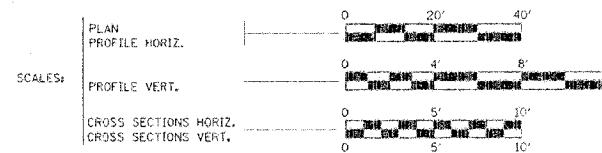


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
BRIDGE REPLACEMENT

ROUTE NO.	DISTRICT	COUNTY	SHEET NO.	TOTAL SHEETS
FAS 460	*	FULTON	13	1
FED. ROAD DIST. NO.	DIVISION	FEED. ACQ. PROJECT		
			*05-00131-00-BR	

INDEX OF SHEETS

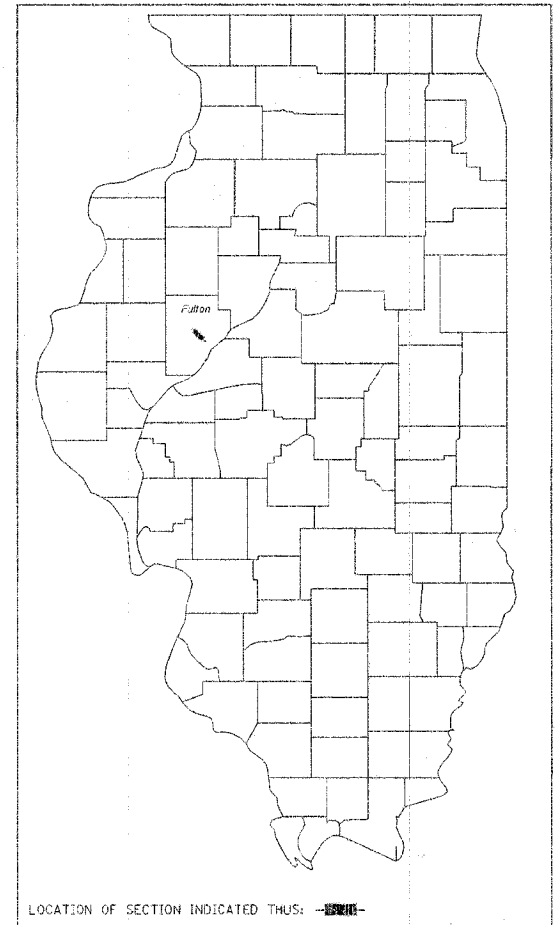
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY & SCHEDULE OF QUANTITIES AND TYPICAL CROSS SECTIONS
3	PLAN & PROFILE
4	TEMPORARY EROSION CONTROL PLAN
5-6	CROSS SECTIONS
7-13	BRIDGE PLANS



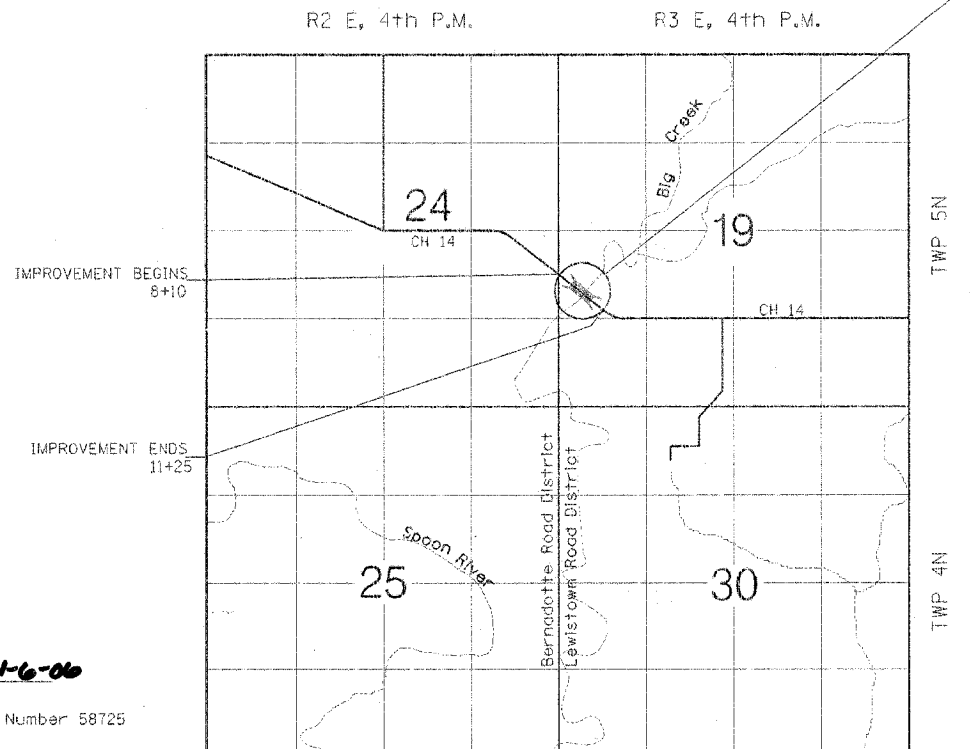
FULTON COUNTY
SECTION 05-00131-00-BR
BRS 0460(104)
FAS 460
COUNTY HIGHWAY 14
BRIDGE REPLACEMENT
AND REHABILITATION PROGRAM
C-94-137-06

ILLINOIS DEPT. OF TRANSPORTATION STANDARD DRAWINGS

STANDARD NO.	DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-03	TEMPORARY EROSION CONTROL SYSTEMS
515001-02	NAME PLATE FOR BRIDGES
630001-07	STEEL PLATEBEAM GUARDRAIL
630301-04	SHOULDER WIDENING FOR TYPE 1 SPECIAL GUARDRAIL TERMINALS
631026-03	TRAFFIC BARRIER TERMINAL TYPE 5 & 5A
701006-02	OFF ROAD OPERATIONS, 2L, 2W, 15' TO 24' FROM PAVEMENT EDGE
701301-02	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
702001-06	TRAFFIC CONTROL DEVICES
BLR 21-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION OF RURAL LOCAL HIGHWAYS
BLR 23-1	TRAFFIC BARRIER TERMINAL TYPE 1



PROPOSED STRUCTURE STA. 9+94
THREE-SPAN PRECAST PRESTRESSED
CONC. BRIDGE 164.5' BK. TO BK
ABUTMENTS, NO SKEW, 24'-0"
OUT TO OUT OF DECK.
OLD STRUCTURE NO. 029-3024
NEW STRUCTURE NO. 029-3224



LOCATION MAP

ADT = 350 (CURRENT), < 350 (DESIGN)
FUNCTIONAL CLASS = MAJOR COLLECTOR

NET LENGTH OF SECTION = 315.00 FEET = 0.060 MILES

CAT #033079-00

COMMITMENTS-NONE



Kelly Jo Hoffmann 11-6-06
KELLY JO HOFFMANN
Illinois Licensed Professional Engineer Number 58725
License Expires 11/30/07

CONTRACT #89438

FDR JOINT UTILITY INFORMATION
CALL TOLL FREE 1-800-892-0123

APPROVED 11-8 2006
William Kuhn
WILLIAM KUHN, PE FULTON COUNTY ENGINEER

Nov 16
PASSED Nov 16 2006
David Laballe
DISTRICT FOUR ENGINEER OF
LOCAL ROADS & STREETS

Releasing For
Bid Based on
Limited Review
Nov 17, 2006
Joseph E. Brown
DEPUTY DIRECTOR OF HIGHWAYS,
REGION THREE ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAUENHOFFER

Frauenhoffer and Associates, P.C. Consulting Engineers
3002 Crossing Court Champaign, IL 61822 217-351-6268

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 460	*	Fulton	13	2
FED. ROAD DIST. NO. 7		FED. AID PROJECT: *05-00131-00-BR		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	X08/24 TOTAL QUANTITIES
20200100	Earth Excavation	Cu. Yd.	65
21101615	Top Soil Furnish & Place, 4"	Sq. Yd.	823
*25000200	Seeding, Class 2	Acre	0.17
25000400	Nitrogen Fertilizer Nutrient	Pound	16
25000500	Phosphorus Fertilizer Nutrient	Pound	16
25000600	Potassium Fertilizer Nutrient	Pound	16
25100115	Mulch, Method 2	Acre	0.17
28000255	Temporary Erosion Control Seeding	Acre	0.17
28000400	Perimeter Erosion Barrier	Foot	585.5
35102000	Aggregate Base Course, Type B 8"	Sq. Yd.	335
40200800	Aggregate Surface Course, Type B	Ton	26
*50100100	Removal of Existing Structures	Each	1
50102400	Concrete Removal	Cu. Yd.	6
50200100	Structure Excavation	Cu. Yd.	29
50300225	Concrete Structures	Cu. Yd.	13.9
50300255	Concrete Superstructure	Cu. Yd.	77.0
50300260	Bridge Deck Grooving	Sq. Yd.	439
50300300	Protective Coat	Sq. Yd.	439
50400605	Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	3900
*50800105	Reinforcement Bars	Pound	1840
50800205	Reinforcement Bars, Epoxy Coated	Pound	10410
50900205	Steel Railing, Type S-1	Foot	326
51500100	Name Plates	Each	1
59300100	Controlled Low-Strength Material	Cu. Yd.	23
Δ*63000000	Steel Plate Beam Guardrail, Type A	Foot	146
Δ63100075	Traffic Barrier Terminal, Type 5A	Each	4
ΔLR631020	Traffic Barrier Terminal, Type 1	Each	4
*67100100	Mobilization	L. Sum	1
*XX004565	Grouted Riprap (Gradation 3)	Sq. Yd.	555
*XX005699	Bituminous Surface Treatment, A-3 Special	Sq. Yd.	335
*Z0013798	Construction Layout	L. Sum	1

* SEE SPECIAL PROVISIONS

Δ SPECIALTY ITEMS

GENERAL NOTES

1. The locations of Existing utilities as shown on the plan are for information only, and are not guaranteed. It shall be the Contractor's responsibility to ascertain their exact location from the utility companies and by field inspection.

