

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|---------|------------|--------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 1 |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

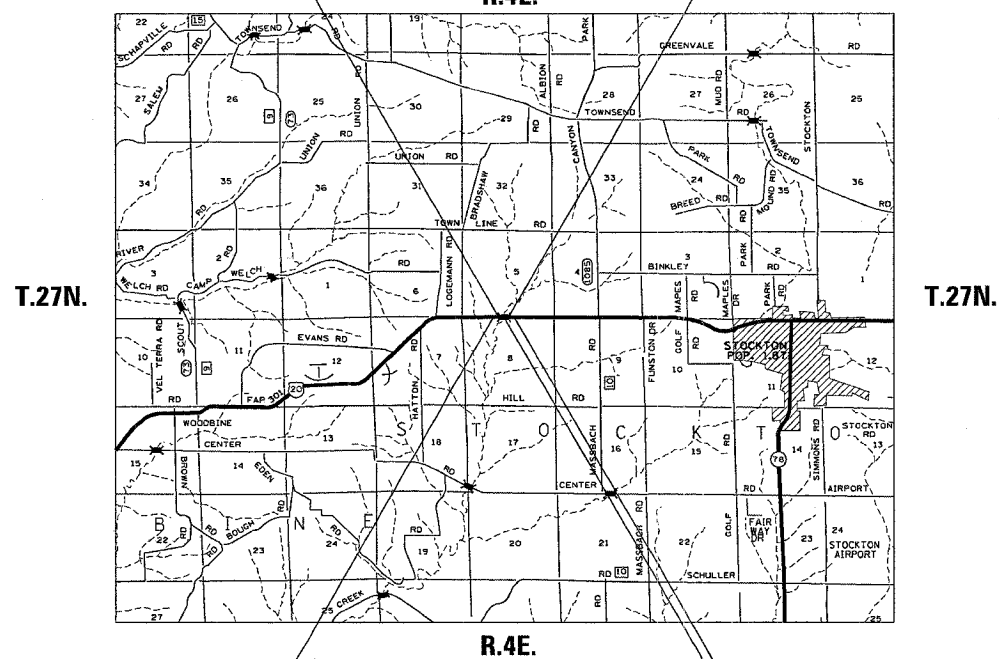
FAP ROUTE 301 (US 20)
SECTION 24BR-1
PROJECT BHF-0301(035)
JODAVIESS COUNTY
C-92-129-05

D-92-002-05



FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR STATE STANDARDS, SEE SHEET NO. 2

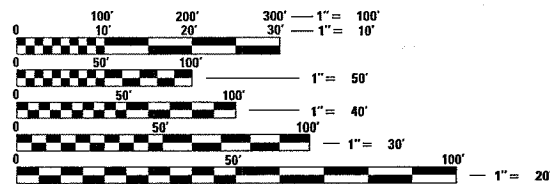
SECTION BEGINS STA. 2022 + 49.92
SECTION ENDS STA. 2024 + 08.88



IMPROVEMENT BEGINS STA. 2019 + 31.57
IMPROVEMENT ENDS STA. 2029 + 40.28

SN 043-0036
REMOVAL AND REPLACEMENT OF SUPERSTRUCTURE
CARRYING US 20 OVER RUCH CREEK

STOCKTON TOWNSHIP SECTION 5 & 8



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec. 12 2005
Gregory Moutts
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 3, 2006
Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT

February 3, 2006
Milton P. Seo, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

NET LENGTH OF PROJECT = 158.96 LIN. FT = 0.030 MILES
GROSS LENGTH OF PROJECT = 158.96 LIN. FT = 0.030 MILES

CONTRACT NO. 64A48

PROJECT ENGINEER: BOB WAGNER

SENIOR SQUAD LEADER: SAMEER ABDULLAH (815) 284-5935

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 2 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

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- 001001 Areas of Reinforcement Bars
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- 630001 - 05 Steel Plate Beam Guardrail
- 630301 - 03 Shoulder Widening for Type 1 (Special Guardrail Terminals)
- 631032 - 01 Traffic Barrier Terminal, Type 6A
- 635001 Delineators
- 635006 - 02 Reflector and Terminal Marker Placement
- 635011 - 01 Reflector Marker and Mounting Details
- 667101 Permanent Survey Markers
- 701006 - 02 Typical Application of Traffic Control Standard
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- 701301 - 02 Typical Application of Traffic Control Standard
- 701311 - 02 Typical Application of Traffic Control Standard
- 701321 - 08 Typical Application of Traffic Control Standard
- 701326 - 02 Typical Application of Traffic Control Standard
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- 704001 - 02 Temporary Concrete Barrier
- 720011 Metal Post for Signs, Markers and Delineators
- 780001 - 01 Typical Pavement Markings
- 886001 Detector Loop Installations
- 886006 Typical Layout for Detection Loops

PLOT DATE = Mon Dec 12 09:54:05 2005
 PLOT SCALE = 50.0000
 USER NAME = mgj111

| REVISIONS | | ILLINOIS DEPARTMENT OF TRANSPORTATION |
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| NAME | DATE | |
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| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 301 | 24BR-1 | JO DAVIESS | 50 | 3 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

SUMMARY OF QUANTITIES

| CODE NUMBER | ITEM | UNIT | TOTAL QUANTITY | X080-2A 80% FED/ 20% STATE | SFTY - 3N 80% FED/ 20% STATE |
|-------------|---|--------|----------------|----------------------------------|------------------------------------|
| 20200100 | EARTH EXCAVATION | CU YD | 299 | 299 | |
| 20400800 | FURNISHED EXCAVATION | CU YD | 121 | 121 | |
| 28100105 | STONE RIPRAP, CLASS A3 | SQ YD | 741 | 741 | |
| 31100100 | SUB-BASE GRANULAR MATERIAL, TYPE A | TON | 331 | 331 | |
| 40600980 | BITUMINOUS SURFACE REMOVAL - BUTT JOINT | SQ YD | 193 | 193 | |
| 40600990 | TEMPORARY RAMP | SQ YD | 56 | 56 | |
| 44000030 | BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH) | SQ YD | 380 | 380 | |
| 44000400 | GUTTER REMOVAL | FOOT | 148 | 148 | |
| 44002000 | CONCRETE CURB REMOVAL | FOOT | 137 | 137 | |
| 48101200 | AGGREGATE SHOULDERS, TYPE B | TON | 68 | 68 | |
| 50101500 | REMOVAL OF EXISTING SUPERSTRUCTURE | EACH | 1 | 1 | |
| 50102400 | CONCRETE REMOVAL | CU YD | 2.8 | 2.8 | |
| 50300225 | CONCRETE STRUCTURES | CU YD | 2.8 | 2.8 | |
| 50300260 | BRIDGE DECK GROOVING | SQ YD | 560 | 560 | |
| 50300300 | PROTECTIVE COAT | SQ YD | 565 | 565 | |
| 5030305 | CONCRETE WEARING SURFACE, 5" | SQ YD | 574 | 574 | |
| 50301245 | FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5 INCHES) | SQ FT | 19 | 19 | |
| 50301250 | FORMED CONCRETE REPAIR (DEPTH GREATER THAN 5 INCHES) | SQ FT | 160 | 160 | |
| 50400405 | PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH) | SQ FT | 4956 | 4956 | |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 7550 | 7550 | |
| 50901005 | STEEL BRIDGE RAIL, TYPE SM | FOOT | 301 | 301 | |
| 51500100 | NAME PLATES | EACH | 1 | 1 | |
| 63000000 | STEEL PLATE BEAM GUARDRAIL, TYPE A | FOOT | 937.5 | 937.5 | |
| 63100087 | TRAFFIC BARRIER TERMINAL, TYPE 6A | EACH | 4 | 4 | |
| 63100169 | TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED) | EACH | 4 | 4 | |
| 63200310 | GUARDRAIL REMOVAL | FOOT | 1285 | 1285 | |
| 63500105 | DELINEATORS | EACH | 4 | 4 | |
| 66700305 | PERMANENT SURVEY MARKERS, TYPE II | EACH | 2 | 2 | |
| 67000400 | ENGINEERS FIELD OFFICE, TYPE A | CAL MO | 4 | 4 | |
| 67100100 | MOBILIZATION | L SUM | 1 | 1 | |
| 70100405 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 | EACH | 1 | 1 | |
| 70100450 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701201 | L SUM | 1 | 1 | |
| 70100500 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701326 | L SUM | 1 | 1 | |
| 70103815 | TRAFFIC CONTROL SURVEILLANCE | CAL DA | 4 | 4 | |
| 70106500 | TEMPORARY BRIDGE TRAFFIC SIGNALS | EACH | 1 | 1 | |
| 70106700 | TEMPORARY RUMBLE STRIPS | EACH | 6 | 6 | |

| CODE NUMBER | ITEM | UNIT | TOTAL QUANTITY | X080-2A 80% FED/ 20% STATE | SFTY - 3N 80% FED/ 20% STATE |
|-------------|---|-------|----------------|----------------------------------|------------------------------------|
| 70300220 | TEMPORARY PAVEMENT MARKING - LINE 4" | FOOT | 4712 | 4712 | |
| 70301000 | WORK ZONE PAVEMENT MARKING REMOVAL | SQ FT | 1571 | 1571 | |
| 70400100 | TEMPORARY CONCRETE BARRIER | FOOT | 564 | 564 | |
| 70400200 | RELOCATE TEMPORARY CONCRETE BARRIER | FOOT | 612 | 612 | |
| 78001110 | PAINT PAVEMENT MARKING - LINE 4" | FOOT | 4956 | 4956 | |
| 78200410 | GUARDRAIL MARKERS, TYPE A | EACH | 19 | 19 | |
| 78201000 | TERMINAL MARKER - DIRECT APPLIED | EACH | 4 | 4 | |
| 78300500 | PAINT PAVEMENT MARKING REMOVAL | SQ FT | 712 | 712 | |
| X0320047 | REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS | SQ FT | 150 | 150 | |
| X0321781 | MECHANICAL SPLICE | EACH | 54 | 54 | |
| X0323557 | BRIDGE JOINT SYSTEM (EXPANSION), 1" | FOOT | 70 | 70 | |
| X0712400 | TEMPORARY PAVEMENT | SQ YD | 483 | 483 | |
| X4066424 | BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N50 | TON | 113 | 113 | |
| XX005495 | PRECAST PRESTRESSED CONCRETE DECK BEAM (21" DEPTH) SPECIAL | SQ FT | 146 | 146 | |
| Z0001900 | ASBESTOS BEARING PAD REMOVAL | EACH | 44 | 44 | |
| Z0002600 | BAR SPLICERS | EACH | 171 | 171 | |
| Z0030250 | IMPACT ATTENUATORS, TEMPORARY (NON - REDIRECTIVE), TEST LEVEL 3 | EACH | 2 | | 2 |
| Z0030350 | IMPACT ATTENUATORS, RELOCATE (NON - REDIRECTIVE), TEST LEVEL 3 | EACH | 4 | | 4 |

* SPECIALTY ITEMS

PLT DATE = Mon Dec 12 09:11:04 2005
 PLT SCALE = 50:0000
 USER NAME = mgj11j

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| REVISIONS | | ILLINOIS DEPARTMENT OF TRANSPORTATION |
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| DATE | | |

SUMMARY OF QUANTITIES

GENERAL NOTES

| | | | | |
|--------------------|----------|-----------|--------------|-----------|
| ROUTE NO. | SEC. | COUNTY | TOTAL SHEETS | SHEET NO. |
| FAP 301 (US 20) | 24BR-1 | JoDaviess | 50 | 4 |
| FED ROAD DIST. NO. | ILLINOIS | PROJECT | | |
| Contract #64A48 | | | | |

The final top 100 mm (four inches) of soil in any right-of-way area disturbed by the Contractor must be capable of supporting vegetation. The soil must be from the A horizon (zero to 2' deep) of soil profiles of local soils.

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 6 (modified) shall be used. Class 6 (modified) shall be used on front slopes and ditch bottoms. This work will be included in the contract unit price per Cubic Meter (Cubic Yard) for EARTH EXCAVATION.

Fertilizer shall be applied to all disturbed areas and incorporated into the seedbed prior to seeding or placement of sod at the rate specified in Sections 250 and 252 of the Standard Specifications. This work shall be included in the cost of EARTH EXCAVATION.

Mulch Method II shall be applied over all seeded areas. This shall be included in the cost of the EARTH EXCAVATION.

Previously pugmilled stockpiles of "Type A" older than 1 month will not be approved for use until a moisture check is run to verify moisture content. Material shipped to projects without being tested will not be accepted.

Except for the top 75 mm (3"), all aggregate bases and subbases 300 mm (12") in thickness shall be constructed of aggregate gradation CA-2. If the specified thickness exceeds 300 mm (12"), the bases or subbases shall be constructed of topsize 150 mm (6") breaker-run crushed stone with 70% to 90% by weight, passing the 4" sieve and 15% to 40% by weight, passing the 50 mm (2") size sieve, except for the top 75 mm (3"). The breaker-run crushed stone shall be reasonably uniformly graded from coarse to fine and be taken from a quarry ledge capable of producing Class "D" quality aggregate. The top 75 mm (3") shall be gradation CA-6 or CA-10 regardless of thickness. The water necessary to achieve compaction in all but the top 75 mm (3") layer may be added after the subbase or base course is placed on the grade.

The following Mixture Requirements are applicable for this project:

| Mixture Uses(s): | Surface Course for Mainline & Temporary Pavement | Binder for Temporary Pavement | |
|---|--|-------------------------------|--|
| PG: | PG 64-22 | PG 64-22 | |
| RAP%: (Max) | 15% | 25% | |
| Design Air Voids | 4.2 @ N50 | 4.2 @ N50 | |
| Mixture Composition (Gradation Mixture) | IL 9.5 or 12.5 | IL 19.0 | |
| Friction Aggregate | D | N/A | |
| 20 Year ESAL | 2.6 | 2.6 | |

Install a "TO ACTUATE SIGNAL" sign for the traffic signal detector loops. The detail of this sign is included in the plans. This work will be included in the cost of TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

Bituminous and Aggregate prime coat shall be placed in accordance with Section 406 of the Standard Specifications. The cost of the prime coats shall be included in the contract unit price per metric ton (ton) for SURFACE COURSE of the type specified.

This structure will retain the same number SN 043-0036.

A quantity of 121 Cubic Meter (Cubic Yards) of Furnish Excavation has been included to further build up the shoulders, if the Engineer determines that the excavated materials from the job are insufficient to bring the shoulders to the proper slope.

The contractor shall submit four copies of the required shop drawings for review and approval to the Bureau of Bridges and Structures, 2300 South Dirksen Parkway, Springfield, IL 62764. After approval of initial submittal, the contractor shall submit one set of shop drawings to Eric Harm, Engineer of Materials, 126 East Ash Street, Springfield, IL 62706, and eight (8) sets of shop drawings to be distributed to:

District 2 District Engineer (1)
Fabricator (1)
Contractor (2)
Resident Engineer (2)
District 2 Bureau of Materials (2)

Embankment quantities for the construction of the Traffic Barrier Terminals as shown in the plans are included in quantities for Furnished Excavation.

The Contractor shall supply the Resident Engineer with the manufacturer's installation requirements for the type of Steel Plate Beam Guardrail Terminal Type 1 Special (Tangent) or Steel Plate Beam Guardrail Terminal Type I Special (Flared).

One 16d galvanized nail shall be used to toe nail the wood block out to the wood post on all Traffic Barrier Terminal Type I Specials.

Delineators shall be installed as shown in Standard 635001, except that the post shall be rotated 180° and only metal-backed delineators shall be permitted.

Delineators shall be placed at the ends of approach guardrail terminal sections, and at each headwall or end section of AR Culverts. This work will be paid for at the contract unit price each for DELINEATORS.

Pavement Marking shall be done according to Standard 780001, except as follows:

- The distance between yellow no-passing lines shall be 200 mm (8"), not 180 mm (7") as shown in the detail of Typical Lane and Edge Lines.

PERMANENT SURVEY MARKERS, TYPE II, shall be set at intervals of 1.6 Km (1 mile) or as directed by the Engineer. Bridge or culvert projects shall have one survey marker placed near the structure. Estimated: ___ Each.

Permanent Survey Markers, Type II shall be cast-in-place as shown on Highway Standard 667101.

The Contractor shall submit to the Engineer a description of location, elevation, and coordinates for each permanent survey marker. The Engineer shall submit this information to the Survey Crew.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

Mediacom
Verizon

Commonwealth Edison Co.
NICOR Gas Co.

CADD data will be available to Contractors and Consultants working on this project. This information will be provided upon request as MicroStation CADD files and Geopak coordinate geometry files ONLY. If data is required in other formats it will be your responsibility to make these conversions. If any discrepancy or inconsistency arises between the electronic data and the information on the hard copy, the information on the hard copy should be used. Contact the District's Project Engineer to request these files.

Program #5
(Arch. Size)
Enlarge
200%
Enlarge 107%

GENERAL NOTES

| ROUTE NO. | SEC. | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|----------|-----------|--------------|-----------|
| FAP 301 (US 20) | 24BR-1 | JoDaviess | 50 | 5 |
| FED ROAD DIST. NO. | ILLINOIS | PROJECT | | |

Contract #64A48

COMMITMENTS

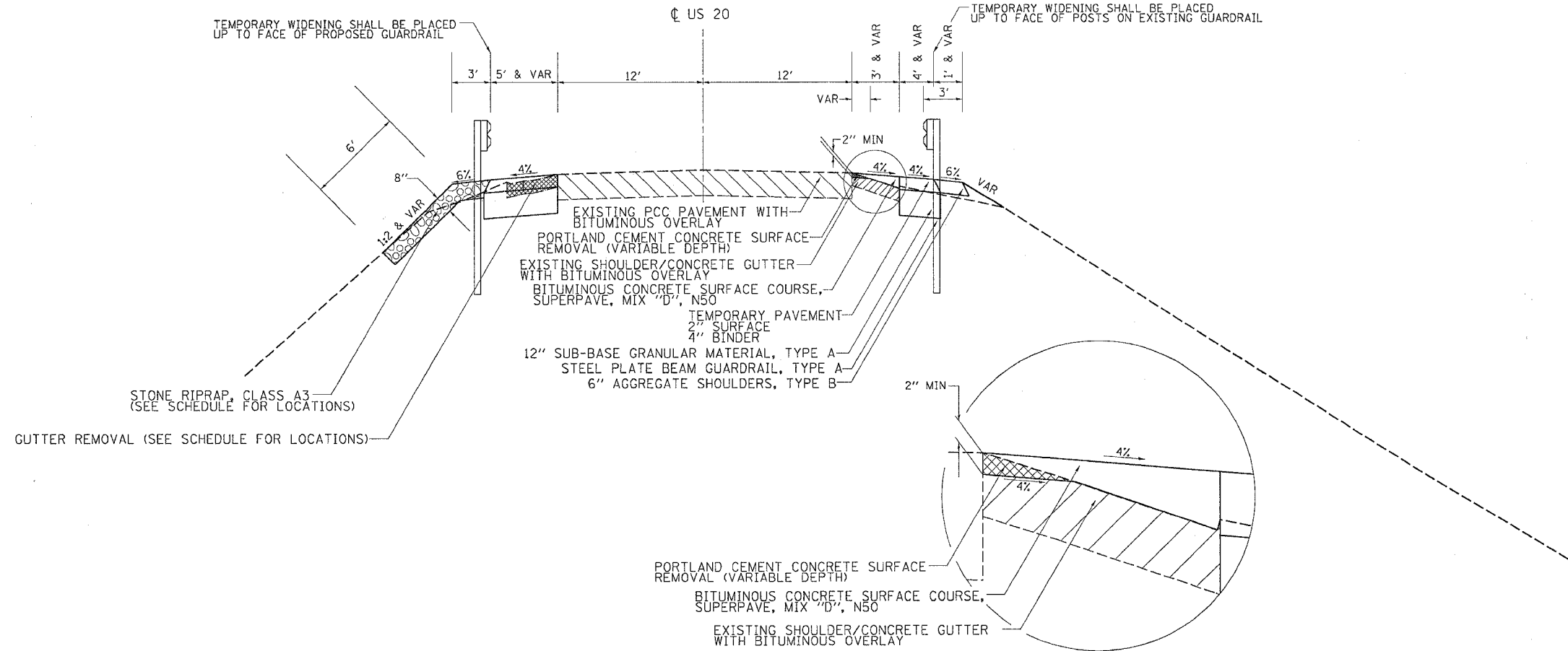
1. All work on this structure over Rush Creek, 3.4 miles W. of IL 78(S), shall be performed from the existing deck and no work shall take place below the existing structure on the ground.
2. No fill shall be placed in or around Rush Creek.

Program #5
(Arch. Size)
Enlarge
200%
Enlarge 107%

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|---------------------|---------|---------------------------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 301 | 24BR-1 | JO DAVIESS | 50 | 6 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

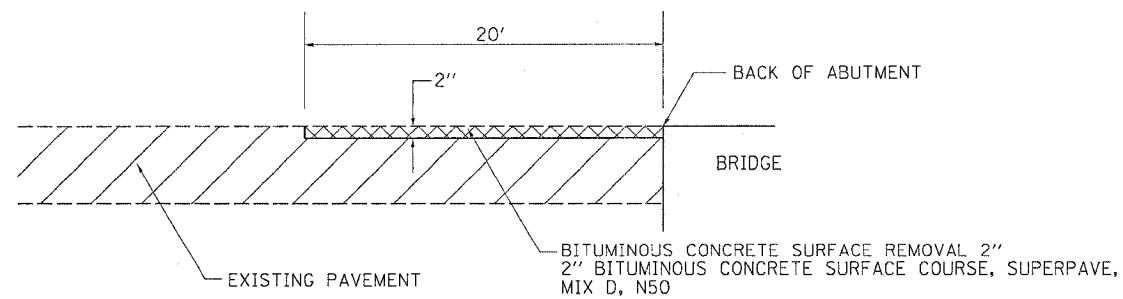
TYPICAL SECTIONS

STA. 2019+31.57 - STA. 2022+29.84
STA. 2024+28.84 - STA. 2029+40.28

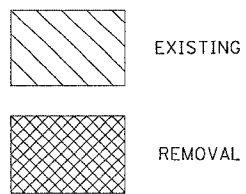


BITUMINOUS SURFACE REMOVAL - BUTT JOINT

STA 2022+29.84 TO STA 2022+62.00
STA 2023+96.98 TO STA 2024+40.28



*NOTE: SEE PLANS FOR BUTT JOINT LAYOUT



SURFACE COURSE 112 (LBS/SY/IN)

PLOT DATE = Mon Dec 12 09:34:04 2005
FILE NAME = c:\p\projects\2005\640225\wpdgn
PLOT SCALE = 50.0000 / IN.
USER NAME = mg11j

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|------------|------------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 7 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | |

SCHEDULE OF QUANTITIES

20200100 EARTH EXCAVATION

| CU YD | LOCATION | | | |
|-------|----------|---------|-----------|-----------------------|
| | US 20 | | | |
| 120 | LT&RT | 2019+31 | - 2022+60 | (FROM CROSS SECTIONS) |
| 179 | LT&RT | 2024+00 | - 2029+40 | (FROM CROSS SECTIONS) |
| 299 | TOTAL | | | |

20400000 FURNISHED EXCAVATION

| CU YD | LOCATION | | | |
|-------|----------|---------|-----------|-----------------------|
| | US 20 | | | |
| 120 | LT&RT | 2022+25 | - 2022+60 | (FROM CROSS SECTIONS) |
| 1 | LT&RT | 2024+00 | - 2028+75 | (FROM CROSS SECTIONS) |
| 121 | TOTAL | | | |

28100105 STONE RIPRAP, CLASS A3

| SQ YD | LOCATION | | | |
|-------|----------|---------|-----------|-----------------------|
| | US 20 | | | |
| 202 | LT | 2020+75 | - 2022+60 | (FROM CROSS SECTIONS) |
| 55 | RT | 2021+75 | - 2022+60 | (FROM CROSS SECTIONS) |
| 484 | LT | 2024+00 | - 2028+75 | (FROM CROSS SECTIONS) |
| 741 | TOTAL | | | |

31100100 SUB-BASE GRANULAR MATERIAL, TYPE A

| TON | LOCATION | | | |
|-----|----------|---------|-----------|-----------------------|
| | US 20 | | | |
| 89 | RT | 2019+31 | - 2022+48 | (FROM CROSS SECTIONS) |
| 49 | LT | 2020+00 | - 2022+60 | (FROM CROSS SECTIONS) |
| 65 | RT | 2024+00 | - 2026+59 | (FROM CROSS SECTIONS) |
| 128 | LT | 2024+12 | - 2029+40 | (FROM CROSS SECTIONS) |
| 331 | TOTAL | | | |

40600980 BITUMINOUS SURFACE REMOVAL - BUTT JOINT

| SQ YD | LOCATION | | | |
|-------|----------|---------|-----------|--|
| | US 20 | | | |
| 97 | LT&RT | 2022+30 | - 2022+62 | |
| 96 | LT&RT | 2023+97 | - 2024+29 | |
| 193 | TOTAL | | | |

40600990 TEMPORARY RAMP

| SQ YD | LOCATION | | | |
|-------|----------|---------|-----------|--|
| | US 20 | | | |
| 28 | LT&RT | 2022+49 | - 2022+56 | |
| 28 | LT&RT | 2024+03 | - 2024+10 | |
| 56 | TOTAL | | | |

44000030 BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)

| SQ YD | LOCATION | | | |
|-------|----------|---------|-----------|-----------------------|
| | US 20 | | | |
| 98 | RT | 2019+31 | - 2021+76 | (FROM CROSS SECTIONS) |
| 66 | LT | 2020+08 | - 2021+74 | (FROM CROSS SECTIONS) |
| 5 | LT | 2022+21 | - 2022+30 | (FROM CROSS SECTIONS) |
| 4 | RT | 2022+23 | - 2022+30 | (FROM CROSS SECTIONS) |
| 4 | RT | 2024+29 | - 2024+36 | (FROM CROSS SECTIONS) |
| 4 | LT | 2024+29 | - 2024+37 | (FROM CROSS SECTIONS) |
| 78 | RT | 2024+71 | - 2026+43 | (FROM CROSS SECTIONS) |
| 96 | LT | 2024+78 | - 2027+57 | (FROM CROSS SECTIONS) |
| 25 | LT | 2028+09 | - 2029+40 | (FROM CROSS SECTIONS) |
| 380 | TOTAL | | | |

44000400 GUTTER REMOVAL

| EQ FT | LOCATION | | | |
|-------|----------|---------|-----------|--|
| | US 20 | | | |
| 32 | RT | 2022+16 | - 2022+48 | |
| 42 | LT | 2022+18 | - 2022+60 | |
| 42 | RT | 2024+00 | - 2024+42 | |
| 32 | LT | 2024+12 | - 2024+44 | |
| 148 | TOTAL | | | |

44002000 CONCRETE CURB REMOVAL

| EQ FT | LOCATION | | | |
|-------|----------|---------|-----------|--|
| | US 20 | | | |
| 32 | RT | 2022+15 | - 2022+47 | |
| 42 | LT | 2022+17 | - 2022+59 | |
| 31 | RT | 2024+00 | - 2024+31 | |
| 32 | LT | 2024+12 | - 2024+44 | |
| 137 | TOTAL | | | |

48101200 AGGREGATE SHOULDERS, TYPE B

| TONS | LOCATION | | | |
|------|----------|---------|-----------|-----------------------|
| | US 20 | | | |
| 21 | RT | 2019+31 | - 2021+75 | (FROM CROSS SECTIONS) |
| 13 | LT | 2020+00 | - 2022+75 | (FROM CROSS SECTIONS) |
| 24 | RT | 2024+00 | - 2026+60 | (FROM CROSS SECTIONS) |
| 10 | LT | 2028+75 | - 2029+40 | (FROM CROSS SECTIONS) |
| 68 | TOTAL | | | |

63000000 STEEL PLATE BEAM GUARDRAIL, TYPE A

| EQ FT | LOCATION | | | |
|-------|----------|---------|-----------|--|
| | US 20 | | | |
| 200 | RT | 2020+14 | - 2022+14 | |
| 162.5 | LT | 2020+63 | - 2022+26 | |
| 162.5 | RT | 2024+33 | - 2025+96 | |
| 412.5 | LT | 2024+45 | - 2028+58 | |
| 937.5 | TOTAL | | | |

63100067 TRAFFIC BARRIER TERMINAL, TYPE 6A

| EACH | LOCATION | | | |
|------|----------|---------|-----------|--|
| | US 20 | | | |
| 1 | RT | 2022+14 | - 2022+48 | |
| 1 | LT | 2022+26 | - 2022+60 | |
| 1 | RT | 2024+00 | - 2024+33 | |
| 1 | LT | 2024+12 | - 2024+45 | |
| 4 | TOTAL | | | |

63100169 TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)

| EACH | LOCATION | | | |
|------|----------|---------|-----------|--|
| | US 20 | | | |
| 1 | RT | 2019+64 | - 2020+14 | |
| 1 | LT | 2020+13 | - 2020+63 | |
| 1 | RT | 2025+96 | - 2026+46 | |
| 1 | LT | 2028+58 | - 2029+08 | |
| 4 | TOTAL | | | |

63200310 GUARDRAIL REMOVAL

| EQ FT | LOCATION | | | |
|-------|----------|---------|-----------|--|
| | US 20 | | | |
| 291 | RT | 2019+58 | - 2022+48 | |
| 253 | LT | 2020+07 | - 2022+60 | |
| 252 | RT | 2024+00 | - 2026+51 | |
| 489 | LT | 2024+12 | - 2029+00 | |
| 1285 | TOTAL | | | |

63500105 DELINEATORS

| EACH | LOCATION | | | |
|------|----------|---------|--|--|
| | US 20 | | | |
| 1 | RT | 2019+64 | | |
| 1 | LT | 2020+13 | | |
| 1 | RT | 2026+46 | | |
| 1 | LT | 2029+08 | | |
| 4 | TOTAL | | | |

70300220 TEMPORARY PAVEMENT MARKING - LINE 4"

| EQ FT | LOCATION | | | |
|-------|----------|---------|-----------|------------|
| | US 20 | | | |
| 596 | RT | 2020+30 | - 2026+26 | (STAGE 1A) |
| 2058 | LT&RT | 2018+06 | - 2028+35 | (STAGE 1) |
| 2058 | LT&RT | 2018+06 | - 2028+35 | (STAGE 2) |
| 4712 | TOTAL | | | |

70301000 WORK ZONE PAVEMENT MARKING REMOVAL

| SQ FT | LOCATION | | | |
|-------|----------|---------|-----------|------------|
| | US 20 | | | |
| 199 | RT | 2020+30 | - 2026+26 | (STAGE 1A) |
| 686 | LT&RT | 2018+06 | - 2028+35 | (STAGE 1) |
| 686 | LT&RT | 2018+06 | - 2028+35 | (STAGE 2) |
| 1571 | TOTAL | | | |

70400100 TEMPORARY CONCRETE BARRIER

| EQ FT | LOCATION | | | |
|-------|----------|---------|-----------|------------|
| | US 20 | | | |
| 396 | RT | 2021+30 | - 2025+26 | (STAGE 1A) |
| 84 | LT&RT | 2020+46 | - 2021+30 | (STAGE 1) |
| 84 | LT&RT | 2025+26 | - 2026+10 | (STAGE 1) |
| 564 | TOTAL | | | |

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 PLOT SCALE = 50.0000 / IN.
 USER NAME = mg1111

| REVISIONS | |
|-----------|------|
| NAME | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. / HORIZ. / DATE

DRAWN BY / CHECKED BY

| | | | | |
|---------------------|---------|---------------------------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 301 | 24BR-1 | JO DAVIESS | 50 | 8 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

SCHEDULE OF QUANTITIES

70400200 RELOCATE TEMPORARY CONCRETE BARRIER

| EQOI | LOCATION | TON | LOCATION |
|------|------------------|-----------|-----------|
| 24 | US 20 RT 2021+30 | 2021+54 | (STAGE 1) |
| 24 | RT 2025+02 | - 2025+26 | (STAGE 1) |
| 564 | LT&RT 0+0 | - 0+0 | (STAGE 2) |
| 612 | TOTAL | | |

78001110 PAINT PAVEMENT MARKING - LINE 4' (TWO COATS)

| EQOI | LOCATION | TON | LOCATION |
|------|--------------------|-----------|-----------------|
| 1452 | US 20 STA. 2018+06 | - 2025+32 | (NO PASSING LT) |
| 363 | STA. 2018+06 | - 2025+32 | (SKIP DASH RT) |
| 2256 | LT&RT 2020+46 | - 2026+10 | (EDGE LINE) |
| 70 | STA. 2025+32 | - 2026+72 | (SKIP DASH) |
| 652 | STA. 2026+72 | - 2028+35 | (NO PASSING RT) |
| 163 | STA. 2026+72 | - 2028+35 | (SKIP DASH LT) |
| 4956 | TOTAL | | |

78200410 GUARDRAIL MARKERS, TYPE A

| EACH | LOCATION | TON | LOCATION |
|------|------------------|-----------|----------|
| 4 | US 20 RT 2020+14 | - 2022+14 | |
| 4 | LT 2020+63 | - 2022+26 | |
| 4 | RT 2024+33 | - 2025+96 | |
| 7 | LT 2024+45 | - 2028+58 | |
| 19 | TOTAL | | |

78201000 TERMINAL MARKER - DIRECT APPLIED

| EACH | LOCATION | TON | LOCATION |
|------|------------------|-----|----------|
| 1 | US 20 RT 2019+64 | | |
| 1 | LT 2020+13 | | |
| 1 | RT 2026+46 | | |
| 1 | LT 2029+08 | | |
| 4 | TOTAL | | |

78300500 PAINT PAVEMENT MARKING REMOVAL

| SQ FT | LOCATION | TON | LOCATION |
|-------|--------------------|-----------|---------------|
| 303 | US 20 STA. 2018+06 | - 2025+32 | (CENTER LINE) |
| 12 | STA. 2025+32 | - 2026+72 | (CENTER LINE) |
| 69 | STA. 2026+72 | - 2028+35 | (CENTER LINE) |
| 72 | LT 2020+46 | - 2022+60 | (EDGE LINE) |
| 188 | RT 2020+46 | - 2026+10 | (EDGE LINE) |
| 68 | LT 2024+07 | - 2026+10 | (EDGE LINE) |
| 712 | TOTAL | | |

X0712400 TEMPORARY PAVEMENT

| SQ YD | LOCATION | TON | LOCATION |
|-------|------------------|-----------|-----------------------|
| 130 | US 20 RT 2019+31 | - 2022+48 | (FROM CROSS SECTIONS) |
| 71 | LT 2020+00 | - 2022+60 | (FROM CROSS SECTIONS) |
| 95 | RT 2024+00 | - 2026+59 | (FROM CROSS SECTIONS) |
| 187 | LT 2024+12 | - 2029+40 | (FROM CROSS SECTIONS) |
| 483 | TOTAL | | |

X4066424 BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX 'D', N50

| TON | LOCATION | TON | LOCATION |
|-----|------------------|-----------|-----------------------|
| 11 | US 20 RT 2019+31 | - 2021+76 | (FROM CROSS SECTIONS) |
| 8 | LT 2020+08 | - 2021+74 | (FROM CROSS SECTIONS) |
| 1 | LT 2022+21 | - 2022+30 | (FROM CROSS SECTIONS) |
| 1 | RT 2022+23 | - 2022+30 | (FROM CROSS SECTIONS) |
| 11 | LT&RT 2022+30 | - 2022+62 | (FROM CROSS SECTIONS) |
| 11 | LT&RT 2023+97 | - 2024+29 | (FROM CROSS SECTIONS) |
| 1 | RT 2024+29 | - 2024+36 | (FROM CROSS SECTIONS) |
| 1 | LT 2024+29 | - 2024+37 | (FROM CROSS SECTIONS) |
| 54 | RT 2024+71 | - 2026+43 | (FROM CROSS SECTIONS) |
| 11 | LT 2024+78 | - 2027+57 | (FROM CROSS SECTIONS) |
| 3 | LT 2028+09 | - 2029+40 | (FROM CROSS SECTIONS) |
| 113 | TOTAL | | |

Z0030250 IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

| EACH | LOCATION | TON | LOCATION |
|------|------------------|-----|------------|
| 1 | US 20 RT 2021+30 | | (STAGE 1A) |
| 1 | RT 2025+26 | | (STAGE 1A) |
| 2 | TOTAL | | |

Z0030350 IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3

| EACH | LOCATION | TON | LOCATION |
|------|------------------|-----|-----------|
| 1 | US 20 LT 2020+46 | | (STAGE 1) |
| 1 | LT 2026+10 | | (STAGE 1) |
| 1 | RT 2020+46 | | (STAGE 2) |
| 1 | RT 2026+10 | | (STAGE 2) |
| 4 | TOTAL | | |

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 USER NAME = megillj

| REVISIONS | | ILLINOIS DEPARTMENT OF TRANSPORTATION |
|-----------|------|---------------------------------------|
| NAME | DATE | |
| | | SCALE: VERT. HORIZ. DATE |
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|---------------------|---------|------------|------------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 301 | 24BR-1 | JO DAVIESS | 50 | 9 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | |

EARTH WORK SCHEDULE

| EARTH WORK SCHEDULE | | | | |
|---------------------|-----------------|--------------------------|---------------|---|
| LOCATION | EARTH EXC (CUT) | EARTH EXC ADJ SHRINK 25% | EMBANK (FILL) | EARTH WORK BALANCE WASTE (+) SHORTAGE (-) |
| | CU YD | CU YD | CU YD | CU YD |
| 2019+31 - 2022+60 | 120 | 90 | 209 | -120 |
| 2024+00 - 2029+ 40 | 179 | 134 | 135 | -1 |
| TOTAL | 299 | 224 | 344 | -121 |

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 USER NAME = mg111j

| REVISIONS | | ILLINOIS DEPARTMENT OF TRANSPORTATION |
|-----------|------|---------------------------------------|
| NAME | DATE | |
| | | SCALE: VERT. SCALE: HORIZ. DATE |
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| DRAWN BY | | CHECKED BY |
| | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| ROUTE NO. | SECTION | COUNTY | SHEET NO. | SHEET NO. |
|-------------|---------|------------|-----------|-----------|
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 11 |
| SHEET NO. 1 | | | | |
| 20 SHEETS | | | | |

Contract # 64A48

B.M. None
Existing Structure: SN 043-0036 was built in 1971 as SBI Rt 5 at Sta. 477+28. The structure consists of 3 simple span PCC-deck beams on pile bent abutments and pile bent caps. The bk. to bk. of Abutments dimension is 152'-8" and the o. to o. width is 33'-0". The existing superstructure shall be removed and replaced in kind with PCC deck beams. The substructure will be repaired. Stage construction will be used. The existing approach pavements shall remain, but shall be milled 2" to butt into the proposed top of deck.
No Salvage.

