

INDEX OF SHEETS 06-14-13 LETTING ITEM 116

STATE OF ILLINOIS

| | | | | |
|-----------|----------------|--------|--------------|-----------------------------|
| TWP. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 46 | 11-18103-00-BR | BUREAU | 19 | 1 |
| | | | | ILLINOIS CONTRACT NO. 87531 |

- 1 - COVER SHEET
- 2 - SUMMARY OF QUANTITIES
- 3 - GENERAL NOTES, SCHEDULE OF QUANTITIES & DETAIL
- 4 - TYPICAL SECTIONS
- 5 - PLAN AND PROFILE
- 6 - EROSION CONTROL PLAN
- 7 - GENERAL PLAN AND ELEVATION
- 8 - RIPRAP AND PILE LAYOUT
- 9 - 33" x 48" PPC DECK BEAM
- 10 - 33" x 48" DECK BEAM DETAILS
- 11 - SOUTH ABUTMENT DETAILS
- 12 - NORTH ABUTMENT DETAILS
- 13 - STEEL RAILING, TYPE S-1 DETAILS
- 14 - METAL SHELL PILE DETAILS
- 15 - BORING LOGS
- 16-19 - CROSS SECTIONS

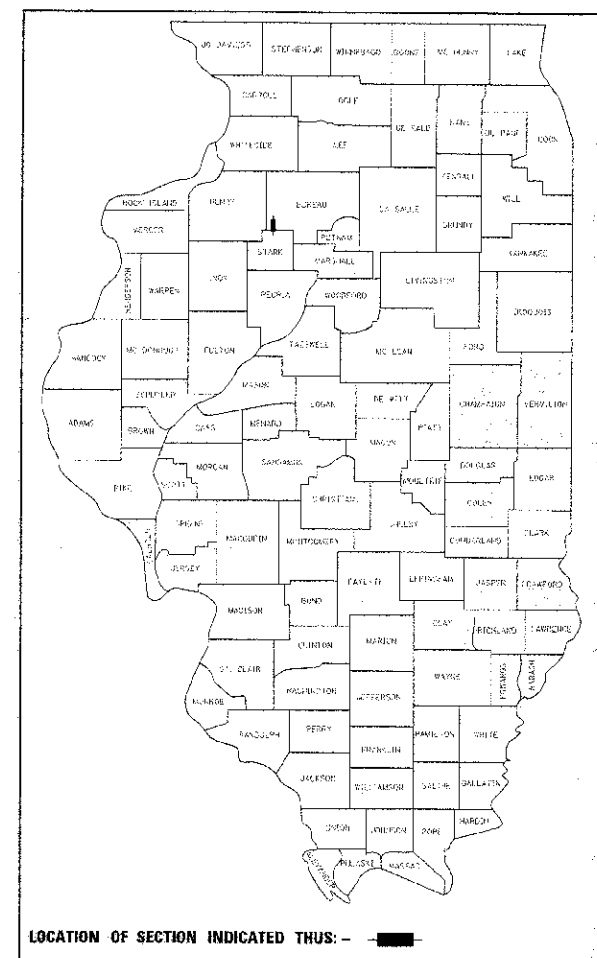
DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID PROJECT HIGHWAY BRIDGE PROGRAM

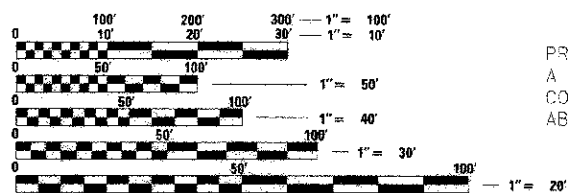
**TOWNSHIP ROUTE 46 (350 E. ST.)
SECTION 11-18103-00-BR
PROJECT BROS-0011(090)
BRIDGE REPLACEMENT
BUREAU COUNTY
NEPONSET ROAD DISTRICT
2013
C-93-092-12**

STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 260001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-03 NAME PLATE FOR BRIDGES
- 701901-02 TRAFFIC CONTROL DEVICES
- 720011-01 METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
- 728001-01 TELESCOPING STEEL SIGN SUPPORT
- 729001-01 APPLICATIONS OF TYPE A & B METAL POSTS (FOR SIGNS & MARKERS)
- B.L.R. 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- B.L.R. 22-7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS



LOCATION MAP SCALE

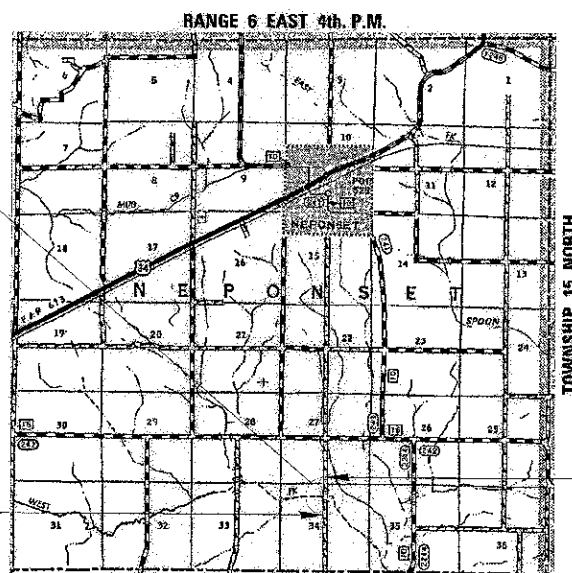


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

**PROJECT ENGINEER - IPN
PROJECT MANAGER - BKC
CONTRACT NO. 87531**

PROPOSED STRUCTURE: S.N. 006-4263
A SINGLE SPAN (107'-3") PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE ON SPILL THRU ABUTMENTS @ STA. 20+00, SKEWED 0°.



CONSTRUCTION BEGINS STATION 17+00

CONSTRUCTION ENDS STATION 22+50

GROSS LENGTH = 550 FT. = 0.104 MILE
NET LENGTH = 500 FT. = 0.095 MILE

UTILITIES:
FRONTIER COMMUNICATIONS
Attn: Garrett Burt
112 Elm Street
Sycamore, IL 60178
815-895-1538

AMEREN IP
Attn: Engineering
1824 Knox Hwy*9
Galesburg, IL 61401



Brian K. Conover
DATE: 3/25/2013
EXPIRES: 12/31/2014

| BUREAU COUNTY HIGHWAY DEPARTMENT | | |
|---|--|------|
| APPROVED | <i>John C. Shaw</i> 03/28 | 2013 |
| | BUREAU COUNTY ENGINEER | |
| APPROVED | <i>Paul J. ...</i> 03/28 | 2013 |
| | NEPONSET ROAD COMMISSIONER | |
| PASSED | <i>David RCO</i> 4-2 | 2013 |
| | DISTRICT 3 LOCAL ROADS & STREETS ENGINEER | |
| RELEASING FOR BID BASED ON LIMITED REVIEW | <i>Paul A. ...</i> 4-2 | 2013 |
| | DEPUTY DIRECTOR OF HIGHWAYS, REGION 2 ENGINEER | |

WILLETT HOFMANN & ASSOCIATES INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, UIXON, IL 61021-0367
T: 815-284-3361 DESIGN FIRM: #184-000918

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE: 0011

| PAY CODE | QUANTITY | UNIT | ITEM |
|------------|----------|---------|---|
| 20300100 | 210 | CU. YD. | CHANNEL EXCAVATION |
| 20400800 | 7 | CU. YD. | FURNISHED EXCAVATION |
| 25100630 | 4,030 | SG. YD. | EROSION CONTROL BLANKET |
| 28000250 | 83 | POUND | TEMPORARY EROSION CONTROL SEEDING |
| 28000305 | 58 | FOOT | TEMPORARY DITCH CHECKS |
| 28000400 | 300 | FOOT | PERIMETER EROSION BARRIER |
| *40200100 | 613 | TCN | AGGREGATE SURFACE COURSE, TYPE A |
| *50100100 | 1 | EACH | REMOVAL OF EXISTING STRUCTURES |
| *50300225 | 28.8 | CU. YD. | CONCRETE STRUCTURES |
| 50400605 | 1,864 | SO. FT. | PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH) |
| 50800105 | 3,660 | POUND | REINFORCEMENT BARS |
| + 50900205 | 158 | FOOT | STEEL RAILING, TYPE S1 |
| 51200957 | 412 | FOOT | FURNISHING METAL SHELL PILES 12" X 0.250" |
| 51202305 | 412 | FOOT | DRIVING PILES |
| 51203200 | 2 | EACH | TEST PILE METAL SHELLS |
| 51500100 | 1 | EACH | NAME PLATES |
| 67100100 | 1 | L. SUM | MOBILIZATION |
| *X2020410 | 735 | CU. YD. | EARTH EXCAVATION (SPECIAL) |
| *X2070302 | 150 | TON | POROUS GRANULAR EMBANKMENT, SPECIAL |
| *X2501100 | 0.83 | ACRE | SEEDING, CLASS 3 (SPECIAL) |
| *X2810210 | 1,068 | TON | STONE RIPRAP, CLASS A5 (SPECIAL) |
| *X7010716 | 1 | L. SUM | TRAFFIC CONTROL AND PROTECTION, (SPECIAL) |
| 70013798 | 1 | L. SUM | CONSTRUCTION LAYOUT |

*See B.L.R. 11310 in the contract documents for Special Provisions.

+Specialty Item

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| | |
|----------------|-----------|
| DESIGNED - IPN | REVISED - |
| CHECKED - BKC | REVISED - |
| DRAWN - FDL | REVISED - |
| CHECKED - BKC | REVISED - |

BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20 + 00

SUMMARY OF QUANTITIES
STRUCTURE NO. 006-4263

| TWP. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--|----------------|--------|--------------------|-----------|
| 46 | 11-18103-00-BR | BUREAU | 19 | 2 |
| WHA* 1003012 | | | CONTRACT NO. 87531 | |
| [ILLINOIS] FED. AID PROJECT BROS-0011090 | | | | |

GENERAL NOTES

All elevations shown on the plans are established from U.S.G.S. mean sea level datum.

Existing structures (including foundations, walls, cisterns, wells or other underground structures) within the right-of-way shall be removed in accordance with Article 501.04 and 501.05 of the Standard Specifications, without additional compensation, unless otherwise noted in the Plans or Special Provisions.

The Contractor shall seed all disturbed areas within the project limits.

No overhaul has been computed and none shall be paid for from any source.

The final top four inches of soil in any right-of-way area disturbed by the Contractor must be a cohesive soil capable of supporting vegetation complying with Section 211 of the Standard Specification for top soil.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications.

All utility poles, gas pipes, etc. in the way of the improvements shall be moved by the utilities prior to construction and shall not be included in the contract. The Contractor shall notify the respective utilities to make the necessary adjustments prior to construction.

The location and elevation of the various underground utilities as shown on the plans are not to be taken as exact. The Contractor shall use special care when conducting construction operations near them to prevent damage.

The utilities located within the project limits or immediately adjacent to the project construction limits include:

| | |
|-------------------------|----------------------|
| Frontier Communications | Ameren IP |
| Attn: Garrett Burt | Attn: Engineering |
| 112 Elm Street | 1524 Knox Highway #9 |
| Sycamore, IL 60178 | Galesburg, IL 61401 |
| (815) 895-1538 | |

A minimum of 48 hours advance notice is required for non-emergency work.

A Nationwide 404 Permit has been issued for this project and the conditions of that Permit must be adhered to.

Where section or subsection monuments are encountered, the Engineer shall be notified before such monuments are removed. The Contractor shall protect and carefully preserve all property markers, monuments and right-of-way pins until the Owner, an Authorized Surveyor, or Agent has witnessed or otherwise referenced their location.

Existing mail boxes, street signs and traffic signs that are within the construction limits shall be removed and reset by the Contractor. Cost of removing and resetting to be included in the contract until price bid per Cubic Yard for Earth Excavation (Special).

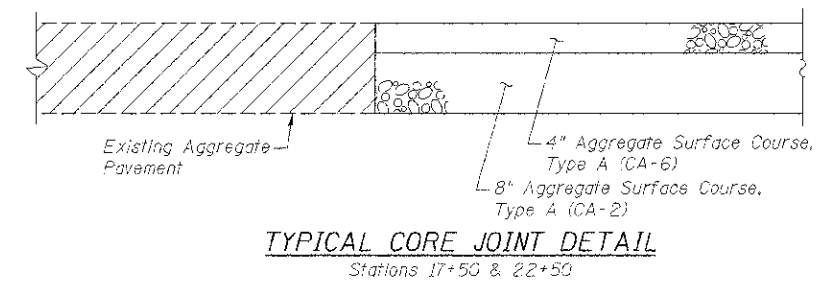
All borrow/waste/use sites must be approved by the Illinois Department of Transportation prior to removing any material from the project site or initiating any earthmoving activities, including temporary stockpiling outside the limits of construction.

SCHEDULE OF QUANTITIES

| EROSION CONTROL BLANKET | | | |
|-----------------------------------|---------------|-------------|----------|
| LOCATION | SO. YD. | REMARKS | |
| LT. STA. 17+00 - 22+50 | 2,130 | | |
| RT. STA. 17+00 - 22+50 | 1,900 | | |
| TOTAL | 4,030 SO. YD. | | 25100630 |
| TEMPORARY EROSION CONTROL SEEDING | | | |
| LOCATION | POUND | REMARKS | |
| LT. STA. 17+00 - 22+50 | 44 | 100 LB/ACRE | |
| RT. STA. 17+00 - 22+50 | 39 | 100 LB/ACRE | |
| TOTAL | 83 POUND | | 28000250 |
| TEMPORARY DITCH CHECKS | | | |
| LOCATION | FOOT | REMARKS | |
| LT. STA. 19+00 | 12 | | |
| RT. STA. 19+00 | 11 | | |
| LT. STA. 21+00 | 16 | | |
| RT. STA. 21+00 | 11 | | |
| LT. STA. 22+00 | 8 | | |
| TOTAL | 58 FOOT | | 28000305 |
| PERIMETER EROSION BARRIER | | | |
| LOCATION | FOOT | REMARKS | |
| LT. STA. 19+58 - 20+28 | 120 | | |
| RT. STA. 19+00 - 20+37 | 180 | | |
| TOTAL | 300 FOOT | | 28000400 |
| AGGREGATE SURFACE COURSE, TYPE A | | | |
| LOCATION | TON | REMARKS | |
| STA. 17+50.00 - 18+16.00 | 89 | 12" (TAPER) | |
| STA. 18+16.00 - 19+60.50 | 220 | 12" | |
| STA. 20+39.50 - 21+70.00 | 198 | 12" | |
| STA. 21+70.00 - 22+50.00 | 106 | 12" (TAPER) | |
| TOTAL | 613 TON | | 40200100 |
| SEEDING, CLASS 3 (SPECIAL) | | | |
| LOCATION | ACRE | REMARKS | |
| LT. STA. 17+00 - 22+50 | 0.44 | | |
| RT. STA. 17+00 - 22+50 | 0.39 | | |
| TOTAL | 0.83 ACRE | | X2501100 |

T.R. 46 EARTHWORK TOTALS

| LOCATION | EARTH EXCAVATION (SPECIAL) X2020410 | EARTH EXCAVATION ADJUSTED FOR SHRINKAGE 25% | EMBANKMENT | CHANNEL EXCAVATION 20300100 | CHANNEL EXCAVATION ADJUSTED FOR SHRINKAGE 67.5% | FURNISHED EXCAVATION 20400800 |
|----------|-------------------------------------|---|------------|-----------------------------|---|-------------------------------|
| | CU YD | CU YD | CU YD | CU YD | CU YD | CU YD |
| TOTAL | 735 | 552 | 638 | 210 | 79 | 7 |



