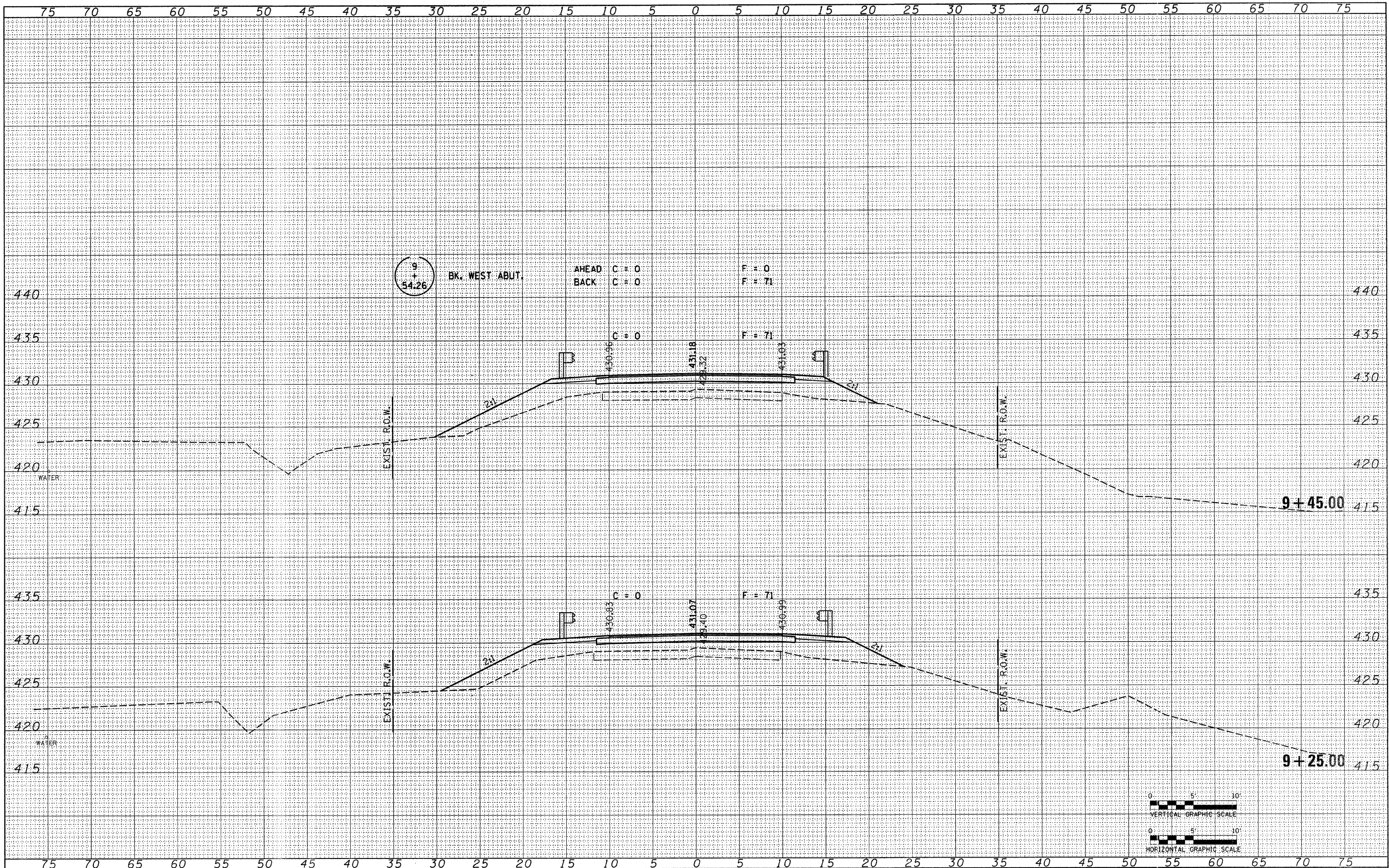
**CROSS SECTIONS**  
**SPRING GARDEN ROAD**

STA. 8+50.00 TO STA. 9+00.00

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
824	05-00183-00-BR	JEFFERSON	23	9
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 99361		

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK NO.	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK NO.	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



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PLOT DATE = 2/6/2009	DATE - 10/20/08	REVISED -

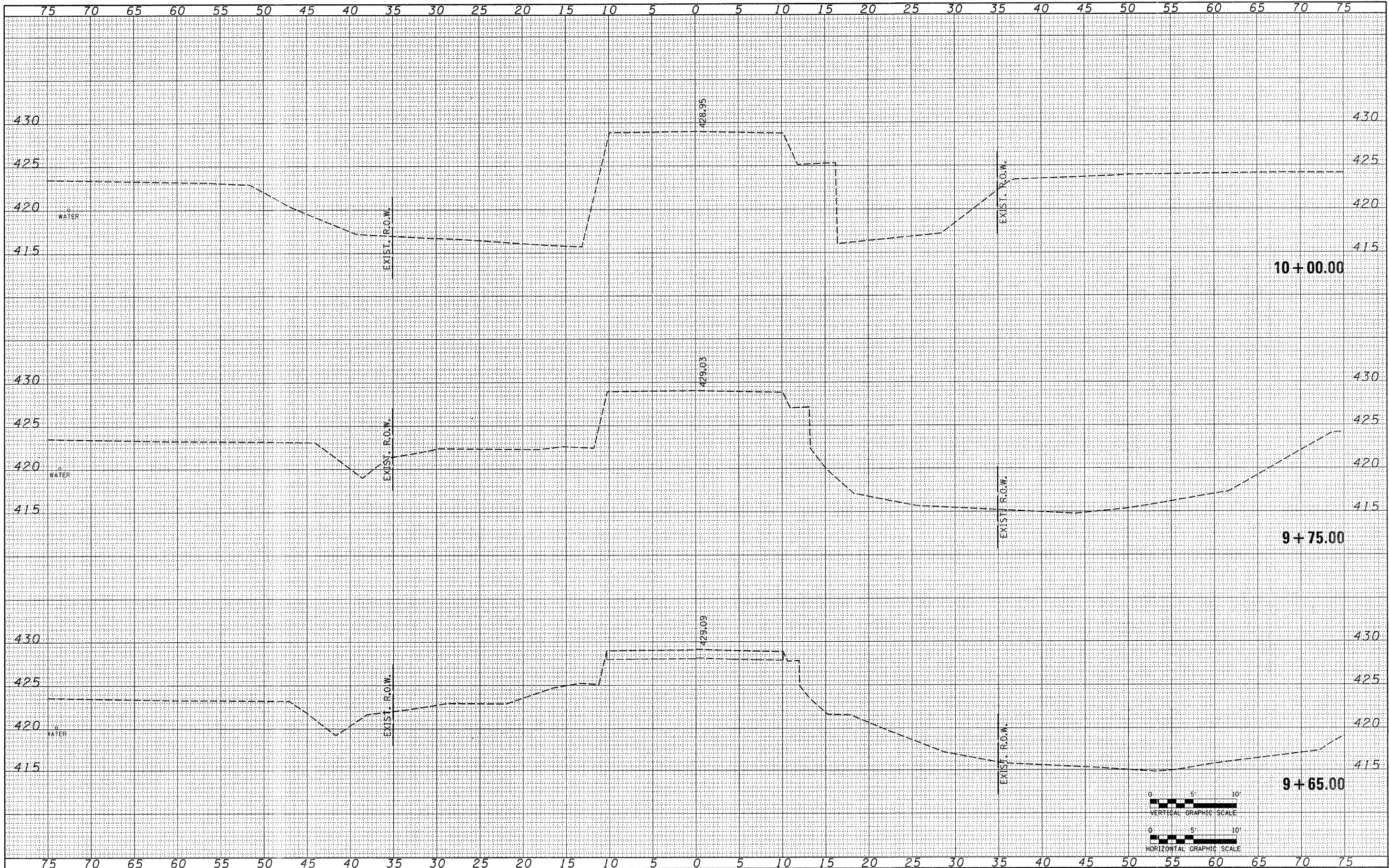
STATE OF ILLINOIS  
JEFFERSON COUNTY HIGHWAY DEPARTMENT

**HLR** HAMPTON, LENZINI & RENWICK, INC.  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

**CROSS SECTIONS**  
**SPRING GARDEN ROAD**

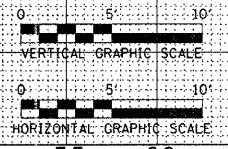
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FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SCALE: 1" = 5' SHEET NO. OF SHEETS STA. 9+25.00 TO STA. 9+45.00 CONTRACT NO. 99361



BY	DATE
FINAL SURVEY NO.	SURVEY CHECKED
NOTE BOOK NO.	TEMPLATE NO.
	AREAS CHECKED

BY	DATE
ORIGINAL SURVEY NO.	SURVEY CHECKED
NOTE BOOK NO.	TEMPLATE NO.
	AREAS CHECKED



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STATE OF ILLINOIS  
JEFFERSON COUNTY HIGHWAY DEPARTMENT

**HLR** HAMPTON, LENZINI & RENWICK, INC.  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

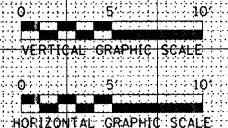
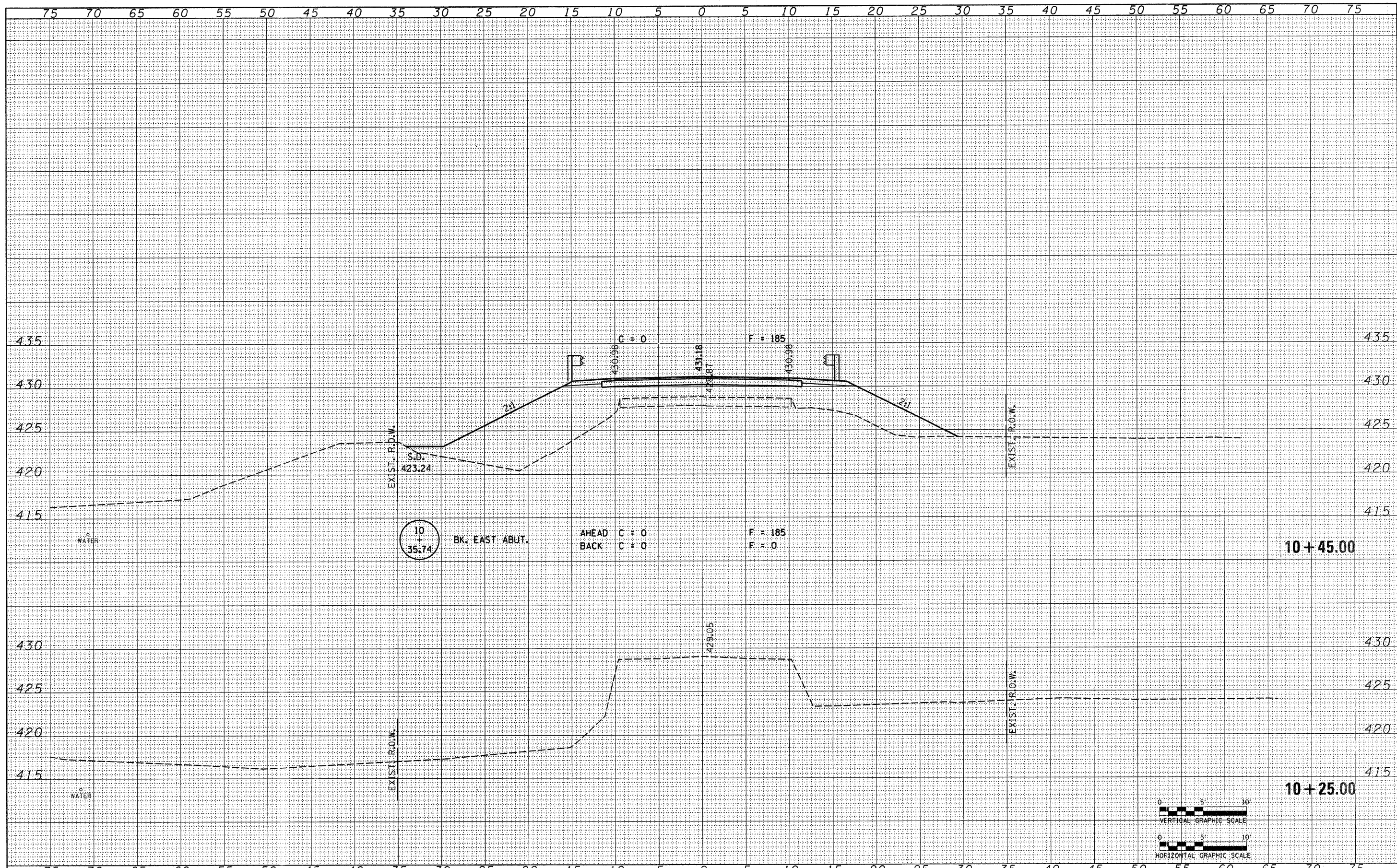
CROSS SECTIONS  
SPRING GARDEN ROAD


