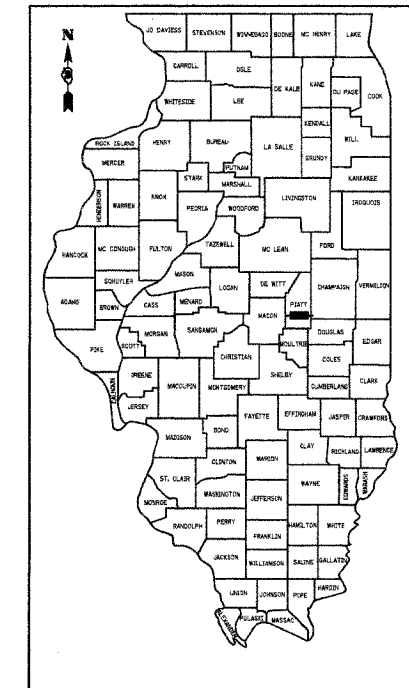


**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**  
**HIGHWAY BRIDGE PROGRAM**

**BEMENT ROAD DISTRICT**  
**SECTION 06-01102-01-BR**  
**PIATT COUNTY**  
**PROJECT NO. BROS-147(62)**  
**TOWNSHIP ROUTE 167**  
**JOB NO. C-95-312-06**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-01102-01-BR	PIATT	15	1
ROAD DIST.		ILLINOIS	BEMENT	

CONTRACT NO. 91364



LOCATION OF SECTION INDICATED THUS:

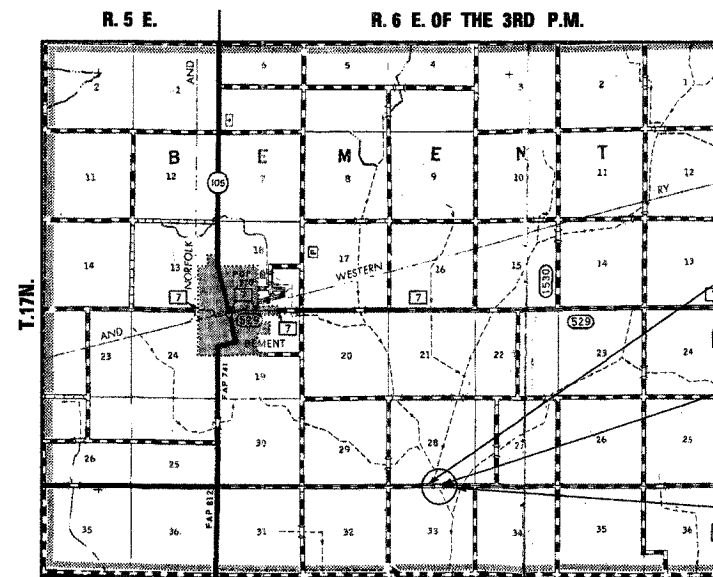
CLASSIFICATION: RURAL TWO-LANE LOCAL ROAD  
 DESIGN VOLUME: UNDER 250 ADT  
 CURRENT ADT: 150 (2006)  
 DESIGN SPEED: 30 MPH  
 3R DESIGN GUIDELINES

TOLL FREE JOINT UTILITY LOCATING  
 INFORMATION FOR EXCAVATORS (J.U.L.I.E.)  
 TELEPHONE NUMBER 1-800-892-0123

SHEET NO.	TITLE
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES, GENERAL NOTES & TYPICAL SECTIONS
3.	PLAN AND PROFILE SHEET
4.-11.	BRIDGE PLANS
12.-15.	STATION CROSS SECTIONS

**STANDARDS:**

- 280001-02 TEMPORARY EROSION CONTROL
- 285001-01 FABRIC FORMED CONCRETE REVETMENT MAT
- 515001-02 NAME PLATE FOR BRIDGES
- 631026-02 TRAFFIC BARRIER TERMINAL TYPE 5 & 5A
- 635006-02 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 702001-06 TRAFFIC CONTROL DEVICES
- BLR 21-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

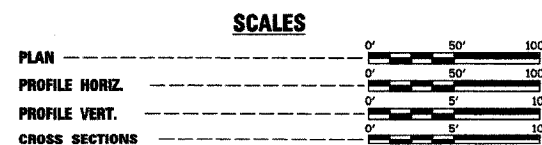
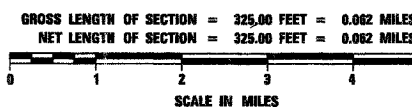


IMPROVEMENT BEGINS  
 STA. 3+50

STA. 5+06.55 - SPECIAL BRIDGE DESIGN  
 PRECAST PRESTRESSED CONCRETE DECK BEAM  
 BRIDGE, THREE SPANS @ 35'-3 1/4", 45'-3",  
 35'-3 1/4"; 27'-0" ROADWAY, SKEW = 26°  
 EXISTING S.N. 074-3109  
 PROPOSED S.N. 074-3306

IMPROVEMENT ENDS  
 STA. 6+75

**LOCATION PLAN**



*Fred J. Stone Jr. (S-30-06)*  
 ILLINOIS PROFESSIONAL NO. 26065  
 EXPIRES 11-30-07

4440 ASH GROVE  
 SPRINGFIELD, IL 62711  
 (217) 793-8600  
 oasinc@insightbb.com

**FEHR-GRAHAM & ASSOCIATES, LLC**  
 ENGINEERING AND SCIENCE CONSULTANTS  
MEMBER OF THE F. W. WOODWARD GROUP

PASSED	<i>June 8 2006</i>	2006
ROAD DISTRICT COMMISSIONER		
APPROVED	<i>June 8 2006</i>	2006
COUNTY ENGINEER		
PASSED	<i>8/21 2006</i>	2006
DISTRICT FIVE ENGINEER OF LOCAL ROADS & STREETS		
RELEASED FOR BID BASED ON LIMITED REVIEW	<i>AUG 23 2006</i>	2006
DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER		
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-0102-01-BR	PIATT	15	2
ROAD DIST.	ILLINOIS		BELEMENT	
CONTRACT NO. 91364				

### SUMMARY OF QUANTITIES

X080-2A

NUMBER	ITEM	UNIT	QUANTITY
20200100	EARTH EXCAVATION	CU YD	155
20300100	CHANNEL EXCAVATION	CU YD	40
* 25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.2
* 28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	40
28000400	PERIMETER EROSION BARRIER	FOOT	600
* 28100205	STONE RIPRAP, CLASS A3	TON	70
28500100	FABRIC FORMED CONCRETE REVETMENT MAT	SQ YD	173
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	224
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	43.3
* 50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	3,127
50800105	REINFORCEMENT BARS	POUND	4,670
50900205	STEEL RAILING, TYPE S1	FOOT	232
*	FURNISHING, DRIVING AND FILLING METAL PILE SHELLS 14"	FOOT	650
51203200	TEST PILE METAL SHELLS	EACH	2
51204315	CONCRETE ENCASEMENT	CU YD	25.0
51500100	NAME PLATES	EACH	1
67100100	MOBILIZATION	L SUM	1
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1

\*SEE SPECIAL PROVISIONS

### GENERAL NOTES

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, AND AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

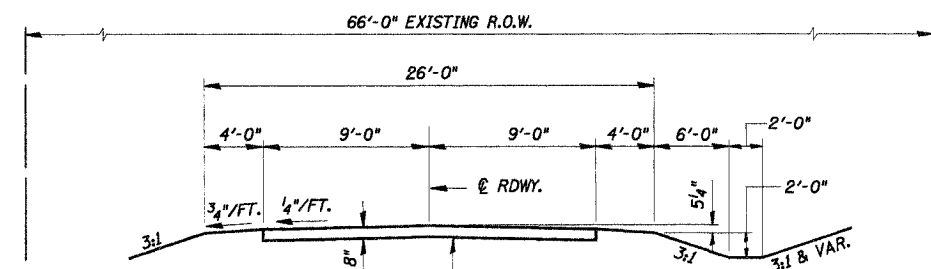
THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY, AS DIRECTED BY THE ENGINEER.

SEEDING, CLASS 2 (SPECIAL) = 0.2 ACRE

### TEMPORARY EROSION CONTROL

THE FOLLOWING QUANTITIES ARE ESTIMATES ONLY. ACTUAL QUANTITIES FOR EROSION CONTROL WILL BE DETERMINED BY THE ENGINEER IN THE FIELD AND THERE WILL BE NO ADJUSTMENT IN ANY UNIT PRICE DUE TO A CHANGE IN PLAN QUANTITY.

PERIMETER EROSION BARRIER = 600 FOOT  
TEMPORARY EROSION CONTROL SEEDING = 40 POUND



SUGGESTED FILL SECTION  
CONSTRUCT AS SHOWN BY  
STATION CROSS SECTIONS

AGGREGATE SURFACE  
COURSE, TYPE B  
1.75 TON/CU. YD.

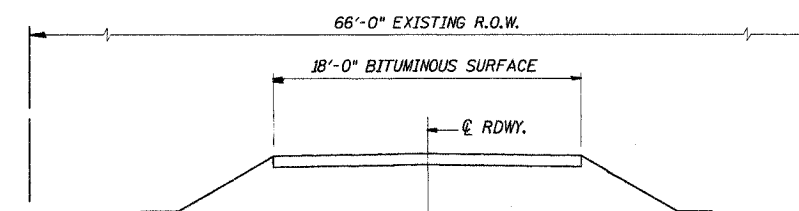
SUGGESTED CUT SECTION  
CONSTRUCT AS SHOWN BY  
STATION CROSS SECTIONS

### TYPICAL PROPOSED CROSS SECTION

STA. 4+00 TO STA. 4+48.57 AND  
STA. 5+64.53 TO STA. 6+50

ROAD CLASSIFICATION: LOCAL ROAD ADT 0-250  
CURRENT ADT LESS THAN 150

TRANSITION FROM EXISTING ROADWAY TO PROPOSED ROADWAY  
TO BE CONSTRUCTED FROM STA. 3+50 TO STA. 4+00 AND  
FROM STA. 6+50 TO STA. 6+75.