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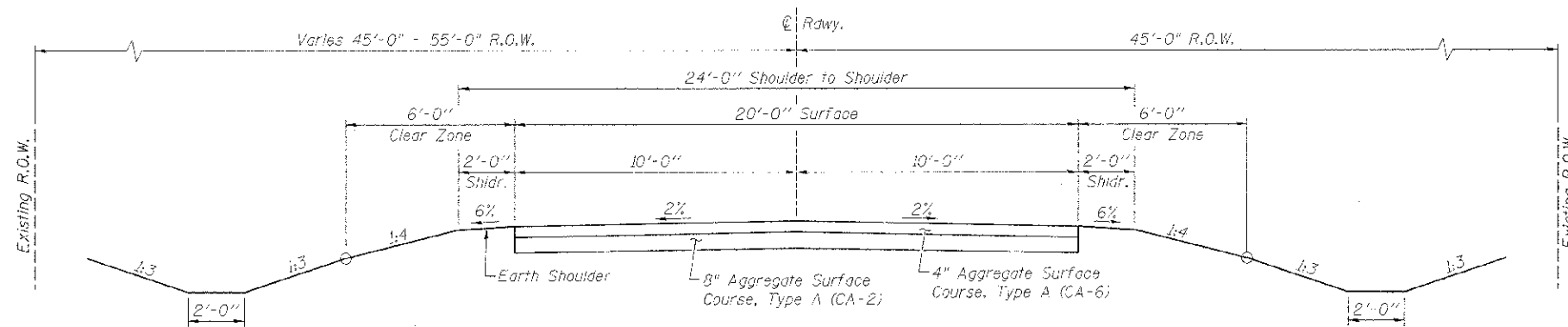


| | |
|----------------|-----------|
| DESIGNED - IPN | REVISED - |
| CHECKED - BKC | REVISED - |
| DRAWN - PDL | REVISED - |
| CHECKED - BKC | REVISED - |

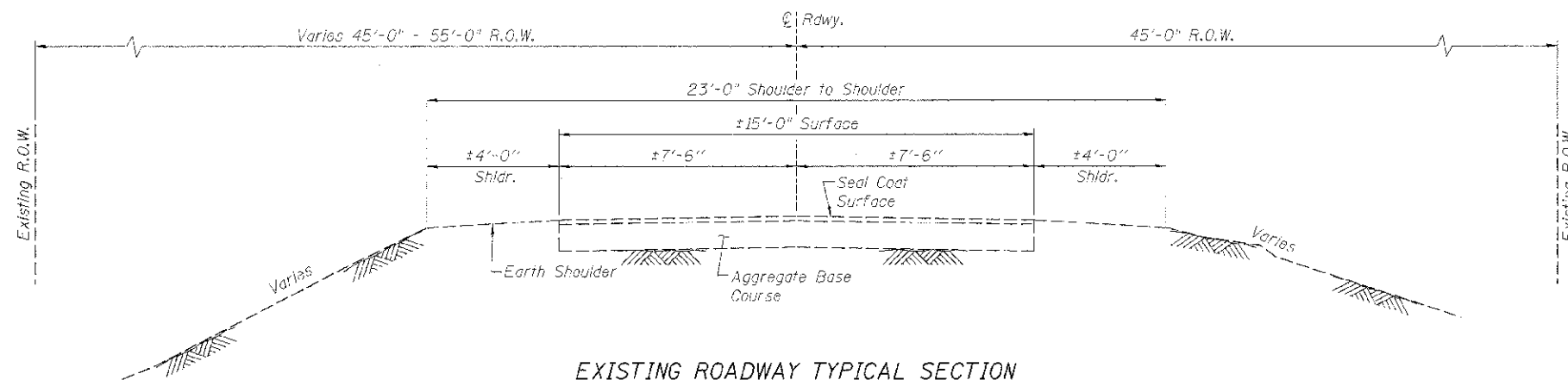
BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20 + 00

GENERAL NOTES, SCHEDULE OF QUANTITIES & DETAIL
STRUCTURE NO. 006-4263

| | | | | |
|--|--------------------------|--------------------|-------------------|---------------|
| TWP. : 46 | SECTION : 11-16103-00-BR | COUNTY : BUREAU | TOTAL SHEETS : 19 | SHEET NO. : 3 |
| WPA* 1003012 | | CONTRACT NO. 87531 | | |
| [LINKS] [FEED] [AID] [PROJECT] [BROS-00110905] | | | | |



PROPOSED ROADWAY TYPICAL SECTION
STA. 18+16 - STA. 21+70
 (Looking North)



EXISTING ROADWAY TYPICAL SECTION
STA. 17+50 - STA. 22+50
 (Looking North)

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| | | | |
|------------|-----|-----------|--|
| DESIGNED - | IPN | REVISED - | |
| CHECKED - | DKC | REVISED - | |
| DRAWN - | FDL | REVISED - | |
| CHECKED - | BKC | REVISED - | |

BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20+00

TYPICAL SECTIONS
STRUCTURE NO. 006-4263

| TWP. R.1.E. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--|----------------|--------------------|--------------|-----------|
| 46 | 11-18193-00-BR | BUREAU | 19 | 4 |
| WHA* 1003012 | | CONTRACT NO. 87531 | | |
| ILLINOIS FED. AID PROJECT BR05-0011090 | | | | |

BENCH MARK #400: Railroad Spike in 2nd P.P. S. of Bridge, N. Side of TR 46 35' Lt. of Sta. 16+12, El. 713.13

BENCH MARK #401: Chis. "C" on the Southeast Wingwall of structure, 10' Rt. of Sta. 19+51, El. 719.35

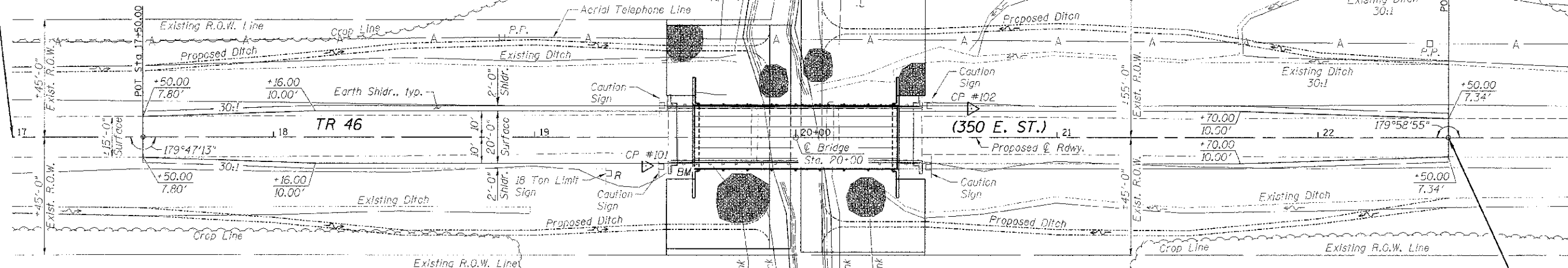
BENCH MARK #402: Railroad Spike in 2nd P.P. N. of Bridge, W. Side of TR 46, 35' Lt. of Sta. 25+26, El. 714.41

*Ditch work shall begin at Station 17+00, roadway work will begin at Station 17+50.

*CONSTRUCTION BEGINS AT STA. 17+00

CONSTRUCTION ENDS AT STA. 22+50

| | |
|-------------------|--|
| DATE | |
| BY | |
| PROJECT NO. | |
| PLANNING | |
| DESIGN | |
| CONSTRUCTION | |
| AS-BUILT | |
| NO. OF SHEETS | |
| NO. OF THIS SHEET | |
| DATE | |

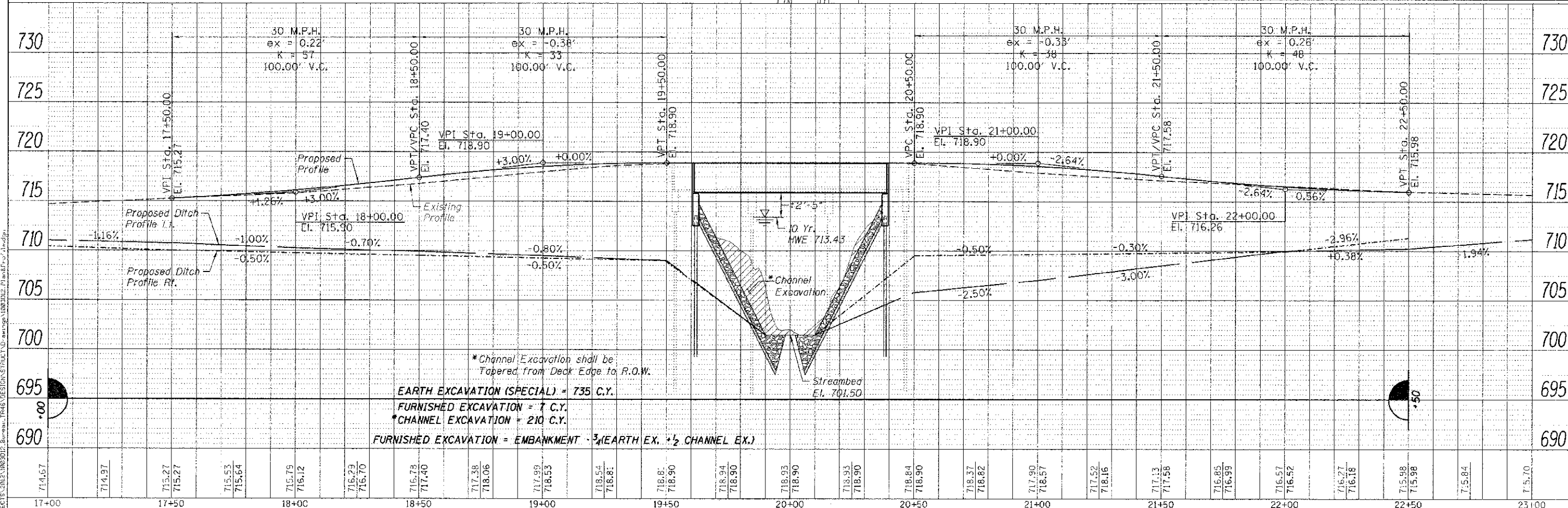


UTILITIES:
 Frontier Communications Ameren IP
 112 Elm Street Sycamore, IL 60178 Ph: 815-895-1538 Attn: Garrett Burt
 1824 Knox Hwy #9 Galesburg, IL 61401 Attn: Engineering
EXISTING STRUCTURE: S.N. 006-4259
 A three span (30'-6" x 32'-0" x 30'-6") steel girder bridge on spill-thru abutments at Sta. 20+00. Skewed 0°. To be removed. No salvage.

PROPOSED STRUCTURE: S.N. 006-4263
 A single span (1 @ 77'-8") precast, prestressed concrete deck beam bridge on spill-thru abutments at Sta. 20+00. Skewed 0°.

| CP. # | STA. | N | E | EL. | DESCRIPTION |
|-------|--------------------|------------|------------|--------|-------------|
| 100 | 13.3' Lt. 15+06.70 | 1667835.68 | 2400193.87 | 713.25 | 5/8" I.P. |
| 101 | 11.0' Rt. 19+42.70 | 1668271.65 | 2400215.42 | 718.30 | 5/8" I.P. |
| 102 | 11.0' Lt. 20+67.30 | 1668396.32 | 2400196.52 | 718.01 | 5/8" I.P. |
| 103 | 11.0' Rt. 25+07.30 | 1668836.24 | 2400219.51 | 716.58 | 5/8" I.P. |

| | |
|-------------------|--|
| DATE | |
| BY | |
| PROJECT NO. | |
| PLANNING | |
| DESIGN | |
| CONSTRUCTION | |
| AS-BUILT | |
| NO. OF SHEETS | |
| NO. OF THIS SHEET | |
| DATE | |



*Channel Excavation shall be Tapered from Deck Edge to R.O.W.
EARTH EXCAVATION (SPECIAL) = 735 C.Y.
FURNISHED EXCAVATION = 7 C.Y.
***CHANNEL EXCAVATION = 210 C.Y.**
FURNISHED EXCAVATION = EMBANKMENT - 3/4(EARTH EX. + 1/2 CHANNEL EX.)



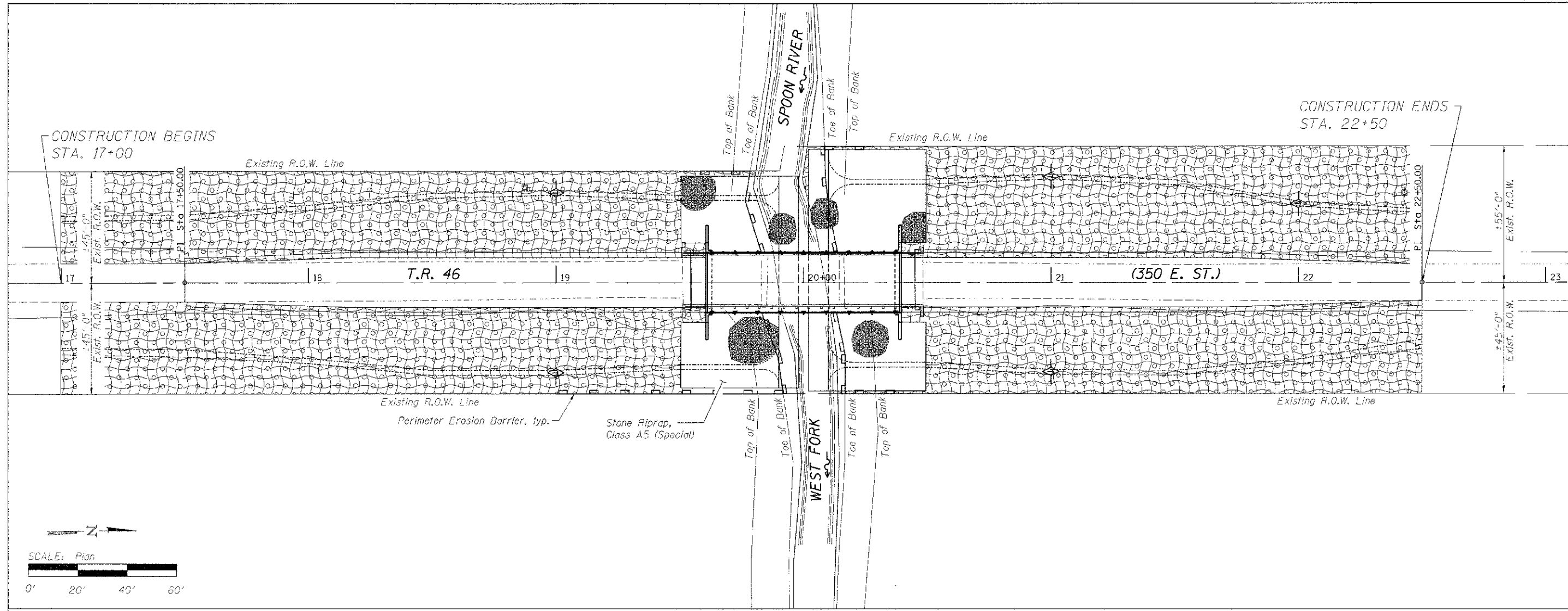
| | | | |
|----------|-----|---------|--|
| DESIGNED | IPN | REVISED | |
| CHECKED | BKC | REVISED | |
| DRAWN | RDA | REVISED | |
| CHECKED | BKC | REVISED | |

**BUREAU COUNTY
 TR. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
 STATION 20+00**

**PLAN AND PROFILE
 STRUCTURE NO. 006-4263**
 SCALE: 1" = 40'-0" SHEET NO. 1 OF 1 SHEETS
 STA. 17+00.00 TO STA. 23+00.00

| | | | |
|--|------------------------|--------------------|--------------------|
| TWP. 46 N. | SECTION 11-16J03-00-BR | COUNTY BUREAU | TOTAL SHEETS NO. 5 |
| WHA* 10033012 | | CONTRACT NO. 87531 | |
| ILLINOIS FED. AID PROJECT BRGS-001109D | | | |

| | |
|------------|--|
| DATE | |
| BY | |
| PROJ. FILE | |
| PROJ. NO. | |
| PROJ. NAME | |
| DATE | |
| BY | |
| PROJ. FILE | |
| PROJ. NO. | |
| PROJ. NAME | |



| | |
|------------|--|
| DATE | |
| BY | |
| PROJ. FILE | |
| PROJ. NO. | |
| PROJ. NAME | |
| DATE | |
| BY | |
| PROJ. FILE | |
| PROJ. NO. | |
| PROJ. NAME | |

Call Before You Dig

1-800-092-0123

EROSION CONTROL NOTES

The soil erosion and sediment control practices will be inspected weekly and after 1/2" of rain or more by the individual on site in charge of soil erosion and sediment control during the construction of the project.

Perimeter erosion barrier shall comply with Section 280 of the Standard Specifications and shall be placed as shown on the Erosion Control Plan and in accordance with stations shown on the Schedule of Quantities sheet or as directed by the Engineer.

Silt fence shall be installed following the completion and stabilization of all areas adjacent to the on-site drainages. The silt fence will remain in place until the contributing area is stabilized.

For Seeding, Class 3 (Special) see Special Provisions.

Erosion control blanket shall be placed in ditches and to all disturbed areas as shown on this Erosion Control Plan sheet and in accordance with Section 251 of the Standard Specifications for Road and Bridge Construction.