SCHEDULE OF QUANTITIES

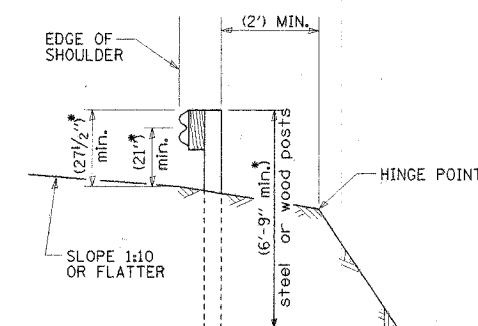
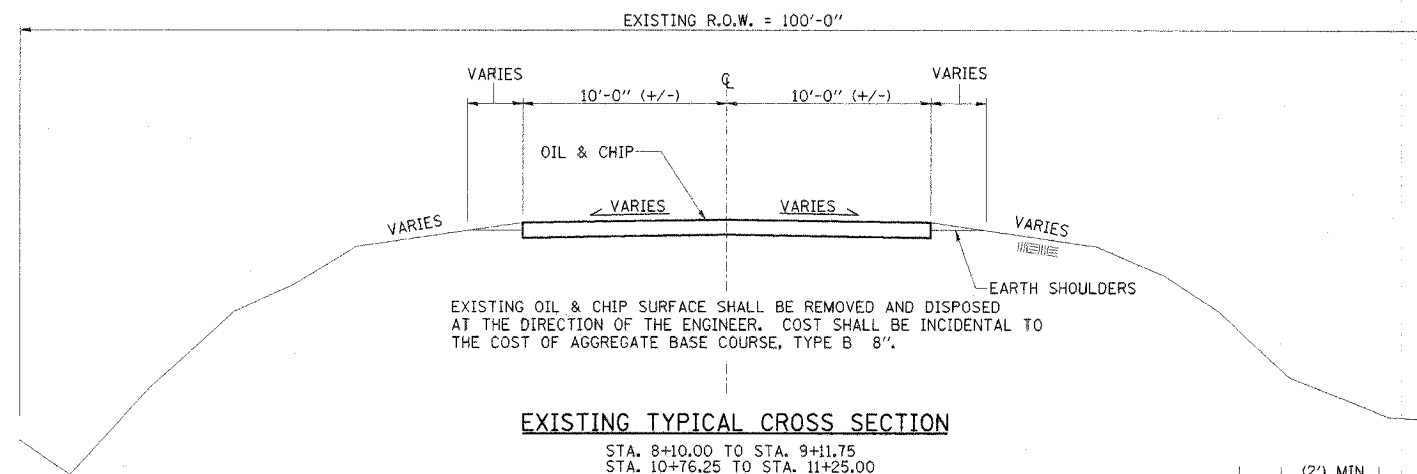
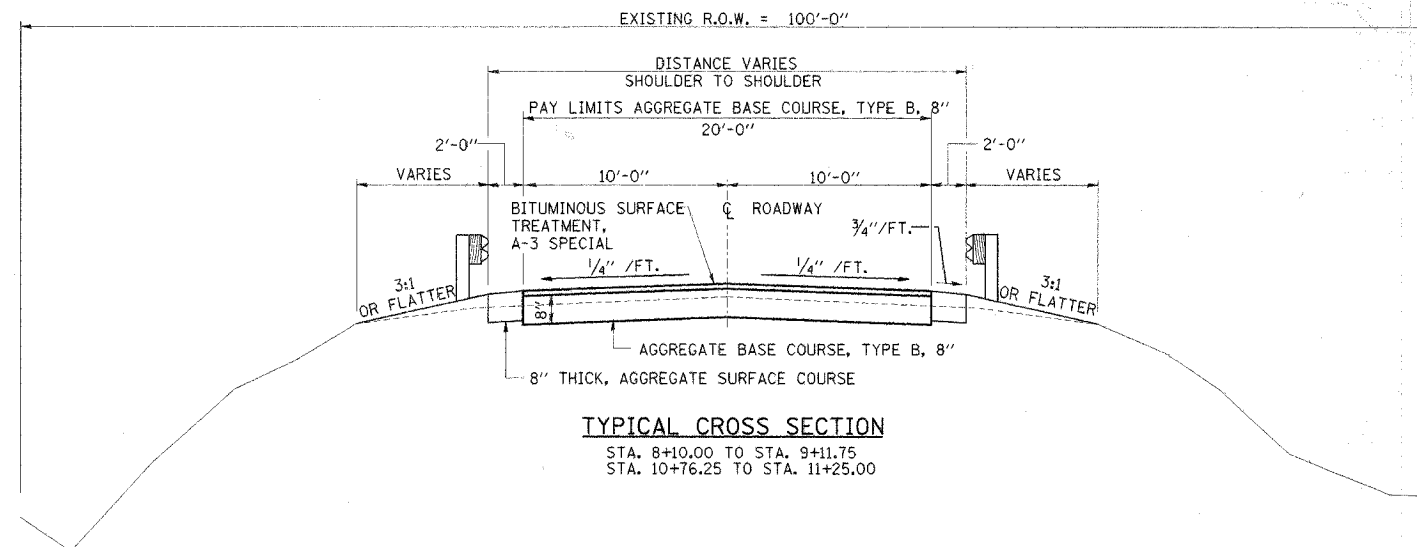
TRAFFIC BARRIER TERMINAL, TYPE 5A				
LOCATION	TO	STA.	LT	EACH
STA. 8+99.42	TO	STA. 9+12.67	LT	1
STA. 8+99.42	TO	STA. 9+12.67	RT	1
STA. 10+75.33	TO	STA. 10+88.58	LT	1
STA. 10+75.33	TO	STA. 10+88.58	RT	1
TOTAL				4

TRAFFIC BARRIER TERMINAL, TYPE 1				
LOCATION	TO	STA.	LT	EACH
STA. 8+12.42	TO	STA. 8+37.42	LT	1
STA. 8+12.42	TO	STA. 8+37.42	RT	1
STA. 10+99.58	TO	STA. 11+24.58	LT	1
STA. 10+99.58	TO	STA. 11+24.58	RT	1
TOTAL				4

STEEL PLATE BEAM GUARDRAIL				
LOCATION	TO	STA.	LT & RT	FOOT
STA. 8+37.42	TO	STA. 8+99.42	LT & RT	124'
STA. 10+88.58	TO	STA. 10+99.58	LT & RT	22'
TOTAL				146'

AGGREGATE BASE COURSE, TYPE B 8"			
LOCATION	TO	SQ YD	
STA. 8+10	TO	STA. 9+11.75	227
STA. 10+76.25	TO	STA. 11+25	108
TOTAL		335	

AGGREGATE SURFACE COURSE, TYPE B			
LOCATION	TO	TONS	
STA. 8+10	TO	STA. 9+11.75	17.6
STA. 10+76.25	TO	STA. 11+25	8.4
TOTAL		26	



* ADJUST HEIGHT OF POSTS TO TRANSITION UP TO MATCH THE END OF THE BRIDGE RAIL.

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J. Wolf				
APVD	J.A. Fraunhofer	NO.	DATE	REVISION	BY

FRAUENHOFER
Fraunhofer and Associates, P.C. Consulting Engineers
3002 Crossing Court Champaign, IL 61822 217-351-6268

SUMMARY & SCHEDULE OF QUANTITIES AND TYPICAL SECTIONS

COUNTY HIGHWAY 14
SECTION 05-00131-00-BR
FULTON COUNTY

SHEET	2
DWG NO.	5047-sum.dgn
DATE	NOV 2006
PROJ NO.	5047

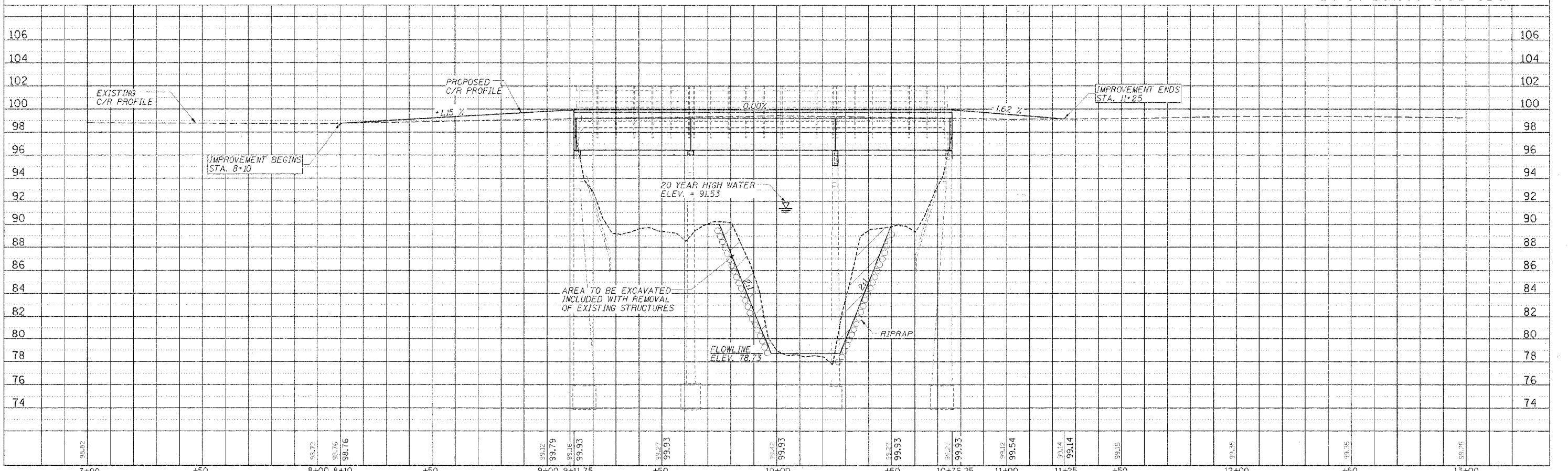
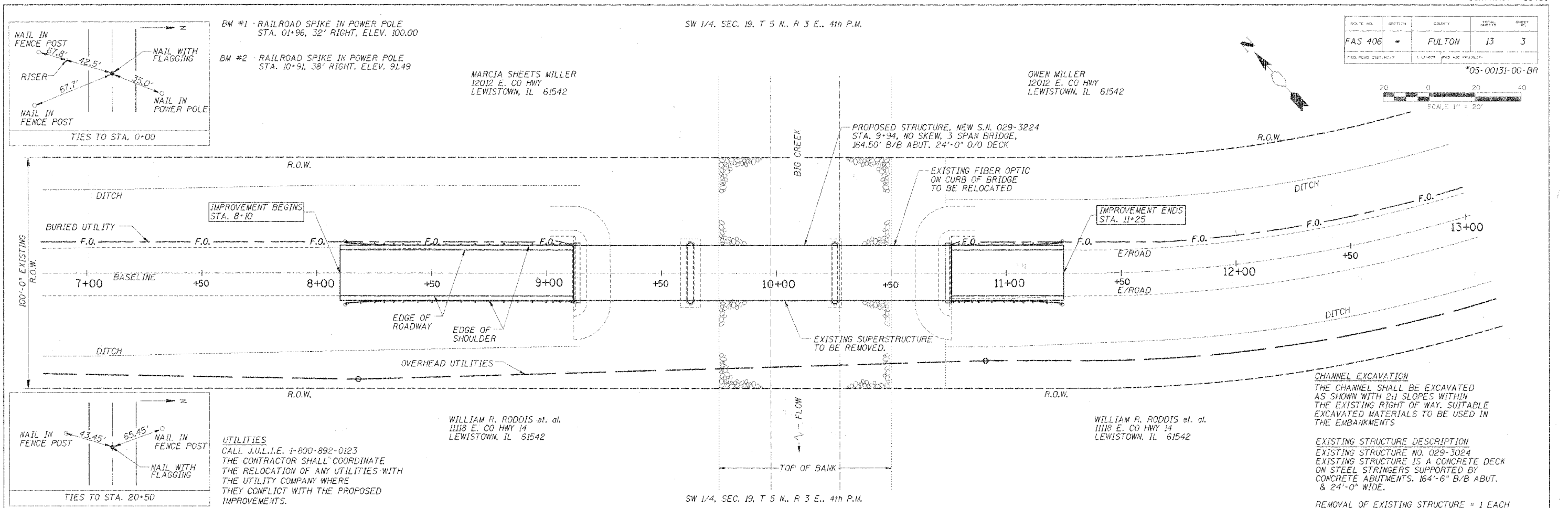


EXHIBIT #5

PLAN & PROFILE STA. 7+00 TO STA. 13+00

EROSION CONTROL SEQUENCE

1. PLACEMENT OF PERIMETER EROSION CONTROL BARRIER PRIOR TO COMMENCEMENT OF ANY WORK. SEE STANDARD 280001.
2. REMOVAL OF THE EXISTING STRUCTURE.
3. CONSTRUCTION OF RETROFITTED SUBSTRUCTURE.
4. CONSTRUCTION OF THE NEW SUPERSTRUCTURE.
5. THE PLACEMENT AND MAINTENANCE OF TEMPORARY EROSION CONTROLS.
6. FINAL GRADING AND SHAPING INCLUDING PLACEMENT OF AGGREGATE BASE COURSE & BITUMINOUS SURFACE.
7. REMOVAL AND PROPER CLEAN UP OF TEMPORARY EROSION CONTROLS.
8. PLACEMENT OF PERMANENT EROSION CONTROLS.