### EXISTING TYPICAL CROSS SECTION

SUMMARY OF QUANTITIES, GENERAL NOTES  
AND TYPICAL CROSS SECTION  
TOWNSHIP ROUTE 167  
SECTION 06-0102-01-BR  
PIATT COUNTY  
STA. 5+06.55

4440 ASH GROVE  
SPRINGFIELD, IL 62711  
(217) 793-8800  
www.fehr-graham.com

FEHR-GRAHAM & ASSOCIATES, LLC  
ENGINEERING AND SCIENCE CONSULTANTS

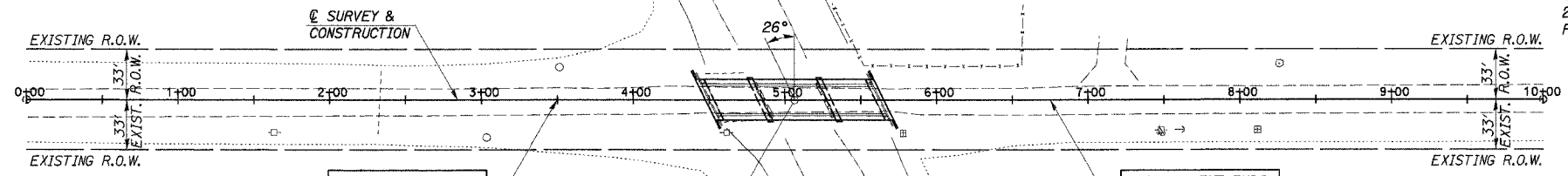
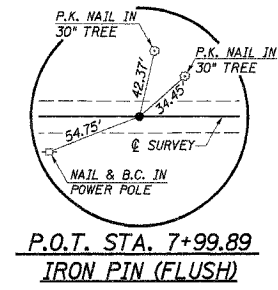
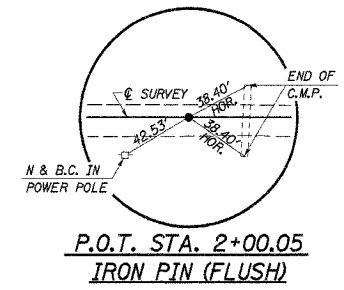
DRAWN: S.A.P.  
DATE: 02/22/06

CHECKED: G.J.C.  
DATE: MARCH/06

JOB NO.: 0602  
FILE: SUMTYP.DGN  
DATE: 05/30/06

SE 1/4, SECTION 28, T17N, R6E, 3RD P.M.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-0102 -01-BR	PIATT	15	3
STA. 0+00	TO STA. 10+00			
ILLINOIS		BEMENT		
CONTRACT NO. 91364				



**EXISTING STRUCTURE NO. 074-3109**  
 3-SPAN CONTINUOUS WIDE FLANGE BEAM BRIDGE WITH CONCRETE SLAB ON CONCRETE PILE BENT PIERS AND CONCRETE PILE BENT SPILL-THRU ABUTMENTS; 113'-4" BK.-BK. ABUTMENTS. 3-SPANS @ 34'-8", 40'-8", 34'-8" C.-C. BRGS., 18'-0" ROADWAY, 21'-0" O.-O. DECK, 26° SKEW  
 REMOVAL OF EXISTING STRUCTURES = 1 EACH

**OVERHEAD POWER**  
 EASTERN ILLINI ELECTRIC  
 ALAN SCHWEIGHART  
 217-379-2131 EXT. 173

**BURIED CABLE**  
 VERIZON NORTH, INC.  
 JONNA FRICKE  
 309-663-3422

**CHANNEL EXCAVATION**

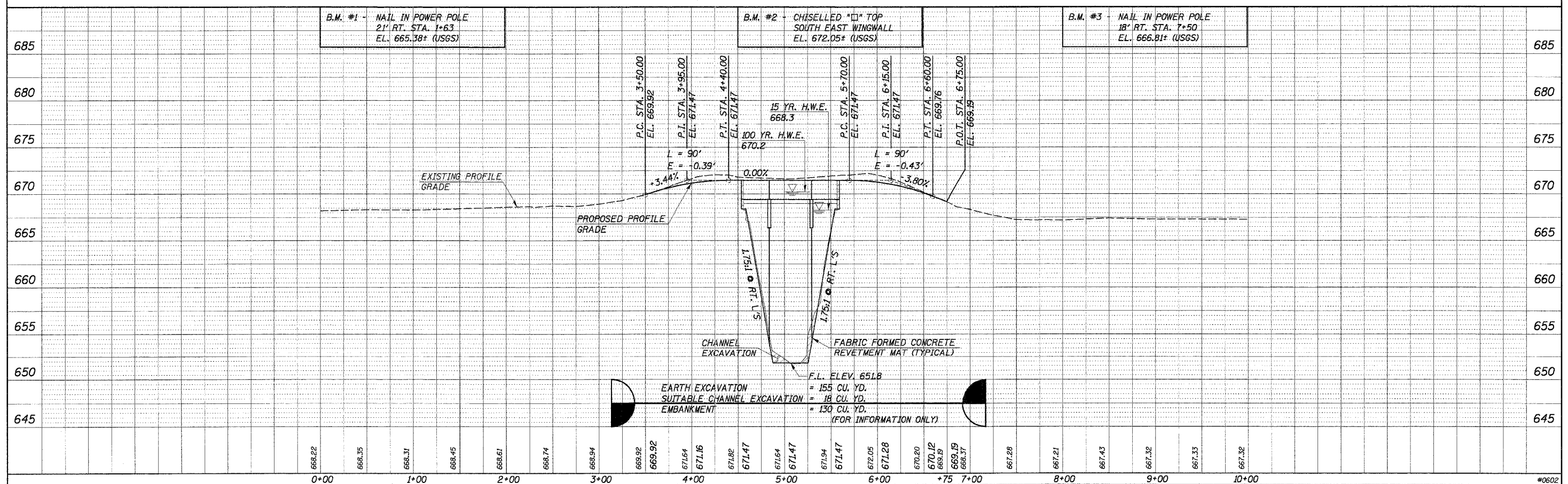
THE CHANNEL SHALL BE EXCAVATED AS SHOWN WITHIN THE LIMITS OF THE PROPOSED STRUCTURE THEN TAPER TO THE EXISTING CHANNEL AT THE R.O.W. LINES. SUITABLE EXCAVATED MATERIAL TO BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.

CHANNEL EXCAVATION = 40 CU. YD.

STA. 5+06.55 - SPECIAL BRIDGE DESIGN  
 PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE; THREE SPANS @ 35'-3 1/4", 45'-3", 35'-3 1/4"; 27'-0" ROADWAY; SKEW = 26°  
 PROPOSED S.N. 074-3306

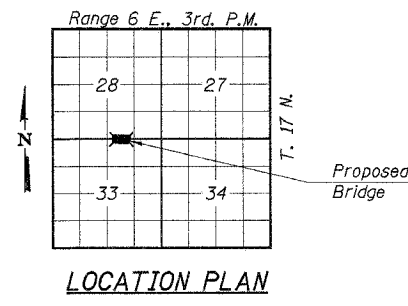
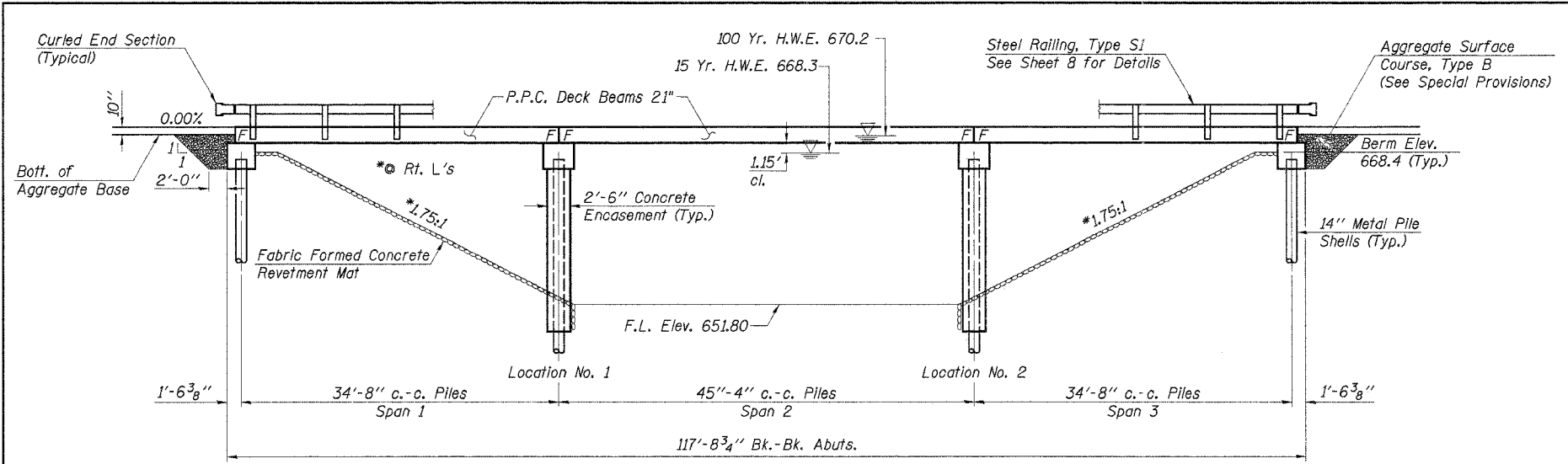
JOHN R. FUNK

NE 1/4, SECTION 33, T17N, R6E, 3RD P.M.



DATE	1/23/06
BY	SCA
SCALE	
REVISION	
NO.	
DATE	
BY	
SCALE	
REVISION	
NO.	
DATE	
BY	
SCALE	
REVISION	
NO.	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-01102-01-BR	PIATT	15	4
ROAD DIST.	ILLINOIS	BEMENT	CONTRACT NO. 91364	



**GENERAL NOTES**

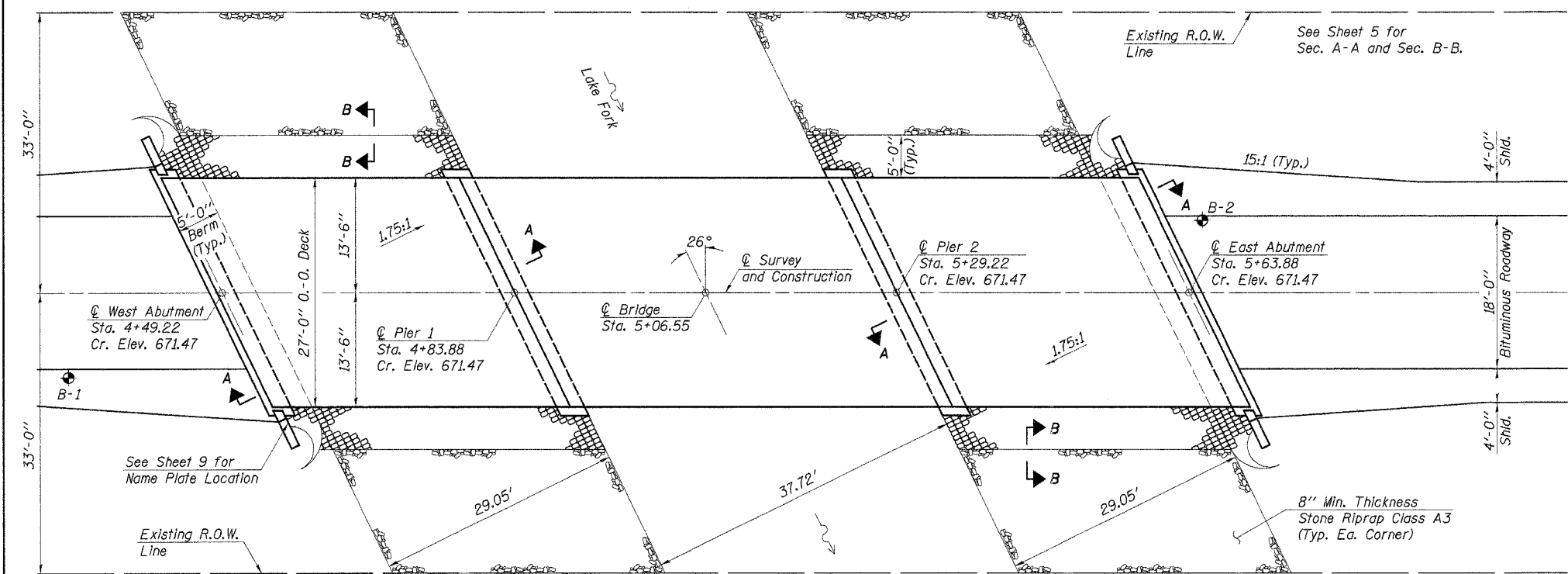
See Special Provisions for Boring data.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322, Grade 60.