The use of green dye in the erosion control blanket is not acceptable.

Temporary ditch checks shall comply with Section 280 of the Standard Specifications for Road and Bridge Construction and Standard 250001-07.

Temporary ditch checks shall be placed at stations called out in the Schedule of Quantities or as directed by the Engineer.

Stockpiles of soil and other building materials to remain in place more than 3 days shall be furnished with erosion and sediment control measures (i.e. perimeter silt fence). Stockpiles to remain in place for 14 days or more shall receive temporary seeding.

All adjacent streets must be kept clear of debris. Inspected daily and cleaned when necessary.

LEGEND

- Perimeter Erosion Barrier
- Seeding, Class 3 (Special)
- Erosion Control Blanket
- Temporary Ditch Checks

BILL OF MATERIAL

| Item | Unit | Quantity |
|-----------------------------------|---------|----------|
| Erosion Control Blanket | Sq. Yd. | 4,030 |
| Temporary Erosion Control Seeding | Pound | 83 |
| Temporary Ditch Checks | Foot | 58 |
| Perimeter Erosion Barrier | Foot | 300 |
| Seeding, Class 3 (Special) | Acre | 0.83 |

WILLET HOFMANN ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
807 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM #184-00018

| | | | |
|------------|-----|-----------|--|
| DESIGNED - | IPX | REVISED - | |
| CHECKED - | BKC | REVISED - | |
| DRAWN - | RDA | REVISED - | |
| CHECKED - | BKC | REVISED - | |

BUREAU COUNTY
T.R. 46 (350 E. ST.) W. FORK SPOON RIVER
STATION 20+00

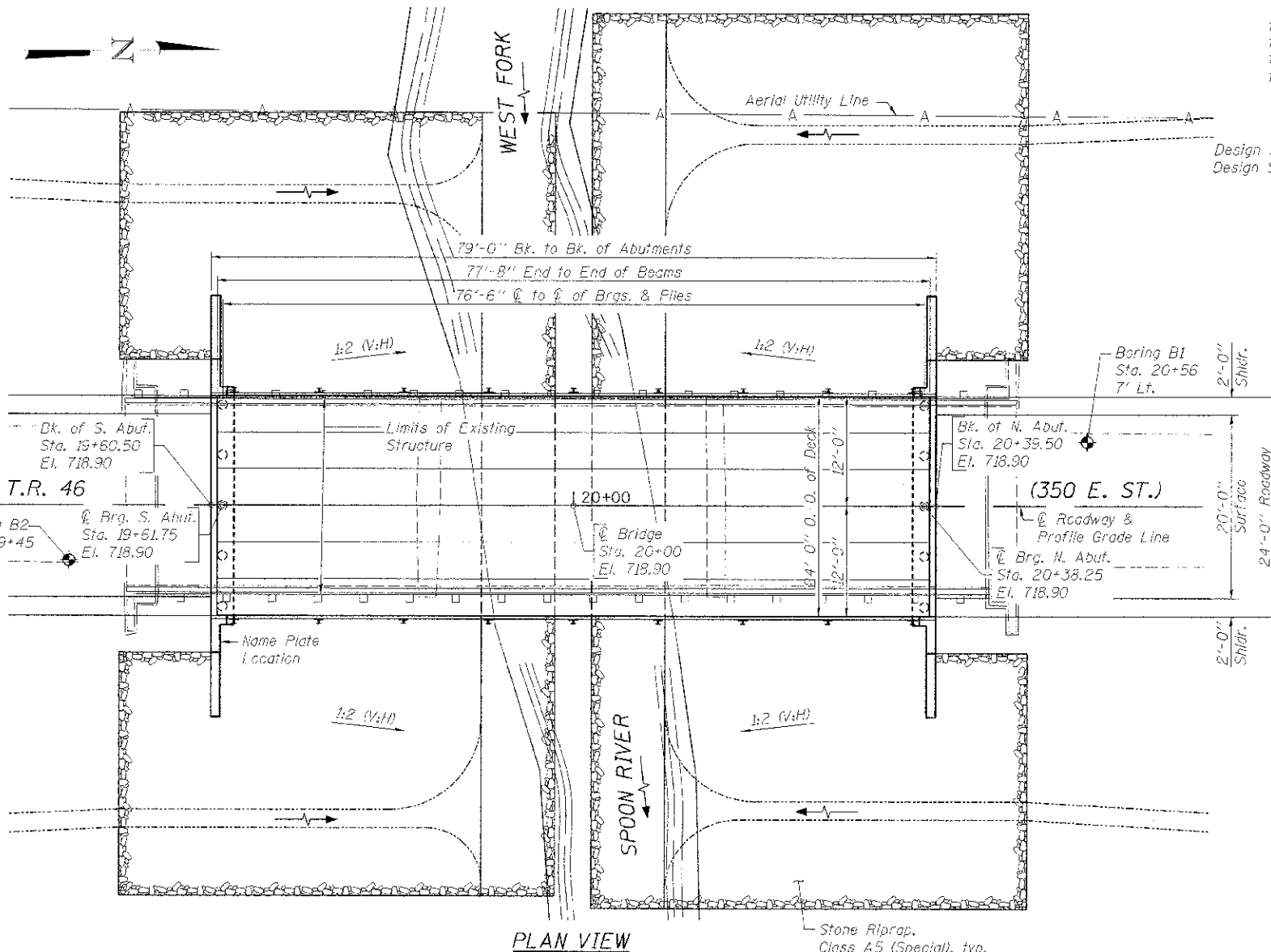
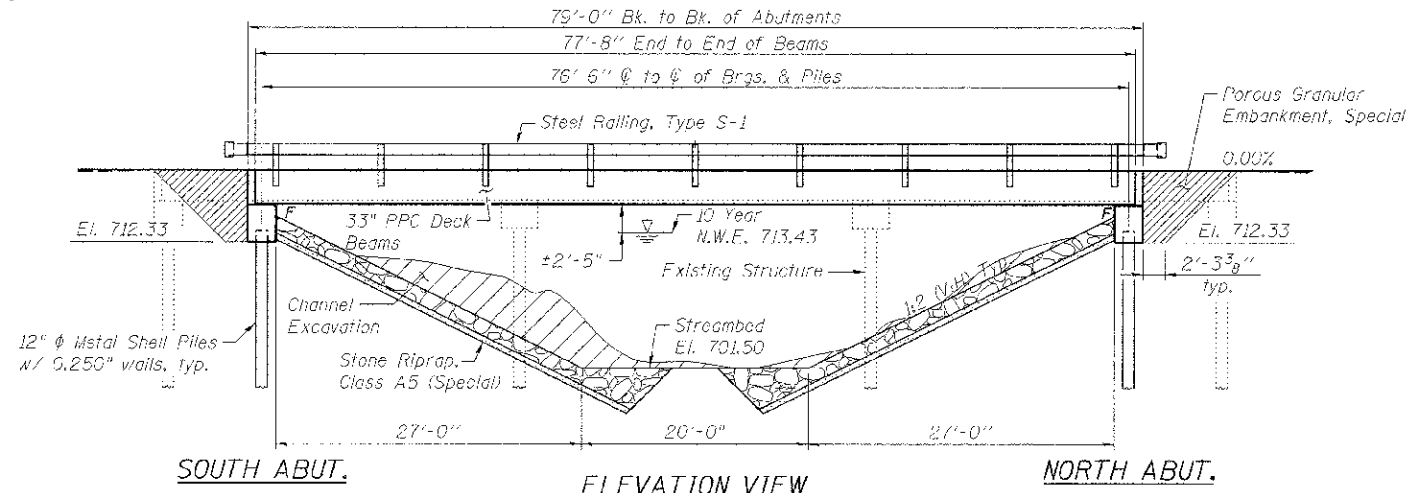
EROSION CONTROL PLAN
STRUCTURE NO. 006-4218
SCALE: 1" = 40'-0" SHEET NO. 1 OF 1 SHEETS STA. 17+00.00 TO STA. 23+00.00

| TWP. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------------|--------------------|--------------|-----------|
| 46 | 11-0103-00-BR | BUREAU | 19 | 6 |
| WHA* 1003012 | | CONTRACT NO. 87531 | | |
| ILLINOIS FED. AID PROJECT BR05-00120901 | | | | |

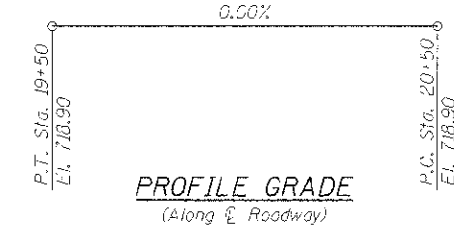
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EXISTING STRUCTURE NO. 006-4259

The existing structure was originally built in 1940. The existing structure is a three span (30'-6"; 32'-0"; 30'-6") steel girder bridge on spill thru abutments, 97'-0" back to back of abutments and 21'-0" out to out of deck. Structure to be removed and replaced. Road shall be closed to traffic during construction. No salvage.



BENCH MARK: Chiseled "□" on the Southeast Wingwall of structure, 10' Rt. of Sta. 19+51, Ei. 719.35



LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th. Edition

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ Low Lax Strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ Low Lax Strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.097g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.152g
Soil Site Class = D

BILL OF MATERIAL - BRIDGE

| ITEM | UNIT | SUPER | SUB | TOTAL |
|---|---------|-------|-------|-------|
| Channel Excavation | Cu. Yd. | --- | 210 | 210 |
| Removal of Existing Structures | Foot | --- | --- | 1 |
| Concrete Structures | Cu. Yd. | --- | 28.8 | 28.8 |
| Precast Prestressed Concrete Deck Beams (33" Depth) | Sq. Ft. | 1,864 | --- | 1,864 |
| Reinforcement Bars | Pound | --- | 3,660 | 3,660 |
| Steel Railing, Type S1 | Foot | 158 | --- | 158 |
| Furnishing Metal Shell Piles 12" x 0.250" | Foot | --- | 412 | 412 |
| Driving Piles | Foot | --- | 412 | 412 |
| Cast Pile Metal Shells | Each | --- | 2 | 2 |
| Name Plates | Each | --- | 1 | 1 |
| Porous Granular Embankment, Special | Ton | --- | 150 | 150 |
| Stone Riprap, Class A5 (Special) | Ton | --- | 1,068 | 1,068 |

GENERAL NOTES

* See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

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

INDEX OF SHEETS

- 1.) General Plan and Elevation
- 2.) Riprap and Pile Layout
- 3.) 33" x 48" PPC Deck Beam
- 4.) 33" x 48" PPC Deck Beam Details
- 5.) South Abutment Details
- 6.) North Abutment Details
- 7.) Steel Railing, Type S-1 Details
- 8.) Metal Shell Pile Details
- 9.) Boring Logs

WATERWAY INFORMATION

Drainage Area = 22.1 sq. mi. Low Grade Ei. 713.57 @ Sta. 14+50

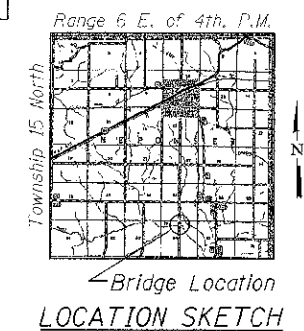
| Flood Yr. | Freq. C.F.S. | Opening Sq. Ft. | | Nat. H.W.E. | Head - Ft. | | Headwater EI. | |
|----------------------|--------------|-----------------|---------|-------------|------------|--------|---------------|-------|
| | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| Design & Overtopping | 10 | 2,600 | 432 527 | 713.43 | 0.76 0.50 | 714.19 | 713.93 | |
| Base | 100 | 4,710 | 539 618 | 714.71 | 0.79 0.52 | 715.50 | 715.23 | |
| Max. Cdo | 500 | 6,290 | 615 673 | 715.47 | 0.75 0.96 | 716.22 | 716.43 | |

DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevation (ft.) | S. Abut. | N. Abut. |
|------------------------------|----------|----------|
| | 712.33 | 712.33 |

WEST FORK OF SPOON RIVER
BUILT 2013 BY
BUREAU COUNTY
SECTION 11-18103-00 BR
TWP. RTE. 46 STATION 20+00
STR. NO. 006-4263 LOADING HL-93

NAME PLATE LETTERING
Refer To Std. 515001



Brian K. Conner
DATE: 3/28/2013
EXPIRES 11/30/14

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans, the design is an economical one for the style of structure and complies with requirements of the current AASHTO Bridge Design Specifications."

GENERAL PLAN AND ELEVATION
T.R. 46 (350 E. ST.) OVER WEST FORK OF SPOON RIVER

SECTION 11-18103-00-BR

BUREAU COUNTY

STATION 20+00

STRUCTURE NO. 006-4263



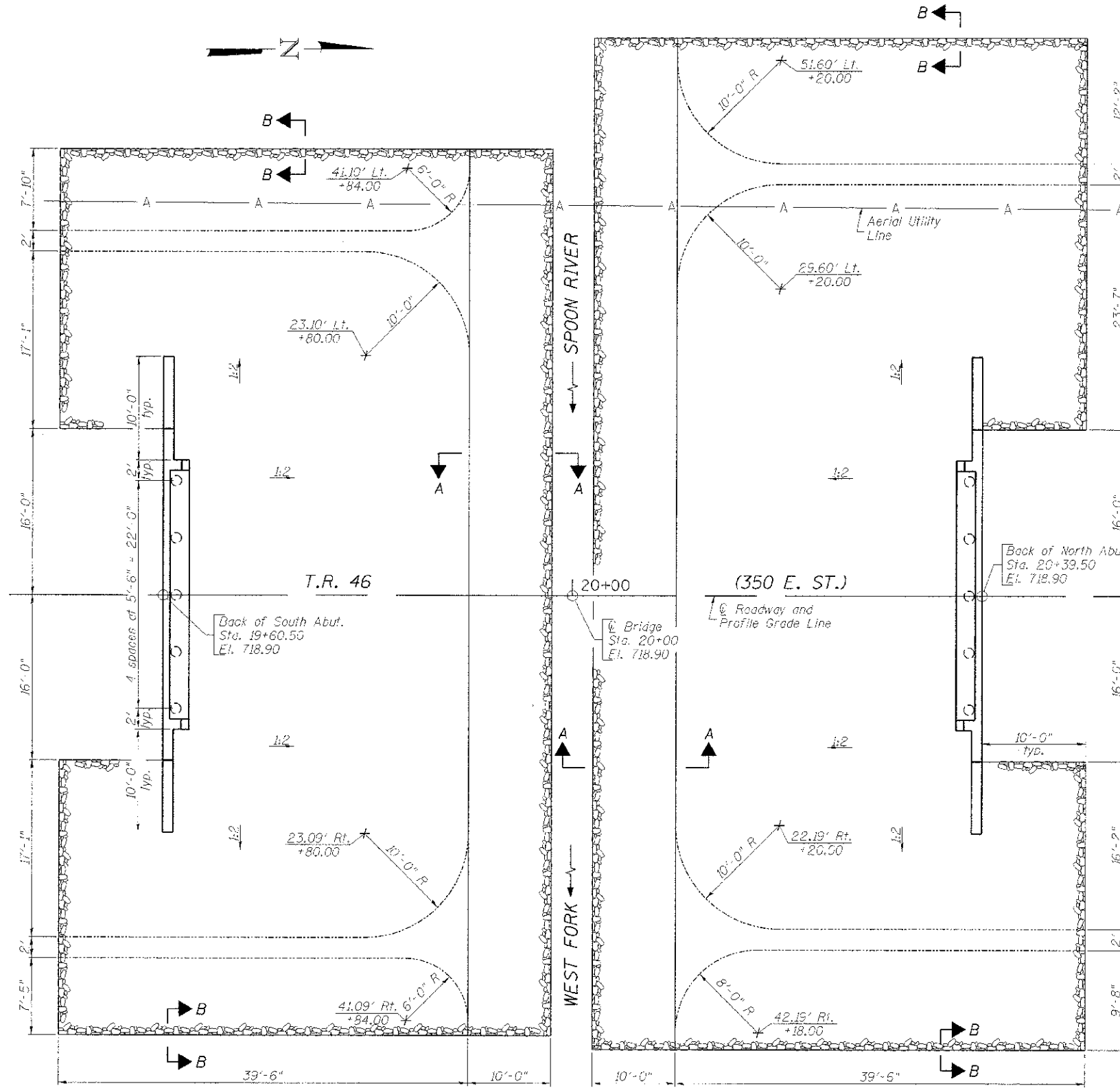
| | |
|----------------|-----------|
| DESIGNED - IPN | REVISED - |
| CHECKED - BKC | REVISED - |
| DRAWN - FDL | REVISED - |
| CHECKED - BKC | REVISED - |

BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20+00

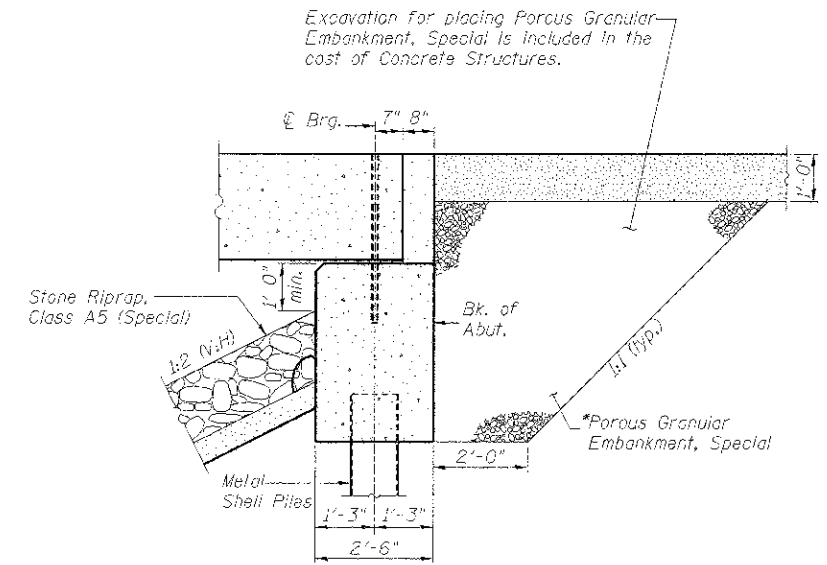
GENERAL PLAN AND ELEVATION
STRUCTURE NO. 006-4263

STRUCTURAL SHEET NO. 1 OF 9

| TWP. RTE. | SECTION | CO. JNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|----------|--------------------|-----------|
| 46 | 11-18103-00-BR | BUREAU | 19 | 7 |
| WHA* 1003D12 | | | CONTRACT NO. 87531 | |
| [ILLINOIS] FED. AID PROJECT BRGS-00110901 | | | | |

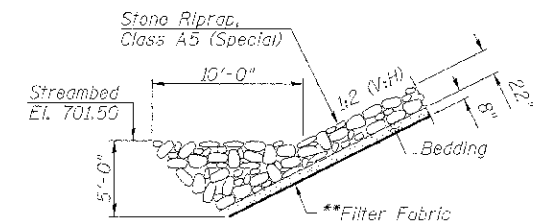


PLAN VIEW

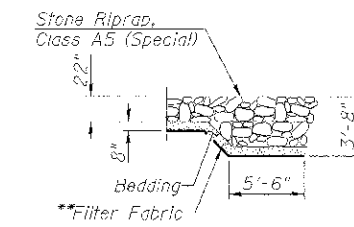


SECTION THRU ABUTMENT

*Pay Limits of Porous Granular Embankment, Special shall extend to 2'-0" in from the end of each wingwall.



SECTION A-A



SECTION B-B

BILL OF MATERIAL

| Item | Unit | Quantity |
|----------------------------------|------|----------|
| Stone Riprap, Class A5 (Special) | Ton | 1.068 |

**Included in the cost of Stone Riprap, Class A5 (Special).

FILE = G:\PROJECTS\2017\1003012_Bureau\116\DESIGN\STRUCT\CD\Drawings\1003012_Riprap.dwg



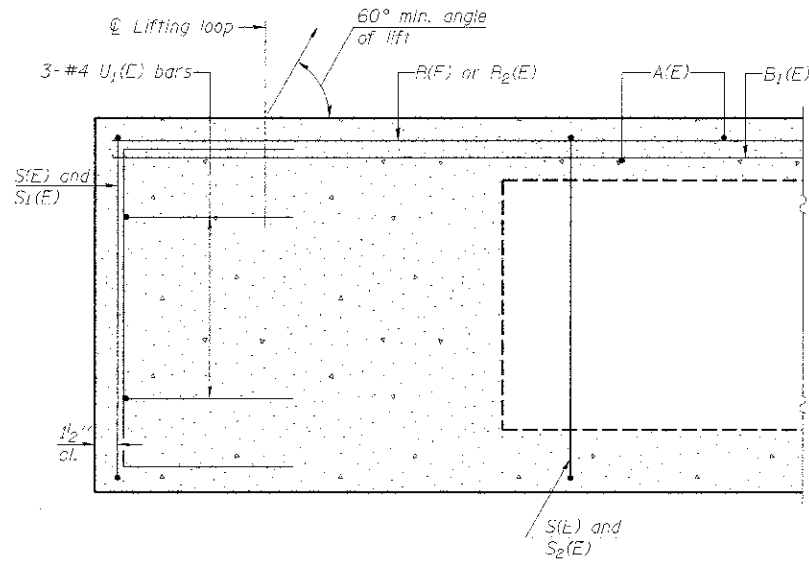
| | |
|----------------|-----------|
| DESIGNED - IPN | REVISED - |
| CHECKED - PKC | REVISED - |
| DRAWN - FDL | REVISED - |
| CHECKED - BKC | REVISED - |

BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20+00

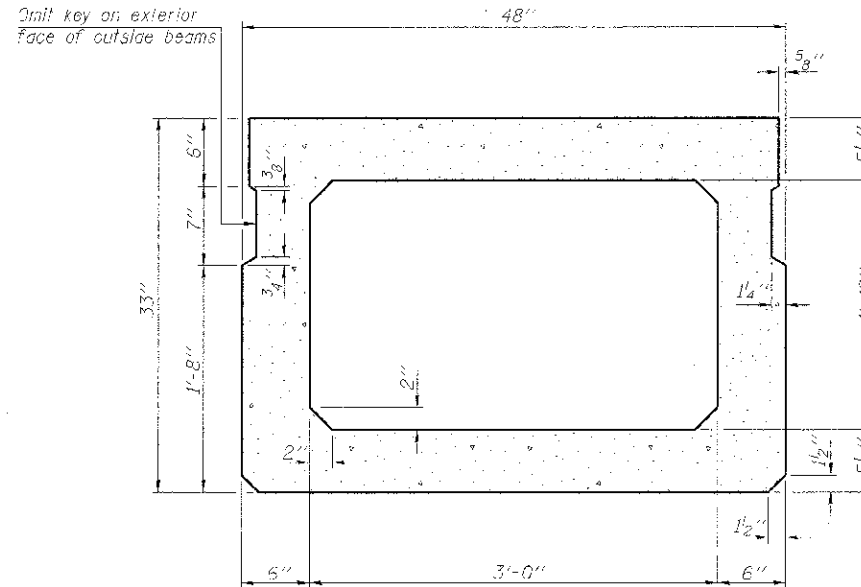
RIPRAP AND PILE LAYOUT
STRUCTURE NO. 006-4263

STRUCTURAL SHEET NO. 2 OF 9

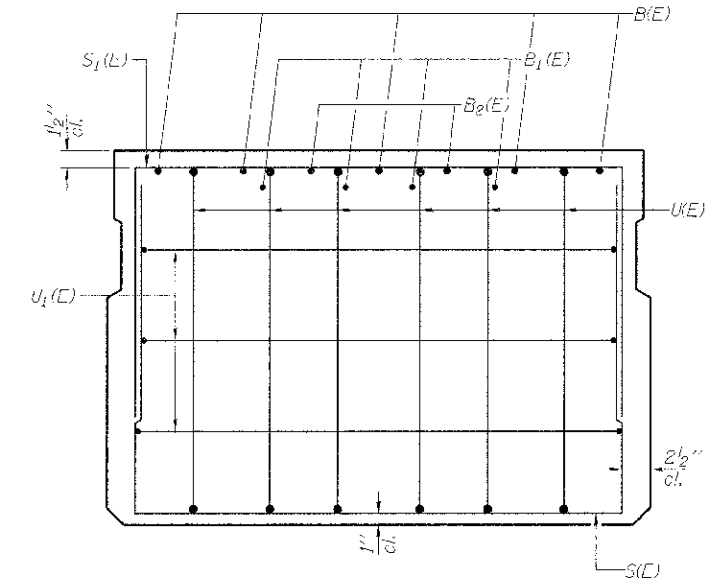
| TWP. & RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|--------|--------------------|-----------|
| 46 | 11-18103-00-BR | BUREAU | 19 | 8 |
| WHA* 1003012 | | | CONTRACT NO. 87531 | |
| BILLINGS FED. AID PROJECT BROS-00110901 | | | | |



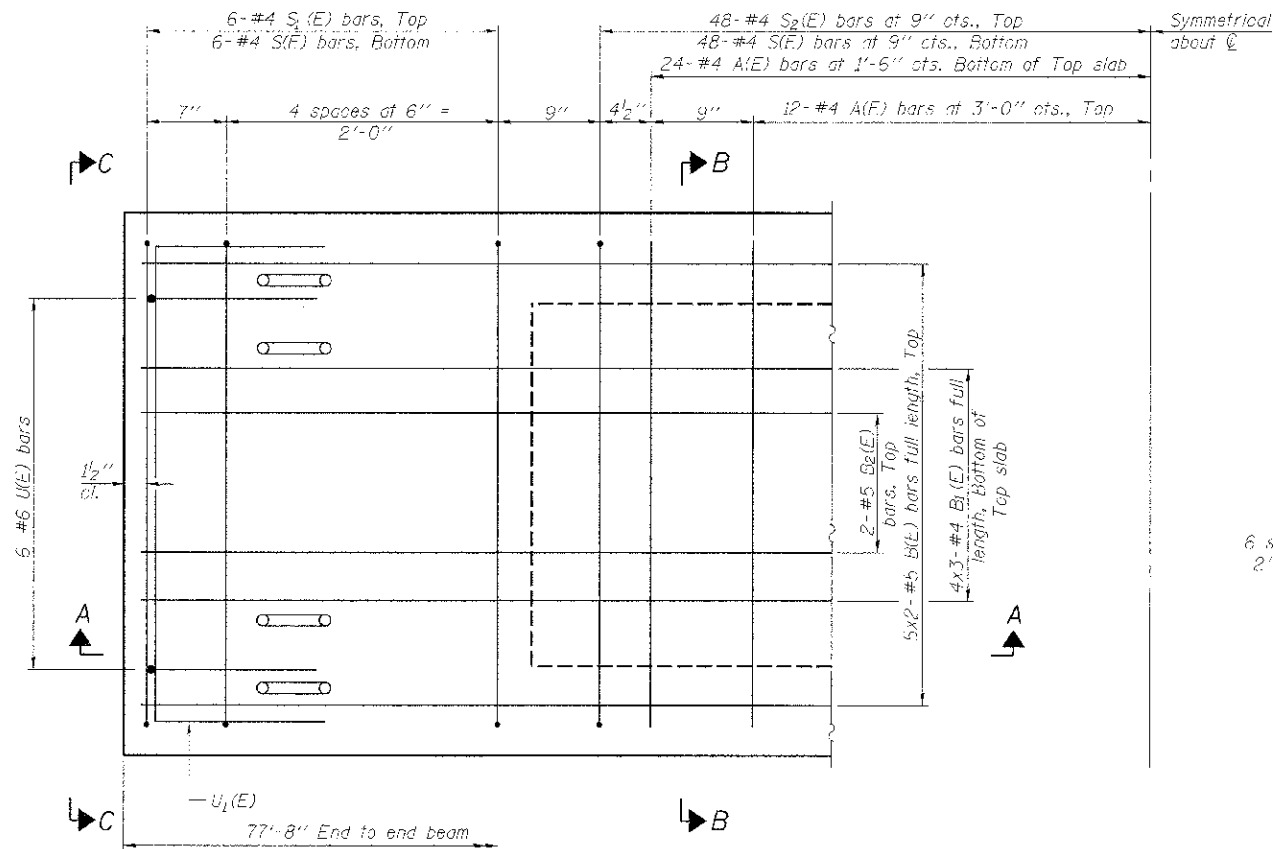
SECTION A-A



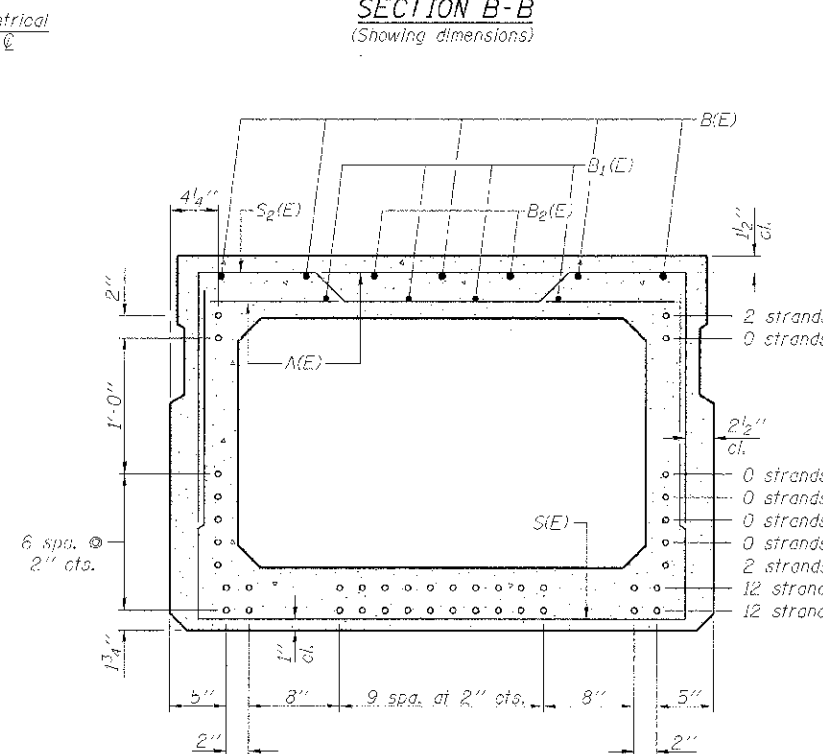
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B
(Showing reinforcement and permissible strand locations)
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

| Bar | No. | Size | Length | Shape |
|-------|-----|------|--------|-------|
| A(E) | 72 | #4 | 3'-7" | — |
| B(E) | 10 | #5 | 40'-0" | — |
| B1(E) | 12 | #4 | 27'-2" | — |
| B2(E) | 4 | #5 | 30'-0" | — |
| S1(E) | 108 | #4 | 8'-5" | □ |
| S1(F) | 12 | #4 | 7'-3" | □ |
| S2(E) | 96 | #4 | 7'-6" | □ |
| U1(E) | 12 | #6 | 5'-0" | □ |
| U1(C) | 6 | #4 | 6'-0" | □ |

Note: See Structural Sheet 4 of 9 for additional details and Bill of Material.

Bar indicated thus 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.