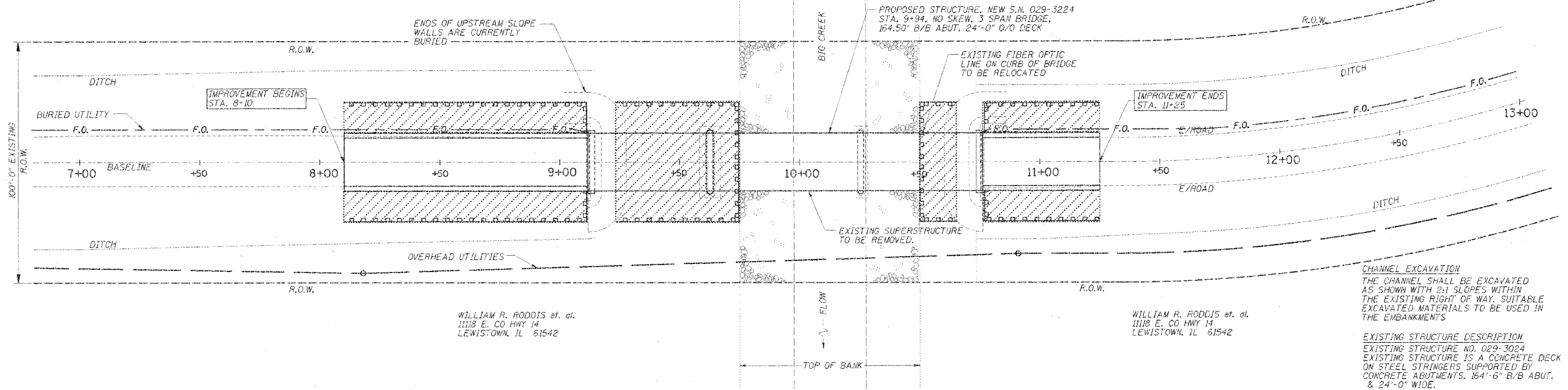
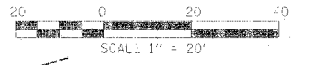
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 406	*	FULTON	13	4
REV. NO.	DATE	BY	REASON	

*05-00131-00-BR

SW 1/4, SEC. 19, T 5 N., R 3 E., 4th P.M.

MARCIA SHEETS MILLER
12012 E. CO HWY
LEWISTOWN, IL 61542

OWEN MILLER
12012 E. CO HWY
LEWISTOWN, IL 61542



WILLIAM R. RODDIS et. al.
1118 E. CO HWY 14
LEWISTOWN, IL 61542

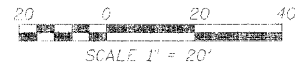
WILLIAM R. RODDIS et. al.
1118 E. CO HWY 14
LEWISTOWN, IL 61542

CHANNEL EXCAVATION
THE CHANNEL SHALL BE EXCAVATED AS SHOWN WITH 2:1 SLOPES WITHIN THE EXISTING RIGHT OF WAY. SUITABLE EXCAVATED MATERIALS TO BE USED IN THE EMBANKMENTS

EXISTING STRUCTURE DESCRIPTION
EXISTING STRUCTURE NO. 029-3024
EXISTING STRUCTURE IS A CONCRETE DECK ON STEEL STRINGERS SUPPORTED BY CONCRETE ABUTMENTS, 164'-6" B/B ABUT. & 24'-0" WIDE.

REMOVAL OF EXISTING STRUCTURE = 1 EACH

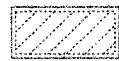
SW 1/4, SEC. 19, T 5 N., R 3 E., 4th P.M.



PERMANENT EROSION CONTROL

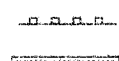


Grouted Riprap



Seeding, Cl. 2 with Fertilizer and Mulch

TEMPORARY EROSION CONTROL



Perimeter Erosion Barrier



Temporary Erosion Control Seeding

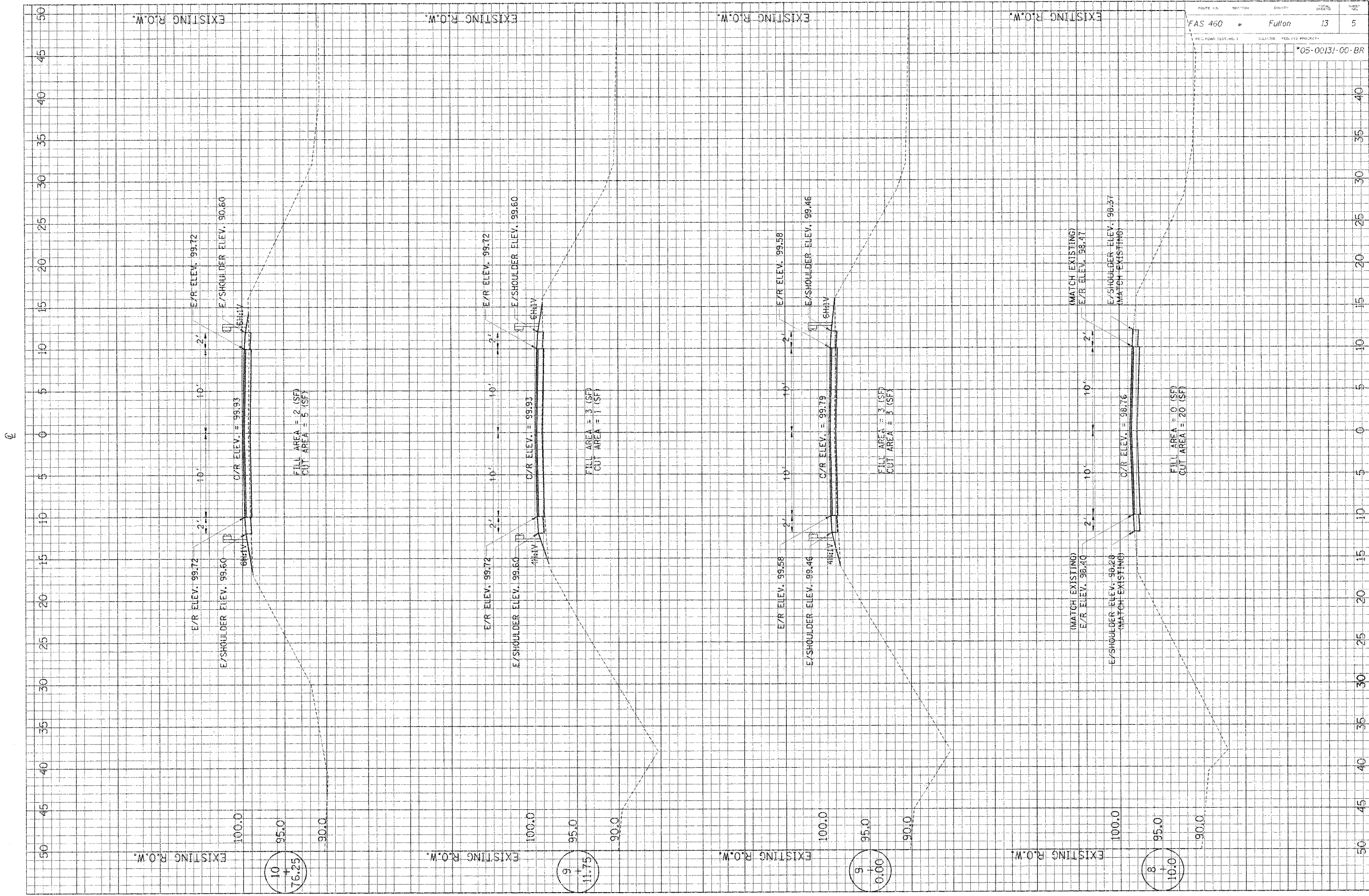
PERIMETER EROSION BARRIER

STA	OFFSET	TO	STA	OFFSET	LENGTH
8+10.00	25' RT	-	9+11.75	25' RT	101.75'
9+11.75	25' RT	-	9+11.75	12' RT	13.00'
8+10.00	25' LT	-	9+11.75	25' LT	101.75'
9+11.75	25' LT	-	9+11.75	12' LT	13.00'
9+23.50	25' RT	-	9+74.75	25' RT	51.25'
9+23.50	25' LT	-	9+74.75	25' LT	51.25'
9+74.75	25' RT	-	9+74.75	25' LT	50.00'
10+50.25	25' RT	-	10+50.25	25' LT	50.00'
10+50.25	25' RT	-	10+55.25	25' RT	15.00'
10+50.25	25' LT	-	10+55.25	25' LT	15.00'
10+76.25	12' RT	-	10+76.25	25' RT	13.00'
10+76.25	25' RT	-	11+25.00	25' RT	48.75'
10+76.25	12' LT	-	10+76.25	25' LT	13.00'
10+76.25	25' LT	-	11+25.00	25' LT	48.75'
TOTAL					585.50'

TEMPORARY EROSION CONTROL SEEDING

STA	TO	STA	AREA
8+10.00	-	9+11.75	0.061 acres
9+23.50	-	9+74.75	0.058 acres
10+50.25	-	10+55.25	0.017 acres
10+76.25	-	11+25.00	0.029 acres
TOTAL			0.165 acres

EROSION CONTROL		
Bill of Materials		
ITEM	UNIT	QTY
Grouted Riprap	Sq. Yds.	555
Seeding, Class 2	Acres	0.17
Temporary Erosion Control Seeding	Acres	0.17
Perimeter Erosion Barrier	Foot	585.5

