

**INDEX OF SHEETS**

- 1 COVER SHEET
- 2 PLAN & PROFILE
- 3 CROSS SECTIONS
- 4-10 BRIDGE PLANS

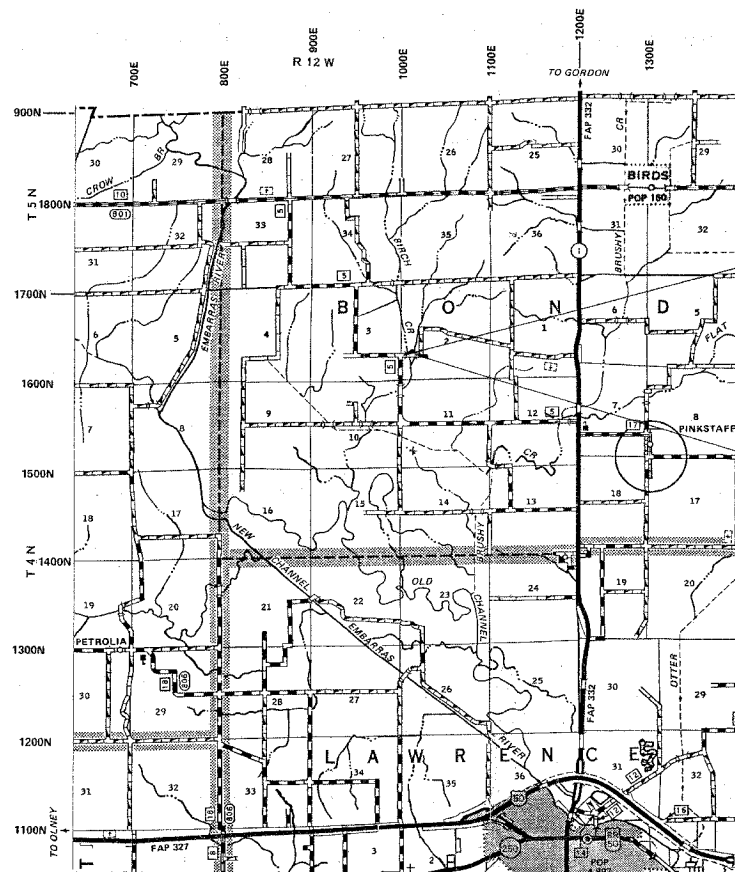
STANDARDS: 280001-02 - EROSION CONTROL  
(SEE PROPOSAL) 702001-05 - TRAFFIC  
BLR 21-6 - TRAFFIC  
BLR 22-4 - TRAFFIC

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
PLANS FOR PROPOSED  
FEDERAL-AID B.R.R. PROGRAM  
LAWRENCE COUNTY  
SECTION 05-02126-00-BR  
BOND ROAD DISTRICT  
STRUCTURE NO. 051-3276  
PROJECT NO. BROS-101(23)  
JOB NO. C-97-026-06  
TR 47

SCALES

PLAN 1 INCH = 50 FEET  
PROFILE HORZ. 1 INCH = 50 FEET  
PROFILE VERT. 1 INCH = 10 FEET  
CROSS SECTION 1 INCH = 5 FEET

| SUMMARY OF QUANTITIES |       |  |                    |
|-----------------------|-------|--|--------------------|
| QTY                   | UNIT  | ITEM   | XX00-2A<br>CODE NO |
| 240                   | TON   | AGGREGATE SURFACE COURSE,<br>TYPE B (CA-6)             | XX003658           |
| 120                   | TON   | AGGREGATE SURFACE COURSE,<br>TYPE B (CA-9)             | XX003659           |
| 0.5                   | ACRE  | TREE REMOVAL, ACRES                                    | 20100500           |
| 300                   | CU YD | EARTH EXCAVATION                                       | 20200100           |
| 92                    | CU YD | CHANNEL EXCAVATION                                     | 20300100           |
| 399                   | CU YD | FURNISHED EXCAVATION                                   | 20400800           |
| 0.50                  | ACRE  | SEEDING, CLASS 2 (SPECIAL)                             | 25001000           |
| 4                     | EACH  | TEMPORARY DITCH CHECKS                                 | 28000300           |
| 80                    | FOOT  | PERIMETER EROSION BARRIER                              | 28000400           |
| 90                    | TON   | STONE DUMPED RIPRAP, CLASS A4                          | 28100807           |
| 48                    | TON   | STONE RIPRAP DITCH                                     | 28102600           |
| 1                     | EACH  | REMOVAL OF EXISTING STRUCTURES                         | 50100100           |
| 19.8                  | CU YD | CONCRETE STRUCTURES                                    | 50300225           |
| 1400                  | SQ FT | PRECAST PRESTRESSED CONCRETE<br>DECK BEAMS (21" DEPTH) | 50400405           |
| 1940                  | POUND | REINFORCEMENT BARS                                     | 50800105           |
| 100                   | FOOT  | STEEL RAILING, TYPE S1                                 | 50900205           |
| 594                   | FOOT  | FURNISHING STEEL PILES HP10X42                         | 51201400           |
| 594                   | FOOT  | DRIVING STEEL PILES                                    | 51202700           |
| 1                     | EACH  | TEST PILE STEEL HP 10X42                               | 51203400           |
| 2.6                   | CU YD | CONCRETE ENCASEMENT                                    | 51204315           |
| 1                     | EACH  | NAME PLATES  | 51500100           |
| 1                     | L SUM | MOBILIZATION   | 67100100           |
| 1                     | L SUM | TRAFFIC CONTROL AND PROTECTION                         | 70101700           |



SECTION 05-02126-00-BR  
BEGINS STA. 4+00

STA. 6+30 - STANDARD BRIDGE DESIGN  
PROPOSED PRECAST PRESTRESSED CONCRETE DECK  
BEAM BRIDGE. 1 SPAN @ 50'. 28' RDWY., SKEW = 0'  
EXISTING STR. NO. 051-3057  
PROPOSED STR. NO. 051-3276

SECTION 05-02126-00-BR  
ENDS STA. 8+50

FUNCTIONAL CLASS: RURAL LOCAL ROAD  
ADT = 50  
DESIGN SPEED = 30 MPH

CONTRACT NO. 95452

LOCATION MAP

APPROXIMATE SCALE: 1 INCH = 1 MILE  
NET LENGTH = 450 L.F. = 0.085 MILES

TOLL FREE JOINT UTILITY LOCATING  
INFORMATION FOR EXCAVATORS (J.U.L.I.E.)  
TELEPHONE NO. 1-800-892-0123

PROFESSIONAL DESIGN FIRM #184-000832

*Michael J. ...* 10/26/2005  
ILLINOIS REGISTERED PROFESSIONAL ENGINEER # 31350  
LICENSE EXPIRES NOVEMBER 30, 2007

APPROVED 10/27, 2005

*[Signature]*  
LOCAL AGENCY REPRESENTATIVE

PASSED 12-23, 2005

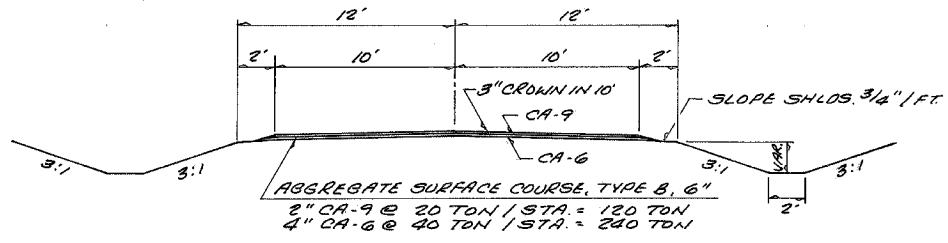
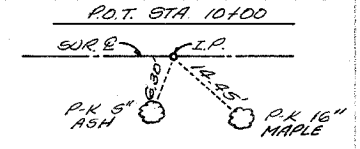
*Manuel E. Kattl*  
DISTRICT SEVEN ENGINEER  
OF LOCAL ROADS & STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW

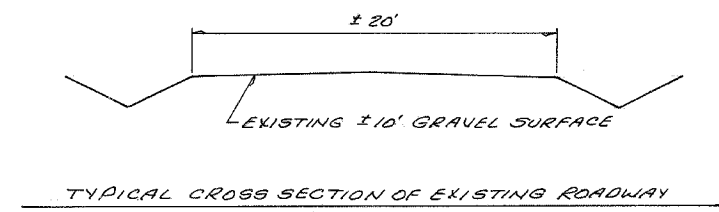
12/23, 2005

*Christie M. Reed*  
DEPUTY DIRECTOR OF HIGHWAYS  
REGION FOUR ENGINEER  
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

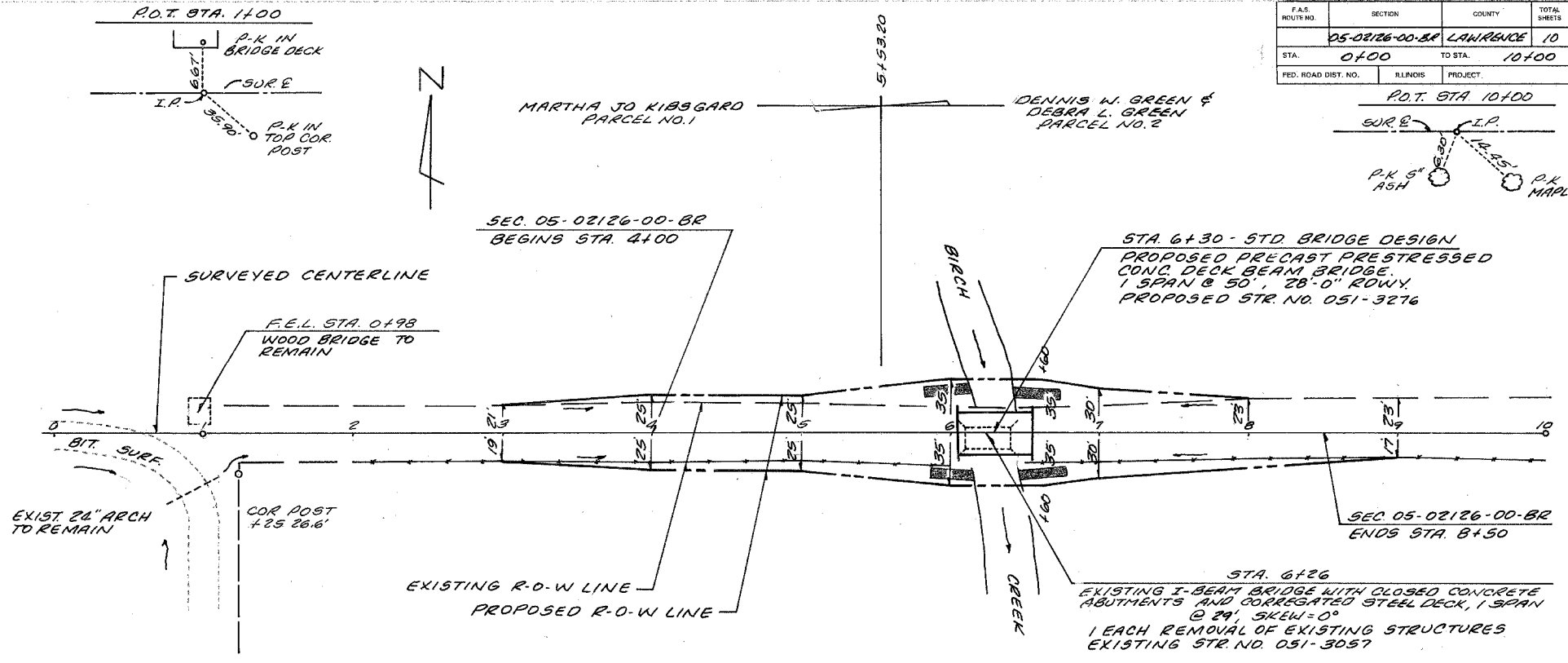
| F.A.S. ROUTE NO.    | SECTION       | COUNTY  | TOTAL SHEETS | SHEET |
|---------------------|---------------|---------|--------------|-------|
| 05-02126-00-BR      | LAWRENCE      |         | 10           | 2     |
| STA. 0+00           | TO STA. 10+00 |         |              |       |
| FED. ROAD DIST. NO. | ILLINOIS      | PROJECT |              |       |