See Roadway Plans for Approach Pavement and Traffic Barrier Terminal

SEQUENCE OF CONSTRUCTION

- PRE-STAGE I
Provide Traffic control for Pre-Stage I construction as shown on the Roadway Plans. Remove and replace beam Beam #8 Span 3 as shown on sheet 19 and 20.
- STAGE I
Provide Traffic control for Stage I construction as shown on the Roadway Plans. Perform Stage I removal and construction as shown in the plans.
- STAGE II
Provide Traffic control for Stage II Construction as shown on the Roadway Plans. Perform Stage II removal and construction as shown in the plans.

LOADING HS20-44

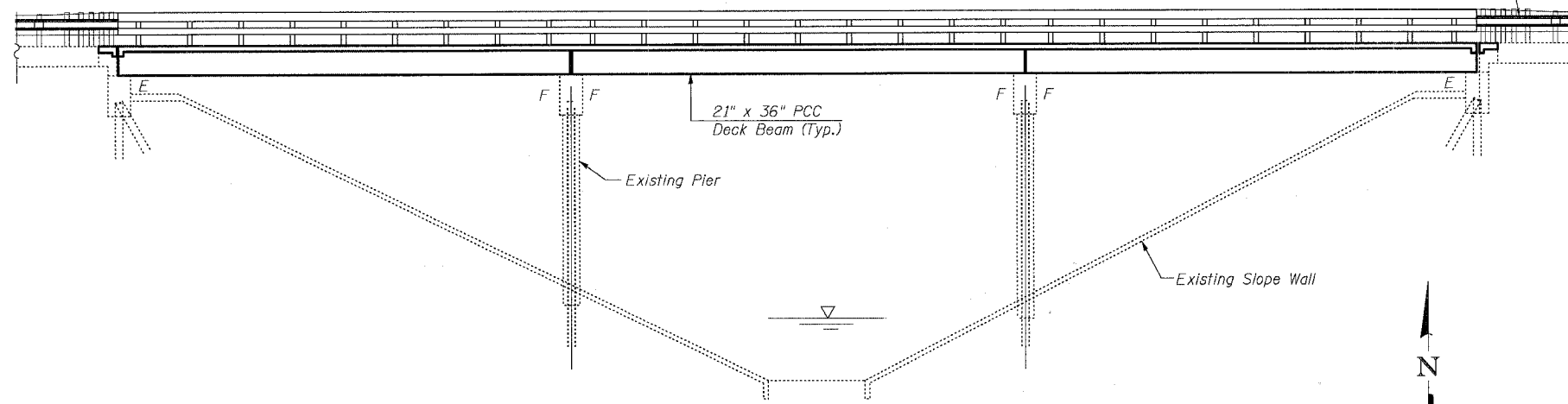
Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO

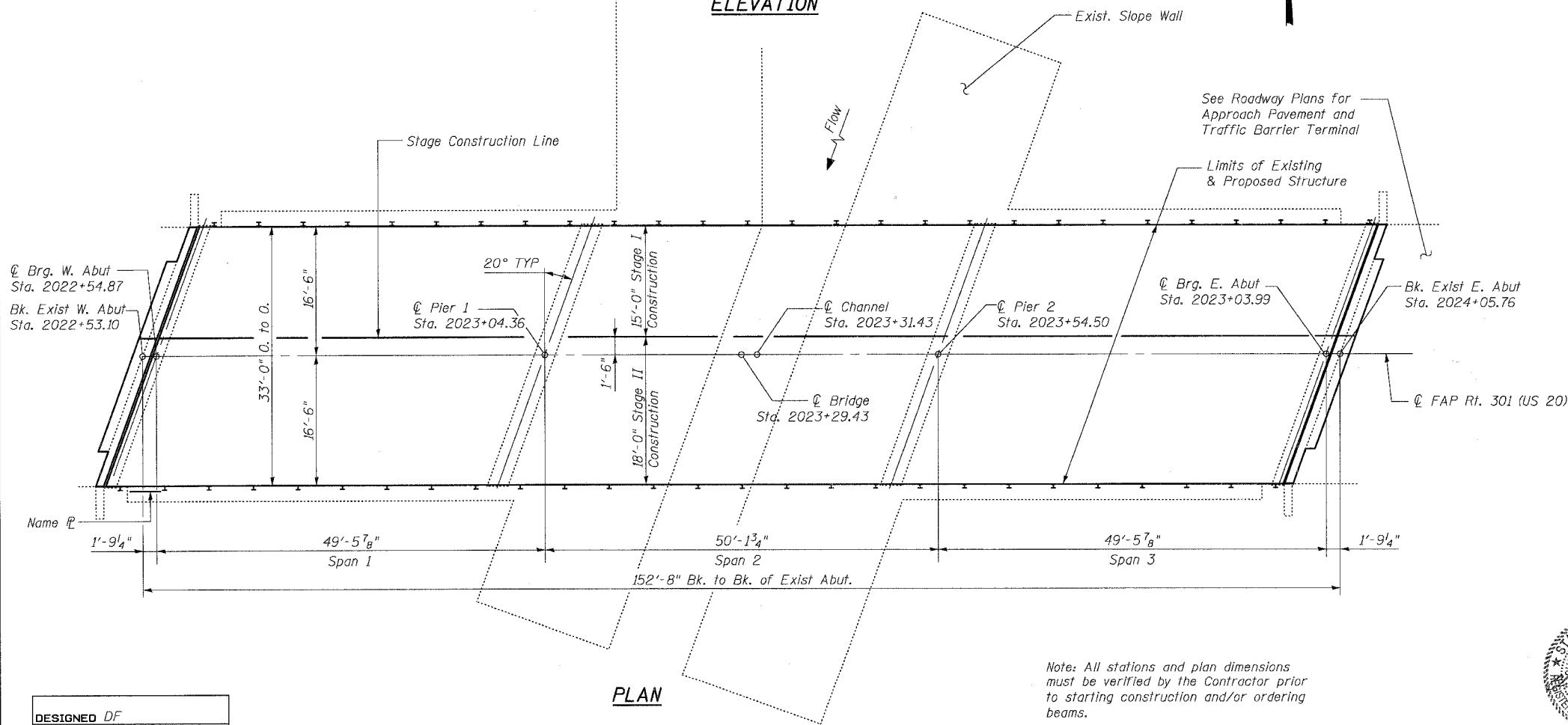
DESIGN STRESSES

NEW & EXISTING CONSTRUCTION
FIELD UNITS

- $f'_c = 5,000$ psi (Concrete Wearing Surface)
 $f'_c = 3,500$ psi (All other)
 $f_y = 60,000$ psi (reinforcement)
- PRECAST PRESTRESSED UNITS
- $f'_c = 5,000$ psi
 $f'_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ low relax strands)
 $f_{si} = 201,960$ psi ($\frac{1}{2}$ " ϕ low relax strands)



ELEVATION



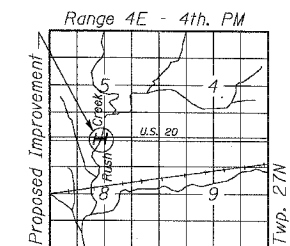
PLAN

Note: All stations and plan dimensions must be verified by the Contractor prior to starting construction and/or ordering beams.

| | |
|----------|----|
| DESIGNED | DF |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | CB |



V3 Companies
7325 Janes Avenue
Woodridge, IL 60517
630.724.9200 phone
630.724.9202 fax
www.v3co.com



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-----------------------|----------|------------------|--------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 12 |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT | | |

SHEET NO. 2
20 SHEETS

Contract # 64A48

GENERAL NOTES

INDEX OF BRIDGE SHEETS

1. General Plan and General Data
2. General Notes, Bill of Material, Index of Sheets, Name Plate, Rail Post Spacing
3. Stage Removal & Construction
4. Temporary Concrete Barrier for Stage Construction
5. Type SM Steel Bridge Rail Side Mounted with Concrete Wearing Surface
6. Superstructure
- 7-8. Superstructure Details
- 9-10. Bridge Joint System-Expansion
11. Concrete Removal-West Abutment
12. Concrete Removal-East Abutment
13. West Abutment Repairs
14. East Abutment Repairs
15. Pier 1 Repairs
16. Pier 2 Repairs
17. Bar Splicer Assembly Details
18. Anchor Bolt Details for Retainers
19. Pre-Stage I Beam Replacement Details
20. PPC Deck Beam (21" Depth) Special

TOTAL BILL OF MATERIAL

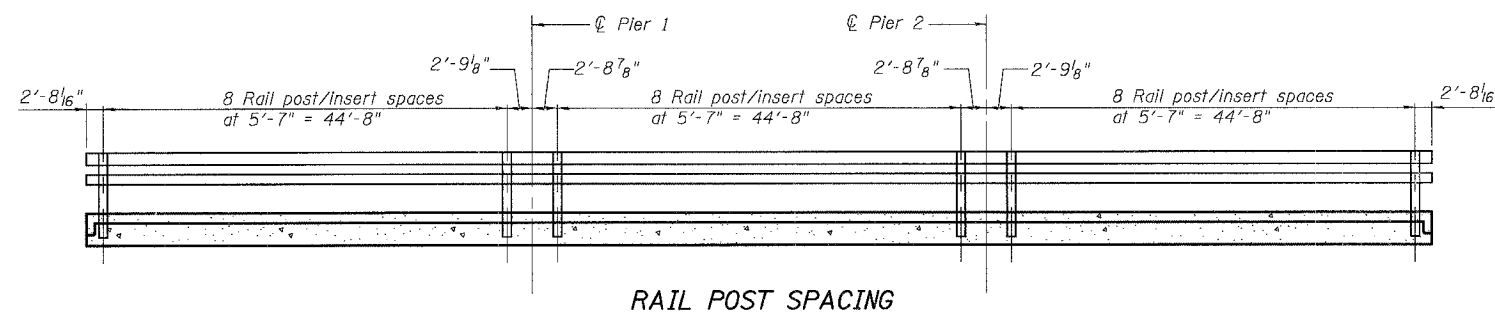
| ITEM | UNIT | SUPER | SUB | TOTAL |
|---|---------|--------|-------|--------|
| Removal of Existing Superstructure | Each | 1 | - | 1 |
| Concrete Removal | Cu. Yd. | 2.8 | - | 2.8 |
| Concrete Structures | Cu. Yd. | 2.8 | - | 2.8 |
| Bridge Deck Grooving | Sq. Yd. | 560.3 | - | 560.3 |
| Protective Coat | Sq. Yd. | 565 | - | 565 |
| Concrete Wearing Surface, 5" | Sq. Yd. | 574.0 | - | 574.0 |
| Formed Concrete Repair (Depth Equal to or Less Than 5") | Sq. Ft. | - | 18.7 | 18.7 |
| Formed Concrete Repair (Depth Greater Than 5") | Sq. Ft. | - | 159.6 | 159.6 |
| Precast Prestressed Concrete Deck Beams (21" Depth) | Sq. Ft. | 4956.2 | - | 4956.2 |
| Reinforcement Bars, Epoxy Coated | Pound | 7130 | 420 | 7550 |
| Steel Bridge Rail, Type SM | Foot | 301 | - | 301 |
| Name Plates | Each | 1 | - | 1 |
| Bridge Joint System (Expansion), 1" | Foot | 70.3 | - | 70.3 |
| Bar Splicers | Each | 159 | 12 | 171 |
| * Removal of Existing PPC Deck Beam | Sq. Ft. | 150.2 | - | 150.2 |
| * Mechanical Splice | Each | 54 | - | 54 |
| * PPC Deck Beam (21" Depth) Special | Sq. Ft. | 146.2 | - | 146.2 |
| Asbestos Bearing Pad Removal | Each | 44 | - | 44 |

*See Sheets S19 and S20 for Beam Replacement prior to Stage I Removal.

STATION 2023+29.43
BUILT 200... BY
STATE OF ILLINOIS
FAP ROUTE 301 SEC 24BR-1
LOADING HS20
STR. NO. 043-0036

NAME PLATE
See Std. 515001

Expansion guards which are not cast in the precast unit shall be fabricated and erected according to Article 503.10(c) of the Standard Specifications.
Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
Existing Name Plate shall be cleaned and relocated adjacent to new Name Plate on the outside face of 8" rail, in addition the existing wingwall where the existing Name Plate is removed shall be patched, the cost is included with Name Plates.
All Construction joints shall be bonded.
The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and actual beam camber.
The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.
No in-stream work will be allowed on this project.
Repair of the pier and abutment caps shall be completed prior to placement of the new deck beams. The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.
If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats, the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum, and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.



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| DESIGNED | DF |
| CHECKED | CB |
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| CHECKED | CB |

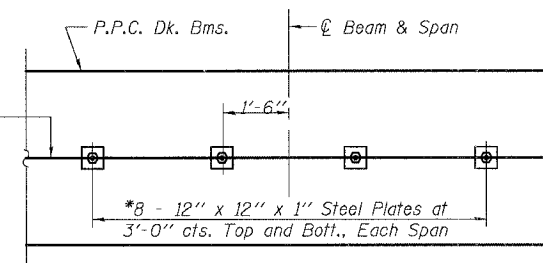
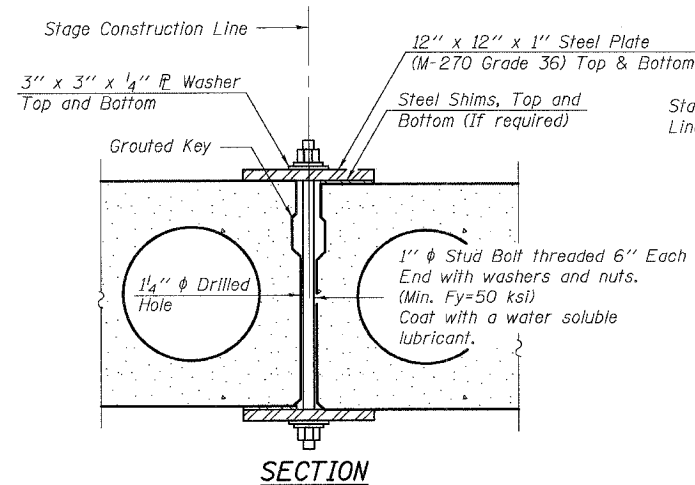
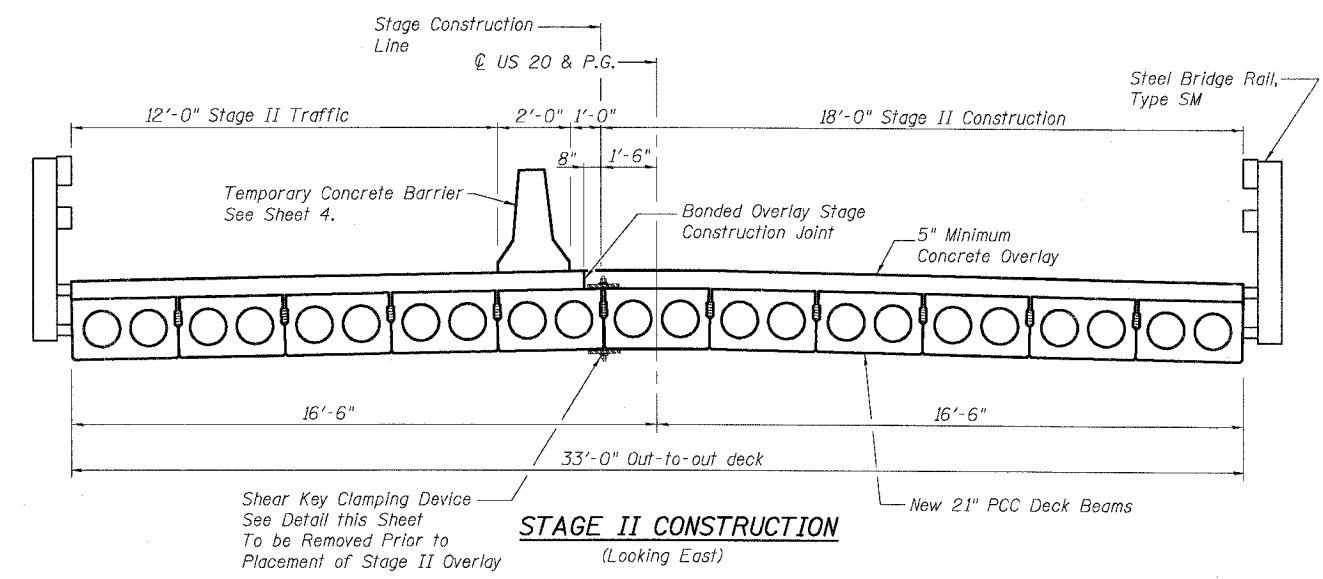
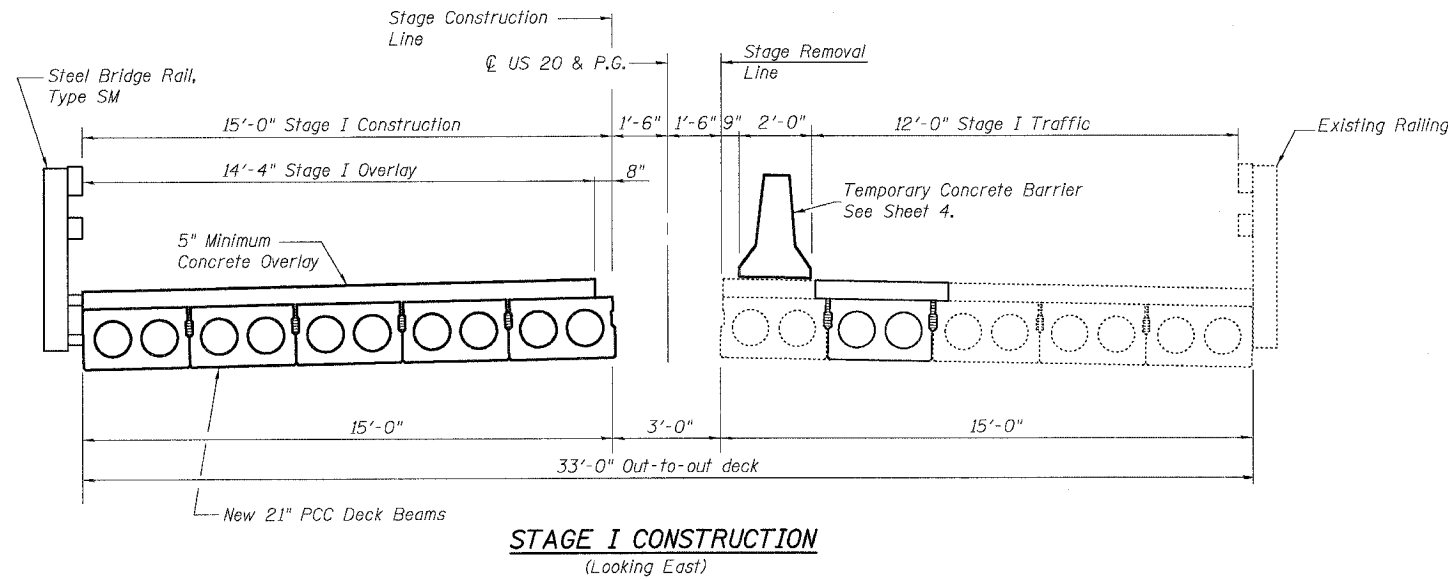
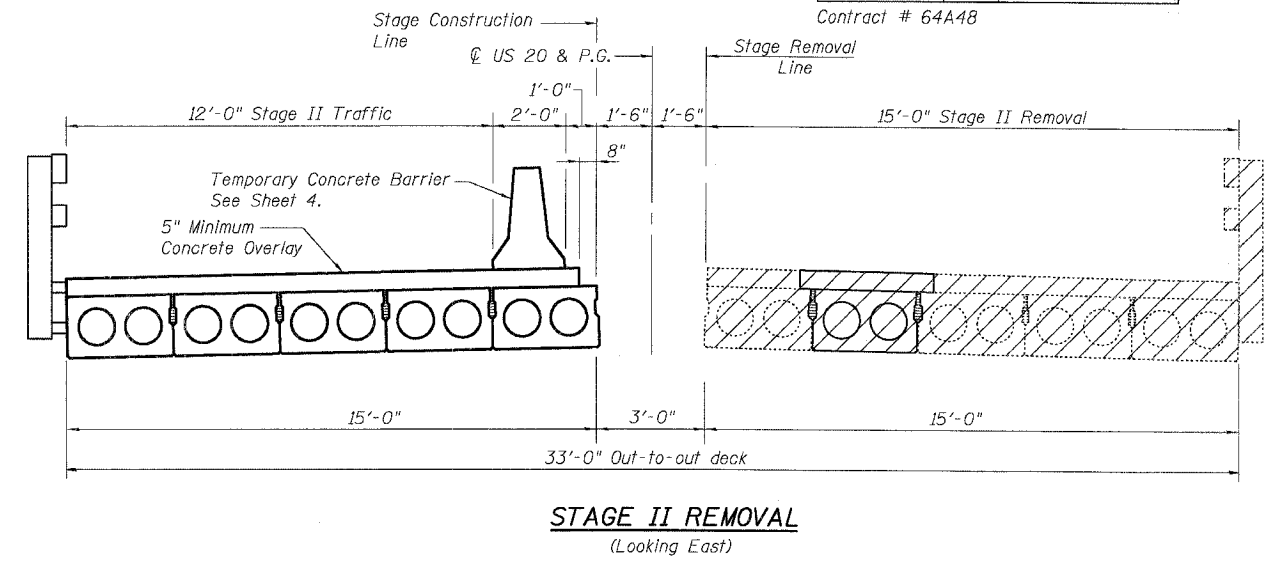
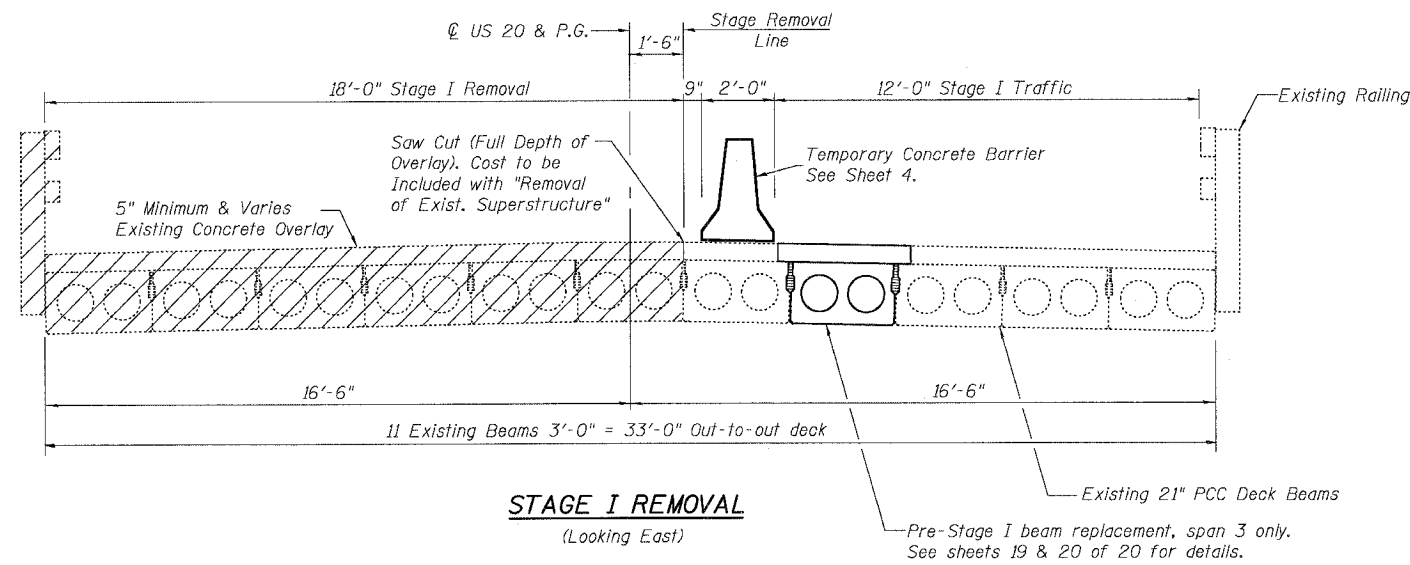
**GENERAL NOTES, BILL OF MATERIAL
INDEX OF SHEETS, NAME PLATE
RAIL POST SPACING**
U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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|-----------------------|---------|------------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 13 |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | FED. AID PROJECT | |

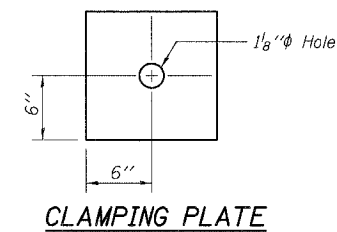
SHEET NO. 3
20 SHEETS

Contract # 64A48



SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

*Space to miss transverse reinforcement in wearing surface
See Special Provisions for Stage Construction of Precast Prestressed Concrete Deck Beams.
Cost included with "Precast Prestressed Concrete Deck Beams (21" Depth)".
See Stage Construction Details for traffic lanes.



LEGEND

- Removal of Existing Superstructure
- Existing Superstructure
- New Construction

STAGE REMOVAL & CONSTRUCTION

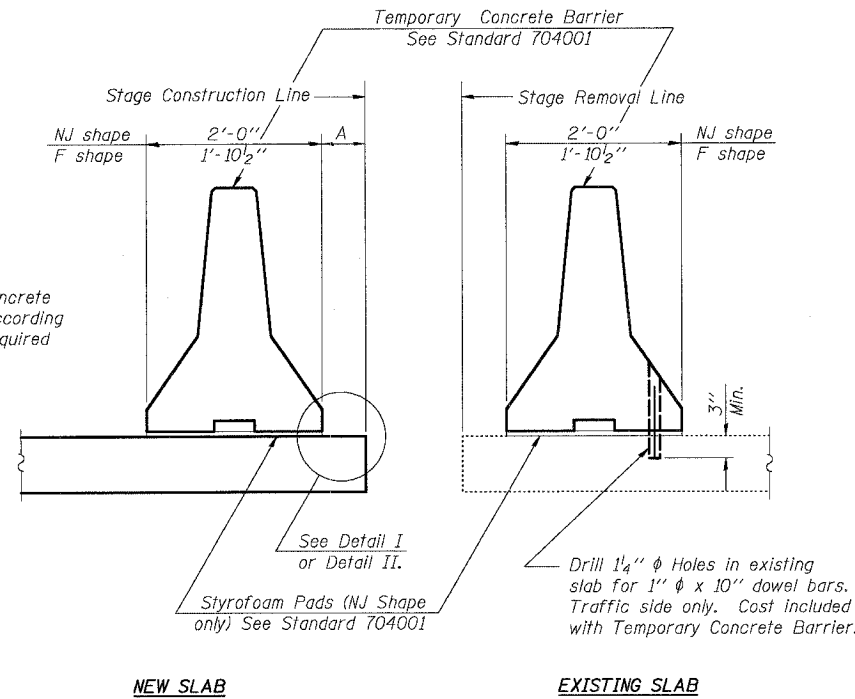
U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

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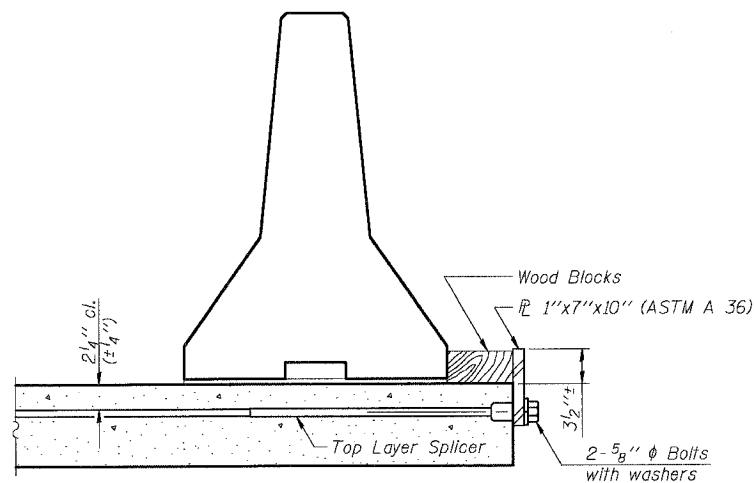
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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|-------------------------|-------------------|----------------------|-------------------|-------------|--------------------------|
| ROUTE NO. FAP 301 | SECTION 24BR-1 | COUNTY JO DAVIESS | SHEET 50 | SHEET 14 | SHEET NO. 4 20 SHEETS |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | FED. AID PROJECT- | | |

Contract # 64A48

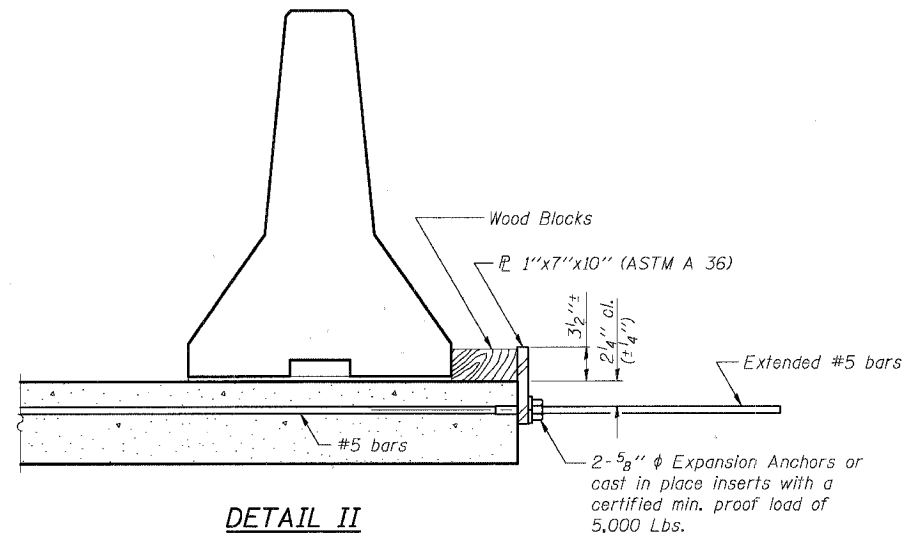


SECTIONS THRU SLAB



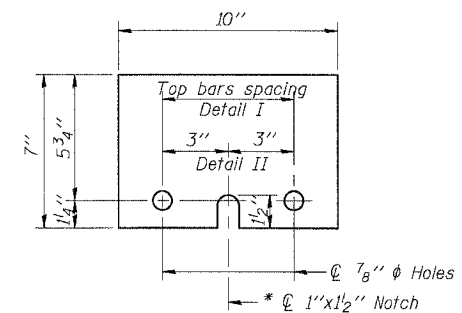
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



1" x 7" x 10"

* Required only with Detail II

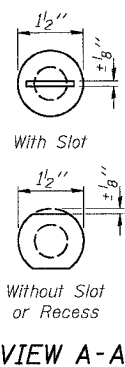
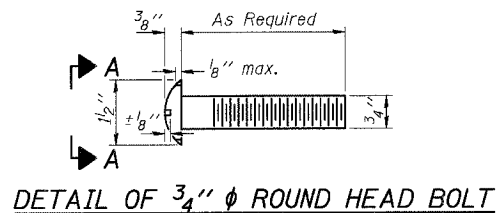
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| CHECKED | CB |
| DRAWN | DF |
| CHECKED | CB |

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

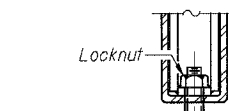
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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| ROUTE NO. | SECTION | COUNTY | SHEET NO. | SHEET NO. | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 15 | 20 SHEETS |
| Contract # 64A48 | | | | | |



4-3/4" ϕ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" ϕ holes in hollow structural section may be drilled in the field.

