

| T.R. RTE.                | SECTION                   | COUNTY | TOTAL SHEET SHEETS NO. |
|--------------------------|---------------------------|--------|------------------------|
| 335A                     | 06-15129-00-BR            | SHELBY | 14 1                   |
| STA. 20+00 TO STA. 25+00 |                           |        |                        |
| FED. ROAD DIST. NO.      | ILLINOIS FED. AID PROJECT |        |                        |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**PLANS FOR PROPOSED  
HIGHWAY BRIDGE PROGRAM**

**PROJECT NO. BROS-173(152)  
T.R. 335A OVER BRUSH CREEK  
SECTION 06-15129-00-BR  
SHELBY COUNTY  
JOB NO. C-97-078-07**

INDEX OF SHEETS

- 1 - TITLE SHEET
- 2 - SUMMARY OF QUANTITIES, DETAILS, & TYPICAL SECTIONS
- 3 - PLAN & PROFILE
- 4 - GENERAL PLAN & ELEVATION
- 5 - SUPERSTRUCTURE
- 6 - RAILING
- 7 - ABUTMENTS
- 8 - PILE SPLICE DETAILS
- 9 & 10 - CROSS SECTIONS

STANDARDS

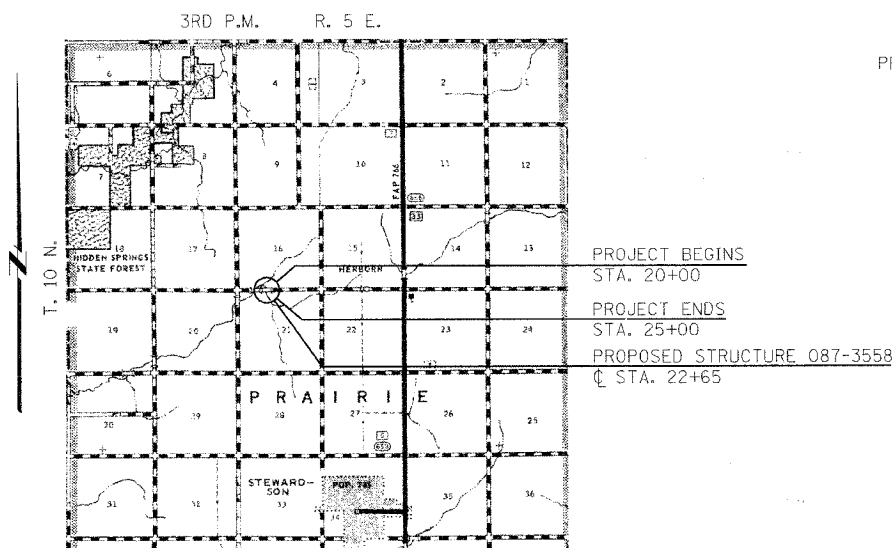
STANDARD 000001-04  
STANDARD 280001-03  
STANDARD 515001-02  
STANDARD 630301-02  
STANDARD 635006-02  
STANDARD 702001-06  
STANDARD BLR 21-6  
  
STANDARD BLR 24-1

DESCRIPTION

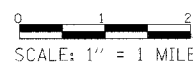
STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS  
TEMPORARY EROSION CONTROL SYSTEMS  
NAME PLATE FOR BRIDGES  
SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS  
REFLECTOR AND TERMINAL MARKER PLACEMENT  
TRAFFIC CONTROL DEVICES  
TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS  
MAILBOX TURNOUT

EXISTING STRUCTURE: SINGLE SPAN TIMBER DECK ON STEEL STRINGERS. CLOSED TIMBER ABUTMENTS AND WINGWALLS. ±24'-0" BK.-BK. ABUTMENTS, ±18'-9" CLEAR DECK WIDTH, ±0° SKEW.  
EXISTING STRUCTURE NO. 087-3334

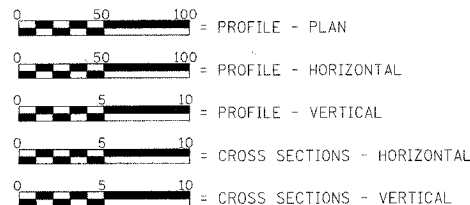
PROPOSED STRUCTURE: SINGLE SPAN REINFORCED CONCRETE DECK BEAM (27") BRIDGE ON OPEN CONCRETE ABUTMENTS. 57'-6" BK.-BK. ABUTMENTS, 24'-0" CLEAR DECK WIDTH, TYPE S1 RAILING, 20° SKEW RT. FORWARD.  
PROPOSED STRUCTURE NO. 087-3558



LENGTH OF SECTION - 500.00 FEET = 0.095 MILES



SCALE IN FEET



LAND SECTIONS - 16 & 21  
LAND QUARTER SECTION - S.W. & N.W.  
FUNCTIONAL CLASSIFICATION: LOCAL (NON-URBAN)  
A.D.T. - 225(2004)  
A.D.T. - 300(2030)  
30 M.P.H. DESIGN SPEED



*Christopher P. Kohlbus 5/25/07*  
EXPIRATION: 11/30/2007

APPROVED: *05-24-2007*  
*S. Ahl*  
COUNTY ENGINEER

APPROVED: *05-24-2007*  
*X Howard Korte*  
ROAD DISTRICT COMMISSIONER

PASSED: *May 30, 2007*  
*Moussa Karim*  
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review: *May 30, 2007*  
*Christopher M. Rader*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

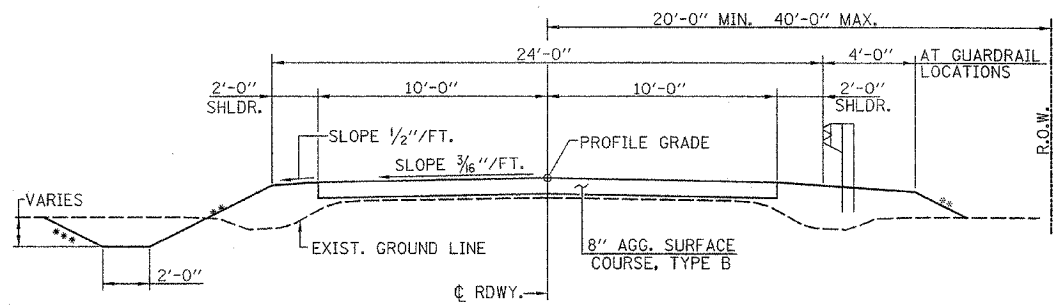
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLOT DATE = #DAYS  
FILE NAME = #FILE#

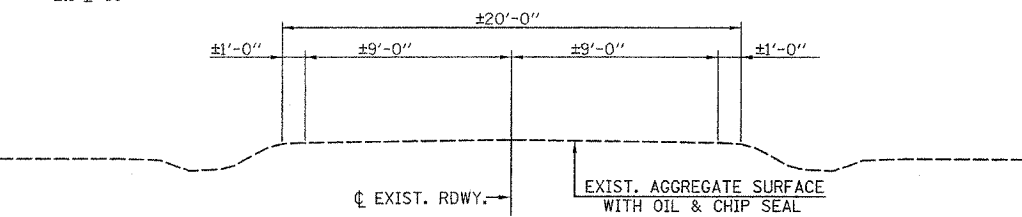
TOLL FREE  
"JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS"  
WWW.U.L.E.J TELEPHONE NUMBER  
1-800-892-0123

CONTRACT NO. 95520

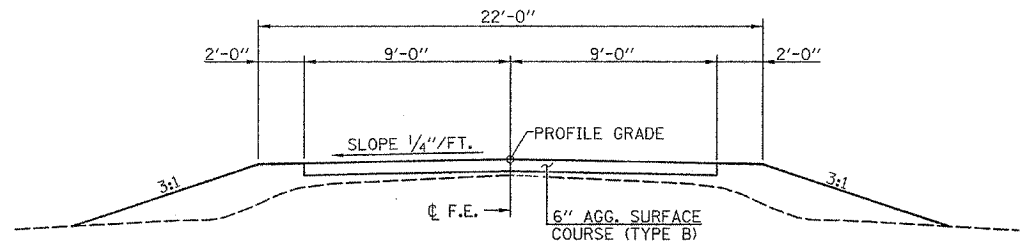
| T.R. RTE.                | SECTION        | COUNTY  | TOTAL SHEETS | SHEET NO. |
|--------------------------|----------------|---|--------------|-----------|
| 335A                     | 06-15129-00-BR | SHELBY  | 11           | 2         |
| STA. 20+00 TO STA. 25+00 |                | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |              |           |



PROPOSED CROSS SECTION



EXISTING CROSS SECTION



TYPICAL PRIVATE & FIELD ENTRANCE

(F.E. STA. 21+00 LT. - 24 TON)  
 (P.E. STA. 23+93 LT. - 96 TON)  
 (P.E. STA. 24+73 LT. - 21 TON)

EARTHWORK SCHEDULE

| LOCATION   | EARTH EXCAVATION | EARTH EXCAVATION ADJUSTED FOR SHRINKAGE | EMBANKMENT | EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) |
|--|------------------|---|------------|---|
|  | CU. YD.          | CU. YD.                                 | CU. YD.    | CU. YD.                                     |
| STA. 20+00 TO STA. 21+00                         | 39               | 29                                      | 39         | -10   |
| STA. 21+00 TO STA. 22+00                         | 59               | 44                                      | 171        | -127  |
| STA. 22+00 TO STA. 22+38.25                      | 33               | 25                                      | 95         | -70   |
| BRIDGE OMISSION - STA. 22+38.25 TO STA. 22+91.75 | -                | -                                       | -          | -   |
| STA. 22+91.75 TO STA. 23+00                      | 3                | 2                                       | 25         | -23   |
| STA. 23+00 TO STA. 23+50                         | 19               | 14                                      | 138        | -124  |
| STA. 23+50 TO STA. 24+00                         | 30               | 23                                      | 130        | -107  |
| STA. 24+00 TO STA. 25+00                         | 61               | 46                                      | 74         | -28   |
| Total  | 244              | 183                                     | 672        | -489  |

SUMMARY OF QUANTITIES

| ITEM     | UNIT  | QUANTITY |
|----------|---|----------|
| 20100110 | TREE REMOVAL (6 TO 15 UNITS DIAMETER)               | 26       |
| 20100210 | TREE REMOVAL (OVER 15 UNITS DIAMETER)               | 32       |
| 20200100 | EARTH EXCAVATION                                    | 244      |
| 20300100 | CHANNEL EXCAVATION                                  | 214      |
| 20400800 | FURNISHED EXCAVATION                                | 489      |
| 25000200 | SEEDING, CLASS 2                                    | 0.8      |
| 25000400 | NITROGEN FERTILIZER NUTRIENT                        | 72       |
| 25000500 | PHOSPHORUS FERTILIZER NUTRIENT                      | 72       |
| 25000600 | POTASSIUM FERTILIZER NUTRIENT                       | 72       |
| 25100115 | MULCH, METHOD 2                                     | 0.8      |
| 28000250 | TEMPORARY EROSION CONTROL SEEDING                   | 100      |
| 28000300 | TEMPORARY DITCH CHECKS                              | 3        |
| 28000500 | INLET AND PIPE PROTECTION                           | 3        |
| 28100207 | STONE RIPRAP, CLASS A4                              | 305      |
| 28200200 | FILTER FABRIC                                       | 435      |
| 40200800 | AGGREGATE SURFACE COURSE, TYPE B                    | 591      |
| 44000600 | SIDEWALK REMOVAL                                    | 70       |
| 50100100 | REMOVAL OF EXISTING STRUCTURES                      | 1        |
| 50200100 | STRUCTURE EXCAVATION                                | 85       |
| 50300225 | CONCRETE STRUCTURES                                 | 27.8     |
| 50300280 | CONCRETE ENCASEMENT                                 | 2.8      |
| 50400405 | PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH) | 1250     |
| 50800105 | REINFORCEMENT BARS                                  | 2745     |
| 50900205 | STEEL RAILING, TYPE S1                              | 107      |
| 51201400 | FURNISHING STEEL PILES HP 10X42                     | 189      |
| 51202305 | DRIVING PILES                                       | 189      |
| 51203400 | TEST PILE STEEL HP 10X42                            | 1        |
| 51500100 | NAME PLATES   | 1        |
| 54200223 | PIPE CULVERTS, CLASS D, TYPE 1 18"                  | 138      |
| 63100075 | TRAFFIC BARRIER TERMINAL, TYPE 5A                   | 2        |
| 63100167 | TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)  | 2        |
| 67100100 | MOBILIZATION  | 1        |
| 78201000 | TERMINAL MARKER - DIRECT APPLIED                    | 4        |