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824	05-00183-00-BR	JEFFERSON	23	11
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 99361		

SCALE: 1" = 5' SHEET NO. OF SHEETS STA. 9+65.00 TO STA. 10+00.00

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	BY
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	

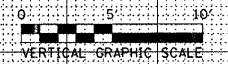
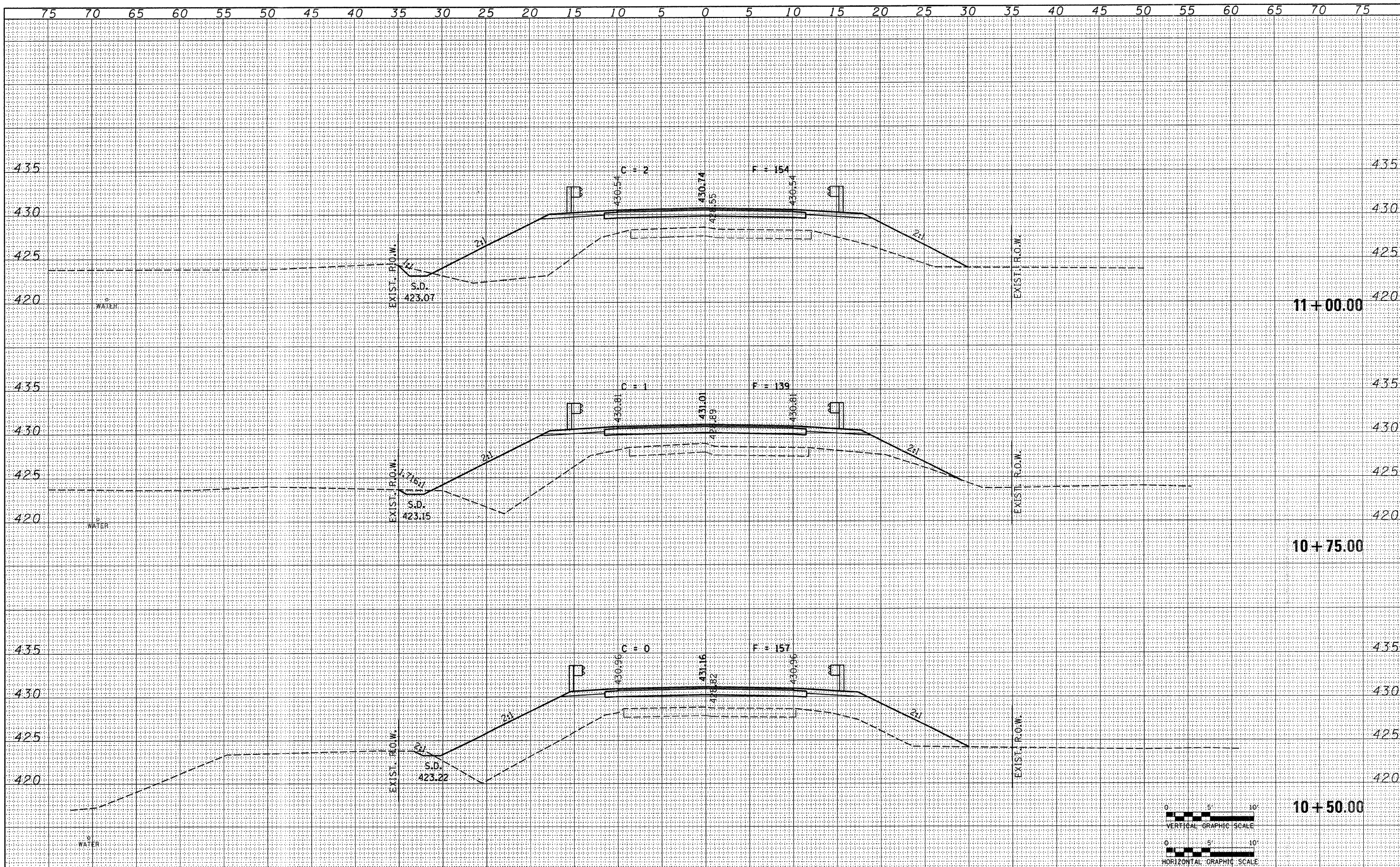
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NOTE BOOK NO.	PLOTTED	BY
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	



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PLOT SCALE =	CHECKED - S.W.M.	REVISED -	STA. 10+25.00 TO STA. 10+45.00		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT						
PLOT DATE = 2/6/2009	DATE - 10/20/08	REVISED -										

DATE	BY

DATE	BY



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 DESIGNED - J.W.F.  
 DRAWN - D.T.M.  
 CHECKED - S.W.M.  
 DATE - 10/20/08  
 PLOT SCALE =  
 PLOT DATE = 2/6/2009

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 JEFFERSON COUNTY HIGHWAY DEPARTMENT

HLR HAMPTON, LENZINI & RENWICK, INC.  
 CIVIL & STRUCTURAL ENGINEERS  
 LAND SURVEYORS

CROSS SECTIONS  
 SPRING GARDEN ROAD

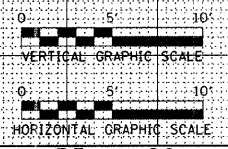
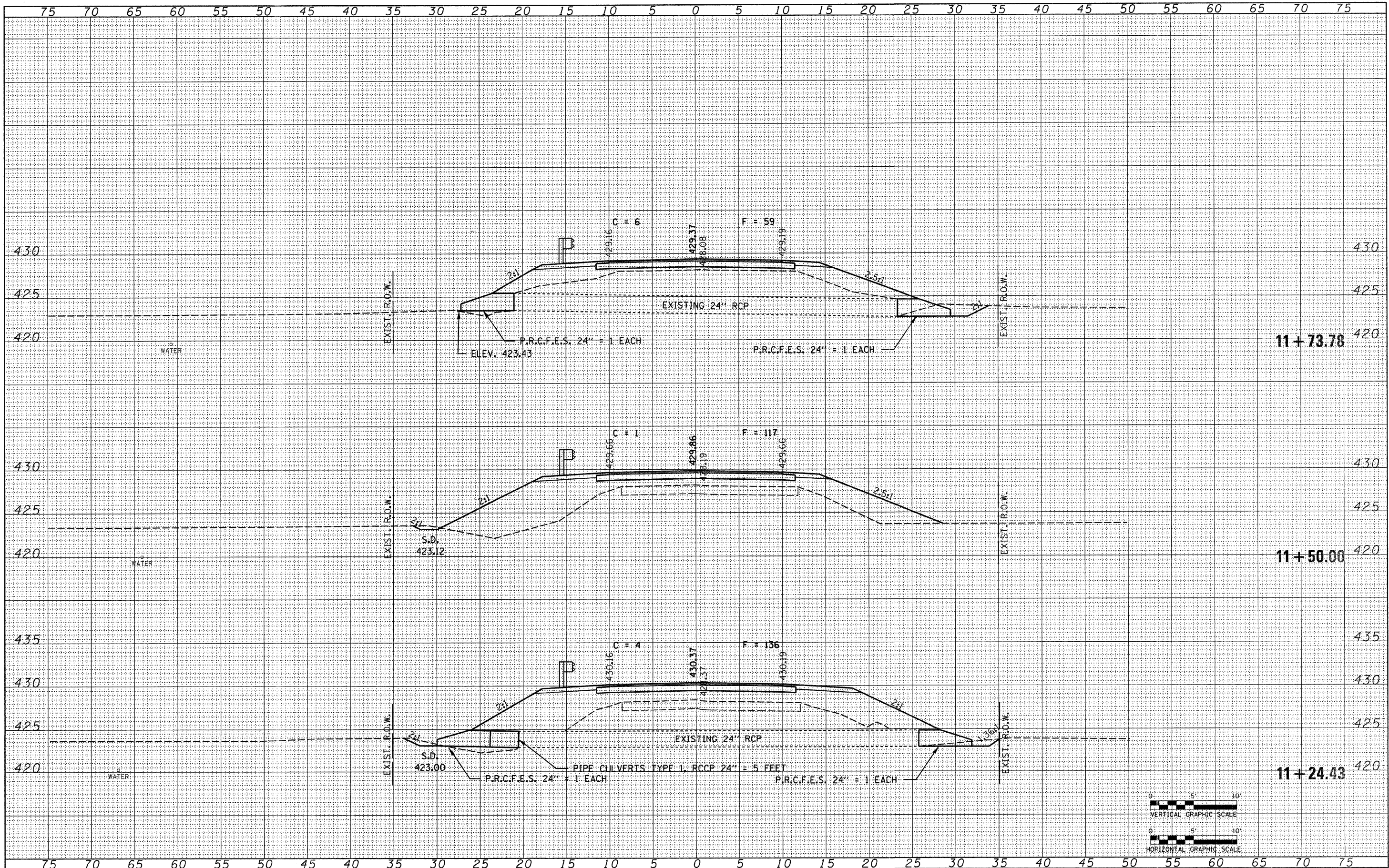
SCALE: 1" = 5'

SHEET NO. OF SHEETS  
 STA. 10+50.00 TO STA. 11+00.00

FAS 824	SECTION 05-00183-00-BR	COUNTY JEFFERSON	TOTAL SHEETS 23	SHEET NO. 13
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 99361	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	
AREAS CHECKED	
FINISHED SURVEY	
NOTE BOOK	
NO.	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	
AREAS CHECKED	
FINISHED SURVEY	
NOTE BOOK	
NO.	
AREAS CHECKED	



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USER NAME =	DESIGNED - J.W.F.	REVISED -
	DRAWN - D.T.M.	REVISED -
PLOT SCALE =	CHECKED - S.W.M.	REVISED -
PLOT DATE = 2/6/2009	DATE - 10/20/08	REVISED -