RAIL SPLICE CONNECTION
AT EXPANSION JT.



1/8" x 2 1/2" Slotted Holes in hollow structural section

5/8" ϕ x 1 3/4" Cap Screw with flat washer & 3/4" ϕ X pipe spacer, 1/2" long.

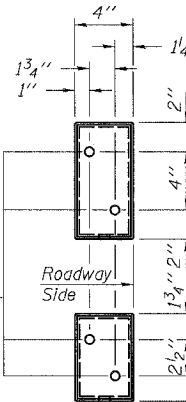
3/8" x 2 1/2" x 1'-8" Top & Bottom

3/8" x 6 7/8" x 1'-8" Each side, top rail

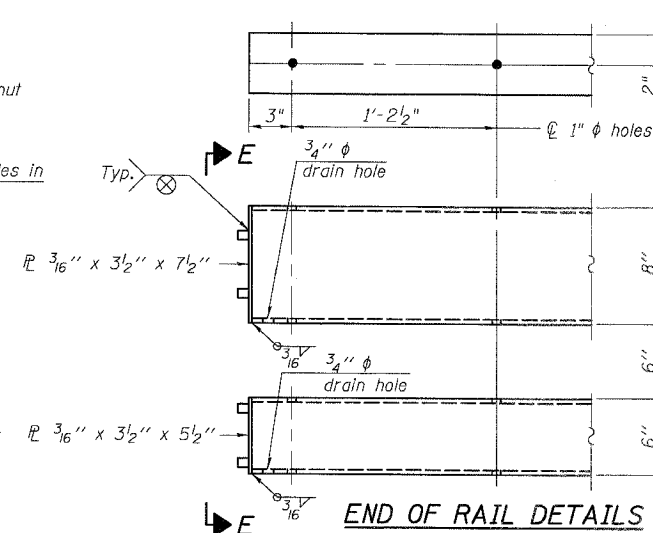
3/8" x 4 1/8" x 1'-8" Each side, bottom rail

5/8" ϕ x 1 3/4" Cap Screw with flat washer

SECTION AT
RAIL SPLICE



VIEW E-E



NOTES

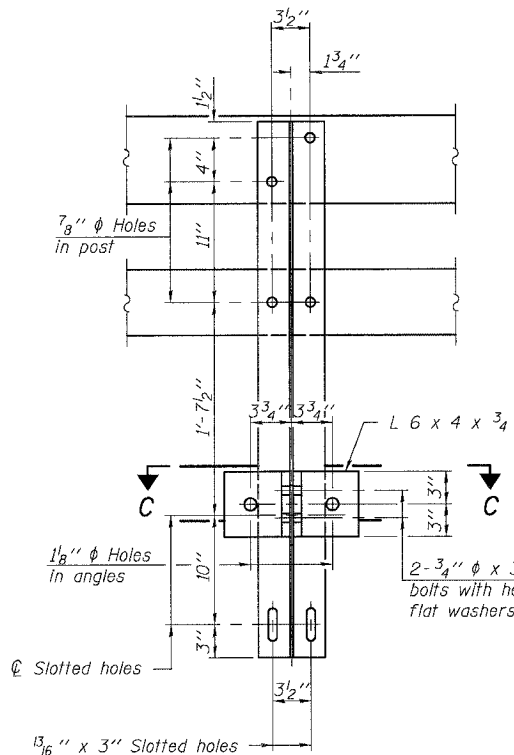
Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.
All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.
Bolts, cap screws, and nuts shall conform to the requirements 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 according to AASHTO M 232.
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.
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 Bridge Rail, Type SM.
The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.

BILL OF MATERIAL

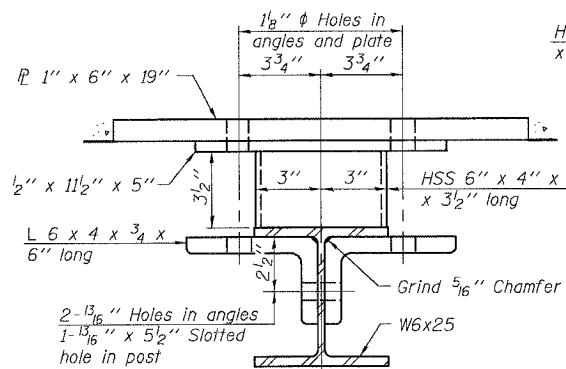
| Item | Unit | Quantity |
|----------------------------|------|----------|
| Steel Bridge Rail, Type SM | Foot | 301 |

TYPE SM
STEEL BRIDGE RAIL SIDE MOUNTED
WITH CONCRETE WEARING SURFACE

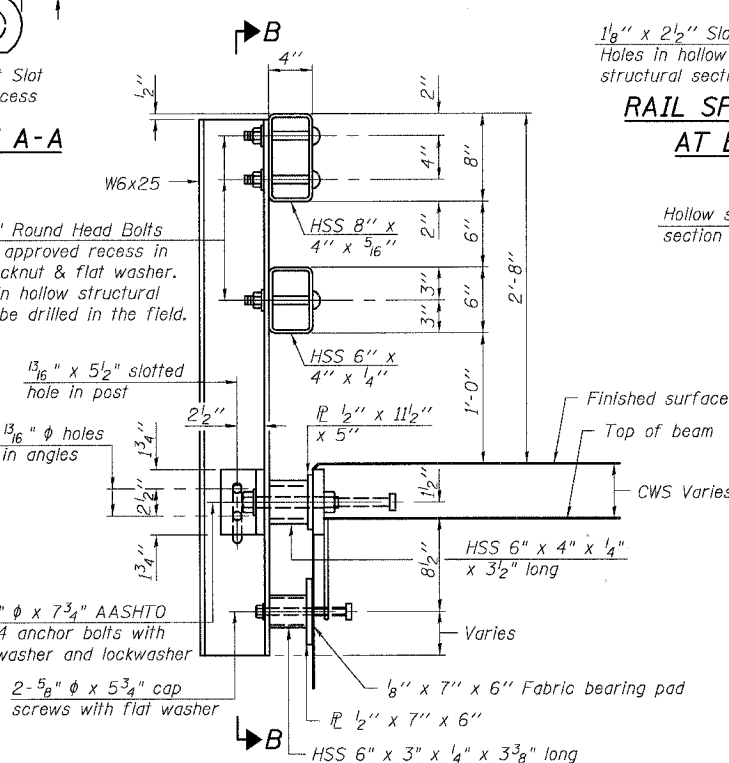
U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036



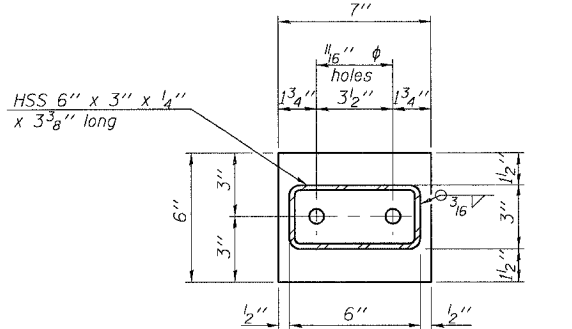
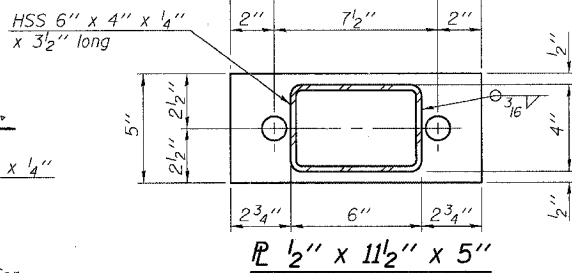
SECTION B-B



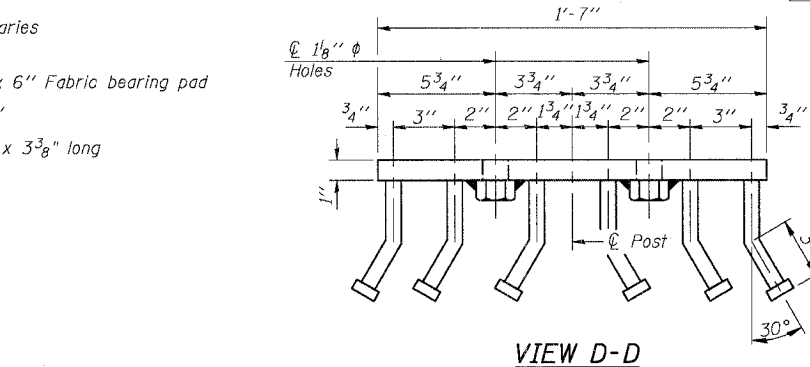
SECTION C-C



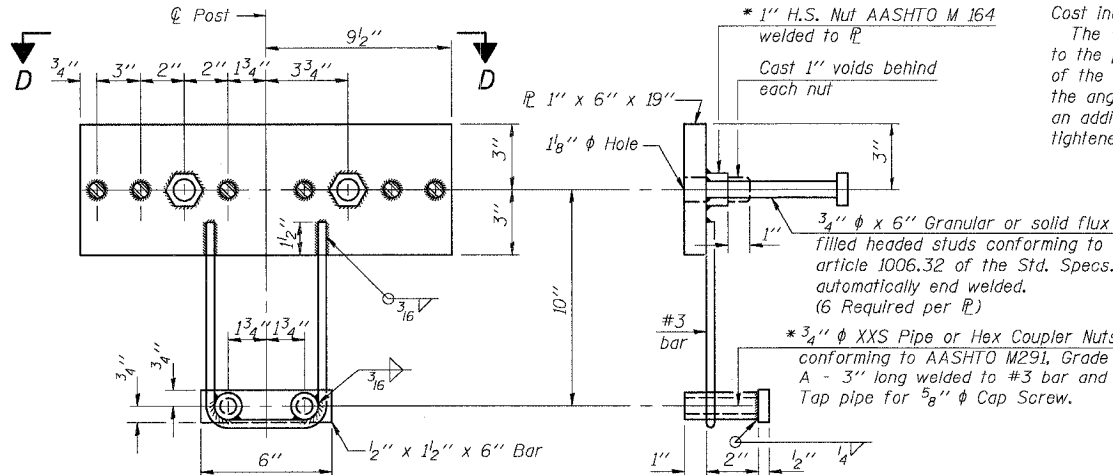
SECTION AT RAIL POST



1/2" x 7" x 6"



VIEW D-D



ANCHOR DEVICE

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

| | |
|----------|----|
| DESIGNED | DF |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | DF |
| R-34CWS | |

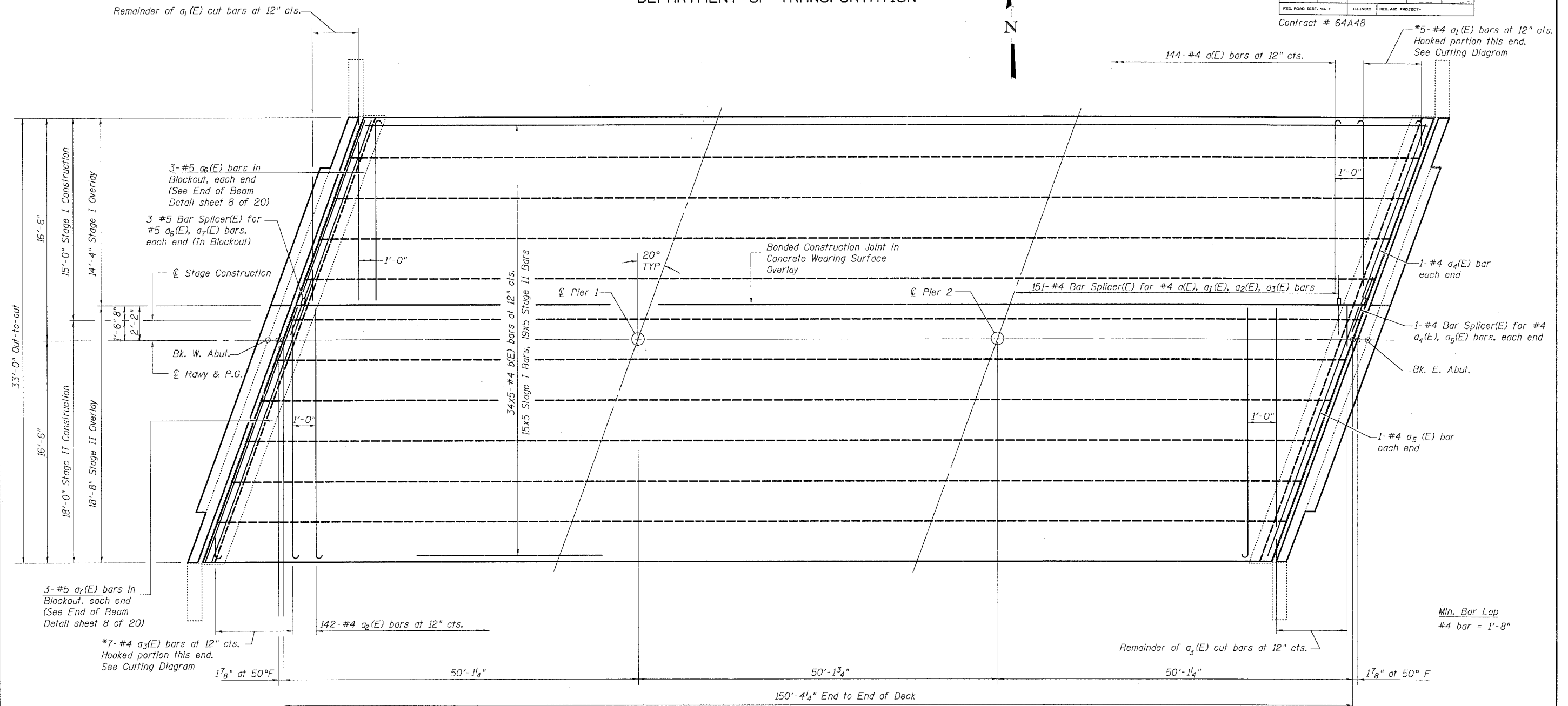
10-28-05 (6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-----------------------|---------|------------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | SHEET NO. | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 16 |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | FED. AID PROJECT | |

SHEET NO. 6
20 SHEETS

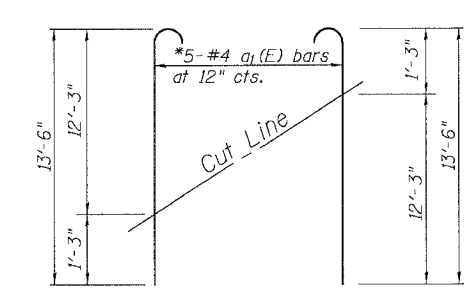
Contract # 64A48



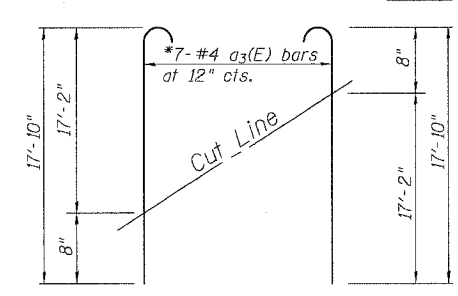
*7- #4 a3(E) bars at 12" cts.
Hooked portion this end.
See Cutting Diagram

*5- #4 a1(E) bars at 12" cts.
Hooked portion this end.
See Cutting Diagram

| | |
|----------|----|
| DESIGNED | DF |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | PM |



FIELD CUTTING DIAGRAM



FIELD CUTTING DIAGRAM

Note:
For remainder of superstructure details, see sheets 7 thru 10 of 20.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 32x5 - #4 etc. indicates 32 lines of bars with 5 length per line.

* Order a1(E) & a3(E) bars full length.
Cut to fit skew and use remainder of bars in opposite end.

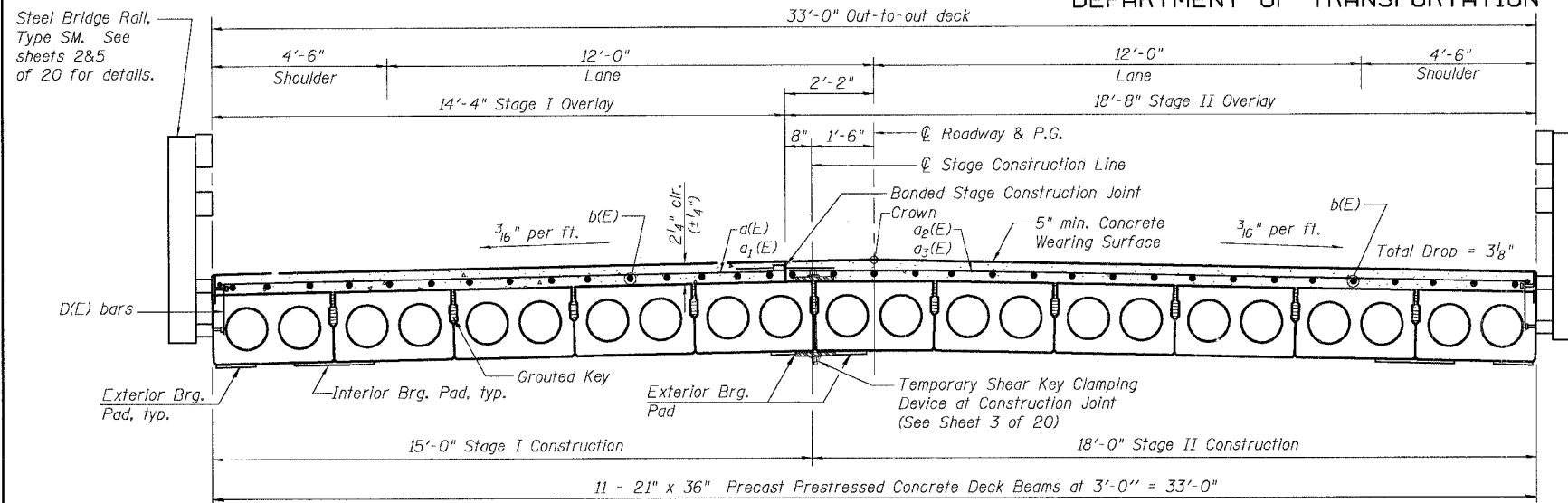
SUPERSTRUCTURE
U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-----------------------|---------|------------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | SHEETS | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 17 |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | FED. AID PROJECT | |

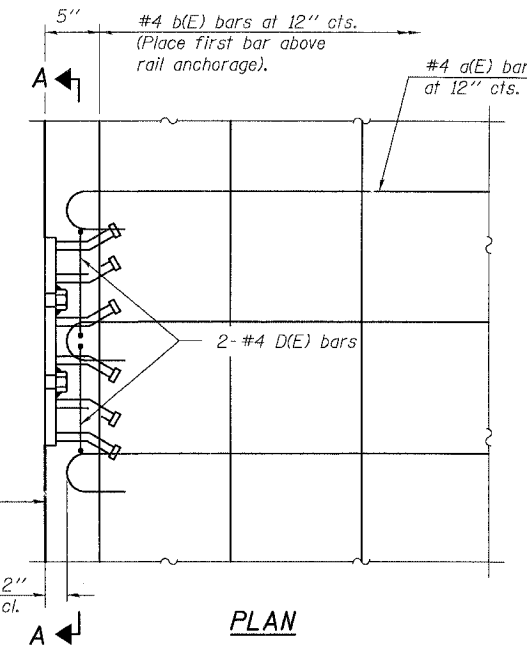
20 SHEETS

Contract # 64A48

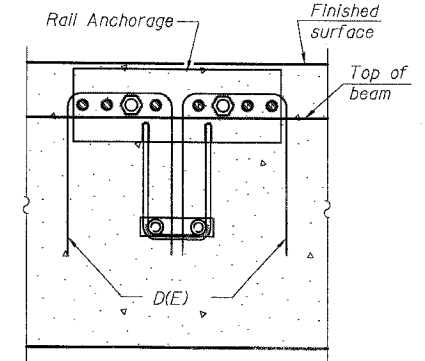


CROSS SECTION

(Looking East)
(Dimensions are at right angles to ϕ Rdwy)

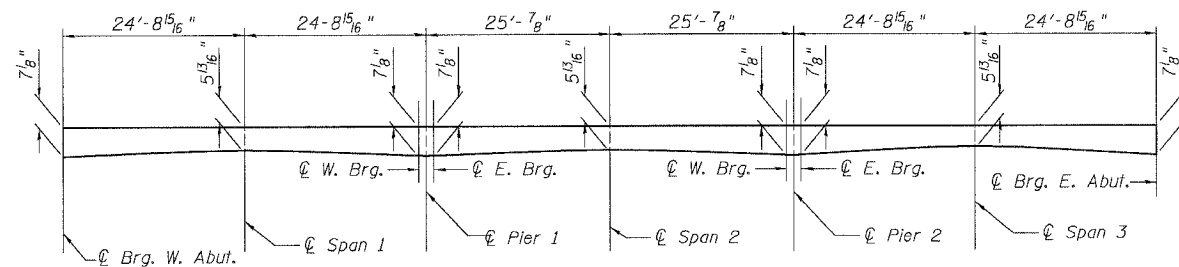


PLAN



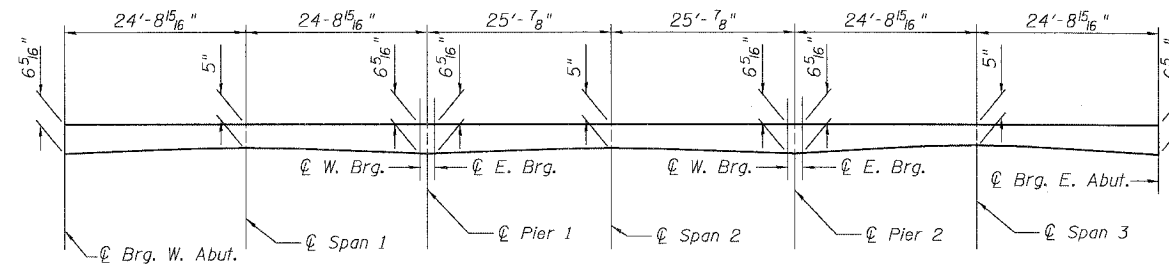
SECTION A-A

Notes:
The rail anchorage shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.



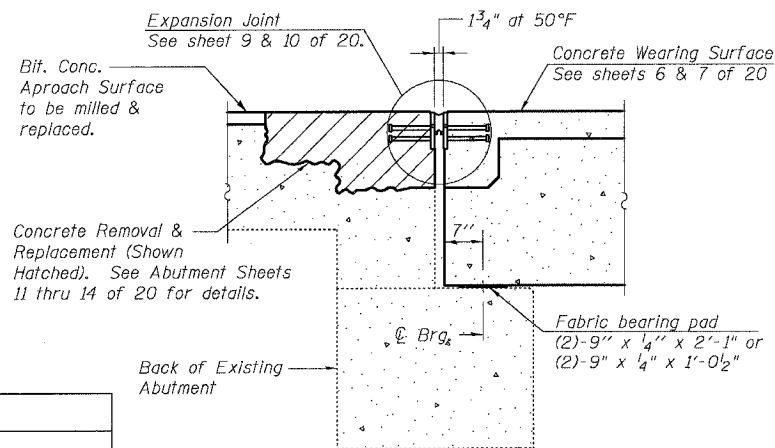
REINFORCED CONCRETE WEARING SURFACE PROFILE ALONG ϕ ROADWAY

(Concrete wearing surface at breakout at expansion end of beams not shown.)



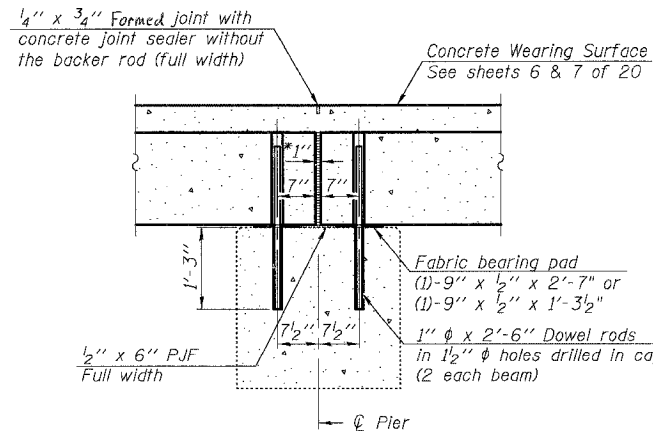
REINFORCED CONCRETE WEARING SURFACE PROFILE ALONG EDGE OF DECK

(Concrete wearing surface at breakout at expansion end of beams not shown.)



SECTION THRU PROPOSED ABUTMENT

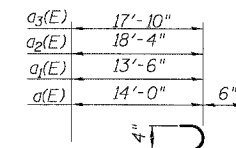
(Dimensions at Rt. Angles to Abutment)



SECTION THRU FIXED PIER

(Dimensions at Rt. Angles to Pier)

* 1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.



BAR a(E), a1(E), a2(E), a3(E)

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|------|---------|---------------|
| a(E) | 144 | #4 | 14'-6" | U |
| a1(E) | 5 | #4 | 14'-0" | U |
| a2(E) | 142 | #4 | 18'-10" | U |
| a3(E) | 7 | #4 | 18'-4" | U |
| a4(E) | 2 | #4 | 14'-10" | — |
| a5(E) | 2 | #4 | 19'-6" | — |
| a6(E) | 6 | #5 | 14'-10" | — |
| a7(E) | 6 | #5 | 19'-6" | — |
| b(E) | 170 | #4 | 31'-4" | — |
| Bar Splicers | | | | Each 159 |
| Reinforcement Bars, Epoxy Coated | | | | Pound 7130 |
| Concrete Wearing Surface | | | | Sq. Yd. 551.3 |

Reinforcement bars designated (E) shall be epoxy coated.

SUPERSTRUCTURE DETAILS

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

Notes:

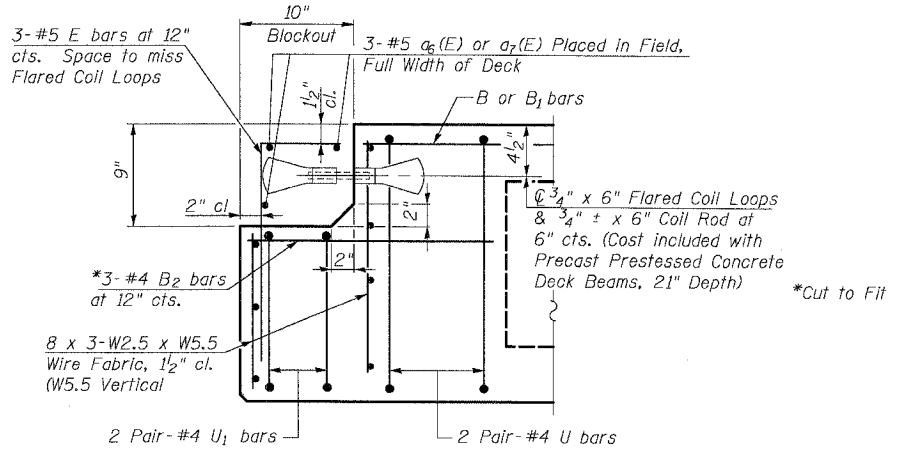
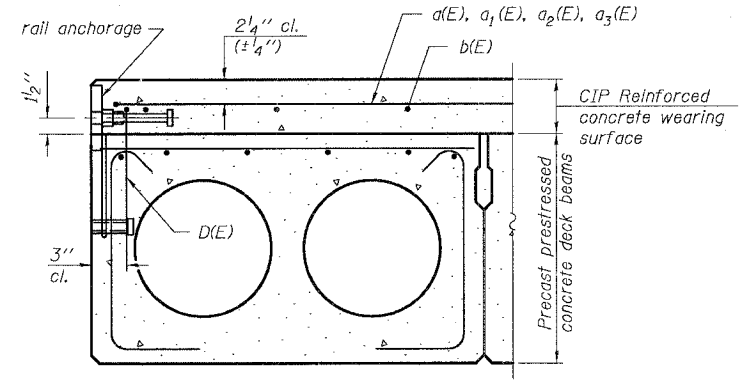
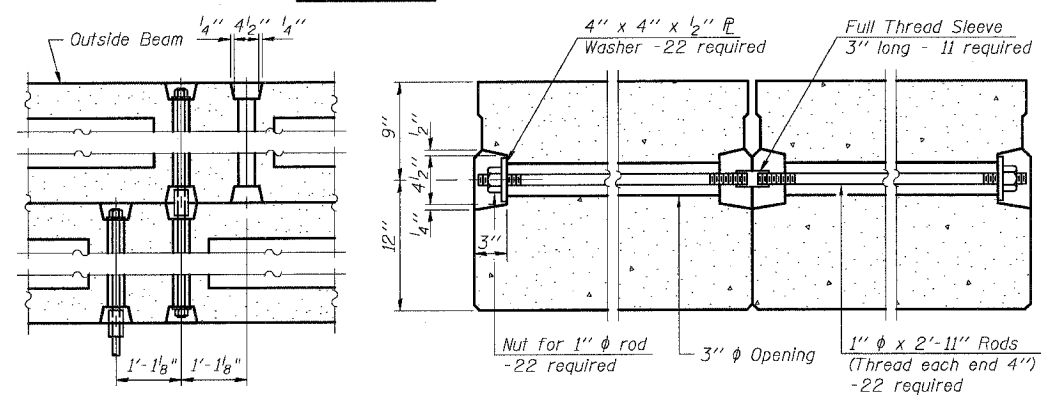
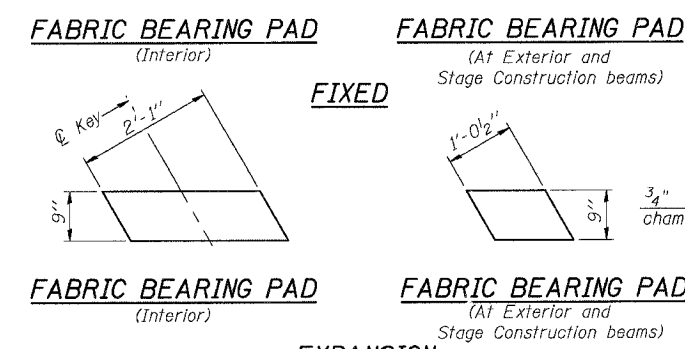
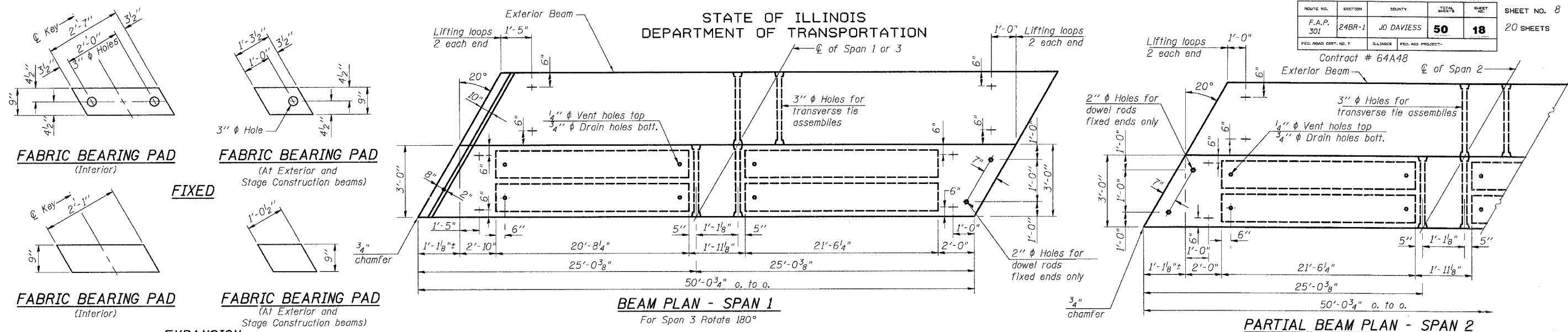
All horizontal dimensions are at right angles to beam ends. Ends of beams shall be aligned at the expansion joints. Any linear variation in the beam lengths shall be placed at the fixed joint. After beams have been erected, holes for dowel rods shall be drilled into substructure and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a minimum of 24 hrs prior to grouting the shear keys. Concrete wearing surface (including breakout) to be poured after grouting the shear keys. Hatched area to be poured after concrete wearing surface (including breakout) is in place. Quantity included with Concrete Structures on sheet 13 & 14 of 20.

See sheet 8 of 20 for bearing pad details. Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams (21" Depth).

| | |
|----------|----|
| DESIGNED | MO |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | DF |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|--------------------------|---------|------------|--------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| F.A.P. 301 | 24BR-1 | JO DAVIESS | 50 | 18 |
| SHEET NO. 8 20 SHEETS | | | | |



NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be (2) $\frac{1}{2}$ " ϕ 270 ksi strands, as shown.