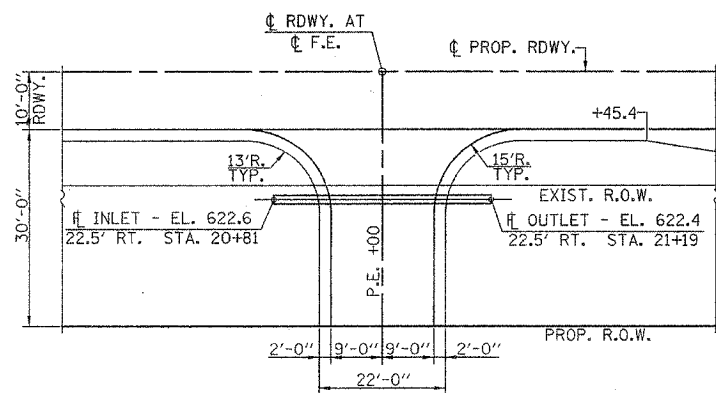
• SEE SPECIAL PROVISIONS  
 Δ SPECIALTY ITEMS

GENERAL NOTES

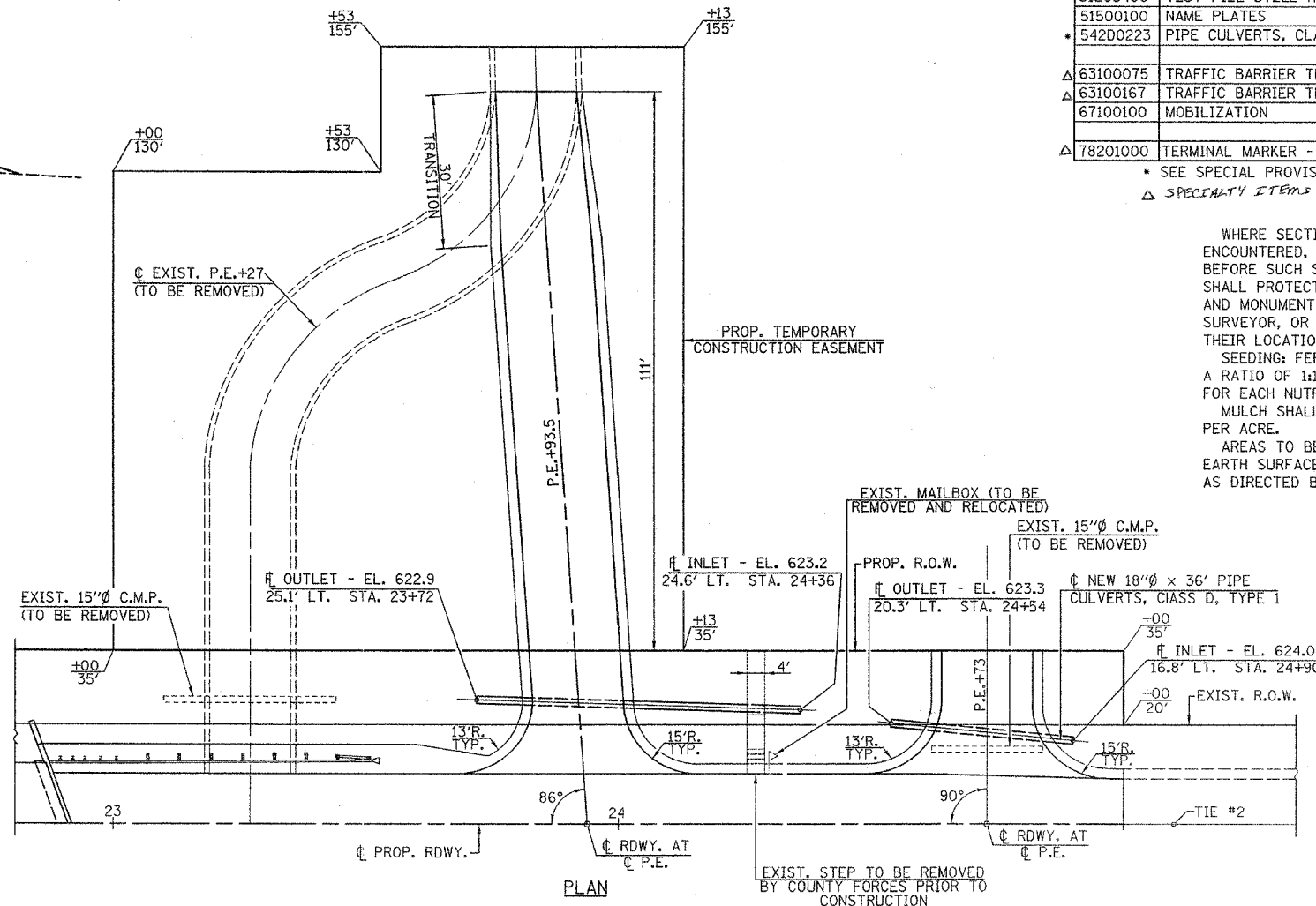
WHERE SECTION OR SUBSECTION STONES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH STONES ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED OR REFERENCED THEIR LOCATION.  
 SEEDING: FERTILIZER NUTRIENTS SHALL BE APPLIED AT A RATIO OF 1:1:1 AND AT A RATE OF 90 POUNDS PER ACRE FOR EACH NUTRIENT.  
 MULCH SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE.  
 AREAS TO BE SEEDDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AND EASEMENT AS DIRECTED BY THE ENGINEER.

SCHEDULE SIDEWALK REMOVAL

| LOCATION                      | QUANTITY (SQ. FT.) |
|-------------------------------|--------------------|
| STA. 24+27 15' LT. TO 35' LT. | 70                 |
| TOTAL                         | 70                 |



PLAN (FIELD ENTRANCE - STA. 21+00 RT.)

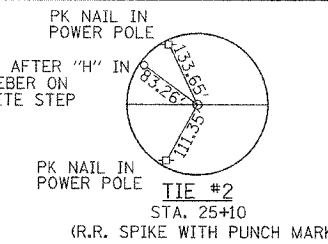
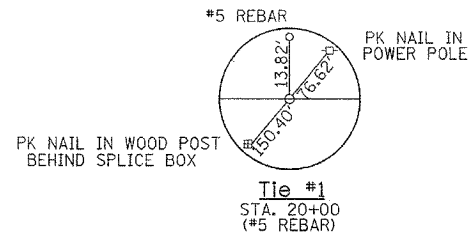


PLAN

SUMMARY OF QUANTITIES,  
 SCHEDULES, DETAILS  
 AND TYPICAL SECTIONS  
 T.R. 335A OVER BRUSH CREEK  
 SECTION 06-15129-00-BR  
 SHELBY COUNTY

| T.R. RTE.                | SECTION        | COUNTY  | TOTAL SHEETS | SHEET NO. |
|--------------------------|----------------|---|--------------|-----------|
| 335A                     | 06-15129-00-BR | SHELBY  | 11           | 3         |
| STA. 20+00 TO STA. 25+00 |                | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |              |           |

SECTION 16, T.10 N. R.5 E. 3rd P.M.



SCHEDULE  
TEMPORARY DITCH CHECKS

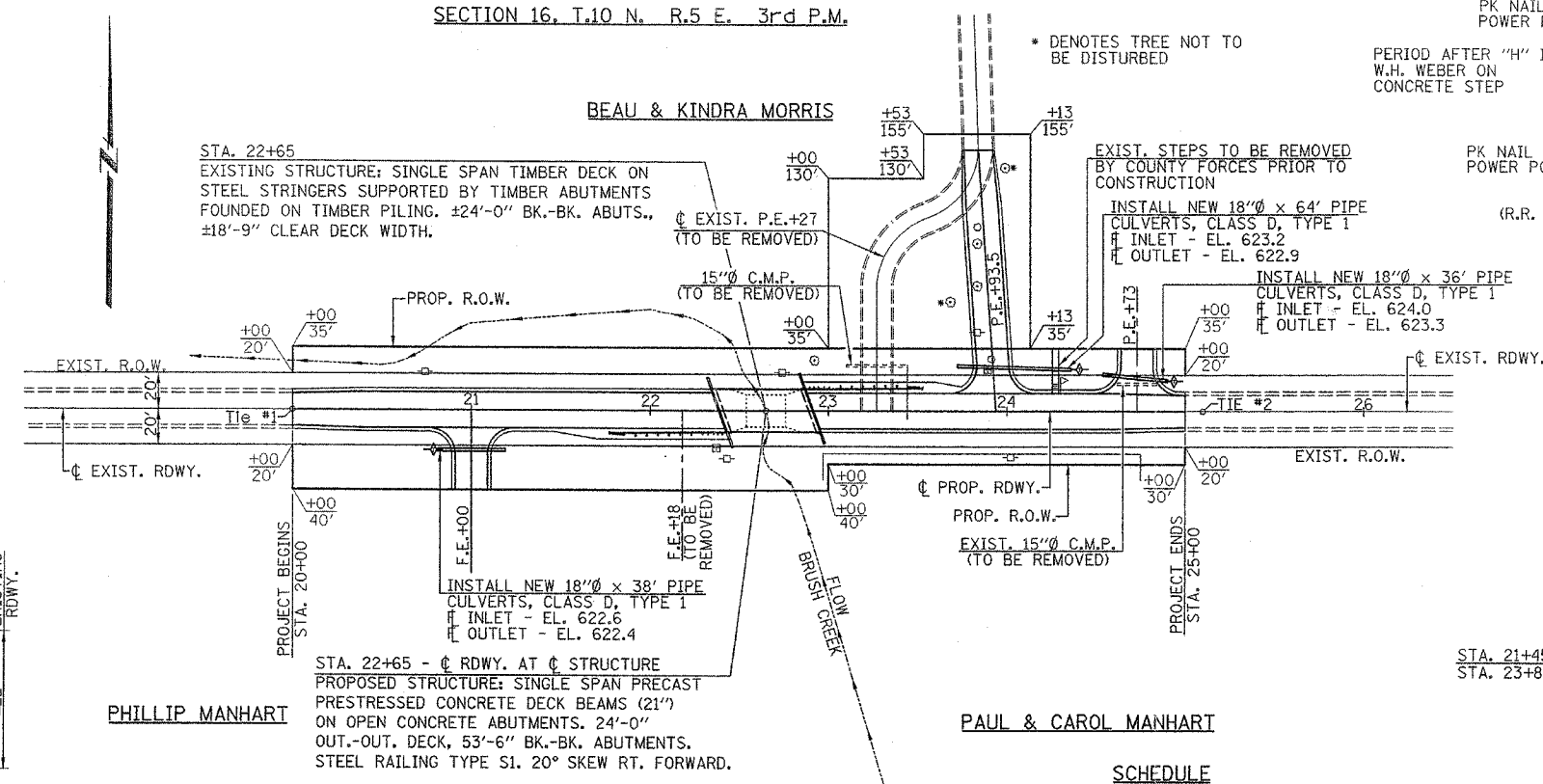
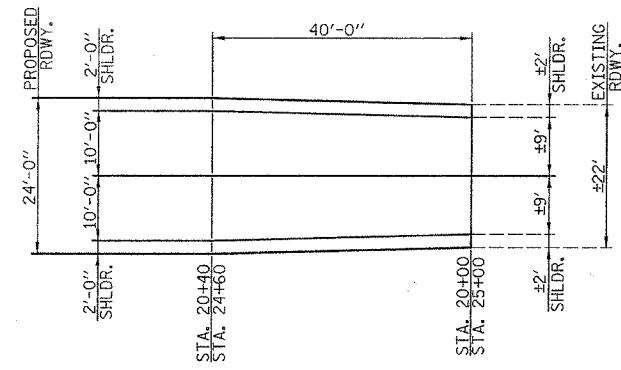
| LOCATION           | QUANTITY (Each) |
|--------------------|-----------------|
| STA. 22+25 28' RT. | 1               |
| STA. 23+00 27' LT. | 1               |
| STA. 23+10 24' RT. | 1               |
| <b>TOTAL</b>       | <b>3</b>        |

SCHEDULE  
SCHEDULE INLET & PIPE PROTECTION

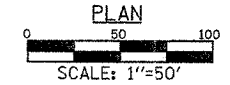
| LOCATION       | QUANTITY (EACH) |
|----------------|-----------------|
| STA. 20+81 RT. | 1               |
| STA. 24+36 LT. | 1               |
| STA. 24+90 LT. | 1               |
| <b>TOTAL</b>   | <b>3</b>        |

SCHEDULE  
SEEDING CLASS 2 & MULCH, METHOD 2

| LOCATION                                    | QUANTITY (ACRE) |
|---|-----------------|
| STA. 20+00 TO STA. 25+00 35' LT. TO 40' RT. | 0.8             |
| <b>TOTAL</b>                                | <b>0.8</b>      |



SECTION 21, T.10 N. R.5 E. 3rd P.M.