STATE OF ILLINOIS  
JEFFERSON COUNTY HIGHWAY DEPARTMENT

**HLR** HAMPTON, LENZINI & RENWICK, INC.  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

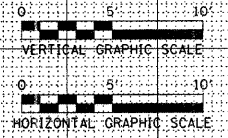
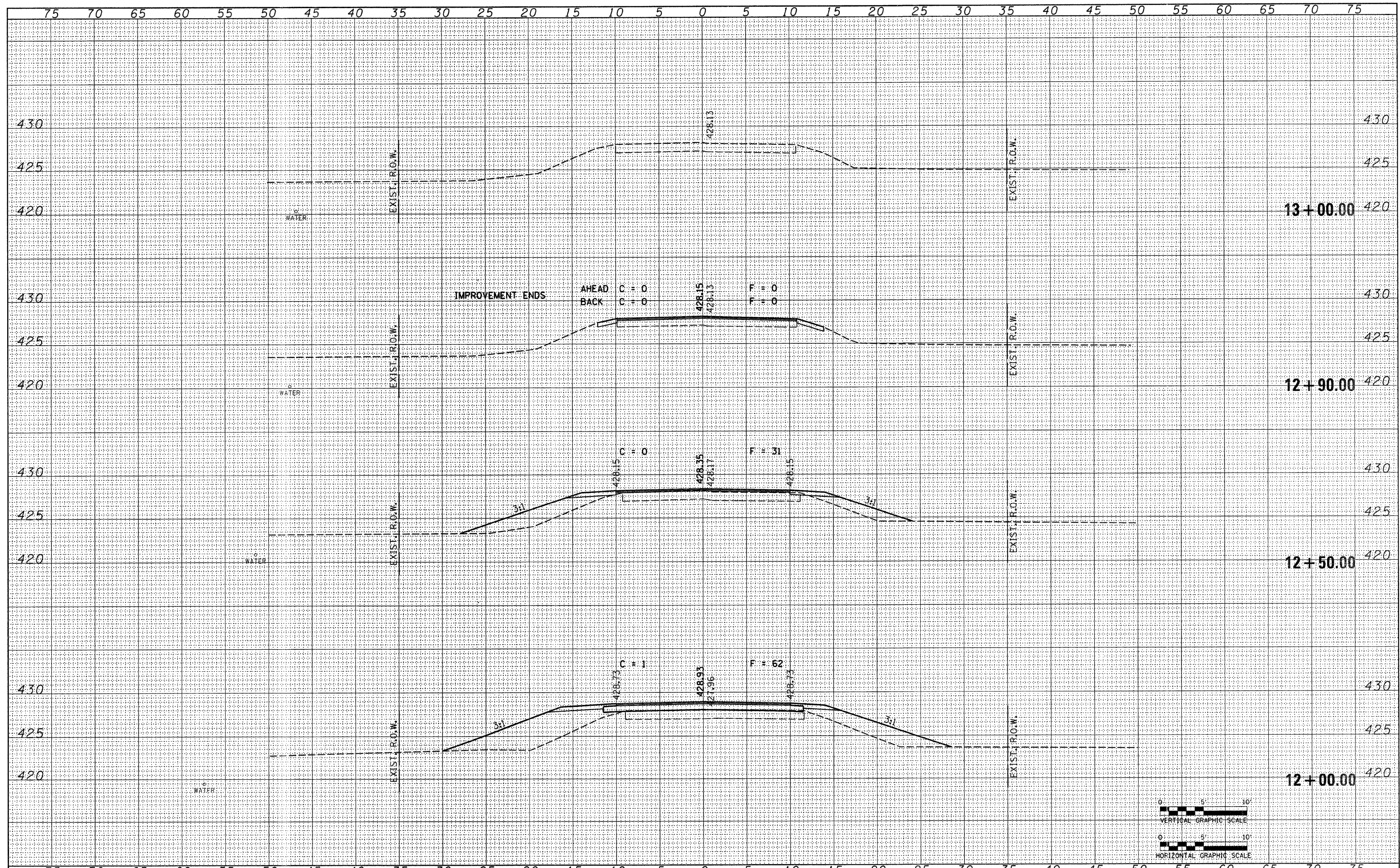
CROSS SECTIONS  
SPRING GARDEN ROAD

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 99361

SCALE: 1" = 5' SHEET NO. OF SHEETS STA. 11+24.43 TO STA. 11+73.78

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	BY
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	BY
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	



FILE NAME = 080129-sht-sxs.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS</b> <b>JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>	<b>HAMPTON, LENZINI &amp; RENWICK, INC.</b> CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS	<b>CROSS SECTIONS</b>		FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 2/6/2009	CHECKED - S.W.M.	REVISED -			CONTRACT NO. 99361						
		DATE - 10/20/08	REVISED -			ILLINOIS FED. AID PROJECT						

BENCHMARK: Top of concrete beam, 11' Lt., Sta. 9+71, Elev. 429.38

EXISTING STRUCTURE NO. 041-3012: Sta. 10+00 - Three span precast prestressed concrete deck beam bridge on closed timber abutments and wingwalls and timber pile bent piers. 58.8' Fc.-Fc. Abuts.; 20.5' o.-o. Deck Structure closed to traffic.

No Salvage

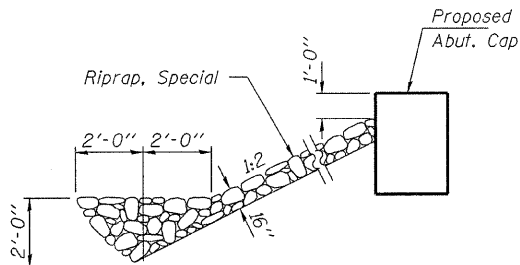
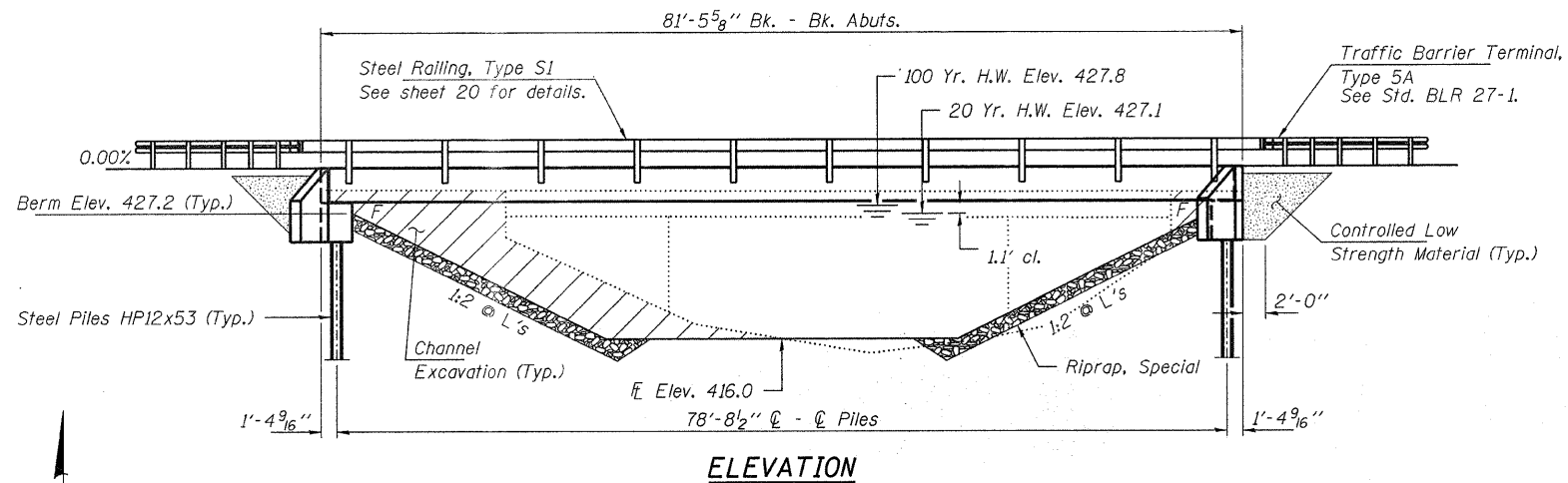
**GENERAL NOTES**

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.  
 Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.  
 Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.  
 All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions. See Sheets 23 for Borings.

GUN CREEK  
 BUILT 200\_ BY  
 JEFFERSON COUNTY  
 SEC. 05-00183-00-BR  
 F.A.S. 824 / C.H. 42  
 STR. NO. 041-3743  
 LOADING HL-93

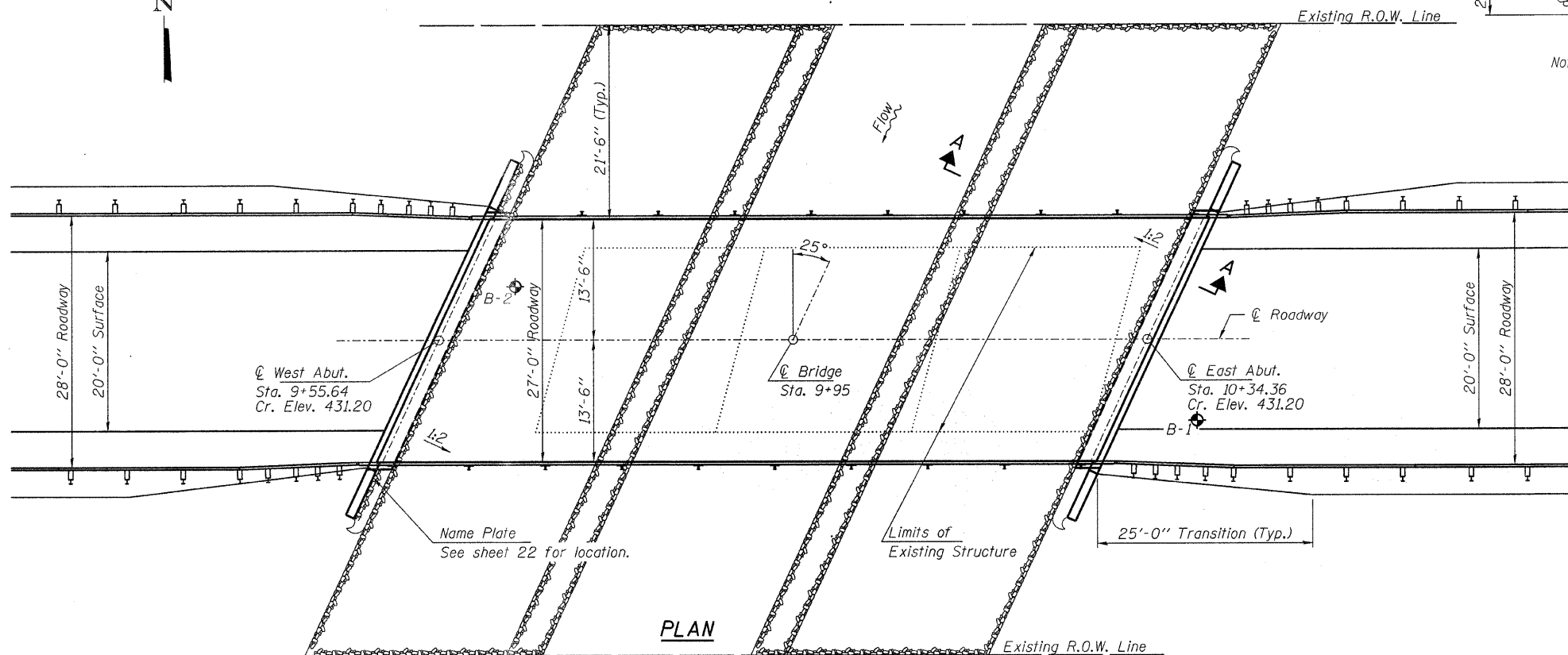
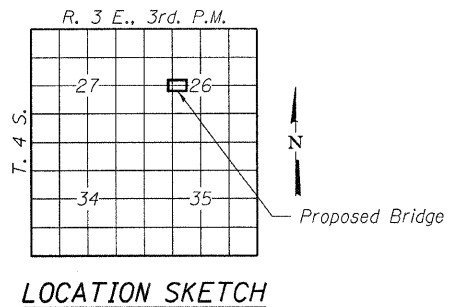
**NAME PLATE**

See Std. 515001



**SECTION A-A**

Note: See Special Provisions for Riprap, Special.



**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		165	165
Riprap, Special	Ton			360
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.	30.6		30.6
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	2,160		2,160
Reinforcement Bars	Pound		2,650	2,650
Steel Railing, Type S1	Foot	170		170
Furnishing Steel Piles HP12x53	Foot		275	275
Driving Piles	Foot		275	275
Name Plates	Each		1	1
Controlled Low Strength Material	Cu. Yd.			75

**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3,500 psi  
 fy = 60,000 psi (Reinf.)

**PRECAST PRESTRESSED UNITS**

f'c = 6,000 psi  
 f'ci = 5,000 psi  
 fpu = 270,000 psi (1/2" low lax. strands)  
 fpbt = 201,960 psi (1/2" low lax. strands)  
 fy = 60,000 psi (Reinf.)

