

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 7	05-00259-00-BR	SHELBY	19	2
FED. ROAD DIST. NO.	ILLINOIS PROJECT			

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
△A2006416	TREE, QUERCUS ALBA (WHITE OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	6
△A2006616	TREE, QUERCUS IMBRICARIA (SHINGLE OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	6
△A2006816	TREE, QUERCUS MUEHLENBERGII (CHINKAPIN OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	6
△A2007116	TREE, QUERCUS RUBRA (RED OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	6
20100500	TREE REMOVAL, ACRES	ACRE	2.2
20200100	EARTH EXCAVATION	CU. YD.	6,149
* 20300100	CHANNEL EXCAVATION	CU. YD.	185
△* 25000200	SEEDING, CLASS 2	ACRE	2.1
△25000400	NITROGEN FERTILIZER NUTRIENTS	POUND	189
△25000500	PHOSPHORUS FERTILIZER NUTRIENTS	POUND	189
△25000600	POTASSIUM FERTILIZER NUTRIENTS	POUND	189
△* 25100115	MULCH METHOD 2	ACRE	2.1
△28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	480
28000300	TEMPORARY DITCH CHECKS	EACH	4
28000400	PERIMETER EROSION BARRIER	FOOT	615
28000500	INLET AND PIPE PROTECTION	EACH	3
28100207	STONE RIPRAP, CLASS A4	TON	465
* 28102600	STONE RIPRAP DITCH	TON	418
28200200	FILTER FABRIC	SQ. YD.	609
30200650	PROCESSING MODIFIED SOIL, 12"	SQ. YD.	2,115
30201500	LIME	TON	44
* 35100100	AGGREGATE BASE COURSE, TYPE A	TON	1,049
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU. YD.	157
50300225	CONCRETE STRUCTURES	CU. YD.	124.7
50300280	CONCRETE ENCASMENT	CU. YD.	11.8
* 50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ. FT.	3785
* 50800105	REINFORCEMENT BARS	POUND	9,650
50900205	STEEL RAILING, TYPE S1	FOOT	320
51201400	FURNISHING STEEL H PILES 10X42	FOOT	647
51202305	DRIVING PILES	FOOT	72
51203400	TEST PILES STEEL HP 10X42	EACH	1
51204650	PILE SHOES	EACH	4
51500100	NAME PLATES	EACH	1
* 54200640	PIPE CULVERTS, TYPE 1, CORRUGATED STEEL OR ALUMINUM CULVERT PIPE 15"	FOOT	158.0
* 54215550	METAL END SECTIONS 15"	EACH	6
* 60109582	PIPE UNDERDRAIN FOR STRUCTURES 6"	FOOT	95.0
△* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
△* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	7
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL. MO.	6
△* 78200400	GUARDRAIL REFLECTORS	EACH	8
△* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
* 67100100	MOBILIZATION	LS	1
* X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION, LOCATION 1	EACH	1
* X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION, LOCATION 2	EACH	1
* Z0065000	SETTING PILES IN ROCK	EACH	18

* SEE SPECIAL PROVISIONS

△ SPECIALTY ITEMS

ESTIMATED QUANTITIES

ITEM	RATE OF APPLICATION	QUANTITIES
SEEDING CLASS 2	= ART. 250.07	= 2.1 ACRES
NITROGEN FERTILIZER NUTRIENTS	= 90 LBS./ACRE	= 189 POUNDS
PHOSPHORUS FERTILIZER NUTRIENTS	= 90 LBS./ACRE	= 189 POUNDS
POTASSIUM FERTILIZER NUTRIENTS	= 90 LBS./ACRE	= 189 POUNDS
MULCH METHOD 2	=	= 2.1 ACRES
LIME	= 0.0208 TONS/SY	= 44 TONS

THE SEEDING MIXTURE SHALL CONFORM TO ROADSIDE MIXTURE TYPE 2, DURING THE PERIOD BETWEEN NOVEMBER 1, AND DECEMBER 31. THE CONTRACTOR SHALL SUBSTITUTE 10 POUNDS OF PERENNIAL RYE FOR 48 POUNDS OF OATS, SPRING.

EARTHWORK SUMMARY

EARTH EXCAVATION	=	6,149	CU. YD.
CHANNEL EXCAVATION	=	185	CU. YD.
TOTAL FILL REQ'D.	=	2671	CU. YD. (IN PLACE)

ESTIMATE OF FILL FROM EARTH EX. = 2671 CU. YD.
 ESTIMATE OF FILL FROM CHANNEL EX. = 0 CU. YD.
 FURNISHED EXCAVATION REQUIRED = 0 CU. YD.

RT/LT	STA.	TO	STA.	TRAFFIC BARRIER TERMINAL, TYPE I, SPECIAL (TANGENT)	TRAFFIC BARRIER TERMINAL, TYPE 5A	GUARDRAIL REFLECTORS	TERMINAL MARKER - DIRECT APPLIED
				EACH	EACH	EACH	EACH
LT	8+33.13	TO	8+53.13	1		1	1
LT	10+68.13	TO	11+18.13	1		1	1
RT	8+41.87	TO	8+91.87	1		1	1
RT	10+76.87	TO	11+26.87	1		1	1
LT	8+53.13	TO	8+93.63		1	1	
LT	10+55.63	TO	10+68.13		1	1	
RT	8+91.87	TO	9+04.37		1	1	
RT	10+64.37	TO	10+76.87		1	1	
TOTALS				4	4	8	4