Note: Spacing of S1(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

FILE: S:\PROJECTS\2012\1005012_Bureau\TR46\DESIGNS\PROJECT\Drawings\0013012_33in_DeckBeam.dgn



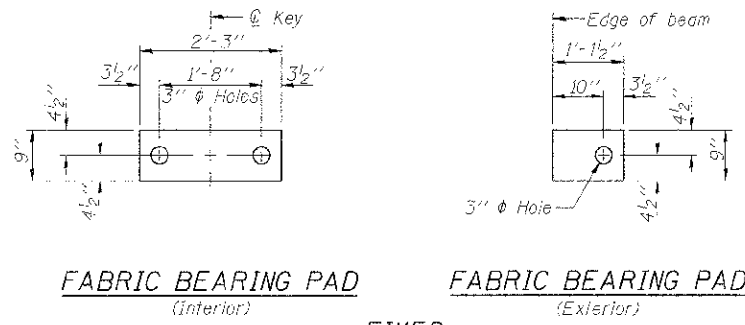
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|----------------|-----------|
| DESIGNED - IPN | REVISED - |
| CHECKED - BKC | REVISED - |
| DRAWN - FDL | REVISED - |
| CHECKED - BKC | REVISED - |

BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20+00

33" x 48" PPC DECK BEAM
STRUCTURE NO. 006-4263

STRUCTURAL SHEET NO. 3 OF 9

| | | | | |
|---|------------------------|--------------------|-----------------|-------------|
| TWP. RTE. 46 | SECTION 11 18103 00 BR | COUNTY BUREAU | TOTAL SHEETS 19 | SHEET NO. 9 |
| WHA# 1005012 | | CONTRACT NO. 87533 | | |
| [ELLING] FED. AID PROJECT BR05-20110901 | | | | |

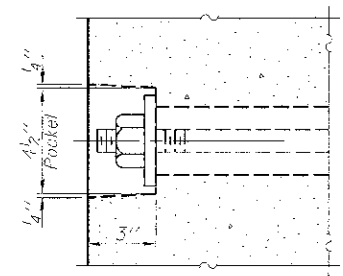


FABRIC BEARING PAD
(Interior)

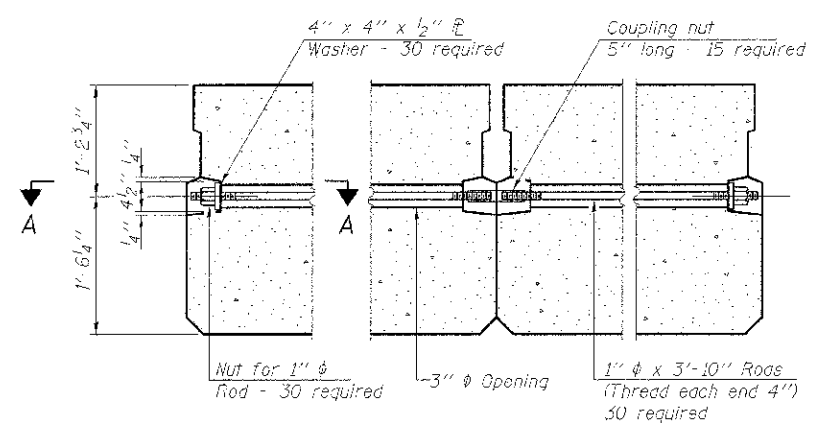
FABRIC BEARING PAD
(Exterior)

FIXED

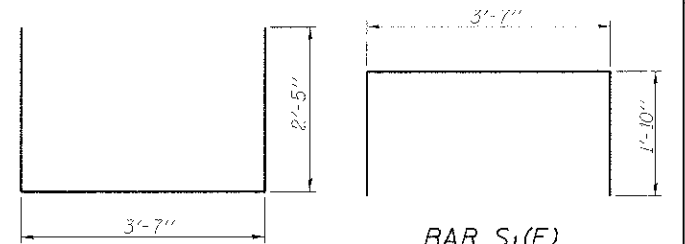
Notes:
Exterior bearing pads shall be used at the crown break.
All bearing pads shall be 1" thick.



SECTION A-A

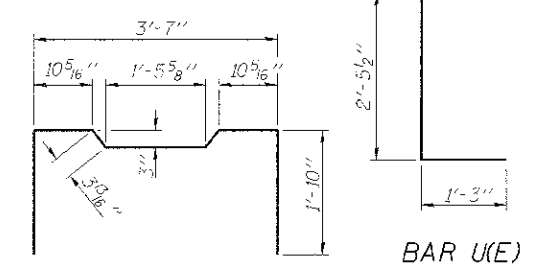


TYPICAL TRANSVERSE TIE ASSEMBLY



BAR S(E)

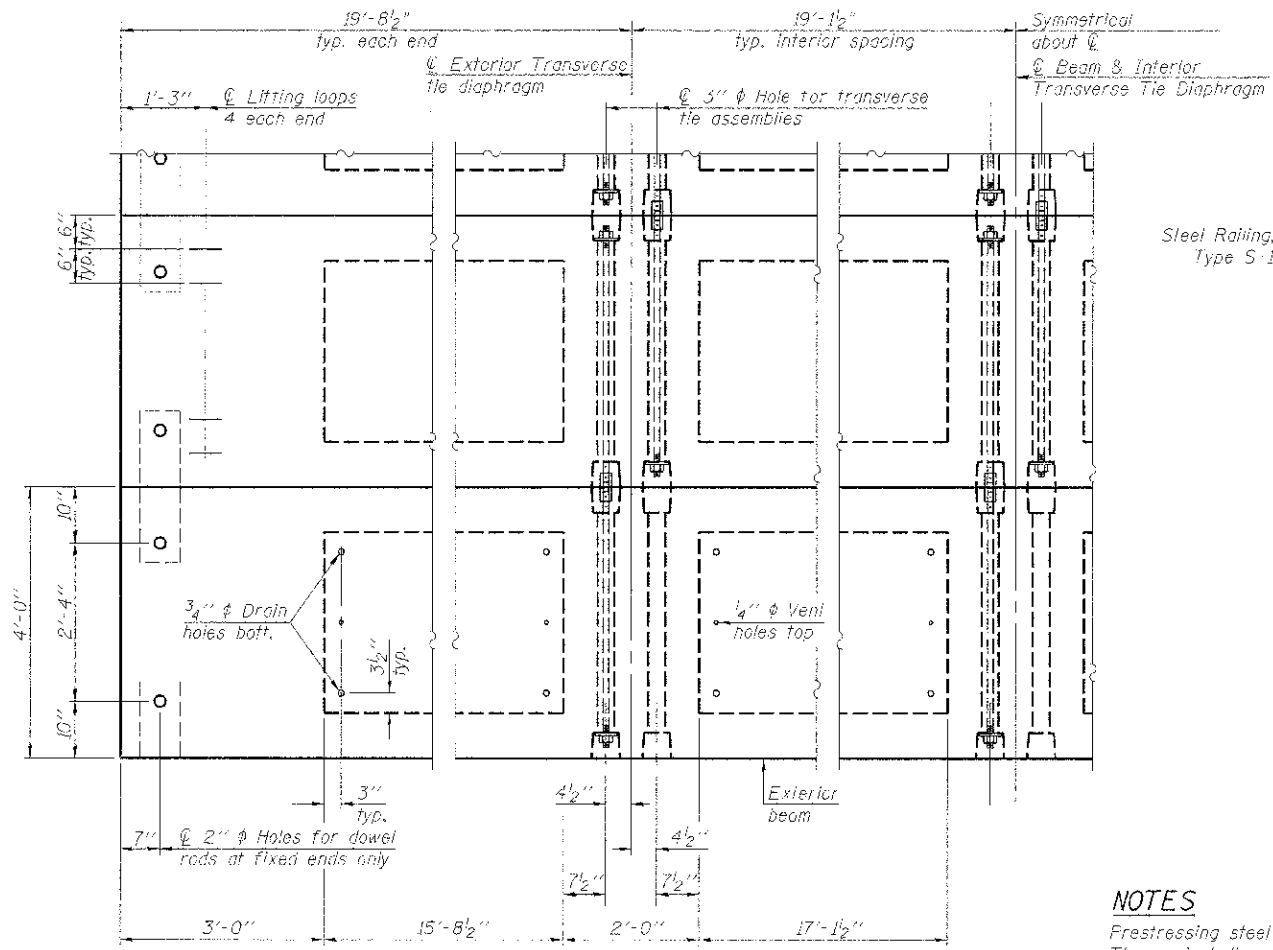
BAR S1(E)



BAR U(E)

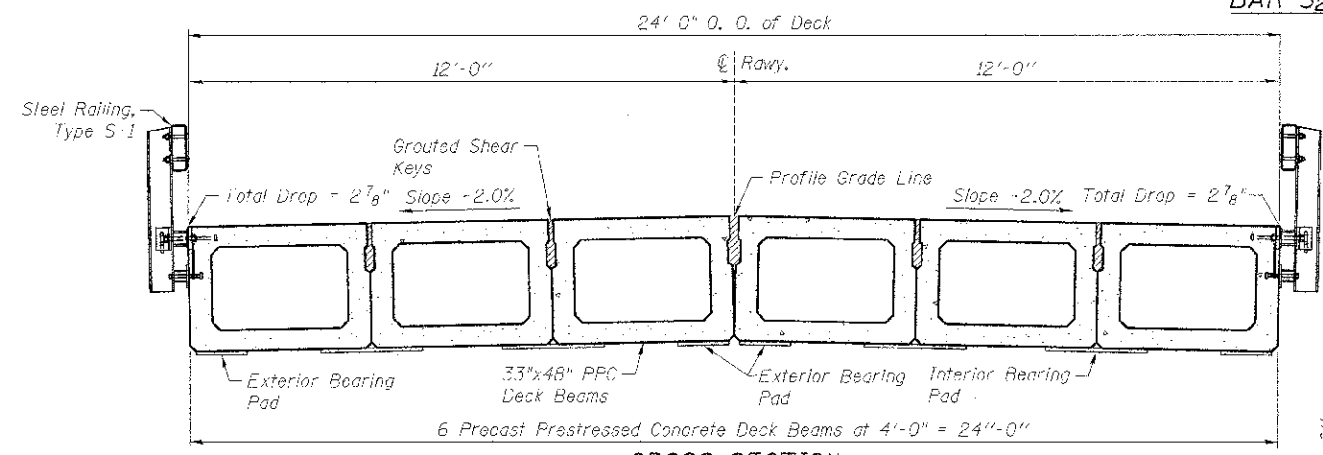
BAR S2(E)

BAR U1(E)

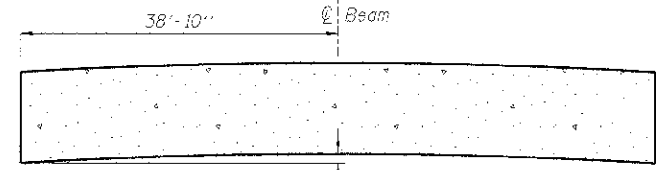


PLAN VIEW

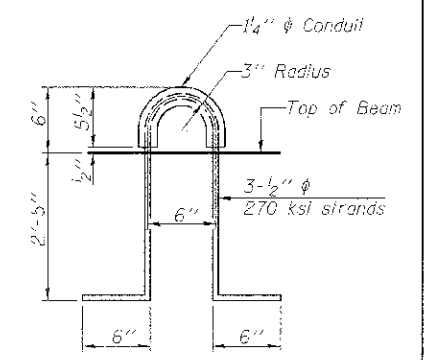
Note: Connect beams in pairs with the transverse tie configuration shown.
Unused transverse tie hole on exterior beam shall be omitted.



CROSS SECTION



CAMBER DIAGRAM



LIFTING LOOP DETAIL

NOTES

- Frestressing 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.
- The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6,000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5,000 psi.

BILL OF MATERIAL

| Item | Unit | Quantity |
|---|---------|----------|
| Precast Prestressed Concrete Deck Beams (33" Depth) | Sq. Ft. | 1,864 |

FILE # S:\PROJECTS\21\21\BR012_Br_msl_TR46\DESIGN\STRUCT\Drawings\BR012_33in_DeckBeamDetails.dgn

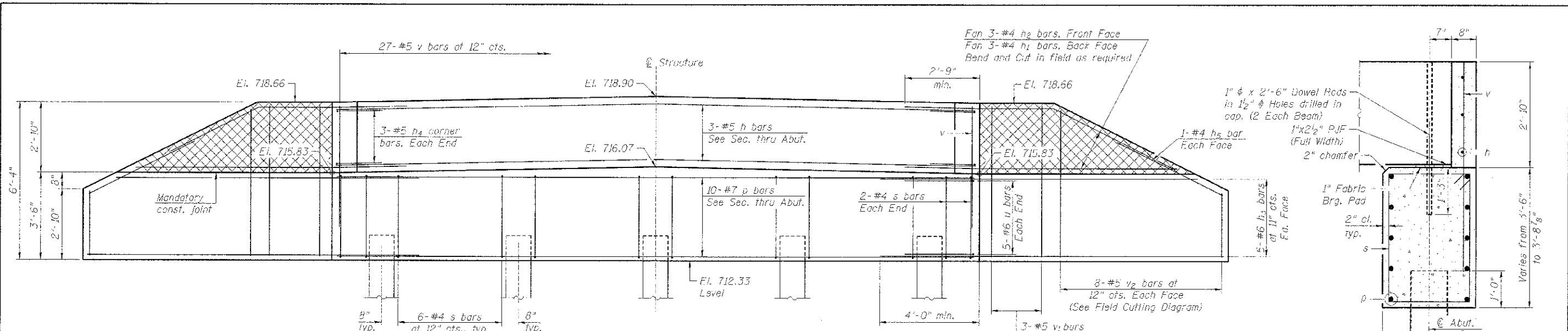


| | |
|----------------|-----------|
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| CHECKED - BKC | REVISED - |
| DRAWN - FDL | REVISED - |
| CHECKED - BKC | REVISED - |

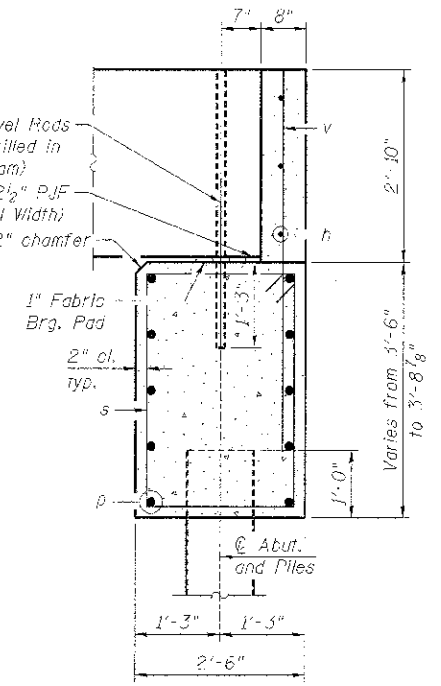
BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20+00

33" x 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 006-4263
STRUCTURAL SHEET NO. 4 OF 9

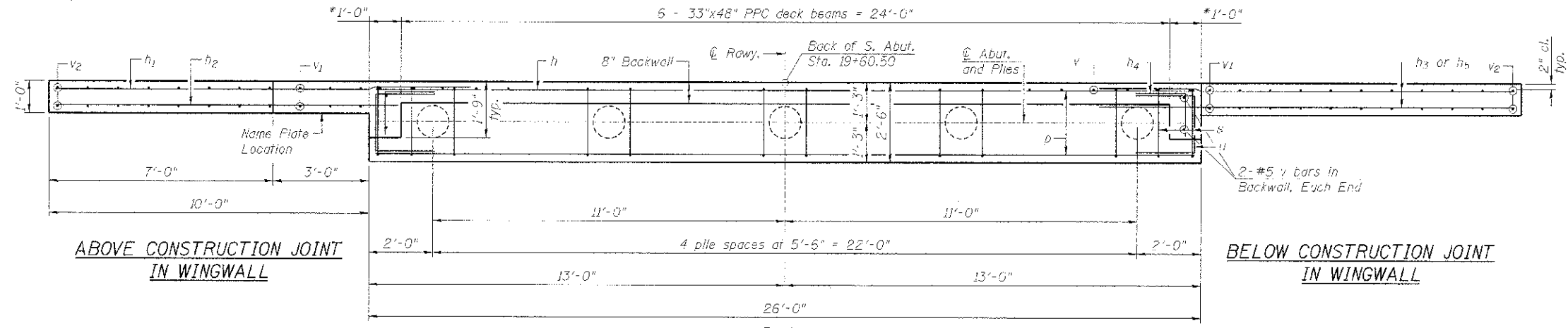
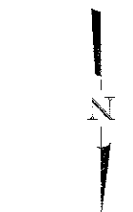
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|--|----------------|--------------------|--------------|-----------|
| TWP. R1E. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 46 | 11-18103-CO-BR | BUREAU | 19 | 10 |
| WHA# 1003012 | | CONTRACT NO. 87531 | | |
| [ILLINOIS] FED. AID PROJECT BR95-0311(090) | | | | |



ELEVATION
(Looking South)



SECTION THRU ABUTMENT

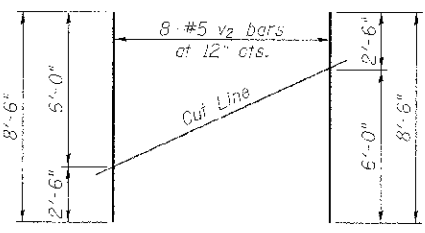


PLAN

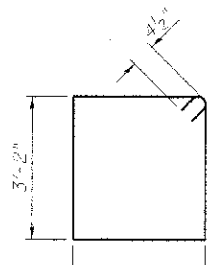
ABOVE CONSTRUCTION JOINT IN WINGWALL

BELOW CONSTRUCTION JOINT IN WINGWALL

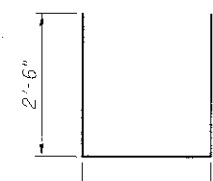
PILE DATA
 Type: Metal Shell 12" ϕ x 0.250" walls
 Nominal Required Bearing: 294 kips
 Factored Resistance Available: 162 kips
 Est. Length: 53'
 No. Production Piles: 4
 No. Test Piles: 1



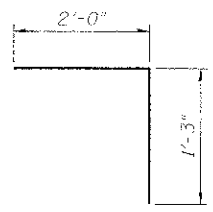
FIELD CUTTING DIAGRAM
 Order v_2 bars full length. Cut as shown and use remainder of bars in opposite face.