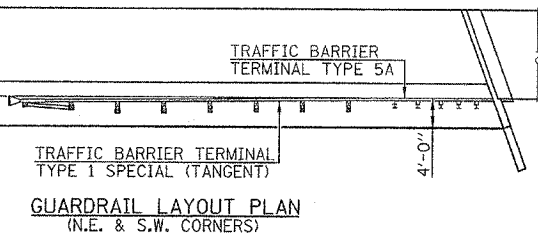


SCHEDULE  
TREE REMOVAL (6 TO 15 UNITS DIAMETER)

| LOCATION           | QUANTITY (UNIT) |
|--------------------|-----------------|
| STA. 23+83 70' LT. | 12              |
| STA. 23+83 94' LT. | 14              |
| <b>TOTAL</b>       | <b>26</b>       |

SCHEDULE  
TREE REMOVAL (OVER 15 UNITS DIAMETER)

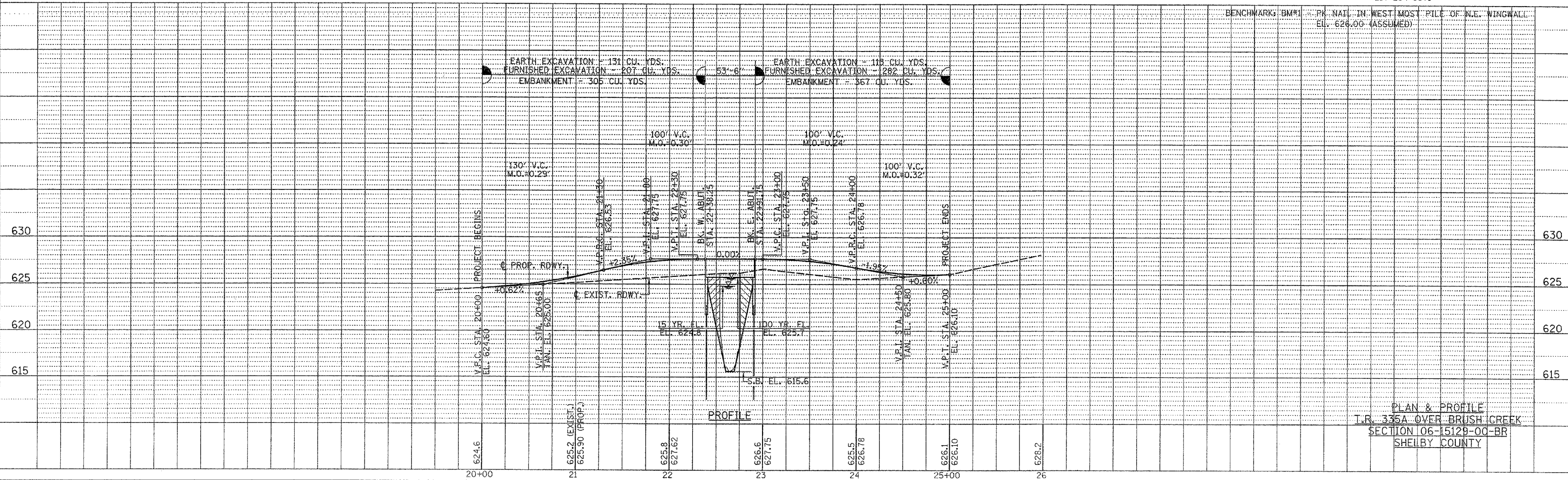
| LOCATION           | QUANTITY (UNIT) |
|--------------------|-----------------|
| STA. 22+92 28' LT. | 32              |
| <b>Total</b>       | <b>32</b>       |



**UTILITIES**  
SHELBY ELECTRIC COOPERATIVE  
NORTH ROUTE 128  
SHELBYVILLE, ILLINOIS 62565  
CONSOLIDATED COMMUNICATIONS INC.  
121 SOUTH 17TH STREET  
MATTOON, ILLINOIS 61938-3915  
217-234-9971

DATE: \_\_\_\_\_  
BY: \_\_\_\_\_  
CHECKED: \_\_\_\_\_  
DATE: \_\_\_\_\_

DATE: \_\_\_\_\_  
BY: \_\_\_\_\_  
CHECKED: \_\_\_\_\_  
DATE: \_\_\_\_\_



PLAN & PROFILE  
T.R. 335A OVER BRUSH CREEK  
SECTION 06-15129-00-BR  
SHELBY COUNTY

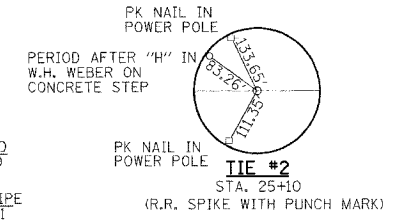
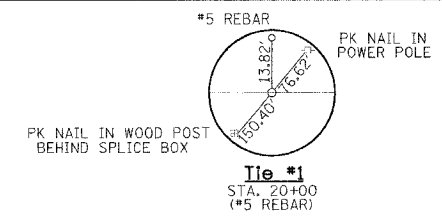
| T.R. RTE.           | SECTION        | COUNTY                    | TOTAL SHEETS | SHEET NO. |
|---------------------|----------------|---------------------------|--------------|-----------|
| 335A                | 06-15129-00-BR | SHELBY                    | 11           | 3         |
| STA. 20+00          |                | TO STA. 25+00             |              |           |
| FED. ROAD DIST. NO. |                | ILLINOIS FED. AID PROJECT |              |           |

**SCHEDULE  
TEMPORARY DITCH CHECKS**

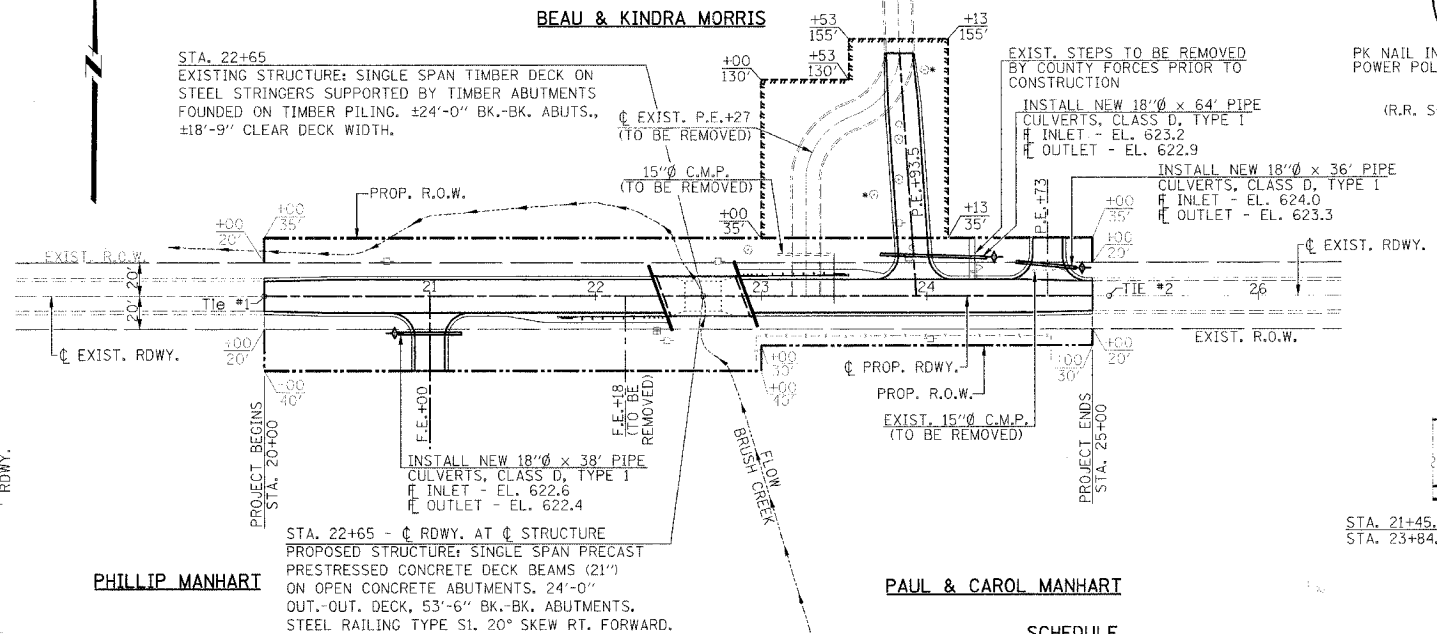
| LOCATION           | QUANTITY (Each) |
|--------------------|-----------------|
| STA. 22+25 28' RT. | 1               |
| STA. 23+00 27' LT. | 1               |
| STA. 23+10 24' RT. | 1               |
| <b>TOTAL</b>       | <b>3</b>        |

**SCHEDULE  
INLET & PIPE PROTECTION**

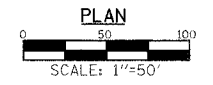
| LOCATION       | QUANTITY (EACH) |
|----------------|-----------------|
| STA. 20+81 RT. | 1               |
| STA. 24+36 LT. | 1               |
| STA. 24+90 LT. | 1               |
| <b>TOTAL</b>   | <b>3</b>        |



**SECTION 16, T.10 N. R.5 E. 3rd P.M.**

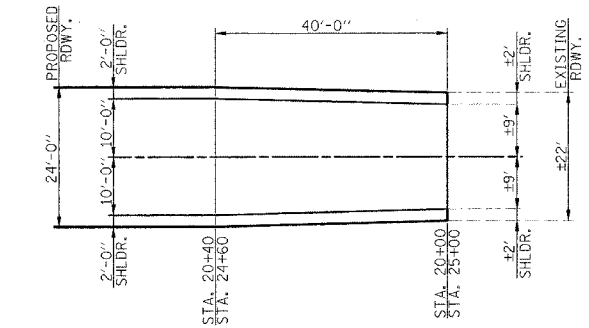


**SECTION 21, T.10 N. R.5 E. 3rd P.M.**



**SCHEDULE  
SEEDING CLASS 2 & MULCH, METHOD 2**

| LOCATION                                    | QUANTITY (ACRE) |
|---|-----------------|
| STA. 20+00 TO STA. 25+00 35' LT. TO 40' RT. | 0.8             |
| <b>TOTAL</b>                                | <b>0.8</b>      |



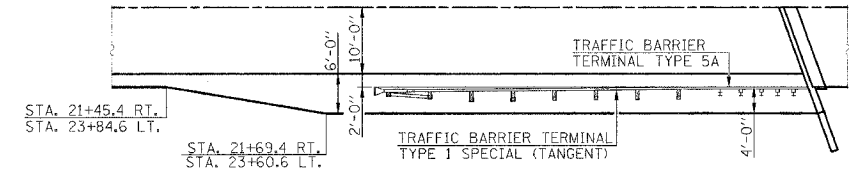
**SCHEDULE  
TREE REMOVAL (6 TO 15 UNITS DIAMETER)**

| LOCATION           | QUANTITY (UNIT) |
|--------------------|-----------------|
| STA. 23+83 70' LT. | 12              |
| STA. 23+83 94' LT. | 14              |
| <b>TOTAL</b>       | <b>26</b>       |

**SCHEDULE  
TREE REMOVAL (OVER 15 UNITS DIAMETER)**

| LOCATION           | QUANTITY (UNIT) |
|--------------------|-----------------|
| STA. 22+92 28' LT. | 32              |
| <b>Total</b>       | <b>32</b>       |

**GUARDRAIL LAYOUT PLAN  
(N.E. & S.W. CORNERS)**

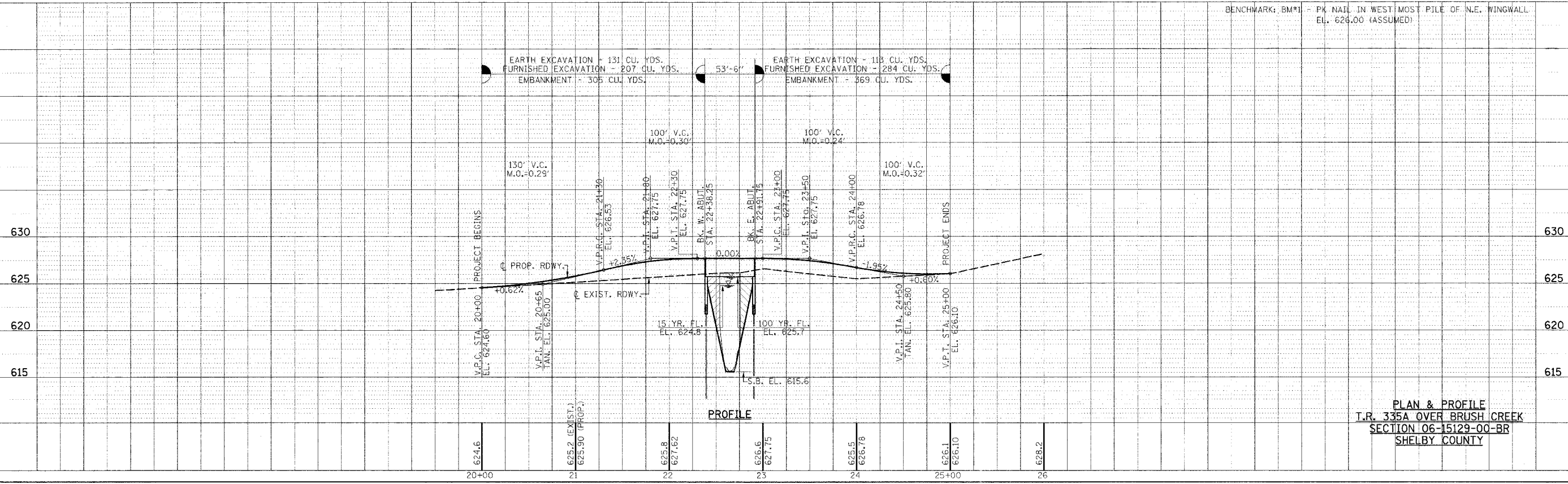


**UTILITIES**

SHELBY ELECTRIC COOPERATIVE  
NORTH ROUTE 128  
SHELBYVILLE, ILLINOIS 62565

CONSOLIDATED COMMUNICATIONS INC.  
121 SOUTH 17TH STREET  
MATTOON, ILLINOIS 61938-3915  
217-234-9971

BENCHMARK: BM#1 - PK NAIL IN WEST MOST PILE OF N.E. WINGWALL  
EL. 626.00 (ASSUMED)