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 3  
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.468g  
 Design Spectral Acceleration at 0.2 sec. (SD5) = 0.872g  
 Soil Site Class = E

**WATERWAY INFORMATION**

Drainage Area = 13.8 Sq. Mi. Existing Low Grade Elev. 427.1 @ Sta. 6+00  
 Proposed Low Grade Elev. 427.1 @ Sta. 6+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	20	3080	450	510	427.1	1.0	0.6	428.1	427.7
Base	100	4590	450	560	427.8	1.0	1.0	428.8	428.8
Max. Calc.	500	6260	450	590	428.5	0.8	0.8	429.3	429.3

20 Year Velocity through Existing Bridge = 6.2 fps      20 Year Velocity through Proposed Bridge = 5.9 fps

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications."

*Steven W. McGinnis* 2/10/2009  
 ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-2010

**GENERAL PLAN AND ELEVATION  
 STRUCTURE NO. 041-3743**

DESIGNED	- A.S.L.
CHECKED	- S.M.S.
DRAWN	- D.T.M.
CHECKED	- D.A.B.

**LOADING HL-93**

Design Specifications: 2007 AASHTO LRFD with all applicable Interims.  
 50#/Sq. Ft. included in dead load for future wearing surface.

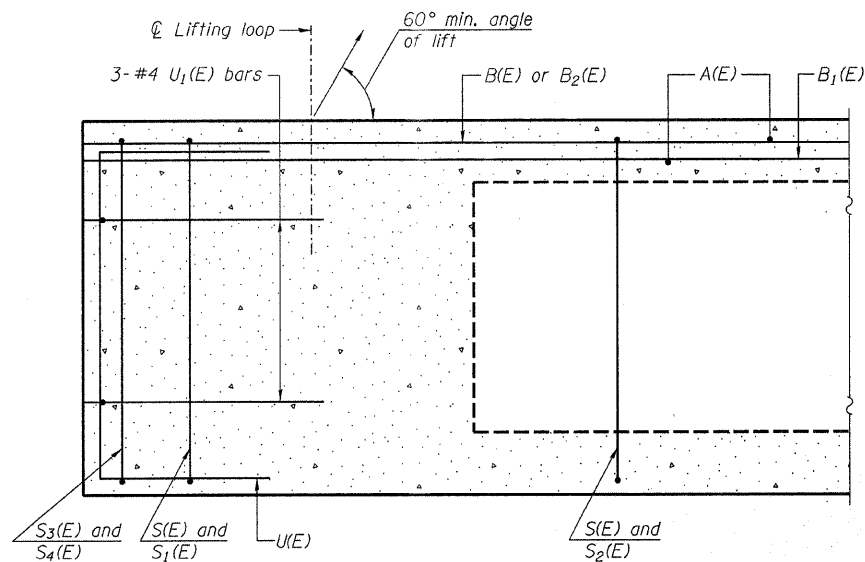
**HAMPTON, LENZINI & RENWICK, INC.**  
 CIVIL & STRUCTURAL ENGINEERS  
 LAND SURVEYORS

**HLR** 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 (217) 548-3400

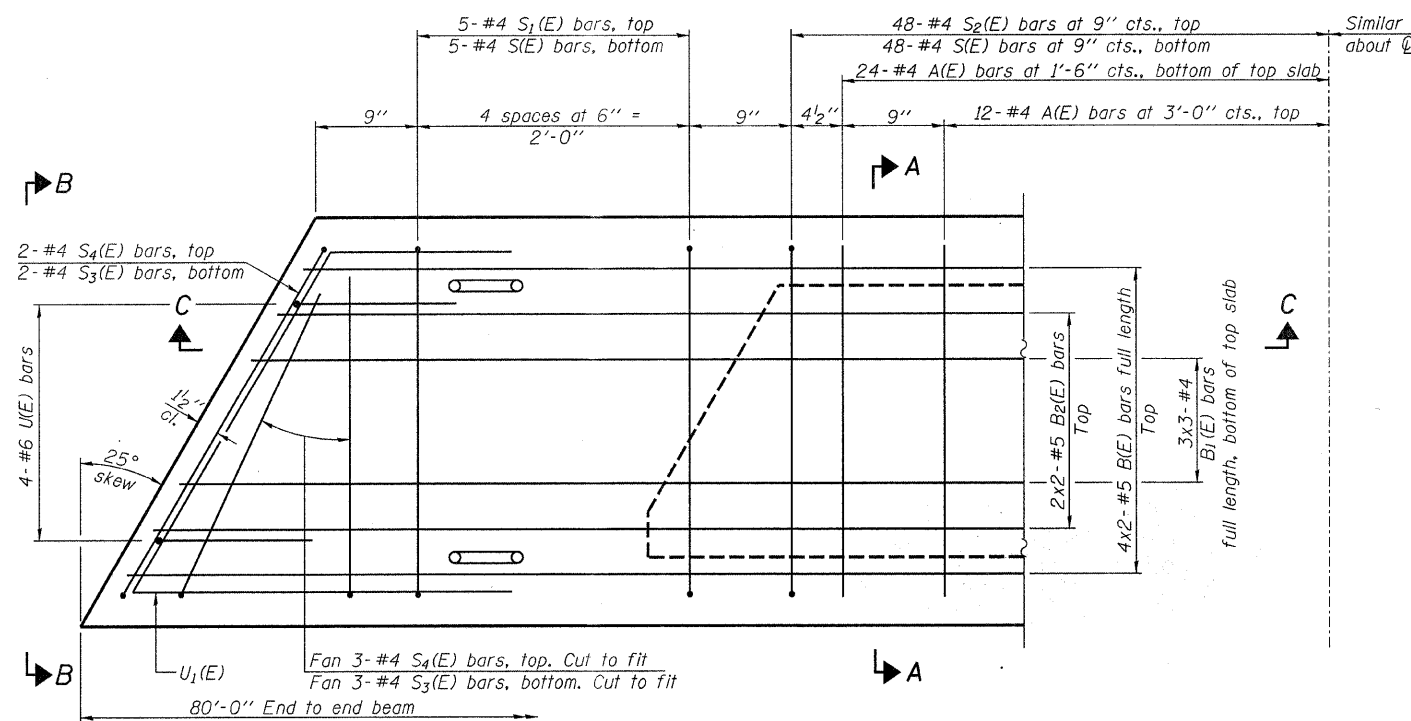
PROJECT NUMBER: 08.0128.130      DATE: 02/06/09

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 99361				



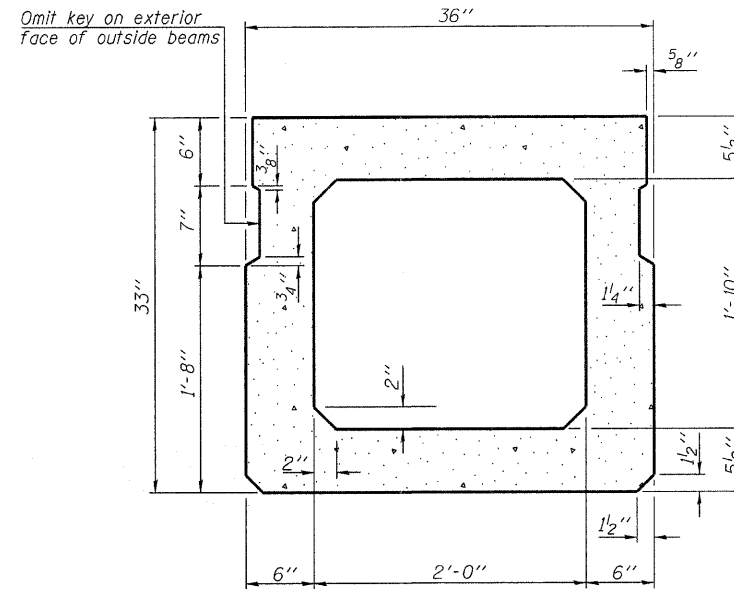


**SECTION C-C**

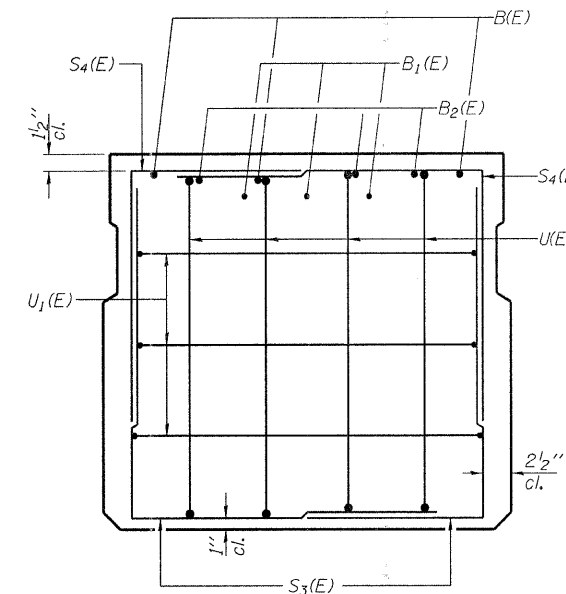


**PLAN VIEW**

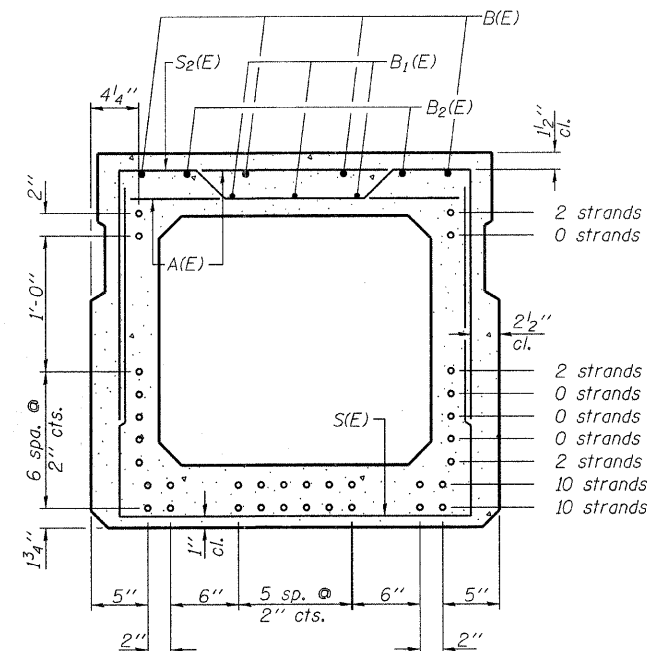
Note: Spacing of S(E) and S<sub>2</sub>(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



**SECTION A-A**  
(Showing dimensions)



**VIEW B-B**



**SECTION A-A**

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

**BAR LIST**  
**ONE BEAM ONLY**  
(For information only)

Bar	No.	Size	Length	Shape
A(E)	72	#4	2'-7"	—
B(E)	8	#5	40'-11"	—
B <sub>1</sub> (E)	9	#4	27'-8"	—
B <sub>2</sub> (E)	4	#5	40'-11"	—
S(E)	106	#4	7'-5"	⌌
S <sub>1</sub> (E)	10	#4	6'-3"	⌌
S <sub>2</sub> (E)	96	#4	6'-6"	⌌
S <sub>3</sub> (E)	10	#4	4'-9"	⌌
S <sub>4</sub> (E)	10	#4	4'-2"	⌌
U(E)	8	#6	5'-0"	⌌
U <sub>1</sub> (E)	6	#4	6'-6"	⌌

Note: See sheets 18 & 19 for additional details and Bill of Material.

**BAR LAPS**

#4 bar = 1'-8"  
#5 bar = 2'-2"

**SUPERSTRUCTURE**  
**33" x 36" PPC DECK BEAM**  
**STRUCTURE NO. 041-3743**

DESIGNED - A.S.L.
CHECKED - S.M.S.
DRAWN - D.T.M.
CHECKED - D.A.B.