STA.	LT/RT	STA.	LT/RT	PERIMETER EROSION BARRIER (FOOT)
8+40	LT	9+00	LT	100
10+00	LT	10+25	RT	140
10+00	LT	13+00	LT	300
10+25	RT	11+00	RT	75
TOTAL				615

Revised 6-1-07

STA.	LT/RT	OFFSET (FOOT)	TEMP DITCH CHECK (EACH)	INLET & PIPE PROTECTION (EACH)
5+29	RT	19.70		1
6+18	RT	22.00		1
9+00	LT	39.80	1	
9+00	RT	22.00	1	
10+60	RT	52.88	1	
14+50	LT	15.22	1	
12+72	RT	25.00		1
TOTAL			4	3

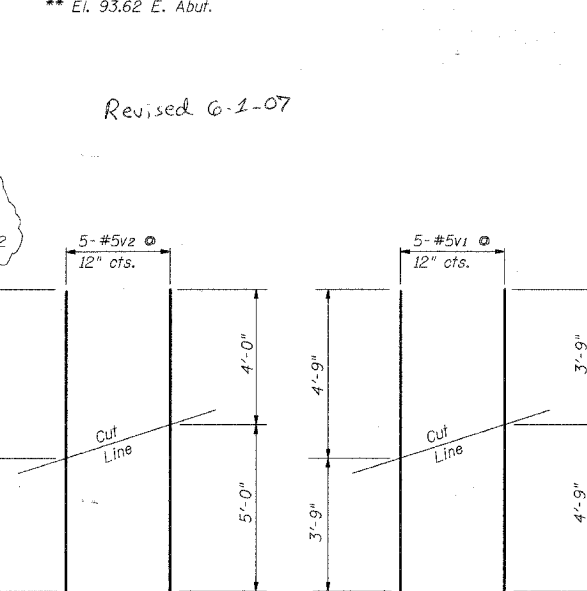
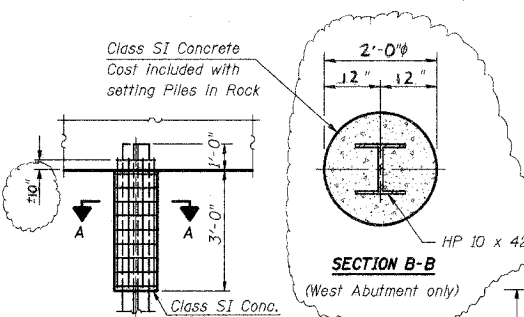
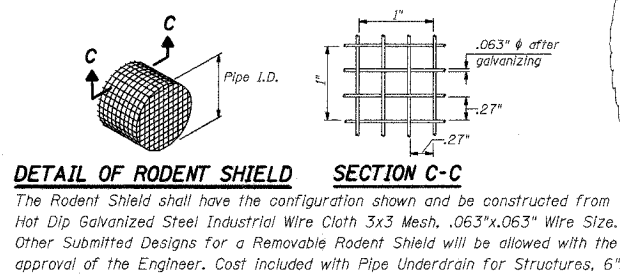
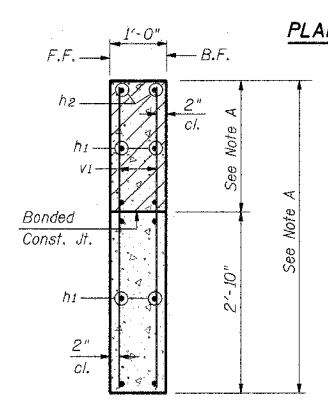
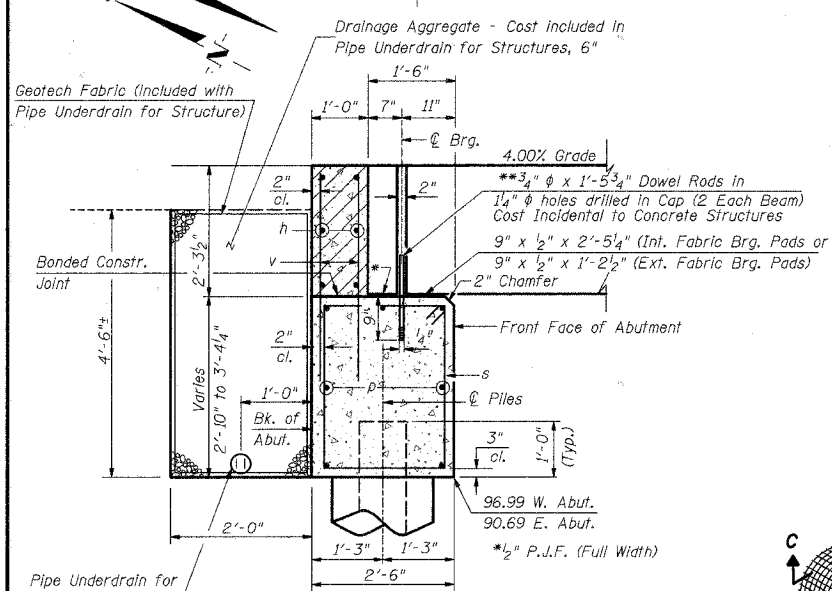
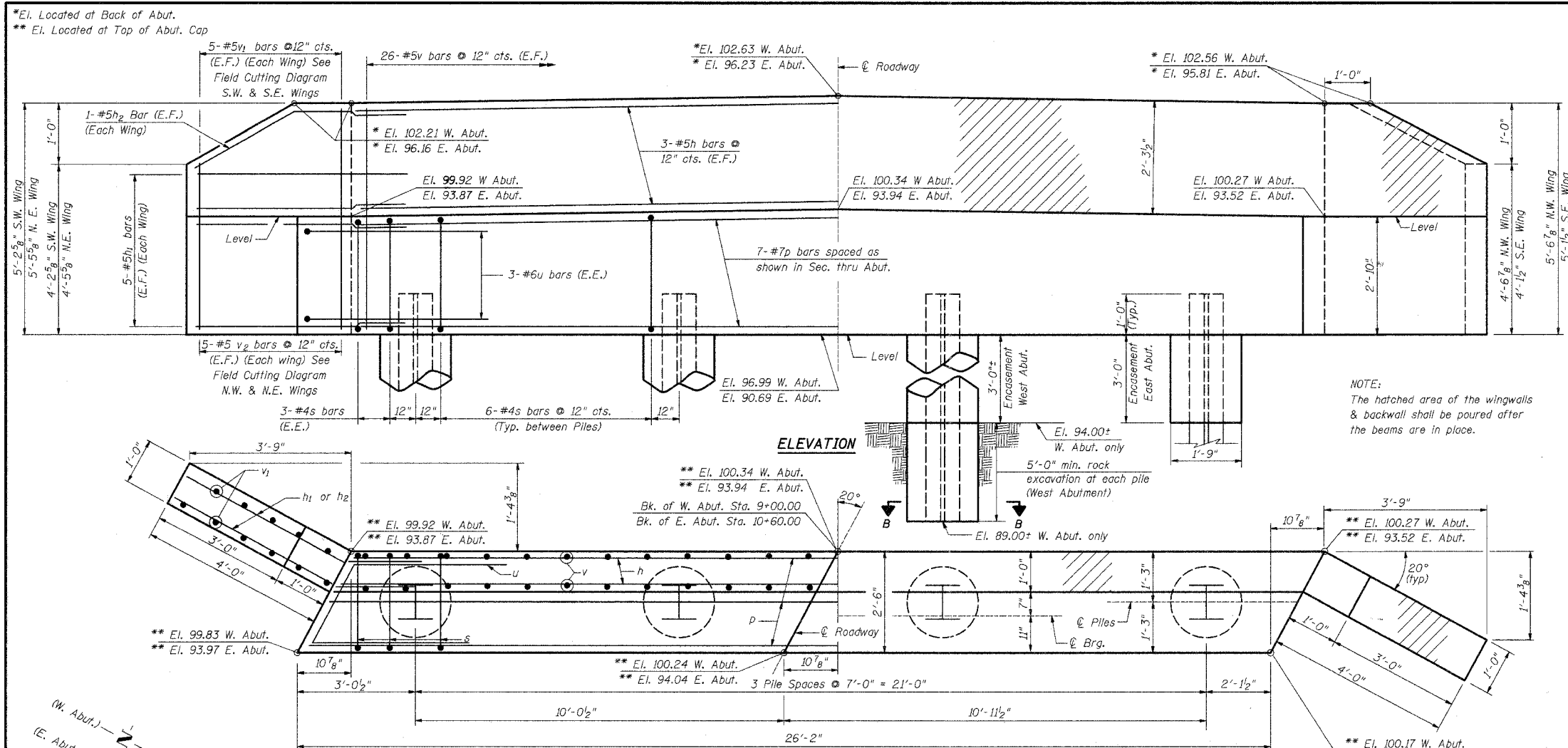
STA.	LT/RT	STA.	LT/RT	ACRES
5+40	LT	13+25	LT	1.1
6+29	RT	11+96	RT	1.1
TOTAL				2.2