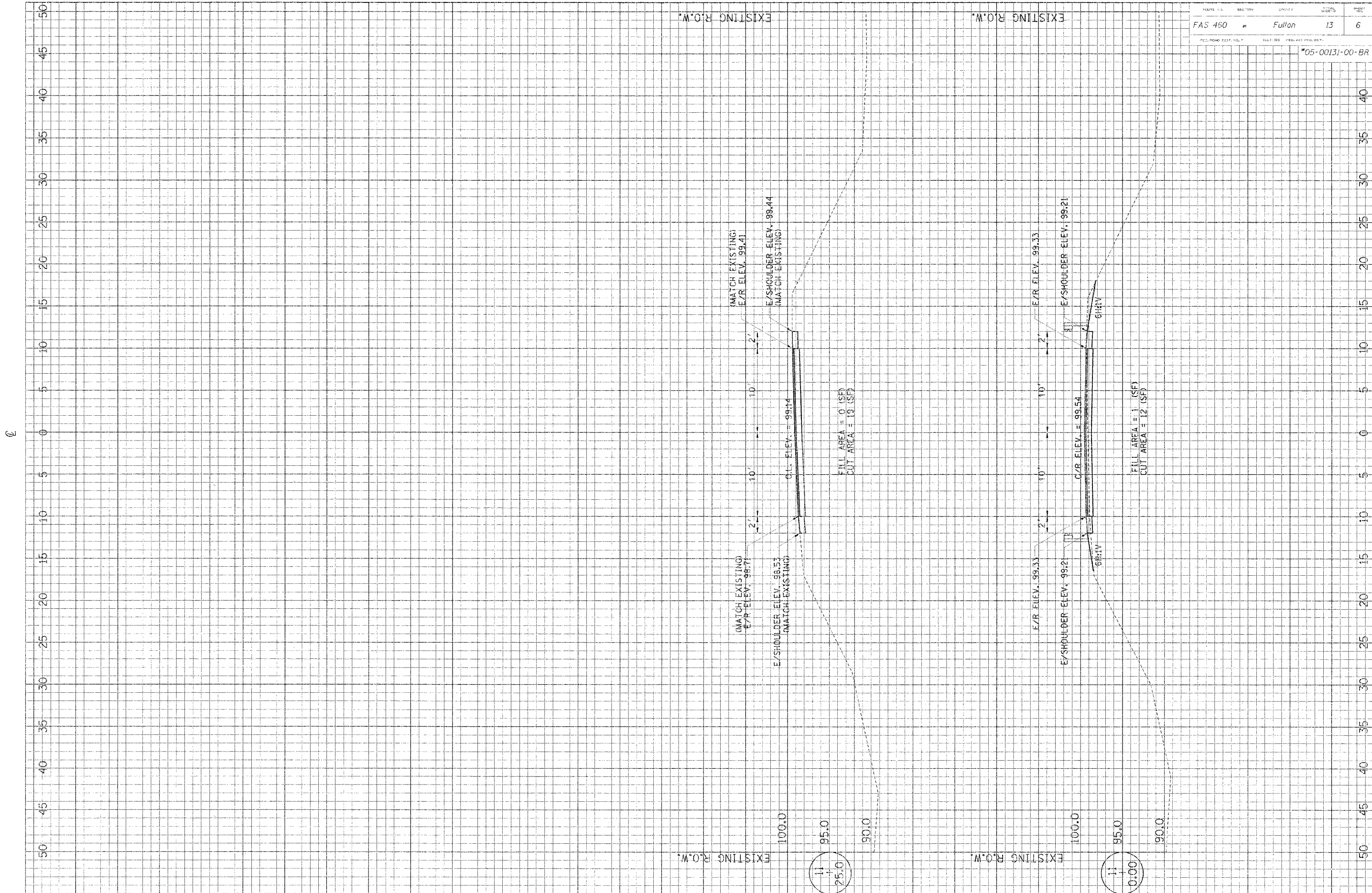


10
+
76.25

9
+
11.75

5
+
0.00

8
+
10.0

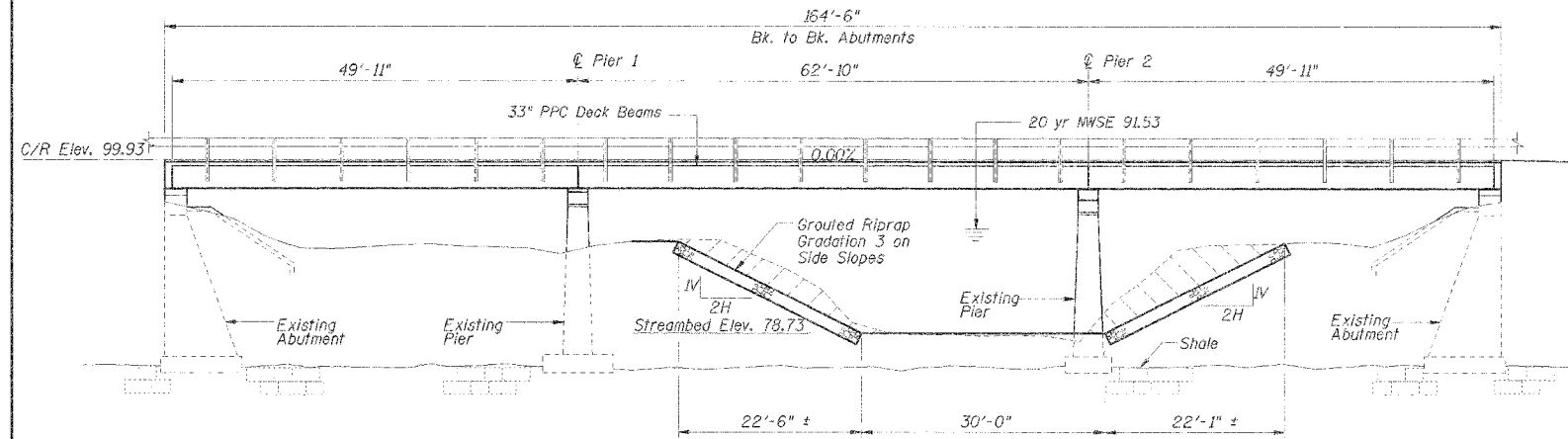


Existing Structure: Concrete Decking with Steel Beams and Concrete Piers.
3 spans of Steel Stringers and Girders.
162.5' Long and 24' Wide.

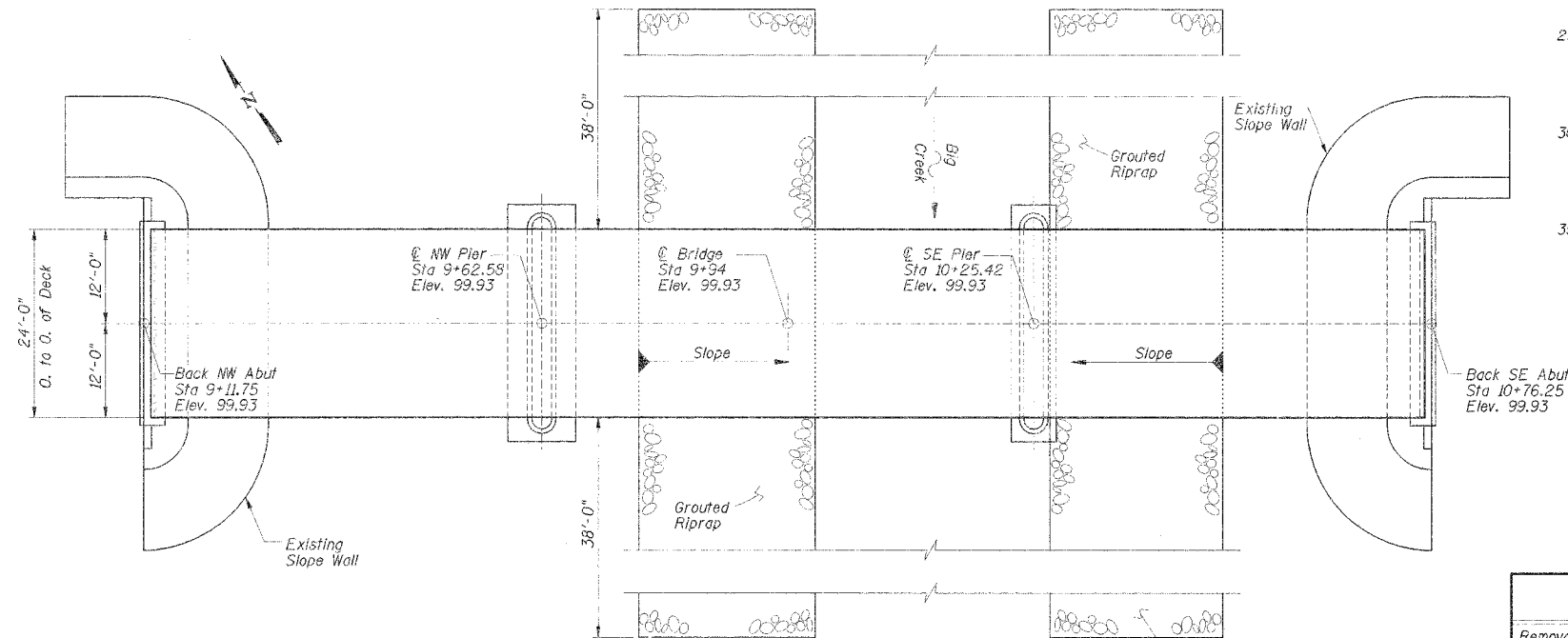
BM #1 - R.R. spike in P.P., Sta. 01+96, 32' right, Elev. 100.00
BM #2 - R.R. spike in P.P., Sta 10+91, 38' right, Elev. 91.49

ROUTE NO.	SUBSECTION	COUNTY	SHEET NO.	TOTAL SHEETS
FAS 406	*	Fulton	13	7
FAS. TRANS. DIST. NO.		ILLINOIS	FED. AID. PROJECT NO.	

*05-00131-00-BR



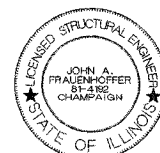
ELEVATION



PLAN

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- Boring Data is shown only as a guide to bidders in estimating soil conditions which may be encountered during construction.
- Class SI or MS Concrete shall be used in the abutments.



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 the requirements of the current "AASHTO Standard Specifications for Highway Bridges."

John A. Frauenhoffer
JOHN A. FRAUENHOFFER
Illinois Licensed Structural Engineer Number 4192
License Expires 11/30/06

BORING B-1

Location: STA 8+90, 9' RT
Elev. 98.90

Water Levels
While Drilling: 19'
At Completion: 20'

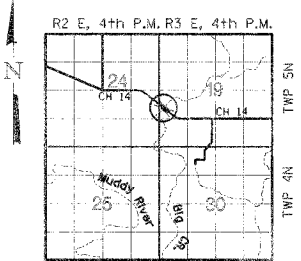
DEPTH (ft)	N	QU	W	DESCRIPTION
0				4" Oil & Chip 11" Sand & Gravel Base
6	1.53	V	15.8	Brown silty clay w/ fine sand
8	2.10	B	16.7	Dk. brown silty sandy clay
4	1.28	B	19.5	Dk. grayish brown silty clay
6	1.68	B	19.9	Dk. grayish brown silty clay w/ fine sand
4	1.42	B	19.6	Dk. gray wet silty clay
4	0.45	B	25.6	Dk. gray soft clay
6	0.30		13.8	Med. sand w/ sm. pebbles
3	--		19.3	Dk. Brown wet silty clay
107/5"	0.7	B	30.4	Lt. gray weathered shale
101/2"	--		9.3	Lt. gray weathered shale
37/6"	--		8.6	Dk. brown/black weathered shale
108/3"	--		6.1	Gray & brown weathered shale
105/2"	--		--	38.67' End of Boring

BORING B-2

Location: STA 10+95, 8' RT
Elev. 99.20

Water Levels
While Drilling: 22.2'
At Completion: 23'

DEPTH (ft)	N	QU	W	DESCRIPTION
0				5 1/2" Oil & Chip 9" Sand & Gravel Base
7	1.2	B	15.4	Brown silty clay w/ sm. pebbles
5	1.26	B	15.7	Dk. grayish brown silty clay
5	1.58	B	19.4	Dk. grayish brown silty clay
4	1.15	B	26.3	Dk. grayish brown wet silty sandy clay
3	0.60	B	31.7	Dk. grayish brown wet silty sandy clay
4	0.65	B	32.0	Dk. grayish brown wet silty sandy clay
4	0.65	V, S, B	34.2	Med. to fine sand w/ pebbles
13	--		19.7	Lt. gray weathered shale
97/3"	--		4.5	Lt. gray weathered shale
101/2"	--		7.5	28.67' End of Boring

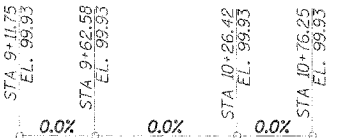


LOCATION SKETCH

STRUCTURE NO. 029-3224
SEC. 05-00131-00-BR BUILT 200
LEWISTOWN ROAD DISTRICT
FULTON COUNTY
LOADING HS-20-44

NAME PLATE

See Standard 515001



PROFILE GRADE

DESIGN SPECIFICATIONS

AASHTO 2002 and all applicable Interims

DESIGN LOADING

HS 20-44
25 P.S.F Future Wearing Surface

DESIGN STRESSES

- $f'_c = 3,500$ psi (Cast in Place Concrete)
- $f'_c = 5,000$ psi (P.P.C. Units)
- $f'_{ci} = 4,000$ psi (P.P.C. Units)
- $f_y = 60,000$ psi (Reinforcement)
- $f'_s = 270,000$ psi ($1/2"$ ϕ Strands)
- $f'_{si} = 201,960$ psi ($1/2"$ ϕ Strands)

WATERWAY DATA

Drainage Area	62.24	Sq. Mi.
Existing Opening	561.4	Sq. Ft.
Required Opening (20 Yr.)	708.7	Sq. Ft.
Proposed Opening (20 Yr.)	727.6	Sq. Ft.
Design Discharge (20 Yr.)	4625.6	C.F.S.
Computed Discharge (100 Yr.)	6855.7	C.F.S.
20 Yr. Head	0.34	Ft.
100 Yr. Head	0.89	Ft.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		29	29
Concrete Structures	Cu. Yd.		13.9	13.9
Concrete Superstructure	Cu. Yd.	77.0		77.0
Bridge Deck Grooving	Sq. Yd.	439		439
Protective Coat	Sq. Yd.	439		439
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	3900		3900
Reinforcement Bars	Pound		1840	1840
Reinforcement Bars, Epoxy Coated	Pound	10410		10410
Steel Railing, Type S1	Foot	326		326
Name Plates	Each			1
GROUTED RIPRAP (Gradation 3)	Sq. Yd.		555	555
Controlled Low-Strength Material	Cu. Yd.		23	23

FRAUENHOFFER

Frauenhoffer and Associates, P.C. Consulting Engineers
3002 Crossing Court Champaign, Il. 61822 217-351-6268