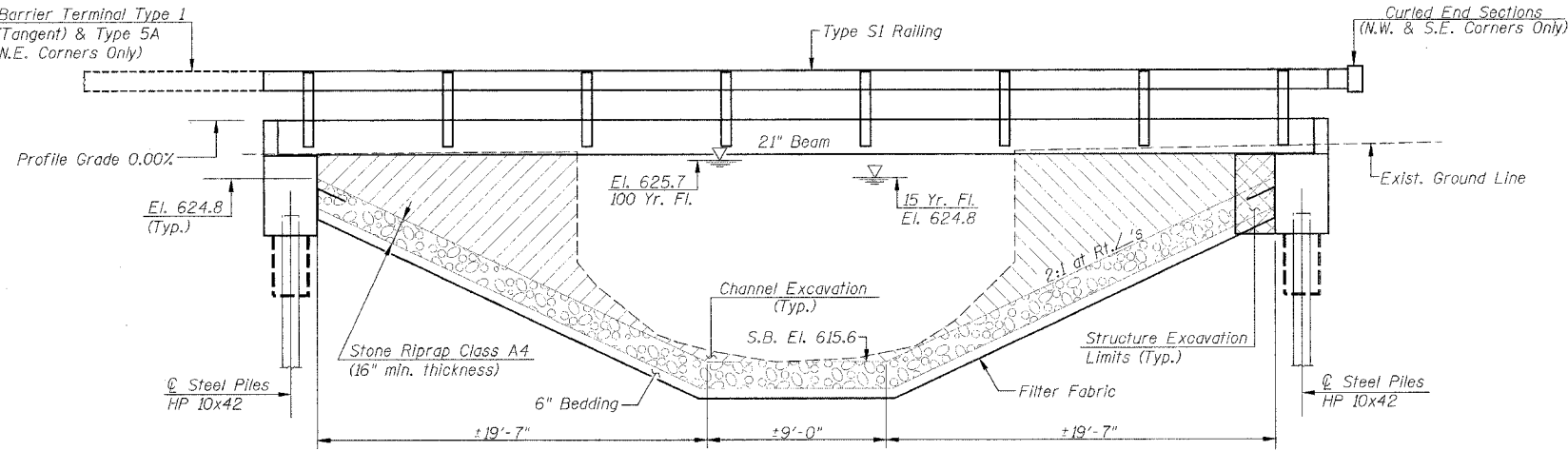


**PLAN & PROFILE  
I.R. 335A OVER BRUSH CREEK  
SECTION 06-15129-00-BR  
SHELBY COUNTY**

| T.R. NO.                                      | SECTION        | COUNTY        | TOTAL SHEETS | SHEET NO. |
|---|----------------|---------------|--------------|-----------|
| 335A  | 06-15129-00-BR | SHELBY        | 11           | 4         |
| STA. 20+00                                    |                | TO STA. 25+00 |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |                |               |              |           |

Existing Structure: Single Span Timber Deck Bridge on Steel Stringers  
Supported by Timber Abutments Founded on Timber  
Piling, ±24'-0" Bk.-Bk. Abutments, ±18'-9" Clear Deck Width.  
Benchmarks: BM#1 - PK Nail in West Most Pile  
of N.E. Wingwall El. 626.00 (Assumed)

Traffic Barrier Terminal Type 1  
Special (Tangent) & Type 5A  
(S.W. & N.E. Corners Only)



**ELEVATION**  
(Looking Downstream)

**TOTAL BILL OF MATERIAL**

| ITEM  | UNIT    | SUPER | SUB  | TOTAL |
|---|---------|-------|------|-------|
| Channel Excavation                                  | Cu. Yd. |       |      | 214   |
| Stone Riprap, Class A4                              | Ton     |       |      | 305   |
| Filter Fabric                                       | Sq. Yd. |       |      | 435   |
| Removal of Existing Structures                      | Each    |       |      | 1     |
| Structure Excavation                                | Cu. Yd. |       |      | 85    |
| Concrete Structures                                 | Cu. Yd. |       | 27.8 | 27.8  |
| Concrete Encasement                                 | Cu. Yd. |       | 2.8  | 2.8   |
| Precast Prestressed Concrete Deck Beams (21" Depth) | Sq. Ft. | 1250  |      | 1250  |
| Reinforcement Bars                                  | Pound   |       | 2745 | 2745  |
| Steel Railing Type S1                               | Foot    | 107   |      | 107   |
| Furnishing Steel Piles HP 10x42                     | Foot    |       | 189  | 189   |
| Driving Piles                                       | Foot    |       | 189  | 189   |
| Test Pile Steel HP 10x42                            | Each    |       | 1    | 1     |
| Name Plates   | Each    |       | 1    | 1     |

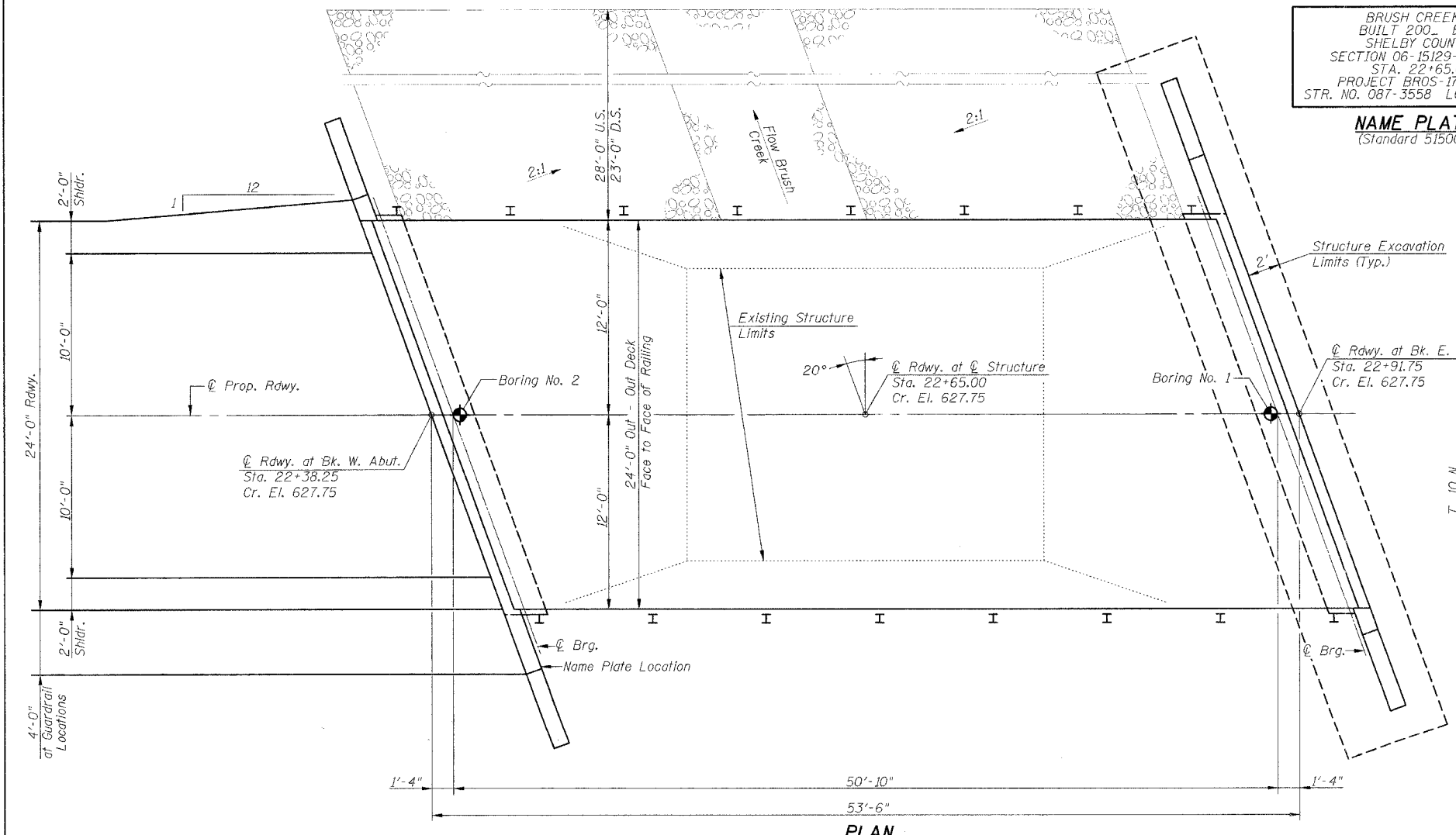
**WATERWAY INFORMATION**

Drainage Area = 4.24 Sq. Mi. Low Grade Elev. = 624.60 @ Sta. 20+00

| Flood           | Freq. Yr. | Q    | Opening Sq. Ft. |       | Nat. Head - ft. |       | Headwater El. |       |       |
|-----------------|-----------|------|-----------------|-------|-----------------|-------|---------------|-------|-------|
|                 |           |      | Exist.          | Prop. | H.W.E. Exist.   | Prop. | Exist.        | Prop. |       |
| Design          | 15        | 1059 | 147             | 247   | 624.8           | 0.8   | 0.2           | 625.6 | 625.0 |
| Base            | 100       | 1806 | 147             | 288   | 625.7           | 1.3   | 0.7           | 627.0 | 626.4 |
| Exist. Overtop. | 10        | 990  |                 |       |                 |       |               |       |       |
| Prop. Overtop.  | 12        | 1025 |                 |       |                 |       |               |       |       |
| Max. Calc.      | 500       | 2454 | 147             | 313   | 626.2           | 1.1   | 1.3           | 627.3 | 627.5 |

BRUSH CREEK  
BUILT 200 BY  
SHELBY COUNTY  
SECTION 06-15129-00-BR  
STA. 22+65.00  
PROJECT BROS-173(152)  
STR. NO. 087-3558 LOADING HS20

**NAME PLATE**  
(Standard 515001)



**PLAN**

**DESIGN STRESSES**

**FIELD UNITS**  
f<sub>c</sub> = 1400 psi  
f<sub>s</sub> = 24000 psi

**PRECAST PRESTRESSED UNITS**  
f'<sub>c</sub> = 5000 psi  
f'<sub>ci</sub> = 4000 psi  
f'<sub>s</sub> = 270000 psi  
f'<sub>si</sub> = 201960 psi

**GENERAL NOTES**

See Proposal for Boring Data.  
Reinforcement bars shall conform to the requirements of ASTM A706, Grade 60 (IL Modified). See Special Provisions.  
The layout of the riprap slopedwall may be varied to suit conditions in the field as determined by the Engineer.  
The contractor shall drive one test pile in a permanent location at the East Abutment as directed by the Engineer in the field prior to ordering the remainder of piles.

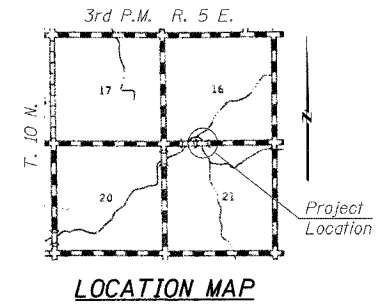
**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specifications.  
**LOADING HS 20-44**  
Allow 25#/sq. ft. for future wearing surface.

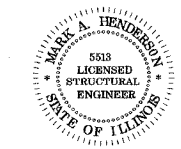
I certify that to the best of my knowledge, information and belief, this bridge is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "A.A.S.H.T.O. Standard Specifications For Highway Bridges".