The Contractor shall drive one metal shell test pile in a permanent location at the West abutment and at Pier #2 as directed by the Engineer, before ordering the remainder of piles.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Aggregate Surface Course, Ty. B shall be used to backfill behind each abutment as indicated by the Engineer. The additional quantity of CA-10 is included in the total quantity for Aggregate Surface Course, Ty. B. (See Special Provisions).



LAKE FORK  
BUILT 200\_ BY  
BEMENT ROAD DISTRICT  
PIATT COUNTY  
SEC. 06-01102-01-BR  
PROJ. BROS-147(62)  
STR. NO. 074-3306 LOADING HS20

**LETTERING FOR NAME PLATE**  
See Std. 515001

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	3,127		3,127
Concrete Structures	Cu. Yd.		43.3	43.3
Reinforcement Bars	Pound		4,670	4,670
Steel Railing, Type S1	Foot	232		232
Name Plates	Each		1	1
Metal Pile Shells 14"	Foot		650	650
Test Pile Metal Shell	Each		2	2
Stone Riprap, Class A3	Ton		70	70
Fabric Formed Concrete Revetment Mat	Sq. Yd.		173	173
Concrete Encasement	Cu. Yd.		25.0	25.0
Underwater Structure Excavation Protection Location - No. 1	Each		1	1
Underwater Structure Excavation Protection Location - No. 2	Each		1	1
Aggregate Surface Course, Type B	Ton		60	60

Construction Permits:  
The Requirements of the IDNR - Division of Water Resources have been fulfilled in accordance with Statewide Permit No. 2.

**WATERWAY INFORMATION**

DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.

Drainage Area	95.78 Sq. Mi.
Existing Opening (15 Yr.)	1,030 Sq. Ft.
Required Opening (15 Yr.)	1,030 Sq. Ft.
Proposed Opening (15 Yr.)	1,030 Sq. Ft.
Design Discharge (15 Yr.)	3,369 C.F.S.
Created Head (15 Yr.)	0.0 Ft.
100 Year Discharge	5,247 C.F.S.
100 Yr. Created Head	0.1 Ft.

**DESIGN STRESSES**

$f'_c = 5,000$  p.s.i. (Prestressed Beams)  
 $f'_{ti} = 4,000$  p.s.i. (Prestressed Beams)  
 $f'_c = 1,400$  p.s.i. (Concrete)  
 $f'_s = 270,000$  p.s.i. (Prestressed Strands)  
 $f'_{sl} = 201,960$  p.s.i. (Prestressed Strands)  
 $f'_s = 24,000$  p.s.i. (Reinf. Bars -- Field Units)  
 $f'_y = 60,000$  p.s.i. (Reinf. Bars -- Field Units)  
 $n = 9$  (Concrete)  
LOADING HS20-44  
Design Specifications: 2002 AASHTO 25#/Sq. Ft. Included in dead load for future wearing surface.

"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 Standard Specifications for Highway Bridges'."

Fred J. Stone, Jr. (5-30-06)  
ILLINOIS STRUCTURAL NO. 2934 (Expires 11/30/06)



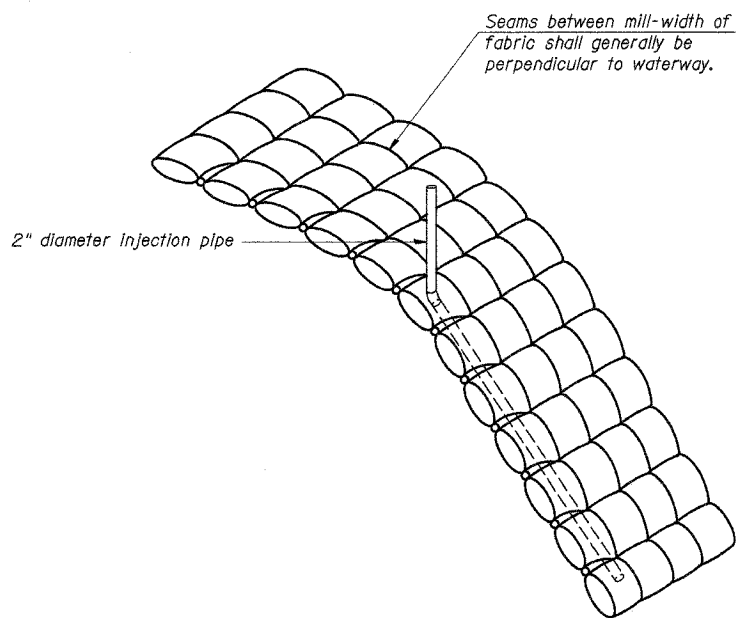
**GENERAL PLAN & ELEVATION**

SECTION 06-01102-01-BR  
BEMENT ROAD DISTRICT  
PIATT COUNTY  
STATION 5+06.55

4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8600 oasinc@insightbb.com	<b>FEHR-GRAHAM &amp; ASSOCIATES, LLC</b> ENGINEERING AND SCIENCE CONSULTANTS PREPARED BY: BOB WILSON, P.E. CHECKED BY: BOB WILSON, P.E. DATE: 05/26/06	JOB NO.: 0602 FILE: 0602GPE.DGN DATE: 05/26/06
---	--	--

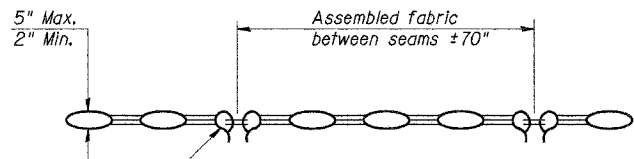
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-01102-01-BR	PIATT	15	5
ROAD DIST.	ILLINOIS		BEMENT	

CONTRACT NO. 91364



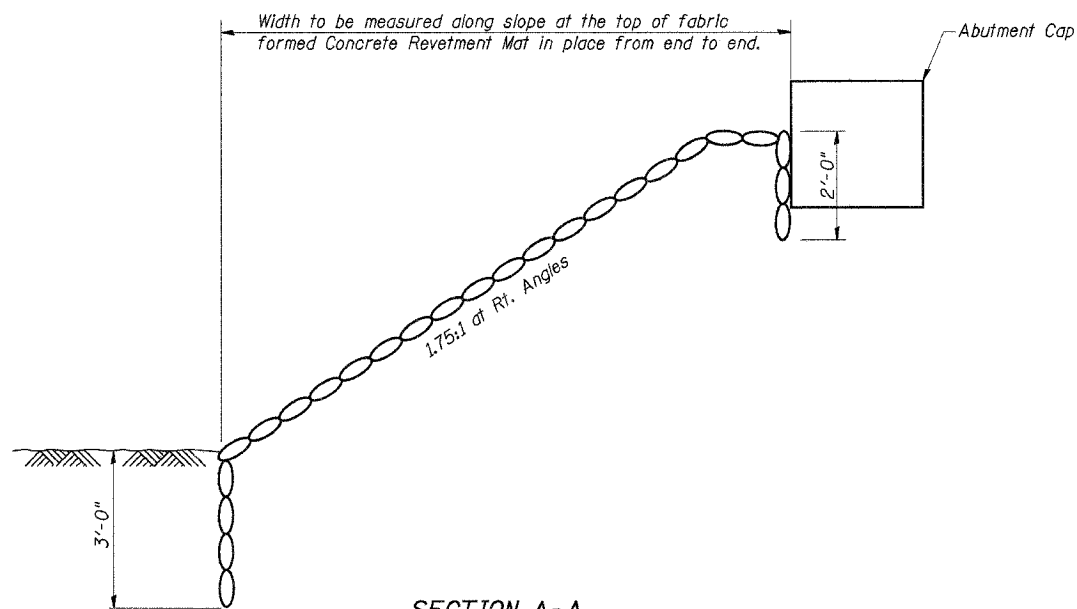
**INSTALLATION DETAIL**

Locate mortar stops to accommodate mortar quantities to be injected.



Locate field sewn joint midway between mortar stops. Lay seams down for best appearance.

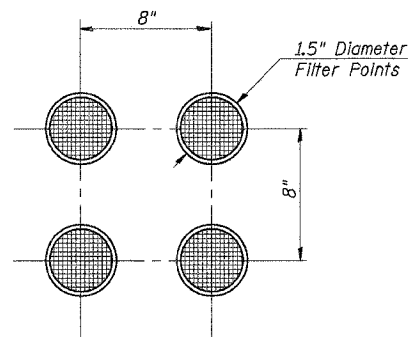
**TYPICAL SECTION THRU FILTER POINT MAT**



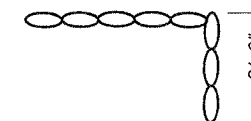
**SECTION A-A**

**TYPICAL FABRIC FORMED CONCRETE REVETMENT MAT LINE**

See Sheet 4 for Location



**LAYOUT OF FILTER POINTS**

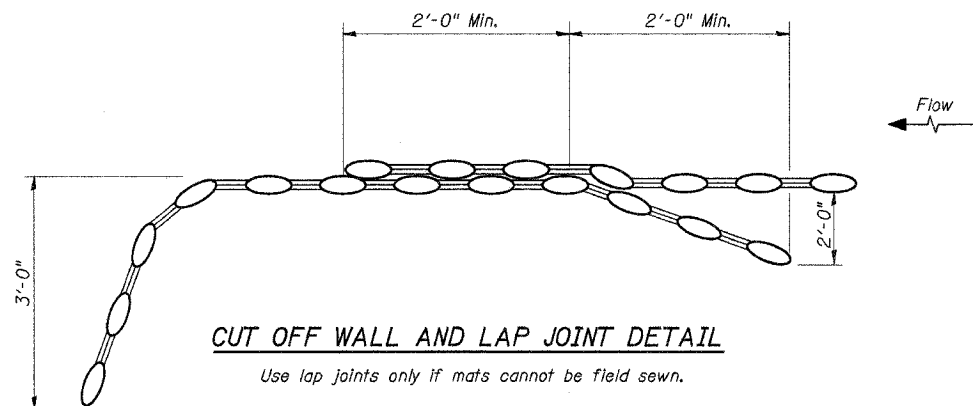


**SECTION B-B**

See Sheet 4

**BILL OF MATERIAL**

Item	Unit	Quantity
Fabric Formed Concrete Revetment Mat	Sq. Yd.	173



**CUT OFF WALL AND LAP JOINT DETAIL**

Use lap joints only if mats cannot be field sewn.

DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.

**GENERAL NOTES**

In placing insert points through fabric use extreme care to avoid breaking drop stitches.

Injection points shall be no more than 30 feet apart on the horizontal.

Cut off walls shall be installed at the upstream and downstream ends of the mat.

**CONCRETE REVETMENT MAT DETAILS**

SECTION 06-01102-01-BR  
BEMENT ROAD DISTRICT  
PIATT COUNTY  
STATION 5+06.55

4440 ASH GROVE  
SPRINGFIELD, IL 62711  
(217) 789-8600  
oasinc@insightbb.com

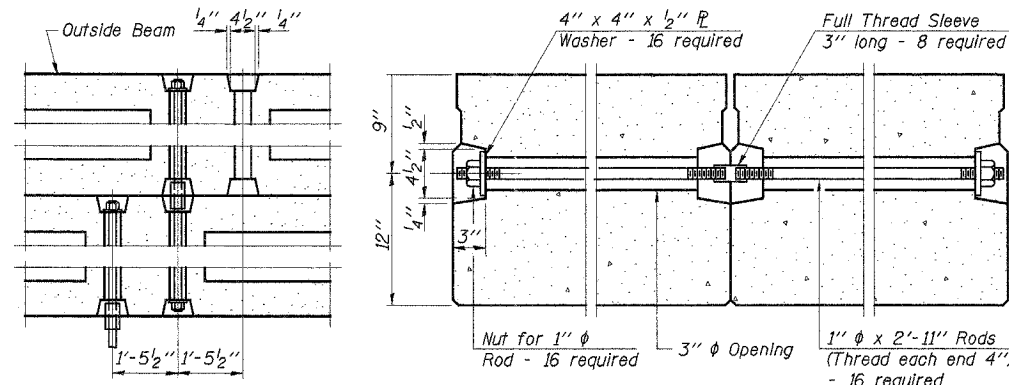
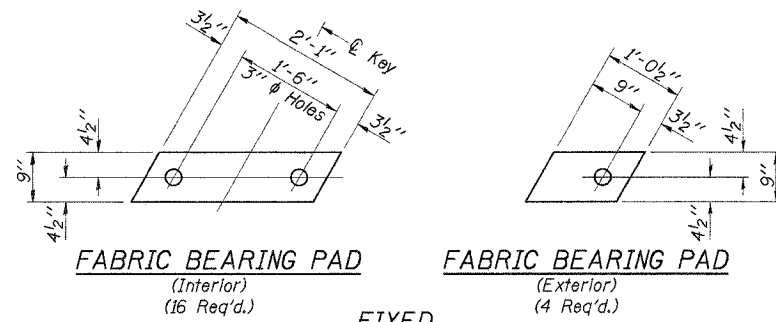
**FEHR-GRAHAM & ASSOCIATES, LLC**  
ENGINEERING AND SCIENCE CONSULTANTS  
PELHAM, N. ROCHESTER, N. ROCHESTER, N. ROCHESTER, N. ROCHESTER, N.

JOB NO.: 0602  
FILE: 0602REVMAT.DGN  
DATE: 05/26/06

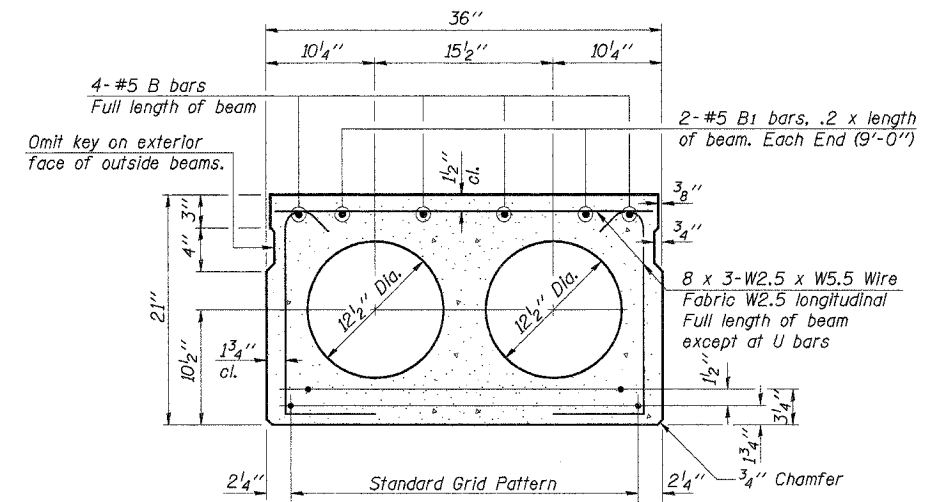


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-01102-01-BR	PIATT	15	7
ROAD DIST.	ILLINOIS		BEMENT	

CONTRACT NO. 91364



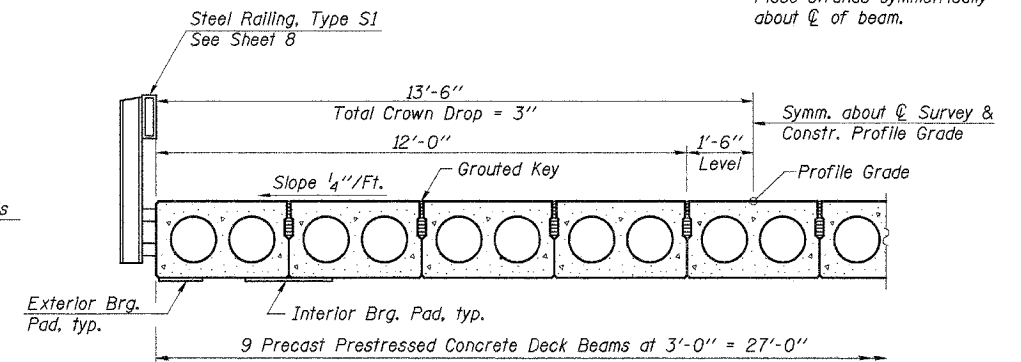
TYPICAL TRANSVERSE TIE ASSEMBLY



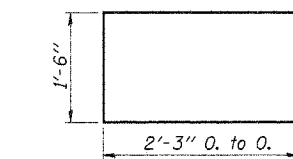
TYPICAL SECTION

12-1/2"  $\phi$  Strands, Each Strand Stressed to 30,900 Lbs.  
4-Strands 1 3/4" up, 8-Strands 3 1/4" up

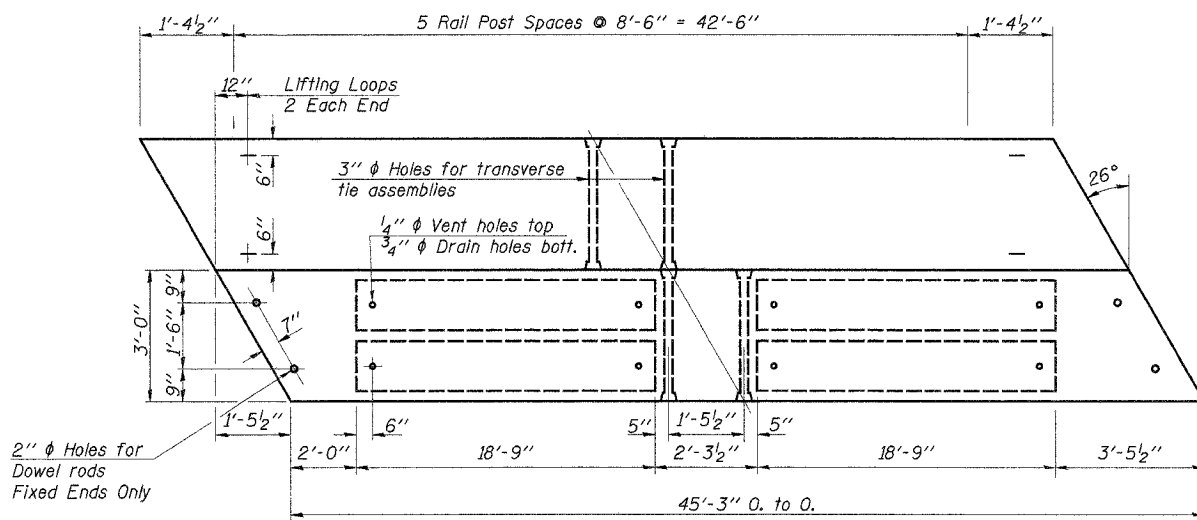
Note:  
Place strands symmetrically about  $\phi$  of beam.



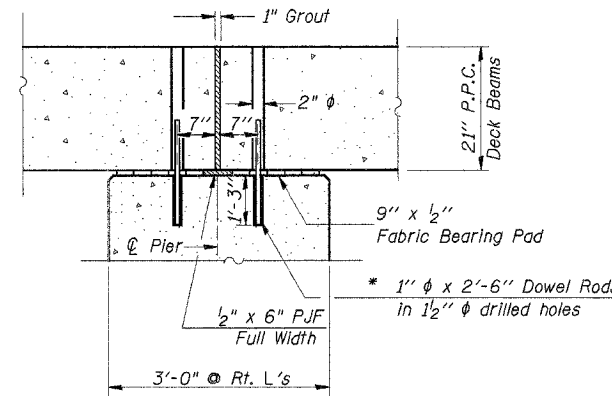
HALF CROSS SECTION



BAR U1



PLAN

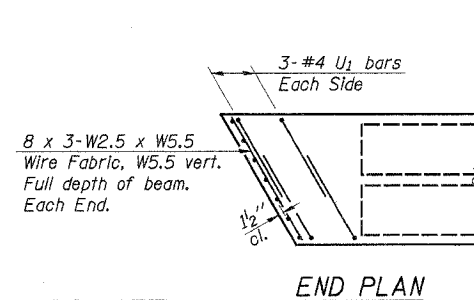


SEC. AT PIER

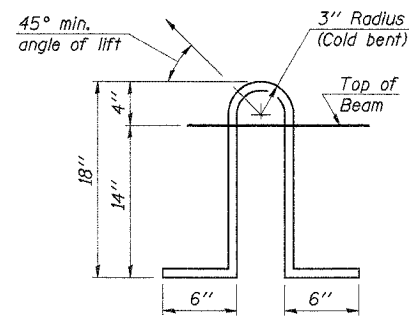
\* Note: After beams are in place, 1/2" holes shall be drilled into the substructure, and the dowel rods grouted in place and allowed to cure (Min. 24 Hrs.) prior to grouting shear key.