STA.	LT/RT	OFFSET (FOOT)	R-O-W MARKERS EACH
4+50	LT	20.36	1
4+50	RT	24.64	1
6+28.65	LT	70.00	1
6+28.65	RT	50.00	1
7+00	RT	46.77	1
11+26.03	LT	70.00	1
13+24.54	LT	24.45	1
TOTAL			7

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DESIGNED: C.M.V. CHECKED: D.R.B.
 DRAWN: T.H.W. DATE: DECEMBER 2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 7	05-00259-00-BR	SHELBY	19	16
FED. ROAD DIST. NO.		ILLINOIS PROJECT		SHEET 5 of 8



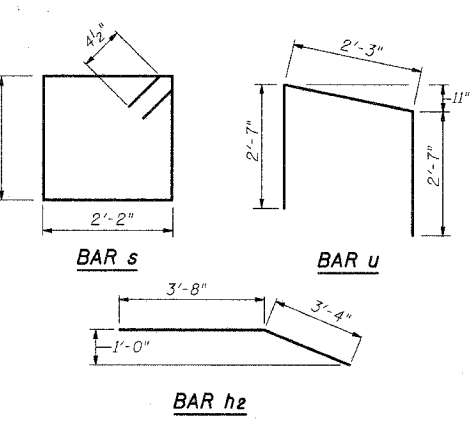
BILL OF MATERIAL
(2 Abutments)

Bar	No.	Size	Length	Shape
h	12	#5	25'-10"	—
h ₁	40	#5	7'-0"	—
h ₂	8	#5	7'-0"	—
p	14	#7	25'-10"	—
s	48	#4	9'-11"	□
u	12	#6	7'-5"	□
v	104	#5	4'-0"	—
v ₁	10	#5	8'-6"	—
v ₂	10	#5	9'-0"	—