Mark A. Henderson 5/24/07  
Expiration Date 11/30/2008

**GENERAL PLAN & ELEVATION**  
**T.R. 335A OVER BRUSH CREEK**  
**SECTION 06-15129-00-BR**  
**SHELBY COUNTY**

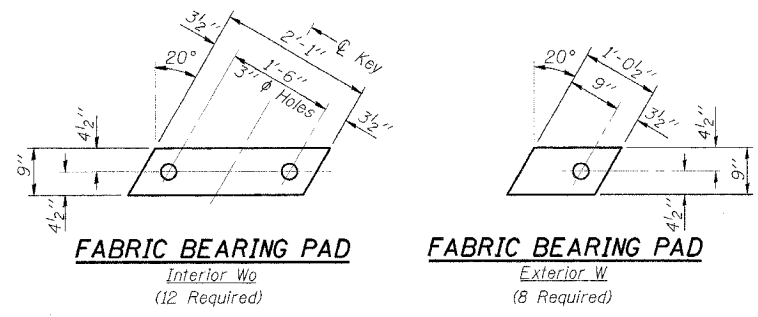


**LOCATION MAP**

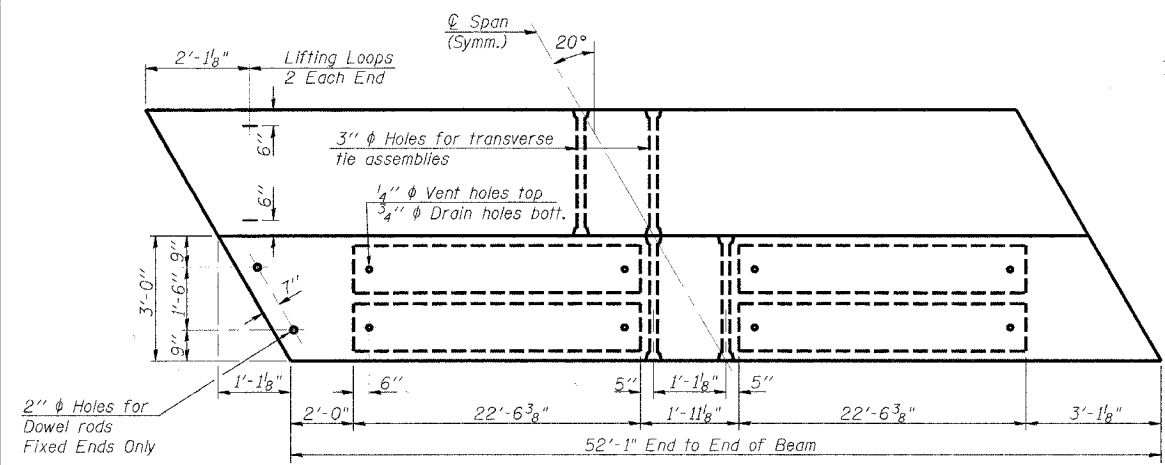
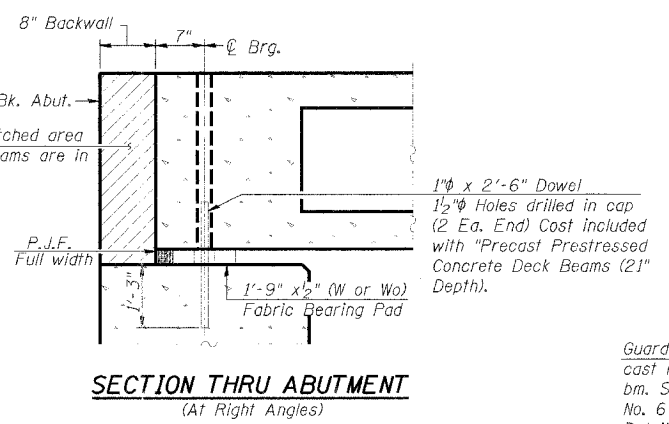
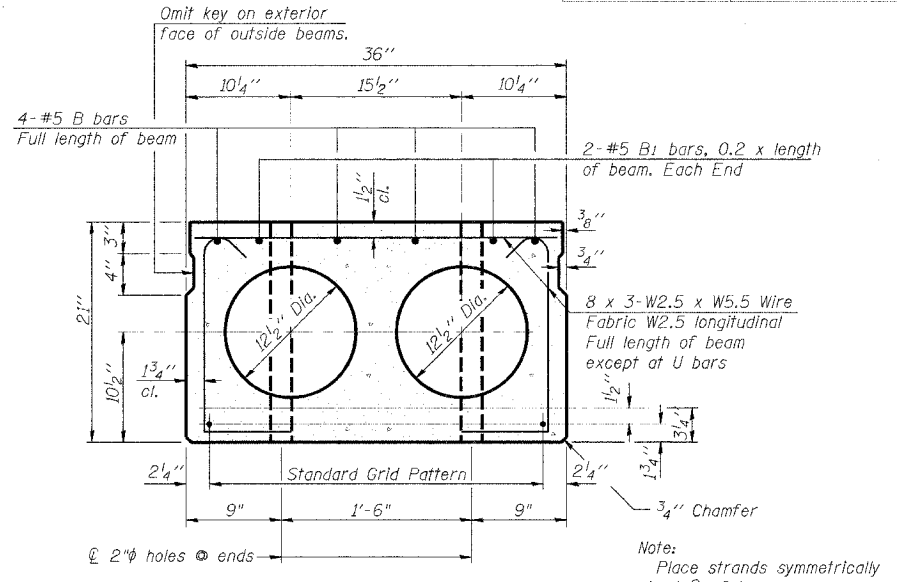
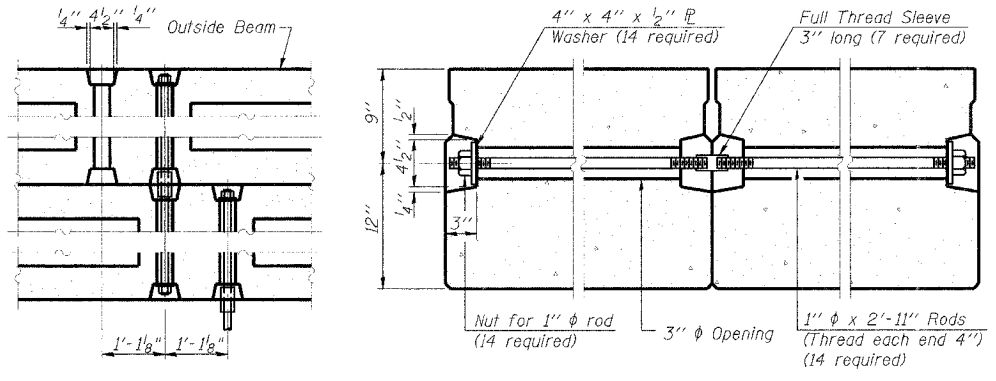
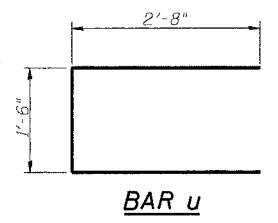


PLAT DATE = #DATES  
FILE NAME = #FILES

|                                |                |                  |             |
|--------------------------------|----------------|------------------|-------------|
| T.R.                           | SECTION        | COUNTY           | TOTAL SHEET |
| 335A                           | 06-15129-00-BR | SHELBY           | 11          |
| STA. 20+00                     | TO STA. 25+00  |                  | 5           |
| FED. ROAD DIST. NO. - ILLINOIS |                | FED. AID PROJECT |             |



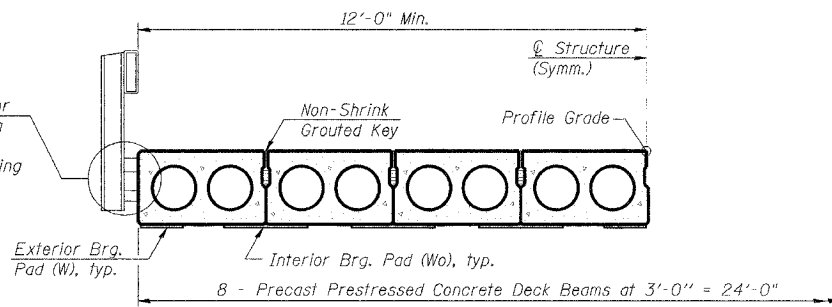
**FIXED BEARINGS**



**NOTES**

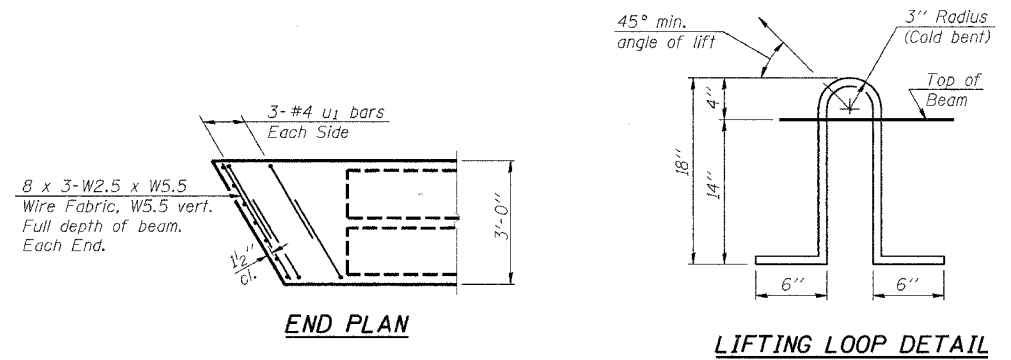
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2-1/2" φ-270 ksi strands, as shown. The 1" φ rods in the transverse tie assembly shall be 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 ASTM A706 Grade 60 (Illinois Modified). 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, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4000 p.s.i. Rail Post Anchor Devices shall be cast into exterior face of outside beams as specified on Sheet No. 6. After beams have been erected, holes shall be drilled into the substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a min. 24 hours prior to grouting the shear keys.

**HALF CROSS SECTION**



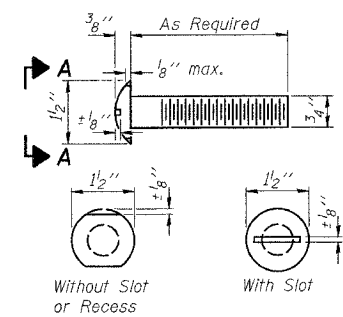
**BILL OF MATERIAL**

|   |         |      |
|---|---------|------|
| Precast Prestressed Conc. Deck Bms. (21" Depth) | Sq. Ft. | 1250 |
|---|---------|------|

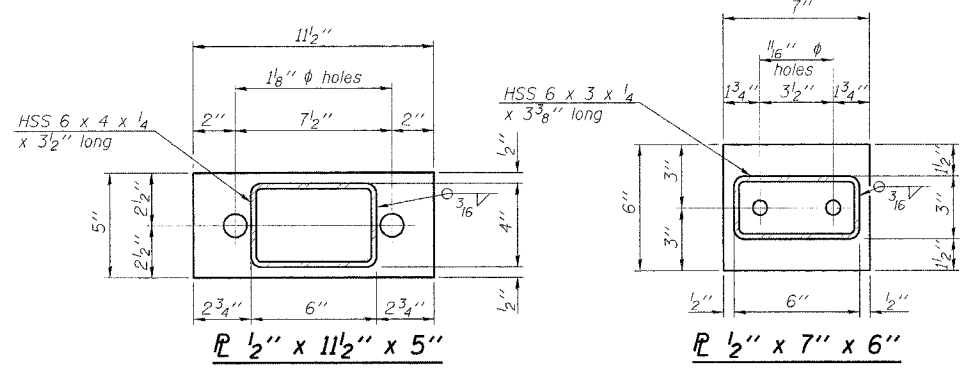


PLOT DATE = 8/17/85  
FILE NAME = 071015

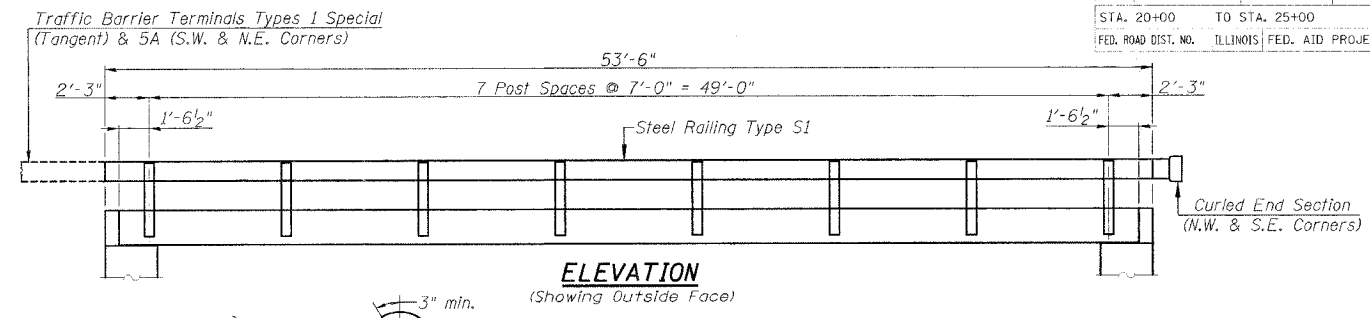
| T.R. SHEET NO.           | SECTION        | COUNTY                    | TOTAL SHEETS | SHEET NO. |
|--------------------------|----------------|---------------------------|--------------|-----------|
| 335A                     | 06-15129-00-BR | SHELBY                    | 11           | 6         |
| STA. 20+00 TO STA. 25+00 |                | ILLINOIS FED. AID PROJECT |              |           |