PD-3336-L

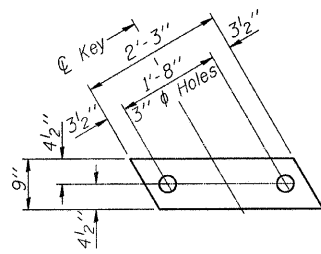
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**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

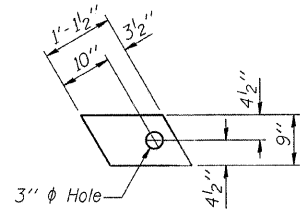
**HLR** 3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 546-3400

PROJECT NUMBER: 08.0129.130 DATE: 02/06/09

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 99361				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



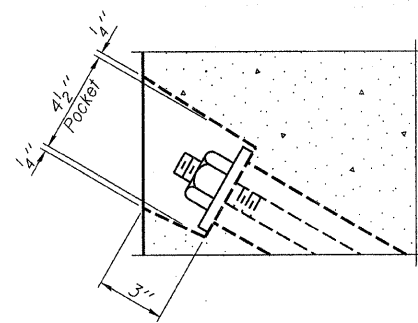
**FABRIC BEARING PAD**  
(Interior)



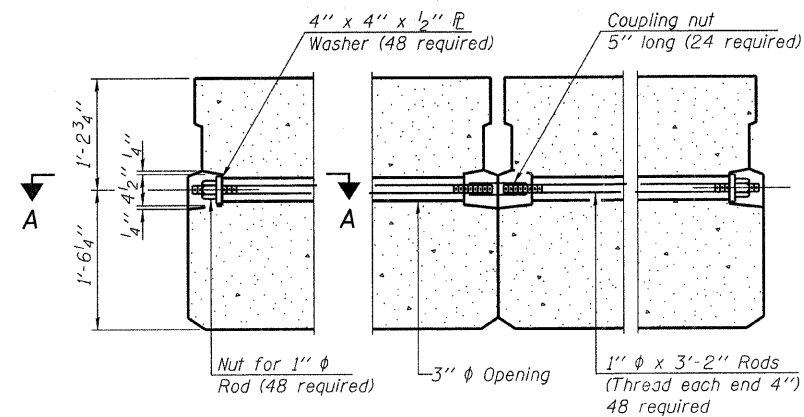
**FABRIC BEARING PAD**  
(Exterior)

**FIXED**

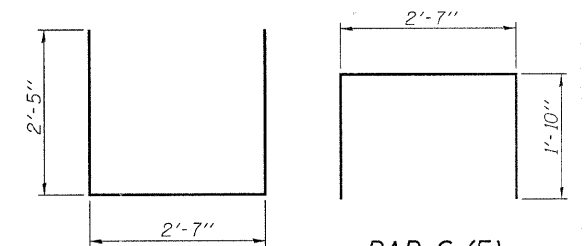
Note: Omit holes when using expansion bearings.



**SECTION A-A**

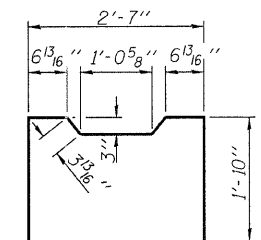


**TYPICAL TRANSVERSE TIE ASSEMBLY**

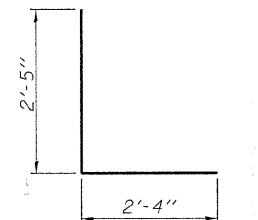


**BAR S<sub>1</sub>(E)**

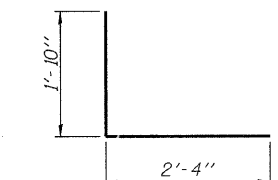
**BAR S<sub>2</sub>(E)**



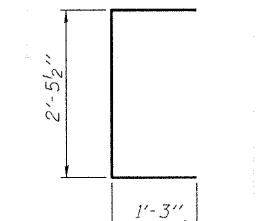
**BAR S<sub>2</sub>(E)**



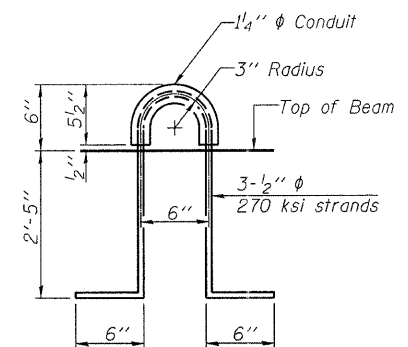
**BAR S<sub>3</sub>(E)**



**BAR S<sub>4</sub>(E)**



**BAR U<sub>1</sub>(E)**

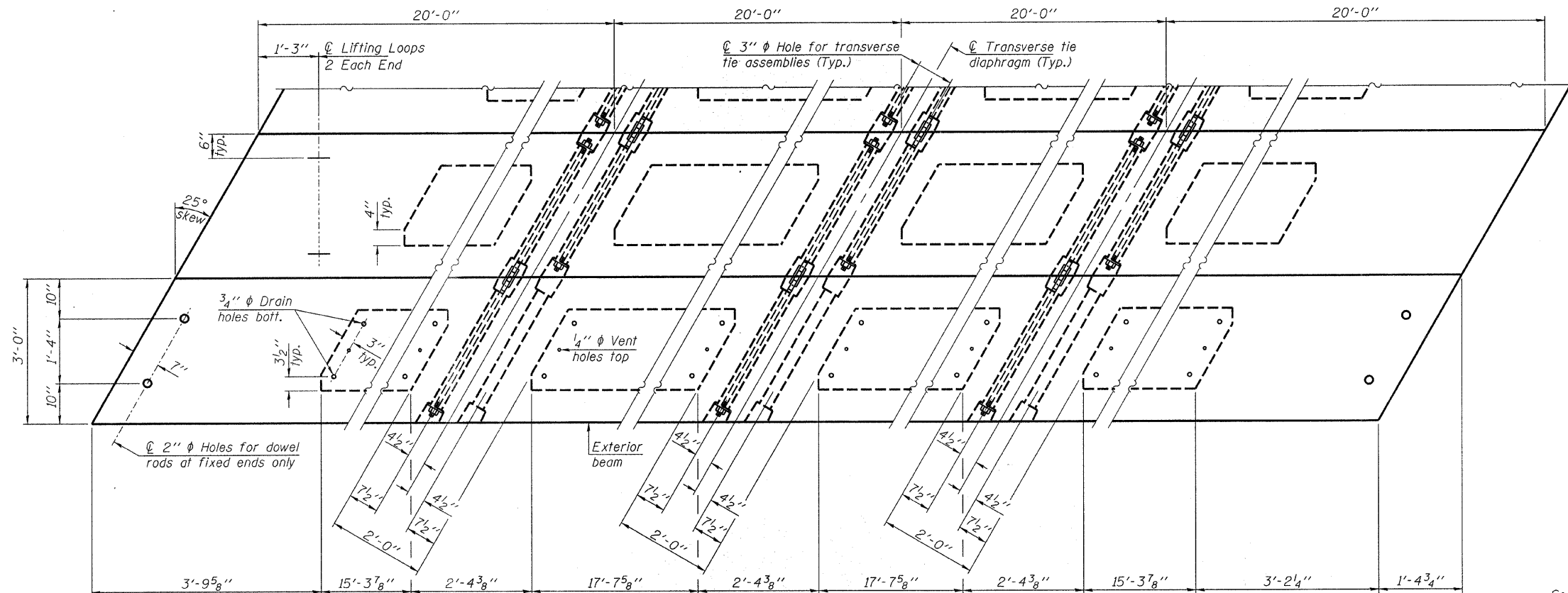


**LIFTING LOOP DETAIL**

See Special Provisions for Alternate Lifting Lugs.

**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (33" depth)	Sq. Ft.	2,160
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**PLAN VIEW**

**NOTES**

Note: Connect beams in pairs with the transverse tie configuration shown.

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

DESIGNED - A.S.L.
CHECKED - S.M.S.
DRAWN - D.T.M.
CHECKED - D.A.B.

PD-3336-LD 10-1-08

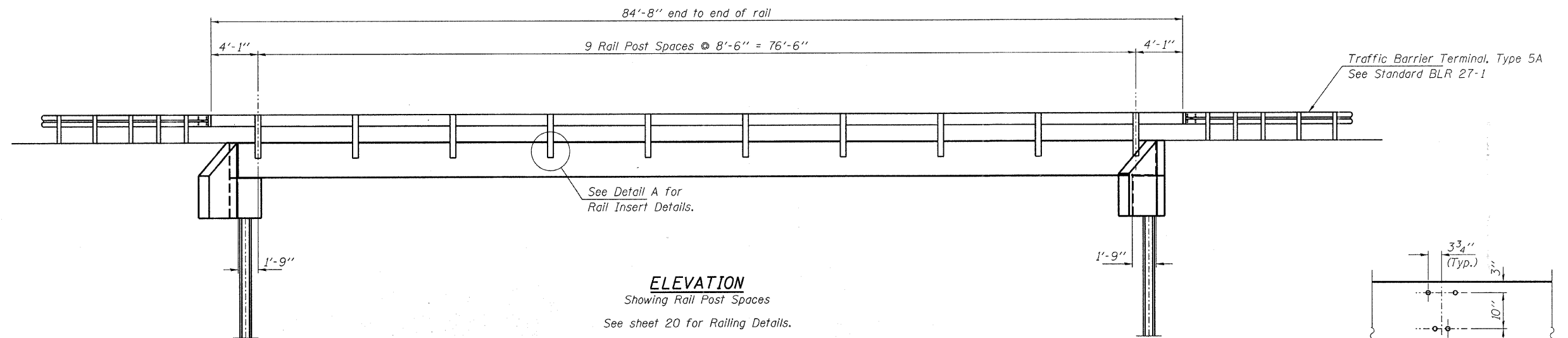
**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

**HLR** 3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 546-3400

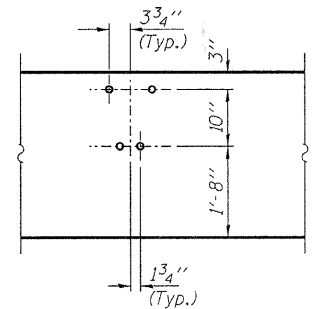
PROJECT NUMBER: 08.0129.130 DATE: 02/08/09

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
824	05-00183-00-BR	JEFFERSON	23	18
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 99361				

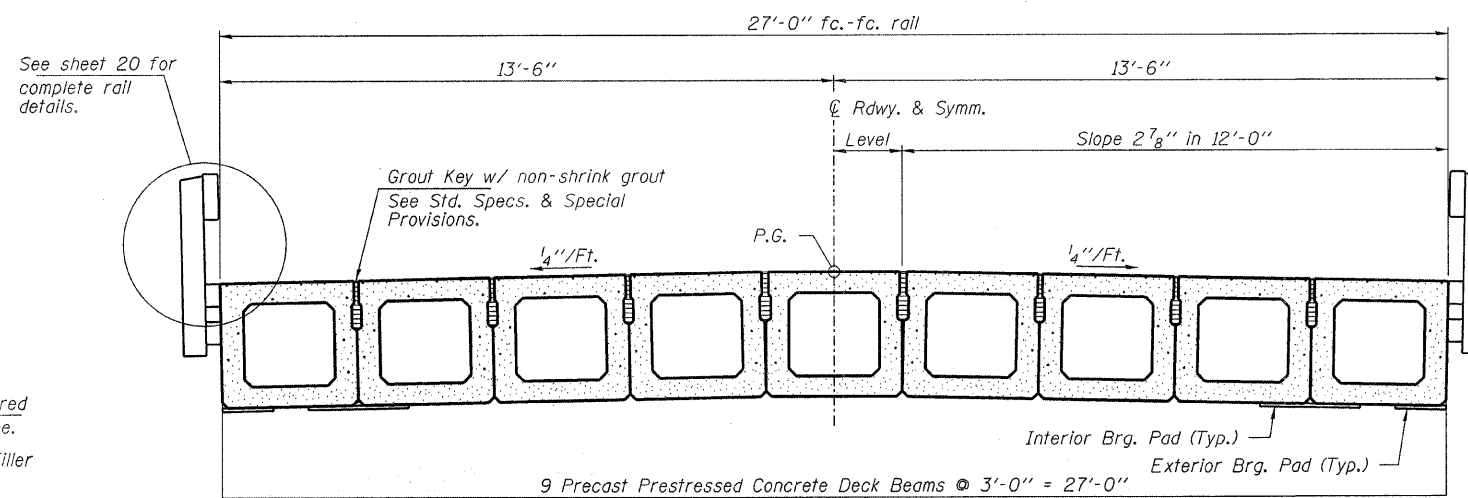
**33" X 36" PPC DECK BEAM DETAILS**  
**STRUCTURE NO. 041-3743**



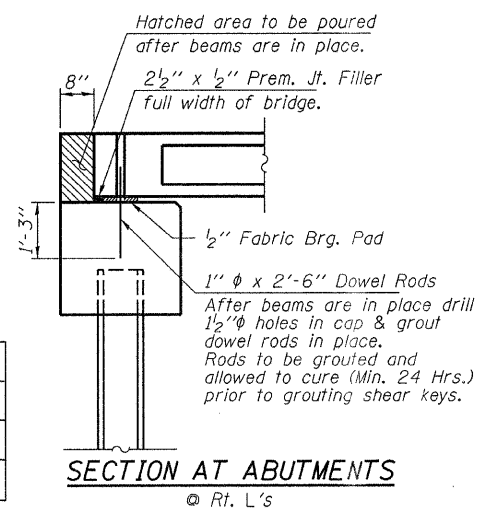
**ELEVATION**  
Showing Rail Post Spacing  
See sheet 20 for Railing Details.