The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

Non prestressing steel shall conform to AASHTO M-31 or M-322 Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two $\frac{1}{8}$ " fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

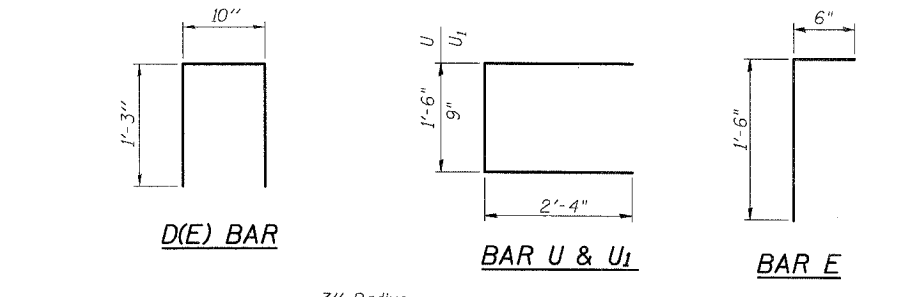
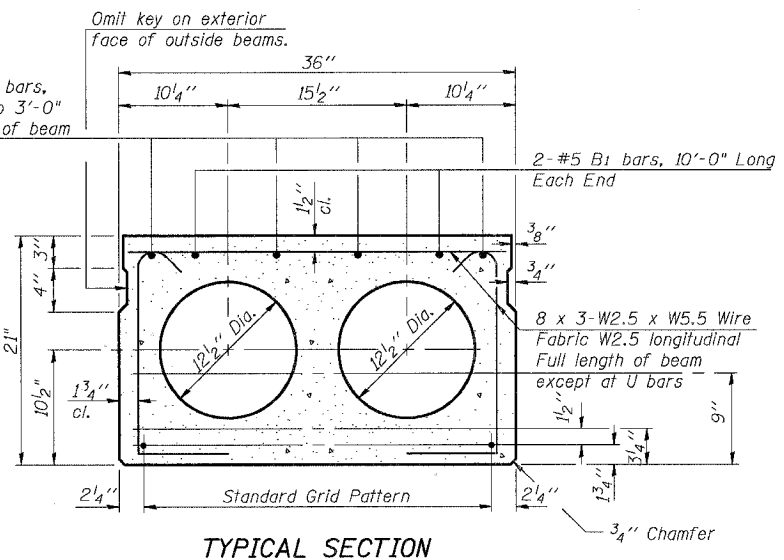
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

Required Release Strength, f'_{ci} , shall be 4000 p.s.i.

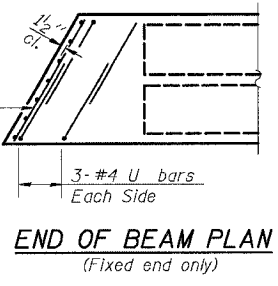
Bridge rail inserts shall be cast in precast beams.

See sheet 2 & 5 of 20 for location of rail anchors.



| | |
|----------|----|
| DESIGNED | MO |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | DF |

PD-3-L 10-22-04



$\frac{1}{2}$ " ϕ Strands, Each Strand Stressed to 30,900 Lbs.
7-Strands $1\frac{3}{4}$ " up, 6-Strands $3\frac{1}{4}$ " up, 2-Strands 9" up

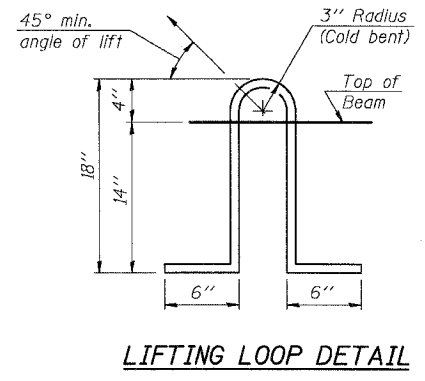
Note:
Place strands symmetrically about ϕ of beam.

BILL OF MATERIAL

| Item | Unit | Quantity |
|---|---------|----------|
| Precast Prestressed Conc. Deck Bms. 21" Depth | Sq. Ft. | 4956.2 |

SUPERSTRUCTURE DETAILS

S.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036



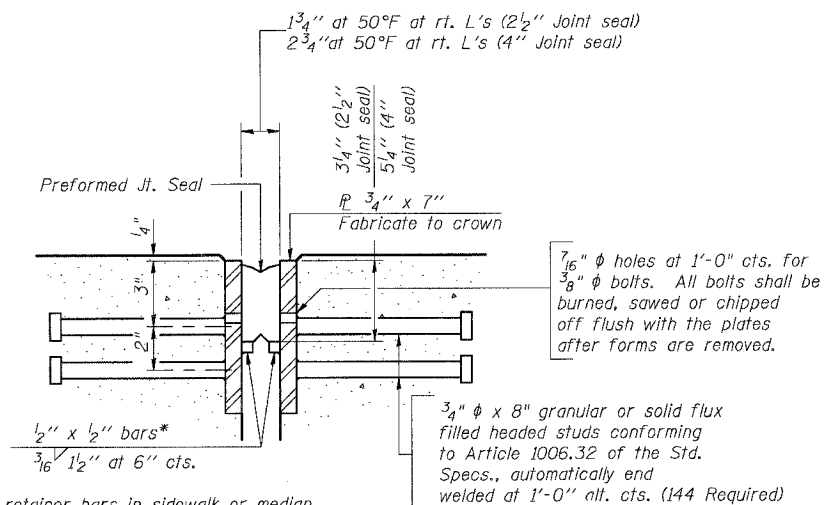
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | | |
|-----------------------|----------|------------------|--------------|-------|--------------------------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET | SHEET NO. 9 20 SHEETS |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 19 | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT | | | |

Contract # 64A48

GENERAL NOTES

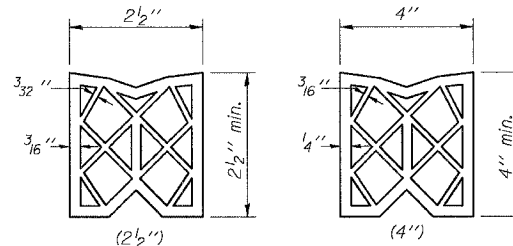
Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be $\frac{3}{16}$ ". Seal space with silicone sealant suitable for structural steel.



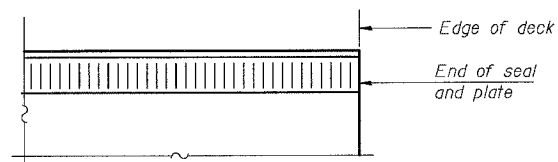
*Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

SECTION THRU EXPANSION JOINT
(2 1/2" and 4" joint seals)

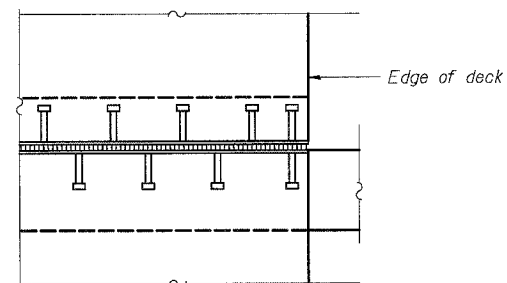
| Design Movement | Required Preformed Joint Seal Size | Required Strip Seal Rated movement |
|-----------------|------------------------------------|------------------------------------|
| 1" | 2 1/2" | 1" |
| 1 5/8" | 4" | 2" |



PREFORMED JOINT SEAL



END TREATMENT ELEVATION
(Showing seal and plate)



PLAN

| | |
|----------|----|
| DESIGNED | MO |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | DF |

BILL OF MATERIAL

| Item | Unit | Total |
|---------------------------------|------|-------|
| Bridge Joint System (Expansion) | foot | 70.3 |

(Sheet 1 of 2)

BRIDGE JOINT SYSTEM - EXPANSION
(PREFORMED JOINT SEAL)

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-----------------------|----------|------------------|-----------|-------------|
| ROUTE NO. | SECTION | COUNTY | SHEET NO. | SHEET TOTAL |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 20 |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT | | |

SHEET NO. 10
20 SHEETS

Contract # 64A48

GENERAL NOTES

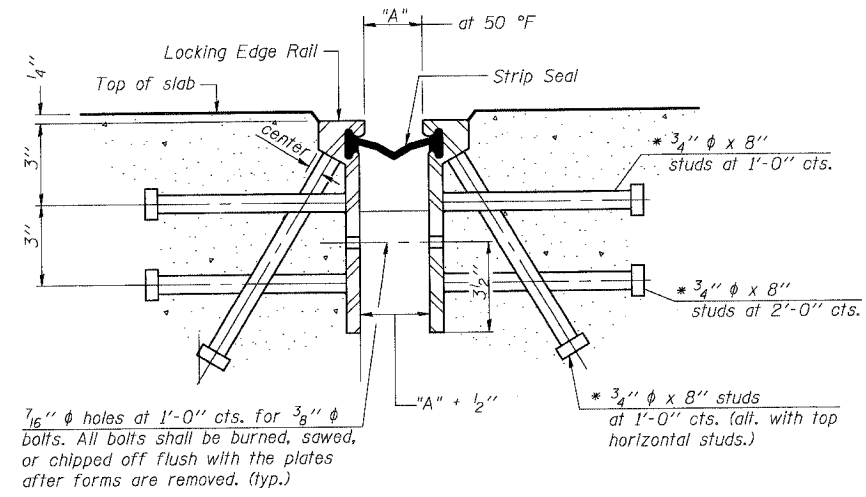
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

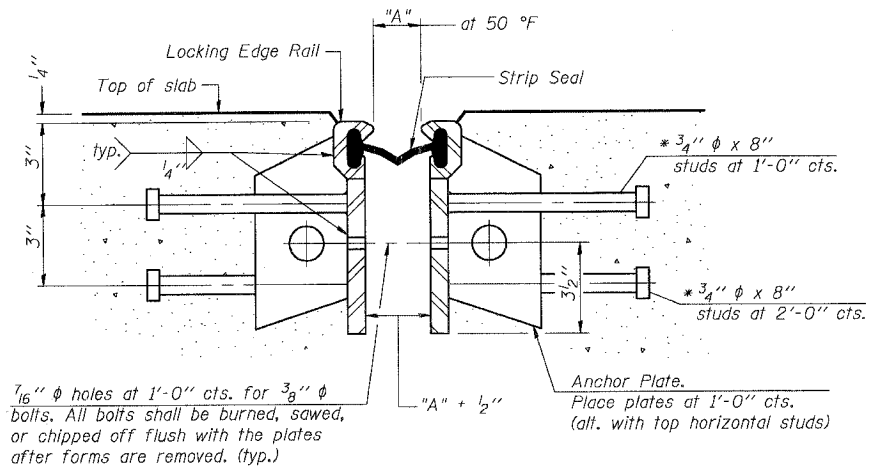
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.



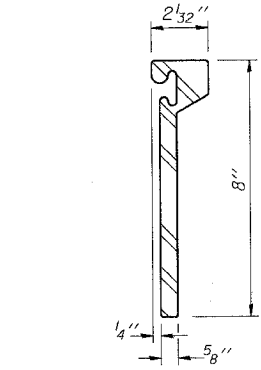
| Required Strip Seal rated movement | "A" |
|------------------------------------|--------|
| 1" | 1 1/8" |
| 2" | 1 3/4" |



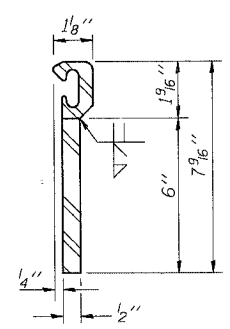
SECTION THRU ROLLED RAIL EXP. JOINT
(360 Studs Required)

SECTION THRU WELDED RAIL EXP. JOINT
(216 Studs Required)
(144 Anchor Plates Required)

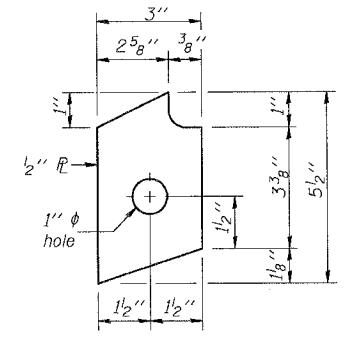
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



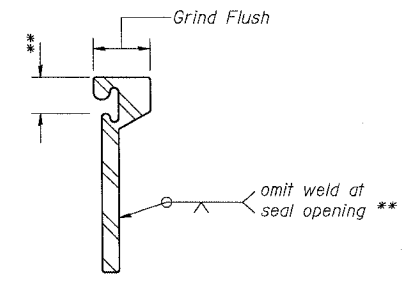
ROLLED (EXTRUDED) RAIL



WELDED RAIL

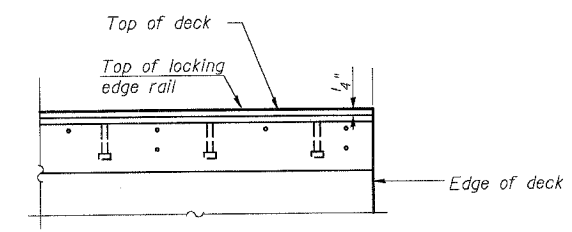


ANCHOR PL
(for welded rail)



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.



END TREATMENT ELEVATION

LOCKING EDGE RAILS

| | |
|----------|----|
| DESIGNED | MO |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | DF |

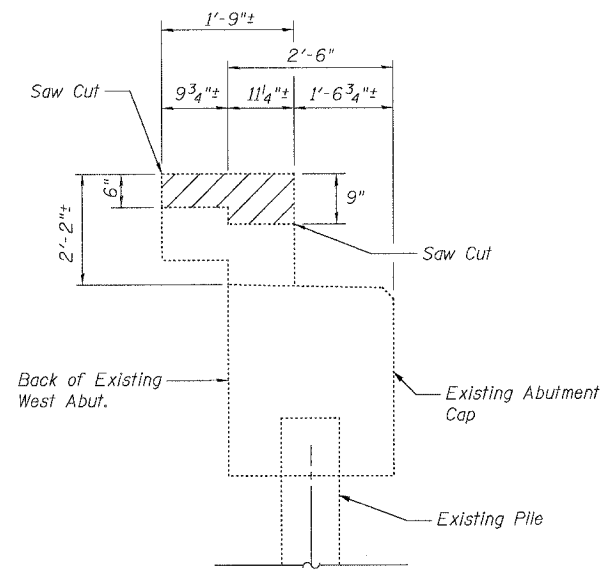
(Sheet 2 of 2)
BRIDGE JOINT SYSTEM - EXPANSION
(ALTERNATE-STRIP SEAL)

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

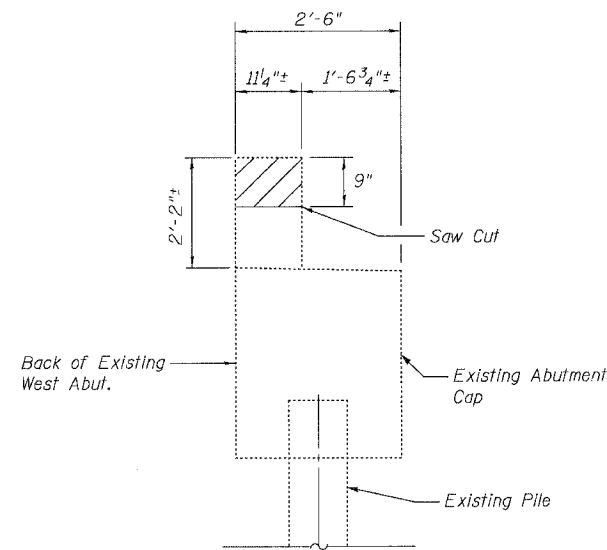
| | | | | |
|-----------------------|---------|------------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | SHEET NO. | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 21 |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | FED. AID PROJECT | |

Contract # 64A48



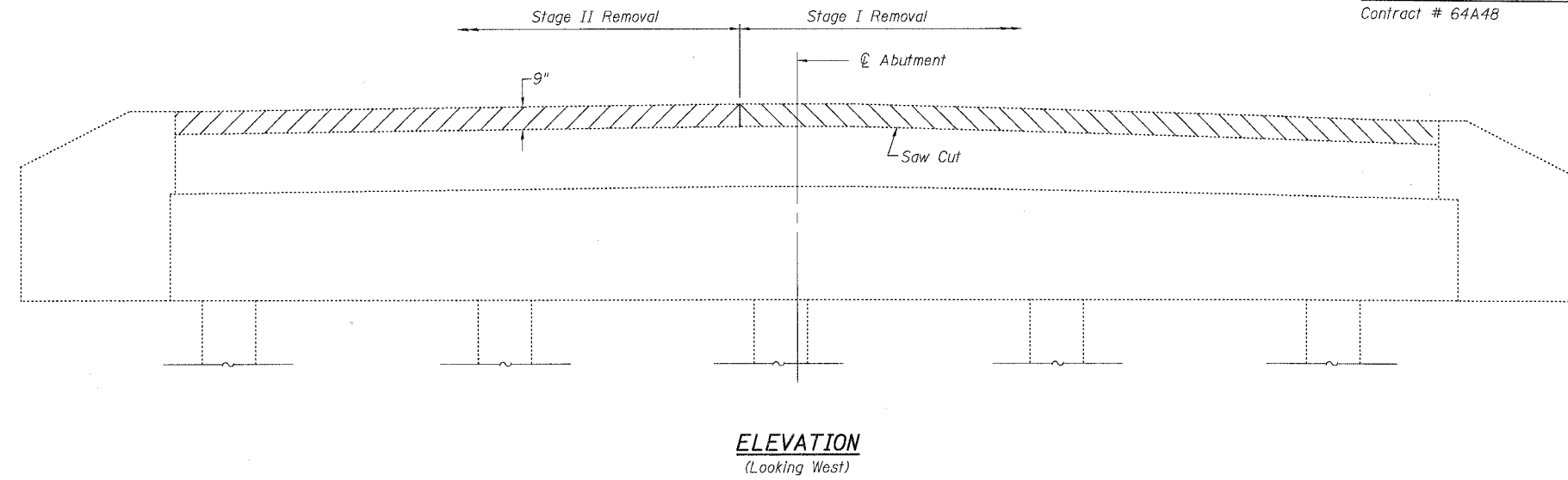
SEC. A-A

(Dimensions are at Rt. Angles to Abutment)

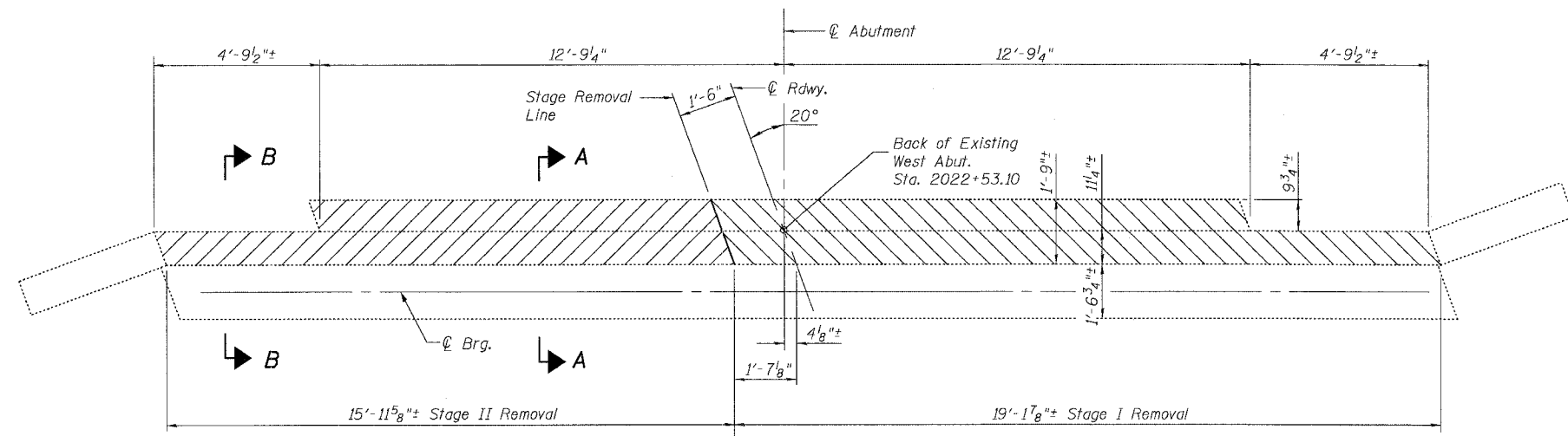


SEC. B-B

(Dimensions are at Rt. Angles to Abutment)



ELEVATION
(Looking West)



PLAN

LEGEND

| | |
|--|---------------------------|
| | Stage I Concrete Removal |
| | Stage II Concrete Removal |

BILL OF MATERIAL

| Item | Unit | Quantity |
|------------------------------|--------|----------|
| Concrete Removal | Cu. Yd | 1.4 |
| Asbestos Bearing Pad Removal | Each | 22 |

**CONCRETE REMOVAL
WEST ABUTMENT**

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

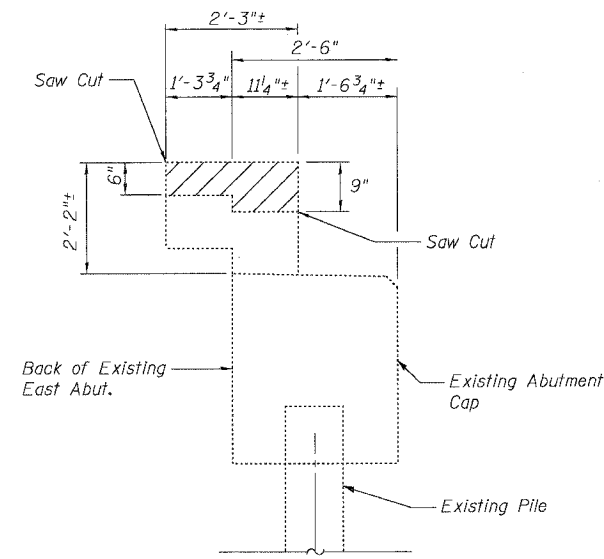
- Note:
- Existing reinforcement extending into new concrete shall be cleaned, straightened, and incorporated into new construction. Cost shall be included with Concrete Removal.
 - Saw cutting to be included in the cost of Concrete Removal.
 - Dimensions are based on existing plan dimension, see General Notes on Sheet S2 of 20.

| | |
|----------|----|
| DESIGNED | DF |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | DF |

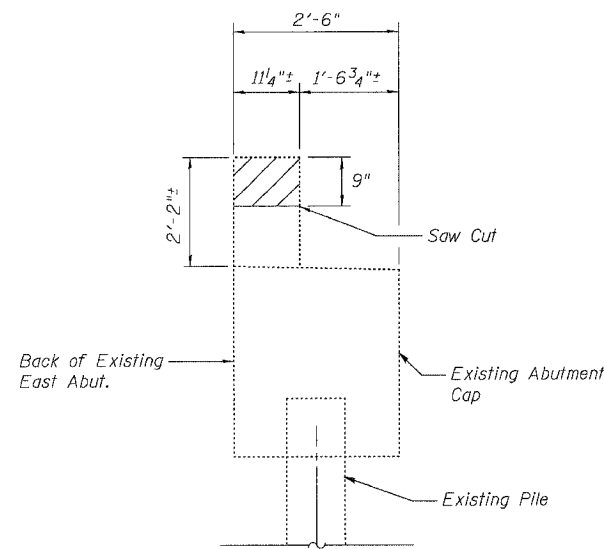
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-----------------------|----------|------------------|--------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 22 |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT | | |

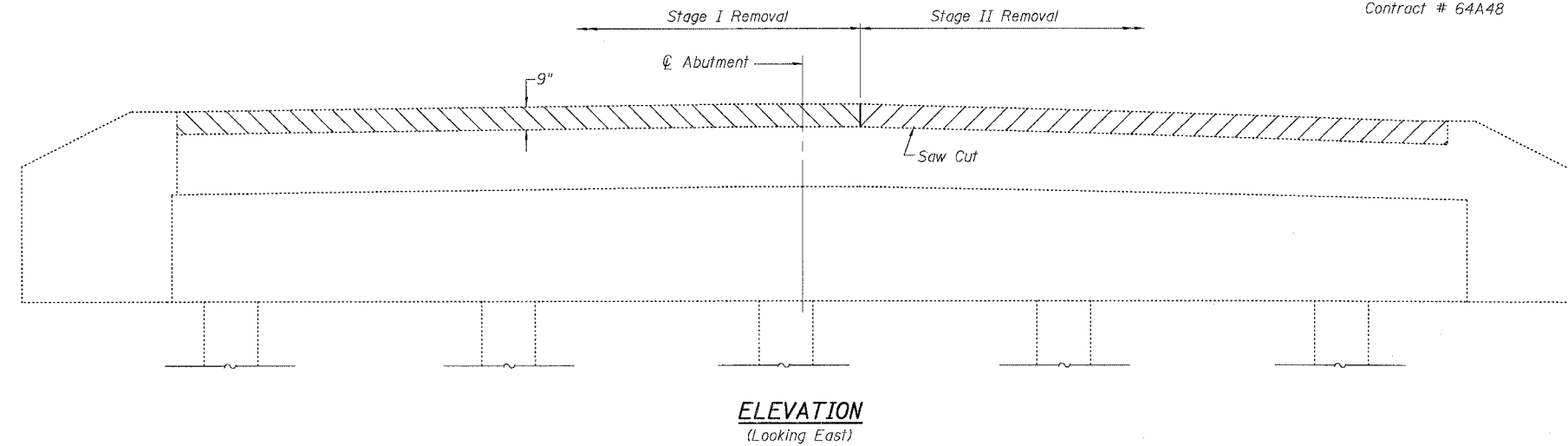
Contract # 64A48



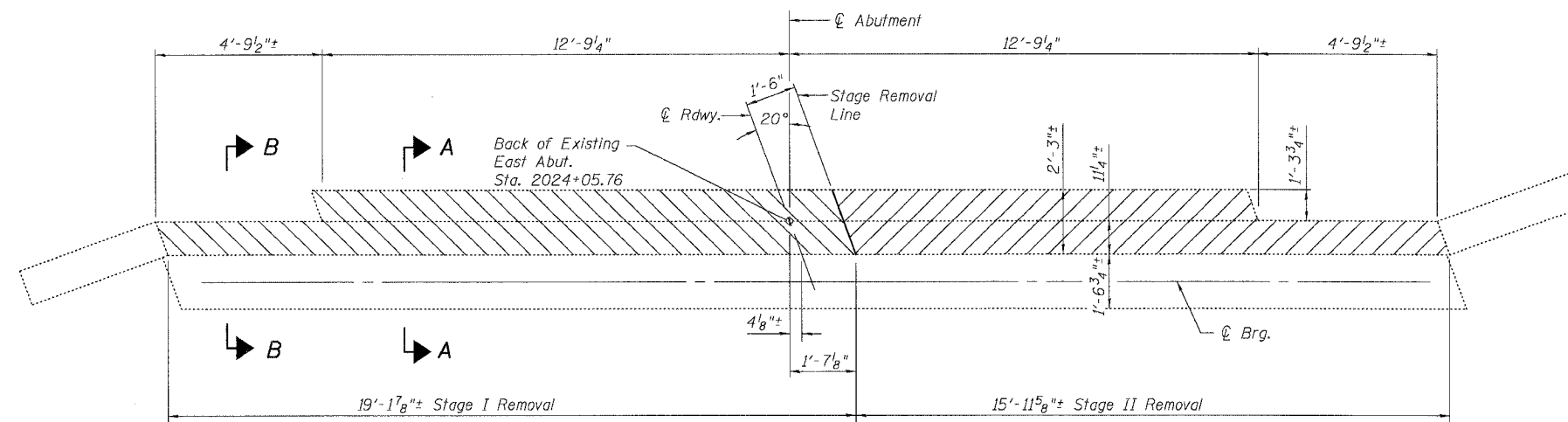
SEC. A-A
(Dimensions are at Rt. Angles to Abutment)



SEC. B-B
(Dimensions are at Rt. Angles to Abutment)



ELEVATION
(Looking East)



PLAN

LEGEND

| | |
|--|---------------------------|
| | Stage I Concrete Removal |
| | Stage II Concrete Removal |

BILL OF MATERIAL

| Item | Unit | Quantity |
|------------------------------|--------|----------|
| Concrete Removal | Cu. Yd | 1.4 |
| Asbestos Bearing Pad Removal | Each | 22 |

**CONCRETE REMOVAL
EAST ABUTMENT**

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

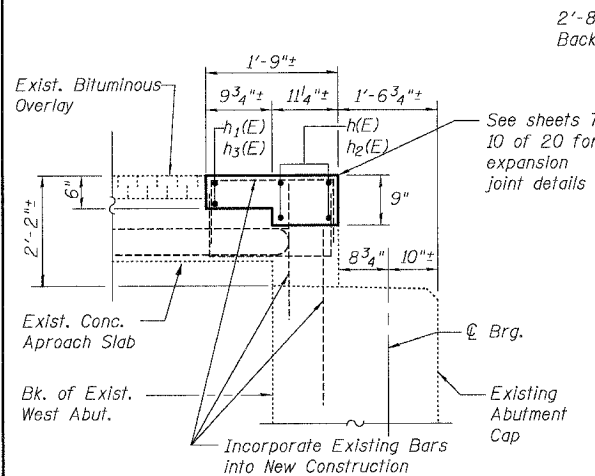
| | |
|----------|----|
| DESIGNED | DF |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | DF |

- Note:
- Existing reinforcement extending into new concrete shall be cleaned, straightened, and incorporated into new construction. Cost shall be included with Concrete Removal.
 - Saw cutting to be included in the cost of Concrete Removal.
 - Dimensions are based on existing plan dimension, see General Notes on Sheet S2 of 20.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

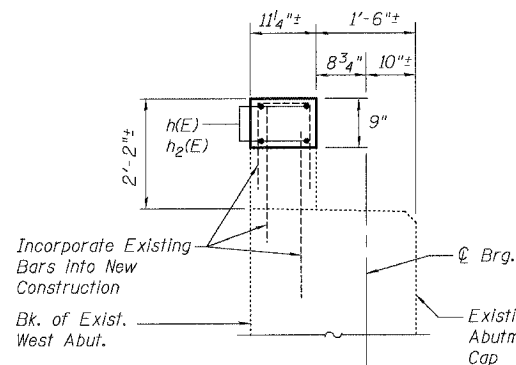
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|-----------------------|----------|------------------|-----------|-------|
| ROUTE NO. | SECTION | COUNTY | SHEET NO. | SHEET |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 23 |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT | | |

SHEET NO. 13
20 SHEETS



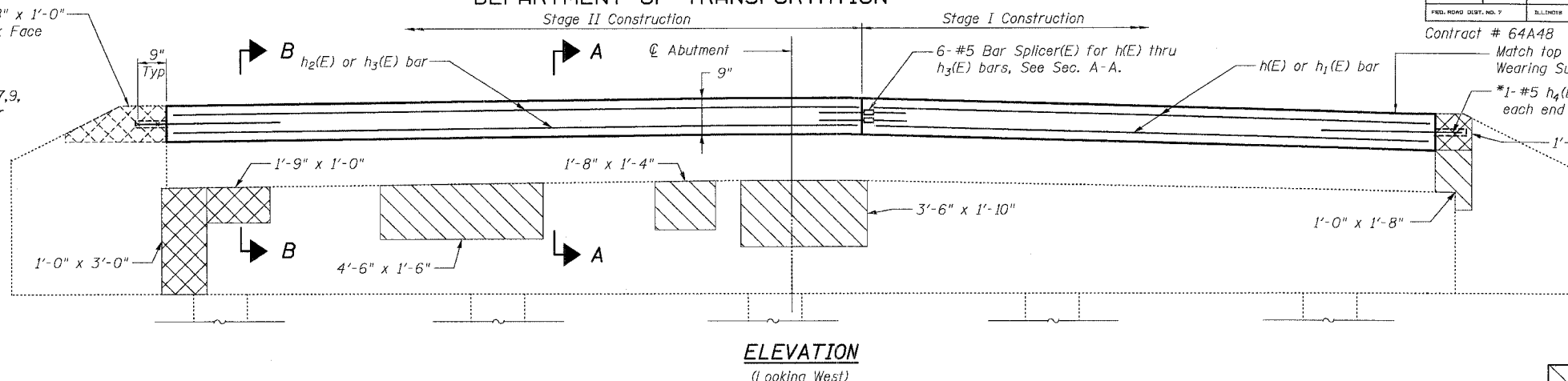
SEC. A-A

(Dimensions at Rt. Angles to Abutment)



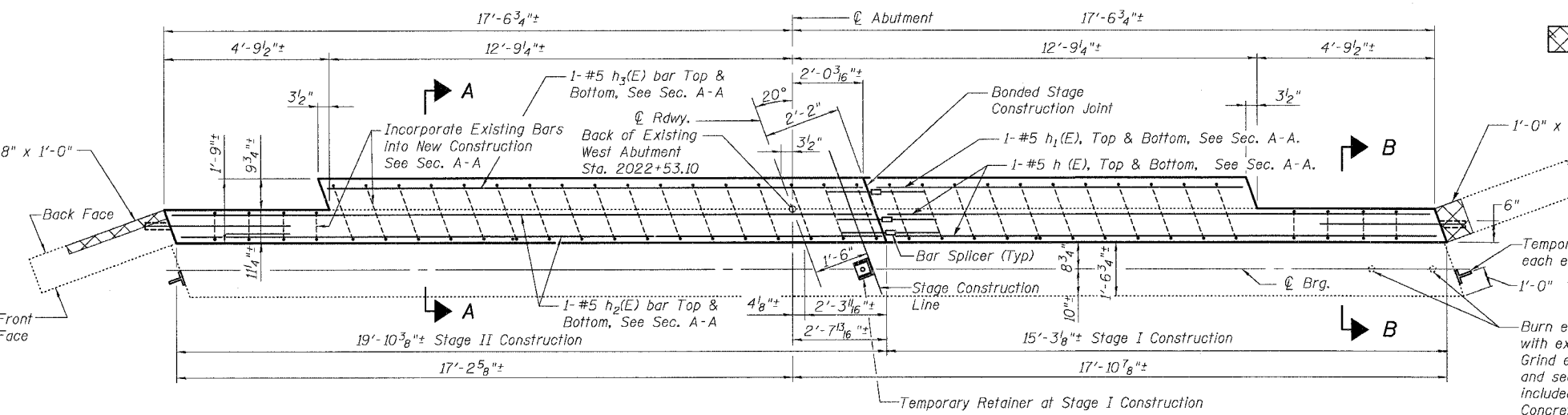
SEC. B-B

(Dimensions at Rt. Angles to Abutment)



ELEVATION

(Looking West)



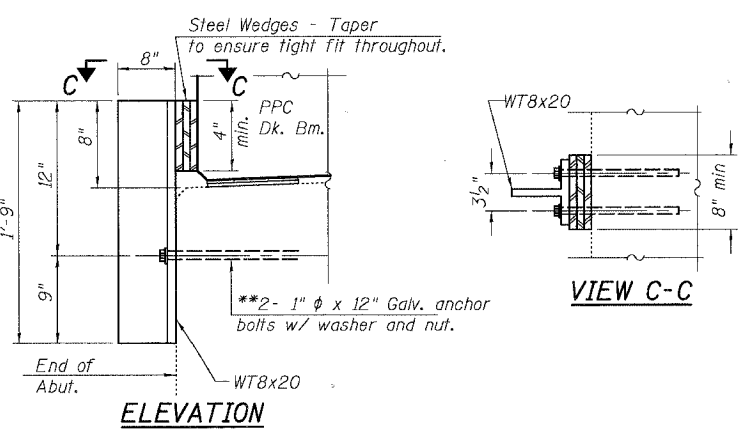
PLAN

LEGEND

- Formed Concrete Repair (Depth Equal to or Less Than 5")
- Formed Concrete Repair (Depth Greater than 5")

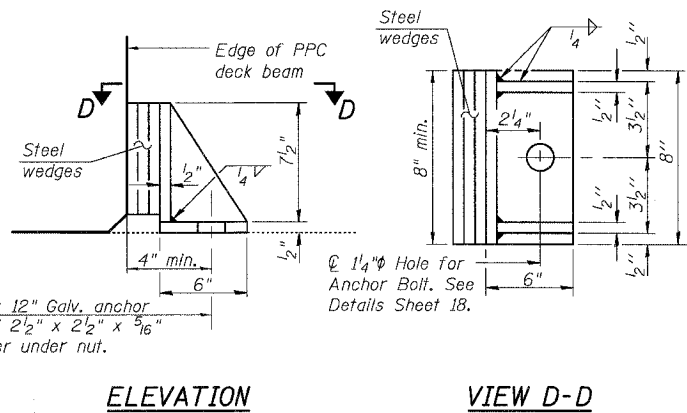
Notes:
Concrete Structures shown are to be poured after Concrete Wearing Surface (including blockout) is in place and cured.
The concrete wearing surface (including blockout) shall be poured and cured prior to removing the Stage I Construction Temporary Retainers. Burn or cut the anchor bolt flush with existing abutment surface. Grind anchor bolts smooth and seal with epoxy. Cost included with Prestressed Concrete Deck Beams (21" Depth).
The concrete wearing surface (including blockout) shall be poured and cured prior to removing the temporary retainers. Anchor bolts may be left in place or removed as specified in the removal of Stage I Construction Temporary Retainers above.
Existing reinforcement extending into new concrete shall be cleaned, straightened and incorporated into new construction.
Any existing reinforcement damaged during partial removal of the backwall shall be replaced with equivalent size grouted bars at no additional cost to the state.
*Epoxy grout h4(E) bars in 9" min. drilled holes according to Section 584 of the Standard Specifications.
**Cost of temporary retainers and accessories are included with Precast Prestressed Concrete Deck Beams (21" Depth).
**Anchor bolts or approved threaded rods to be drilled and grouted in place. See Anchor Bolt Detail sheet 18 of 20.

| | |
|----------|----|
| DESIGNED | DF |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | DF |



ELEVATION

TEMPORARY RETAINER DETAIL
(At Exterior Beams)



ELEVATION

TEMPORARY RETAINER AT STAGE I CONSTRUCTION
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|------------------------------------|-----|---------|--------|-------|
| h(E) | 4 | #5 | 15'-0" | — |
| h1(E) | 2 | #5 | 10'-2" | — |
| h2(E) | 4 | #5 | 19'-6" | — |
| h3(E) | 2 | #5 | 14'-8" | — |
| h4(E) | 2 | #5 | 3'-3" | — |
| Reinforcement Bars, Epoxy Coated | | Pound | | 210 |
| Concrete Structures | | Cu. Yd. | | 1.4 |
| Formed Concrete Repair (Depth <5") | | Sq. Ft. | | 17.2 |
| Formed Concrete Repair (Depth >5") | | Sq. Ft. | | 12.4 |
| Bar Splicers | | Each | | 6 |

Reinforcement bars designated (E) shall be epoxy coated.