ITEM	UNIT	QUANTITY
Reinforcement Bars	Pound	2,480
Concrete Structures	Cu. Yd.	22.4
Furnishing Steel Piles, HP 10 x 42	Lin. Ft.	108
Driving Steel Piles	Lin. Ft.	72
Test Piles	Each	1
Structure Excavation	Cu. Yd.	50
Concrete Encasement	Cu. Yd.	2.8
Setting Piles in Rock	Each	4
Pipe Underdrain for Structures, 6"	Foot	95
Pile Shoes	Each	4

PILE DATA

Type & Size: HP 10 x 42
Nominal Required Bearing: 335 kips
Est. Length: 24' East Abut. (Including 1 Test Pile, With Pile Shoes)
9' West Abut. (Set in Rock)
No. of Production Piles: 3
No. of Test Piles: 1
Allowable Resistance Available: 112 kips
Piles Set in Rock: 4



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DESIGNED: C.M.V. CHECKED: D.R.B.
DRAWN: T.H.W. DATE: DECEMBER 2006

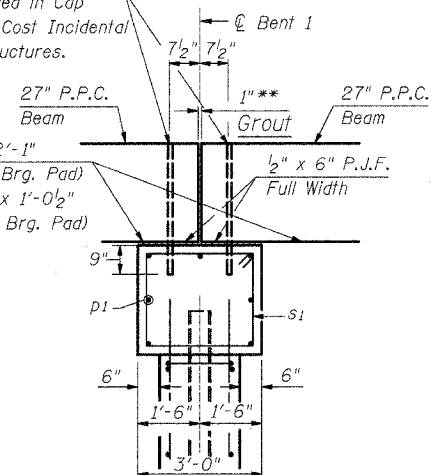
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 7	05-00259-00-BR	SHELBY	19	17
FED. ROAD DIST. NO.		ILLINOIS PROJECT		SHEET 6 of 9

** 1" Joint shall be packed with a Non-shrinking Grout.
1" Dimension may Vary plus or Minus to accommodate Tolerance in Beam Lengths.

*** Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hours) prior to grouting Shear Keys.

*** 3/4" φ x 1'-6" Dowel Rods in 1 1/4" φ holes drilled in Cap (2 Each Beam) Cost Incidental to Concrete Structures.

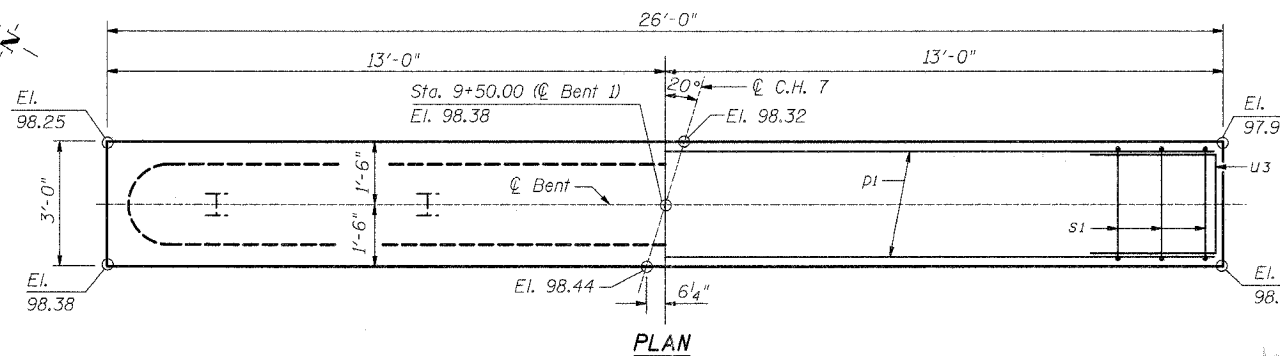
1 - 9" x 1/2" x 2'-1" (Interior Fabric Brg. Pad) or 1 - 9" x 1/2" x 1'-0 1/2" (Exterior Fabric Brg. Pad)
27" P.P.C. Beam
1"*** Grout
1/2" x 6" P.J.F. Full Width