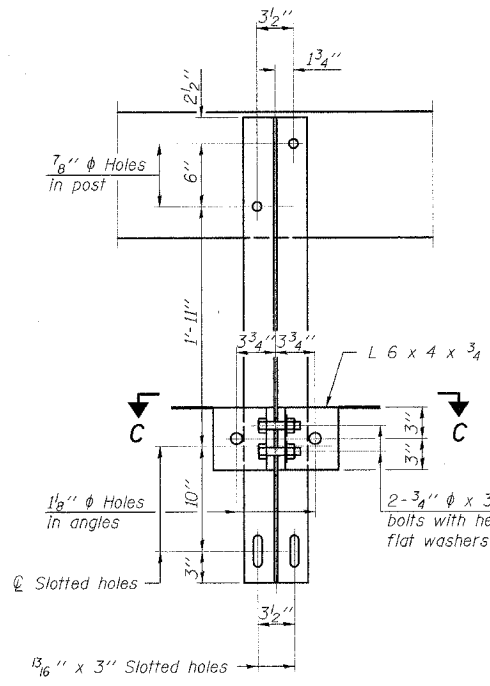
**VIEW A-A  
ROUND HEAD BOLT**



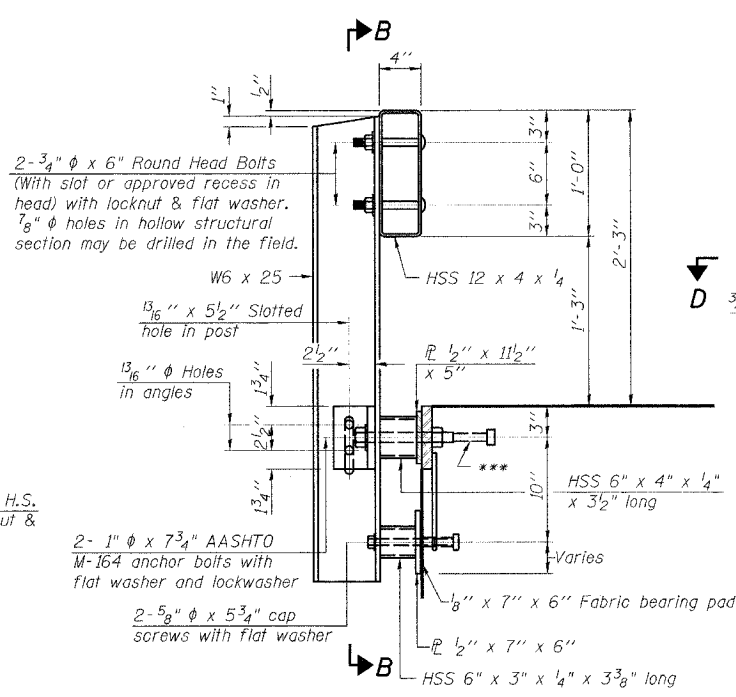
**R 1/2" x 11 1/2" x 5"**  
**R 1/2" x 7" x 6"**



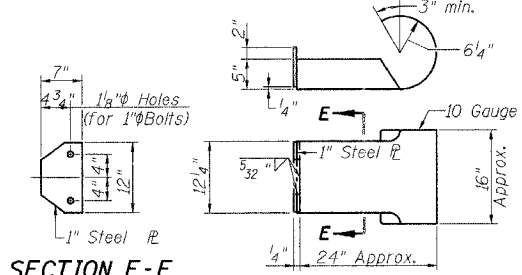
**ELEVATION  
(Showing Outside Face)**



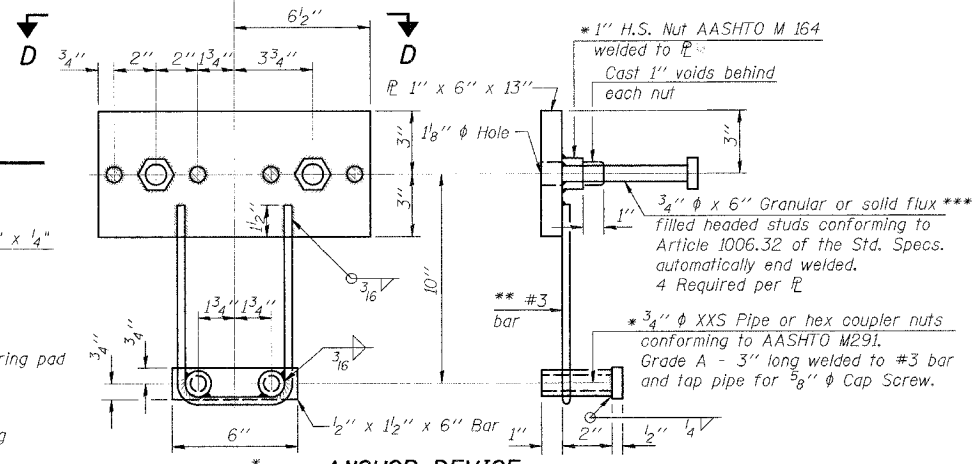
**SECTION B-B**



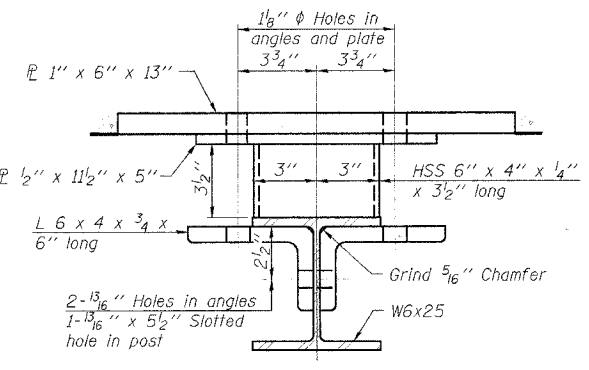
**SECTION AT RAILING POST**



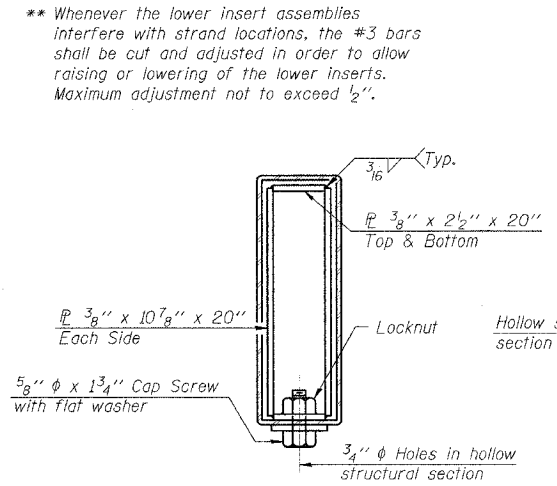
**SECTION E-E  
CURLED END SECTION  
DETAILS (2 Required)**



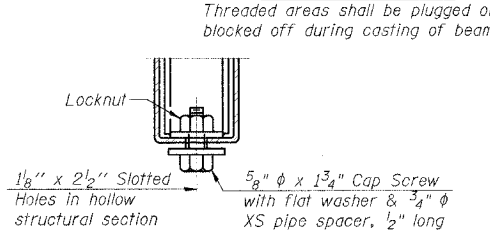
**ANCHOR DEVICE**



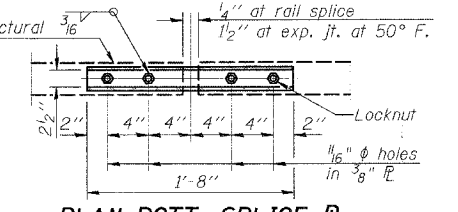
**SECTION C-C**



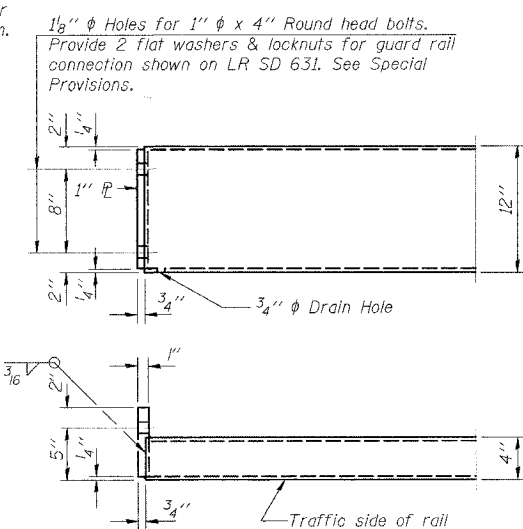
**SECTIONS AT RAIL SPLICE**



**RAIL SPLICE CONNECTION  
AT EXPANSION JT.**

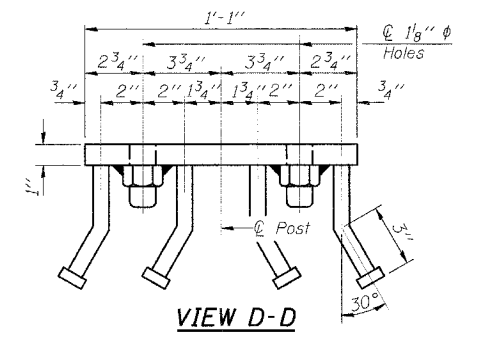


**PLAN-BOTT. SPLICE  
TYPICAL**



**END OF RAIL DETAILS**

**Notes:**  
 All field drilled holes shall be coated with an approved zinc rich paint before erection.  
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S1.  
 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.  
 Hollow structural steel tubing shall conform to the requirements of A.S.T.M. A-500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.  
 All other steel shapes and plates shall conform to the requirements of A.A.S.H.T.O. M-270 Grade 36 except posts and angles shall conform to A.A.S.H.T.O. M-270, Grade 50.  
 Bolts, cap screws, and nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, nuts, and washers noted which shall conform to A.A.S.H.T.O. M-164.  
 All posts, railing, rail splices, anchor devices, angles and tube spacers shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 and A.S.T.M. A-385. Galvanized rail shall not be painted.  
 All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with A.A.S.H.T.O. M-232.  
 Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Railing, Type S1.  
 The lower portion of the post flange in contact with concrete shall receive a 1/8" fabric bearing pad between the plate and concrete.  
 The 3/4" diameter high strength bolts used to connect the 6" x 4" x 3/4" angles to the post shall be tightened in accordance with Article 505.04(f)(2) of the Standard Specifications. The 1" diameter high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8" diameter cap screws in bottom of posts shall be tightened to a snug fit only.  
 The cost of curled end sections shall be included in the cost of Steel Railing, Type S1.



**VIEW D-D**

**BILL OF MATERIAL**

| Item                   | Unit | Quantity |
|------------------------|------|----------|
| Steel Railing, Type S1 | Foot | 107      |

**STEEL RAILING, TYPE S1  
 T.R. 335A OVER BRUSH CREEK  
 SECTION 06-15129-00-BR  
 SHELBY COUNTY**

PLOT DATE = 8/24/05  
 FILE NAME = 061129

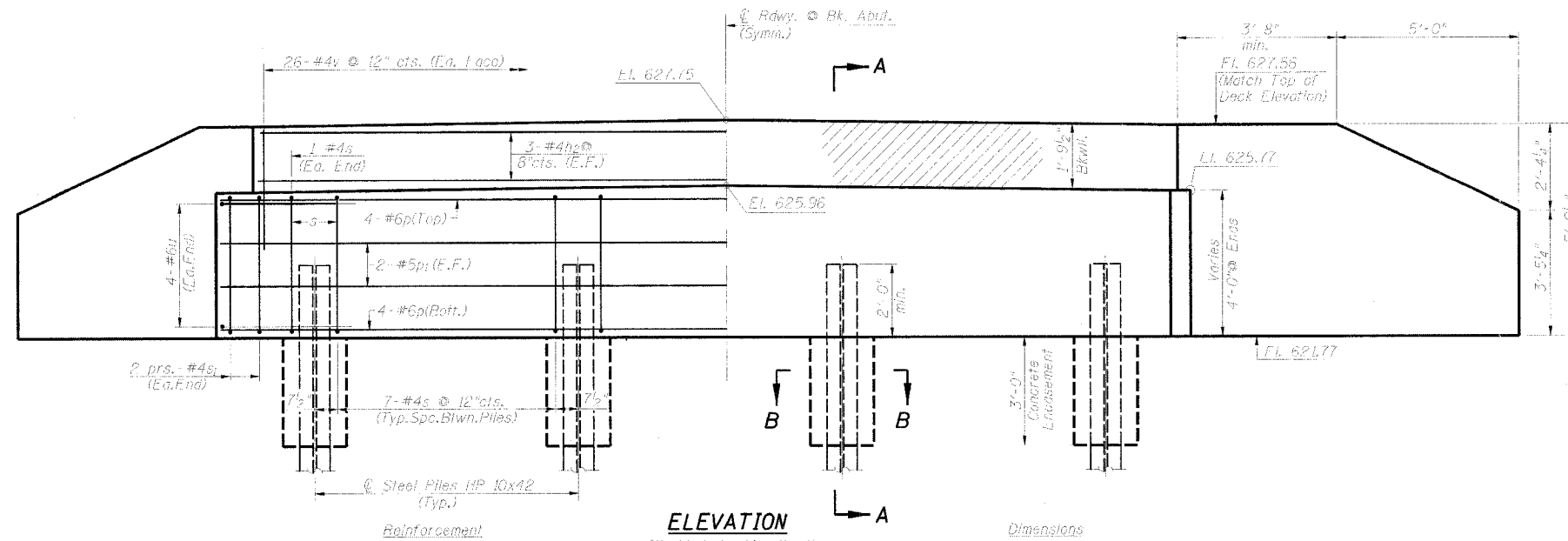
| T.R. NO.                                      | SECTION        | COUNTY        | TOTAL SHEETS | SHEET NO. |
|---|----------------|---------------|--------------|-----------|
| 335A  | 06-15129-00-BR | SHELBY        | 11           | 7         |
| STA. 20+00                                    |                | TO STA. 25+00 |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |                |               |              |           |