TYPICAL CROSS SECTION OF PROPOSED IMPROVEMENT



TYPICAL CROSS SECTION OF EXISTING ROADWAY



STA. 6+30 - STD BRIDGE DESIGN  
 PROPOSED PRECAST PRESTRESSED CONC. DECK BEAM BRIDGE.  
 1 SPAN @ 50', 28'-0" ROWY.  
 PROPOSED STR. NO. 051-3276

STA. 6+26  
 EXISTING I-BEAM BRIDGE WITH CLOSED CONCRETE ABUTMENTS AND CORRUGATED STEEL DECK, 1 SPAN @ 24', SKEW = 0°  
 1 EACH REMOVAL OF EXISTING STRUCTURES  
 EXISTING STR. NO. 051-3057

KELLY E. SLATER & MARY L. SLATER, CO-TRUSTEES OF REVOCABLE TRUST  
 PARCEL NO. 3

**EARTHWORK SCHEDULE**

|                             |             |
|-----------------------------|-------------|
| EARTH EXCAVATION            | 300 CU. YD. |
| EARTH EXCAVATION ADJ. 25%   | 225 CU. YD. |
| CHANNEL EXCAVATION          | 92 CU. YD.  |
| CHANNEL EXCAVATION ADJ. 25% | 69 CU. YD.  |
| EMBANKMENT                  | 893 CU. YD. |
| FURNISHED EXCAVATION        | 399 CU. YD. |

B.M. #1 ELEV. 434.10  
 P.K. IN COR. POST  
 26.6' RT. STA. 1+25

**PERIMETER EROSION BARRIER**  
 20' @ EACH COR. OF BRIDGE DU TO E  
 OF CHANNEL SLOPE = 80 FEET

**TEMPORARY DITCH CHECKS**  
 LT. & RT. 6+00 = 2 EACH  
 LT. & RT. 7+00 = 2 EACH  
 TOTAL = 4 EACH

**TREE REMOVAL, ACRES**  
 RT. STA. 3+00-7+00 = 0.4 AC.  
 LT. STA. 5+12-6+18 = 0.1 AC.  
 TOTAL = 0.5 AC.

**STONE RIPRAP DITCH**  
 LT. 5+82-6+12 = 12 TON  
 RT. 5+85-6+15 = 12 TON  
 LT. 6+40-6+70 = 12 TON  
 RT. 6+45-6+75 = 12 TON  
 TOTAL = 48 TON

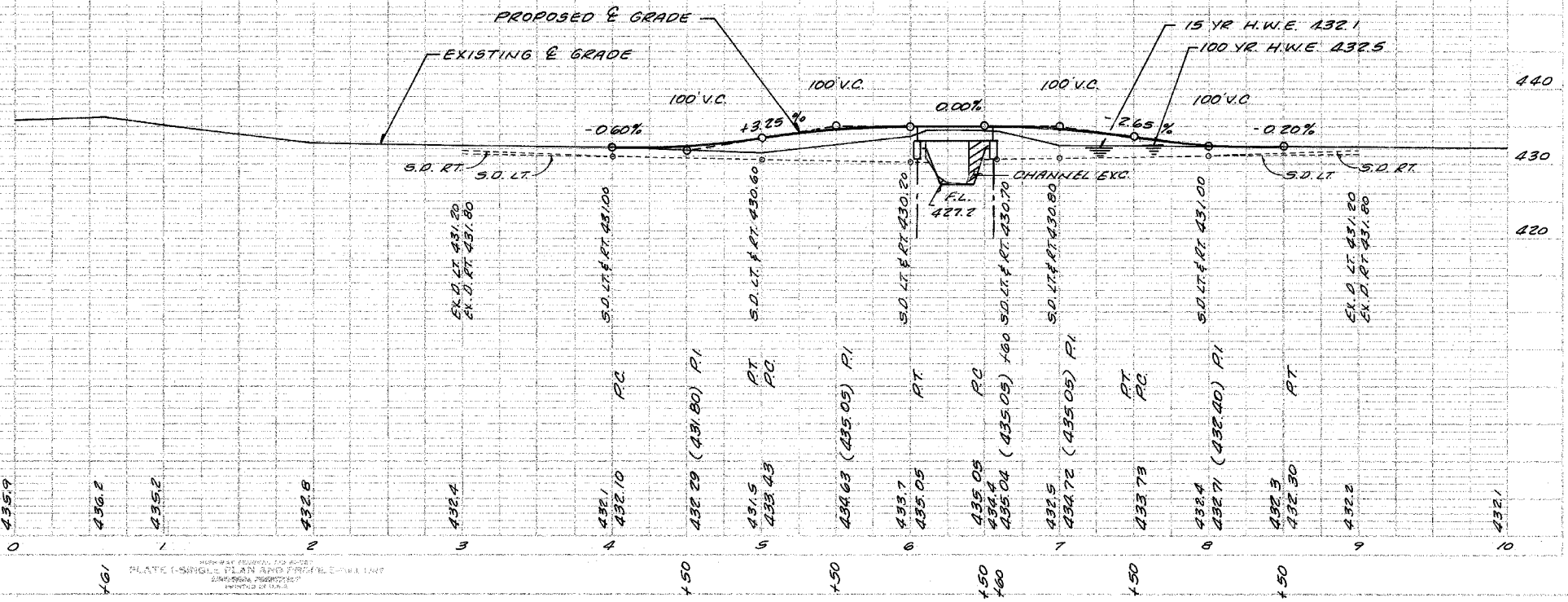
**CONSTRUCT TRANSITION**  
 FROM EXIST. ROWY. TO PROP. 24' ROWY. B.M. #2 ELEV. 432.88  
 STA. 3+00 TO STA. 4+00 P.K. IN 10" TREE ON E  
 STA. 8+00 TO STA. 9+00 STA. 10+50