**DETAIL A**



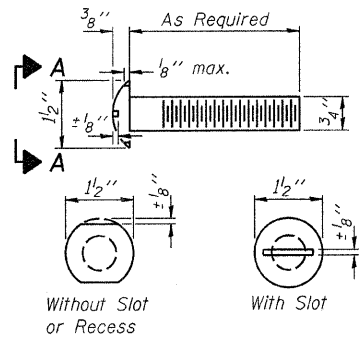
**CROSS SECTION**  
See sheets 17 & 18 for Superstructure.



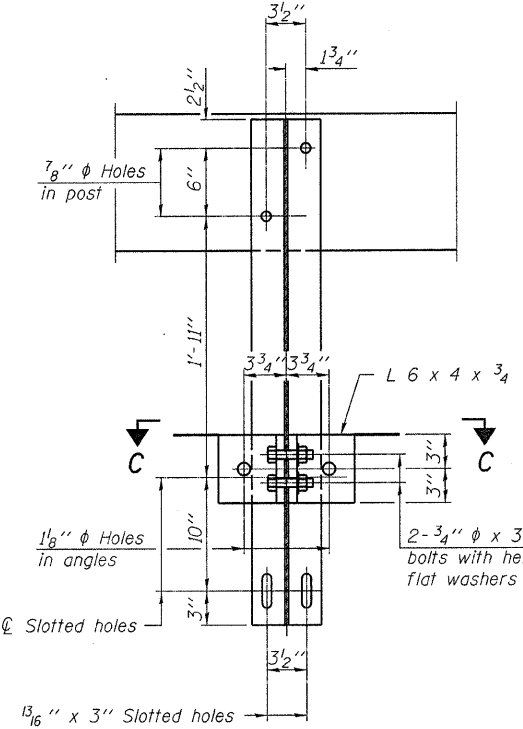
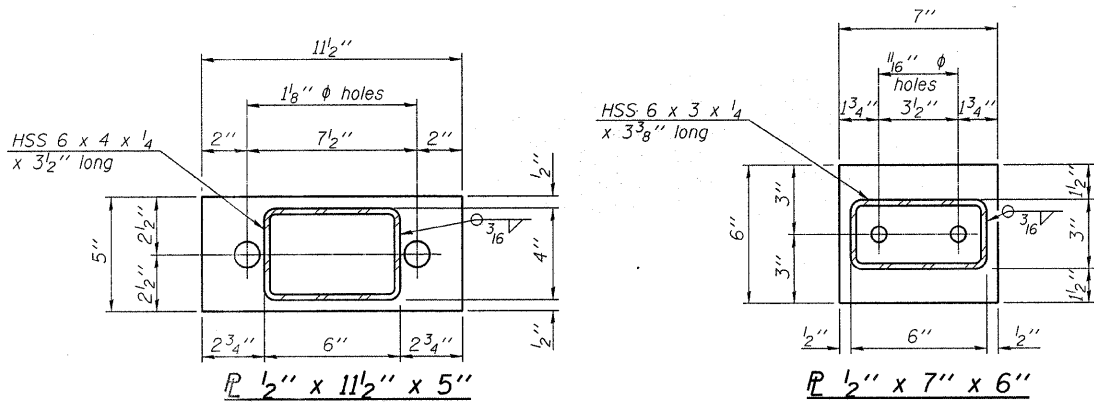
DESIGNED - A.S.L.
CHECKED - S.M.S.
DRAWN - D.T.M.
CHECKED - D.A.B.

**SUPERSTRUCTURE DETAILS**  
**STRUCTURE NO. 041-3743**

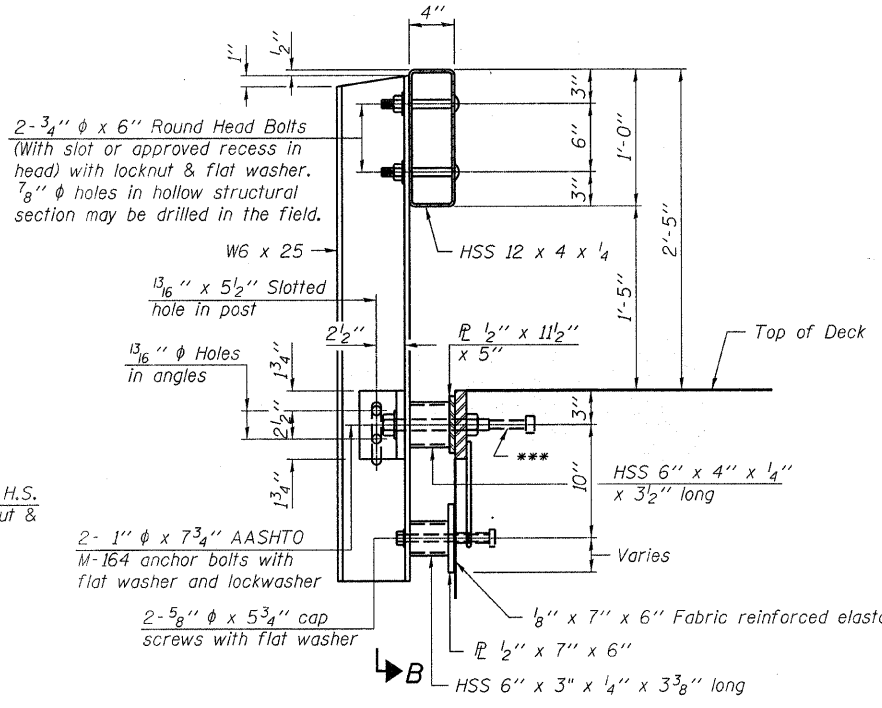
 HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400	FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	824	05-00183-00-BR	JEFFERSON	23	19
PROJECT NUMBER: 08.0129.130	DATE: 02/06/09	CONTRACT NO. 99361			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		



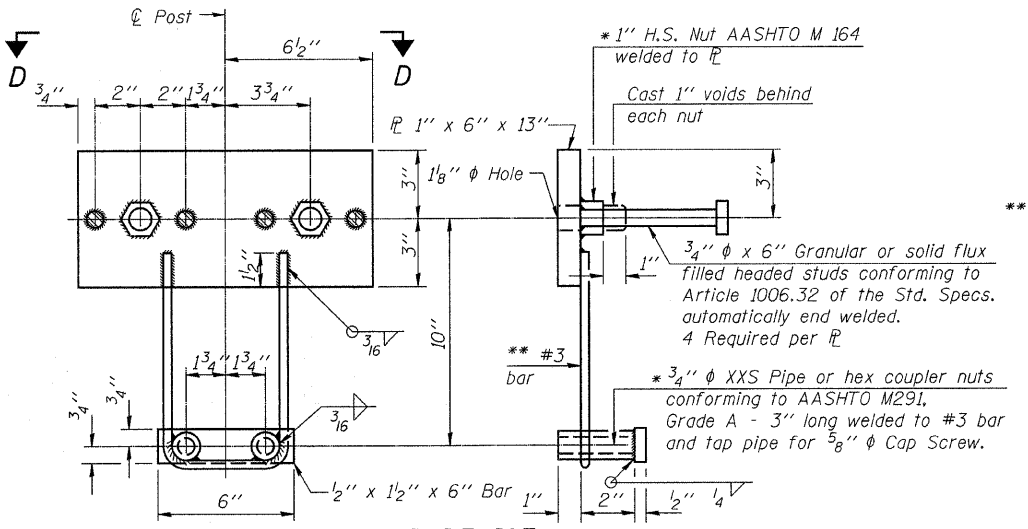
**VIEW A-A  
ROUND HEAD BOLT**



**SECTION B-B**

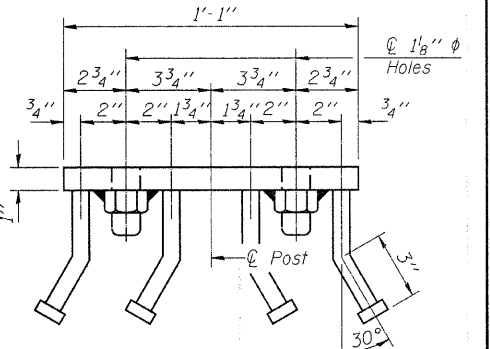


**SECTION AT RAILING POST**

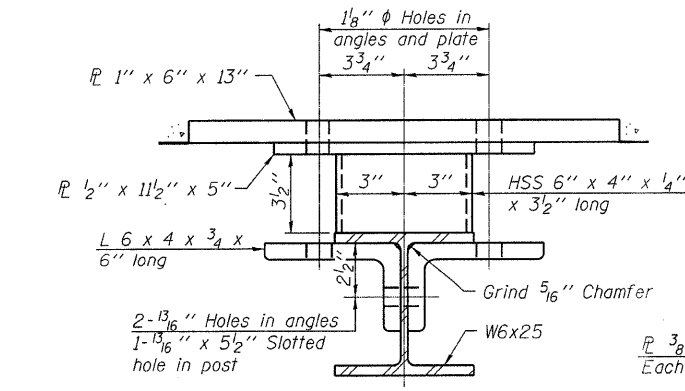


**ANCHOR DEVICE**

**Notes:**  
 All field drilled holes shall be coated with an approved zinc rich paint before erection.  
 For multi-span bridges, sufficient 1/4 inch x 6 inch x 1'-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.  
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.  
 \*\*\* The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

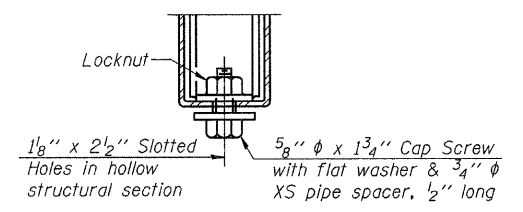


**VIEW D-D**

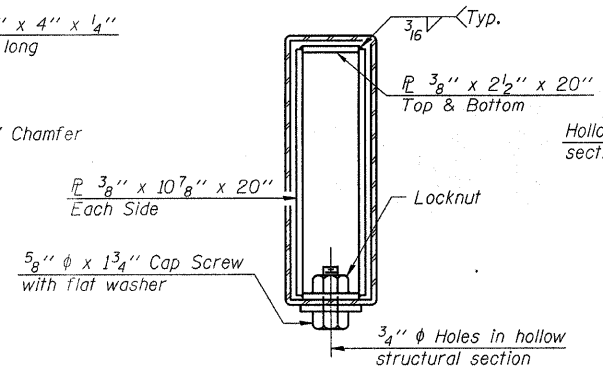


**SECTION C-C**

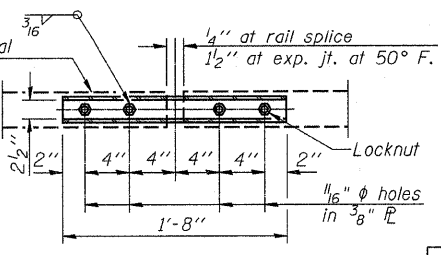
\*\*\* Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2 inch.