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 2-1/2"  $\phi$ -270 ksi strands, as shown. The 1"  $\phi$  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 or M-322 Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/2" 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. See Special Provisions for review and distribution of shop drawings. Rail post anchor devices shall be cast into outside beam as elsewhere specified.



END PLAN



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Quantity
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,222

Estimated Total Weight (One Beam) = 26,900 Pounds

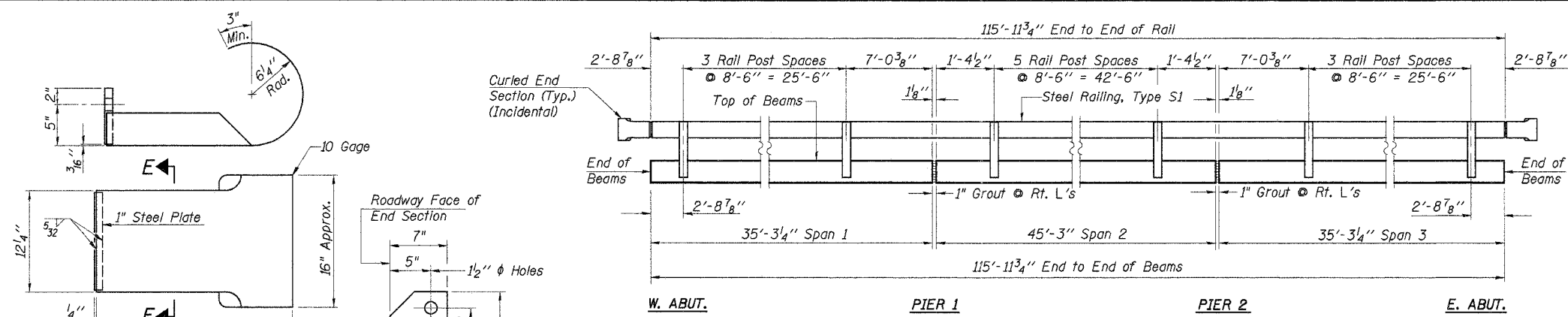
DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.
PD-3-R	9-1-03

**SUPERSTRUCTURE  
SPAN 2**

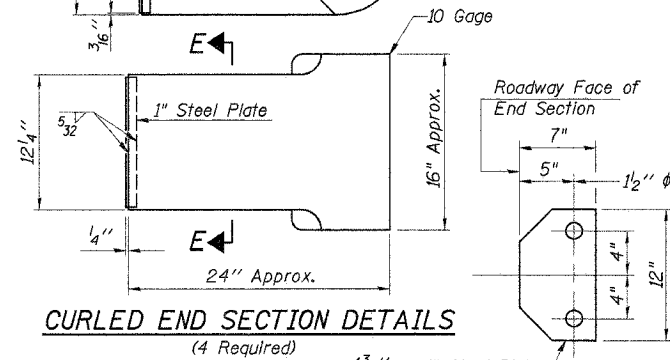
SECTION 06-01102-01-BR  
BEMENT ROAD DISTRICT  
PIATT COUNTY  
STATION 5+06.55

4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8690 oasinc@insightbb.com	<b>FEHR-GRAHAM &amp; ASSOCIATES, LLC</b> ENGINEERING AND SCIENCE CONSULTANTS PRESIDENT: R. ROYCE, S. ROSS, V.P. OF OPERATIONS: J. H. HARRIS, S. HARRIS, V.P. OF OPERATIONS: J. HARRIS	JOB NO.: 0602 FILE: 0602SUPER2.DGN DATE: 05/26/06
---	---	---

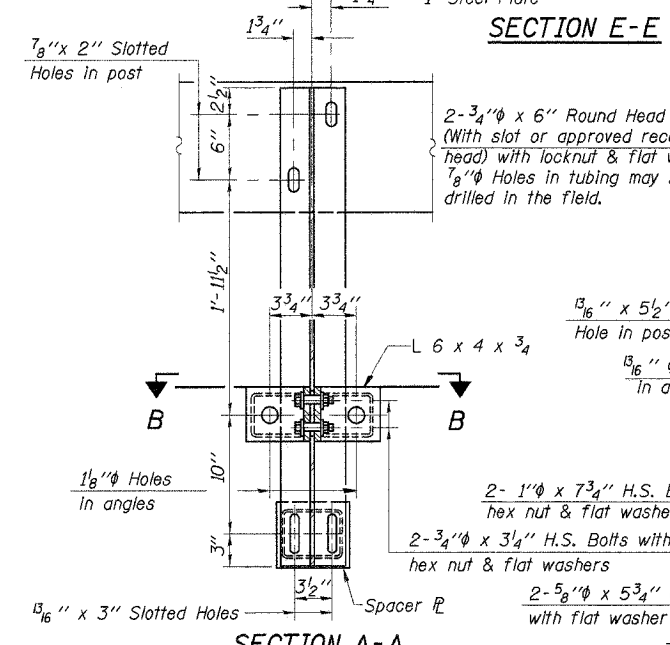
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-01102-01-BR	PIATT	15	8
ROAD DIST.	ILLINOIS	BEMENT	CONTRACT NO. 91364	



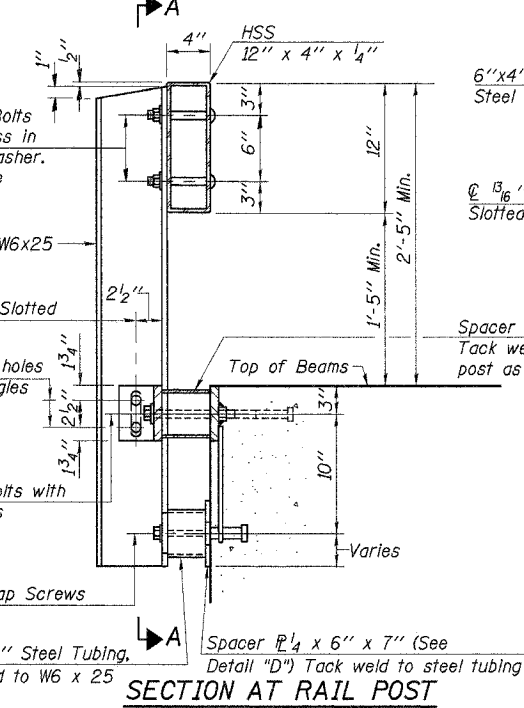
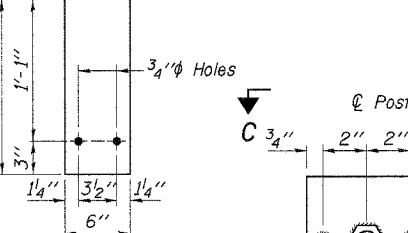
**CURLED END SECTION DETAILS**  
(4 Required)



**SECTION E-E**

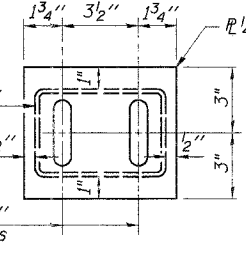


**SECTION A-A**

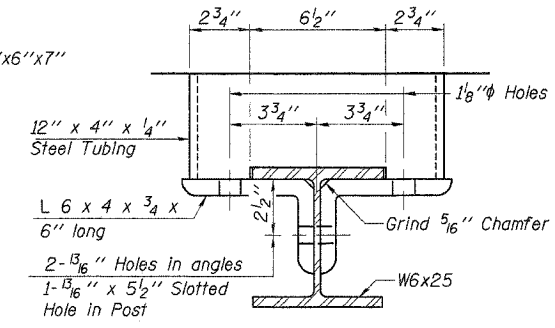


**ANCHOR DEVICE**

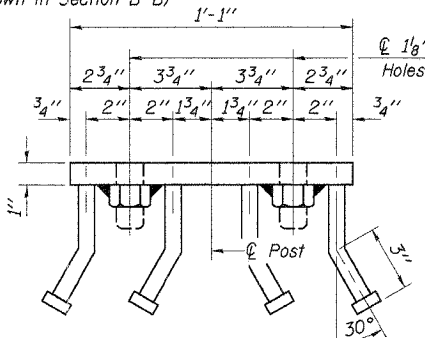
\* Threaded areas shall be plugged or blocked off during casting of beam.



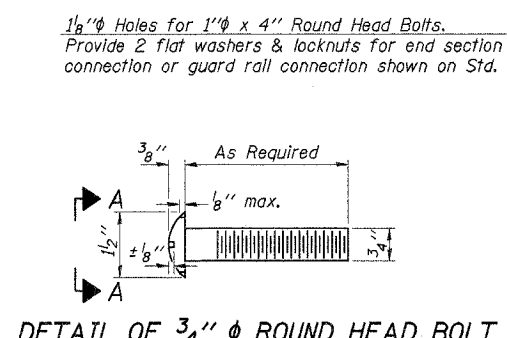
**DETAIL "D"**



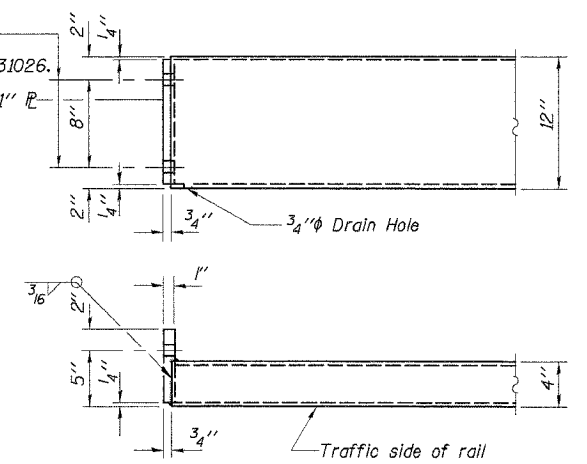
**SECTION B-B**



**VIEW C-C**



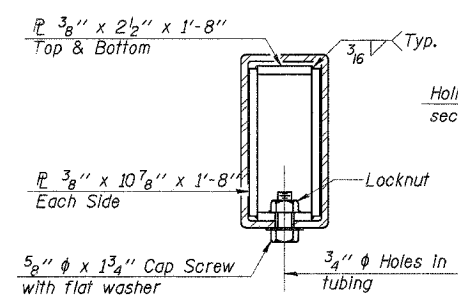
**VIEW A-A**



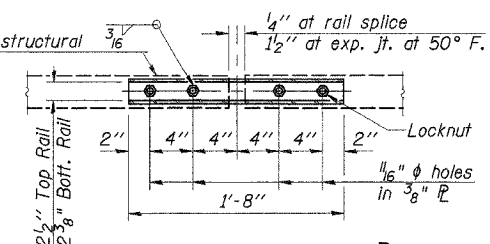
**END OF RAIL DETAILS**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S1	Foot	232



**SECTIONS AT RAIL SPLICE**



**PLAN-BOTTOM SPLICE P TYPICAL**

DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.