FROM PROP. 24' ROWY. TO PROP. 28' ROWY.  
 STA. 5+55 TO STA. 6+05  
 STA. 6+55 TO STA. 7+05

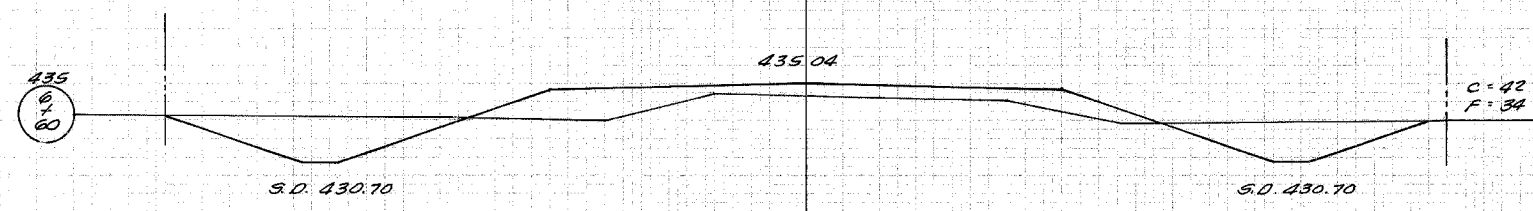
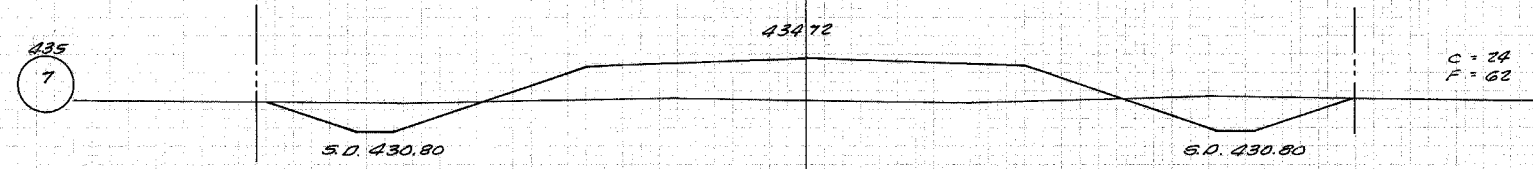
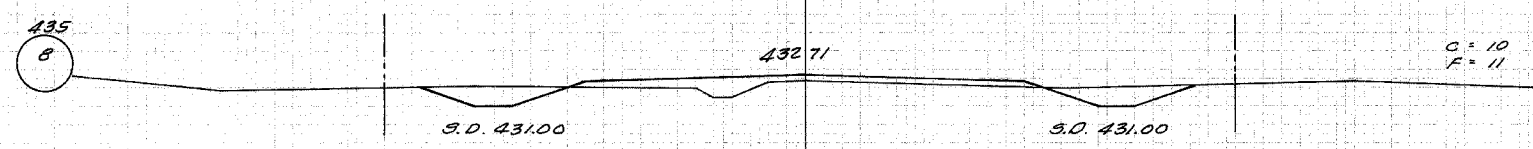
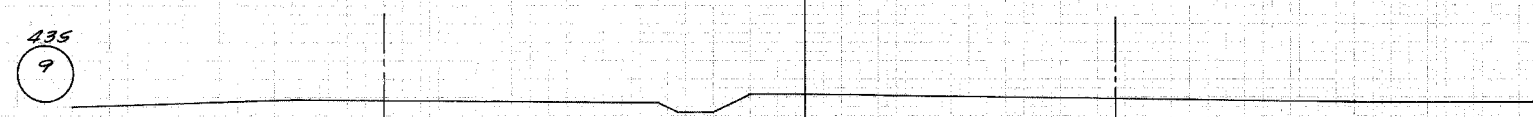
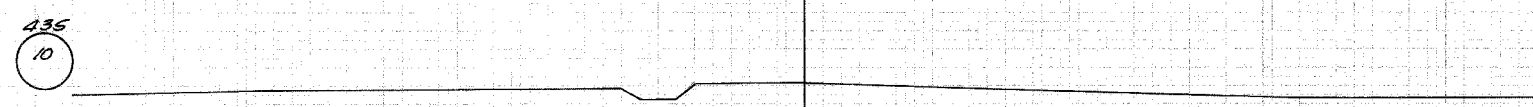
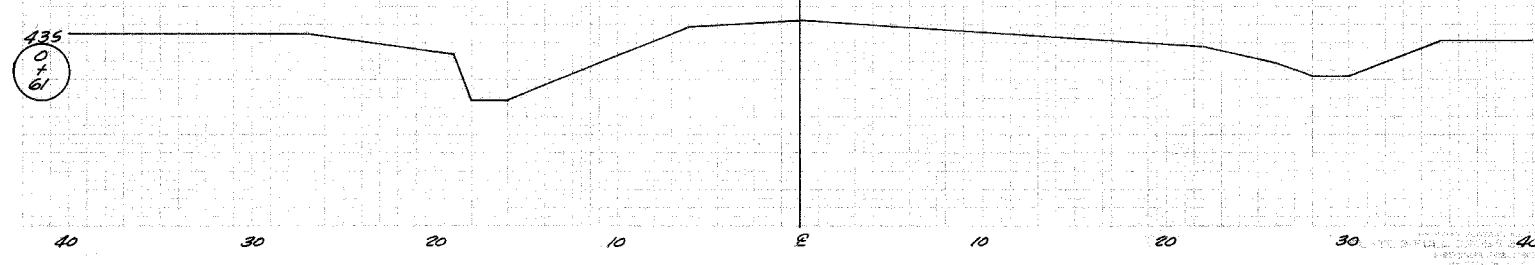
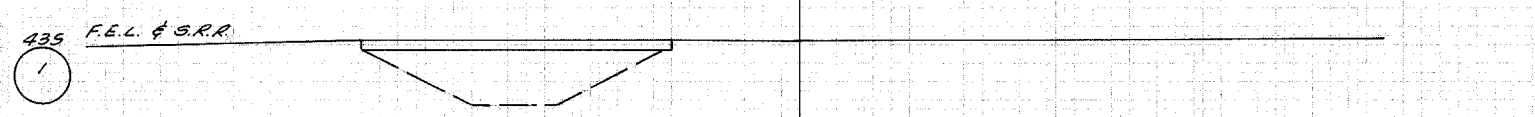
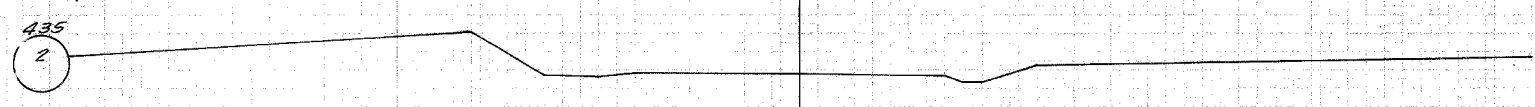
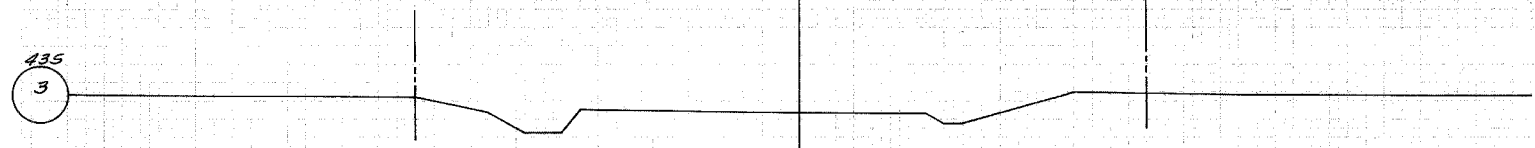
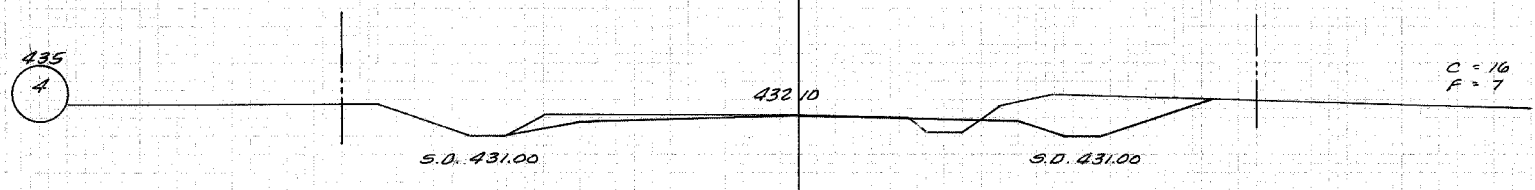
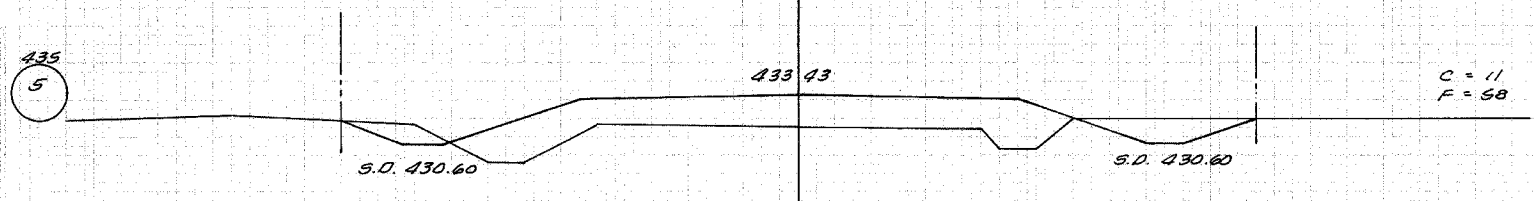
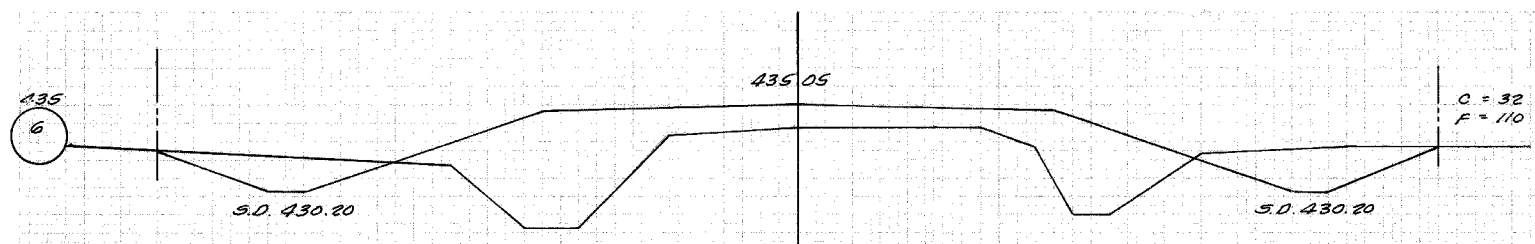
QUANTITIES INCLUDED IN THOSE LISTED

**SEEDING CLASS 2 (SPECIAL)**  
 STA. 3+00-7+00 = 0.5 AC.

UTILITIES  
 NONE



| F.A.S. ROUTE NO.    | SECTION  | COUNTY        | TOTAL SHEETS | SHEET |
|---------------------|----------|---------------|--------------|-------|
| 05-02126-00-86      | LAWRENCE |               | 10           | 3     |
| STA. 0+61           |          | TO STA. 10+00 |              |       |
| FED. ROAD DIST. NO. | ILLINOIS | PROJECT       |              |       |



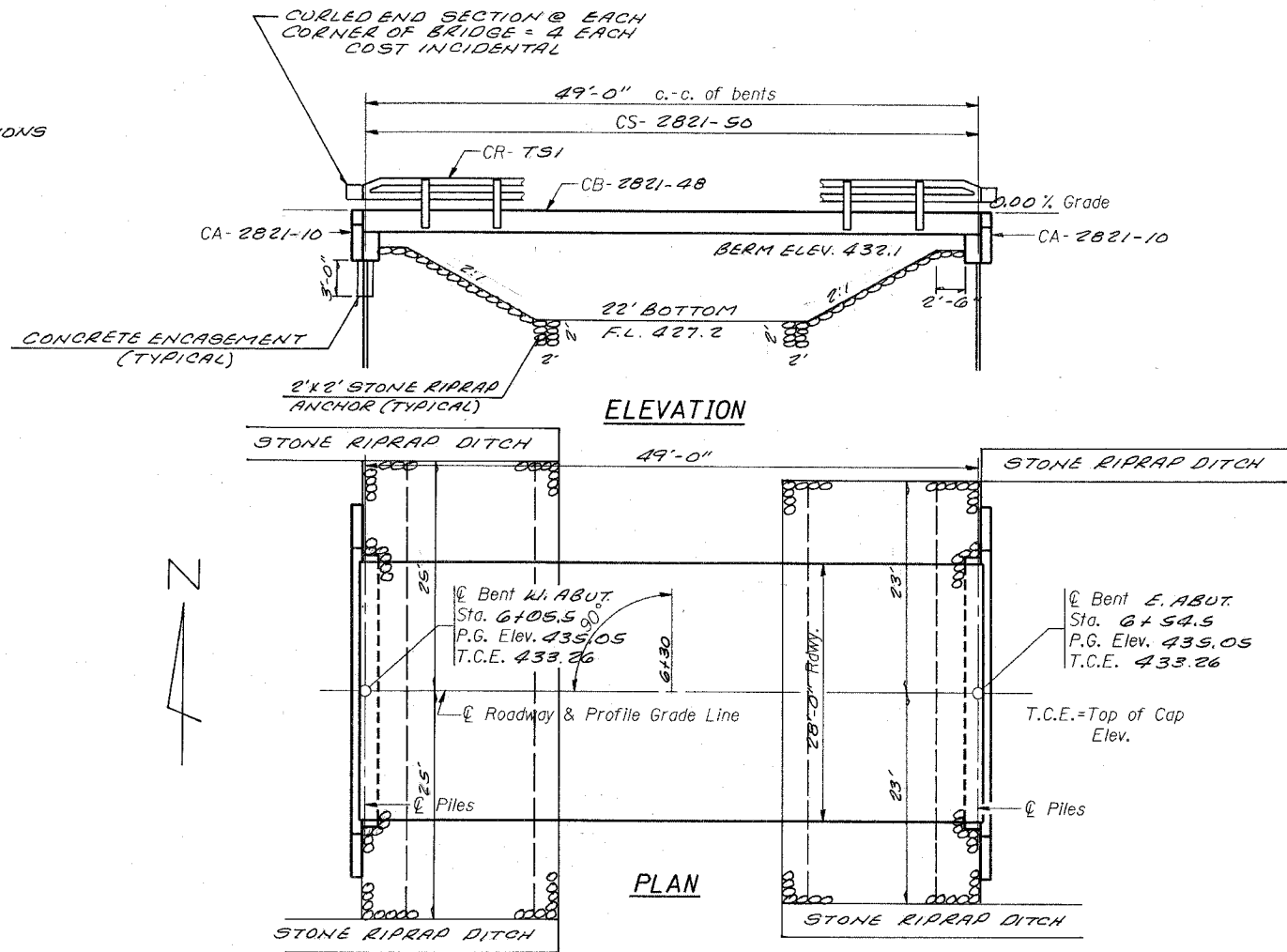
| ROUTE NO. | SECTION  | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------|----------|--------|--------------|-----------|
| *         | LAWRENCE | 10     | 4            |           |

\*05-02126-00-BR

B.M.