BAR s



BAR u



BAR h4

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|---|---------|-------|---------|-------|
| h_1 | 3 | #5 | 25'-8" | — |
| h_2 | 6 | #4 | 11'-4" | — |
| h_3 | 6 | #4 | 9'-4" | — |
| h_4 | 20 | #6 | 13'-10" | — |
| h_5 | 6 | #5 | 3'-3" | — |
| h_6 | 4 | #4 | 4'-9" | — |
| p | 10 | #7 | 25'-8" | — |
| s | 28 | #4 | 11'-5" | □ |
| u | 10 | #6 | 7'-1" | — |
| v | 31 | #5 | 4'-10" | — |
| v_1 | 12 | #5 | 5'-0" | — |
| v_2 | 16 | #5 | 8'-6" | — |
| Concrete Structures | Cu. Yd. | 14.4 | | |
| Reinforcement Bars | Pound | 1,830 | | |
| Furnishing Metal Shell Piles 12" x 0.250" | Foot | 212 | | |
| Driving Piles | Foot | 212 | | |
| Test Pile Metal Shells | Each | 1 | | |
| ** Ferrous Granular Embankment, Special | Ton | 75 | | |

NOTES:
 Hatched portion of wingwalls to be poured with the backwall after the deck beams have been installed and grout has cured for a minimum of 24 hours.
 All exposed edges shall have standard $\frac{3}{4}$ " chamfers, except as noted.
 Space reinforcement in cap to miss dowel rods.
 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 a min. of 24 hours prior to grouting the shear keys.
 For pile details, see Structural Sheet 8 of 9.
 * May vary due to overrun of beams.
 ** For Drainage Details, see Structural Sheet 2 of 9.

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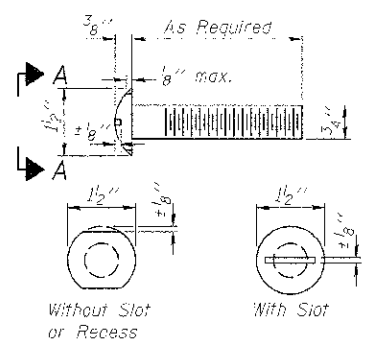


| | | | |
|-------------|-----|-----------|--|
| DESIGNED - | JPN | REVISED - | |
| CHECKED - | BKC | REVISED - | |
| DRAWN - | FDL | REVISED - | |
| (CHECKED) - | BKC | REVISED - | |

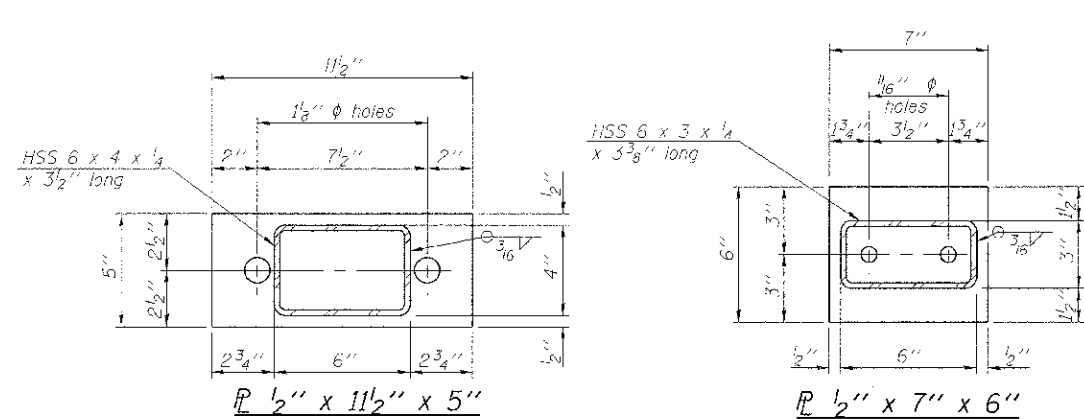
BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20+00

SOUTH ABUTMENT DETAILS
STRUCTURE NO. 006-4263
 STRUCTURAL SHEET NO. 5 OF 9

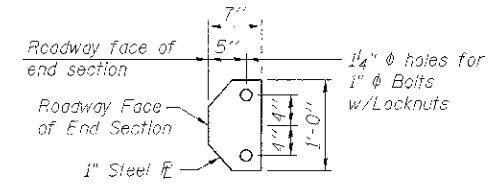
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|---|----------------|--------------------|-------------|
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| 46 | 11-18103-00-BR | BUREAU | 19 11 |
| WHA# 1002012 | | CONTRACT NO. 87531 | |
| (ILLINOIS) FED. AID PROJECT BR05-00(1090) | | | |



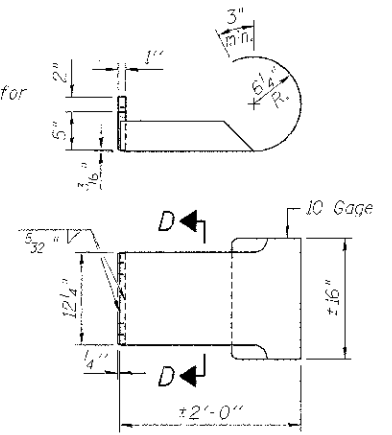
VIEW A-A
ROUND HEAD BOLT



ELEVATION VIEW



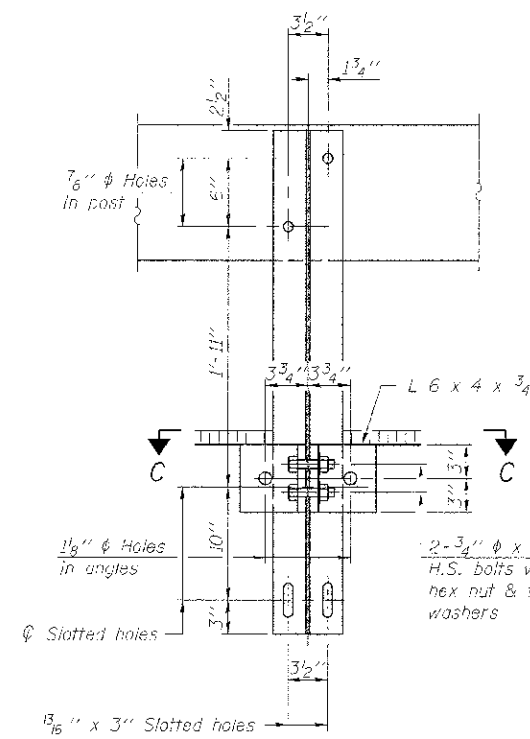
SECTION D-D



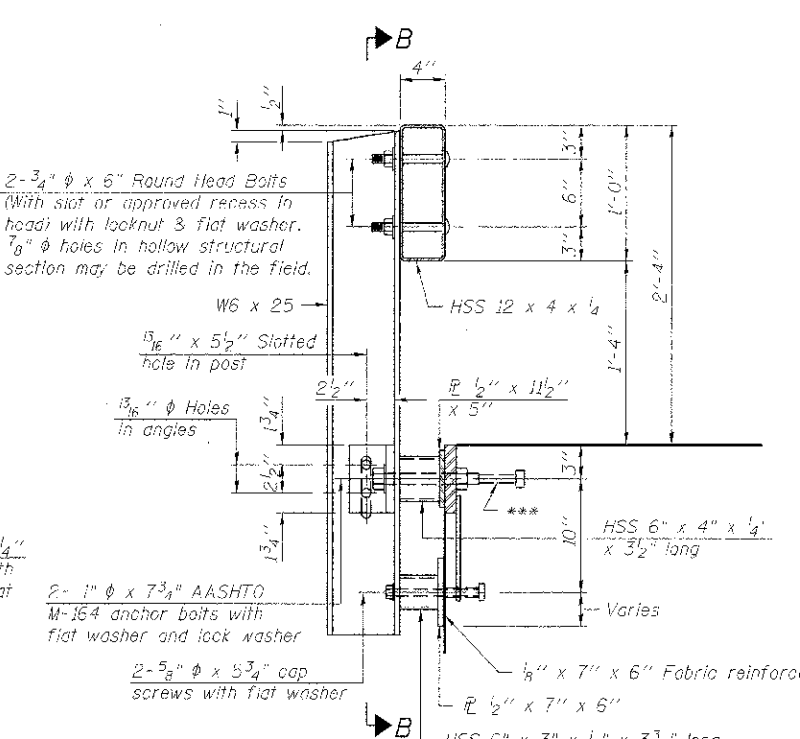
CURLLED END SECTION DETAILS
****(4 required)

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 S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

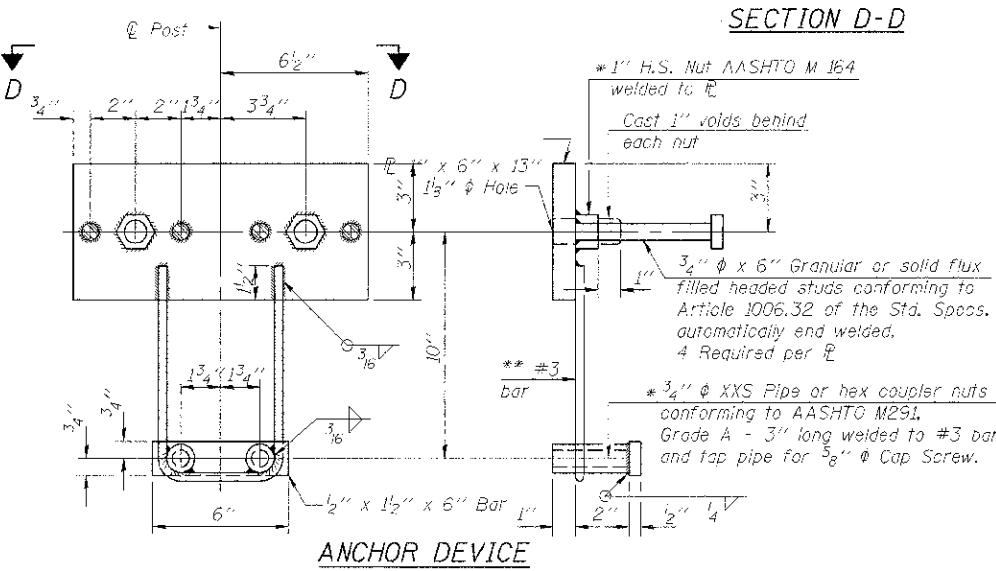
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.
**** Cost of Curled End Sections to be included with Steel Railing, Type S1.



SECTION B-B

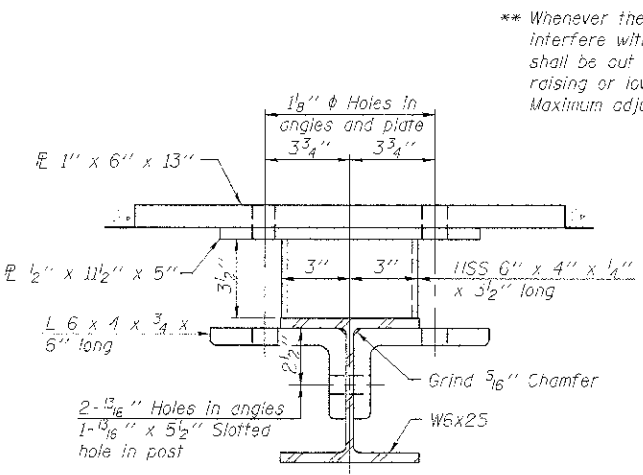


SECTION AT RAILING POST

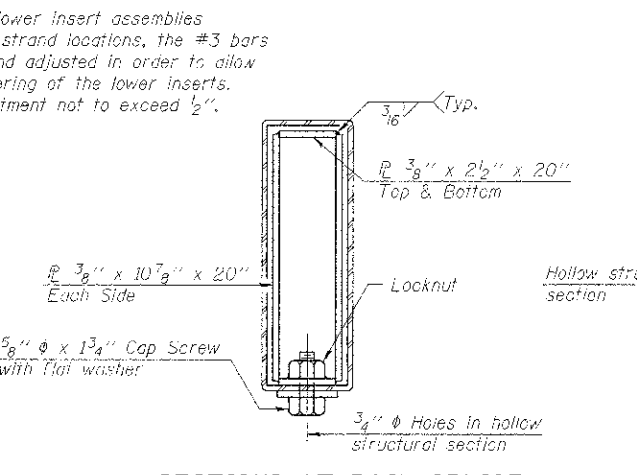


ANCHOR DEVICE

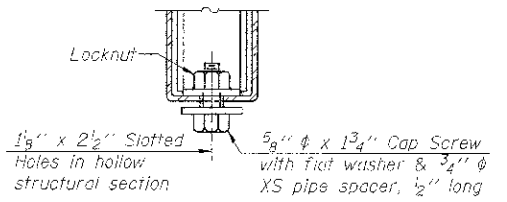
* Threaded areas shall be plugged or blocked off during casting of beam.



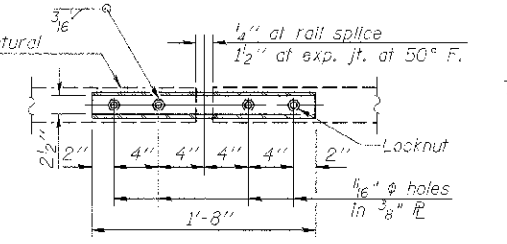
SECTION C-C



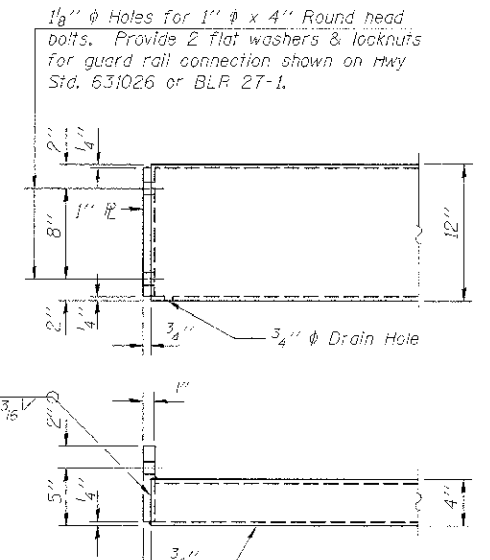
SECTIONS AT RAIL SPLICE



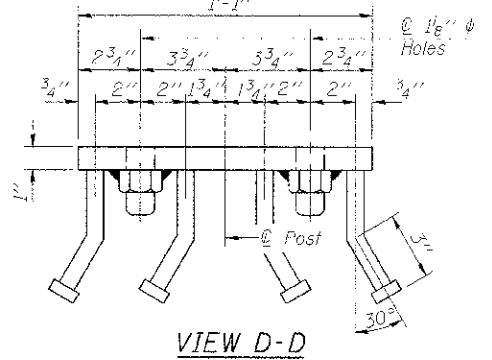
RAIL SPLICE CONNECTION
AT EXPANSION JT.



PLAN-BOTT. SPLICE AT
TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

| Item | Unit | Quantity |
|------------------------|------|----------|
| Steel Railing, Type S1 | Foot | 158 |

** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be out and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

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| | |
|----------------|-----------|
| DESIGNED - IPN | REVISED - |
| CHECKED - BKC | REVISED - |
| DRAWN - PDL | REVISED - |
| CHECKED - BKC | REVISED - |

BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20+00

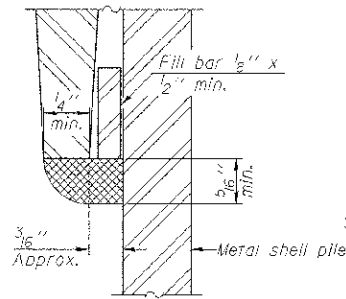
STEEL RAILING, TYPE S-1 DETAILS
STRUCTURE NO. 006-4263
STRUCTURAL SHEET NO. 7 OF 9

| W.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--|----------------|--------------------|--------------|-----------|
| 46 | 11-18103-00-BR | BUREAU | 18 | 13 |
| W-HA# 1003012 | | CONTRACT NO. 87531 | | |
| ILLINOIS FED. AID PROJECT: BR05-0C110901 | | | | |

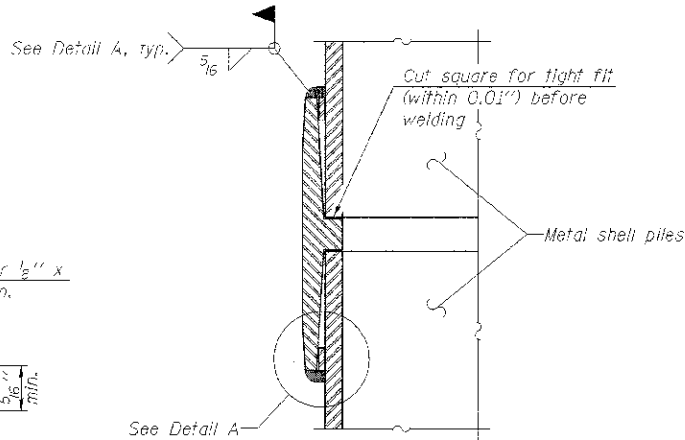


METAL SHELL PILE TABLE

| Designation and outside diameter | Wall thickness t | Weight per foot (Lbs./ft.) | Inside volume (yd. ³ /ft.) |
|----------------------------------|------------------|----------------------------|---------------------------------------|
| PP12 | 0.179" | 22.50 | 0.0274 |
| PP12 | 0.250" | 31.37 | 0.0267 |
| PP14 | 0.250" | 36.71 | 0.0368 |
| PP14 | 0.312" | 45.61 | 0.0351 |

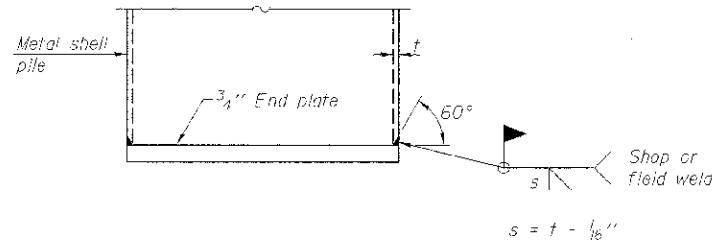


DETAIL A

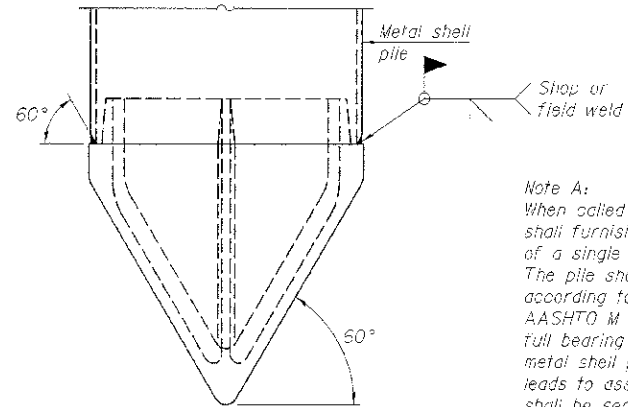


WELDED COMMERCIAL SPLICE

Notes:
 The 1/2" x 1/2" min. fillet bar may be constructed of 2 bars with a 1/8" max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.



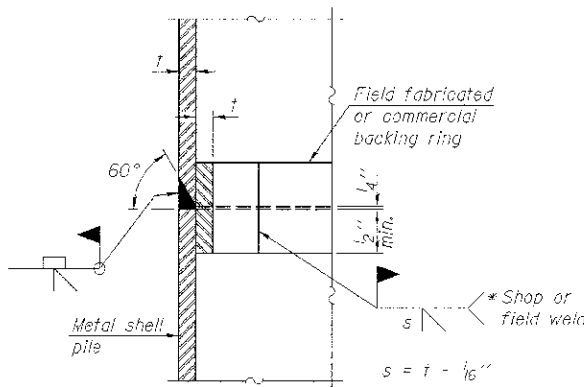
END PLATE ATTACHMENT



METAL SHELL PILE SHOE ATTACHMENT

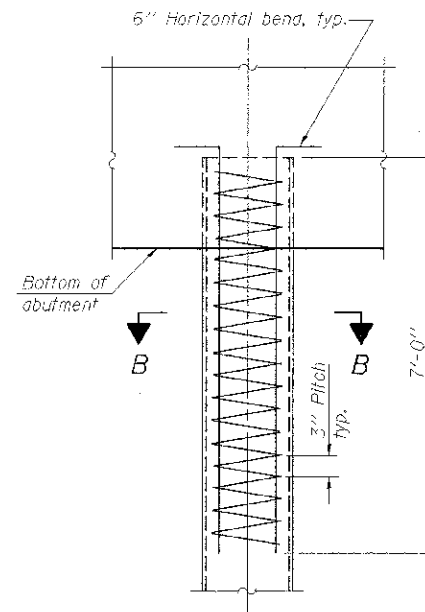
(See Note A)

Note A:
 When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



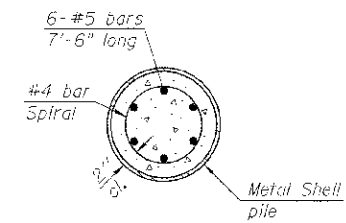
COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION

METAL SHELL REINFORCEMENT AT ABUTMENTS



SECTION B-B

Note:
 The metal shell piles shall be according to ASTM A 252 Grade 3.

FILE = S:\PROJECTS\2014\11-18-03-00-BR\STRUCT\Drawings\11-18-03-00-BR-Metal-Shell-Pile.dwg



| | |
|----------------|-----------|
| DESIGNED - IPN | REVISED - |
| CHECKED - BKC | REVISED - |
| DRAWN - FDL | REVISED - |
| CHECKED - BKC | REVISED - |

BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20+00

METAL SHELL PILE DETAILS
STRUCTURE NO. 006-4263

STRUCTURAL SHEET NO. 8 OF 9

| TWP. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|--------------------|--------------|-----------|
| 46 | 11-18-03-00-BR | BUREAU | 19 | 14 |
| WHA# 1003012 | | CONTRACT NO. 87531 | | |
| ILLINOIS FED. AID PROJECT BR05-00110900 | | | | |

BORING LOG Sheet 1 of 4

Client: Willett Hofmann & Associates
 Project Name: T.R. 46 (350 East St.) Over Fork Spoon River
 Project Site: Section 11-18103-00-BR Neponset Twp. Bureau County, IL

Boring No. B-1
 Surface Elev. 718.68
 Auger Depth 76' Rotary Depth NA
 Start Date 09/15/12 Finish Date 09/15/12

Location: North Abutment West of Centerline
 Station: 20+56 7 LT

| (DEPTH) ELEV. | DESCRIPTION OF MATERIALS | Depth in feet | SAMPLES | | | | DRILLED BY | REMARKS |
|---------------|---|---------------|------------|-------------|----------|-----------------|------------|---------|
| | | | Sample No. | Sample Type | Qc (TSF) | N Value (Blows) | | |
| 718.68 | Asphalt over Aggregate | 1 | | | | | | |
| 716.68 | Medium Stiff Brown/Gray Silty Clay Till | 2 | 1 | SS | 1.0 | 7 | B 24 | |
| 714.68 | | 3 | 2 | SS | 1.0 | 7 | B 25 | |
| 712.68 | Stiff Black/Brown/Gray Silty Clay Fill | 4 | 3 | SS | 1.2 | 7 | B 32 | |
| 710.68 | | 5 | 4 | SS | 1.2 | 9 | B 33 | |
| 708.68 | Soft Brown/Gray Silty Clay | 6 | 5 | SS | 0.6 | 4 | B 31 | |
| 706.68 | | 7 | 6 | SS | 0.8 | 3 | B 30 | |
| 704.68 | Soft Gray Clayey Sand & Silt | 8 | 7 | SS | 0.5 | 2 | B 33 | |
| 702.68 | | 9 | 8 | SS | 0.6 | 2 | B 34 | |

Groundwater Data: Static water level after auger removal 16 ft. depth.
 Comments:

BORING LOG Sheet 2 of 4

Client: Willett Hofmann & Associates
 Project Name: T.R. 46 (350 East St.) Over Fork Spoon River
 Project Site: Section 11-18103-00-BR Neponset Twp. Bureau County, IL

Boring No. B-1
 Surface Elev. 718.68
 Auger Depth 76' Rotary Depth NA
 Start Date 09/15/12 Finish Date 09/15/12

Location: North Abutment West of Centerline
 Station: 20+56 7 LT

| (DEPTH) ELEV. | DESCRIPTION OF MATERIALS | Depth in feet | SAMPLES | | | | DRILLED BY | REMARKS |
|---------------|------------------------------|---------------|------------|-------------|----------|-----------------|------------|---------|
| | | | Sample No. | Sample Type | Qc (TSF) | N Value (Blows) | | |
| 696.68 | Soft Gray Clayey Sand & Silt | 22 | 9 | SS | 0.6 | 4 | B 32 | |
| 694.68 | | 10 | SS | --- | 14 | --- | 8 | |
| 692.68 | Medium Dense Gray Fine Sand | 26 | 11 | SS | --- | 26 | --- | |
| 690.68 | | 12 | SS | --- | 26 | --- | 9 | |
| 688.68 | Medium Dense Gray Gravel | 30 | 13 | SS | 1.6 | 15 | S 21 | |
| 686.68 | | 14 | SS | --- | 15 | --- | 21 | |

Groundwater Data: Static water level after auger removal 16 ft. depth.
 Comments:

BORING LOG Sheet 3 of 4

Client: Willett Hofmann & Associates
 Project Name: T.R. 46 (350 East St.) Over Fork Spoon River
 Project Site: Section 11-18103-00-BR Neponset Twp. Bureau County, IL

Boring No. B-1
 Surface Elev. 718.68
 Auger Depth 76' Rotary Depth NA
 Start Date 09/15/12 Finish Date 09/15/12

Location: North Abutment West of Centerline
 Station: 20+56 7 LT

| (DEPTH) ELEV. | DESCRIPTION OF MATERIALS | Depth in feet | SAMPLES | | | | DRILLED BY | REMARKS |
|---------------|--|---------------|------------|-------------|----------|-----------------|------------|---------|
| | | | Sample No. | Sample Type | Qc (TSF) | N Value (Blows) | | |
| 675.68 | Very Stiff Gray Silty Clay Loam Till with Sand & Gravel Seams | 43 | 14 | SS | 2.1 | 21 | S 19 | |
| 673.68 | | 15 | SS | 2.0 | 20 | S 21 | | |
| 671.68 | Stiff Pinkish Gray Silty Clay Loam Till with Sand & Gravel Seams | 47 | 16 | SS | --- | 22 | --- | |
| 669.68 | | 17 | SS | 2.1 | 22 | S 21 | | |

Groundwater Data: Static water level after auger removal 16 ft. depth.
 Comments:

BORING LOG Sheet 4 of 4

Client: Willett Hofmann & Associates
 Project Name: T.R. 46 (350 East St.) Over Fork Spoon River
 Project Site: Section 11-18103-00-BR Neponset Twp. Bureau County, IL

Boring No. B-1
 Surface Elev. 718.68
 Auger Depth 76' Rotary Depth NA
 Start Date 09/15/12 Finish Date 09/15/12

Location: North Abutment West of Centerline
 Station: 20+56 7 LT

| (DEPTH) ELEV. | DESCRIPTION OF MATERIALS | Depth in feet | SAMPLES | | | | DRILLED BY | REMARKS |
|---------------|--|---------------|------------|-------------|----------|-----------------|------------|---------|
| | | | Sample No. | Sample Type | Qc (TSF) | N Value (Blows) | | |
| 653.68 | Stiff to Very Stiff Pinkish Gray Silty Clay Loam Till with Sand & Gravel Seams | 64 | 18 | SS | 2.0 | 21 | S 21 | |
| 651.68 | | 19 | SS | --- | 22 | --- | 17 | |
| 649.68 | Bottom of the Boring | 68 | 20 | SS | --- | 20 | --- | |
| 647.68 | | 21 | SS | --- | 20 | --- | 18 | |

Groundwater Data: Static water level after auger removal 16 ft. depth.
 Comments:

BORING LOG Sheet 1 of 4

Client: Willett Hofmann & Associates
 Project Name: T.R. 46 (350 East St.) Over Fork Spoon River
 Project Site: Section 11-18103-00-BR Neponset Twp. Bureau County, IL

Boring No. B-2
 Surface Elev. 718.68
 Auger Depth 76' Rotary Depth NA
 Start Date 09/15/12 Finish Date 09/15/12

Location: South Abutment East of Centerline
 Station: 19+45 6 RT

| (DEPTH) ELEV. | DESCRIPTION OF MATERIALS | Depth in feet | SAMPLES | | | | DRILLED BY | REMARKS |
|---------------|---|---------------|------------|-------------|----------|-----------------|------------|---------|
| | | | Sample No. | Sample Type | Qc (TSF) | N Value (Blows) | | |
| 718.68 | Asphalt over Aggregate | 1 | | | | | | |
| 716.68 | Medium Stiff Brown/Gray Silty Clay Till | 2 | 1 | SS | 1.0 | 7 | B 25 | |
| 714.68 | | 3 | 2 | SS | 1.0 | 6 | B 25 | |
| 712.68 | Stiff Black/Brown/Gray Silty Clay Fill | 4 | 3 | SS | 1.1 | 7 | B 33 | |
| 710.68 | | 5 | 4 | SS | 1.2 | 9 | B 32 | |
| 708.68 | Soft Brown/Gray Silty Clay | 6 | 5 | SS | 0.6 | 3 | B 30 | |
| 706.68 | | 7 | 6 | SS | 0.6 | 3 | B 30 | |
| 704.68 | Soft Gray Clayey Sand & Silt | 8 | 7 | SS | 0.4 | 2 | B 31 | |
| 702.68 | | 9 | 8 | SS | 0.5 | 2 | B 32 | |

Groundwater Data: Static water level after auger removal 16 ft. depth.
 Comments:

BORING LOG Sheet 2 of 4

Client: Willett Hofmann & Associates
 Project Name: T.R. 46 (350 East St.) Over Fork Spoon River
 Project Site: Section 11-18103-00-BR Neponset Twp. Bureau County, IL

Boring No. B-2
 Surface Elev. 718.68
 Auger Depth 76' Rotary Depth NA
 Start Date 09/15/12 Finish Date 09/15/12

Location: South Abutment East of Centerline
 Station: 19+45 6 RT

| (DEPTH) ELEV. | DESCRIPTION OF MATERIALS | Depth in feet | SAMPLES | | | | DRILLED BY | REMARKS |
|---------------|------------------------------------|---------------|------------|-------------|----------|-----------------|------------|---------|
| | | | Sample No. | Sample Type | Qc (TSF) | N Value (Blows) | | |
| 696.68 | Soft Gray Clayey Sand & Silt | 22 | 9 | SS | --- | 4 | --- | |
| 694.68 | | 10 | SS | --- | 15 | --- | 28 | |
| 692.68 | Medium Dense Gray Fine Clayey Sand | 26 | 11 | SS | --- | 26 | --- | |
| 690.68 | | 12 | SS | --- | 25 | --- | 18 | |
| 688.68 | Medium Dense Gray Gravel | 30 | 13 | SS | 1.8 | 16 | S 22 | |
| 686.68 | | 14 | SS | --- | 16 | --- | 22 | |

Groundwater Data: Static water level after auger removal 16 ft. depth.
 Comments:

BORING LOG Sheet 3 of 4

Client: Willett Hofmann & Associates
 Project Name: T.R. 46 (350 East St.) Over Fork Spoon River
 Project Site: Section 11-18103-00-BR Neponset Twp. Bureau County, IL

Boring No. B-2
 Surface Elev. 718.68
 Auger Depth 76' Rotary Depth NA
 Start Date 09/15/12 Finish Date 09/15/12

Location: South Abutment East of Centerline
 Station: 19+45 6 RT

| (DEPTH) ELEV. | DESCRIPTION OF MATERIALS | Depth in feet | SAMPLES | | | | DRILLED BY | REMARKS |
|---------------|--|---------------|------------|-------------|----------|-----------------|------------|---------|
| | | | Sample No. | Sample Type | Qc (TSF) | N Value (Blows) | | |
| 675.68 | Very Stiff Gray Silty Clay Loam Till with Sand & Gravel Seams | 43 | 14 | SS | --- | 25 | --- | |
| 673.68 | | 15 | SS | 2.3 | 21 | S 20 | | |
| 671.68 | Stiff Pinkish Gray Silty Clay Loam Till with Sand & Gravel Seams | 47 | 16 | SS | 2.0 | 19 | S 20 | |
| 669.68 | | 17 | SS | 1.9 | 18 | S 20 | | |

Groundwater Data: Static water level after auger removal 16 ft. depth.
 Comments:

BORING LOG Sheet 4 of 4

Client: Willett Hofmann & Associates
 Project Name: T.R. 46 (350 East St.) Over Fork Spoon River
 Project Site: Section 11-18103-00-BR Neponset Twp. Bureau County, IL

Boring No. B-2
 Surface Elev. 718.68
 Auger Depth 76' Rotary Depth NA
 Start Date 09/15/12 Finish Date 09/15/12

Location: South Abutment East of Centerline
 Station: 19+45 6 RT

| (DEPTH) ELEV. | DESCRIPTION OF MATERIALS | Depth in feet | SAMPLES | | | | DRILLED BY | REMARKS |
|---------------|--|---------------|------------|-------------|----------|-----------------|------------|---------|
| | | | Sample No. | Sample Type | Qc (TSF) | N Value (Blows) | | |
| 653.68 | Stiff Pinkish Gray Silty Clay Loam Till with Sand & Gravel Seams | 64 | 18 | SS | --- | 21 | --- | |
| 651.68 | | 19 | SS | 2.2 | 22 | S 19 | | |
| 649.68 | Bottom of the Boring | 68 | 20 | SS | --- | 20 | --- | |
| 647.68 | | 21 | SS | --- | 20 | --- | 18 | |

Groundwater Data: Static water level after auger removal 16 ft. depth.
 Comments:



DESIGNED - IPN
 CHECKED - BKC
 DRAWN - FDL
 CHECKED - BKC

REVISED -
 REVISED -
 REVISED -
 REVISED -

BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20+00

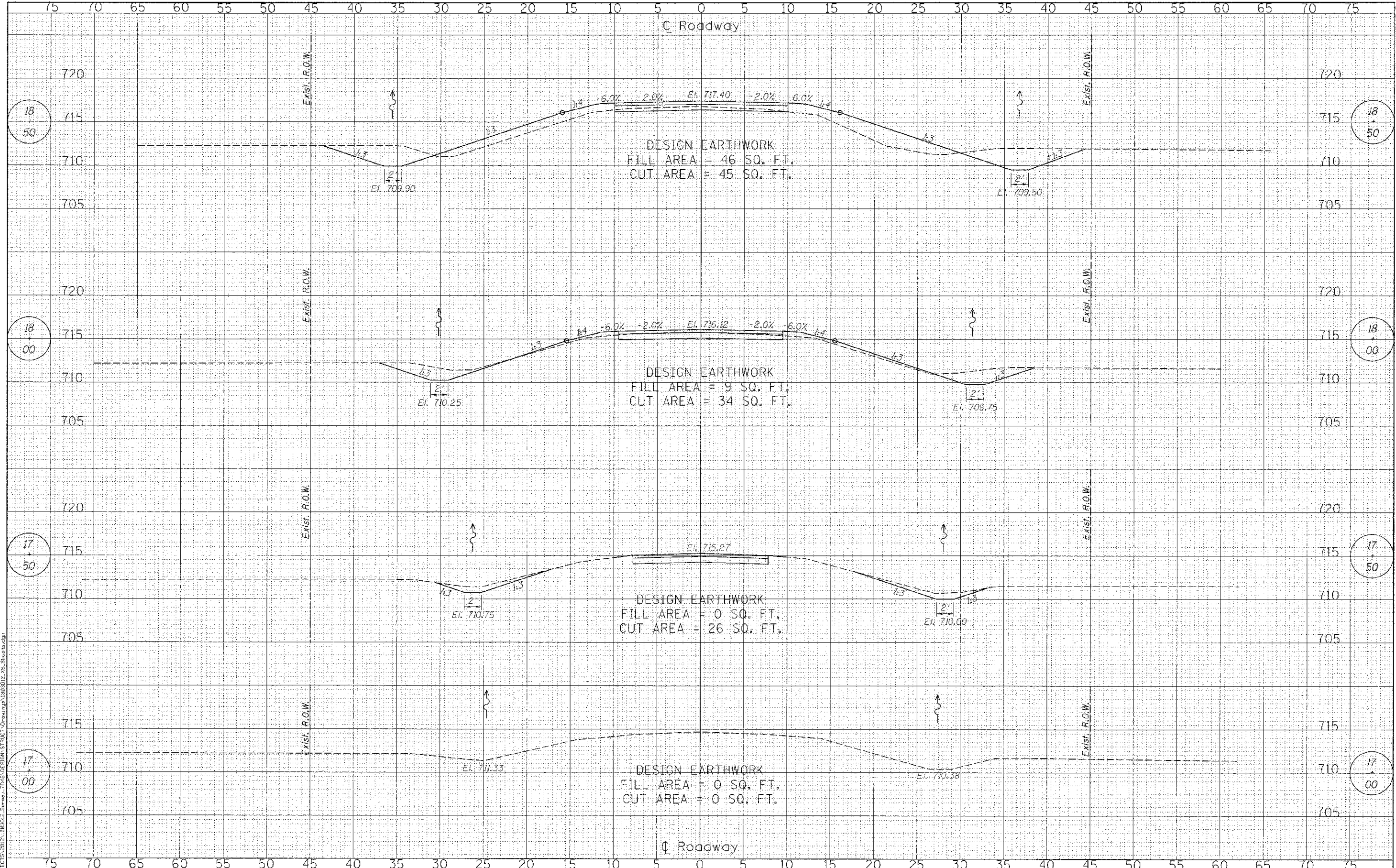
BORING LOGS
STRUCTURE NO. 006-4263
 STRUCTURAL SHEET NO. 9 OF 9

| TWP. RITE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|--------------------|--------------|-----------|
| 46 | 11-18103-00-BR | BUREAU | 19 | 9 |
| WHA* 1003012 | | CONTRACT NO. 87531 | | |
| [J] INOTS/FED. AID PROJECT [G]S-001/090 | | | | |

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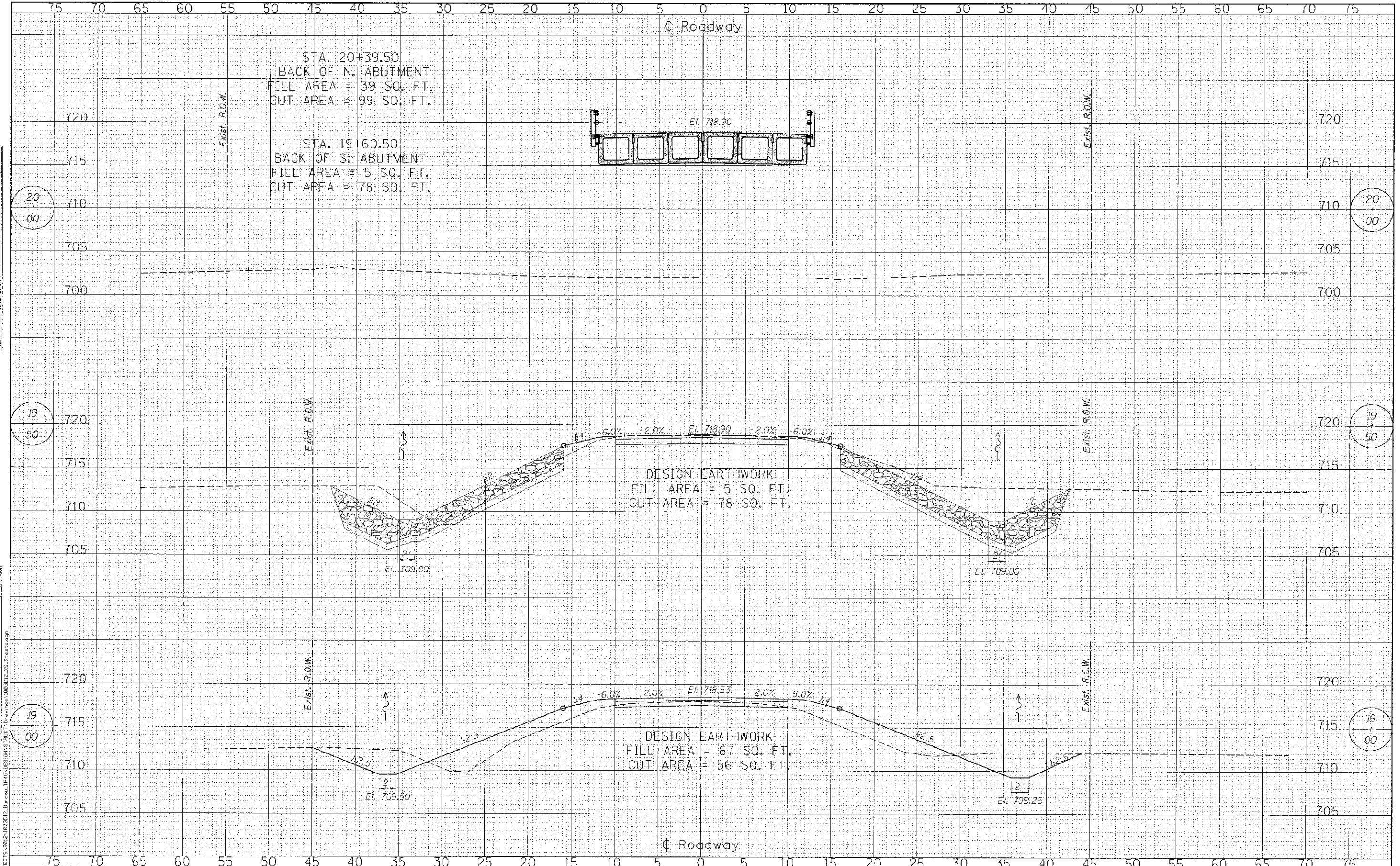
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| NOTED | BKC |
| REVISIONS | |

| | |
|-----------|-----|
| DATE | BY |
| DESIGNED | BSK |
| CHECKED | BKC |
| DRAWN | BSK |
| NOTED | BKC |
| REVISIONS | |



| | |
|---------------|--|
| DATE | |
| BY | |
| PHIL SURVEY | |
| SHOWN | |
| PLOTTED | |
| NOTE BOOK | |
| AREAS CHECKED | |

| | |
|-----------------|--|
| DATE | |
| BY | |
| ORIGINAL SURVEY | |
| SHOWN | |
| PLOTTED | |
| NOTE BOOK | |
| AREAS CHECKED | |



FILE: S:\PROJECTS\0312\1063012 - Bur. casu. IPIAD\DESIGN\STATION 19+00.50 TO 20+00.00.dwg

WILLET HOFMANN ASSOCIATES INC.
 ENGINEERING ARCHITECTURE LAND SURVEYING
 809 EAST 2ND STREET, OMAHA, IL 61021-0367
 T: 815-324-5381 DESIGN FIRM: 4164-DC918

| | | | |
|------------|-----|-----------|--|
| DESIGNED - | BSK | REVISED - | |
| CHECKED - | BKC | REVISED - | |
| DRAWN - | BSK | REVISED - | |
| CHECKED - | BKC | REVISED - | |

BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20+00

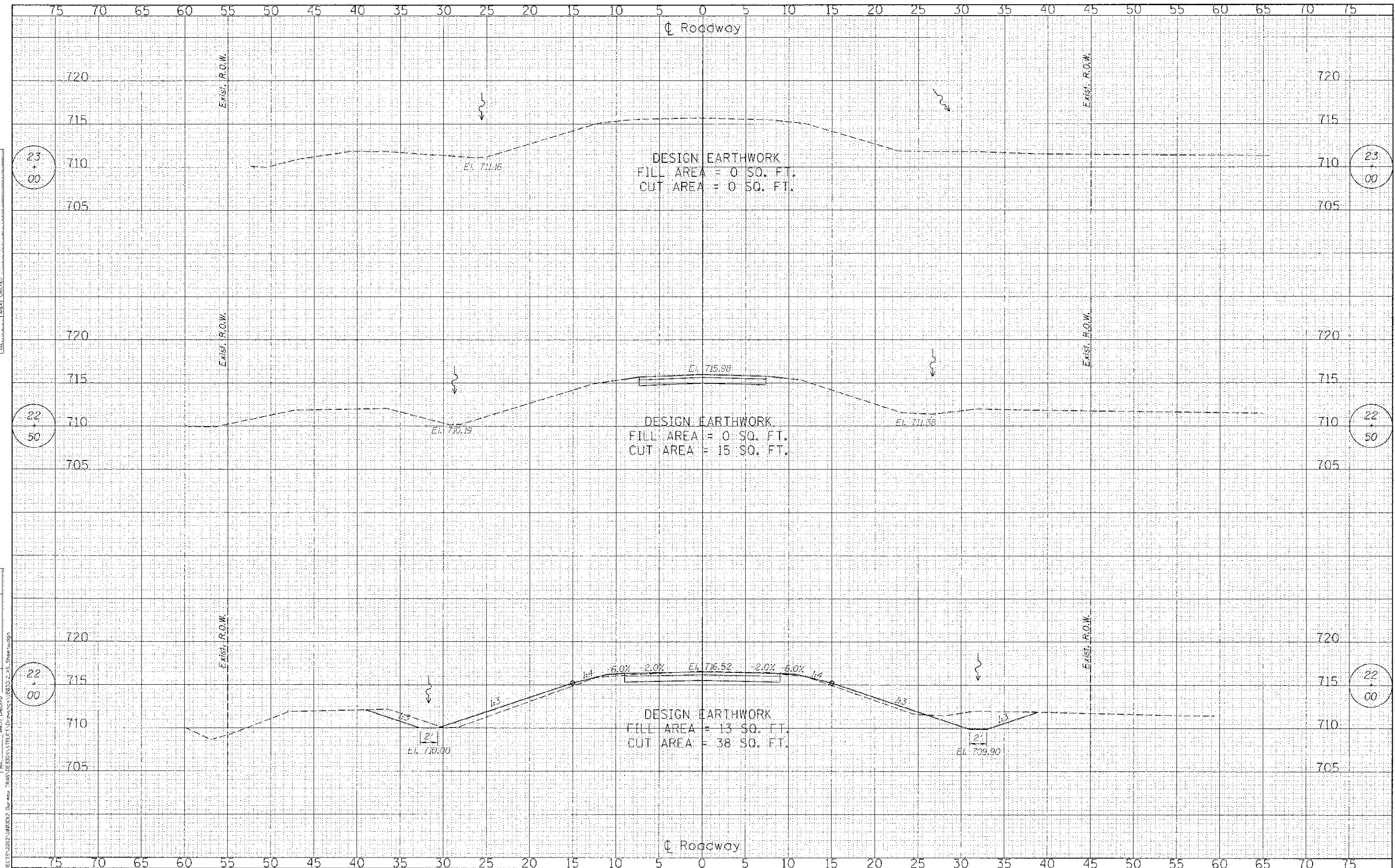
CROSS SECTIONS
STRUCTURE NO. 006-4263

SCALE: 1" = 10'-0" SHEET NO. 2 OF 4 SHEETS STA. 19+00.00 TO STA. 20+00.00

| WP. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|--------|--------------------|-----------|
| 46 | 11-18103-00-9R | HUHLAU | 19 | 17 |
| WIA# 1003D12 | | | CONTRACT NO. 87531 | |
| ILLINOIS FED. AID PROJECT BROS. 001109C | | | | |

| | |
|-----------|-----|
| DATE | BY |
| DESIGNED | BSK |
| CHECKED | B4C |
| DRAWN | B5K |
| REVISIONS | |

| | |
|-----------|-----|
| DATE | BY |
| DESIGNED | BSK |
| CHECKED | B4C |
| DRAWN | B5K |
| REVISIONS | |



FILE # SA-PROJECTS\2022\188002 Over the TRAVELWAY STREET (DRAINAGE) (8802) 2-AS_Sheet-009
 ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED
 FINISHED SURVEY PLOTTED TEMPLATE AREAS CHECKED



| | |
|----------------|-----------|
| DESIGNED - BSK | REVISED - |
| CHECKED - B4C | REVISED - |
| DRAWN - B5K | REVISED - |
| CHECKED - B4C | REVISED - |

BUREAU COUNTY
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER
STATION 20 + 00

CROSS SECTIONS
STRUCTURE NO. 006-4263

SCALE: 1" = 30'-0" SHEET NO. 4 OF 4 SHEETS STA. 22+00.00 TO STA. 22+50.00

| | | | |
|--|------------------------|--------------------|--------------------|
| TWP. 46 | SECTION 11-18123-0C-BR | COUNTY BUREAU | TOTAL SHEET NO. 19 |
| WHA# 1003012 | | CONTRACT NO. 87531 | |
| ILLINOIS REC. #10 PROJECT BRCS-0011030 | | | |