**STEEL RAILING, TYPE S1**

SECTION 06-01102-01-BR  
BEMENT ROAD DISTRICT  
PIATT COUNTY  
STATION 5+06.55

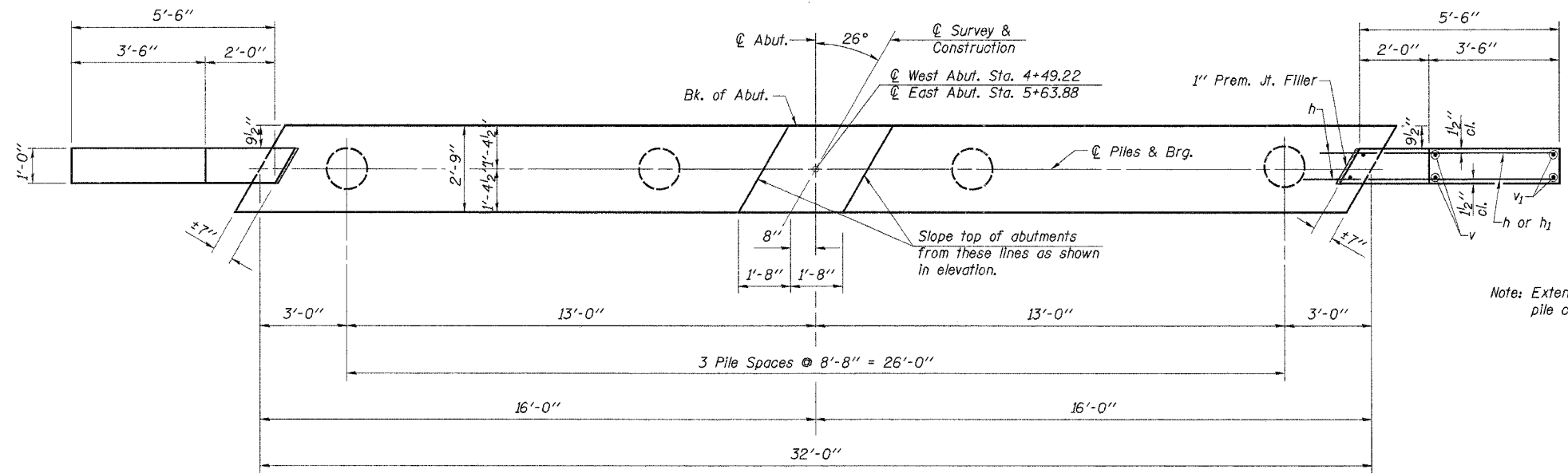
4440 ASH GROVE  
SPRINGFIELD, IL 62711  
(217) 793-8600  
ossinc@insightbb.com

**FEHR-GRAHAM & ASSOCIATES, LLC**  
ENGINEERING AND SCIENCE CONSULTANTS  
PREPARED BY: ROBERT G. BUCHHEIT, P.E.  
DATE: 05/26/06

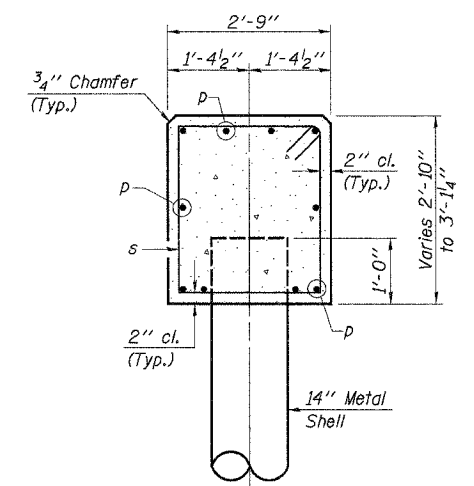
JOB NO.: 0602  
FILE: 0602RAIL.DGN  
DATE: 05/26/06



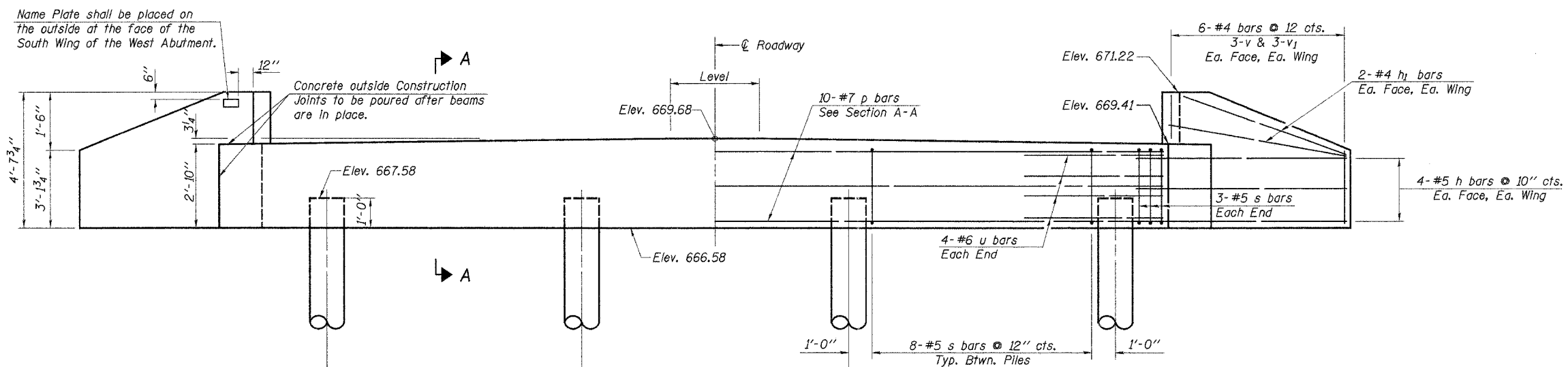
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-01102-01-BR	PIATT	15	9
ROAD DIST.	ILLINOIS		BEMENT	
CONTRACT NO. 91364				



PLAN



SECTION A-A



ELEVATION

**2 ABUTMENTS  
BILL OF MATERIAL**

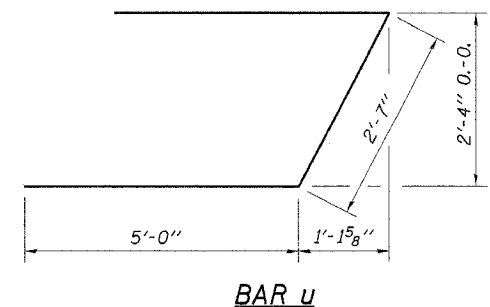
Bar	No.	Size	Length	Shape
h	32	#5	7'-6"	—
h <sub>1</sub>	16	#4	5'-3"	—
p	20	#7	31'-8"	—
s	60	#5	10'-9"	□
u	16	#6	12'-7"	▤
v	24	#4	4'-3"	—
v <sub>1</sub>	24	#4	3'-6"	—
Concrete Structures		Cu. Yd.	22.5	
Reinforcement Bars		Pound	2,700	
Name Plates		Each	1	
Test Pile Metal Shell		Each	1	
Metal Pile Shells 14"		Foot	245	

See Sheet 11 for Pile Details.

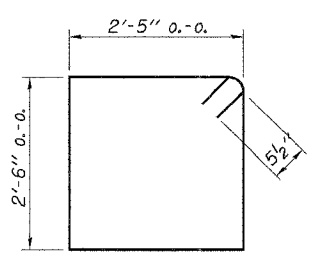
**PILE DATA**

Type.....14" Metal Shell Piles  
 No. Req'd. (2 Abuts.).....\*8  
 Capacity.....45 Tons/Pile  
 Est. Length.....35 Feet/Pile

\*Includes 1 Test Pile to be driven in a permanent location at the West Abutment.



BAR u



BAR s

DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.

**ABUTMENTS**

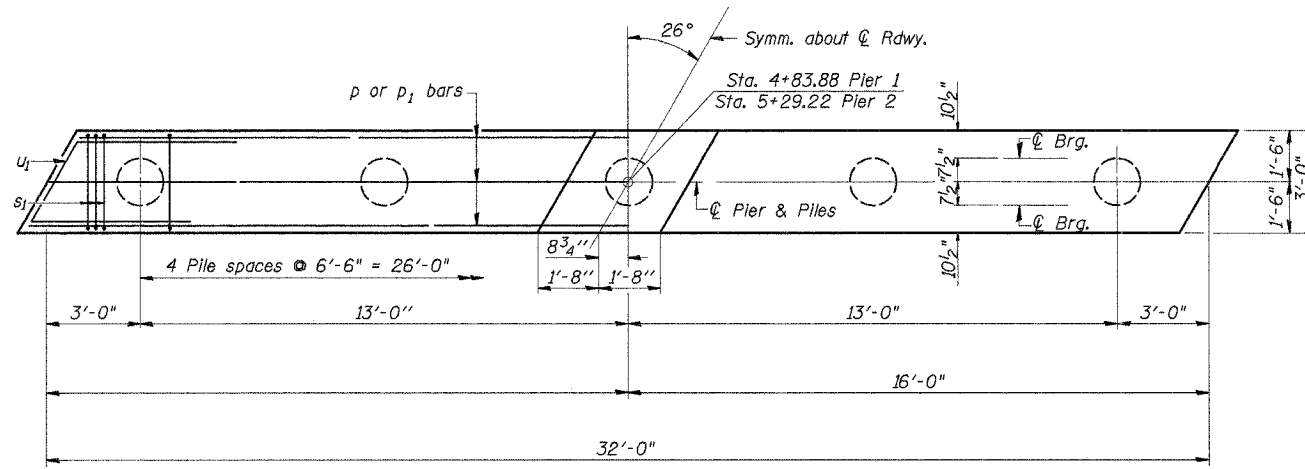
SECTION 06-01102-01-BR  
 BEMENT ROAD DISTRICT  
 PIATT COUNTY  
 STATION 5+06.55

4443 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8600 casinc@insightbb.com	<b>FEHR-GRAHAM &amp; ASSOCIATES, LLC</b> ENGINEERING AND SCIENCE CONSULTANTS <small>MEMBERS: S. BOZEMAN, S. BOZEMAN, S. BOZEMAN, S. BOZEMAN, S. BOZEMAN</small>	JOB NO.: 0602 FILE: 0602ABUT.DGN DATE: 05/26/06
---	---	---