Existing Structure

Salvage- SEE SPECIAL PROVISIONS



**GENERAL NOTES**

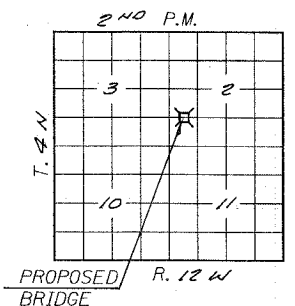
1. The Contractor shall drive 1 test piles, as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
2. See Special Provisions for boring logs.
3. ~~A Calcium Nitrite Corrosion inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.~~

**TOTAL BILL OF MATERIAL**

| Item  | Unit    | Super | Sub.  |        | Total |
|---|---------|-------|-------|--------|-------|
|   |         |       | Piers | Abuts. |       |
| Removal of Existing Structures                      | Each    |       |       |        | 1     |
| Bituminous Concrete Surface Course, Class I         | Ton     |       |       |        |       |
| Waterproofing Membrane System                       | Sq. Yd. |       |       |        |       |
| Concrete Structures                                 | Cu. Yd. |       |       | 19.8   | 19.8  |
| Precast Prestressed Concrete Deck Beams (21" Depth) | Sq. Ft. | 1400  |       |        | 1400  |
| Steel Bridge Rail, Type SM                          | Foot    |       |       |        |       |
| Steel Railing, Type S-1                             | Foot    | 100   |       |        | 100   |
| Reinforcement Bars                                  | Pound   |       |       | 1940   | 1940  |
| Furnishing STEEL PILES HP 10 X 42                   | Foot    |       |       | 594    | 594   |
| Driving STEEL PILES                                 | Foot    |       |       | 594    | 594   |
| Test Piles STEEL HP 10 X 42                         | Each    |       |       | 1      | 1     |
| Name Plates   | Each    |       |       | 1      | 1     |
| Class I Concrete Encasement                         | Cu. Yd. |       |       | 2.6    | 2.6   |
| STONE DUMPED RIPRAP, CLASS A4                       | TON     |       |       |        | 90    |

STONE RIPRAP DITCH CLASS A4 = 90 TON  
MINIMUM THICKNESS = 12"

STATION 6+30  
BIRCH CREEK  
SEC. 05-02126-00-BR BUILT 200  
PROJ. NO. BROS 101(23)  
LAWRENCE COUNTY  
LOADING HS20  
STR. NO. 051-3276



PROPOSED BRIDGE R. 12 W

**PILE DATA (2-ABUTS.)**

Type STEEL HP 10 X 42  
Capacity REFUSAL Tons  
Estimated Length 66 Feet  
Number Required 10 (Includes 1 Test Pile located in Bent #1) WEST ABUT.

**LETTERING FOR NAME PLATE**

Locate Name Plate at S.W. Corner of Bridge (See Std. CN)

**WATERWAY INFORMATION**

Drainage Area = 5.22 SQ. MI. Low Grade Elev. = 432.1 @ Sta. 4+00

| Flood Yr.   | Freq. | Q C.F.S. | Opening Sq. Ft. |        | Nat. H.W.E. | Head - Ft. |       | Headwater El. |       |
|-------------|-------|----------|-----------------|--------|-------------|------------|-------|---------------|-------|
|             |       |          | Exist.          | Prop.  |             | Exist.     | Prop. | Exist.        | Prop. |
| Design      | 15    | 1275     | 52,120          | 84,155 | 432.10      | 0.1        | 0.2   | 432.2         | 432.3 |
| Base        | 100   | 2059     | 84,152          | 85,172 | 432.50      | 0.2        | 0.3   | 432.7         | 432.8 |
| Overtopping |       |          |                 |        |             |            |       |               |       |
| Max. Calc.  | 500   |          |                 |        |             |            |       |               |       |

**DESIGN SPECIFICATIONS**

1992 AASHTO, 1993 & 1994 Interims  
HS20-44 Loading, Load Factor Design.

**INDEX OF SHEETS**

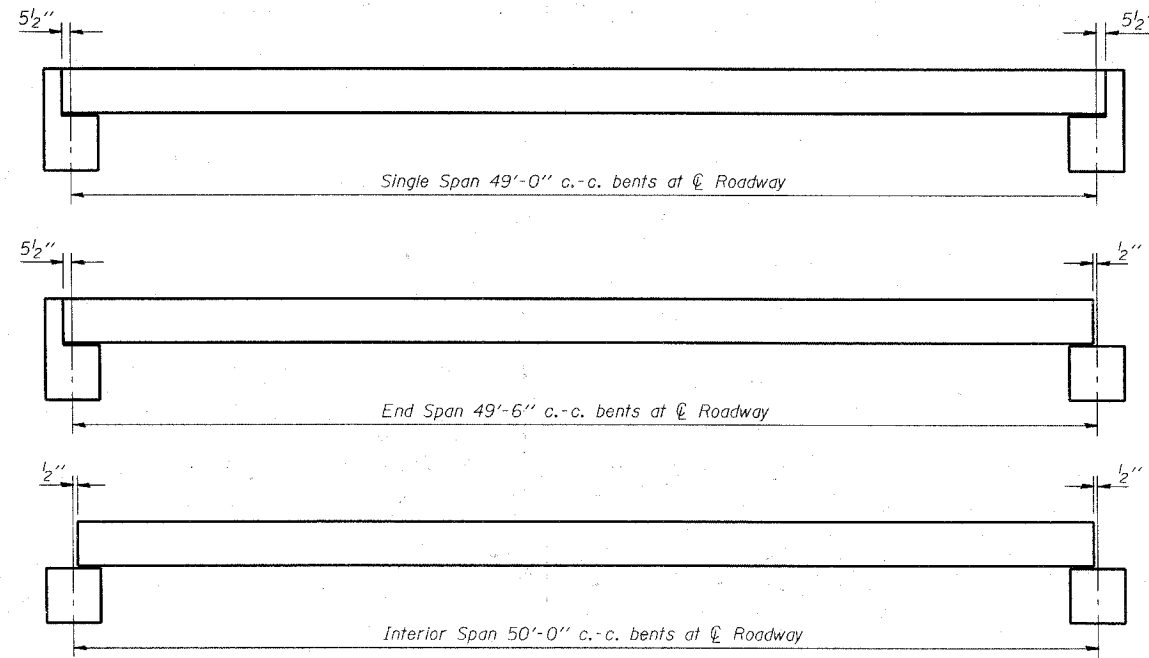
1. General Plan & Elevation
2. Standard CS - 2821 - 50
3. Standard CB - 2821 - 48
4. Standard CA - 2821 - 10
5. Standard CR - 791
6. Standard CN
7. Standard CX - 1
8. Standard
9. Standard

**GENERAL PLAN & ELEVATION**

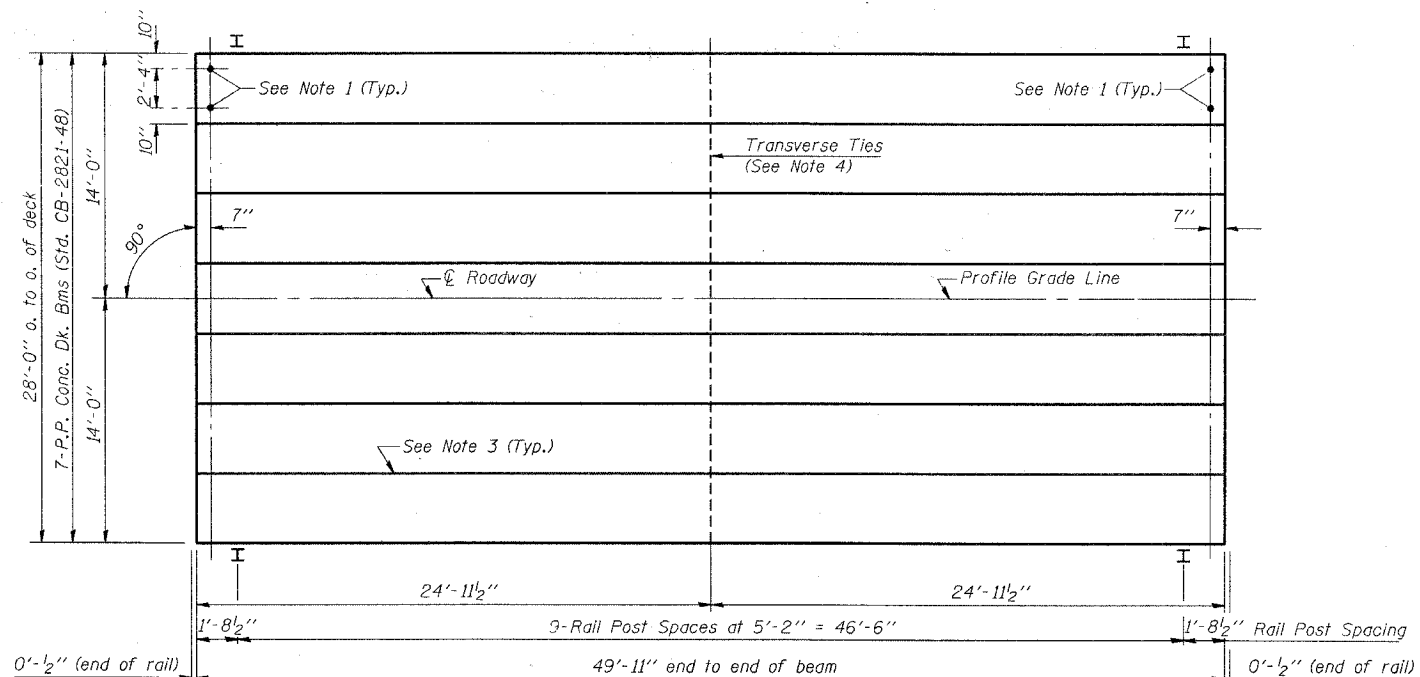
T.R. ROUTE 47  
OVER BIRCH CREEK  
SECTION 05-02126-00-BR  
LAWRENCE COUNTY  
STATION 6+30

| REL. | SECTION  | COUNTY | TOTAL SHEETS | SHEET NO. |
|------|----------|--------|--------------|-----------|
| *    | LAWRENCE | 10     | 5            |           |