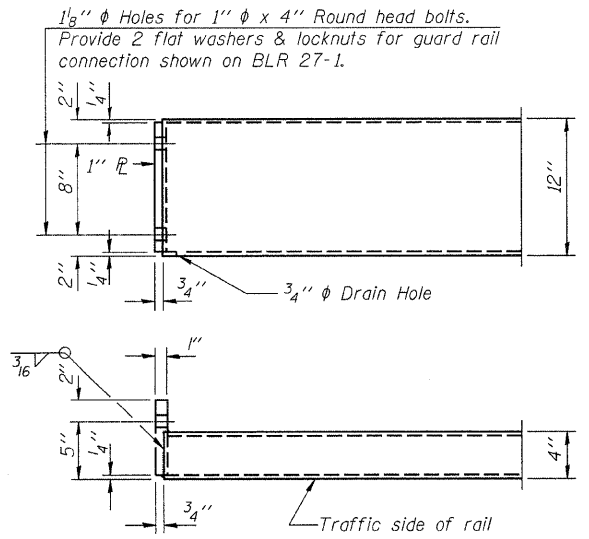
**RAIL SPLICE CONNECTION  
AT EXPANSION JT.**



**SECTIONS AT RAIL SPLICE**



**PLAN-BOTT. SPLICE R  
TYPICAL**



**END OF RAIL DETAILS**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	170

**STEEL RAILING, TYPE S-1  
STRUCTURE NO. 041-3743**

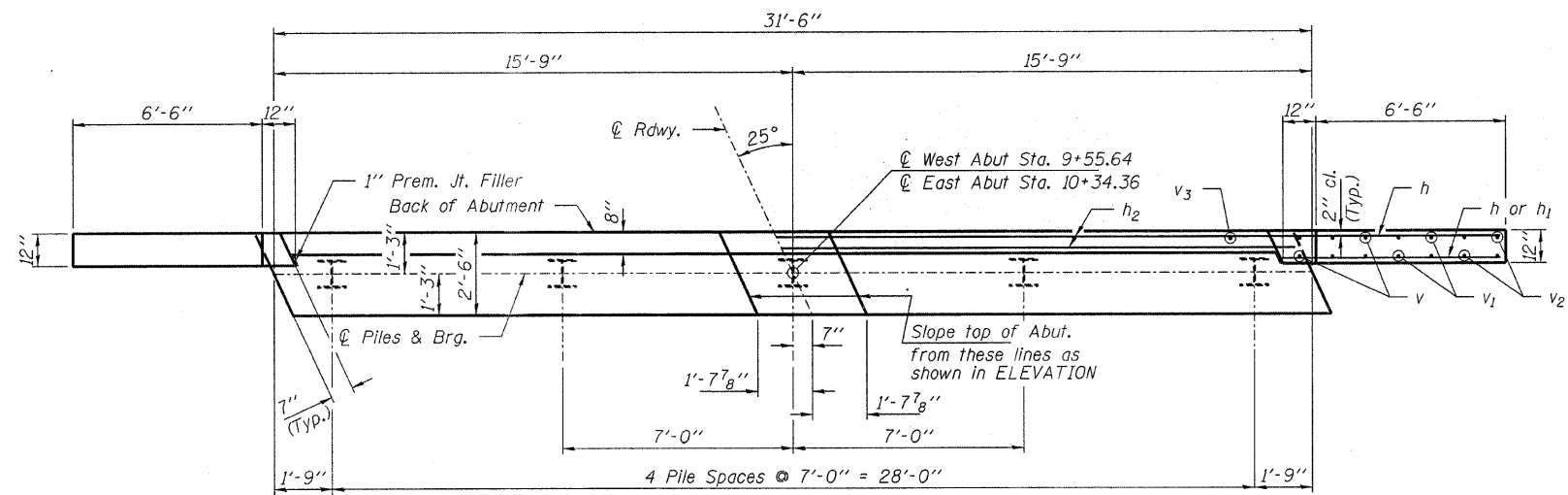
DESIGNED - A.S.L.
CHECKED - S.M.S.
DRAWN - D.T.M.
CHECKED - D.A.B.

R-23A

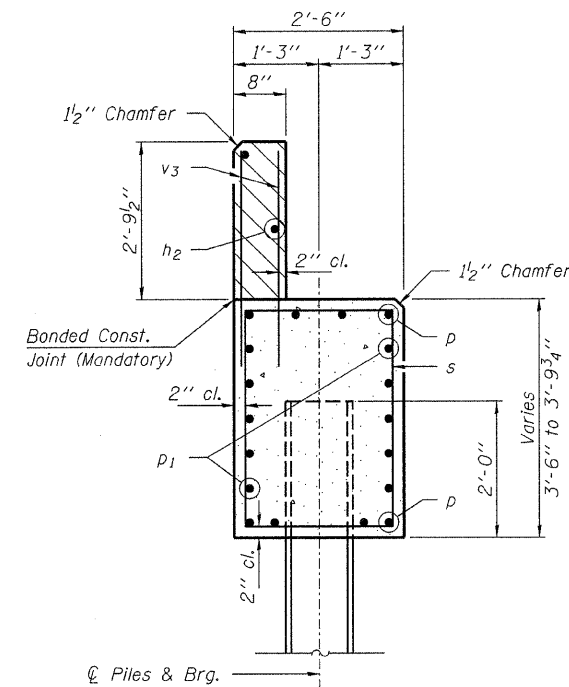
10-1-08 (10'-9" Maximum Post Spacing)

**HAMPTON, LENZINI & RENWICK, INC.**  
 CIVIL & STRUCTURAL ENGINEERS  
 LAND SURVEYORS  
**HLR** 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 (217) 546-3400  
 PROJECT NUMBER: 08.0129.130 DATE: 02/06/09

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
824	05-00183-00-BR	JEFFERSON	23	20
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 99361		

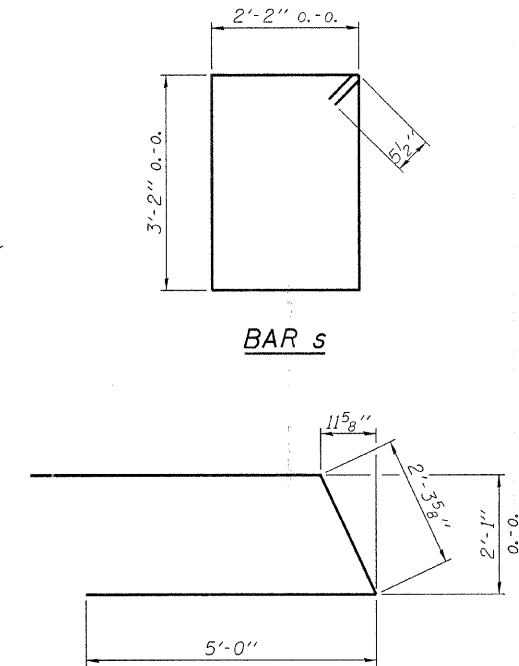


**PLAN**



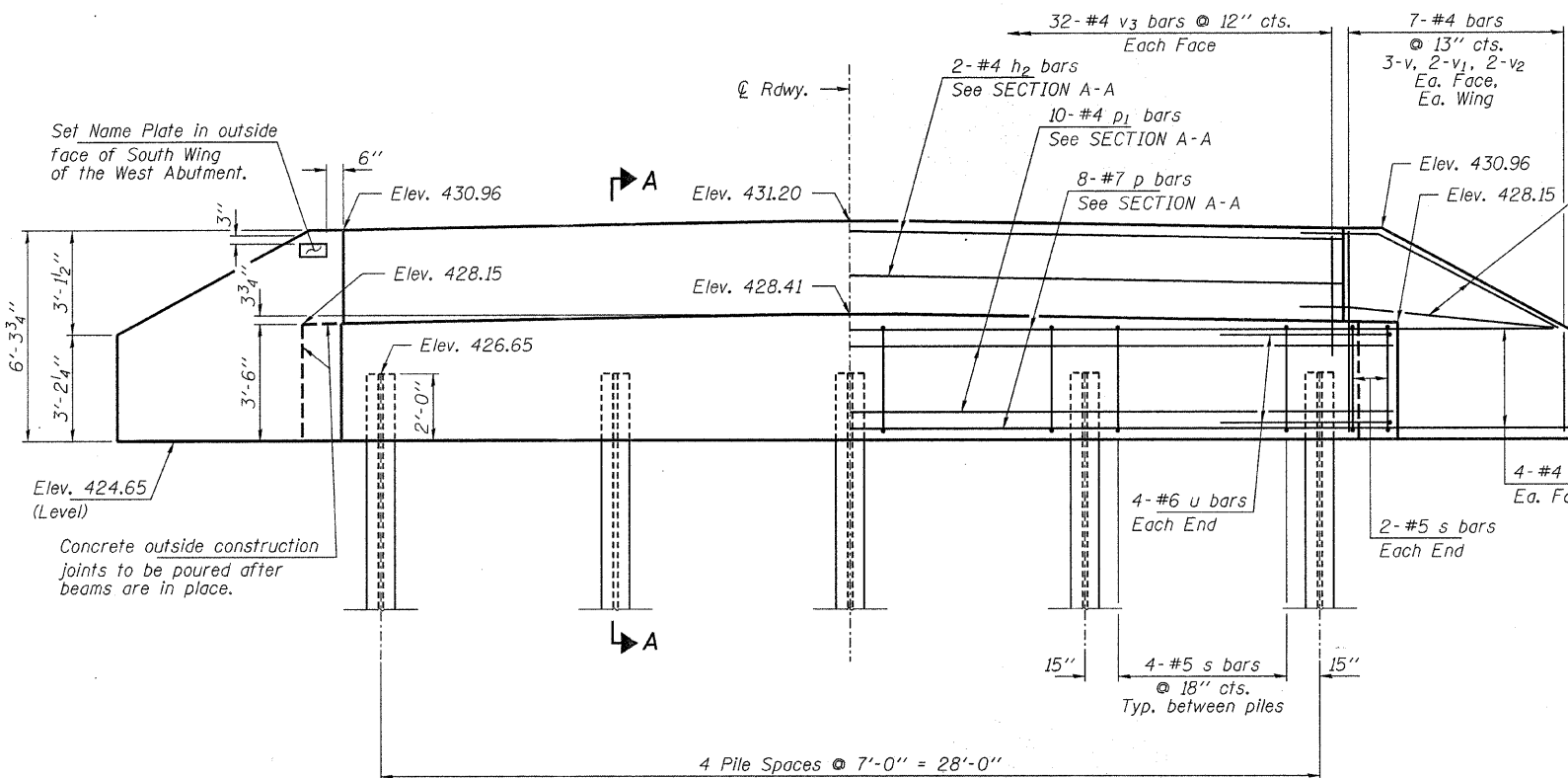
**SECTION A-A**

Hatched area to be poured after beams are in place.



**BAR s**

**BAR u**



**ELEVATION**

**BILL OF MATERIAL - 2 ABUTS.**

BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	8'-6"	—
h1	8	#4	7'-0"	—
h2	4	#4	31'-2"	—
p	16	#7	31'-2"	—
p1	20	#4	31'-2"	—
s	40	#5	11'-7"	□
u	16	#6	12'-4"	U
v	24	#4	4'-10"	—
v1	16	#4	3'-10"	—
v2	16	#4	2'-10"	—
v3	128	#4	3'-8"	—
Concrete Structures			Cu. Yd.	30.6
Reinforcement Bars			Pound	2,650
Steel Piles HP12x53			Foot	275
Name Plates			Each	1

**PILE DATA**

Type Steel HP12x53  
 No. Req'd. (2 Abuts.) 10  
 Factored Resistance Available (Rf) 209 Kips/Pile  
 Nominal Required Bearing (Rn) 419 Kips/Pile  
 Est. Length 30 Ft/Pile (W. Abut.)  
 25 Ft/Pile (E. Abut.)