**NOTES**

All exposed edges shall have standard  $\frac{1}{4}$ " chamfer. Space reinforcement in cap to miss beam anchor dowels. Wingwalls and Backwalls may, at the contractor's option, be cast monolithically. Hatched area and wingwalls shall be poured after deck beams are anchored in place. Quantity for Concrete Structures is included in Bill of Material, this steel. The Steel H-Piles shall be according to AASHTO M270 Grade 50. The Test Pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

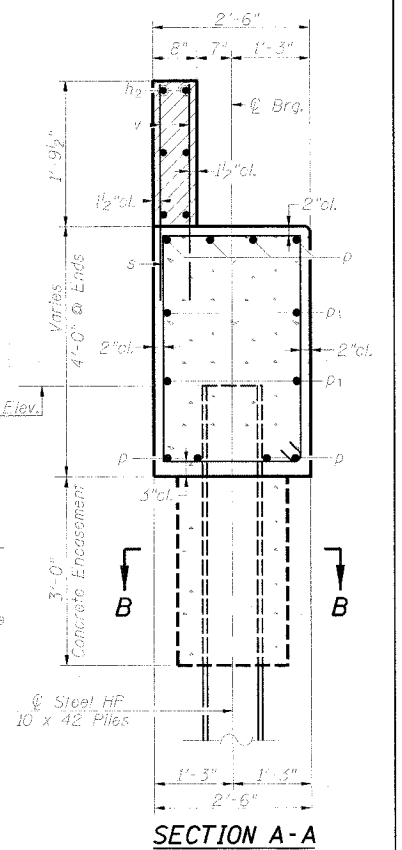
**PILE DATA**

|                                 | W. Abut.       | E. Abut.       |
|---------------------------------|----------------|----------------|
| Pile Type & Size:               | Steel HP 10x42 | Steel HP 10x42 |
| Nominal Required Bearing:       | 335 Kips       | 335 Kips       |
| Allowable Resistance Available: | 111 Kips       | 111 Kips       |
| Estimated Pile Length:          | 27             | 27             |
| Number of Production:           | 4              | 5              |
| Number of Test Piles:           | 0              | 1              |



**ELEVATION**

(W. Abut. Looking West)  
(E. Abut. Looking East)



**SECTION B-B**

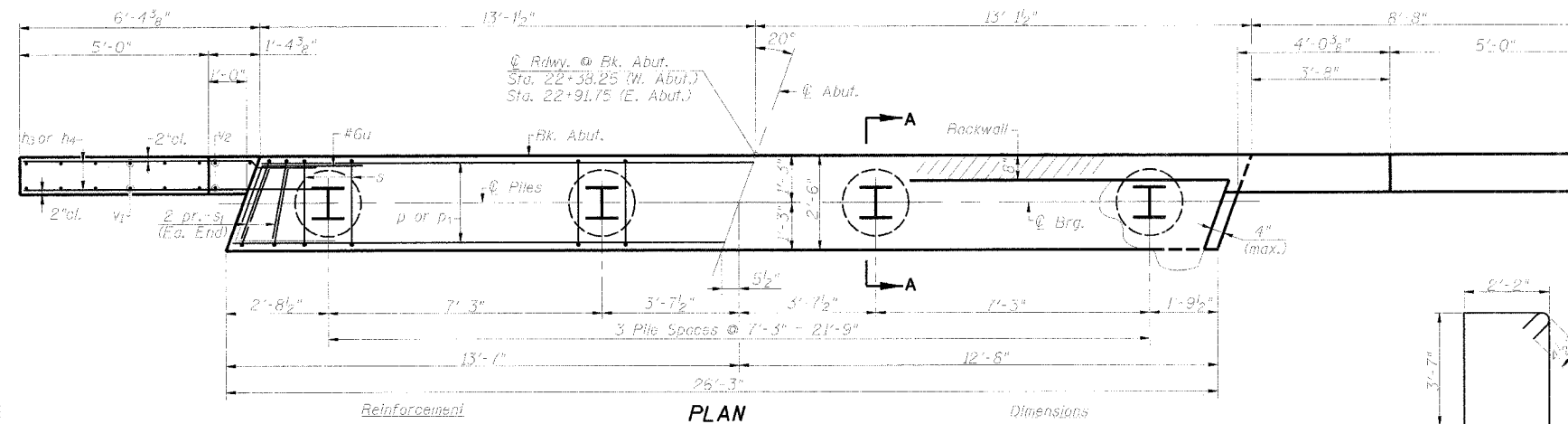
Welded Wire Fabric 6x6-W4.0-W4.0 weighing 58#/100 sq.ft. Cost incidental to Concrete Encasement. (Excavation for placement of Encasement shall be incidental to the unit price for Concrete Encasement. Extend W.W.F. 10" min. into cap.)

**TWO ABUTMENTS  
BILL OF MATERIAL**

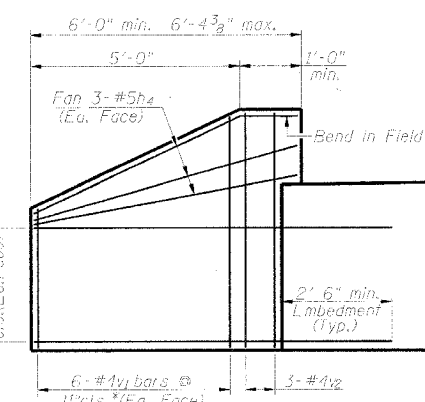
| BAR                             | NO. | SIZE | LENGTH  | SHAPE |
|---------------------------------|-----|------|---------|-------|
| h                               | 16  | #5   | 11'-6"  | ---   |
| h <sub>1</sub>                  | 12  | #5   | 8'-8"   | ---   |
| h <sub>2</sub>                  | 12  | #4   | 28'-3"  | ---   |
| h <sub>3</sub>                  | 16  | #5   | 8'-10"  | ---   |
| h <sub>4</sub>                  | 12  | #5   | 6'-0"   | ---   |
| p <sub>1</sub>                  | 8   | #5   | 25'-11" | ---   |
| p                               | 16  | #6   | 25'-11" | ---   |
| s                               | 46  | #4   | 12'-5"  | □     |
| s <sub>1</sub>                  | 16  | #4   | 7'-11"  | □     |
| u                               | 16  | #6   | 10'-3"  | ---   |
| v                               | 104 | #4   | 3'-3"   | ---   |
| v <sub>1</sub>                  | 24  | #4   | 8'-6"   | ---   |
| v <sub>2</sub>                  | 22  | #4   | 5'-5"   | ---   |
| Concrete Structures             |     |      | Cu. Yd. | 27.8  |
| Reinforcement Bars              |     |      | Pound   | 2745  |
| Furnishing Steel Piles HP 10x42 |     |      | Foot    | 189   |
| Driving Steel Piles             |     |      | Foot    | 189   |
| Test Pile Steel HP 10x42        |     |      | Each    | 1     |
| Concrete Encasement             |     |      | Cu. Yd. | 2.8   |
| Structure Excavation            |     |      | Cu. Yd. | 85    |

**ABUTMENTS**

T.R. 335A OVER BRUSH CREEK  
SECTION 06-15129-00-BR  
SHELBY COUNTY

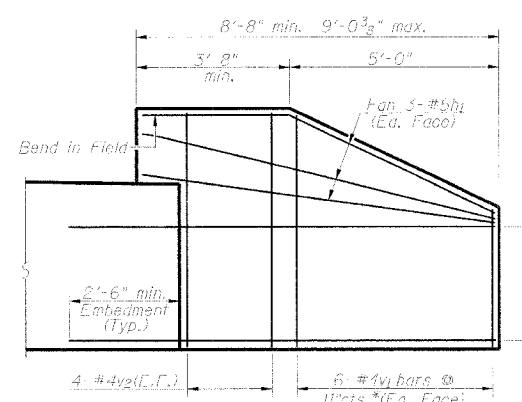


**PLAN**



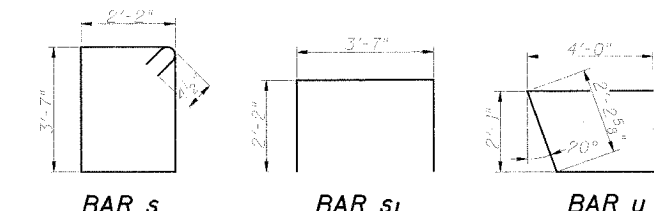
**WINGWALL ELEVATION**

(Showing Reinforcement)  
\* See v<sub>1</sub>-bar cut diagram



**WINGWALL ELEVATION**

(Showing Reinforcement)  
\* See v<sub>1</sub>-bar cut diagram



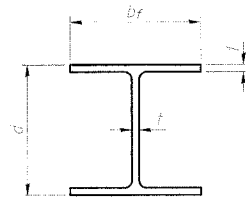
**v<sub>1</sub>- BAR CUT DIAGRAM**

Order v<sub>1</sub> bars full length; Layout in field according to diagram. Cut v<sub>1</sub> bars along cut line. Use remainder of each bar in opposite face.

PLD DATE = 8/20/05  
FILE NAME = PILES

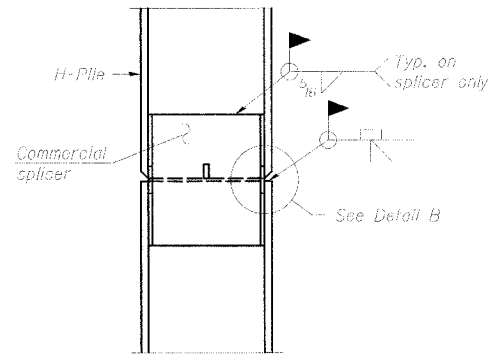


| T.R. SECTION                                  | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|--------|--------------|-----------|
| 335A 06-15129-00-BR                           | SHELBY | 11           | 8         |
| STA. 20+00 TO STA. 25+00                      |        |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |        |              |           |

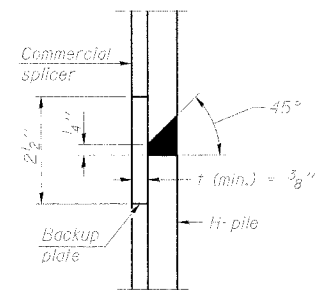


STEEL PILE TABLE

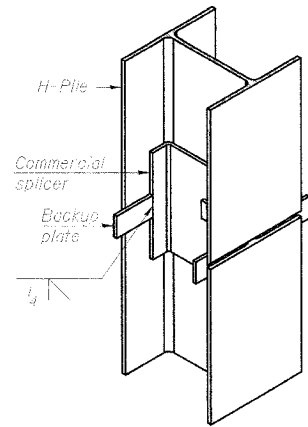
| Designation | Depth d | Flange width bf | Web and Flange thickness t | Encasement diameter A |
|-------------|---------|-----------------|----------------------------|-----------------------|
| HP 14x117   | 14 1/4" | 14 7/8"         | 1 1/16"                    | 30"                   |
| x102   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



ELEVATION

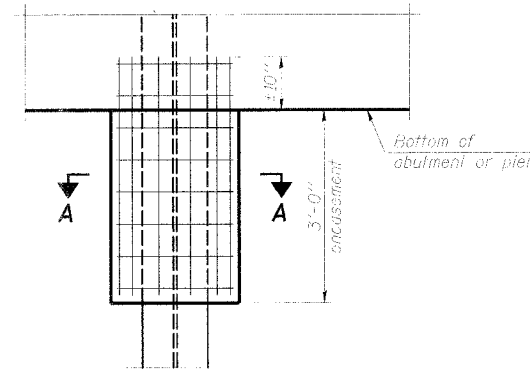


DETAIL "B"