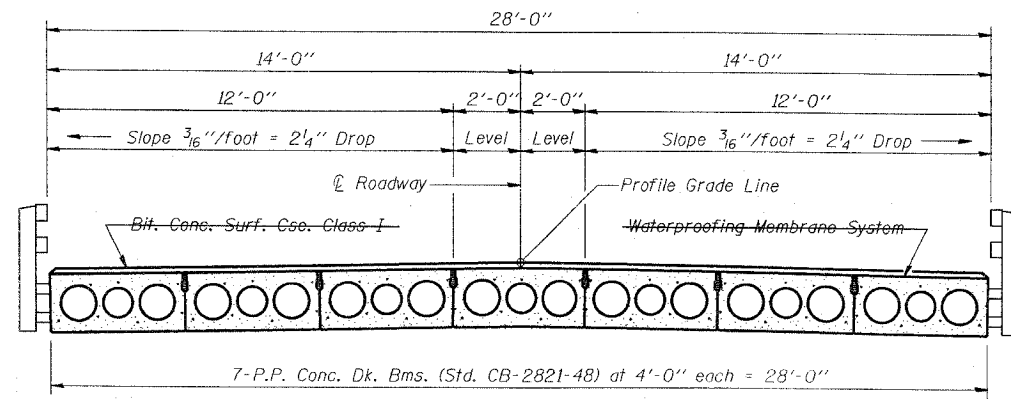
FEL. ROAD DIST. NO. 1 ILLINOIS FEL. AID PROJECT NO. \*05-02126-00-BR



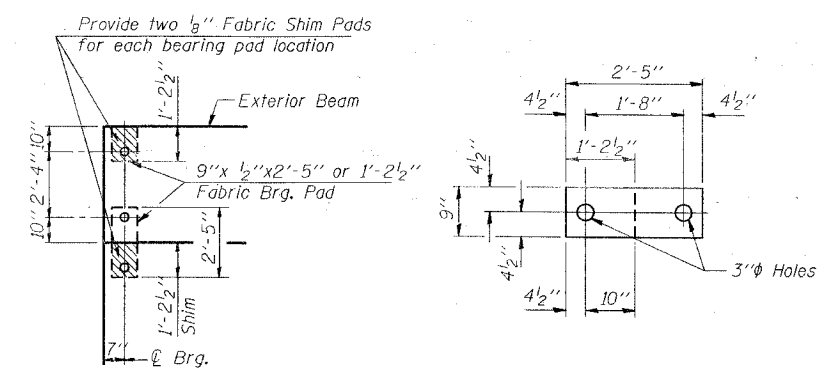
TYPICAL ELEVATIONS



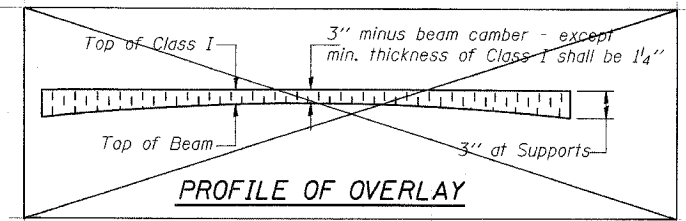
PLAN



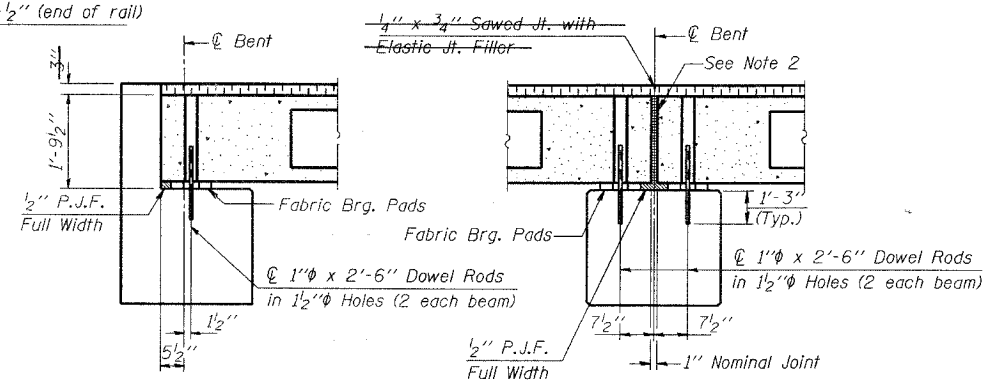
CROSS SECTION



1/2" FABRIC BRG. PAD DETAILS



PROFILE OF OVERLAY



SECTION AT ABUTS. (Along Roadway)

SECTION AT PIERS (Along Roadway)

NOTES

- After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
- Nominal 1" joint at Roadway shall be filled with non-shrink grout.
- Longitudinal keys shall be grouted. WITH NON-SHRINK GROUT.
- 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 outside shall be filled with grout after transverse tie assembly is in place.

QUANTITIES FOR ONE SPAN

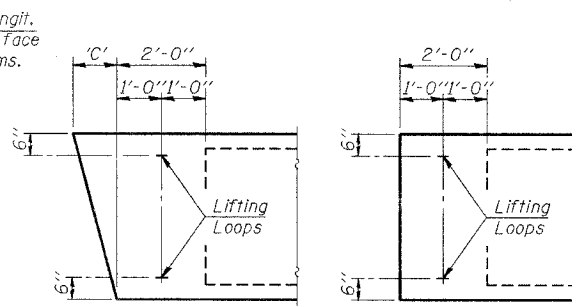
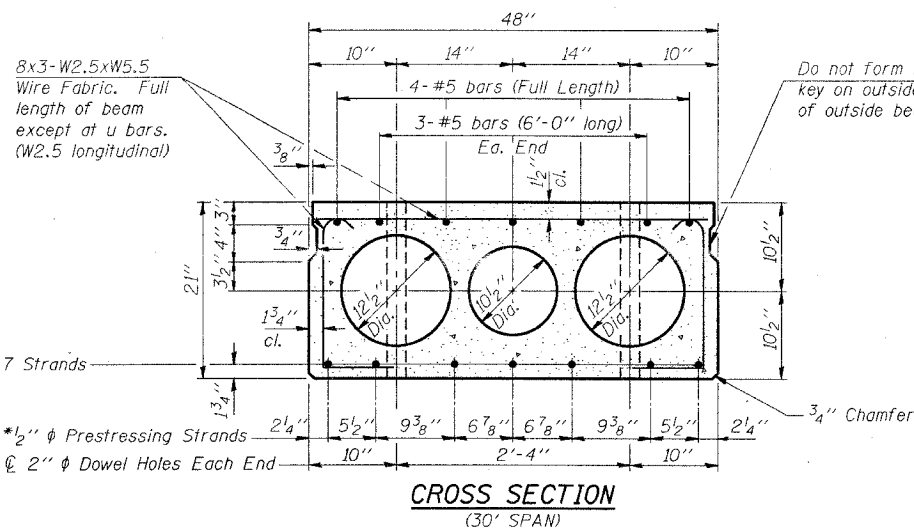
|                               |                |
|-------------------------------|----------------|
| P.P. Conc. Dk. Bm. 21" Dp.    | 1400 Sq. Ft.   |
| Steel Railing                 | 100 Ft.        |
| Bit. Conc. Surf. Coo. Class I | 19.0 Tons      |
| Waterproofing Membrane System | 155.6 Sq. Yds. |

P.P.C. DECK BEAM SUPERSTRUCTURE

|                     |          |          |         |
|---------------------|----------|----------|---------|
| 28' RDWY.           | 21" BMS. | 50' SPAN | 0° SKEW |
| STANDARD CS-2821-50 |          |          |         |

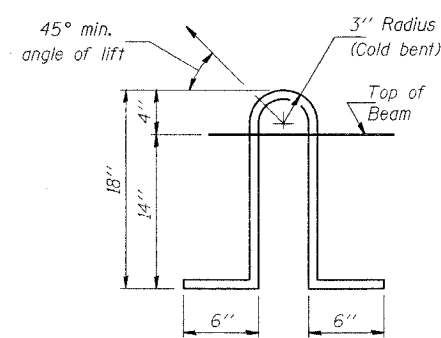
Illinois Department of Transportation  
 PASSED NOVEMBER 1, 1995  
 Prof. J. Kasper  
 Engineer of Bridge Design  
 APPROVED NOVEMBER 1, 1995  
 Ralph E. Carls  
 Engineer of Bridges and Structures

| REF. | SECTION  | COUNTY | TOTAL SHEETS | SHEET NO. |
|------|----------|--------|--------------|-----------|
| *    | LAWRENCE |        | 10           | 6         |



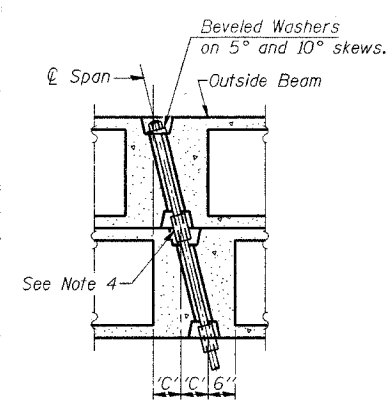
**END BLOCK DETAILS**

Each beam shall have four Lifting Loops, two at each end of beam cast in locations shown above. Loops shall be burned off after beams have been erected.

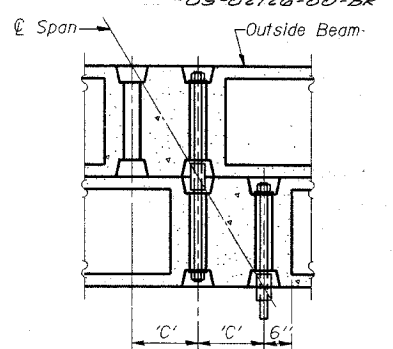


**LIFTING LOOP DETAIL**

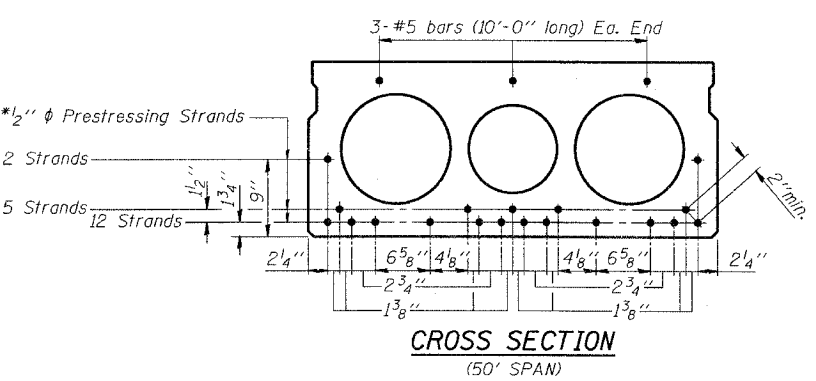
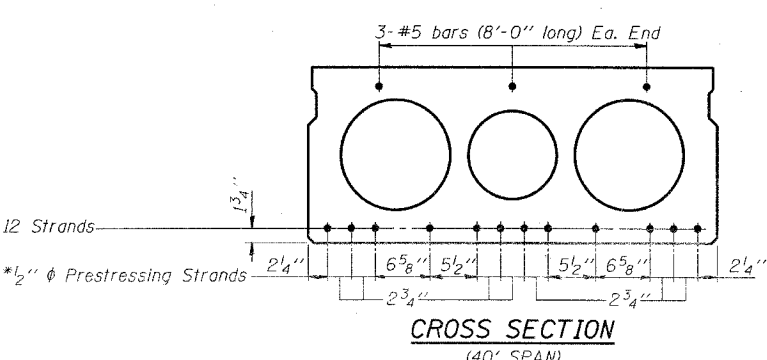
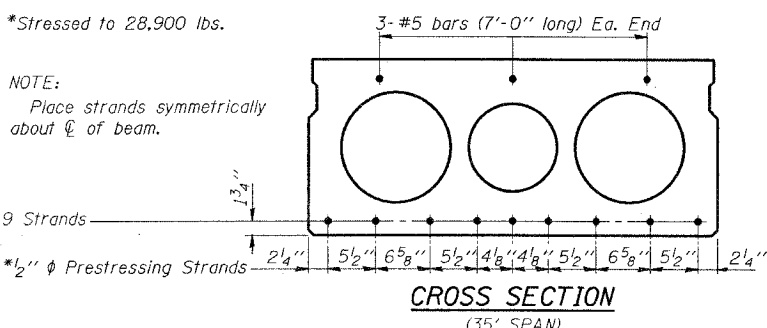
Lifting loops shall be 2. 1/2"  $\phi$ -270 ksi strands, as shown. Alternate approved lifting devices are also acceptable.