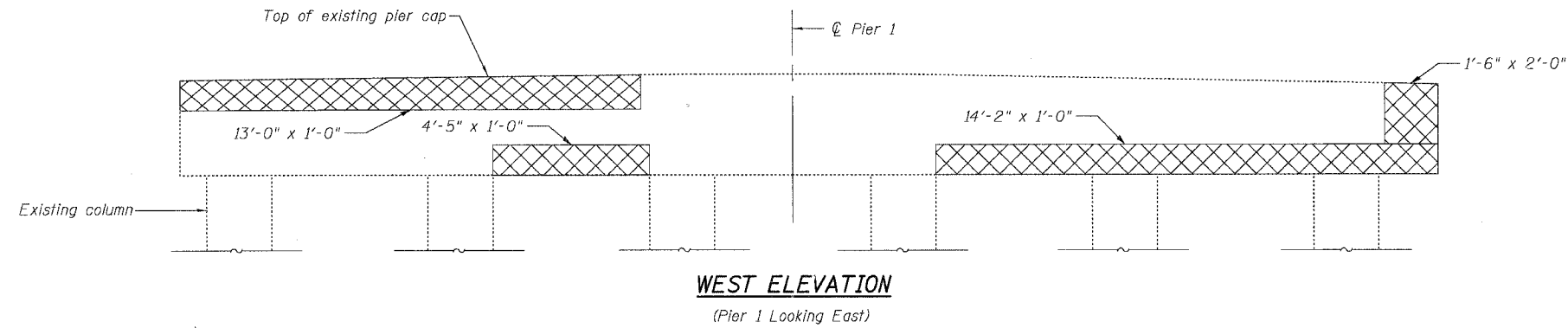
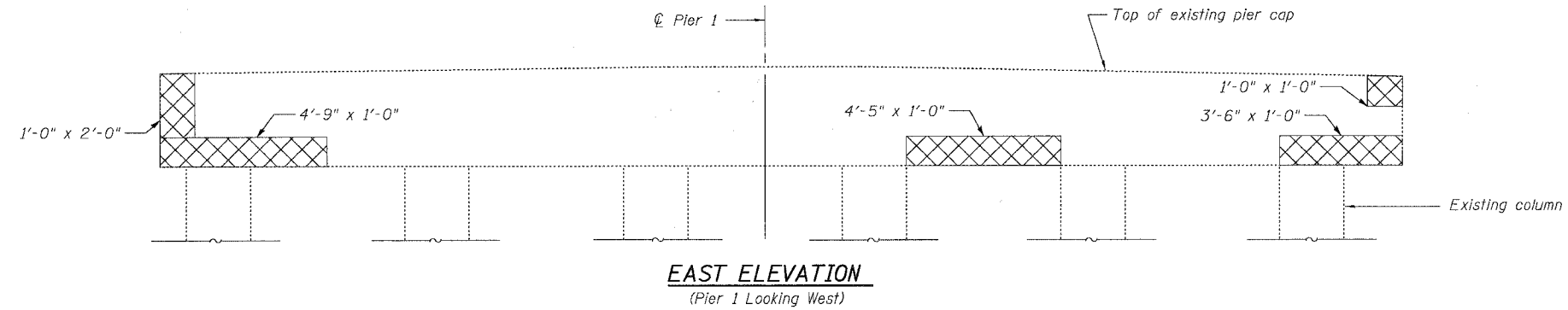
WEST ABUTMENT REPAIRS

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

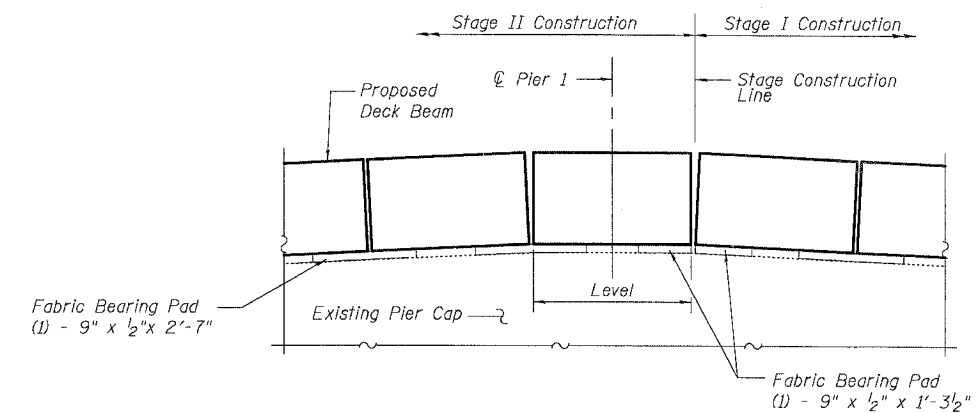
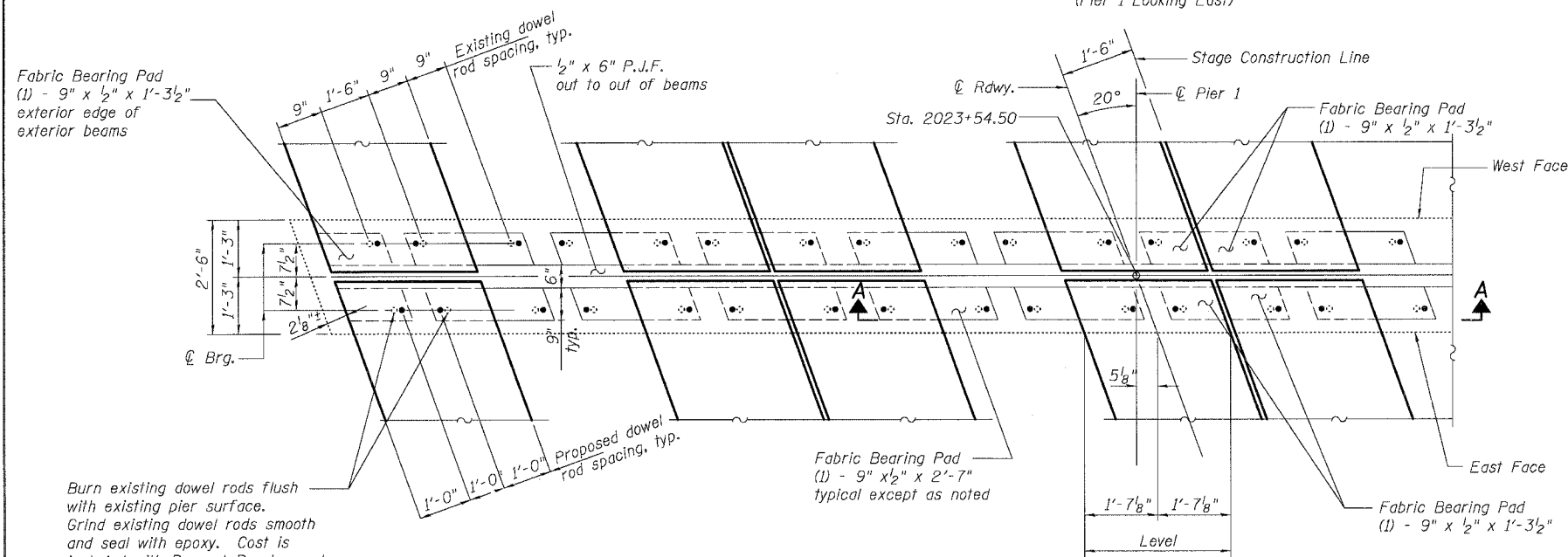
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|-----------------------|---------|------------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | SHEET NO. | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 25 |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | FED. AID PROJECT | |

Contract # 64A48



LEGEND

Formed Concrete Repair (Depth Greater than 5")



SECTION A-A
(Concrete wearing surface and dowel rods not shown.)
(Looking West)

BILL OF MATERIAL

| Item | Unit | Quantity |
|------------------------------------|---------|----------|
| Formed Concrete Repair (Depth >5") | Sq. Ft. | 50.3 |

PIER 1 REPAIRS

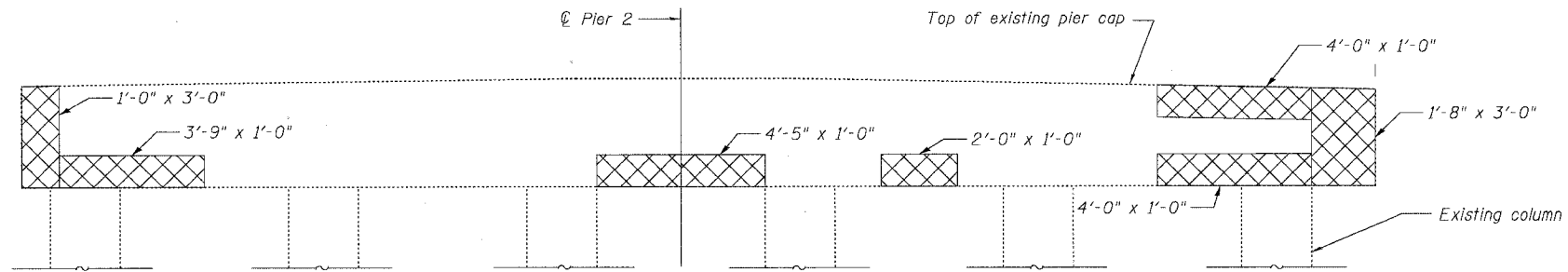
U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

PARTIAL PLAN
(Not all deck beams are shown.)
(Concrete curb and concrete wearing surface not shown.)

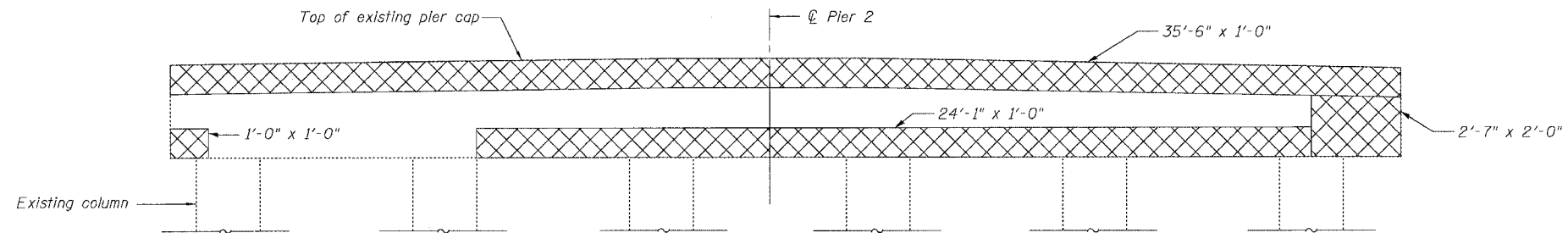
| | |
|----------|----|
| DESIGNED | MO |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | DF |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | | |
|-----------------------|---------|------------------|------------------|-----------|--------------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | SHEET NO. 16 |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 26 | 20 SHEETS |
| FED. ROAD DIST. NO. 7 | BALDWIN | FED. AID PROJECT | Contract # 64A48 | | |



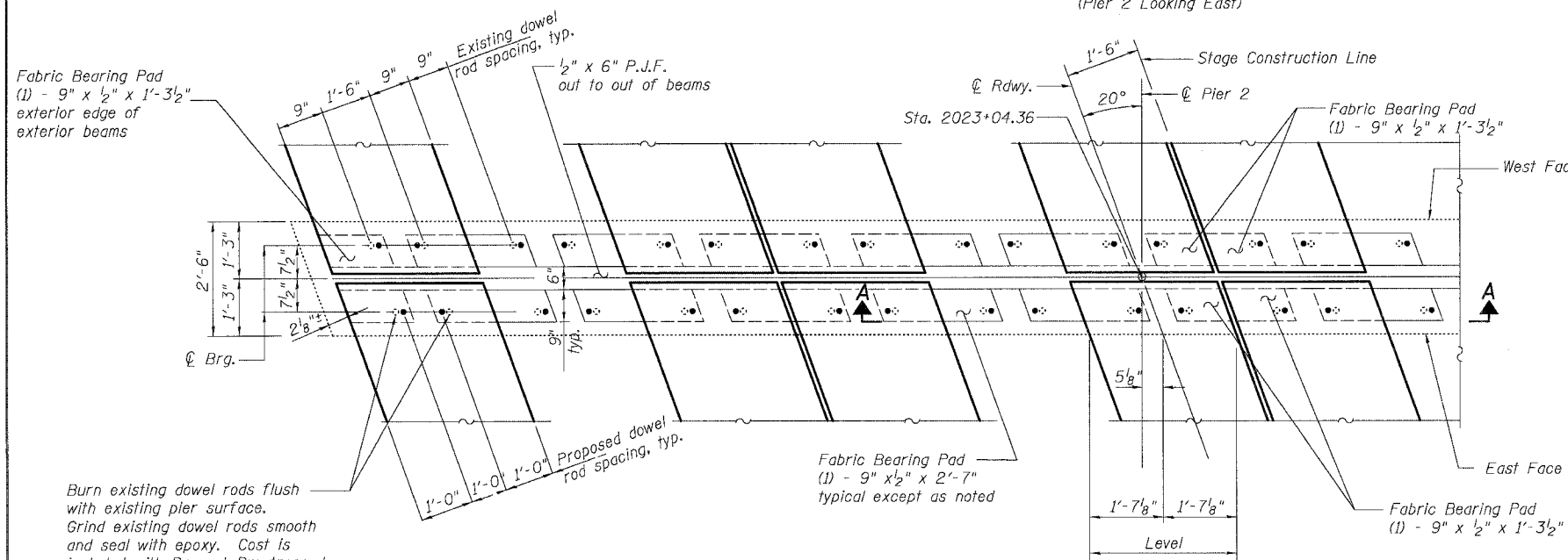
EAST ELEVATION
(Pier 2 Looking West)



WEST ELEVATION
(Pier 2 Looking East)

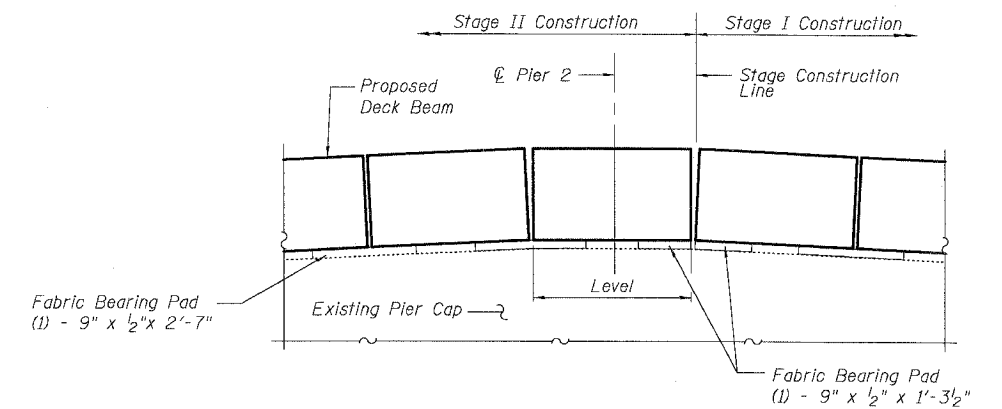
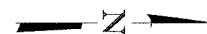
LEGEND

Formed Concrete Repair
(Depth Greater than 5")



PARTIAL PLAN

(Not all deck beams are shown).
(Concrete curb and concrete wearing surface not shown.)



SECTION A-A

(Concrete wearing surface and dowel rods not shown.)
(Looking West)

BILL OF MATERIAL

| Item | Unit | Quantity |
|------------------------------------|---------|----------|
| Formed Concrete Repair (Depth >5") | Sq. Ft. | 91.9 |

PIER 2 REPAIRS

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

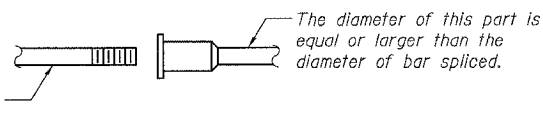
| | |
|----------|----|
| DESIGNED | MO |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | DF |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-----------------------|---------|------------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | SHEETS | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 27 |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | FED. AID PROJECT | |

Contract # 64A48

The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



** ONE PIECE

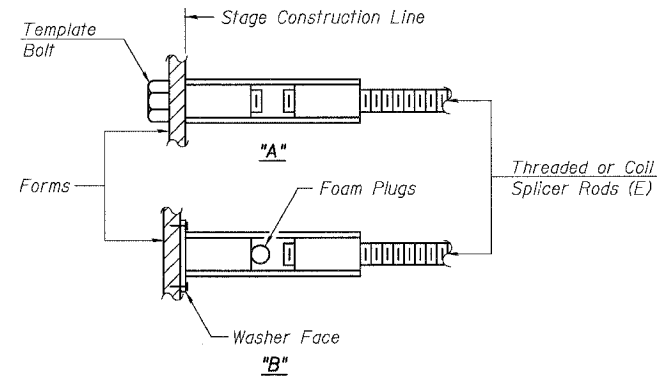
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

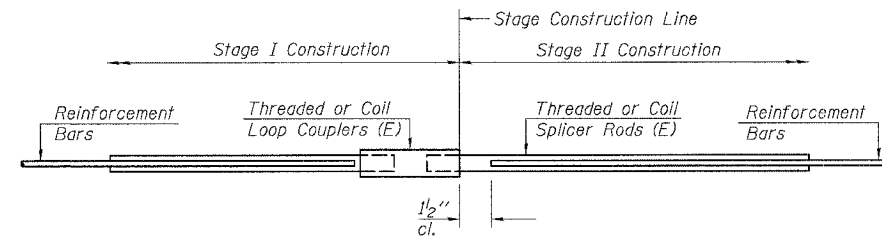
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{s_{allow}} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

| Bar Size to be Spliced | Splicer Rod or Dowel Bar Length | Strength Requirements | |
|------------------------|---------------------------------|------------------------------|---------------------------------------|
| | | Min. Capacity kips - tension | Min. Pull-Out Strength kips - tension |
| #4 | 1'-8" | 14.7 | 5.9 |
| #5 | 2'-0" | 23.0 | 9.2 |
| #6 | 2'-7" | 33.1 | 13.3 |
| #7 | 3'-5" | 45.1 | 18.0 |
| #8 | 4'-6" | 58.9 | 23.6 |
| #9 | 5'-9" | 75.0 | 30.0 |
| #10 | 7'-3" | 95.0 | 38.0 |
| #11 | 9'-0" | 117.4 | 46.8 |

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



STANDARD

| Bar Size | No. Assemblies Required | Location |
|----------|-------------------------|--------------|
| #4 | 153 | Deck Overlay |
| #5 | 6 | In Blockout |
| #5 | 6 | W. Abut. |
| #5 | 6 | E. Abut. |

| | |
|----------|----|
| DESIGNED | DF |
| CHECKED | CB |
| DRAWN | DF |
| CHECKED | CB |

BAR SPLICER ASSEMBLY DETAILS

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

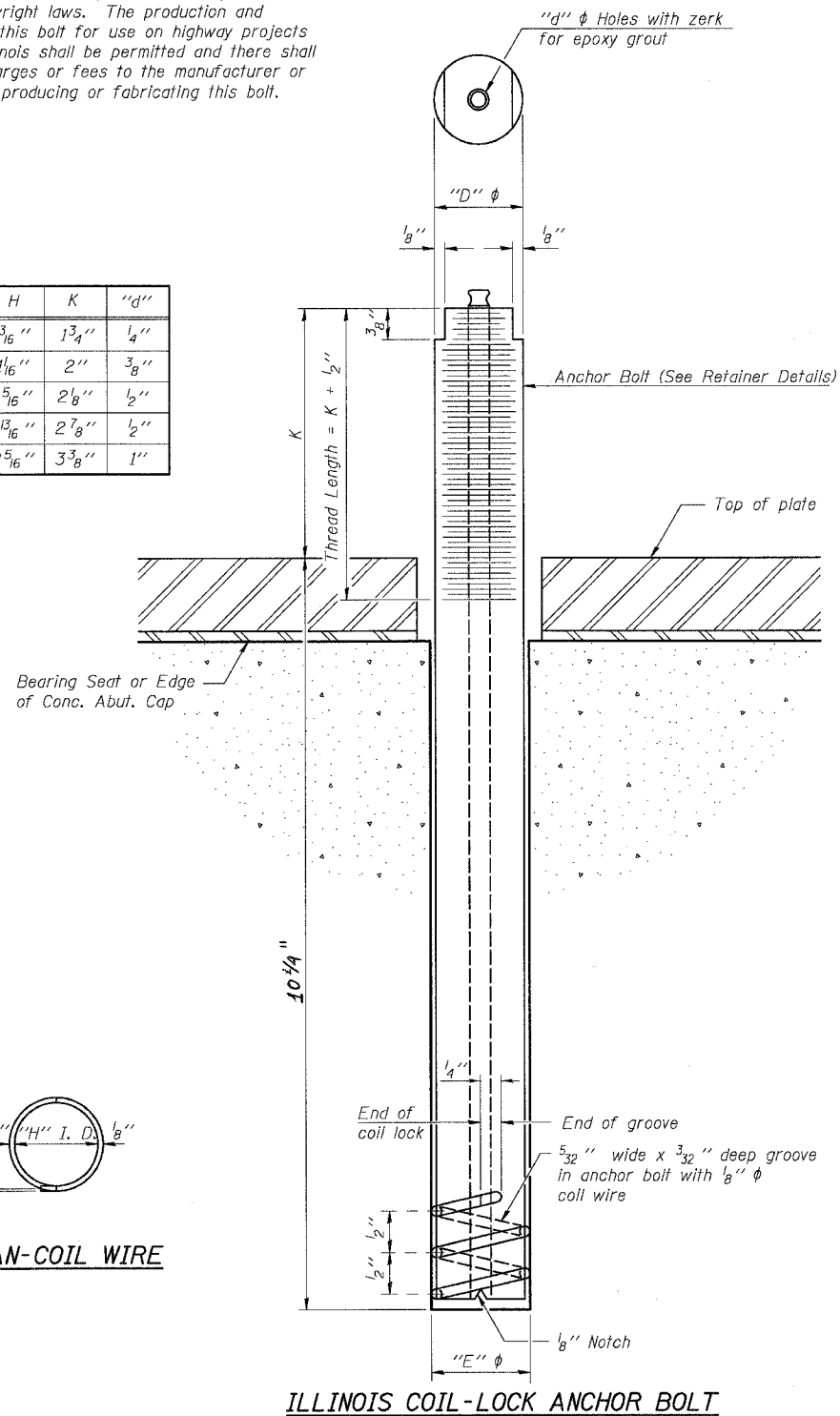
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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|-----------------------|---------|------------|------------------|-------|-----------|
| ROUTE NO. | SECTION | COUNTY | SHEET | SHEET | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 28 | 20 SHEETS |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | FED. AID PROJECT | | |

Contract # 64A48

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

| D | E | H | K | "d" |
|--------|--------|----------|--------|------|
| 1" | 1 1/8" | 1 3/16" | 1 3/4" | 1/4" |
| 1 1/4" | 1 3/8" | 1 1/16" | 2" | 3/8" |
| 1 1/2" | 1 5/8" | 1 5/16" | 2 1/8" | 1/2" |
| 2" | 2 1/8" | 1 13/16" | 2 7/8" | 1/2" |
| 2 1/2" | 2 5/8" | 2 5/16" | 3 3/8" | 1" |



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

- The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

| Location | Type | Size | Retainer Type |
|----------|------|-----------|-----------------------------------|
| W. Abut. | A307 | 1" ϕ | Temp. Retainer at Exterior Beams |
| W. Abut. | A307 | 1" ϕ | Temp. Retainer at Stage I Constr. |
| E. Abut. | A307 | 1" ϕ | Temp. Retainer at Exterior Beams |
| E. Abut. | A307 | 1" ϕ | Temp. Retainer at Stage I Constr. |

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Precast Concrete Deck Beams (21" Depth).

ANCHOR BOLT DETAILS FOR RETAINERS

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

| | |
|----------|----|
| DESIGNED | DF |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | PM |

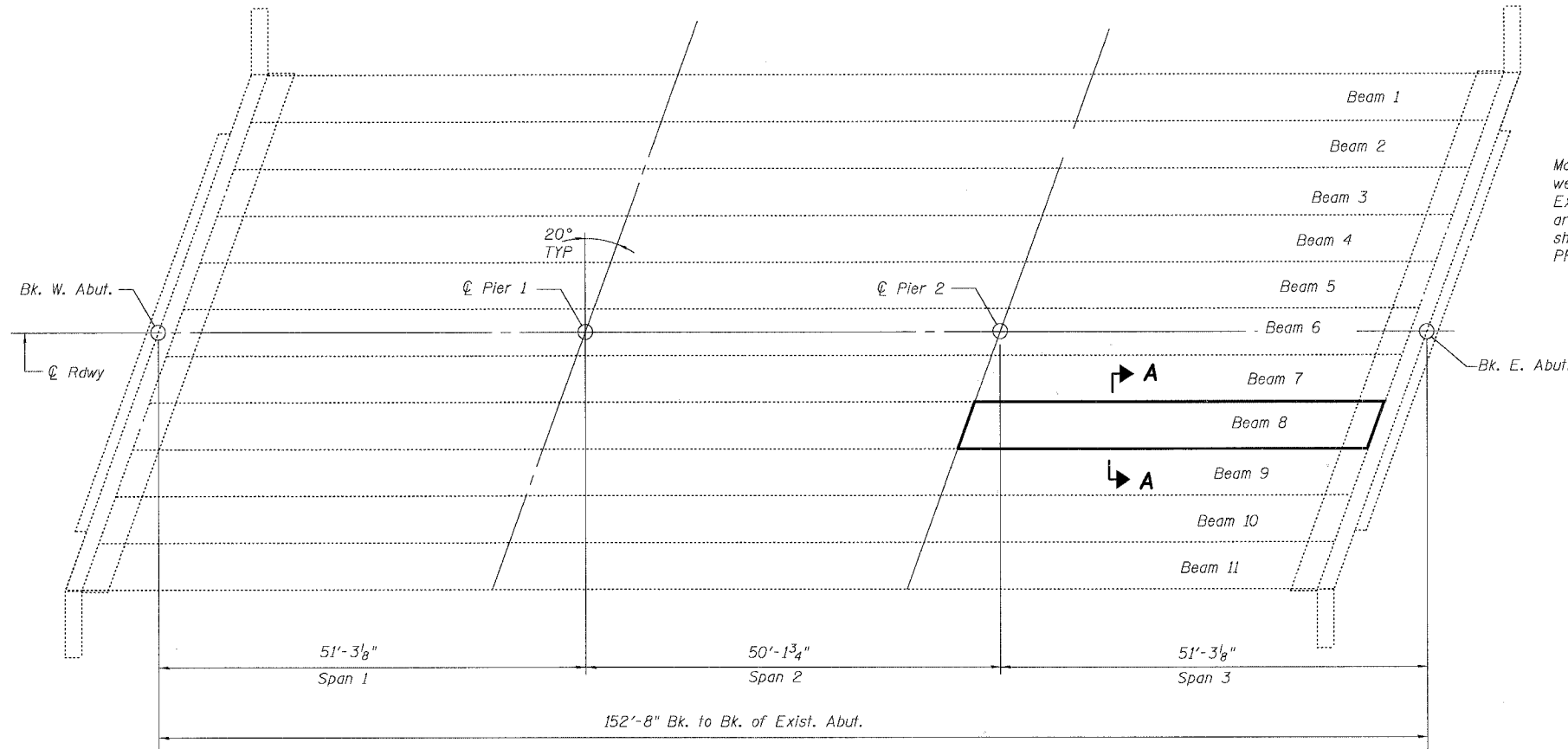
ABB-1

10-22-04

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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|-----------------------|----------|------------------|--------------|-----------|-----------|
| ROUTE NO. | SECTION | COUNTY | SIGNS SHEETS | SHEET NO. | SHEET NO. |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 29 | 20 SHEETS |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT | | | |

Contract # 64A48



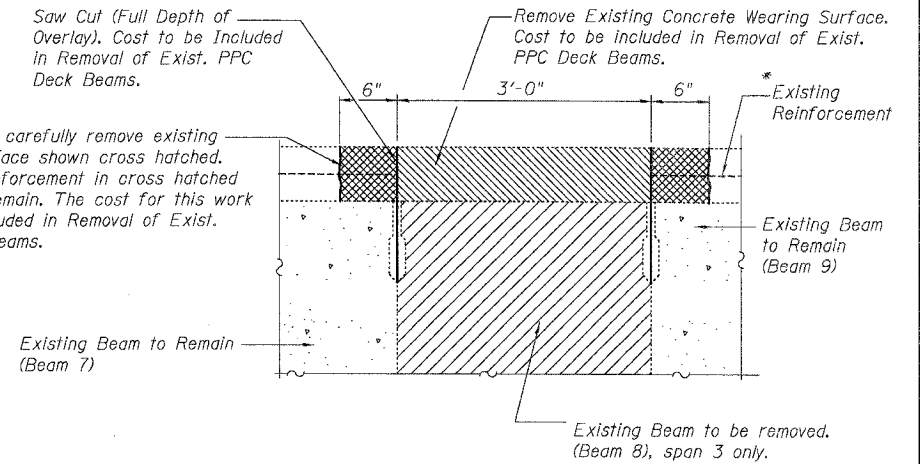
KEY

Existing P.P.C. Deck Beam to be replaced with PPC deck Beam (21" Depth) Special

PLAN



*Existing reinforcement extending into new construction shall be straightened, cleaned and incorporated into new construction, the cost to be included with Removal of Existing PPC Deck Beams. If the Contractor damages this existing reinforcement then the Contractor shall replace this reinforcement at no additional cost to the state.

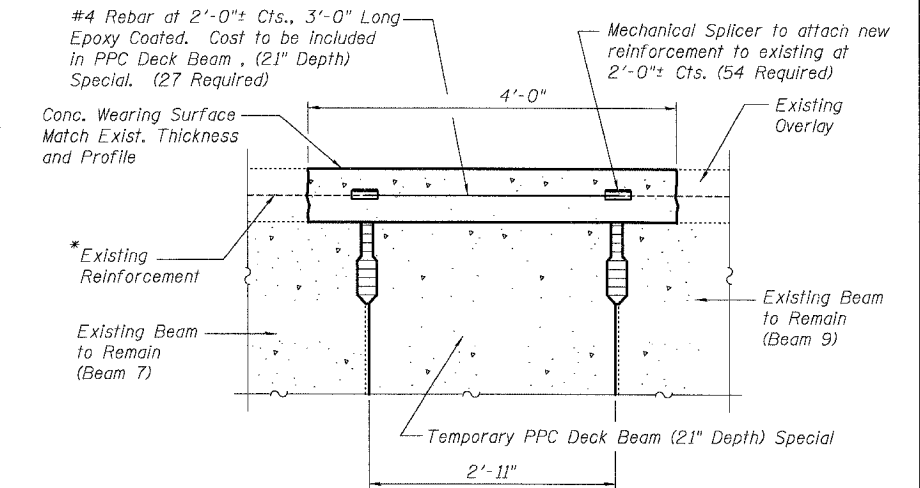


Manually and carefully remove existing wearing surface shown cross hatched. Existing reinforcement in cross hatched area shall remain. The cost for this work shall be included in Removal of Exist. PPC Deck Beams.

Existing Beam to Remain (Beam 7)

Existing Beam to be removed. (Beam 8), span 3 only.