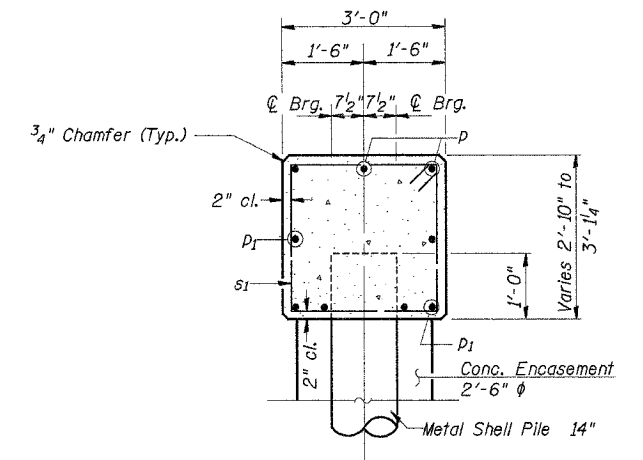
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-01102-01-BR	PIATT	15	10
ROAD DIST.	ILLINOIS		BEMENT	

CONTRACT NO. 91364

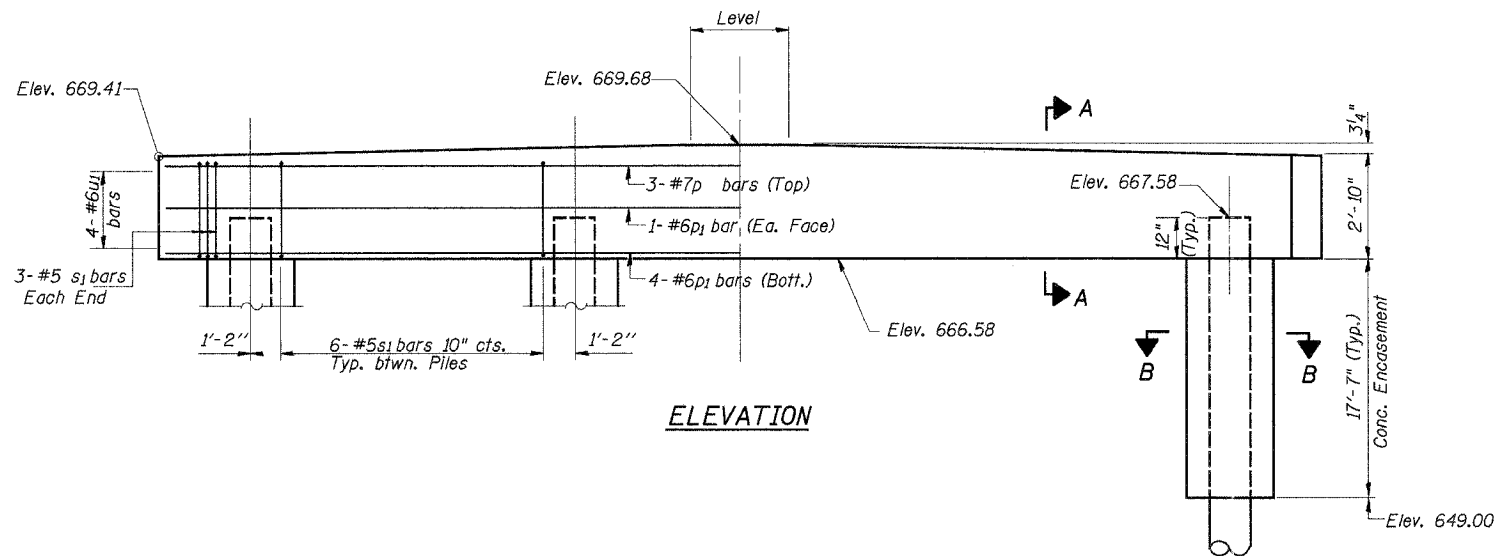
Note: All edges shall have standard 3/4" chamfer



PLAN



SECTION A-A



ELEVATION

BILL OF MATERIAL - 2 PIERS

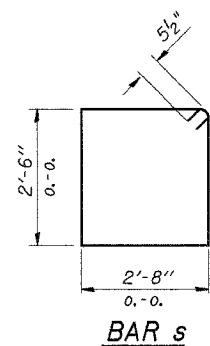
BAR	NO.	SIZE	LENGTH	SHAPE
p	6	#7	31'-8"	—
p1	12	#6	31'-8"	—
s1	60	#5	11'-3"	□
u1	16	#6	12'-10"	▭
Concrete Structures			Cu. Yd.	20.8
Reinforcement Bars			Pound	1,970
Metal Shell Piles 14"			Foot	405
Test Pile Metal Shells			Each	1
Conc. Encasement			Cu. Yd.	25.0

See Sheet 11 For Pile Details

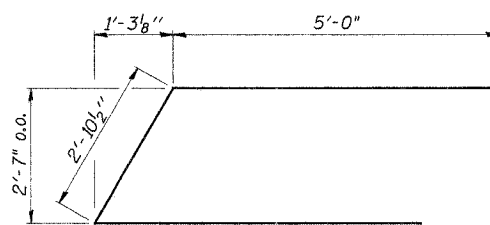
PILE DATA

Type \_\_\_\_\_ 14" Metal Shell Piles  
Capacity \_\_\_\_\_ 58 Tons  
Est. Length \_\_\_\_\_ 45 Feet/Pile  
No. Req'd(2 Piers) \_\_\_\_\_ \*10  
\*Includes one Test Pile to be driven in a permanent location at Pier 2.

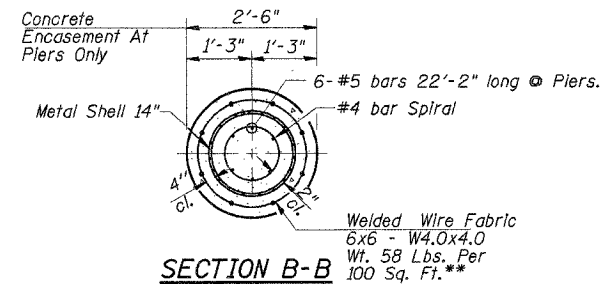
\*\* The cost of Reinforcement is incidental to the cost of "Conc. Encasement". Extend Reinforcement 1'-0" into cap.



BAR s



BAR u



SECTION B-B  
PILE ENCASEMENT DETAIL

DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.

**PIERS**

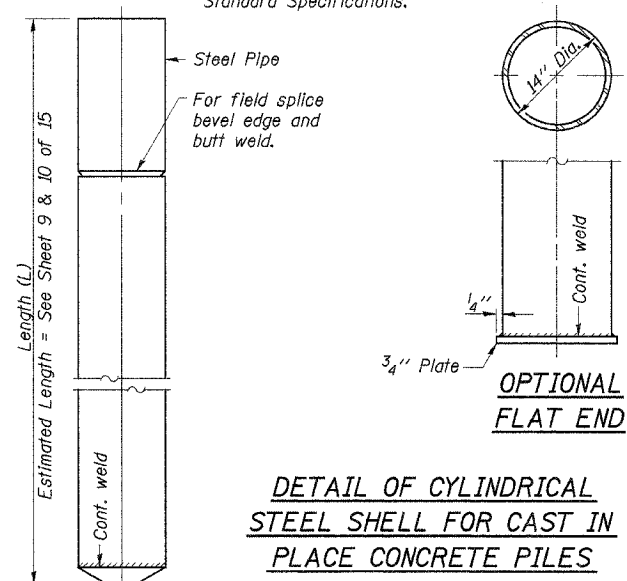
SECTION 06-01102-01-BR  
BEMENT ROAD DISTRICT  
PIATT COUNTY  
STATION 5+06.55

4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 793-8600 oasinc@insightbb.com	<b>FEHR-GRAHAM &amp; ASSOCIATES, LLC</b> ENGINEERING AND SCIENCE CONSULTANTS <small>PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND PLANNERS</small>	JOB NO.: 0602 FILE: 0602PIER.DGN DATE: 05/26/06
---	---	---

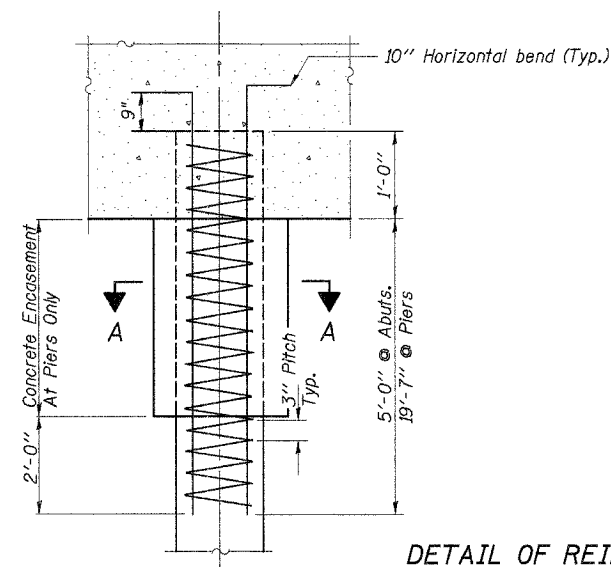
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-01102-01-BR	PIATT	15	11
ROAD DIST.	ILLINOIS		BEMENT	

CONTRACT NO. 91364

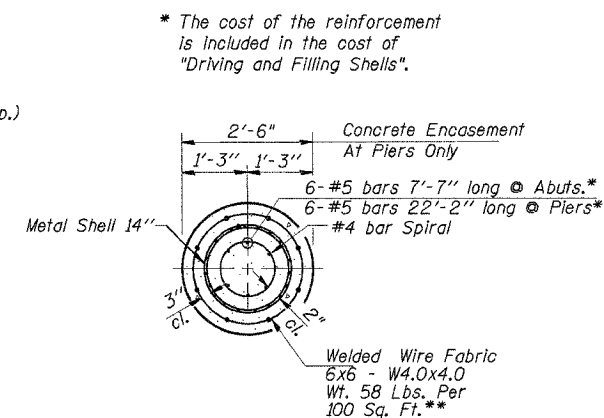
Notes: Driving and bearing ends of pipe shall be cut square.  
The thickness of the shell shall be 0.25 inches with a tolerance of 5% .  
The shell shall be in accordance with Article 1006.05(a) of the Standard Specifications.



**DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES**

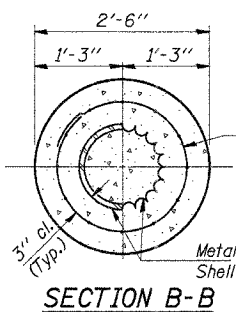
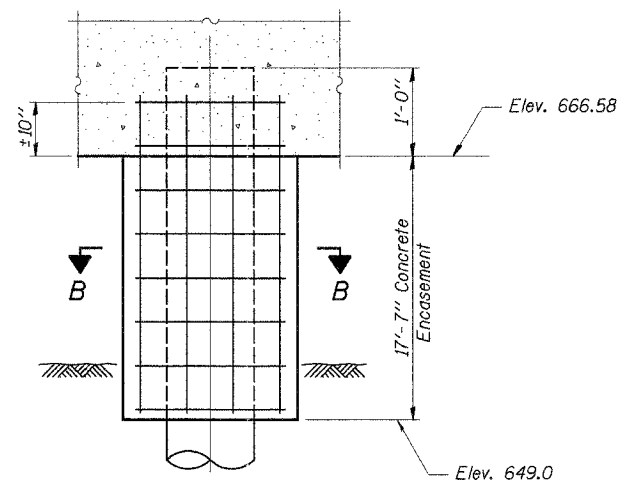


**DETAIL OF REINFORCEMENT FOR METAL SHELLS**



**SECTION A-A**

\*\* The cost of Wire Fabric is included in the cost of Conc. Encasement.



Welded wire fabric 6 x 6 - W4.0 x W4.0 weighing 58#/100 sq. ft. The cost of welded wire fabric is included in the cost of Concrete Encasement.

**DETAIL OF METAL SHELL PILE ENCASEMENT AT PIERS**

DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.

**PILE DETAILS**

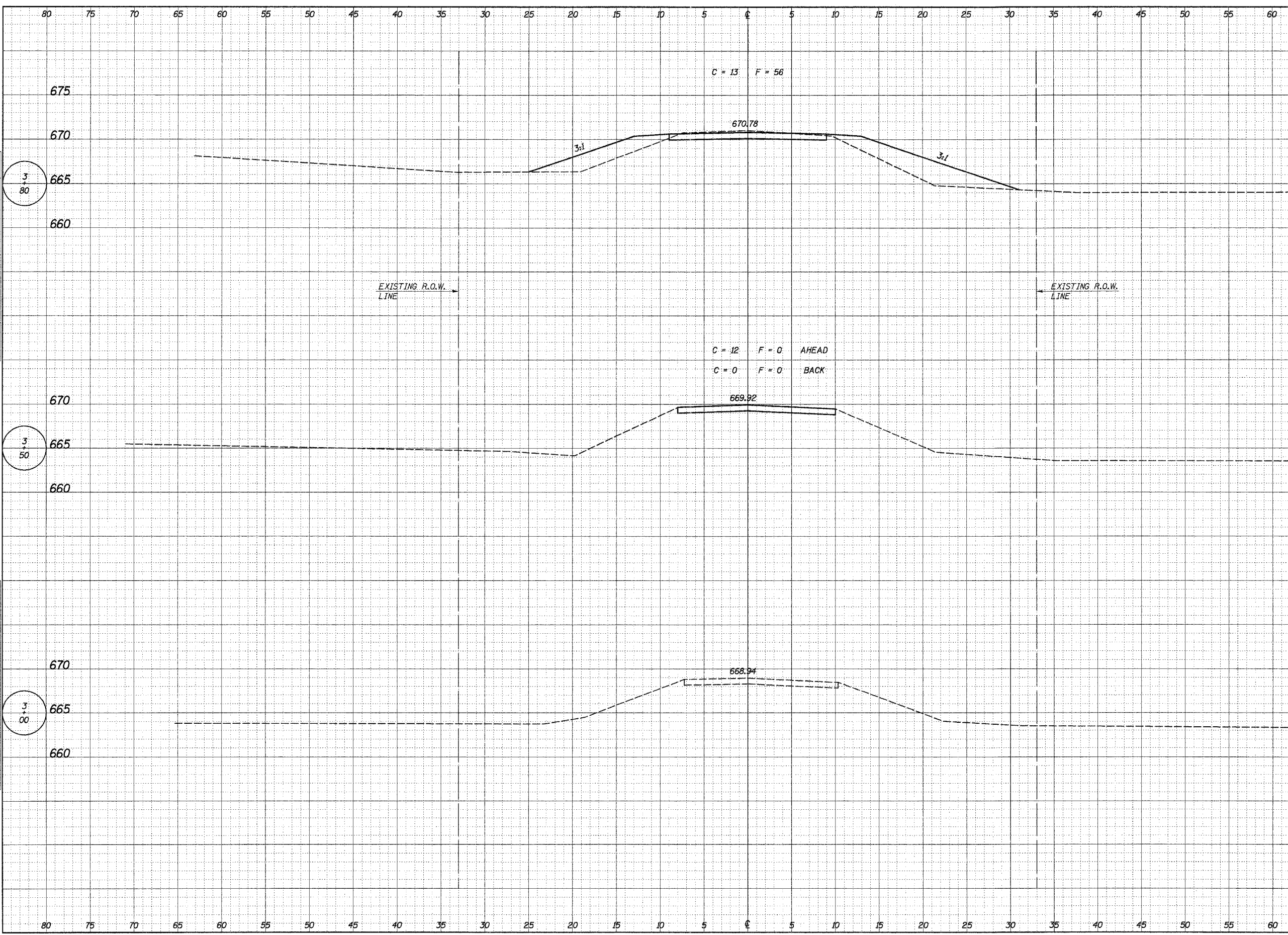
SECTION 06-01102-01-BR  
BEMENT ROAD DISTRICT  
PIATT COUNTY  
STATION 5+06.55

4440 ASH GROVE  
SPRINGFIELD, IL 62711  
(217) 793-6600  
oasinc@insightbb.com

**FEHR-GRAHAM & ASSOCIATES, LLC**  
ENGINEERING AND SCIENCE CONSULTANTS  
RESOURCES: ROOFBORO, V. ROCHELLE S. HERRICK, JR. SPRINGFIELD, IL

JOB NO.: 0602  
FILE: 0602PILES.dgn  
DATE: 05/26/06

F.A. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1. R. 167	06-0102-01-BR	PIATT	15	12
STA. 3+00		TO STA. 3+80		
ROAD DISTRICT ILLINOIS		BEWENT		
CONTRACT NO. 91364				



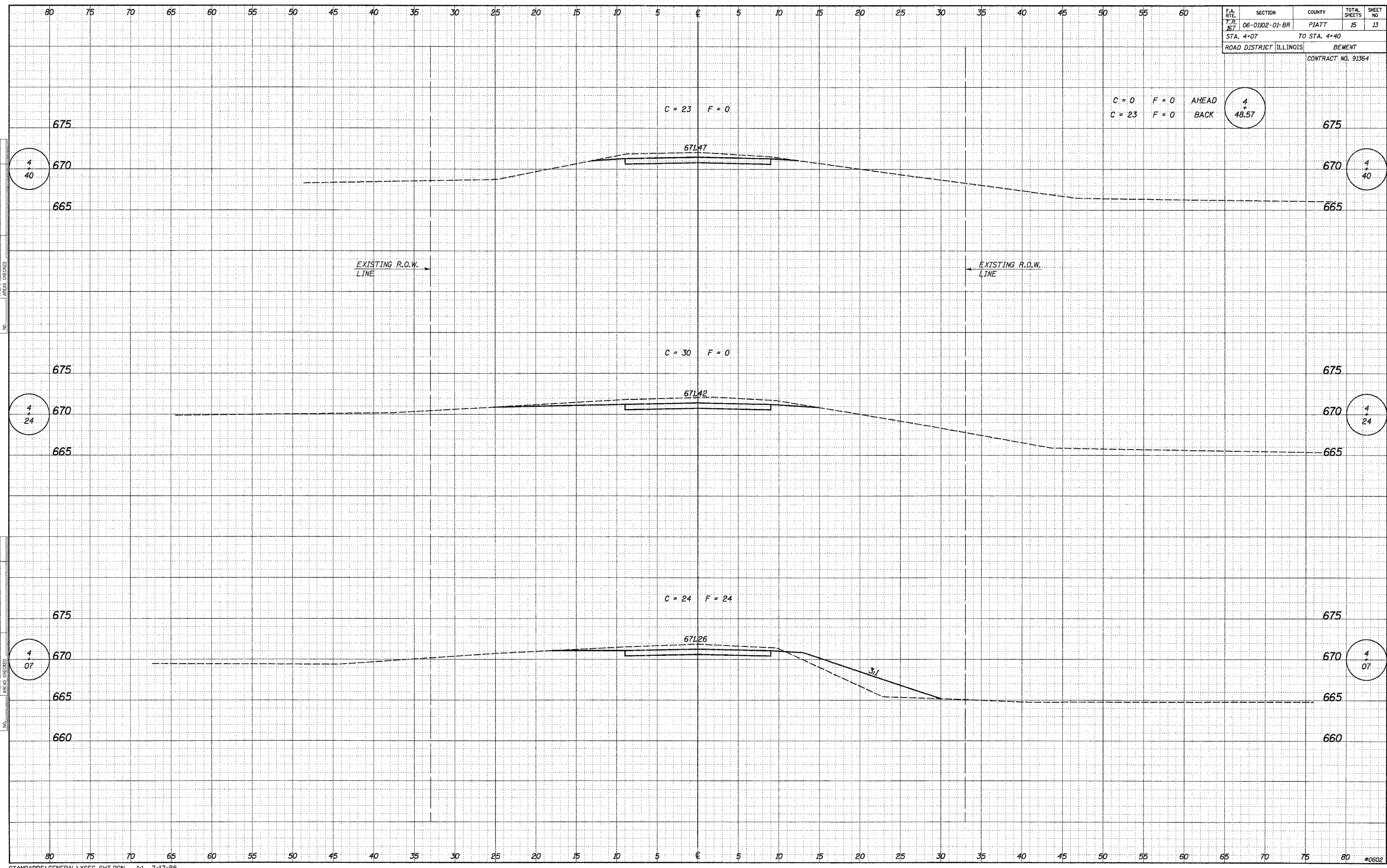
BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 CHECKED \_\_\_\_\_  
 TYPED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_

BY \_\_\_\_\_ DATE 02/27/05  
 SURVEYED \_\_\_\_\_  
 CHECKED \_\_\_\_\_  
 TYPED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_

F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-0102-01-BR	PIATT	15	13
STA. 4+07		TO STA. 4+40		
ROAD DISTRICT ILLINOIS		BEMENT		
CONTRACT NO. 91364				

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

DATE	BY
02/27/05	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	TEMPLATE
NO.	AREAS CHECKED





F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 167	06-01102-01-BR	PIATT	15	15
STA. 6+50		TO STA. 6+86		
ROAD DISTRICT ILLINOIS		BEMENT		
CONTRACT NO. 91364				

BY	DATE
FINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	

BY	DATE
S.L.P.	02/21/06
ORIGINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	