**PARTIAL PLAN TRANSVERSE TIE ASSEMBLY**  
(D'=0°, 5° and 10°)

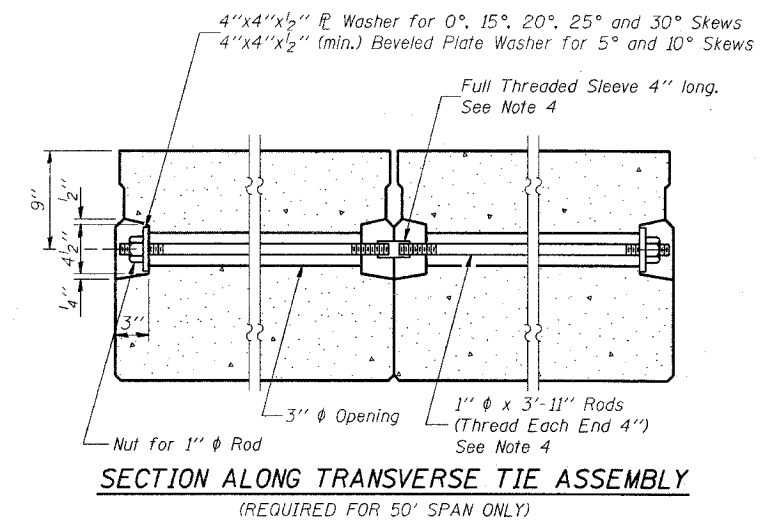
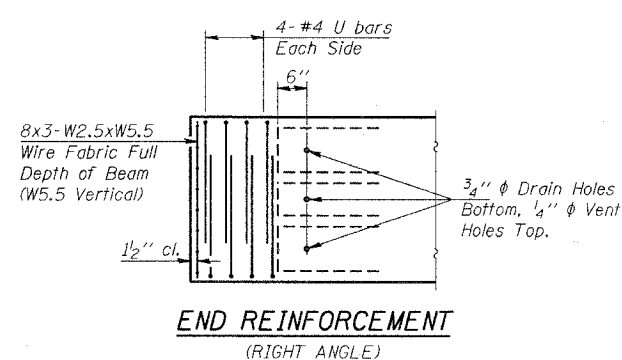
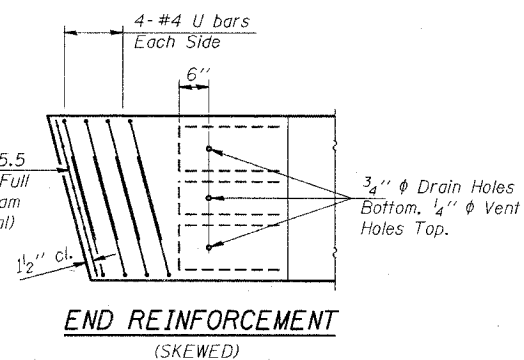


**PARTIAL PLAN TRANSVERSE TIE ASSEMBLY**  
(D'=15°, 20°, 25° and 30°)



**DIMENSION 'C'**

| Skew Angle 'D'         | 0° | 5°    | 10°   | 15°    | 20°    | 25°    | 30°    |
|------------------------|----|-------|-------|--------|--------|--------|--------|
| Dimension 'C' (Inches) | 0  | 4 1/4 | 8 1/2 | 12 7/8 | 17 1/2 | 22 3/8 | 27 3/4 |



**NOTES**

- Prestressing steel shall be uncoated high strength, stress relieved 7-wire strand, Grade 270.
- The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 square inches.
- Reinforcement bars shall conform to AASHTO M-31, M-42 or M-53, Grade 60.
- On 0°, 5° and 10° skew angles, alternate approved transverse tie rods of increased segmental length are acceptable.
- Rail Post anchor devices shall be cast into outside beam as elsewhere specified.
- When Waterproofing Membrane System is specified, the top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
- Low-relaxation strands may be substituted for the stress relieved strands. The initial prestressing force applied to each strand shall be the same as for the stress relieved strands (28,900 lbs.).
- 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 the top of the beam and the bottom edge of the key.

**DESIGN STRESSES**

$f'_c = 5,000$  p.s.i.  
 $f'_{ci}$  (See Required Release Strength Table)  
 $f'_s = 270,000$  p.s.i. (1/2"  $\phi$  Strand)  
 $f_{sl} = 189,000$  p.s.i. (1/2"  $\phi$  Strand)  
 $f_y = 60,000$  p.s.i.

**REQUIRED RELEASE STRENGTH**

| Span | $f'_{ci}$ (psi) |
|------|-----------------|
| 30'  | 4,000           |
| 35'  | 4,000           |
| 40'  | 4,000           |
| 50'  | 4,000           |

Illinois Department of Transportation

PASSED NOVEMBER 1, 1995

*Greg J. Kasper*  
 Engineer of Bridge Design

APPROVED NOVEMBER 1, 1995

*Ralph E. Anderson*  
 Engineer of Bridges and Structures

NOTE  
 The std. reinf. shown on the 30' span cross section is typical for all spans, except as shown.

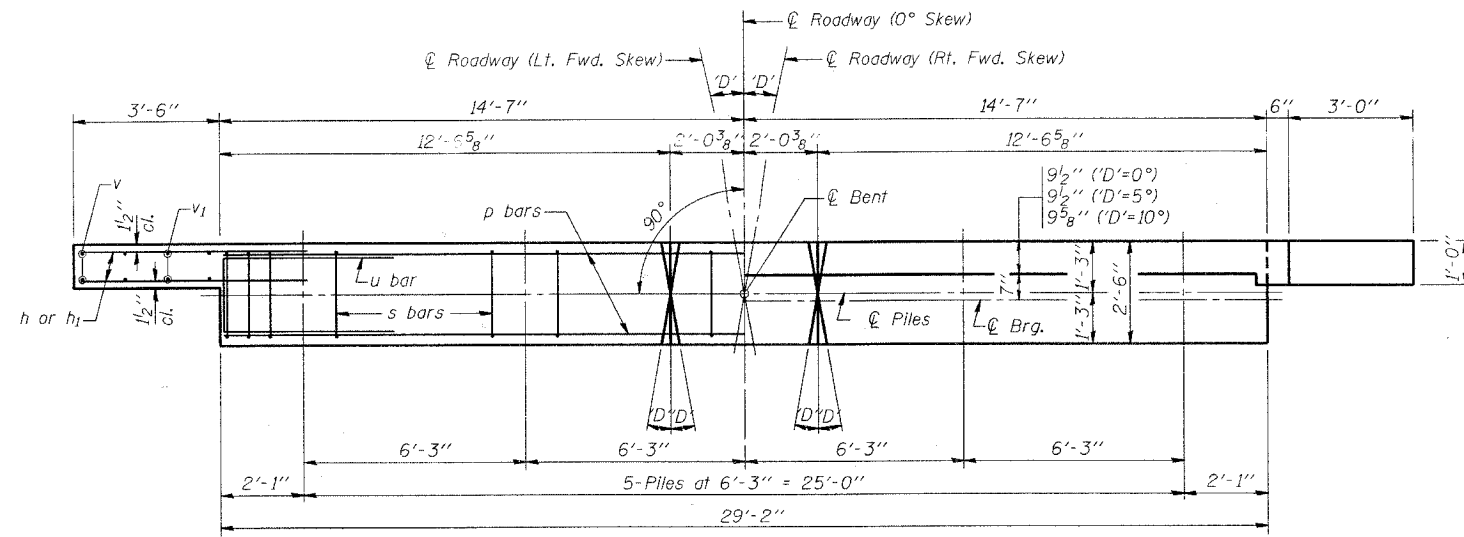
**P.P.C. DECK BEAM DETAILS**

28' ROADWAY      21" x 48" BEAMS

STANDARD CB-2821-48

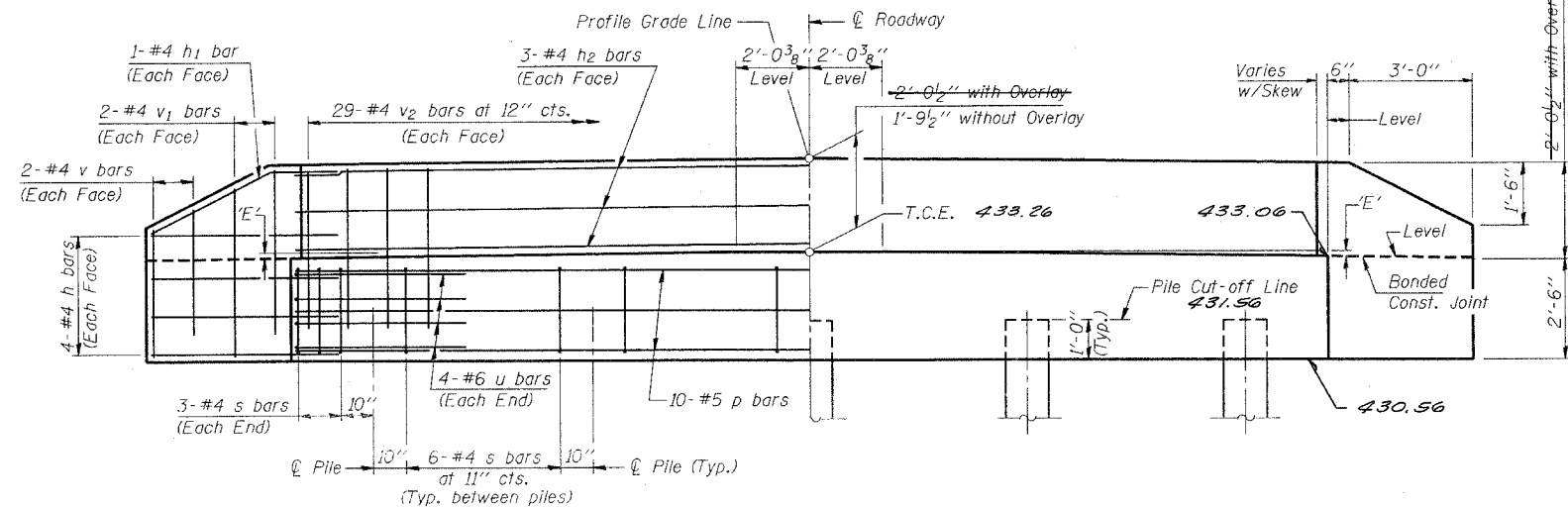
| REL. | SECTION  | COUNTY | TOTAL SHEETS | SHEET NO. |
|------|----------|--------|--------------|-----------|
| *    | LAWRENCE | 10     | 7            | 7         |