(SHOWING REMOVAL)



Conc. Wearing Surface Match Exist. Thickness and Profile

*Existing Reinforcement

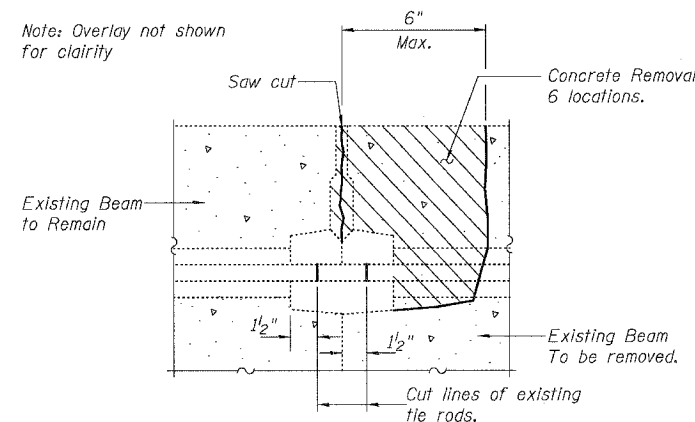
Existing Beam to Remain (Beam 7)

Existing Beam to Remain (Beam 9)

(SHOWING CONSTRUCTION)

**SECTION A-A BEAM AND OVERLAY
REMOVAL AND REPLACEMENT DETAIL**

Note: Overlay not shown for clarity



**BEAM REMOVAL DETAIL
AT TRANSVERSE TIES**

Note: See Sheet 20 of 20 for additional details.

BILL OF MATERIAL

| Item | Unit | Quantity |
|-----------------------------------|---------|----------|
| Remove Existing PPC Deck Beam | Sq. Ft. | 150.2 |
| PPC Deck Beam (21" Depth) Special | Sq. Ft. | 146.2 |
| Concrete Wearing Surface, 5" | Sq. Yd. | 22.7 |
| Mechanical Splice | Each | 54 |

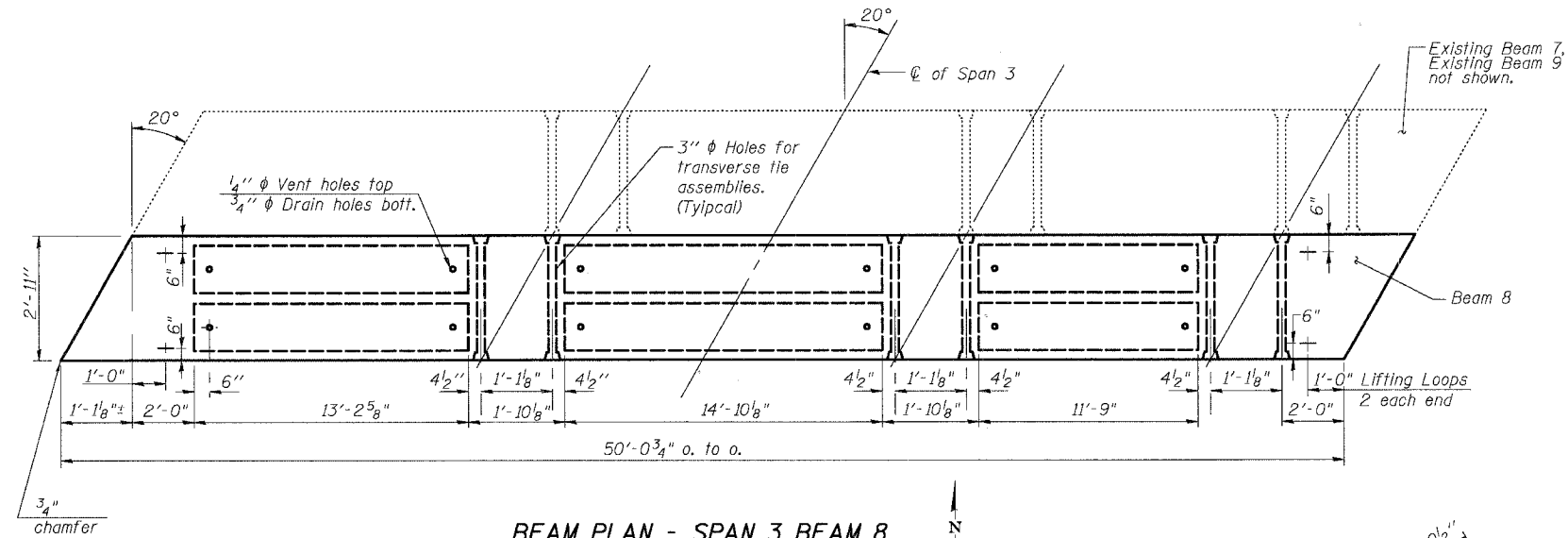
PRE-STAGE I BEAM REPLACEMENT

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

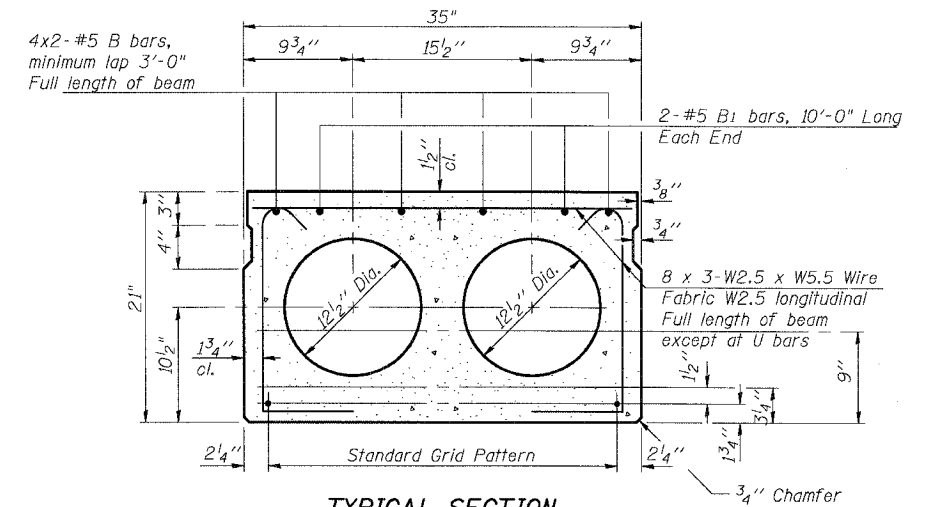
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| CHECKED | CB |
| DRAWN | RG |
| CHECKED | PM |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | | |
|-----------------------|----------|------------------|------------------|-------|--------------|
| ROUTE NO. | SECTION | COUNTY | SHEET NO. | SHEET | SHEET NO. 20 |
| FAP 301 | 24BR-1 | JO DAVIESS | 50 | 30 | 20 SHEETS |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT | Contract # 64A48 | | |



BEAM PLAN - SPAN 3 BEAM 8

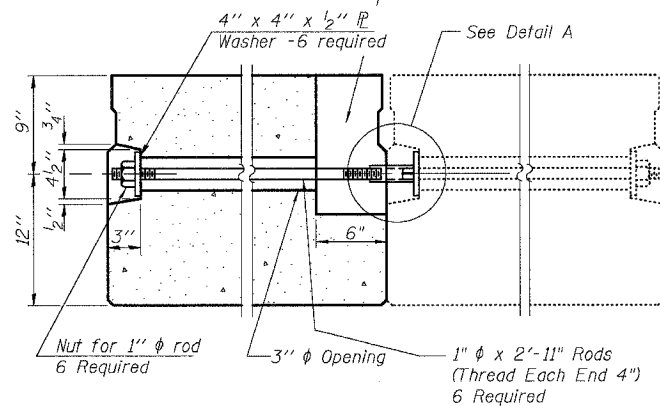


TYPICAL SECTION

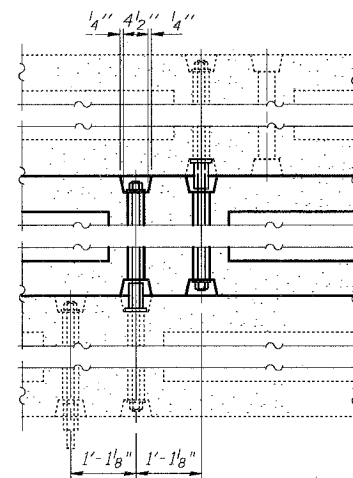
1/2" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
7-Strands 1 3/4" up, 6-Strands 3/4" up, 2-Strands 9" up

Note:
Place strands symmetrically about ϕ of beam.

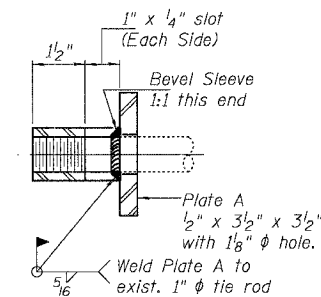
6" x 6" x 11 1/2" Blockout to be filled with Class BD Concrete after Beams have been installed. Cost shall be included in the cost of "Concrete Wearing Surface".



TYPICAL TRANSVERSE TIE ASSEMBLY



FABRIC SHIM PAD
(If Required)



SECTION B-B

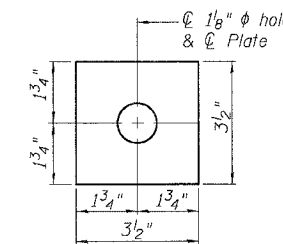
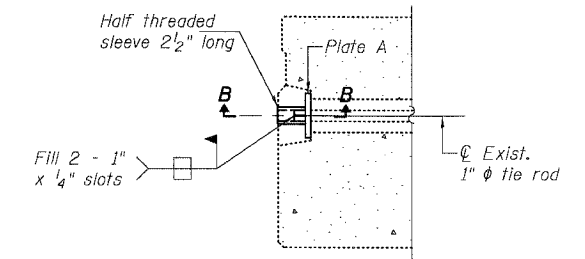
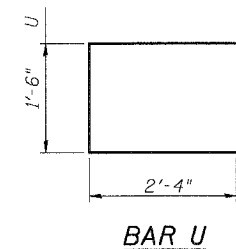


PLATE A
(6 Required)

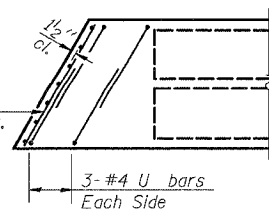


DETAIL A

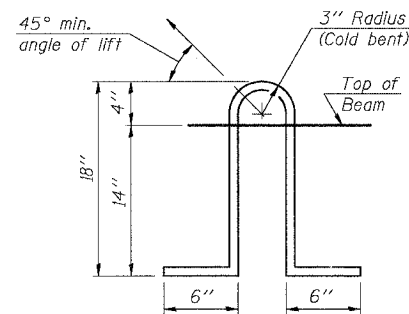


BAR U

8 x 3-W2.5 x W5.5 Wire Fabric, W5.5 vert. Full depth of beam. Each End.



END OF BEAM PLAN



LIFTING LOOP DETAIL

NOTES

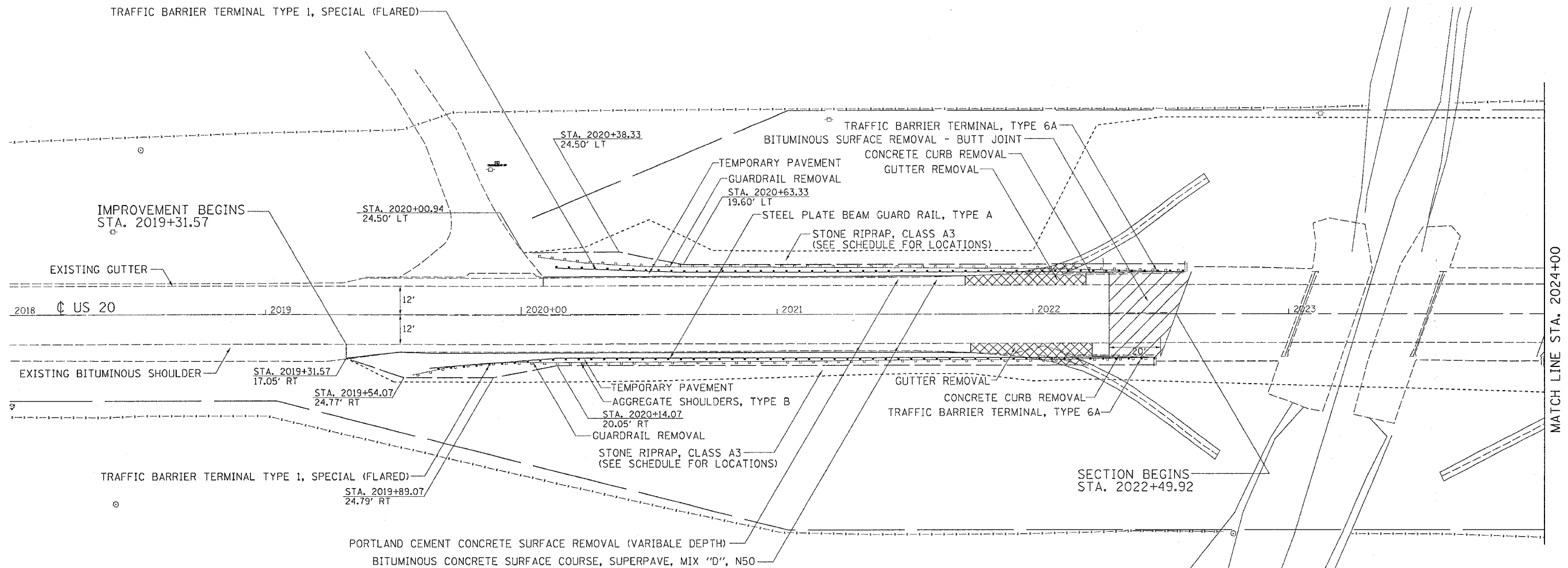
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be (2) - 1/2" ϕ - 270 ksi strands, as shown.
- The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set.
- Non prestressing steel shall conform to AASHTO M-31 or M-322 Grade 60.
- The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Existing bearing pads shall remain in place for this pre-stage 1 work. Existing bearing pads at Abutments contain asbestos and shall not be disturbed.
- Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
- Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
- Required Release Strength, f'_{ci} , shall be 4000 p.s.i.
- See Sheet 19 of 20 for additional details.

PPC DECK BEAM 21" DEPTH SPECIAL

U.S. 20 OVER RUSH CREEK
F.A.P. ROUTE 301 - SEC. 24BR-1
JO DAVIESS COUNTY
STATION 2023+29.43
S.N. 043-0036

| | |
|----------|----|
| DESIGNED | DF |
| CHECKED | CB |
| DRAWN | RG |
| CHECKED | PM |

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 31 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

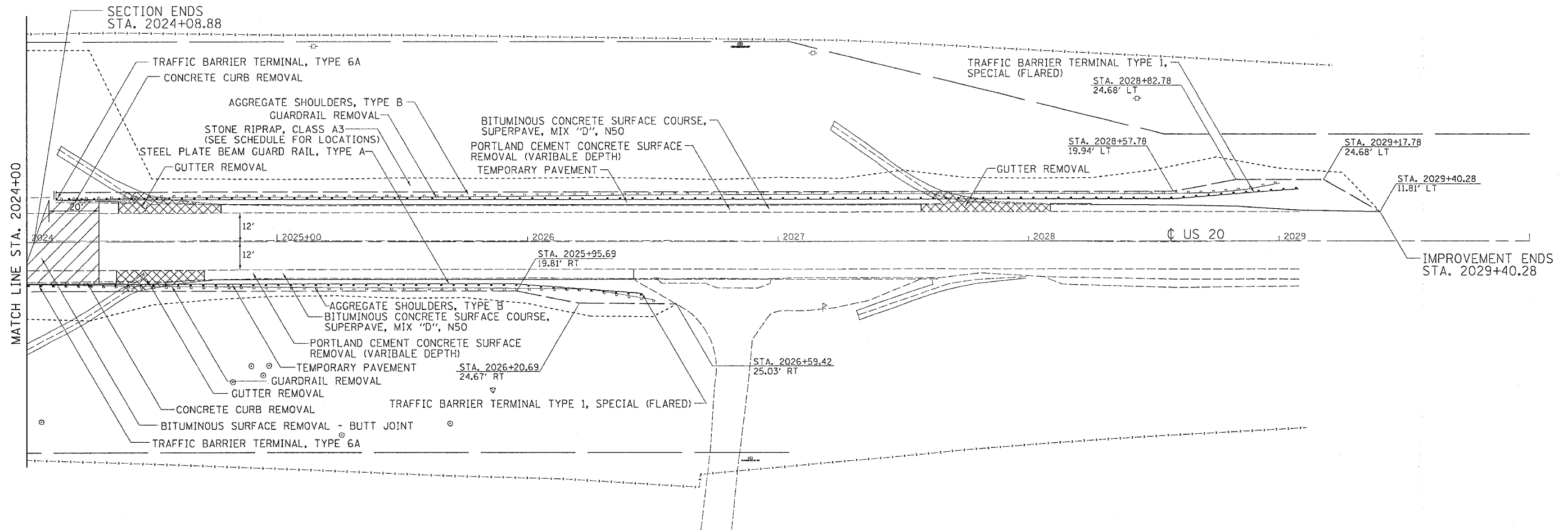


| REVISIONS | | ILLINOIS DEPARTMENT OF TRANSPORTATION |
|-----------|------|---------------------------------------|
| NAME | DATE | |
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SCALE: VERT. DATE
HORIZ. DRAWN BY
CHECKED BY

PLOT DATE = Mon Dec 12 08:35:58 2005
 FILE NAME = c:\p\projects\2005\2005\64A48\64A48.dwg
 PLOT SCALE = 28.8000 / 1 IN.
 USER NAME = mgj111

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|------------|------------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 32 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | |



PLOT DATE = Mon Dec 12 06:33:59 2005
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 PLOT SCALE = 24.0000' / 1" IN.
 USER NAME = mg111



| REVISIONS | |
|-----------|------|
| NAME | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT.
 DATE: HORIZ.

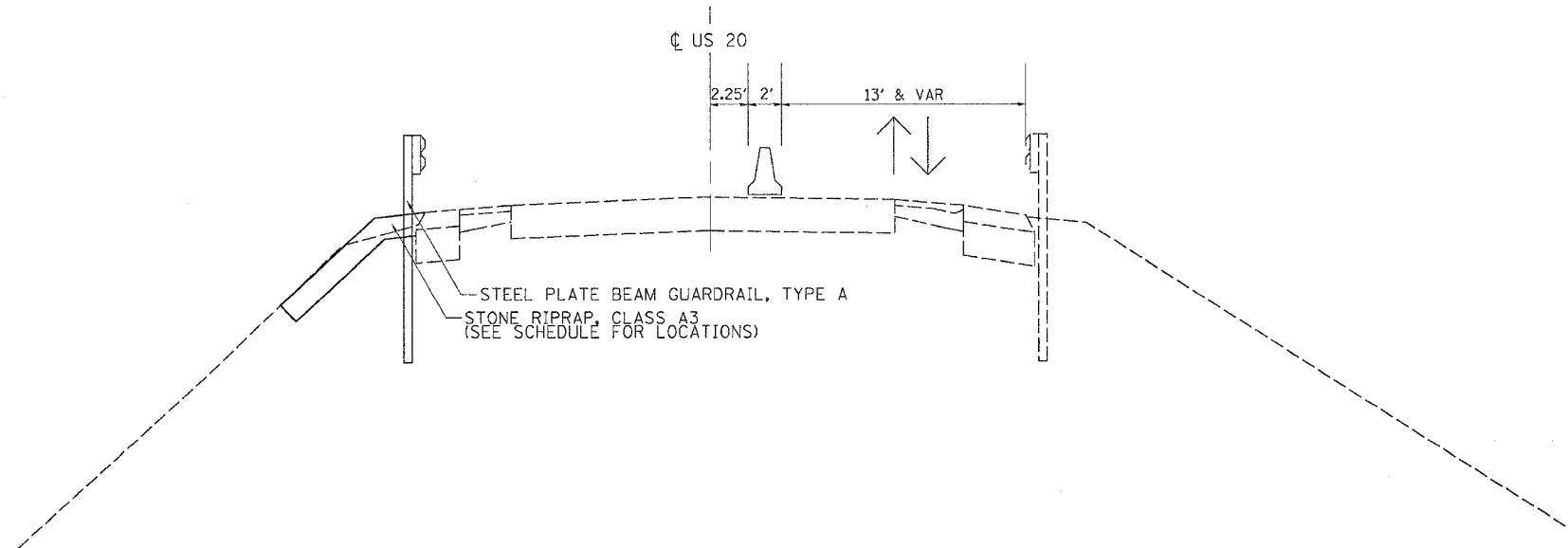
DRAWN BY
 CHECKED BY

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 34 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

STAGING SHEETS

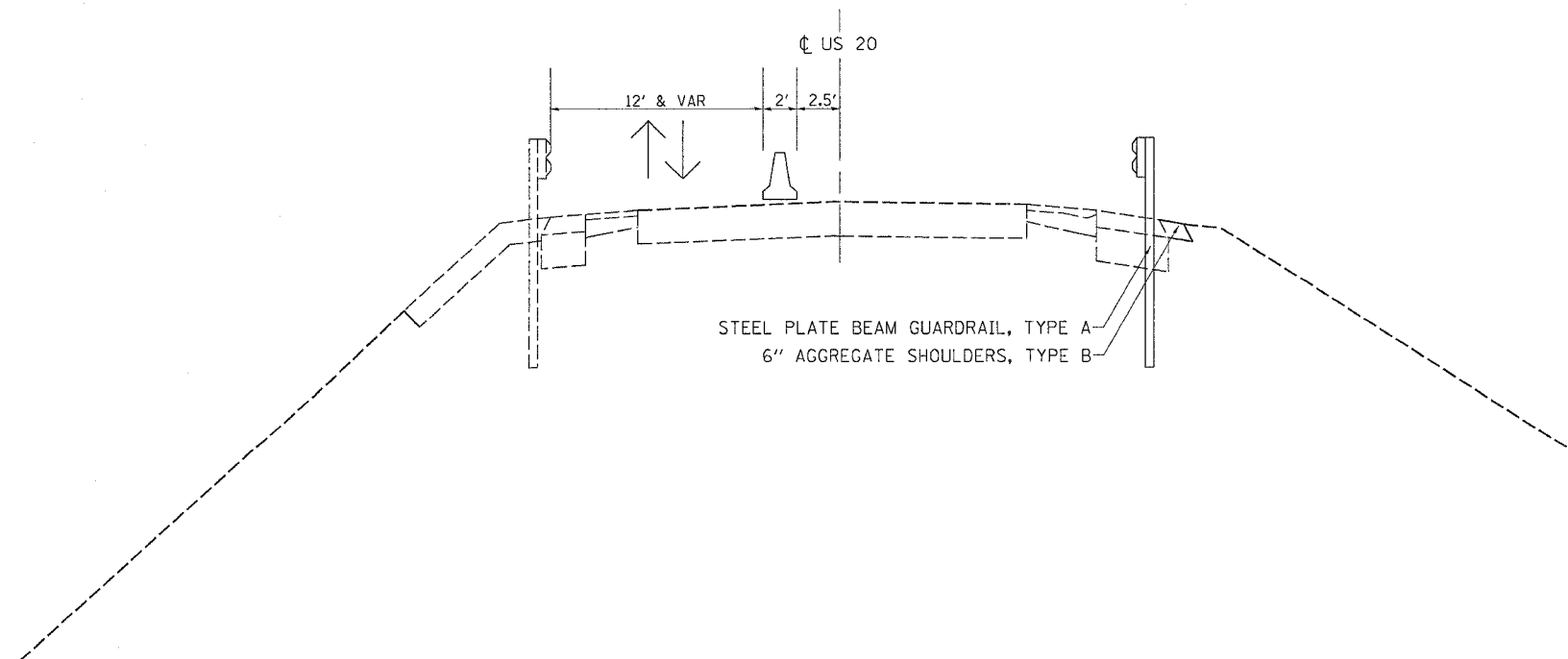
STAGE 1

STAGE 1 WORK SHALL INCLUDE THE REPLACEMENT OF THE DECK BEAMS ON THE NORTH SIDE OF THE STRUCTURE, GUARDRAIL ON THE NORTH SIDE, AGGREGATE SHOULDER BEHIND THE GUARDRAIL, AND STONE RIPRAP PLACEMENT WHERE NEEDED. TRAFFIC WILL BE PUSHED ONTO THE EAST BOUND LANE. TRAFFIC CONTROL AND PROTECTION SHALL BE SET UP AND PAID FOR ACCORDING TO 701321.



STAGE 2

STAGE 2 WORK SHALL INCLUDE THE REPLACEMENT OF THE DECK BEAMS ON THE SOUTH SIDE OF THE STRUCTURE, GUARDRAIL ON THE SOUTH SIDE, AGGREGATE SHOULDER BEHIND THE GUARDRAIL, AND STONE RIPRAP PLACEMENT WHERE NEEDED. TRAFFIC WILL BE PUSHED ONTO THE WEST BOUND LANE. TRAFFIC CONTROL AND PROTECTION SHALL BE SET UP AND PAID FOR ACCORDING TO 701321.



PLOT DATE = Mon Dec 12 09:54:52 2005
 FILE NAME = c:\pwork\2005\24BR-1\24BR-1.dgn
 PLOT SCALE = 20.000000 / 1 IN.
 USER NAME = mgj111

| REVISIONS | |
|-----------|------|
| NAME | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. DATE
 HORIZ. DRAWN BY
 CHECKED BY

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 35 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

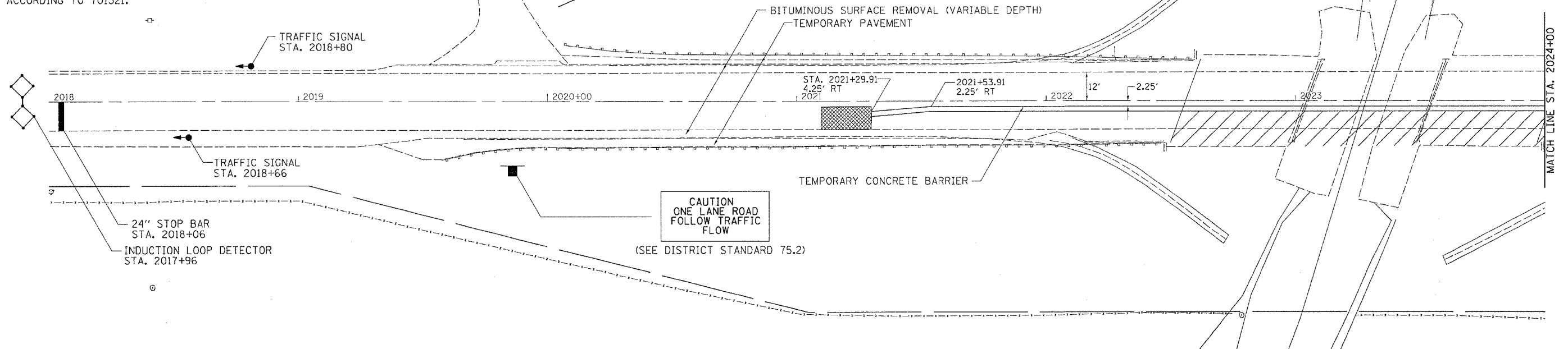
STAGING SHEETS

STAGE 1A

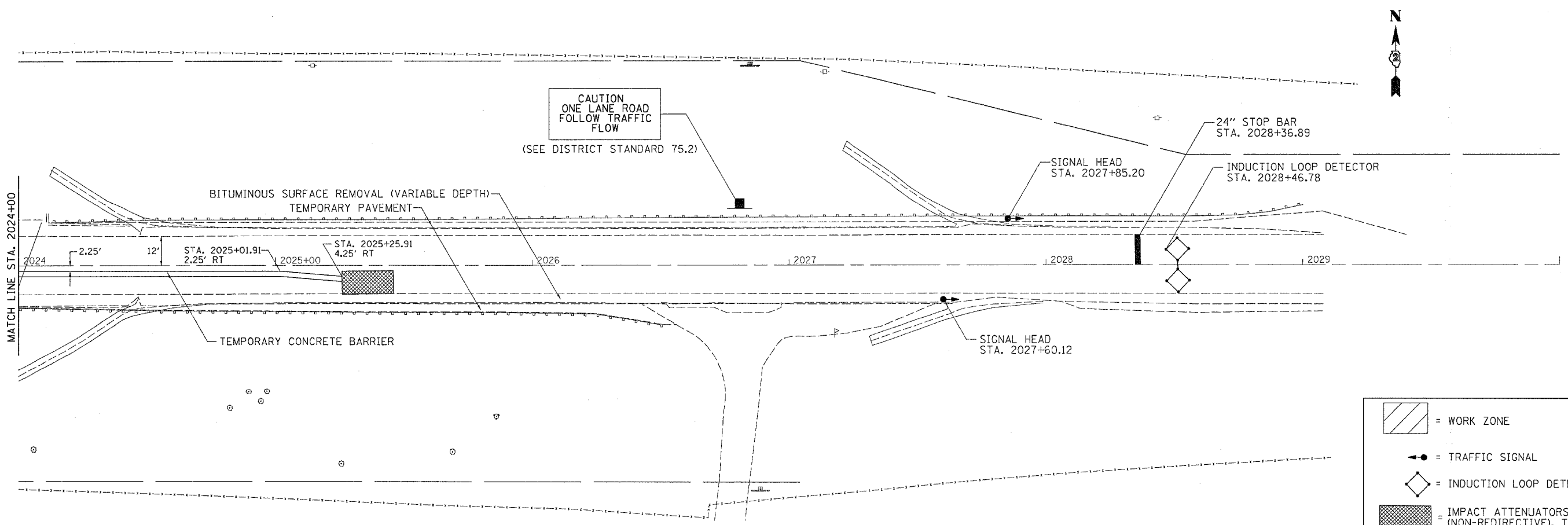
STAGE 1A WORK SHALL INCLUDE ALL TEMPORARY PAVEMENT AND MILLING AND OVERLAY OF EXISTING BITUMINOUS SHOULDER BEFORE ANY WORK SHALL BE DONE IN STAGE 1B. TRAFFIC CONTROL AND PROTECTION SHALL BE SET UP AND PAID FOR ACCORDING TO 701326.

STAGE 1B





STAGE 1B WORK SHALL INCLUDE THE REPLACEMENT OF ONE BEAM ON SPAN 3 ONLY. SEE STRUCTURE PLANS SHEETS 3, 19, AND 20 FOR DETAILS. TRAFFIC WILL BE PUSHED ON THE WEST BOUND LANE. TEMPORARY RUMBLE STRIPS WILL BE PLACED ACCORDING TO 701321. TRAFFIC CONTROL AND PROTECTION SHALL BE SET UP AND PAID FOR ACCORDING TO 701321.



MATCH LINE STA. 2024+00



MATCH LINE STA. 2024+00

-  = WORK ZONE
-  = TRAFFIC SIGNAL
-  = INDUCTION LOOP DETECTOR
-  = IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

PLOT DATE = Mon Dec 12 09:54:52 2005
 PLOT SCALE = 20.0000 / IN.
 USER NAME = meg111

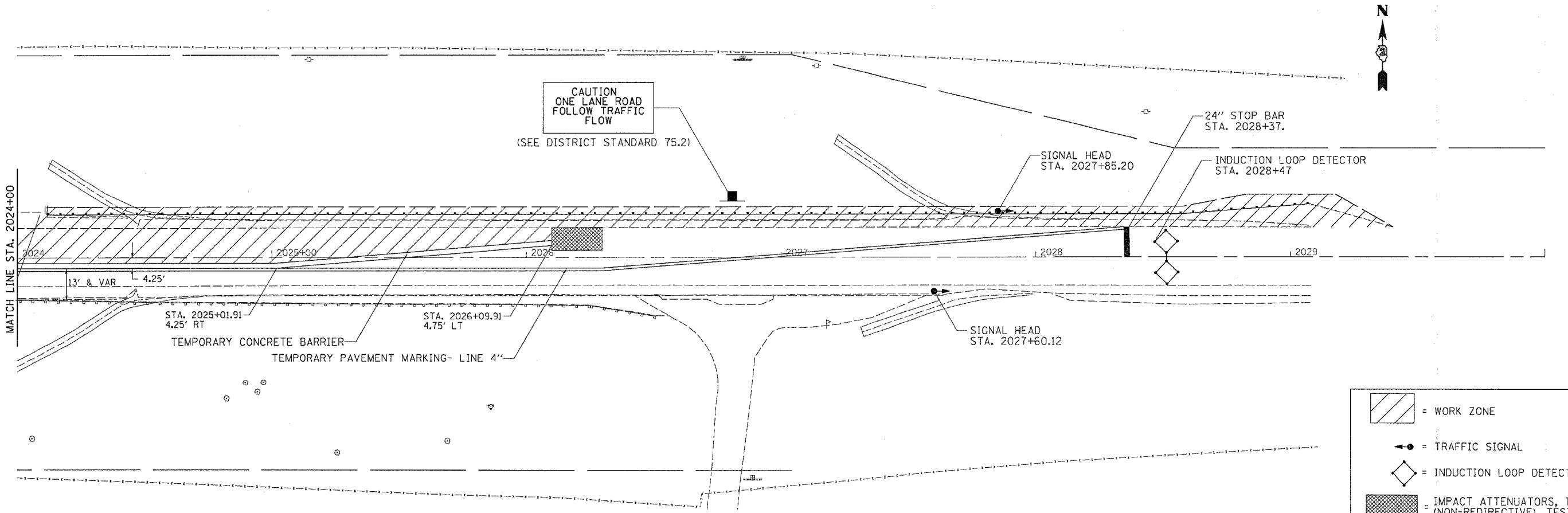
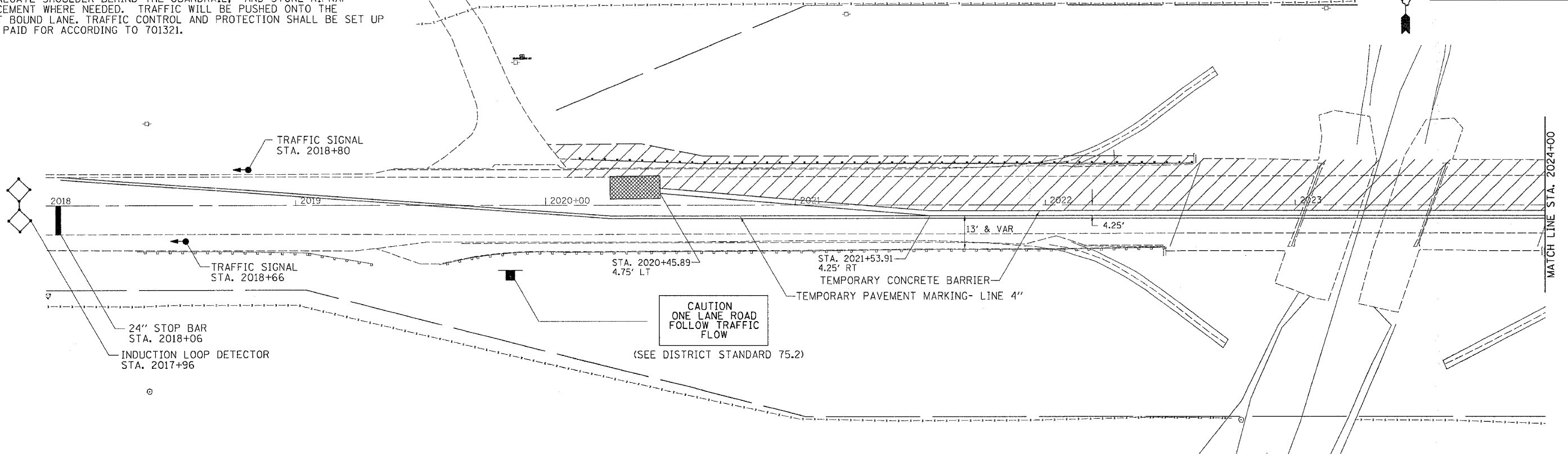
STAGE 1B

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------|---------|---|--------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 36 |
| STA. TO STA. | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | |

STAGE 1

STAGE 1 WORK SHALL INCLUDE THE REPLACEMENT OF THE DECK BEAMS ON THE NORTH SIDE OF THE STRUCTURE, GUARDRAIL ON THE NORTH SIDE, AGGREGATE SHOULDER BEHIND THE GUARDRAIL, AND STONE RIPRAP PLACEMENT WHERE NEEDED. TRAFFIC WILL BE PUSHED ONTO THE EAST BOUND LANE. TRAFFIC CONTROL AND PROTECTION SHALL BE SET UP AND PAID FOR ACCORDING TO 701321.