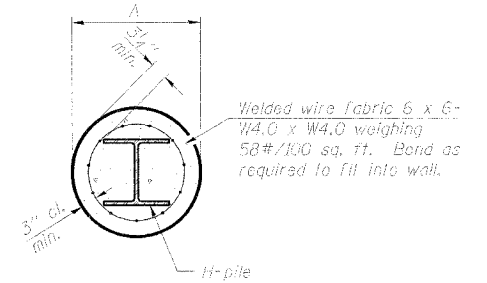


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

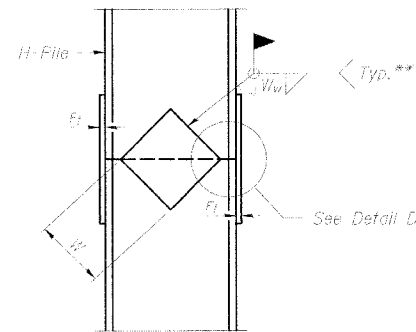


ELEVATION

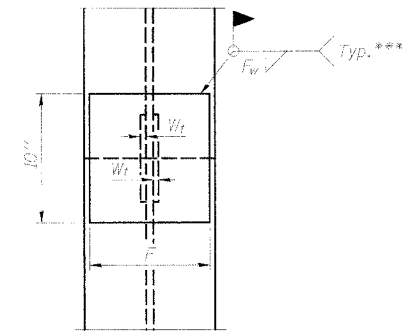


SECTION A-A

PILE ENCASEMENT



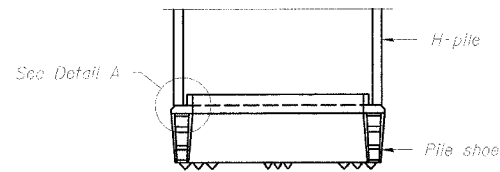
ELEVATION



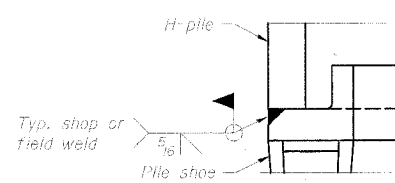
END VIEW

| Designation | F       | F <sub>1</sub> | F <sub>w</sub> | W      | W <sub>1</sub> | W <sub>w</sub> |
|-------------|---------|----------------|----------------|--------|----------------|----------------|
| HP 14x117   | 12 1/2" | 1"             | 7 3/4"         | 7 3/4" | 5 3/8"         | 1 1/2"         |
| x102        | 12 1/2" | 1 1/8"         | 7 3/4"         | 7 3/4" | 5 3/8"         | 1 1/2"         |
| x89         | 12 1/2" | 3/4"           | 7 3/4"         | 7 3/4" | 5 3/8"         | 1 1/2"         |
| x73         | 12 1/2" | 5/8"           | 7 3/4"         | 7 3/4" | 5 3/8"         | 1 1/2"         |
| HP 12x84    | 10"     | 7/8"           | 6 1/2"         | 6 1/2" | 5 3/8"         | 1 1/2"         |
| x74         | 10"     | 7/8"           | 6 1/2"         | 6 1/2" | 5 3/8"         | 1 1/2"         |
| x63         | 10"     | 5/8"           | 6 1/2"         | 6 1/2" | 5 3/8"         | 1 1/2"         |
| x53         | 10"     | 5/8"           | 6 1/2"         | 6 1/2" | 5 3/8"         | 1 1/2"         |
| HP 10x57    | 8"      | 5/4"           | 5 1/4"         | 5 1/4" | 5 3/8"         | 3/8"           |
| x42         | 8"      | 5/8"           | 5 1/4"         | 5 1/4" | 5 3/8"         | 3/8"           |
| HP 8x36     | 7"      | 5/8"           | 4 1/4"         | 4 1/4" | 5 3/8"         | 3/8"           |

WELDED PLATE FIELD SPLICE

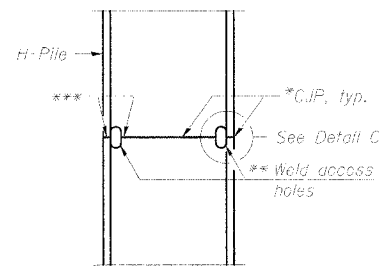


ELEVATION

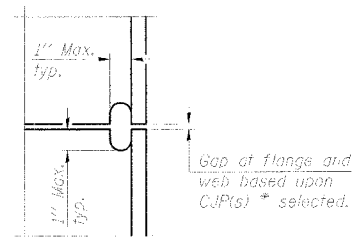


DETAIL A

H-PILE SHOE ATTACHMENT



ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE

- \* Use joint conforming to Figure 3.4 in AWS D11, Structure Welding Code - Steel.
- \*\* Preparation per Fig. 5.2 in AWS D11, Structure Welding Code - Steel.
- \*\*\* Interrupt welds 1/4" from end of each pile.

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

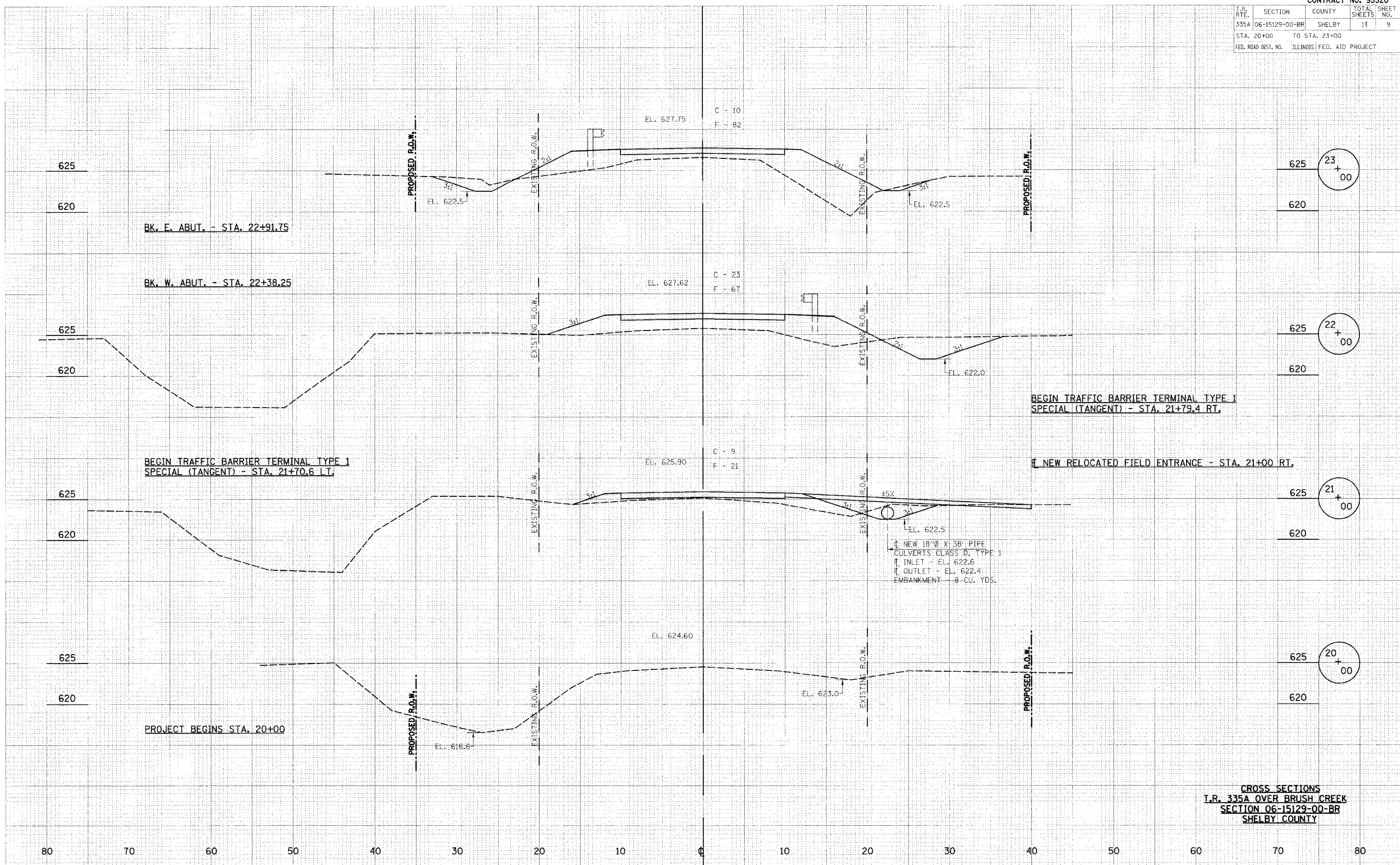
PILE SPLICE DETAILS  
T.R. 335A OVER BRUSH CREEK  
SECTION 06-15129-00-BR  
SHELBY COUNTY

|   |                |               |              |           |
|---|----------------|---------------|--------------|-----------|
| CONTRACT NO. 95520                            |                |               |              |           |
| T.R. NO.                                      | SECTION        | COUNTY        | TOTAL SHEETS | SHEET NO. |
| 335A  | 06-15129-00-BR | SHELBY        | 11           | 9         |
| STA. 20+00                                    |                | TO STA. 23+00 |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |                |               |              |           |

|               |         |
|---------------|---------|
| FILED         | DATE    |
| SEARCHED      | INDEXED |
| SERIALIZED    | FILED   |
| NOV 20 1995   |         |
| FBI - MEMPHIS |         |

|          |       |
|----------|-------|
| ORIGINAL | DATE  |
| BY       | BY    |
| NO. 1    | NO. 1 |
| NO. 2    | NO. 2 |
| NO. 3    | NO. 3 |
| NO. 4    | NO. 4 |
| NO. 5    | NO. 5 |

PLOT DATE = 8/24/95  
FILE NAME = 811111.D



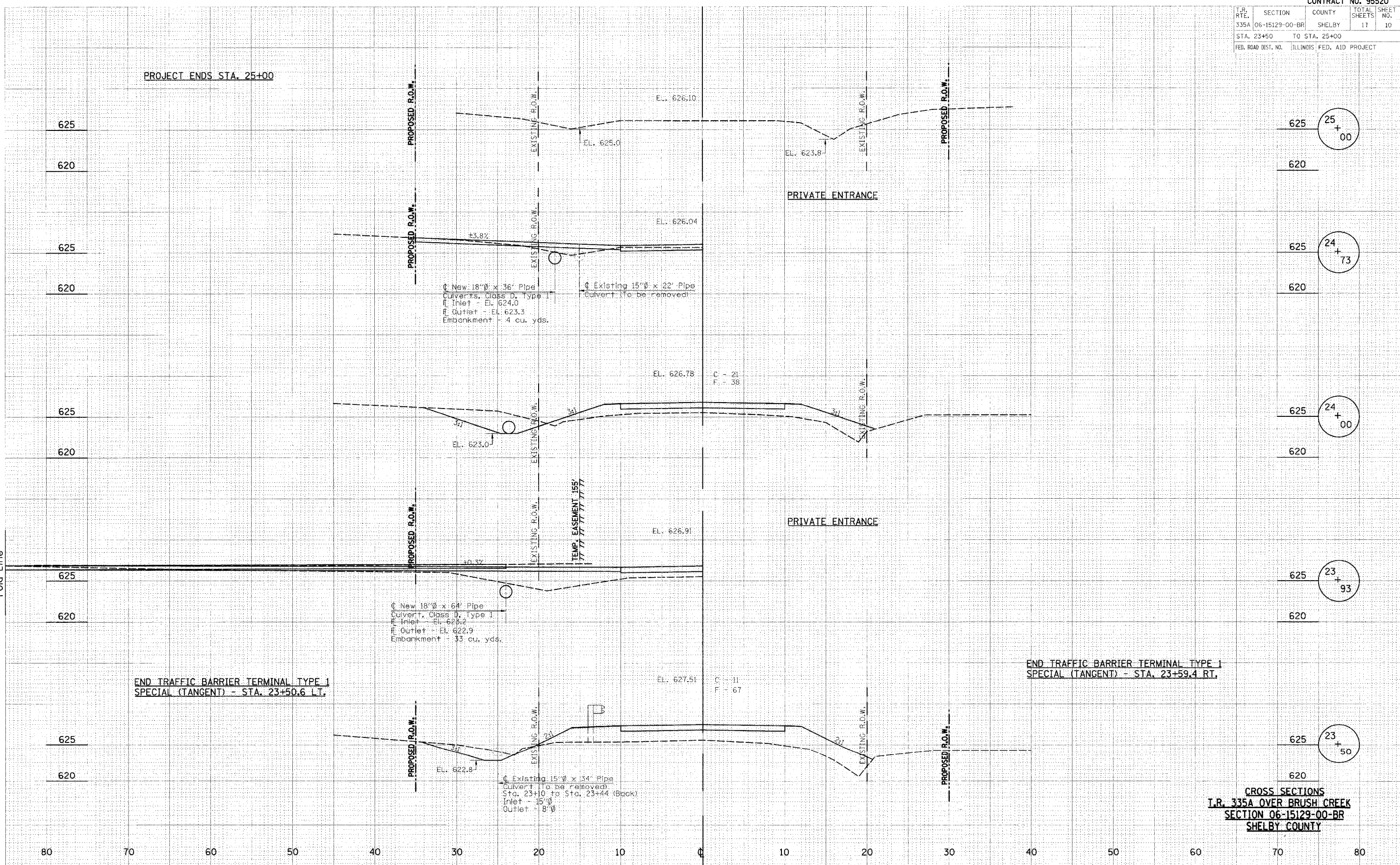
CROSS SECTIONS  
I.R. 335A OVER BRUSH CREEK  
SECTION 06-15129-00-BR  
SHELBY COUNTY

| CONTRACT NO. 95520  |                           |               |              |           |
|---------------------|---------------------------|---------------|--------------|-----------|
| T.R. RTE.           | SECTION                   | COUNTY        | TOTAL SHEETS | SHEET NO. |
| 335A                | 06-15129-00-BR            | SHELBY        | 11           | 10        |
| STA. 23+50          |                           | TO STA. 25+00 |              |           |
| FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT |               |              |           |

|       |  |
|-------|--|
| DATE  |  |
| BY    |  |
| CHKD  |  |
| APP'D |  |
| NO.   |  |

|       |  |
|-------|--|
| DATE  |  |
| BY    |  |
| CHKD  |  |
| APP'D |  |
| NO.   |  |

PLOT DATE = #DATE#  
FILE NAME = #FILE#



CROSS SECTIONS  
 T.R. 335A OVER BRUSH CREEK  
 SECTION 06-15129-00-BR  
 SHELBY COUNTY