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. \*05-02126-00-BR



PLAN

('D' = Designated Skew Angle)



ELEVATION

DIMENSION 'E'

| GRADE         | 'D'=0°      |               | 'D'=5°      |               | 'D'=10°     |               |
|---------------|-------------|---------------|-------------|---------------|-------------|---------------|
|               | UPGRADE END | DOWNGRADE END | UPGRADE END | DOWNGRADE END | UPGRADE END | DOWNGRADE END |
| 0%            | 2 3/8"      | 2 3/8"        | 2 3/8"      | 2 3/8"        | 2 3/8"      | 2 3/8"        |
| Over 0% to 1% | 2 3/8"      | 2 3/8"        | 2 1/4"      | 2 3/8"        | 2 1/8"      | 2 1/2"        |
| Over 1% to 2% | 2 3/8"      | 2 3/8"        | 2 1/8"      | 2 1/2"        | 1 7/8"      | 2 3/4"        |
| Over 2% to 3% | 2 3/8"      | 2 3/8"        | 2"          | 2 5/8"        | 1 5/8"      | 3"            |
| Over 3% to 4% | 2 3/8"      | 2 3/8"        | 1 7/8"      | 2 3/4"        | 1 3/8"      | 3 1/4"        |

NOTES

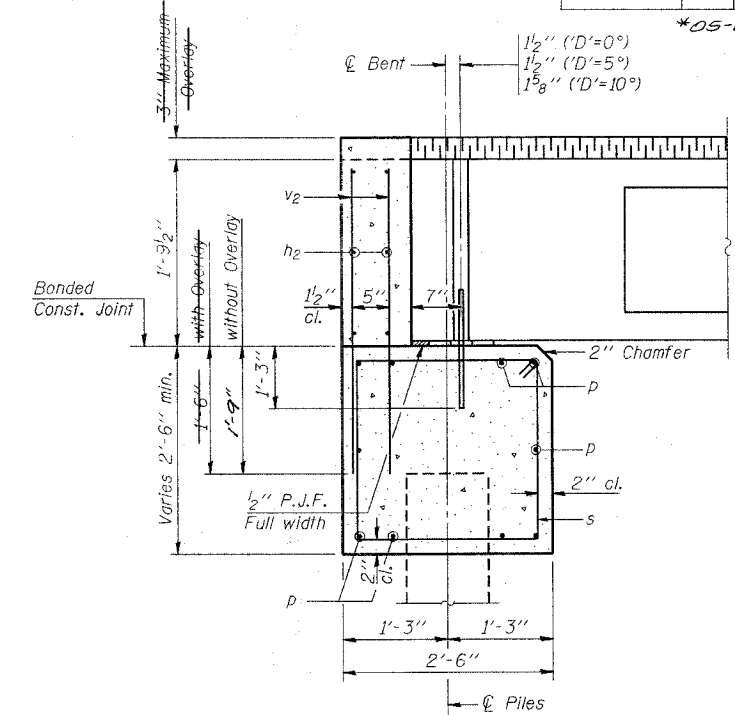
- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- Reinforcement bars shall conform to A.A.S.H.T.O. M-31, M-42 or M-53, Grade 60.

MAXIMUM PILE LOADS

| SPAN | TONS |
|------|------|
| 30'  | 25   |
| 35'  | 27   |
| 40'  | 29   |
| 50'  | 33   |

DESIGN STRESSES

f'c = 3,500 psi  
fy = 60,000 psi

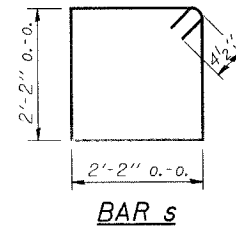


SECTION THRU ABUTMENT

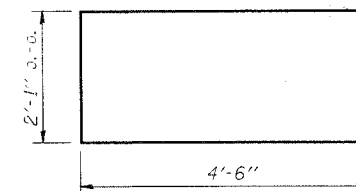
(At Right Angles)

BILL OF MATERIAL FOR ONE ABUTMENT

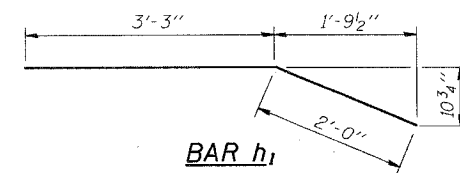
| Bar                 | No. | Size | Length  | Shape    |
|---------------------|-----|------|---------|----------|
| h                   | 16  | #4   | 5'-0"   | —        |
| h1                  | 4   | #4   | 5'-3"   | —        |
| h2                  | 6   | #4   | 28'-10" | —        |
| p                   | 10  | #5   | 28'-10" | —        |
| s                   | 30  | #4   | 9'-5"   | □        |
| u                   | 8   | #6   | 11'-1"  | □        |
| v                   | 8   | #4   | 2'-8"   | —        |
| v1                  | 8   | #4   | 3'-8"   | —        |
| v2                  | 58  | #4   | 3'-5"   | —        |
| Concrete Structures |     |      | 9.9     | Cu. Yds. |
| Reinforcement Bars  |     |      | 970     | Lbs.     |



BAR s



BAR u



BAR h1

Illinois Department of Transportation  
PASSED November 1, 1995  
Engineer of Bridge Design  
APPROVED November 1, 1995  
Engineer of Bridges and Structures

P.P.C. DECK BEAMS  
PILE BENT ABUTMENT  
28' RDWY. 21" BMS. 'D'=0°, 5° OR 10°  
STANDARD CA-2821-10

**NOTES**

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft.-lbs. at 0° F. CONTRACT NO. 95052

All other steel shapes and plates shall conform to the requirements of AASHTO M-270 Grade 36 except posts and angles shall conform to AASHTO M-270 Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.

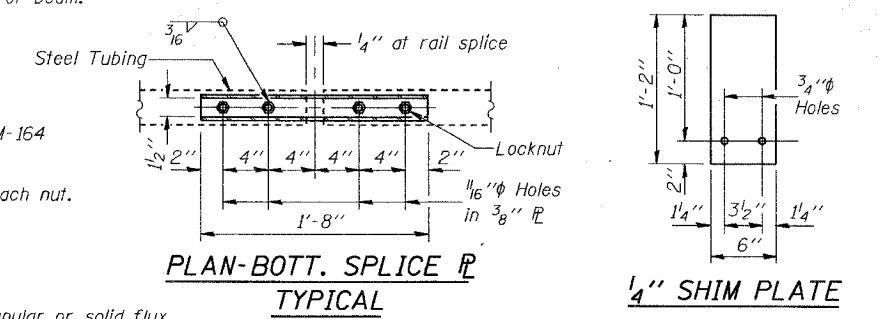
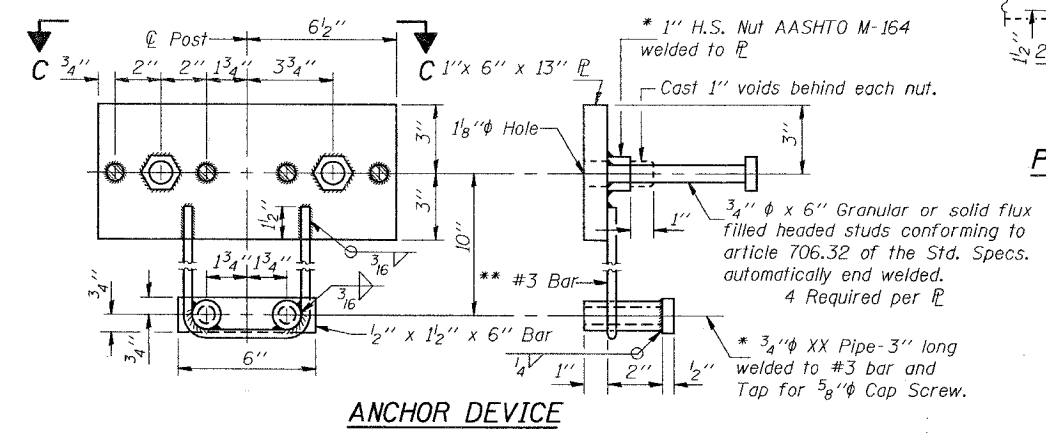
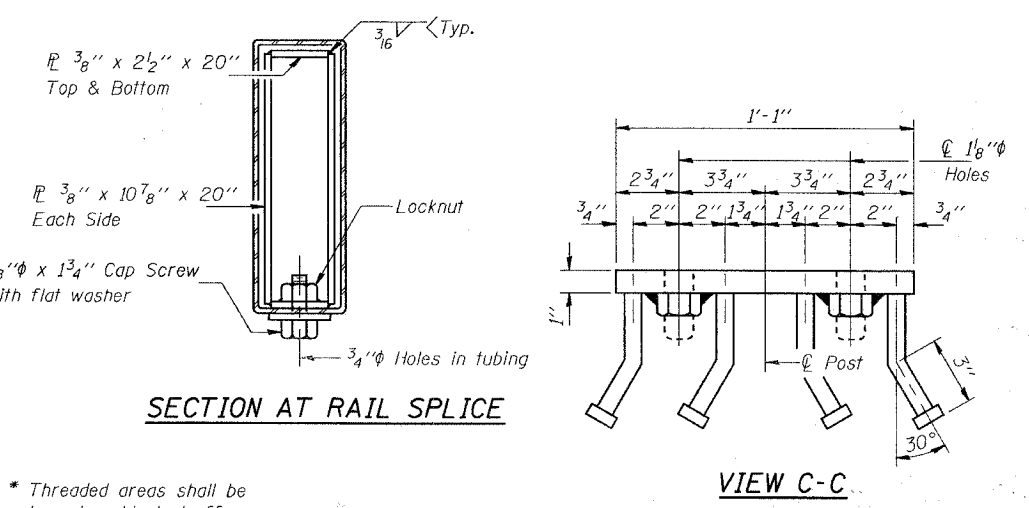
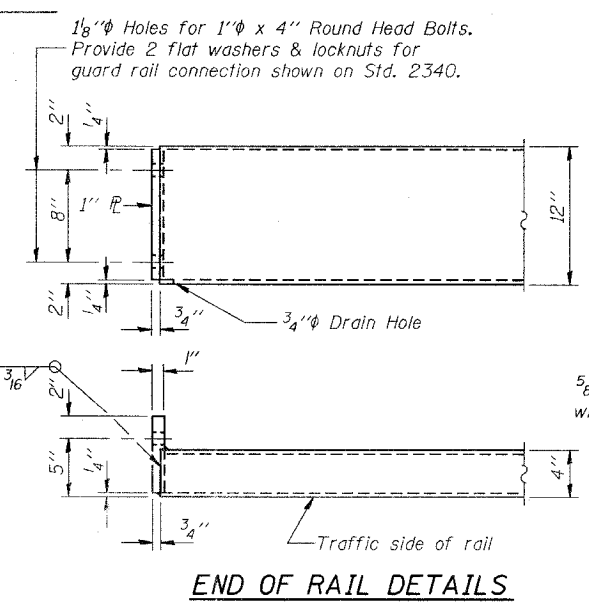
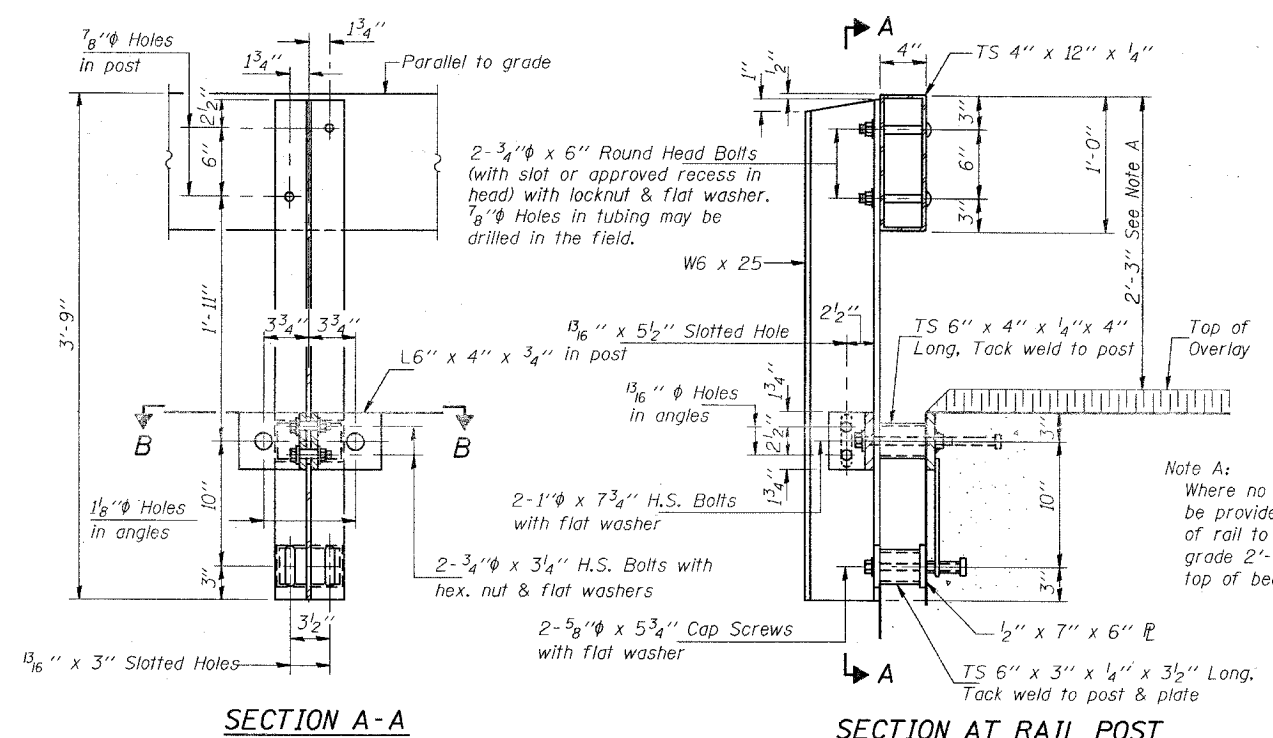
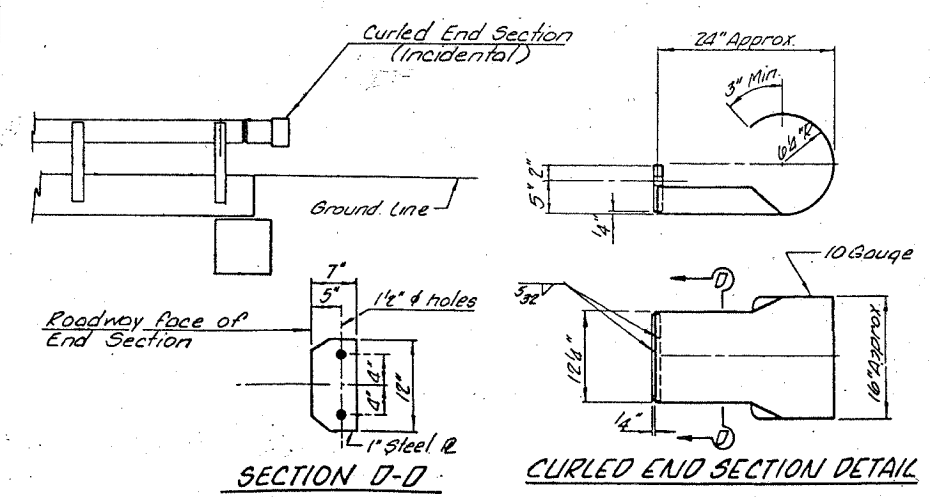
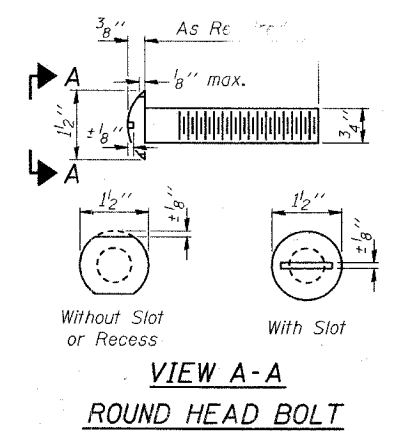
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing, Type S-1.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