STAGING SHEETS



| | |
|--|---|
| | = WORK ZONE |
| | = TRAFFIC SIGNAL |
| | = INDUCTION LOOP DETECTOR |
| | = IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 |

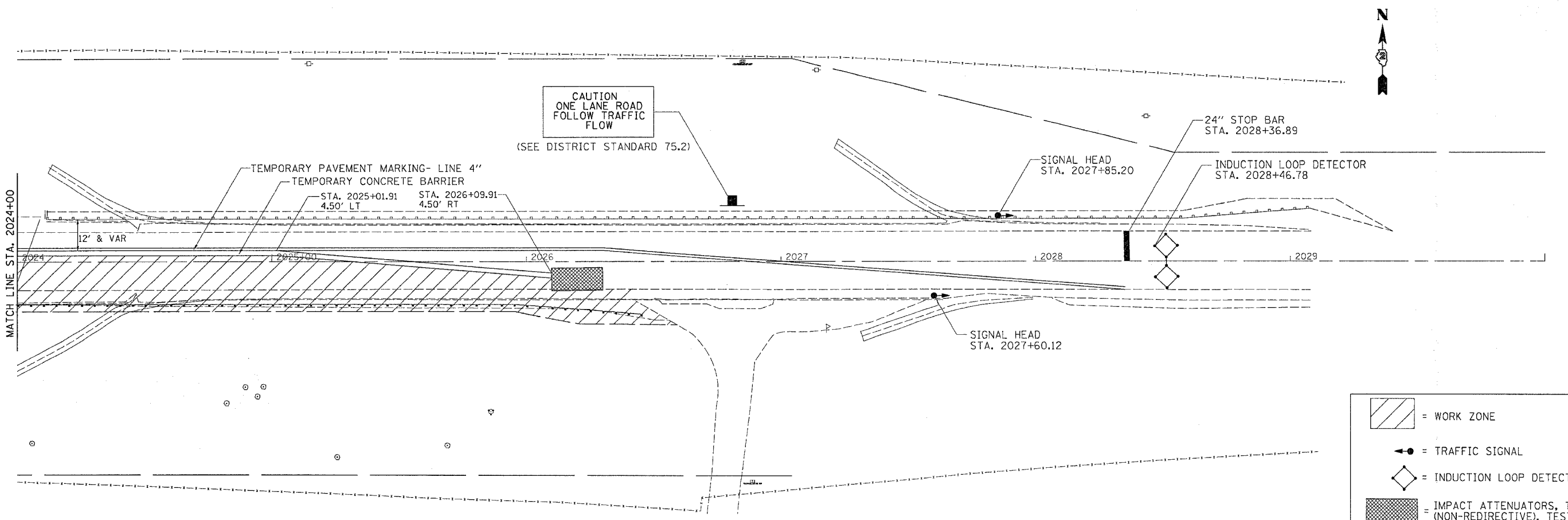
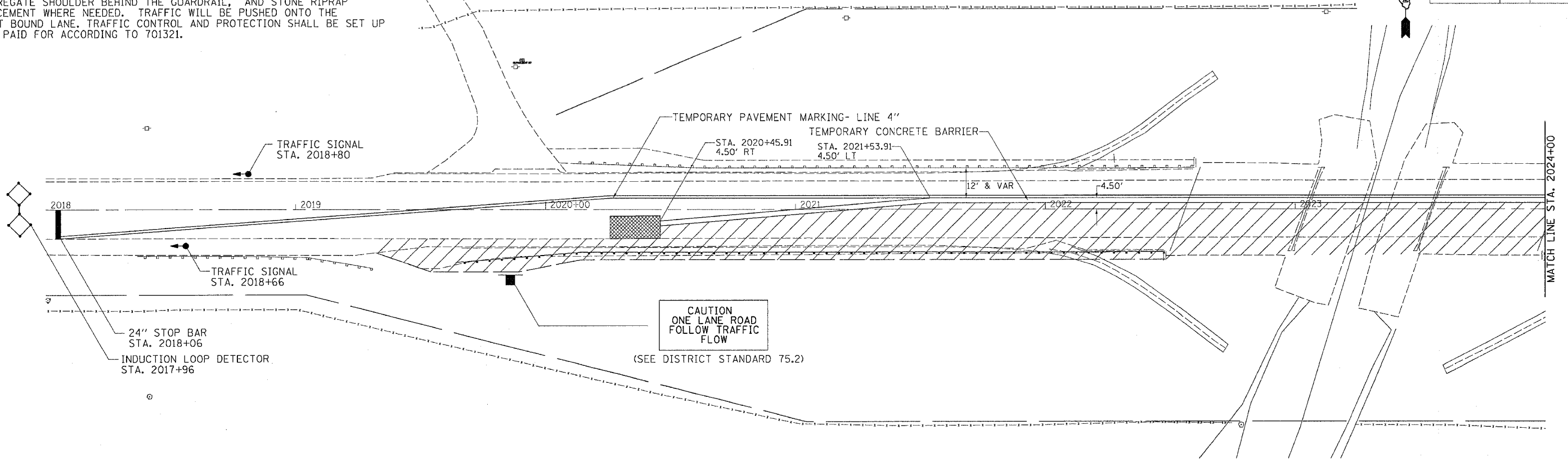
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 PLOT SCALE = 28.8000' / IN.
 USER NAME = mgjllj

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 37 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

STAGE 2

STAGE 2 WORK SHALL INCLUDE THE REPLACEMENT OF THE DECK BEAMS ON THE SOUTH SIDE OF THE STRUCTURE, GUARDRAIL ON THE SOUTH SIDE, AGGREGATE SHOULDER BEHIND THE GUARDRAIL, AND STONE RIPRAP PLACEMENT WHERE NEEDED. TRAFFIC WILL BE PUSHED ONTO THE WEST BOUND LANE. TRAFFIC CONTROL AND PROTECTION SHALL BE SET UP AND PAID FOR ACCORDING TO 701321.

STAGING SHEETS

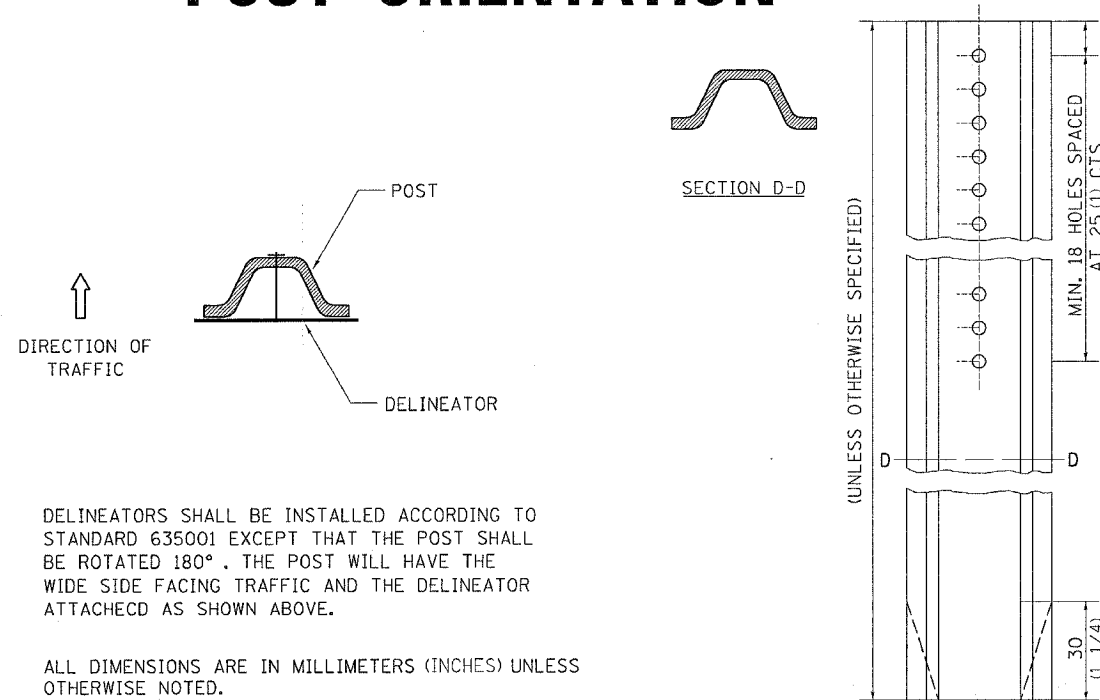


| | |
|--|---|
| | = WORK ZONE |
| | = TRAFFIC SIGNAL |
| | = INDUCTION LOOP DETECTOR |
| | = IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 |

PLOT DATE = Mon Dec 10 09:34:41 2005
 FILE NAME = c:\p\o\mch\248205\248205.dgn
 PLOT SCALE = 28.6688' / IN.
 USER NAME = mgglj

| | | | | |
|---------------------|---------|------------|------------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 301 | 24BR-1 | JO DAVIESS | 50 | 38 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | |

DELINEATOR AND POST ORIENTATION



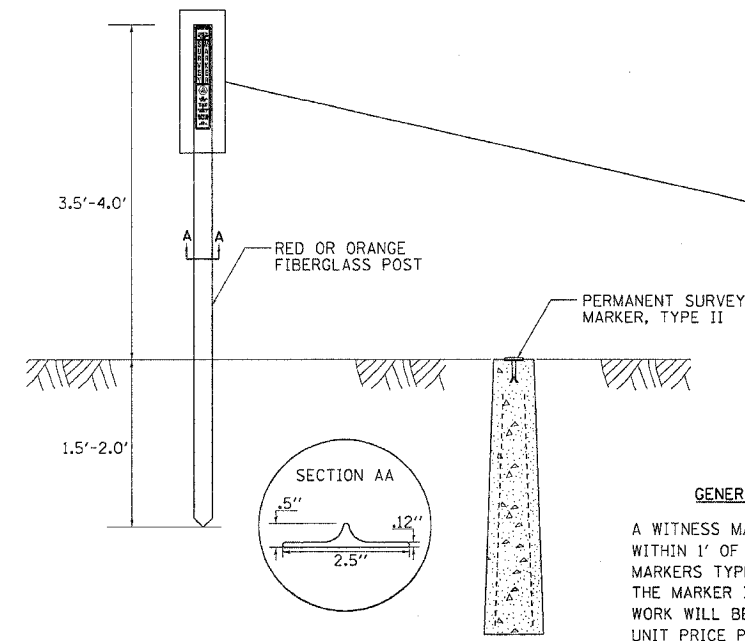
DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°. THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE DELINEATOR ATTACHED AS SHOWN ABOVE.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

DELINEATOR AND POST ORIENTATION 37.4

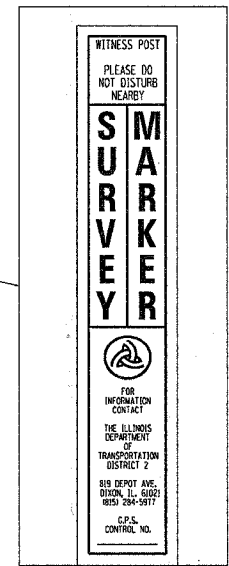
REVISED 1-31-00

WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II



GENERAL NOTES

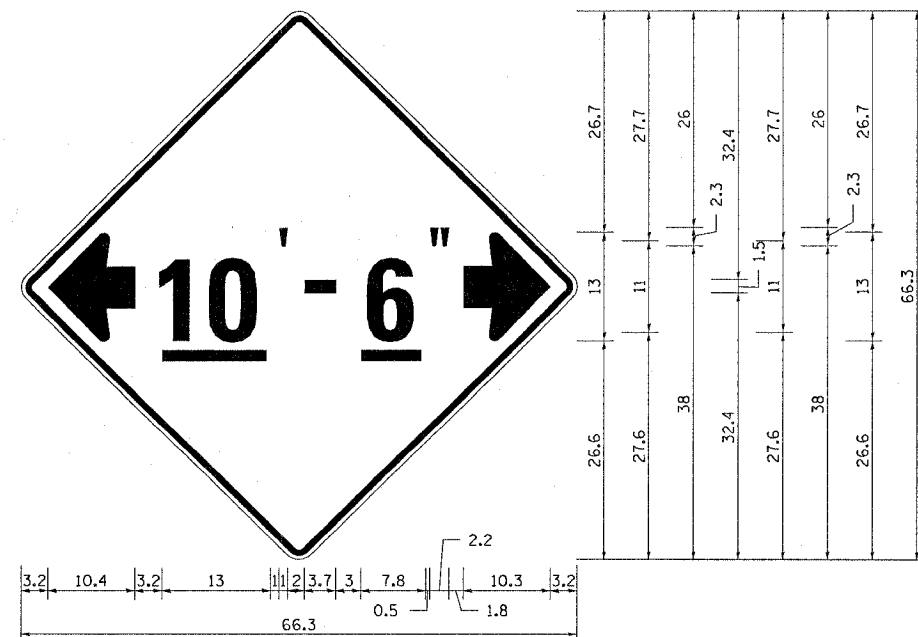
A WITNESS MARKER SHALL BE INSTALLED WITHIN 1' OF ALL PERMANENT SURVEY MARKERS TYPE II EXCEPT IN AREAS WHERE THE MARKER IS IN THE SIDEWALK. THIS WORK WILL BE INCLUDED TO THE CONTRACT UNIT PRICE PER EACH FOR PERMANENT SURVEY MARKERS, TYPE II.



WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II 38.4

REVISED 1-31-00

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



NOTES

W12-2 - Horizontal Clearance Sign 48.0" across sides, 1.9" Radius, 0.8" Border, 0.5" Indent, Black on Orange; Standard Arrow Custom 10.4" X 8.1" 180° Black 11 Inch D Series Lettering; Standard Arrow Custom 10.4" X 8.1" 0°

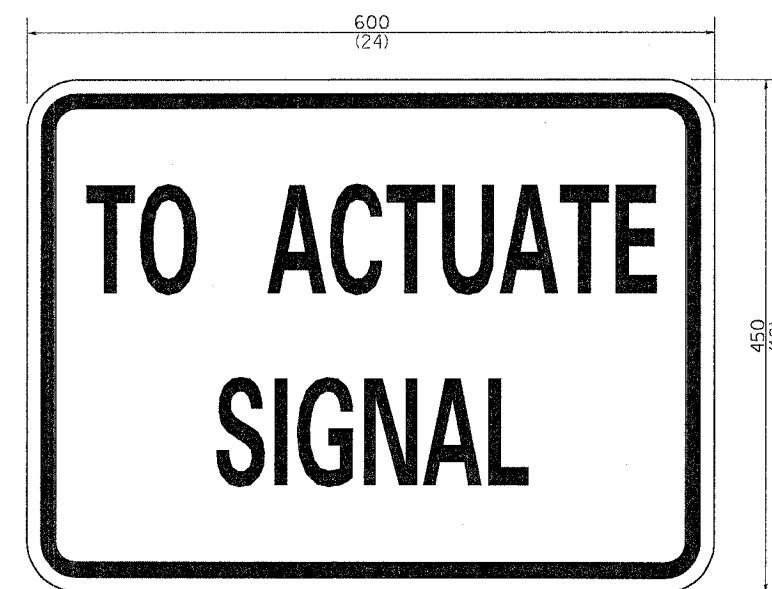
All work to furnish and install these signs shall be included in the cost of the Traffic Control Standards and shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES) 39.4

REVISED 6-29-05

STOP LINE SIGN FOR TEMPORARY SIGNALS



SIZE: 600(24) x 450(18)
 100(4) CAPITAL LETTERS - BLACK
 13(1/2) BORDER - BLACK
 WHITE REFLECTIVE - TYPE B
 ENGINEERING GRADE SHEETING

GENERAL NOTE:

THIS SIGN SHALL BE INSTALLED AT THE STOP LINE AS DIRECTED BY ENGINEER.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

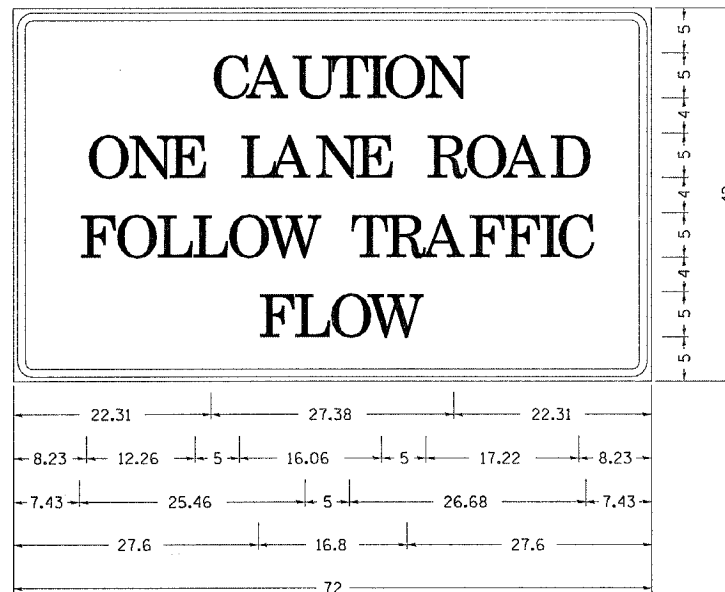
STOP LINE SIGN FOR TEMPORARY SIGNALS 99.4

REVISED 8-7-90

PLOT DATE = Mon, Dec 12 09:33:51 2005
 PLOT SCALE = 50.0000 / IN.
 REFERENCE = REF#

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|----------|------------------|--------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 39 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

ENTRANCE SIGN FOR USE WITH TEMPORARY SIGNALS



Type AA Fluorescent Orange Sheeting ;
 2.25" Radius, 0.88" Border, 0.50" Indent, Black on Orange;
 [CAUTION] D; [ONE LANE ROAD] D;
 [FOLLOW TRAFFIC] D; [FLOW] D

Table Of Widths And Spaces

| | | | | | | | | | | | | | | | | | | | | | |
|-------|---|------|------|---|------|------|---|------|------|---|------|-------|---|------|------|---|------|------|---|------|-------|
| 22.31 | C | 3.36 | 0.62 | A | 4.18 | 0.94 | U | 3.36 | 0.94 | T | 3.04 | 0.94 | I | 0.78 | 1.17 | O | 3.52 | 1.17 | N | 3.36 | 22.31 |
| 8.23 | O | 3.51 | 1.17 | N | 3.36 | 1.18 | E | 3.04 | | | | | | | | | | | | | |
| | L | 3.05 | 0.31 | A | 4.18 | 0.94 | N | 3.36 | 1.17 | E | 3.05 | | | | | | | | | | |
| | R | 3.36 | 0.93 | O | 3.52 | 0.94 | A | 4.18 | 0.93 | D | 3.36 | 8.23 | | | | | | | | | |
| 7.43 | F | 3.04 | 0.94 | O | 3.52 | 1.17 | L | 3.04 | 0.94 | L | 3.05 | 0.94 | O | 3.51 | 0.94 | W | 4.37 | | | | |
| | T | 3.05 | 0.94 | R | 3.36 | 0.94 | A | 4.18 | 0.93 | F | 3.05 | 0.94 | F | 3.04 | 0.94 | I | 0.78 | 1.18 | C | 3.35 | 7.43 |
| 27.60 | F | 3.05 | 0.94 | L | 3.04 | 0.94 | O | 3.52 | 0.93 | W | 4.38 | 27.60 | | | | | | | | | |

GENERAL NOTES

THIS SIGN SHALL BE INSTALLED AT ENTRANCES LOCATED BETWEEN THE TEMPORARY SIGNALS AS DIRECTED BY THE ENGINEER.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

THE COST TO FURNISH, INSTALL AND REMOVE THIS SIGN AT THE REQUIRED LOCATIONS SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

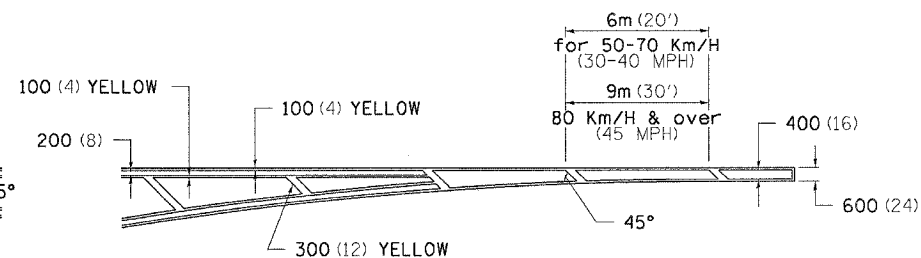
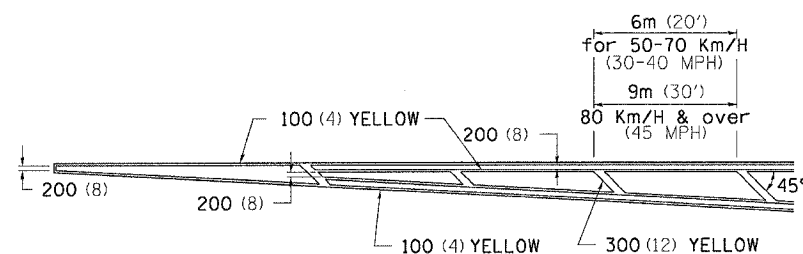
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

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 PLOT SCALE = 50.0000 / IN
 REFERENCE = #REF#

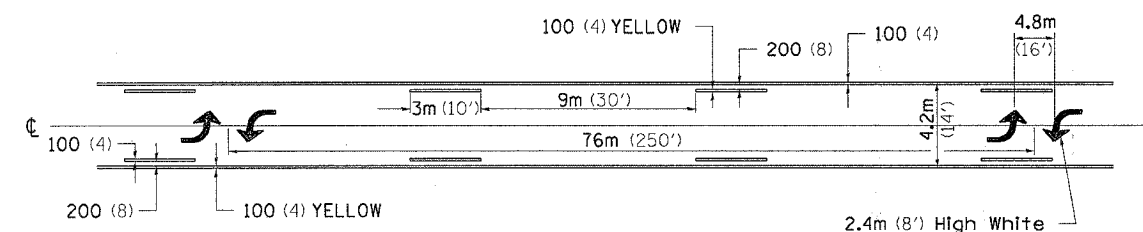
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|------------|--------------|------------------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 40 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS | | FED. AID PROJECT |

TYPICAL PAVEMENT MARKINGS

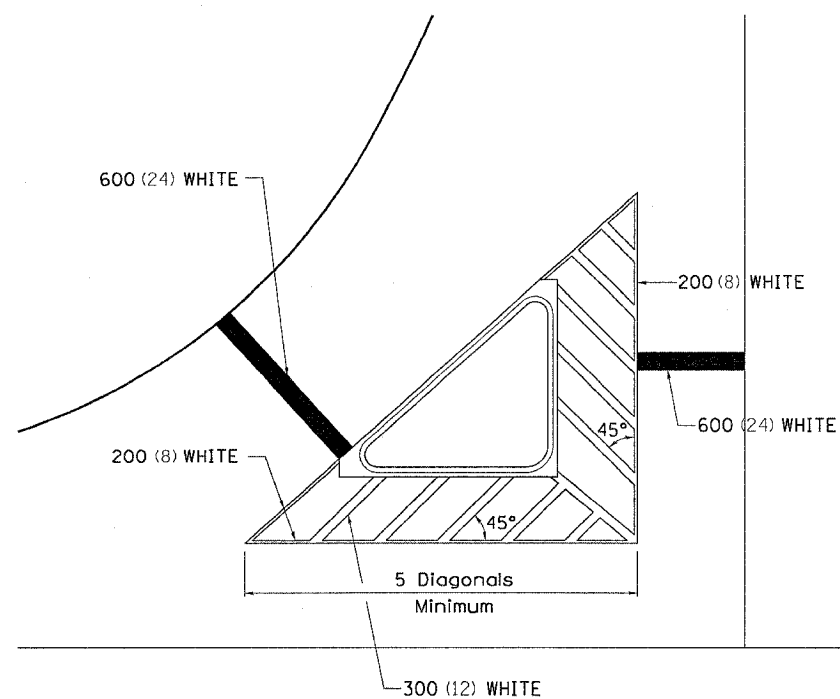
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



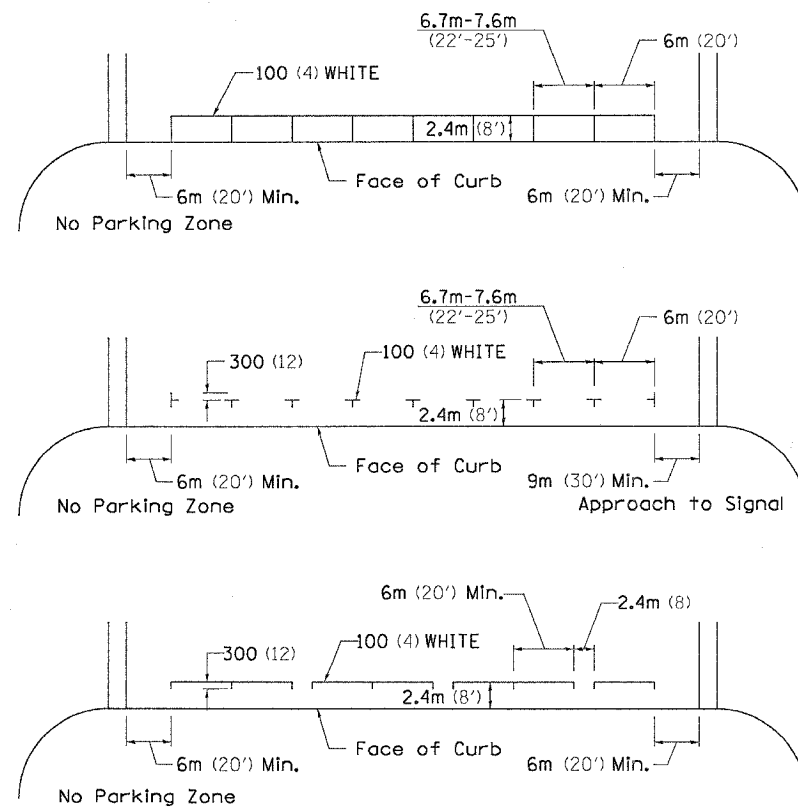
MEDIAN PAVEMENT MARKING



TYPICAL ISLAND OFFSET SHOULDER WIDTH

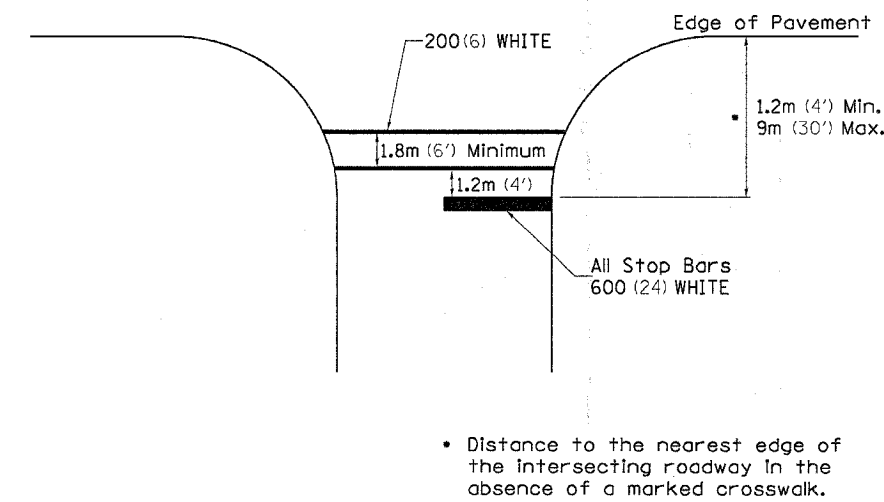


TYPICAL PARKING SPACING



•• ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

STANDARD CROSSWALK MARKING
See Schedules for Locations



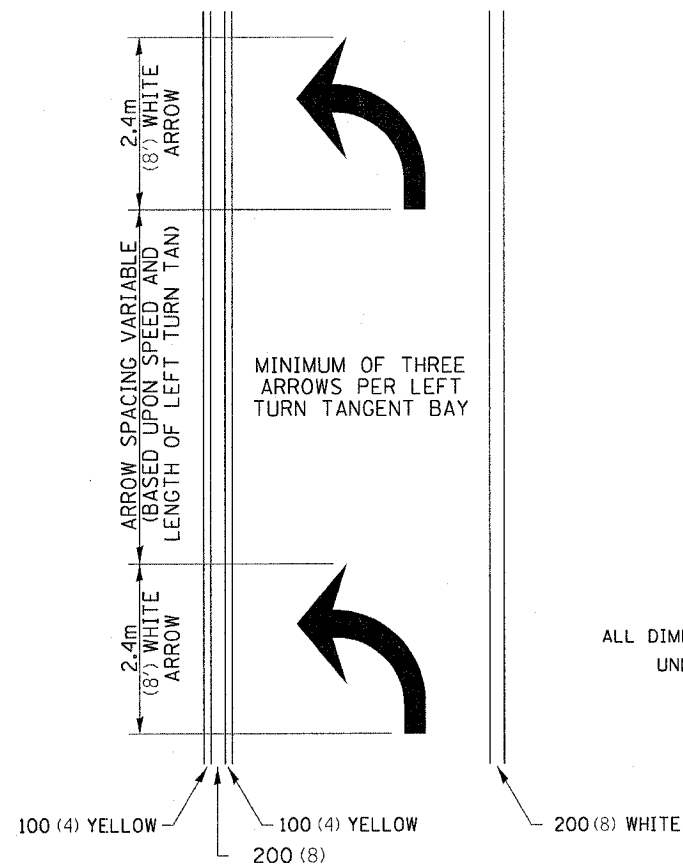
• Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

PLOT DATE = Mon Dec 12 09:13:45 2005
PLOT SCALE = 50.0000 / 1.00
REFERENCE = \$REF\$

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 41 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

TYPICAL PAVEMENT MARKINGS

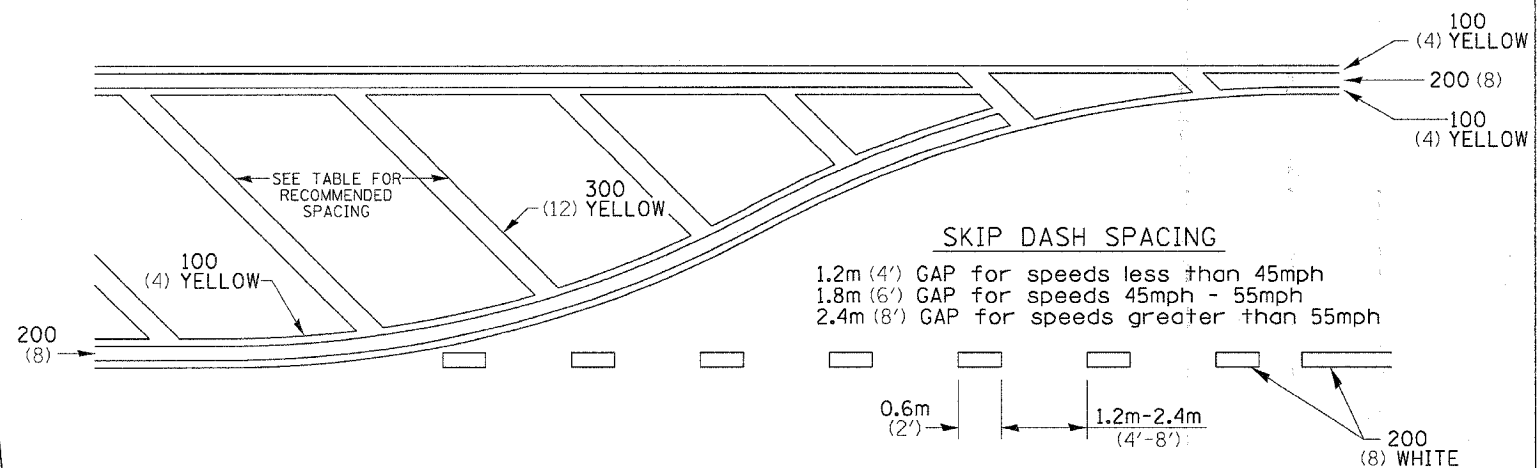
ARROW LAYOUT



- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER
- ◆ TWO-WAY AMBER MARKER

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

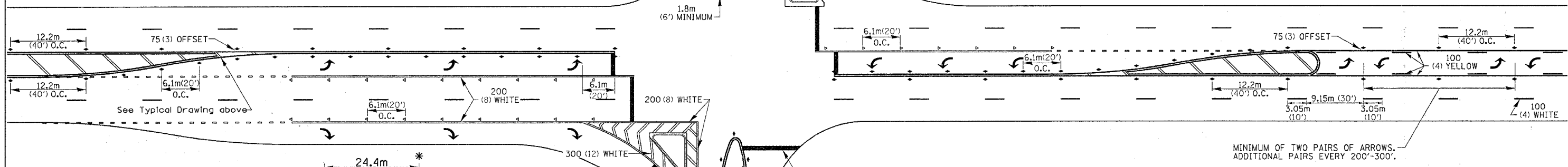
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



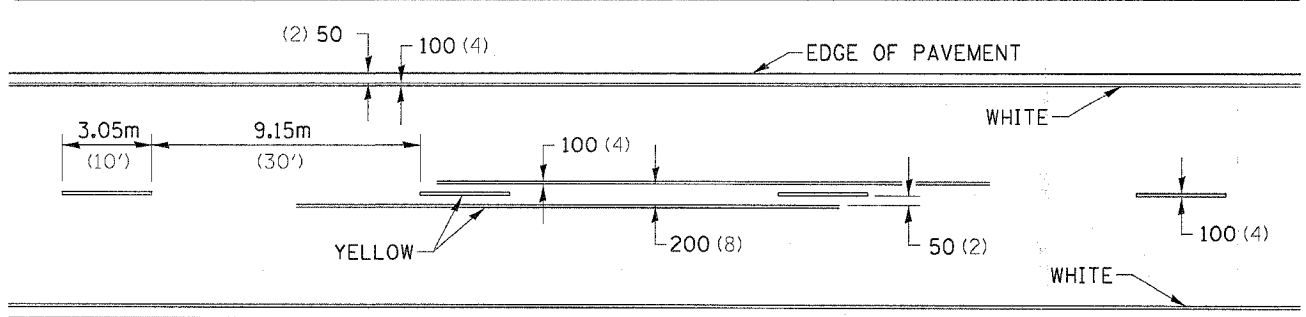
RECOMMENDED SPACING BETWEEN DIAGONALS (IN FEET)

| Speed Limit Range | Continuous Median Area | Intersection Channelization | Objects (Islands) |
|--------------------------|------------------------|-----------------------------|-------------------|
| less than 50Km/H (30MPH) | 15.3m (50') | 4.53m (15') | 3.05m (10') |
| 50-60Km/H (30-40MPH) | 22.9m (75') | 6.1m (20') | 4.53m (15') |
| 70Km/H (45MPH) & over | 22.9m (75') | 9.05m (30') | 6.1m (20') |

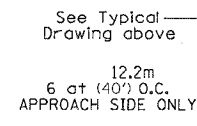
NOTE: If the spacing recommended in the Table does not permit at least five diagonal lines in the area being marked, the spacing from the next lowest speed range should be used. The recommended spacing is measured parallel to the pavement center line.



TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION - NO PASSING ZONES



SYMBOLS



- * REDUCE TO 12.2m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 15Km/H (10MPH) LOWER THAN POSTED SPEEDS.
- ** USE DOUBLE MARKERS WHEN ADT ≥ 25,000

MULTI-LANE / UNDIVIDED

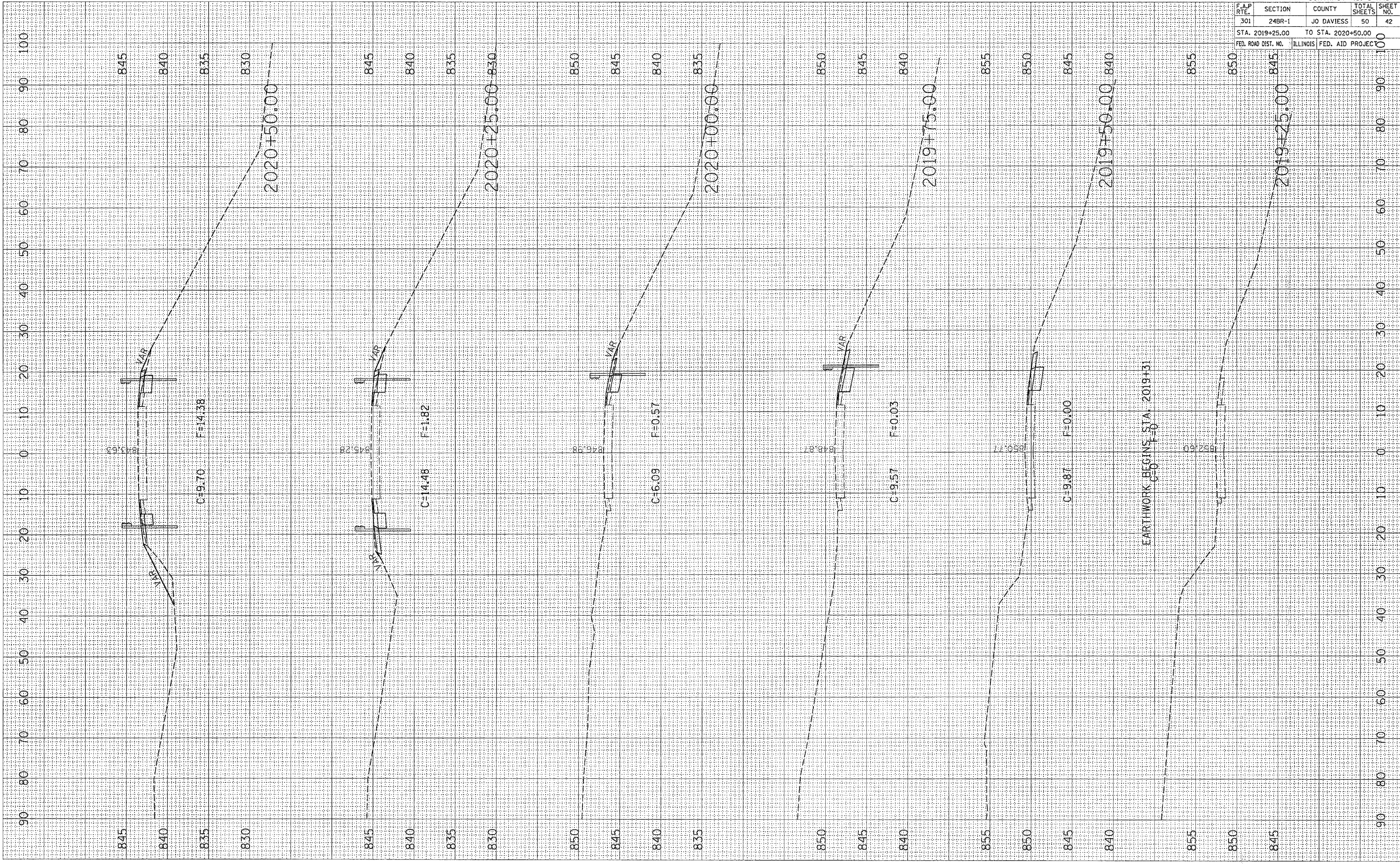
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 PLOT SCALE: 1:1
 PLOT REFERENCE: REF

PLOT DATE * Mon Dec 12 09:36:13 2005
 FILE NAME * c:\pvc\projects\200225\102225.dwg
 PLOT SCALE * 1/8" = 1'-0"
 USER NAME * mgj11j

ORIGINAL SURVEY PLOTTED
 NOTE BOOK AREA CHECKED

FINAL SURVEY PLOTTED
 NOTE BOOK AREA CHECKED

BY _____ DATE _____



| CONTRACT NO. 64448 | | | |
|---------------------|---------|---------------------------|--------------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS |
| 301 | 24BR-1 | JO DAVIESS | 50 |
| STA. 2019+25.00 | | TO STA. 2020+50.00 | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | |

EARTHWORK BEGINS STA. 2019+31

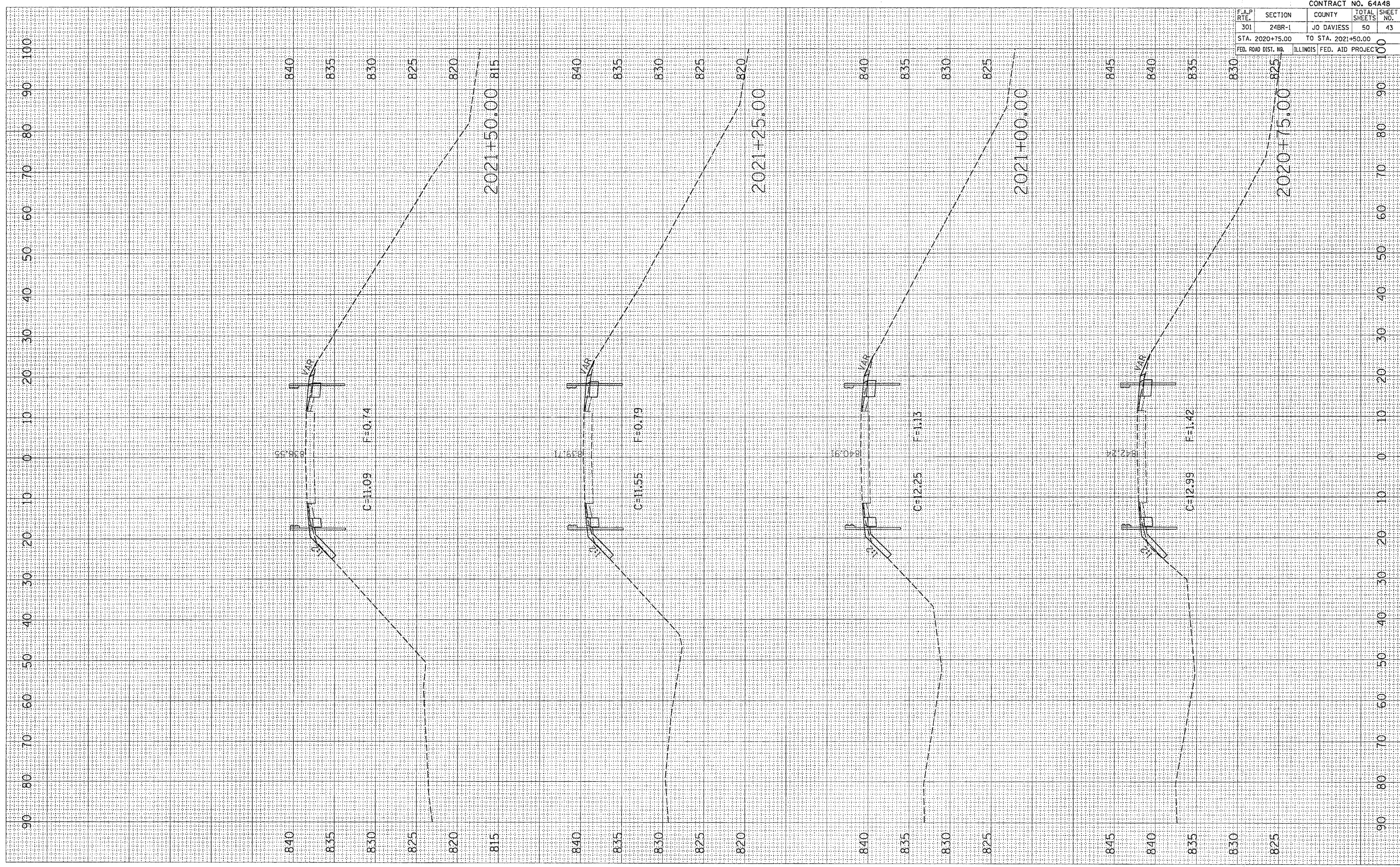
PLOT DATE * Mon Dec 12 09:36:13 2005
 FILE NAME * c:\projects\202025\102025.dwg
 PLOT SCALE * 1/8" = 1' / IN.
 USER NAME * mgslj

ORIGINAL SURVEY
 CHECKED BY _____
 PLOTTED BY _____
 TEMPLATE _____
 AREA _____
 AREAS CHECKED _____
 NO. _____

FINAL SURVEY
 CHECKED BY _____
 PLOTTED BY _____
 TEMPLATE _____
 AREA _____
 AREAS CHECKED _____
 NO. _____

BY _____

DATE _____



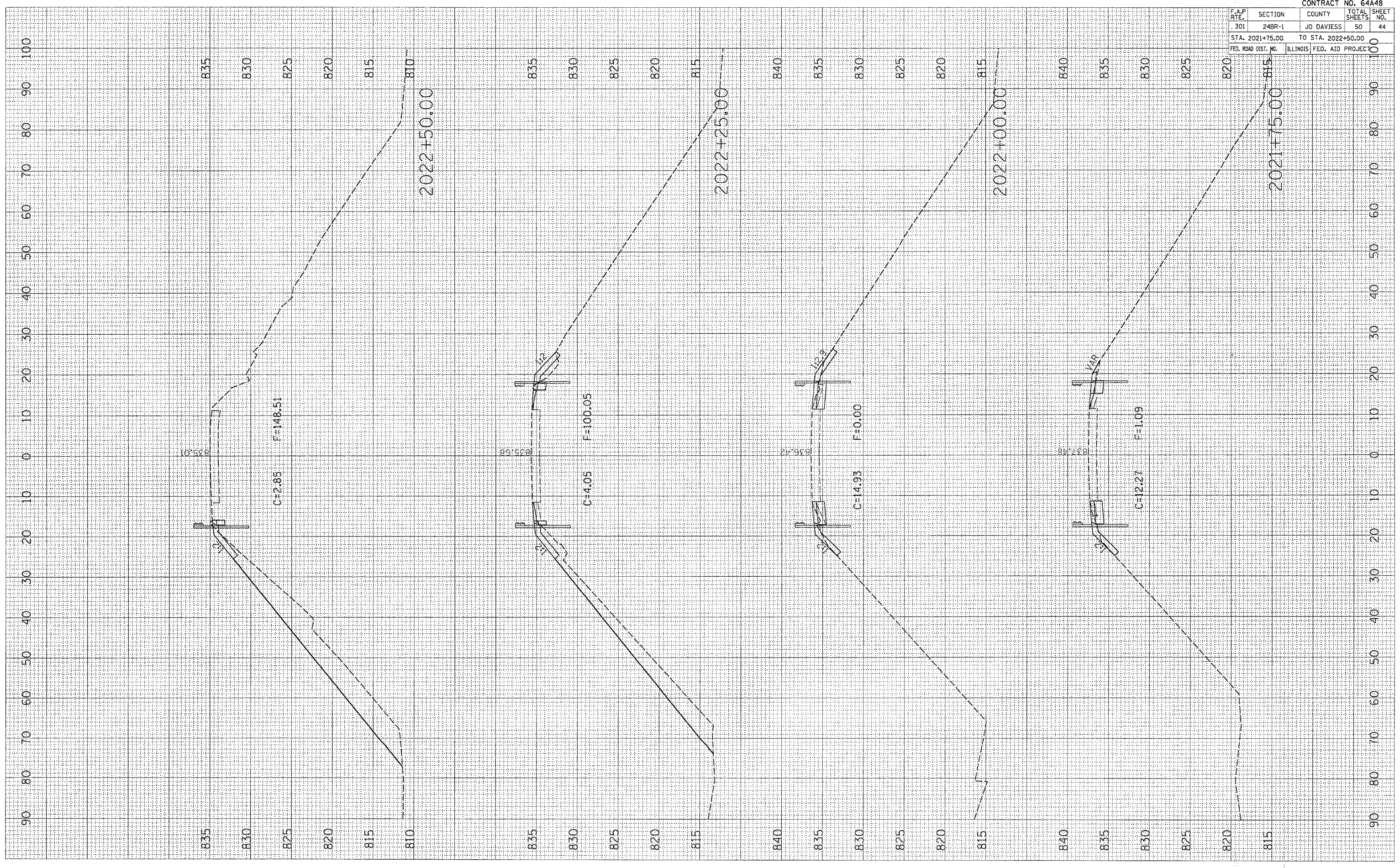
| CONTRACT NO. 64A48 | | | | |
|---------------------|---------|---------------------------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 301 | 24BR-1 | JO DAVIESS | 50 | 43 |
| STA. 2020+75.00 | | TO STA. 2021+50.00 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

FINISH SURVEY CHECKED
 SURVEY PLOTTED
 NOTE BOOK TEMPLATE AREAS CHECKED
 BY: _____ DATE: _____

ORIGINAL SURVEY CHECKED
 SURVEY PLOTTED
 NOTE BOOK TEMPLATE AREAS CHECKED
 BY: _____ DATE: _____

PLOT DATE: Mon Dec 12 09:36:14 2005
 FILE NAME: c:\pvc\projects\20050525\20050525.dwg
 PLOT SCALE: 1/8" = 100.000' / IN.
 USER NAME: emg11j

| CONTRACT NO. 64A48 | | | | |
|---------------------|---------|---------------------------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 301 | 24BR-1 | JO DAVIESS | 50 | 44 |
| STA. 2021+75.00 | | TO STA. 2022+50.00 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

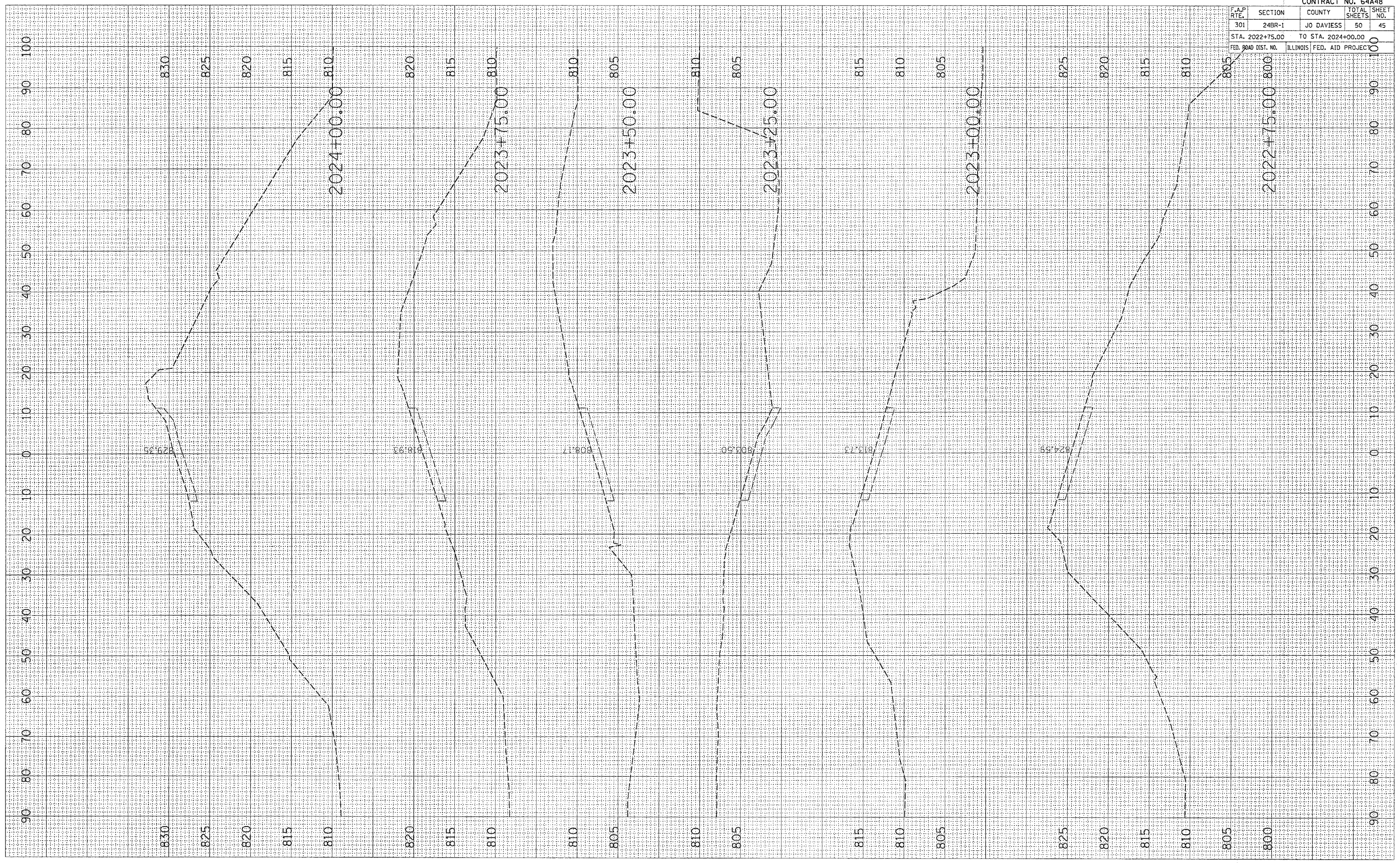


FINAL SURVEY CHECKED BY DATE
 NOTE BOOK PLOTTED TEMPLATE
 AREAS CHECKED

ORIGINAL SURVEY CHECKED BY DATE
 NOTE BOOK PLOTTED TEMPLATE
 AREAS CHECKED

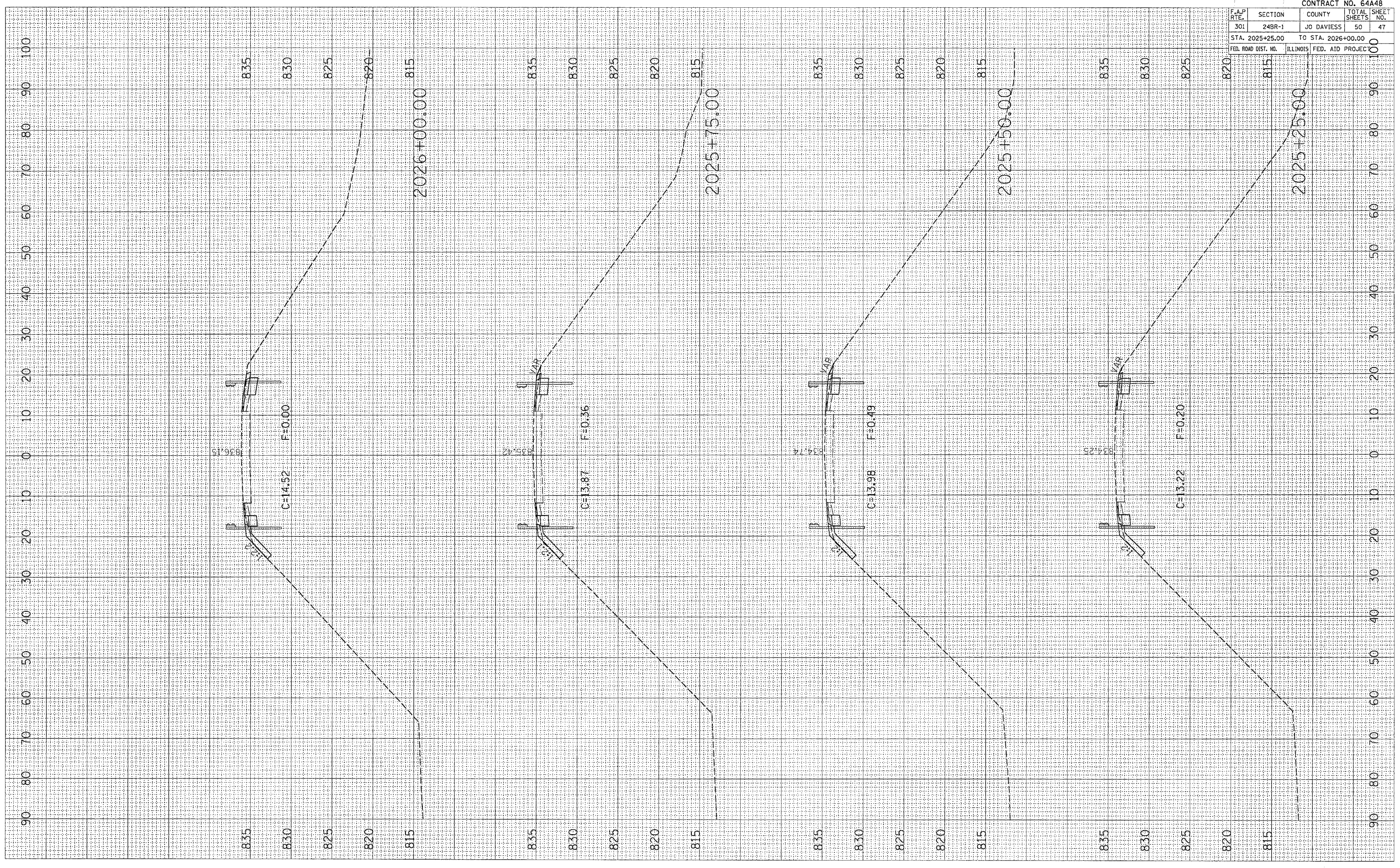
PLOT DATE = Mon, Dec 12 09:36:14 2005
 FILE NAME = c:\projects\220225\220225.dwg
 PLOT SCALE = 10.0000 / IN.
 USER NAME = megr11j

| CONTRACT NO. 64A48 | | | | |
|---------------------|---------|---------------------------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 301 | 24BR-1 | JO DAVIESS | 50 | 45 |
| STA. 2022+75.00 | | TO STA. 2024+00.00 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |



PLOT DATE: Mon Dec 12 09:36:15 2005
 FILE NAME: c:\p\projects\2002\205\dd0205-mm.dwg
 SCALE: 1/8" = 1'-0"
 USER NAME: mag11j

ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED
 FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED
 BY: _____ DATE: _____



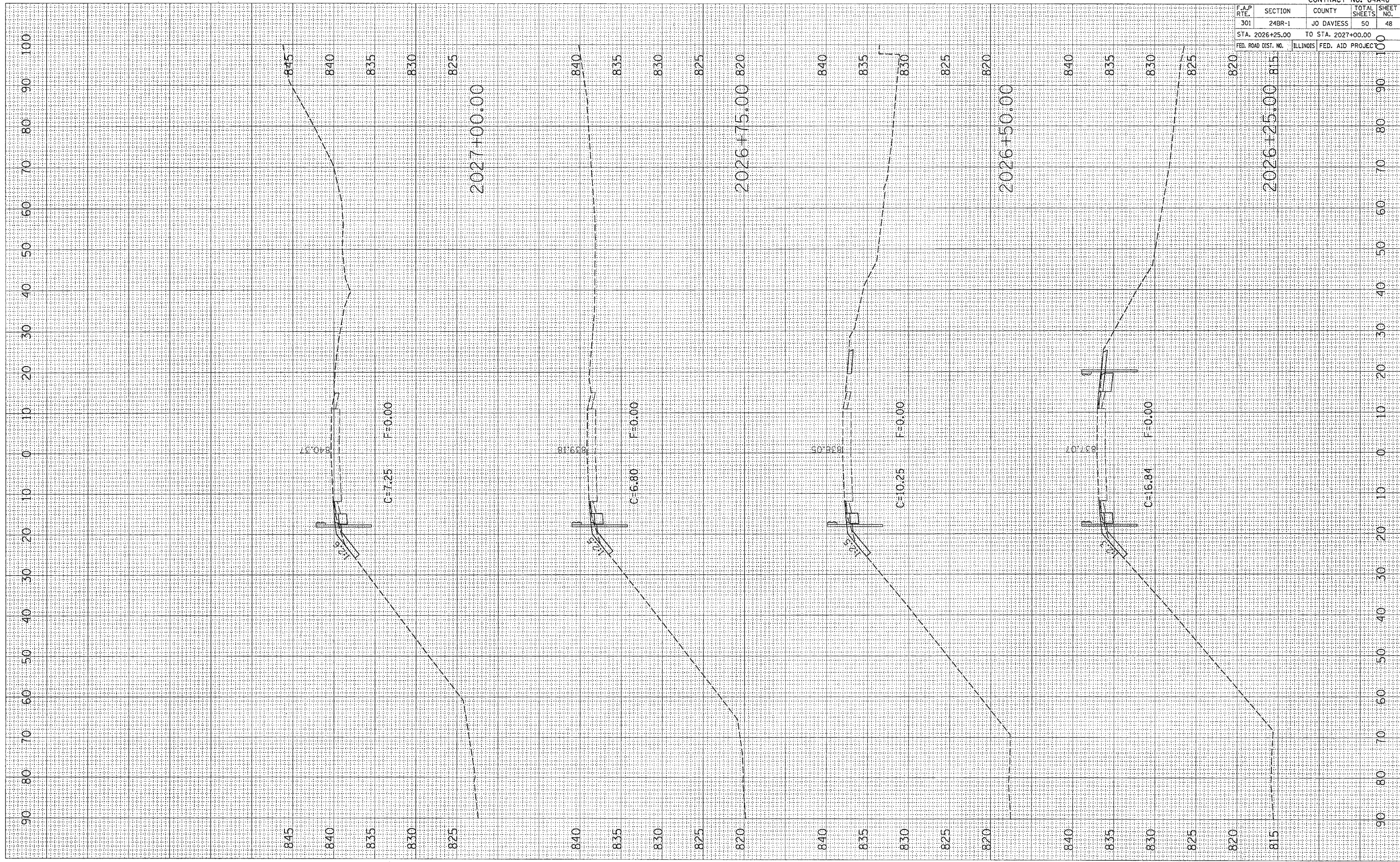
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|---------------------|---------------------------|--------------------|--------------|-----------|
| CONTRACT NO. 64A48 | | | | |
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 301 | 24BR-1 | JO DAVIESS | 50 | 47 |
| STA. 2025+25.00 | | TO STA. 2026+00.00 | | |
| FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | | | |

PLOT DATE : Mon Dec 12 09:36:16 2005
 FILE NAME : c:\projects\20262025\2026.dwg
 PLOT SCALE : 1/8" = 1'-0"
 USER NAME : mgj11

ORIGINAL SURVEY PLOTTED
 SURVEY PLOTTED
 TEMPLATE
 NOTE BOOK
 AREAS CHECKED

FINAL SURVEY PLOTTED
 SURVEY PLOTTED
 TEMPLATE
 NOTE BOOK
 AREAS CHECKED

BY: _____ DATE: _____



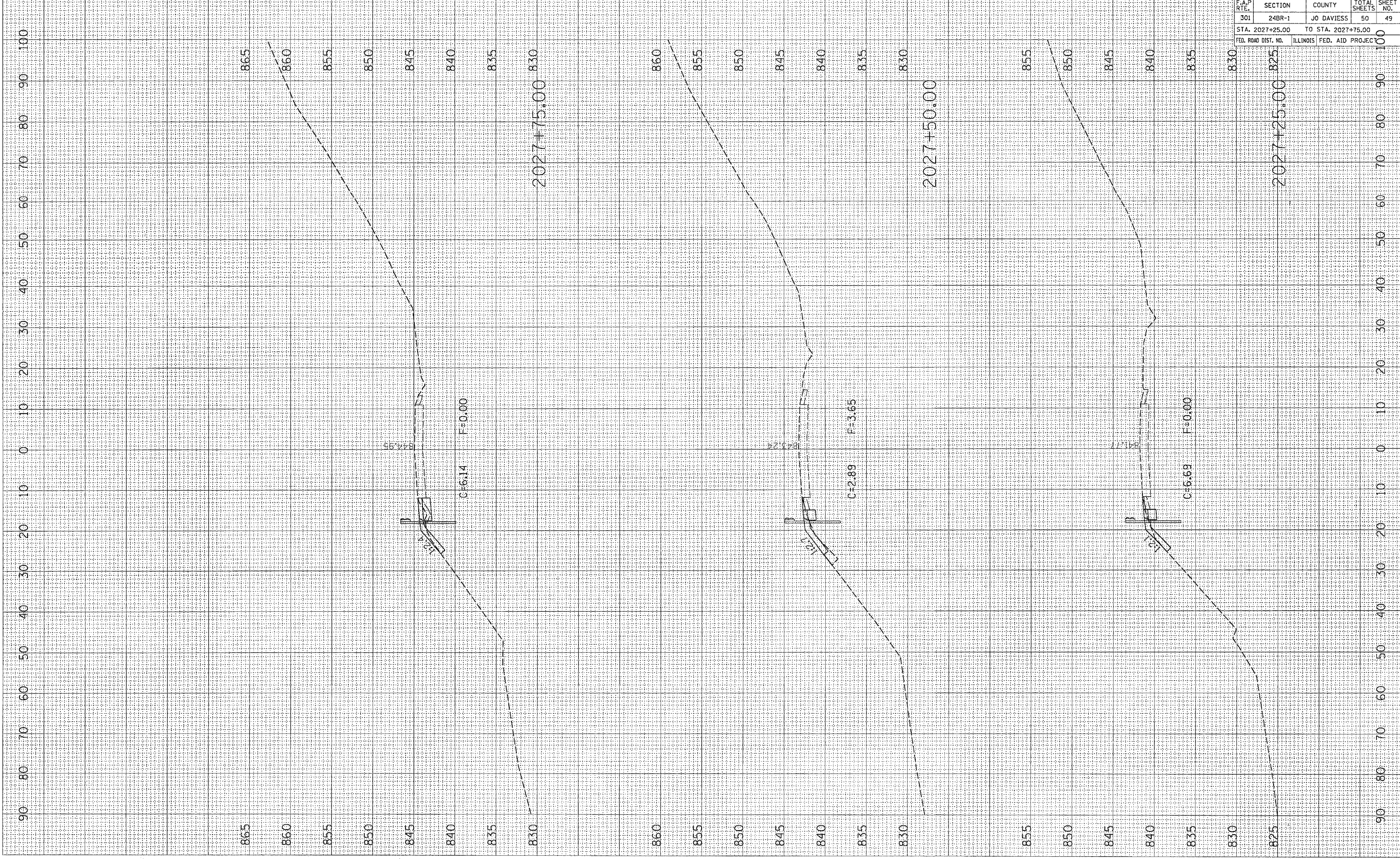
| CONTRACT NO. 64448 | | | | |
|---------------------|---------|--------------------|------------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 301 | 24BR-1 | JO DAVIESS | 50 | 48 |
| STA. 2026+25.00 | | TO STA. 2027+00.00 | | |
| FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | |

PLOT DATE = Mon Dec 12 06:36:16 2005
 FILE NAME = c:\pcc\projects\200228\200228.dwg
 PLOT SCALE = 10.0000 / in.
 USER NAME = mg111

ORIGINAL SURVEY PLOTTED
 SURVEY PLOTTED
 NOTE BOOK NO.
 AREAS CHECKED

FINAL SURVEY PLOTTED
 SURVEY PLOTTED
 NOTE BOOK NO.
 AREAS CHECKED

BY DATE



| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|---------|------------|--------------|-----------|
| 301 | 24BR-1 | JO DAVIESS | 50 | 49 |

STA. 2027+25.00 TO STA. 2027+75.00
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

FINISH SURVEY
 CHECKED BY
 DATE
 NO.

ORIGINAL SURVEY
 CHECKED BY
 DATE
 NO.

PLOT DATE = Mon, Dec 12 09:36:16 2005
 FILE NAME = c:\p\projects\2005\2028\2028.dwg
 PLOT SCALE = 10.0000' / 1"

| | | | |
|---------------------|---------|---------------------------|--------------|
| CONTRACT NO. 64A48 | | | |
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS |
| 301 | 24BR-1 | JO DAVIESS | 50 |
| STA. 2028+00.00 | | TO STA. 2029+00.00 | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | |