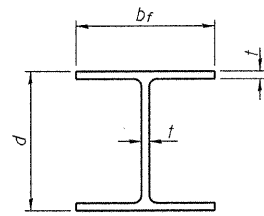
Notes: The Steel H-Piles shall be according to AASHTO M270 Grade 50.

DESIGNED - A.S.L.
CHECKED - S.M.S.
DRAWN - D.T.M.
CHECKED - D.A.B.

**HAMPTON, LENZINI & RENWICK, INC.**  
 CIVIL & STRUCTURAL ENGINEERS  
 LAND SURVEYORS  
 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 (217) 546-3400  
 PROJECT NUMBER: 08.0129.130 DATE: 02/08/09

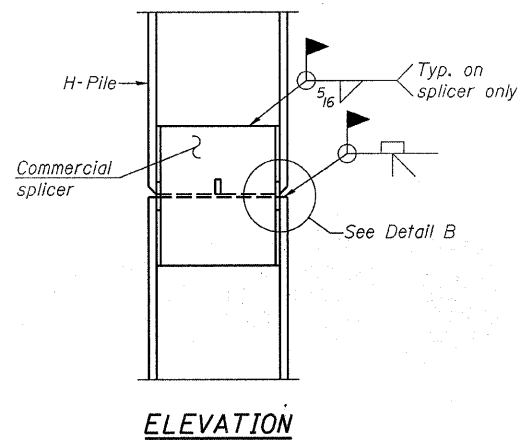
FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
824	05-00183-00-BR	JEFFERSON	23	21
CONTRACT NO. 99361				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

**ABUTMENTS  
 STRUCTURE NO. 041-3743**

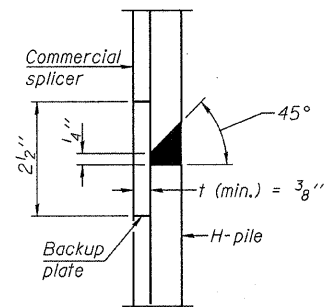


**STEEL PILE TABLE**

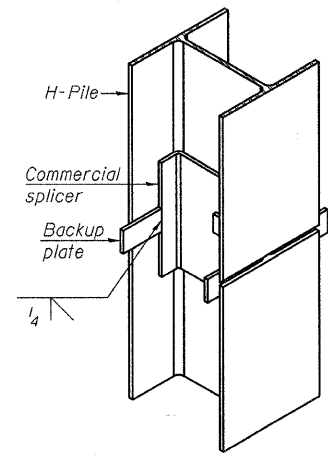
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 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**

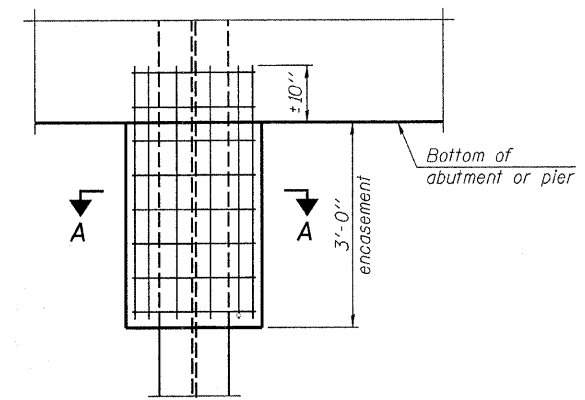


**DETAIL "B"**



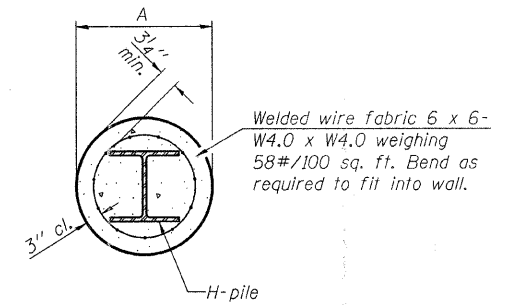
**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE**



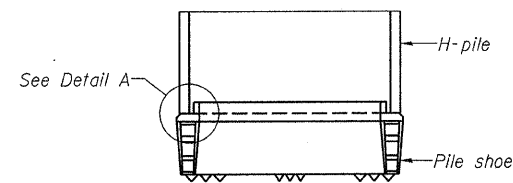
**ELEVATION**

**PILE ENCASEMENT**

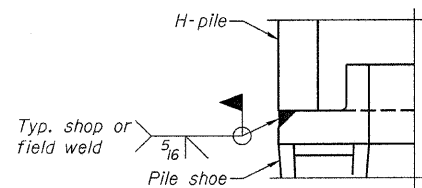


**SECTION A-A**

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

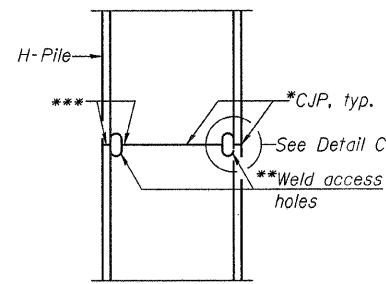


**ELEVATION**

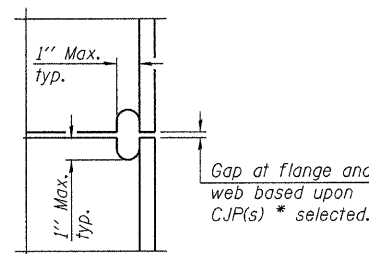


**DETAIL A**

**H-PILE SHOE ATTACHMENT**

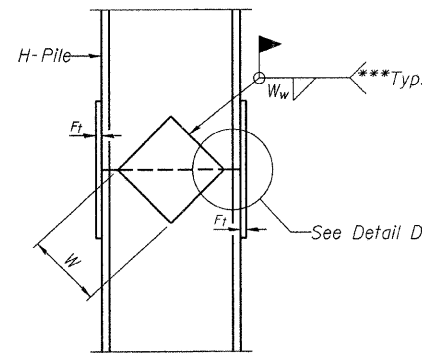


**ELEVATION**

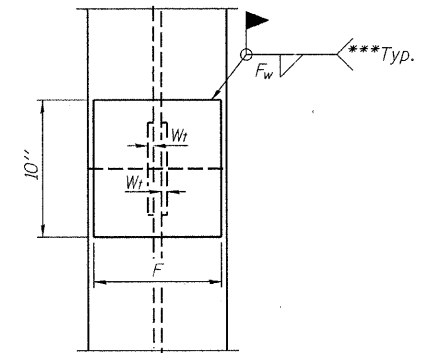


**DETAIL C**

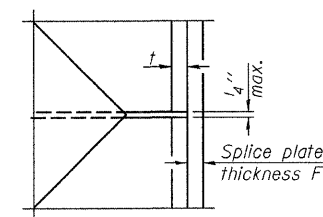
**COMPLETE PENETRATION WELD SPLICE**



**ELEVATION**



**END VIEW**



**DETAIL D**

**WELDED PLATE FIELD SPLICE**

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	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"

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

- \* 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.

DESIGNED - A.S.L.
CHECKED - S.M.S.
DRAWN - D.T.M.
CHECKED - D.A.B.

F-HP 10-1-08

**HAMPTON, LENZINI & RENWICK, INC.**  
 CIVIL & STRUCTURAL ENGINEERS  
 LAND SURVEYORS  
**HLR** 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 (217) 546-3400  
 PROJECT NUMBER: 08.0129.130 DATE: 02/08/09

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
824	05-00183-00-BR	JEFFERSON	23	22
CONTRACT NO. 99361				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

**HP PILE DETAILS  
 STRUCTURE NO. 041-3743**

Bridge Foundation Boring Log

Project: H-08103 Bridge \_\_\_\_\_ Date: 5/28/08  
 Section: 05-00183-00-BR Station \_\_\_\_\_ Bored by: D. Russell  
 Structure: \_\_\_\_\_ Checked By: T. Holcomb  
 County: Jefferson

Boring No. 1	Station	Offset	Surface Water Elev.			Ground Water Elev.		
			Elevation	N	Qu tsf	Elevation	N	Qu tsf
						81.8		
						75.8		
Ground Surface (428.8)	99.8	0						
3" A-3 Surface over								
6" Crushed Stone	99.1					(404.8)	75.8	100/6" 9
Gray Mottled Brown Silty CLAY (A-6) with sand		9	1.4S	18				-25
								100/6" 5
		5	1.3S	19				-5
(422.8)	93.8					(399.8)	70.8	100/6" 5
Gray Mottled Brown Clayey SILT (A-4) with sand		7	1.1S	23				-30
								100/6" 8
(418.8)	89.8	-10	6	1.1S	23			-10
Gray Mottled Brown Silty CLAY (A-6) with sand								100/6" 12
88.3								-30
Brown Sandy CLAY (A-6)		6	0.8B	19				-35
								100/6" 8
		-15	7		22			-15
(412.3)	83.3							100/6" 13
Gray Mottled Brown Silty CLAY (A-6) with sand		19	3.1S	18				-40
								100/6" 20
		-20	23	5.6S	15			-20
(407.3)	78.3							100/6" 26
Brown-Gray Sandy SHALE		66			13			-35

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"  
 Qu - Unconfined Compressive Strength in tons/sq.ft.  
 w - Water Content - percentage of oven dry weight-%  
 B = Bulge Failure  
 S = Shear Failure  
 E = Estimated Value  
 P = Penetrometer

(100.0 = 429.0 U.S.G.S.±)

BORING 1  
(East)

DESIGNED	A.S.L.
CHECKED	S.M.S.
DRAWN	D.T.M.
CHECKED	D.A.B.

Bridge Foundation Boring Log

Project: H-08103 Bridge \_\_\_\_\_ Date: 5/28/08  
 Section: 05-00183-00-BR Station \_\_\_\_\_ Bored by: D. Russell  
 Structure: \_\_\_\_\_ Checked By: T. Holcomb  
 County: Jefferson

Boring No. 2	Station	Offset	Surface Water Elev.			Ground Water Elev.		
			Elevation	N	Qu tsf	Elevation	N	Qu tsf
						81.3		
Ground Surface (429.3)	100.3	0						
3" A-3 Surface over								
6" Crushed Stone	99.6					(405.3)	76.3	100/6" 9
Gray Mottled Brown Silty CLAY to Clayey SILT (A-6 to A-4) with sand		6	1.8S	18				-25
								100/6" 5
		-5	2	0.7B	24			-5
(422.8)	93.8					(400.8)	71.8	100/6" 5
Gray Silty CLAY (A-6) with sand		0	0.8B	27				-30
								100/6" 8
		-10	0	0.4B	24			-10
(417.8)	88.8					(394.8)	65.8	100/6" 13
Brown Mottled Gray Sandy CLAY (A-6)		13	1.6S	15				-35
								100/6" 20
		-15	2	0.4B	30			-15
(415.3)	86.3							100/6" 18
Gray Silty CLAY (A-6)								-40
								100/6" 20
(412.8)	83.8							-20
Brown Clayey SAND (SC)		6	0.5B	18				-40
								100/6" 26
		-20	12	1.5S	20			-20
(407.8)	78.8							100/6" 26
Brown Mottled Gray CLAY (A-6)		6	1.9B	26				-35

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"  
 Qu - Unconfined Compressive Strength in tons/sq.ft.  
 w - Water Content - percentage of oven dry weight-%  
 B = Bulge Failure  
 S = Shear Failure  
 E = Estimated Value  
 P = Penetrometer

BORING 2  
(West)

ABUTMENTS  
STRUCTURE NO. 041-3743

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 CIVIL & STRUCTURAL ENGINEERS  
 LAND SURVEYORS  
  
 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 (217) 546-3400  
 PROJECT NUMBER: 08.0129.130 DATE: 02/06/09

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
824	05-00183-00-BR	JEFFERSON	23	23
CONTRACT NO. 99361				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		