The 1/2" x 7" x 6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 760.07 Type II or place 1/8" fabric bearing pads between the plates and concrete.

The 3/4" 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) (3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

The maximum allowable rail post spacing shall be 10'-6". The rail post spacing shown elsewhere in the plans is based on the allowable spacing for another type of rail. When this type of rail is used, the number of posts may be decreased and the post spacing increased to provide equal post spaces of 10'-6" or less.



Illinois Department of Transportation

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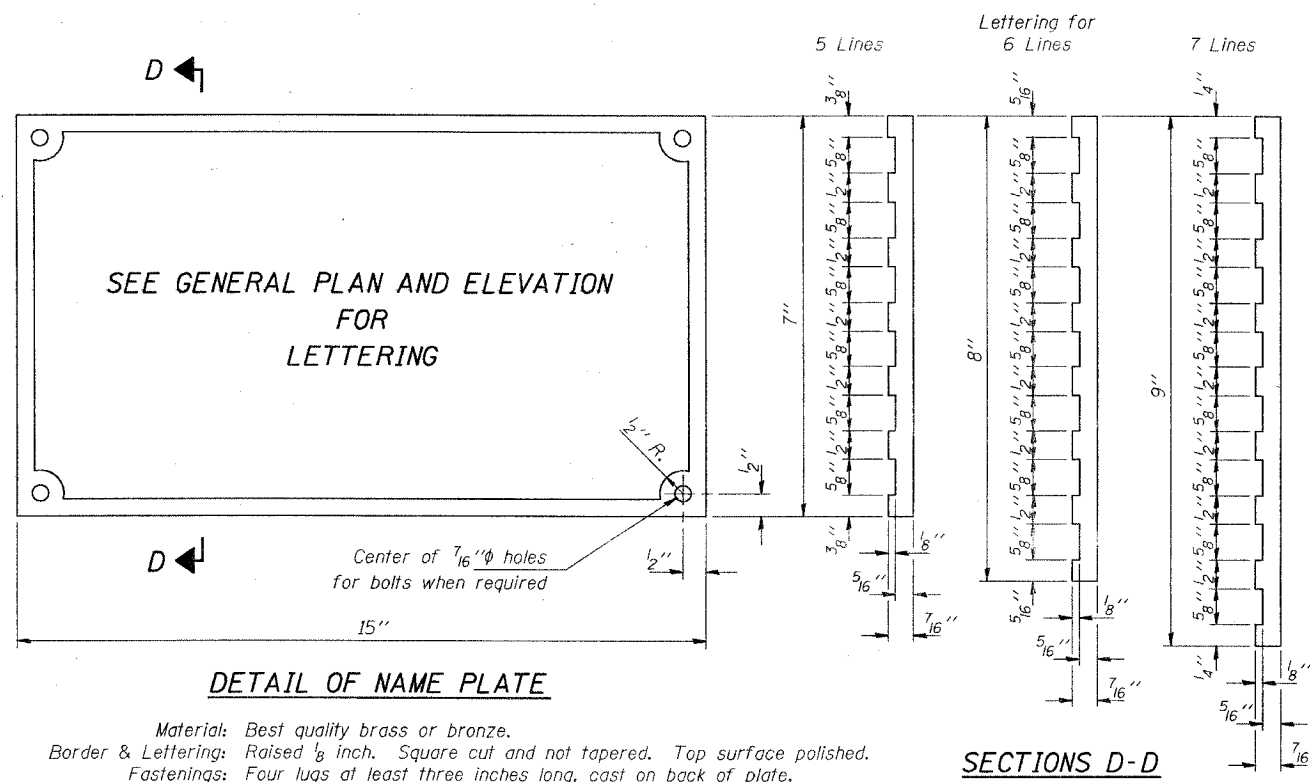
Engineer of Bridges and Structures

**STEEL RAILING, TYPE S-1**

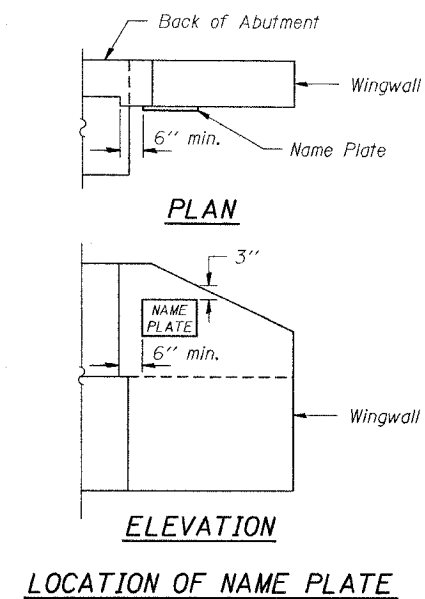
**STANDARD CR-TS1**



|                     |                |          |              |       |
|---------------------|----------------|----------|--------------|-------|
| F.A.S. ROUTE NO.    | SECTION        | COUNTY   | TOTAL SHEETS | SHEET |
|                     | 95-02126-00-BR | LAWRENCE | 10           | 9     |
| STA.                | TO STA.        |          |              |       |
| FED. ROAD DIST. NO. | ILLINOIS       | PROJECT  |              |       |



Material: Best quality brass or bronze.  
 Border & Lettering: Raised  $\frac{1}{8}$  inch. Square cut and not tapered. Top surface polished.  
 Fastenings: Four lugs at least three inches long, cast on back of plate.



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ISSUED 7-1-95

NAME PLATE  
 STANDARD CN

|                     |          |         |              |       |
|---------------------|----------|---------|--------------|-------|
| F.A.S. ROUTE NO.    | SECTION  | COUNTY  | TOTAL SHEETS | SHEET |
| 95-02/26-00-BL      | LAWRENCE |         | 10           | 10    |
| STA.                | TO STA.  |         |              |       |
| FED. ROAD DIST. NO. | ILLINOIS | PROJECT |              |       |

Reinforcement cage shall be omitted when Class ~~SI~~ Concrete Encasement is provided.

The cost of Reinforcement is incidental to the Cost of Furnishing Piles.