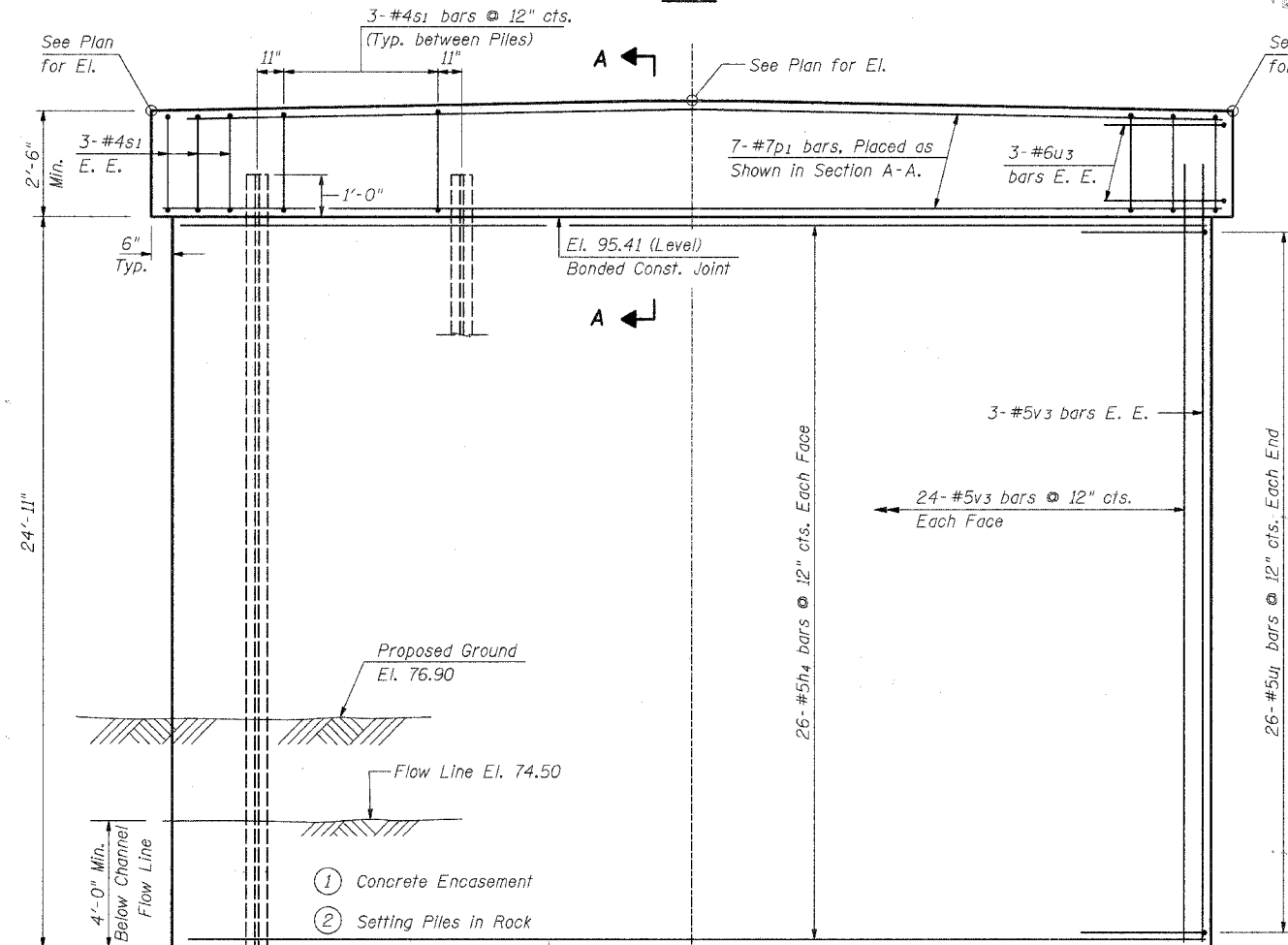
END VIEW

PILE DATA

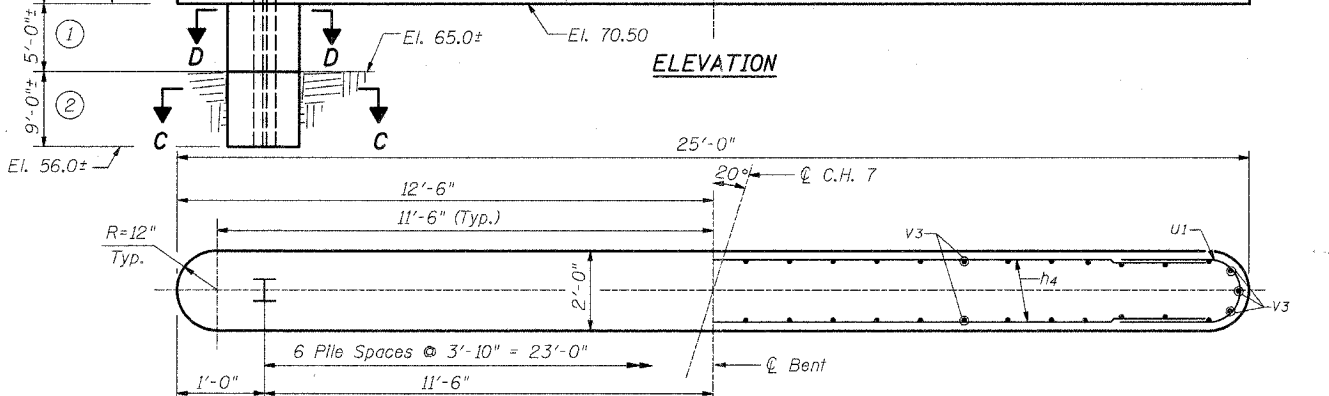
Type = HP 10 x 42
Capacity = 45 Ton, Set in Rock
Estimated Length = 40 Ft.
Number Req'd. = 7