GENERAL PLAN AND ELEVATION

COUNTY HIGHWAY 14
SECTION 05-00131-00-BR
FULTON COUNTY

SHEET 7

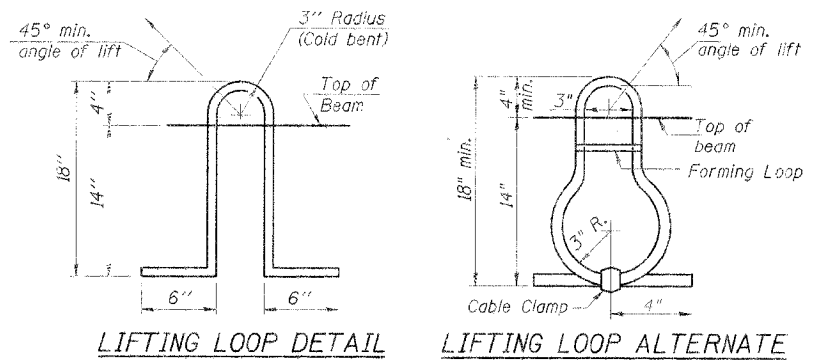
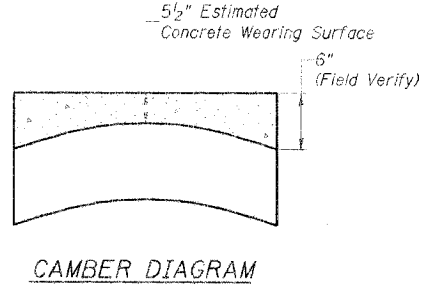
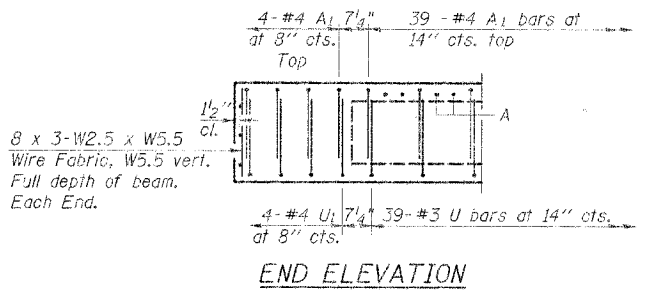
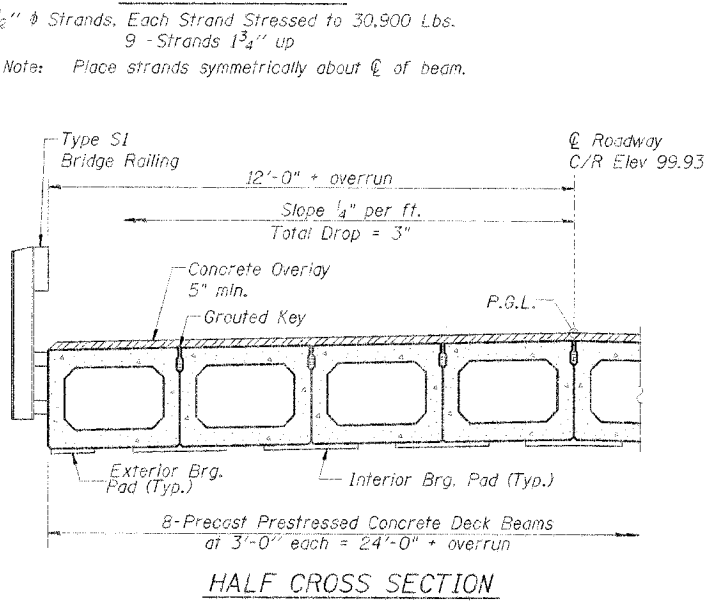
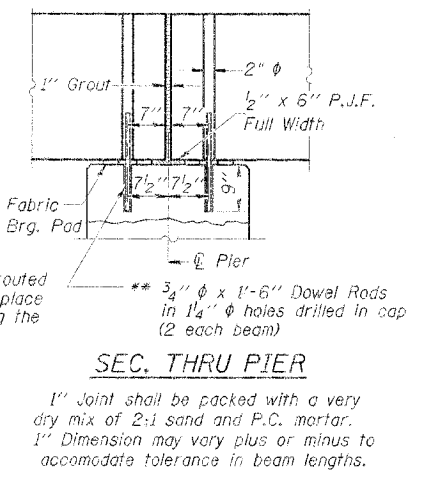
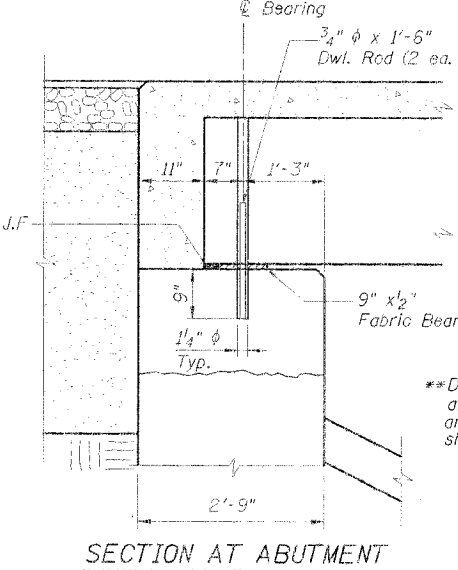
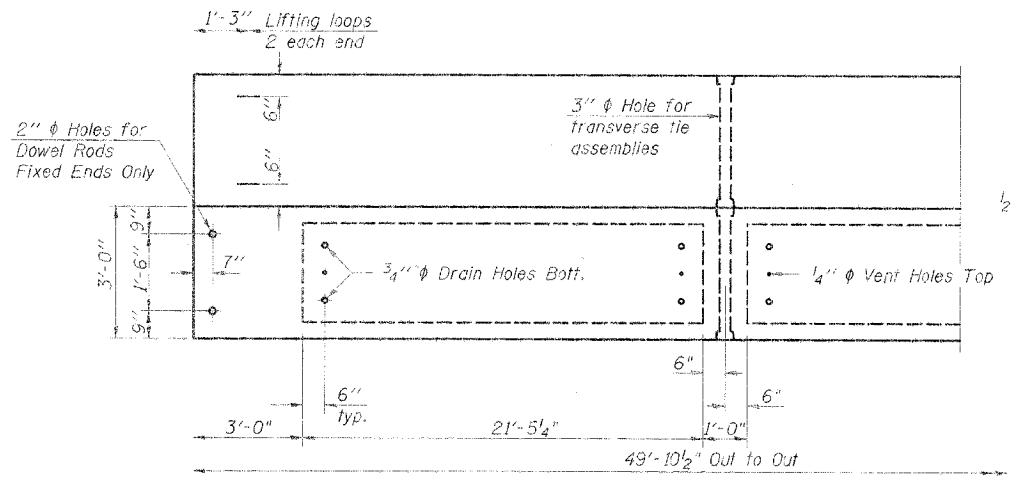
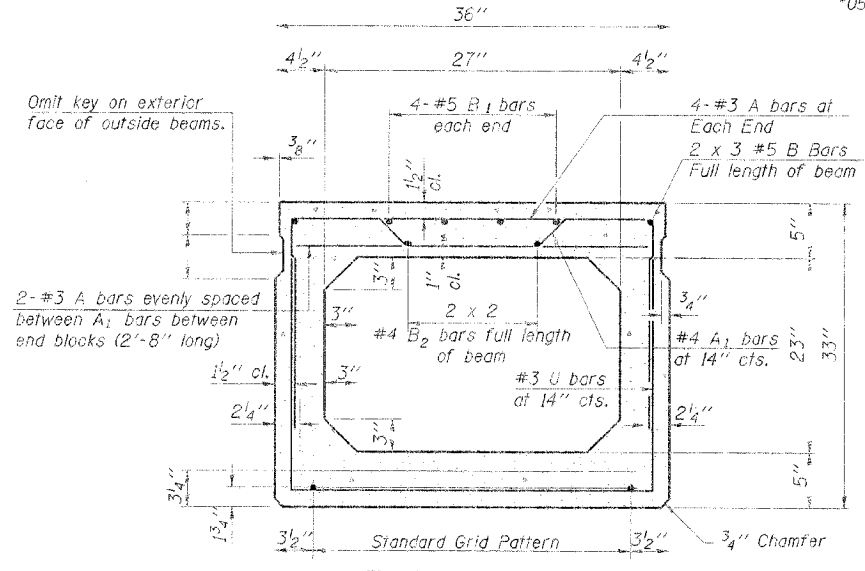
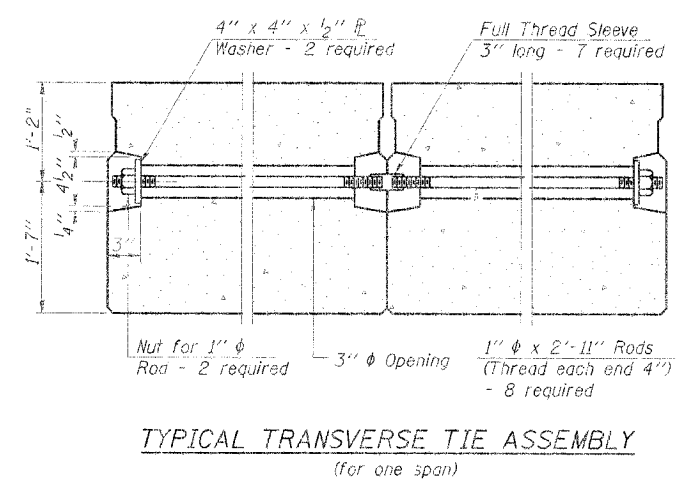
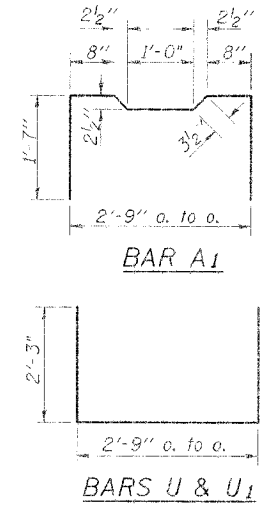
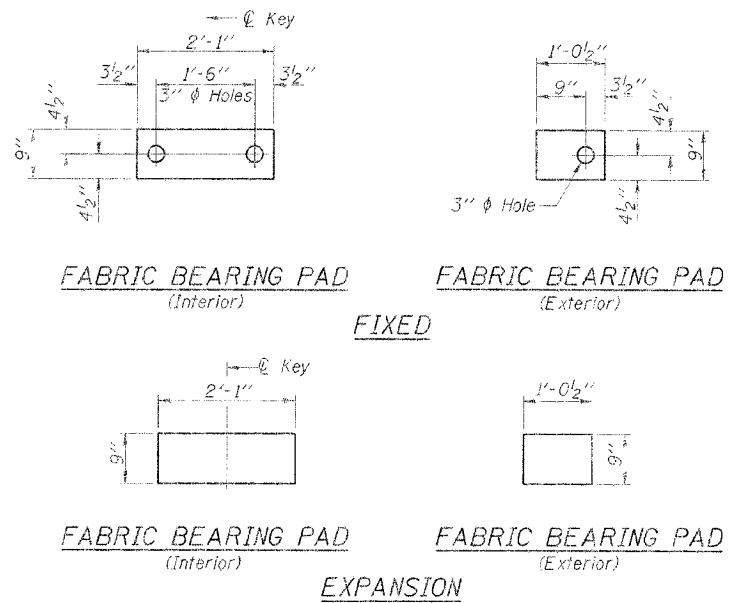
DWG: 047.gpr.dgn

DATE AUG 2006

PROJ NO. 5047

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J. Wolf				
APVD	J.A. Frauenhoffer	NO.	DATE	REVISION	BY

ROUTE NO.	SECTION	DATE	SHEET	TOTAL
FAS 460	*	FULTON	13	8
FED. ROAD DIST. NO. 7	COUNTY	DESIGN DISTRICT		
			*05-00131-00-BR	



NOTES

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. Lifting loops shall be 3/4" diameter - 1/2" diameter - 270 ksi strands, as shown. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

Non prestressing steel shall conform to AASHTO M-31, M-42 or M-53 Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

Required Release Strength, f'ci, shall be 4,000 p.s.i.