PLAN

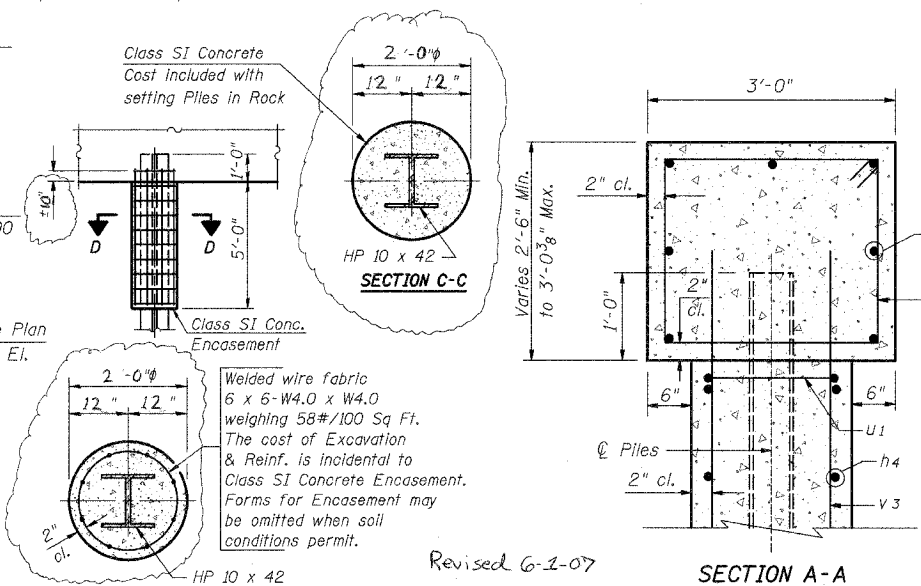


ELEVATION

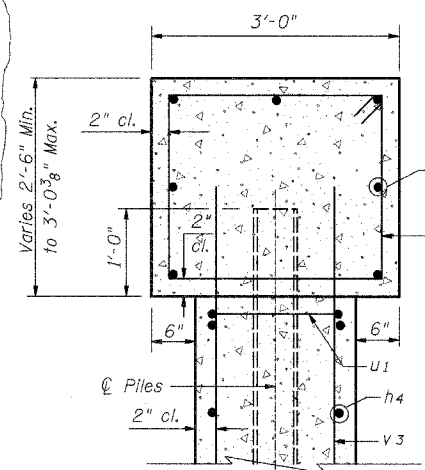


SECTION B-B

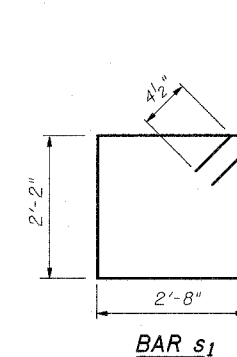
NOTE:
All Edges shall have Standard 3/4" Chamfer except as Noted.



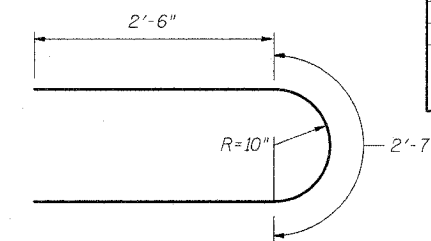
PILE ENCASUREMENT DETAIL



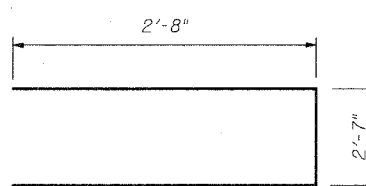
SECTION A-A



BAR s1



BAR u1



BAR u3

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4	52	#5	23'-2"	—
p1	7	#7	25'-6"	—
s1	24	#4	10'-5"	□
u1	52	#5	7'-7"	U
u3	6	#6	7'-11"	U
v3	54	#5	26'-2"	—

ITEM	UNIT	QUANTITY
Reinforcement Bars	Pound	3750
Concrete Structures	Cu. Yd.	53.3
Furnishing Steel Piles, HP 10 x 42	Foot	280
Structure Excavation	Cu. Yd.	32
Setting Piles in Rock	Each	7
Concrete Encasement	Cu. Yd.	4.5
Underwater Structure Excavation Protection, Location 1	Each	1

BENT NO. 1 DETAILS
C.H. 7 OVER RICHLAND CREEK
SEC. 05-00259-00-BR
SHELBY COUNTY
S.N. 087-3550
STA. 9+80

ie consultants

DESIGNED: C.M.V. CHECKED: D.R.B.
DRAWN: T.H.W. DATE: DECEMBER 2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 7	05-00259-00-BR	SHELBY	19	18
FED. ROAD DIST. NO.		ILLINOIS PROJECT		

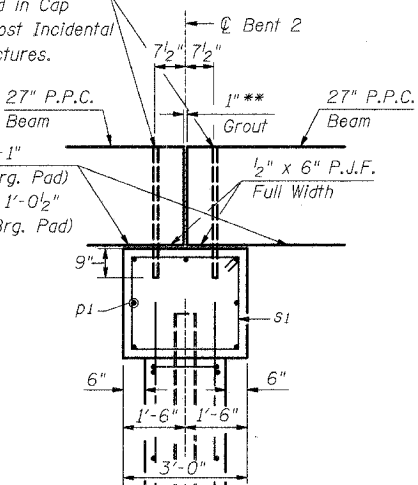
SHEET 1 of 8

** 1" Joint shall be packed with a non-shrink grout.
1" Dimension may Vary plus or Minus to accommodate Tolerance in Beam Lengths.

*** Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hours) prior to grouting Shear Keys.

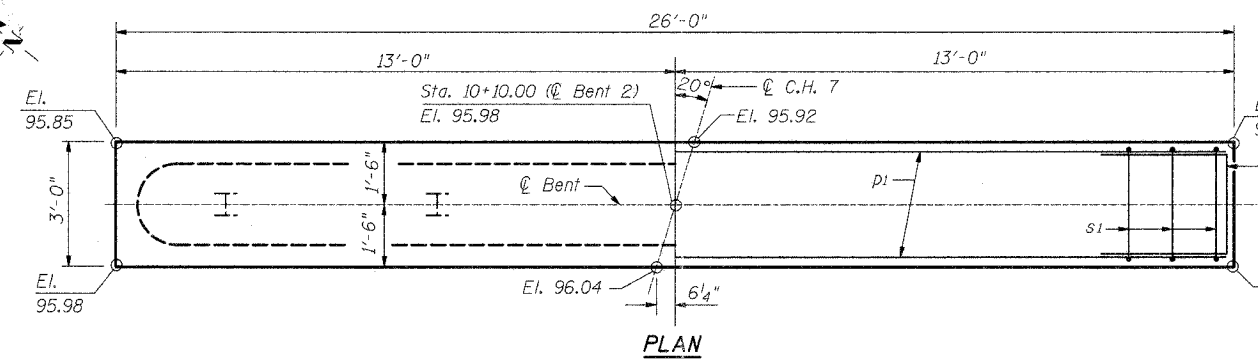
*** 3/4" ϕ x 1'-6" Dowel Rods in 1/4" ϕ holes drilled in Cap (2 Each Beam) Cost Incidental to Concrete Structures.

1 - 9" x 1/2" x 2'-1" (Interior Fabric Brg. Pad) or 1 - 9" x 1/2" x 1'-0 1/2" (Exterior Fabric Brg. Pad)

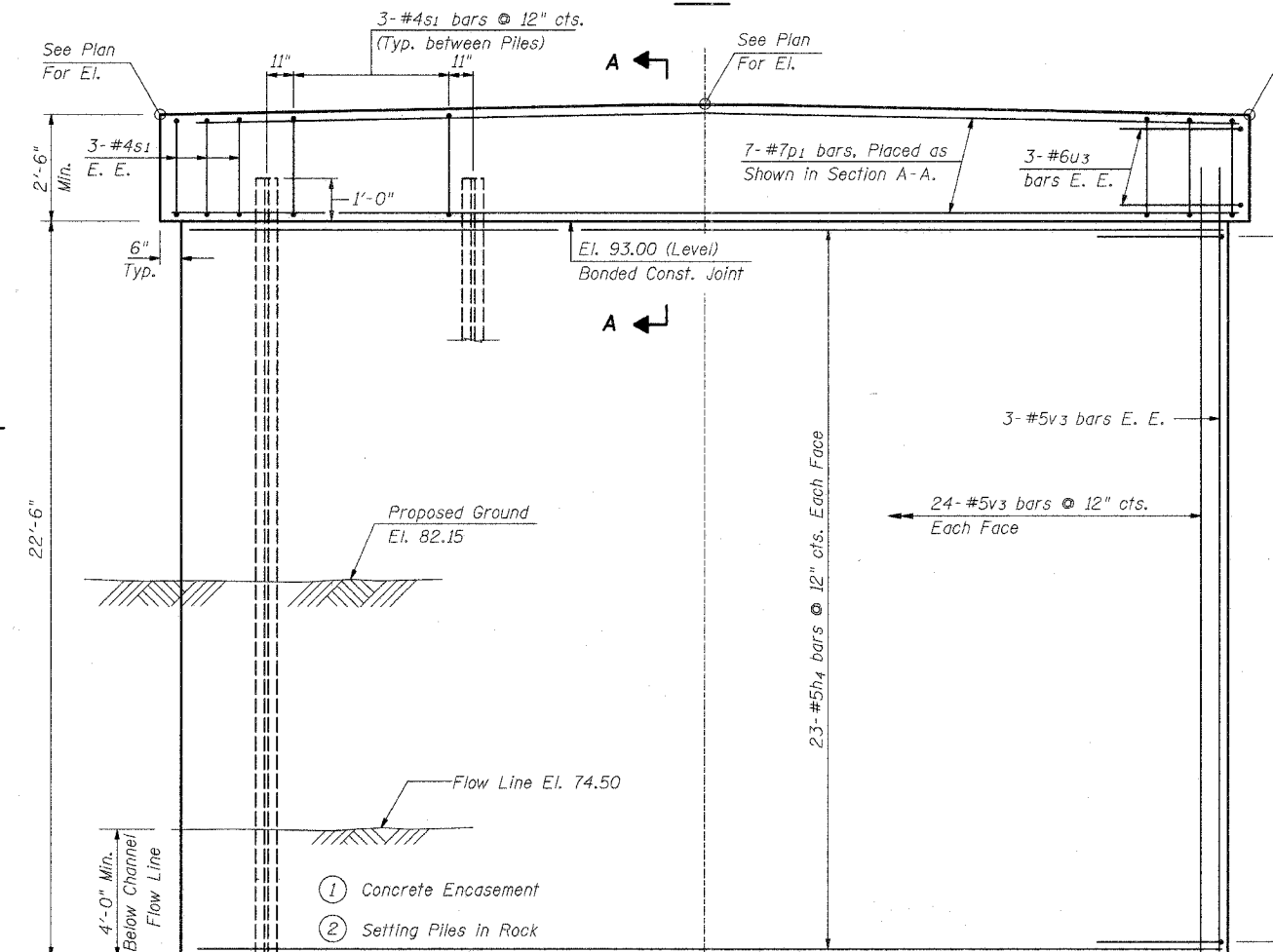


PILE DATA

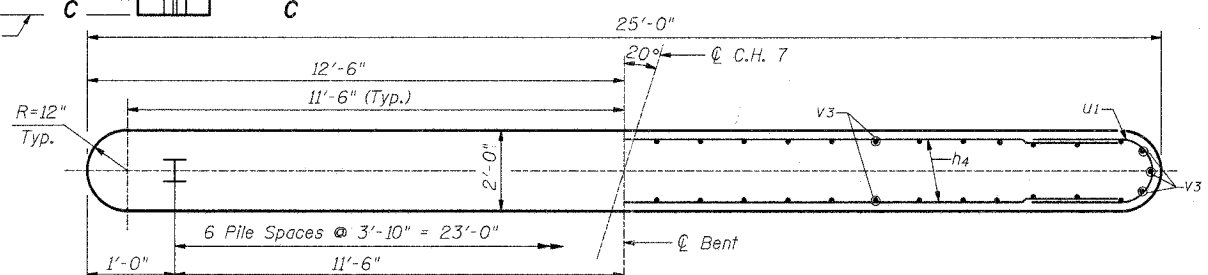
Type	=	HP 10 x 42
Capacity	=	45 Ton, Set in Rock
Estimated Length	=	37 Ft.
Number Req'd.	=	7



PLAN



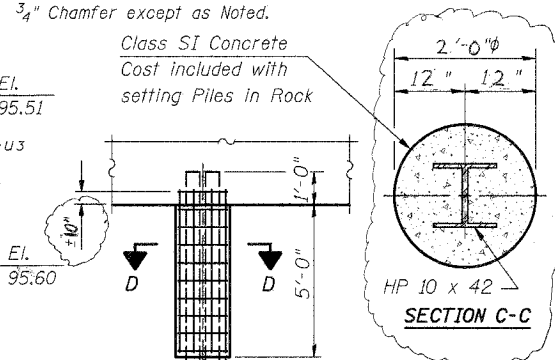
ELEVATION



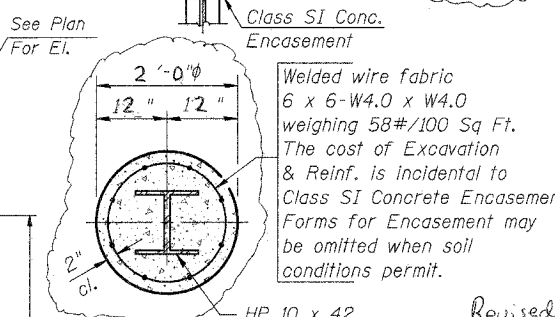
SECTION B-B

NOTE:
All Edges shall have Standard 3/4" Chamfer except as Noted.

Class SI Concrete Cost included with setting Piles in Rock

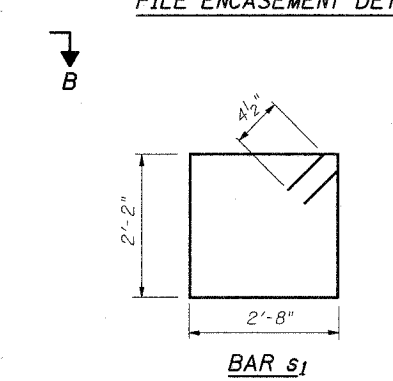


SECTION C-C

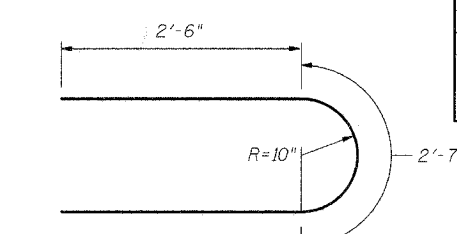


SECTION D-D

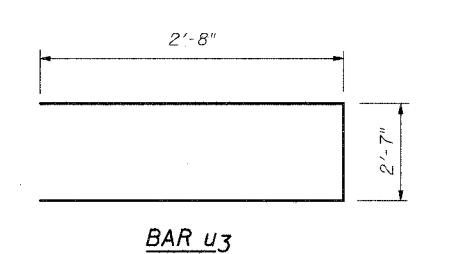
PILE ENCASEMENT DETAIL



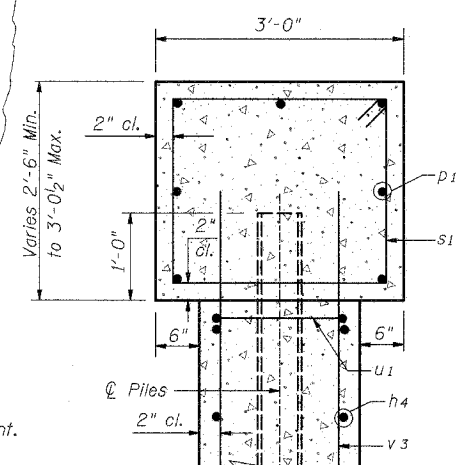
BAR s1



BAR u1



BAR u3



SECTION A-A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4	46	#5	23'-2"	—
p1	7	#7	25'-6"	—
s1	24	#4	10'-5"	□
u1	46	#5	7'-7"	U
u3	6	#6	7'-11"	U
v3	54	#5	23'-9"	—

ITEM	UNIT	QUANTITY
Reinforcement Bars	Pound	3420
Concrete Structures	Cu. Yd.	49.0
Furnishing Steel Piles, HP 10 x 42	Foot	259
Structure Excavation	Cu. Yd.	75
Setting Piles in Rock	Each	7
Concrete Encasement	Cu. Yd.	4.5
Underwater Structure Excavation Protection, Location 2	L.S.	1

BENT NO. 2 DETAILS
C.H. 7 OVER RICHLAND CREEK
SEC. 05-00259-00-BR
SHELBY COUNTY
S.N. 087-3550
STA. 9+80