BILL OF MATERIAL-ONE BEAM

Bar	No.	Size	Length	Shape
A	84	#3	2'-8"	
A1	48	#4	6'-1"	
B	6	#5	19'-0"	
B1	8	#5	10'-0"	
B2	4	#4	26'-6"	
U	39	#3	7'-3"	
U1	8	#4	7'-3"	
Precast Prestressed Conc. Deck Bms.				Sq. Ft. 2,394*

* Total quantity of beams for 2 spans

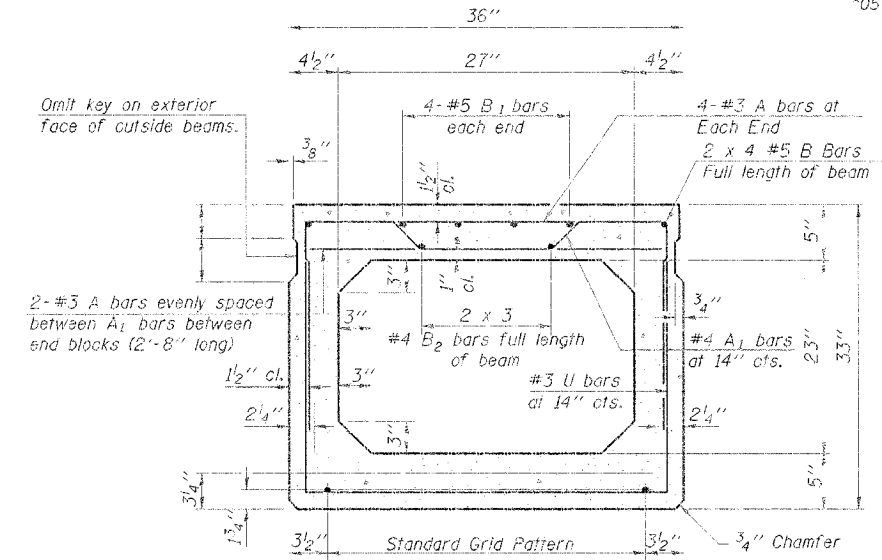
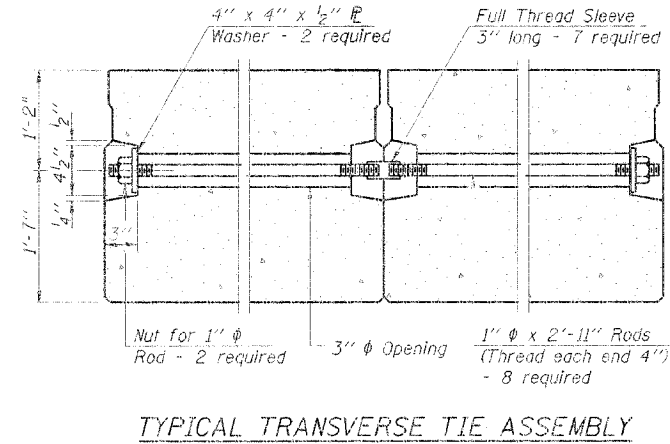
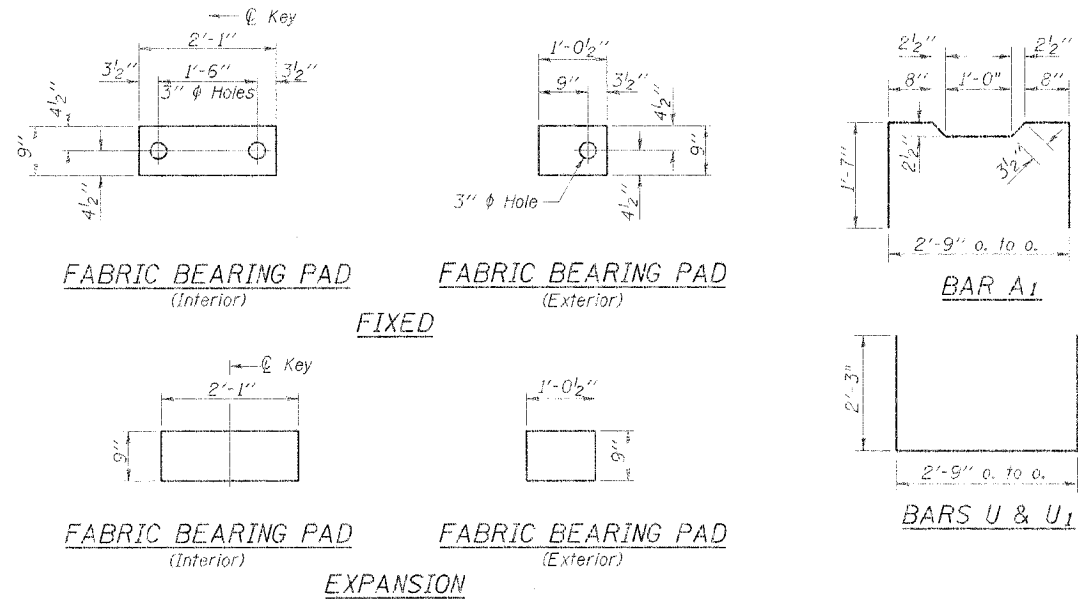
DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J. Wolf				
APVD	G.L. Frauenhoffer	NO.	DATE	REVISION	BY

FRAUENHOFFER
Frauenhoffer and Associates, P.C. Consulting Engineers
3002 Crossing Court Champaign, IL 61822 217-351-6268

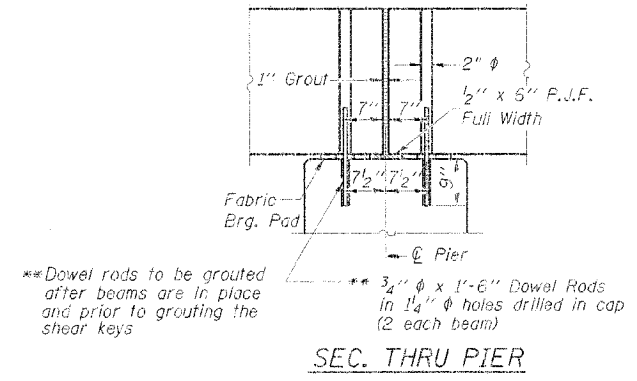
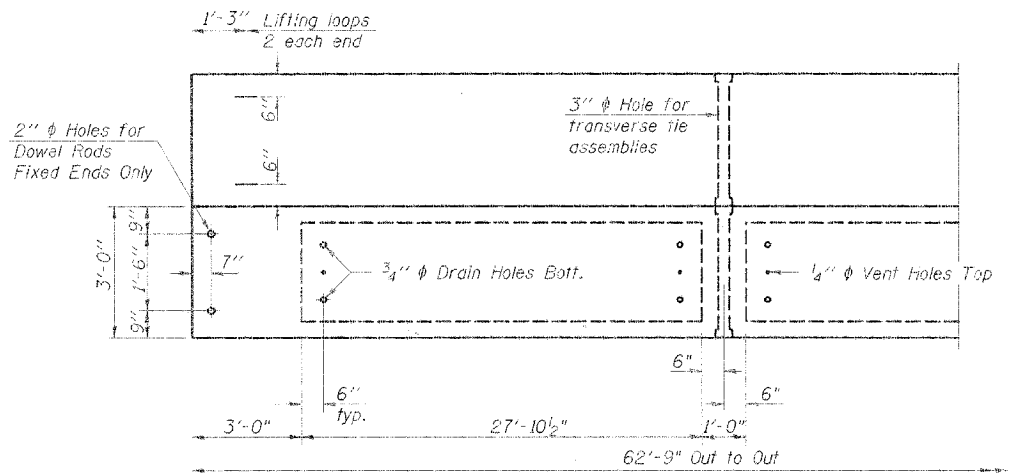
SUPERSTRUCTURE DETAILS - SPANS 1 & 3
COUNTY HIGHWAY 14
SECTION 05-00131-00-BR
FULTON COUNTY

SHEET	8
DWG NO.	5047-SUP.dwg
DATE	AUG 2006
PROJ NO.	5047

NO. 460	SECTION	QUANTITY	DATE	PROJECT
FAS 460	*	FULTON	15	9
REV. HEAD EXIST. S. 17				
*05-00131-00-BR				

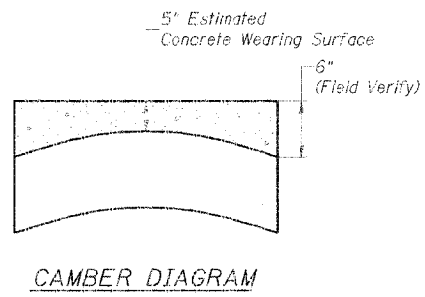
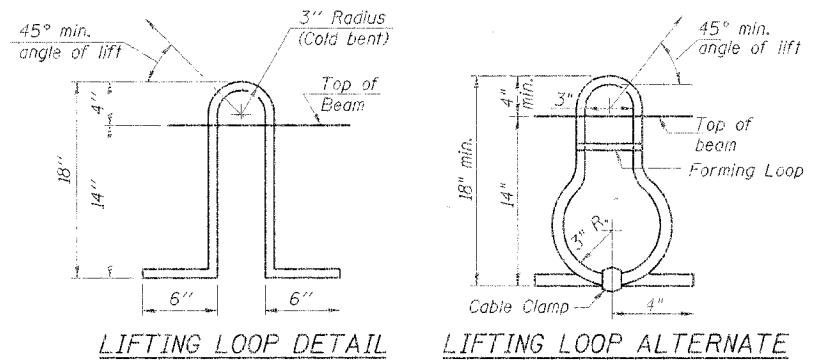
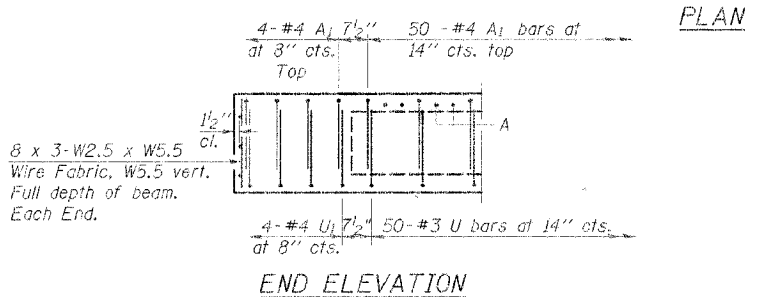
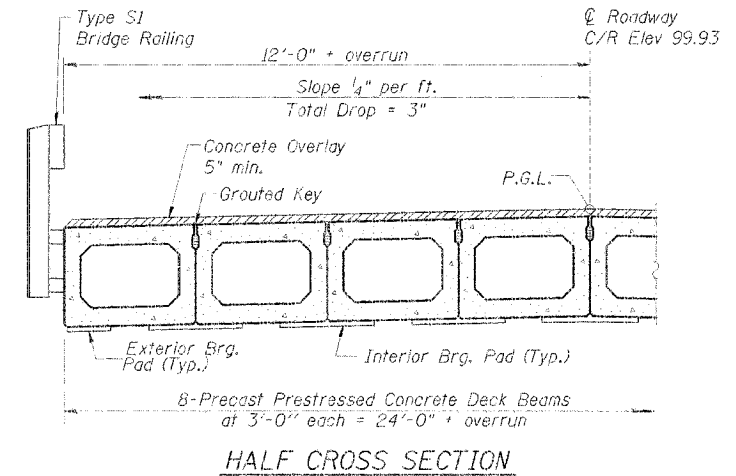


TYPICAL SECTION
 13 - 1/2" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
 9 - Strands 1 3/4" up, 4 - Strands 3 1/4" up
 Note: Place strands symmetrically about ϕ of beam.



**Dowel rods to be grouted after beams are in place and prior to grouting the shear keys
 ** 3/4" ϕ x 1'-6" Dowel Rods in 1 1/4" ϕ holes drilled in cap (2 each beam)

1" Joint shall be packed with a very dry mix of 2:1 sand and P.C. mortar. 1" Dimension may vary plus or minus to accommodate tolerance in beam lengths.



NOTES

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. Lifting loops shall be 3/4" diameter - 2" ϕ -270 ksi strands, as shown. The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Non prestressing steel shall conform to AASHTO M-31, M-42 or M-53 Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4,000 p.s.i.

BILL OF MATERIAL-ONE BEAM

Bar	No.	Size	Length	Shape
A	106	#3	2'-8"	
A1	58	#4	6'-1"	
B	8	#5	18'-3"	
B1	8	#5	12'-7"	
B2	6	#4	24'-8"	
U	50	#3	7'-3"	
U1	8	#4	7'-3"	
Precast Prestressed Conc. Deck Bms.				Sq. Ft. 1,506*

* Total quantity of beams for 1 span

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J. Wolf				
APVD	A. Frauenthoffer	NO.	DATE	REVISION	BY

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 Frauenthoffer and Associates, P.C. Consulting Engineers
 3002 Crossing Court Champaign, IL 61822 217-351-6268

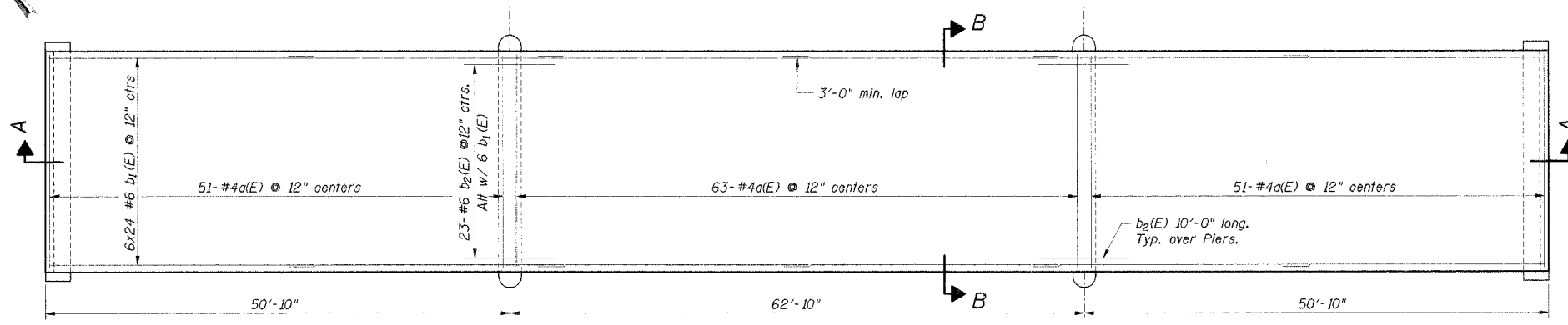
SUPERSTRUCTURE DETAILS - SPAN 2
 COUNTY HIGHWAY 14
 SECTION 05-00131-00-BR
 FULTON COUNTY

SHEET	9
DWG NO.	5047-SU-3.dgn
DATE	AUG 2006
PROJ NO.	5047

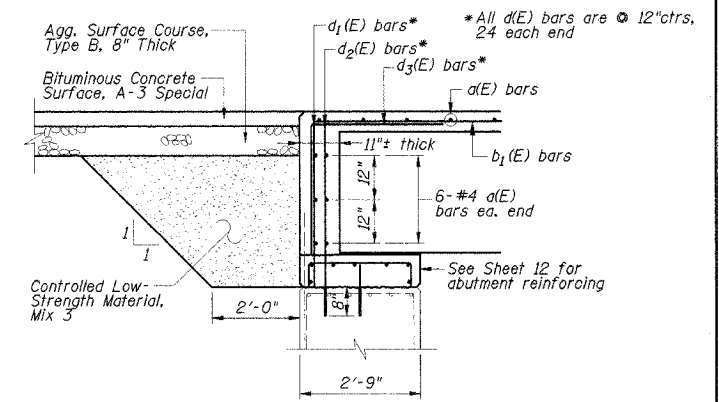
PROJECT NO.	SECTION	COUNT	TOTAL SHEETS	SHEET NO.
FAS 460	*	FULTON	13	10
FED. ROAD DIST. NO. 7	BUILDING	FED. AID PROJECT		

*05-00131-00-BR

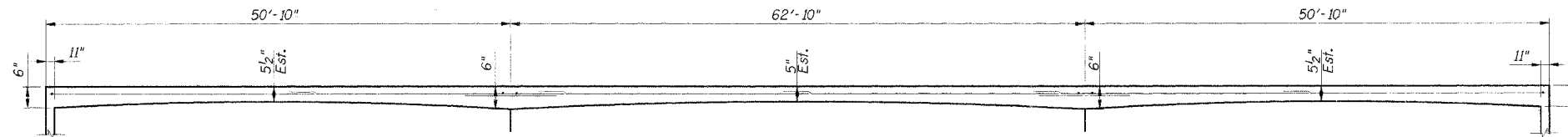
Reinforcement bars designated "(E)" shall be epoxy coated.



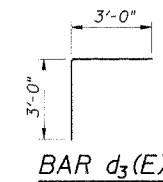
PLAN VIEW



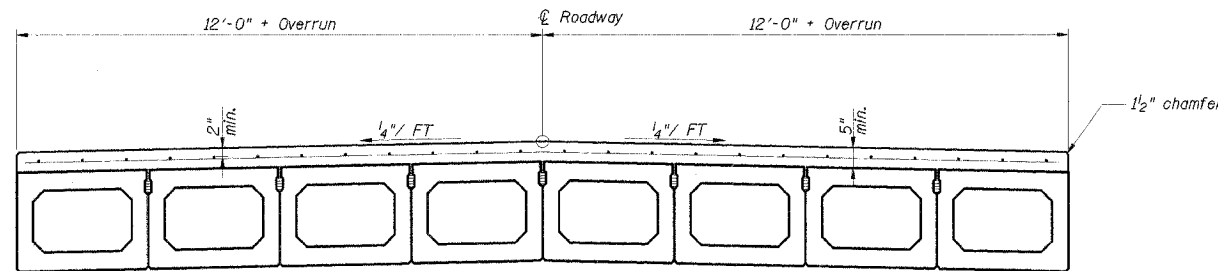
ABUTMENT DETAIL



SECTION A-A
(Exaggerated Vertical Scale)



BAR d₃(E)



SECTION B-B

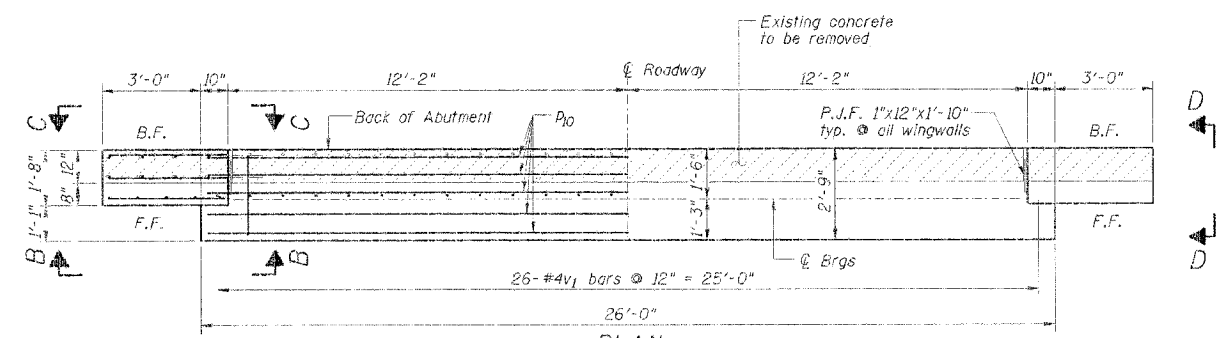
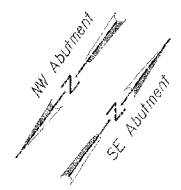
BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
a(E)	177	# 4	23'-6"	—
b ₁ (E)	144	# 6	30'-0"	—
b ₂ (E)	46	# 6	10'-0"	—
d ₁ (E)	48	# 4	3'-7"	—
d ₂ (E)	48	# 4	4'-3"	—
d ₃ (E)	48	# 4	6'-0"	—
Concrete Superstructure		Cu. Yds.	77.0	
Bridge Deck Grooving		Sq. Yds.	439	
Protective Coat		Sq. Yds.	439	
Reinforcement Bars Epoxy Coated		Lbs.	10,410	

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J.A. Fraenhoffer				
APVD	A. Fraenhoffer	NO.	DATE	REVISION	BY

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Frauenhoffer and Associates, P.C. Consulting Engineers
3002 Crossing Court Champaign, IL 61822 217-351-6268

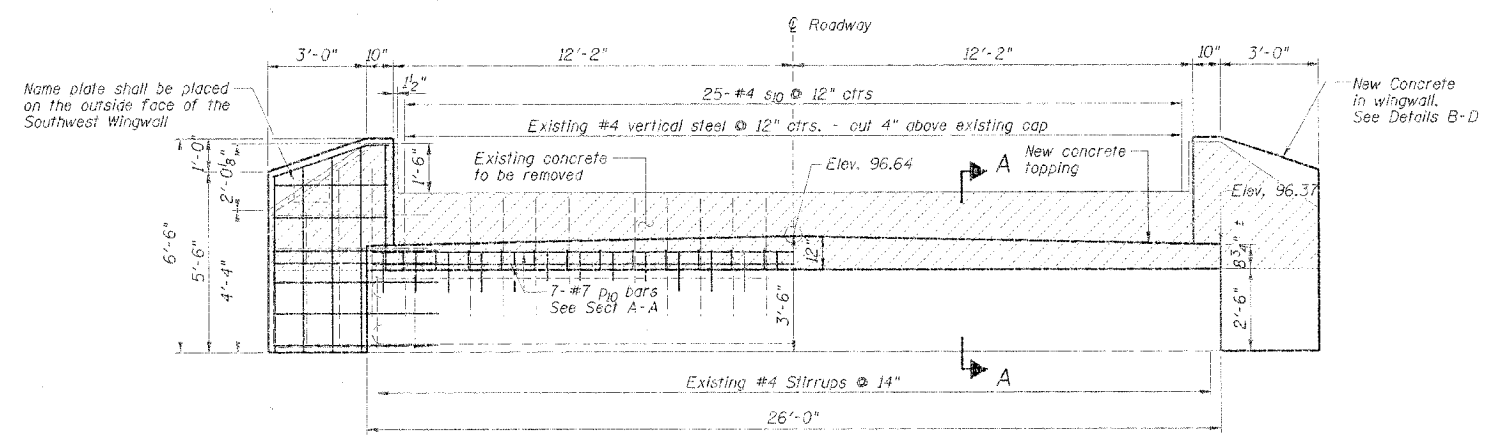
CONCRETE WEARING SURFACE DETAILS
COUNTY HIGHWAY 14
SECTION 05-00131-00-BR
FULTON COUNTY

SHEET	10
DWG NO.	5047-over.dgn
DATE	AUG 2006
PROJ NO.	5047



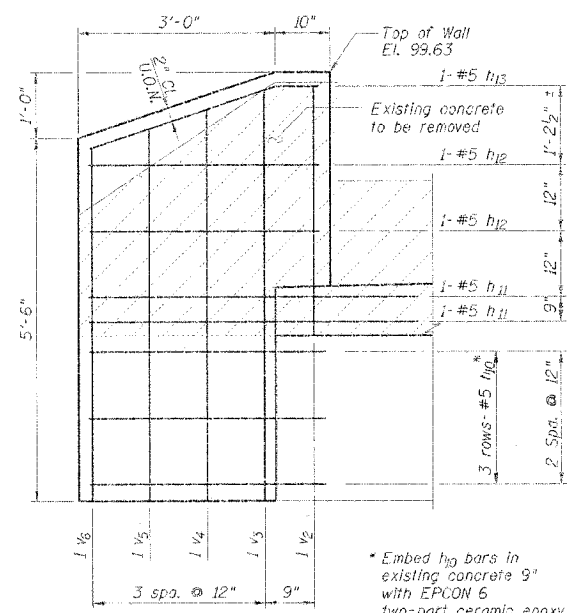
PLAN

(Symmetrical about C)
 Back NW Abut. @ Sta 9+11.75
 Back SE Abut. @ Sta 10+76.25



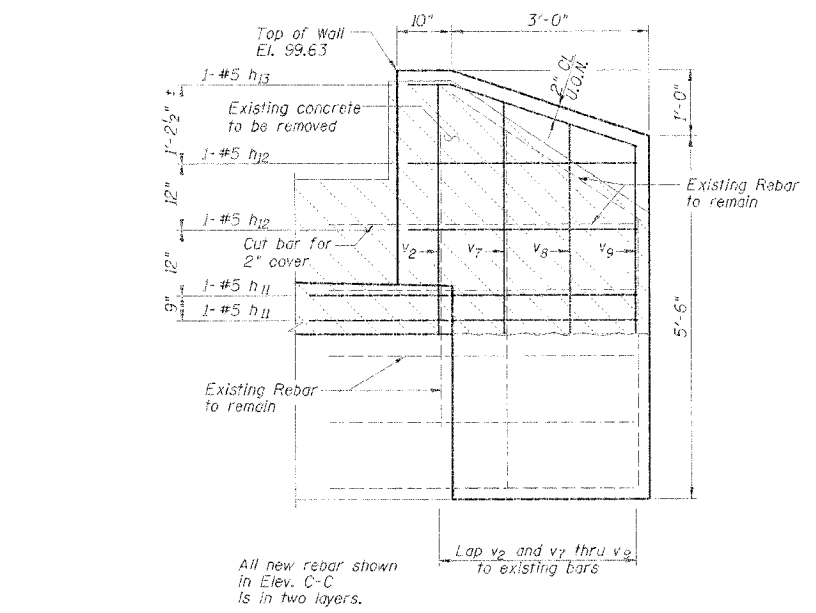
ELEVATION

Symmetrical about C



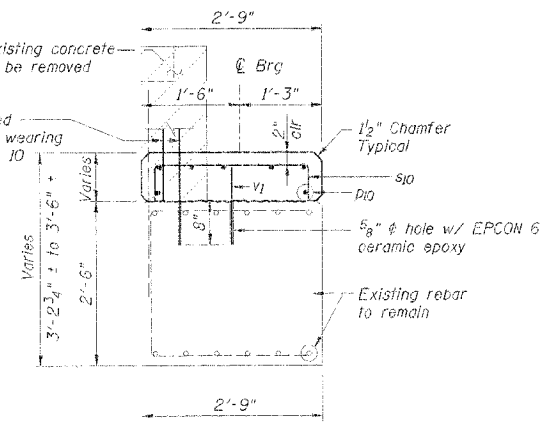
ELEV. B-B

Wingwalls shall be poured after beams are in place.



ELEV. C-C

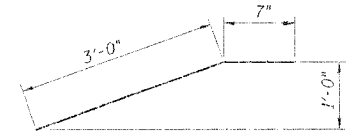
Wingwalls shall be poured after beams are in place.



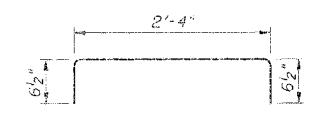
SECTION A-A

(Perpendicular to C of Abutment)

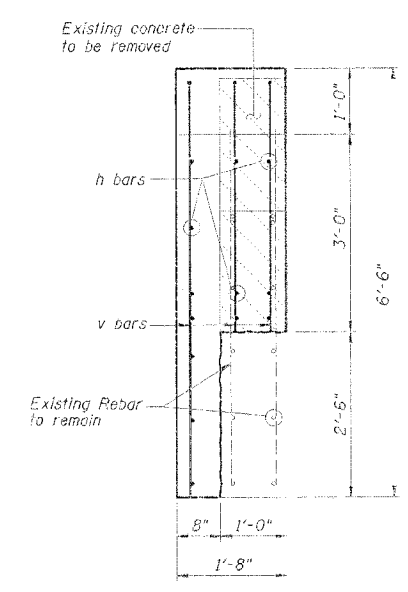
- NOTES:**
- All surfaces in which new concrete will be cast against shall be bushhammered. Any cracked or loose material shall be removed with a chipping hammer. Surfaces shall be cleaned prior to casting. The cost of this work shall be incidental to CONCRETE STRUCTURES.
 - All protruding or remaining rebar shall remain and be cut if necessary to maintain clear cover. The cost of this work shall be incidental to CONCRETE STRUCTURES.
 - The contractor shall field verify ALL DIMENSIONS before removing any portion of the existing substructure, placing reinforcing, or forming concrete.



BAR h13



BAR s10



ELEV. D-D

(Perpendicular to C of Abutment)

BILL OF MATERIAL-2 ABUTS.

Bar	No.	Size	Length	Shape
h10	12	# 5	3'-6"	
h11	24	# 5	5'-10"	
h12	24	# 5	3'-8"	
h13	12	# 5	3'-7"	
p10	14	# 7	25'-6"	
s10	50	# 4	3'-5"	
v1	52	# 4	1'-2"	
v2	12	# 4	3'-9"	
v3	4	# 4	6'-2"	
v4	4	# 4	5'-11"	
v5	4	# 4	5'-8"	
v6	4	# 4	5'-4"	
v7	8	# 4	3'-6"	
v8	8	# 4	3'-2"	
v9	8	# 4	2'-10"	
Concrete Structures		Cu. Yds.	8.9	
Reinforcement Bars		Lbs.	1,340	
Name Plate		Each	1	
Structure Excavation		Cu. Yds.	29	
Concrete Removal		Cu. Yds.	6	

DSGN	K. J. Hoffmann				
DIR	K. J. Hoffmann				
CHK	J. Wolf				
APVD	A. Frauenhoffer	NO.	DATE	REVISION	BY

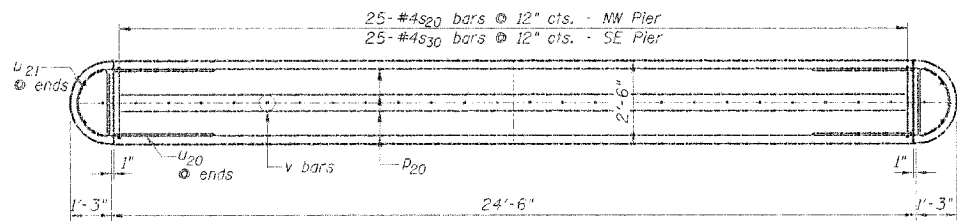
FRAUENHOFFER
 Fraunhoffer and Associates, P.C. Consulting Engineers
 3002 Crossing Court Champaign, IL 61822 217-351-6258

ABUTMENT CAP RETROFIT
 COUNTY HIGHWAY 14
 SECTION 05-00131-00-BR
 FULTON COUNTY

SHEET 12
 DWG NO. 9047-abt.dgn
 DATE AUG 2006
 PROJ NO. 9047

NO. 460	SECTION *	DATE: Fulton	SHEET 13	TOTAL 13
PROJECT: HWY 14		SHEET TITLE: PIER CAP RETROFIT		

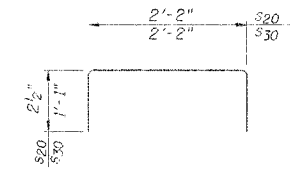
*05-00131-00-BR



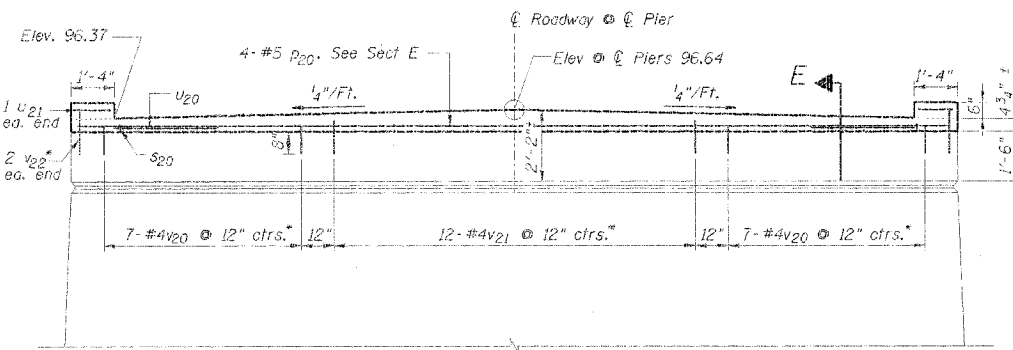
NW & SE PIERS
PLAN VIEW
 Symmetrical about C-C

NOTES:

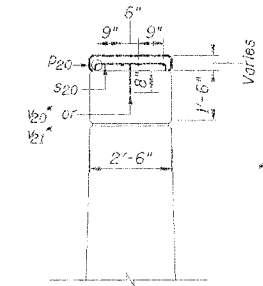
- All surfaces in which new concrete will be cast against shall be bushammered. Any cracked or loose material shall be removed with a chipping hammer. Surfaces shall be cleaned prior to casting. The cost of this work shall be incidental to CONCRETE STRUCTURES.
- The contractor shall field verify ALL DIMENSIONS before removing any portion of the existing substructure, placing reinforcing, or forming concrete.



BARS s20 and s30

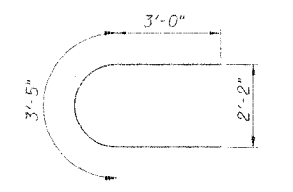


NW PIER ELEVATION
 Symmetrical about C-C

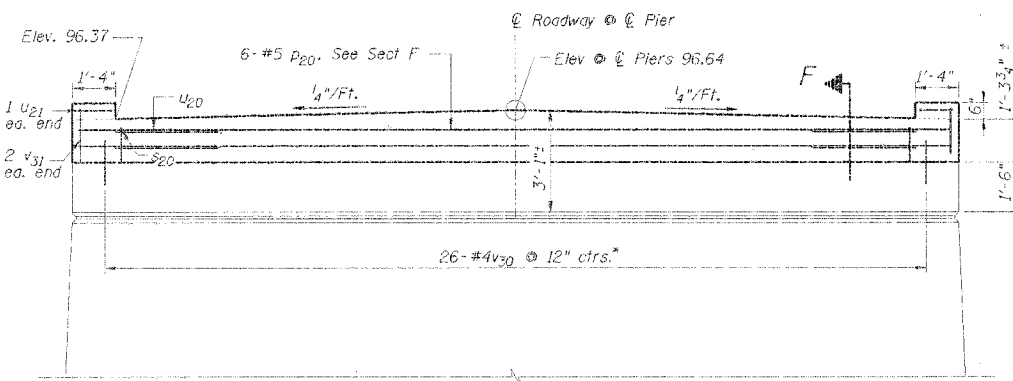


Use 2" clr cover.

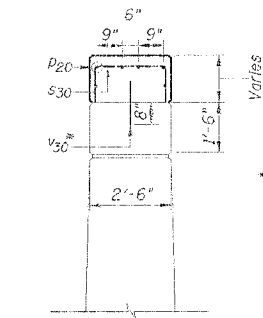
SECTION E
 (Perpendicular to C-C of Pier)



BAR U20

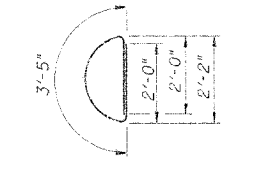


SE PIER ELEVATION
 Symmetrical about C-C



Use 2" clr cover.

SECTION F
 (Perpendicular to C-C of Pier)



BAR U21

BILL OF MATERIAL - 2 PIERS

Bar	No.	Size	Length	Shape
P20	10	# 5	24'-6"	—
S20	25	# 4	2'-7"	U
S30	25	# 4	4'-4"	U
U20	6	# 5	9'-5"	U
U21	4	# 4	7'-5"	U
V20	14	# 4	0'-10"	—
V21	12	# 4	1'-0"	—
V22	4	# 4	1'-5"	—
V30	26	# 4	1'-4"	—
V31	4	# 4	1'-7"	—
Concrete Structures		Cu. Yds.	5.0	
Reinforcement Bars		Lbs.	500	

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J. Wolf				
APVD	A. Frauenthoffer	NO.	DATE	REVISION	BY

FRAUENTHOFER
 Frauenthoffer and Associates, P.C. Consulting Engineers
 3002 Crossing Court Champaign, IL 61822 217-351-6268

PIER CAP RETROFIT
 COUNTY HIGHWAY 14
 SECTION 05-00131-00-BR
 FULTON COUNTY

SHEET	13
DWG NO.	5047pier.dgn
DATE	NOV 2006
PROJ NO.	5047