

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------|----------|--------------------|--------------|-----------|
| VAR. | " | ** | 16 | 1 |
| | ILLINOIS | CONTRACT NO. 74B98 | | |

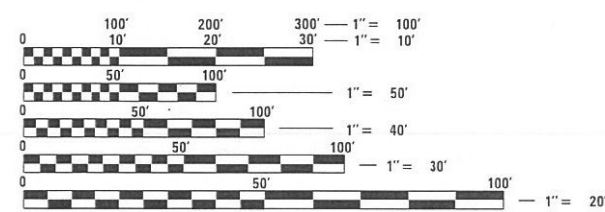
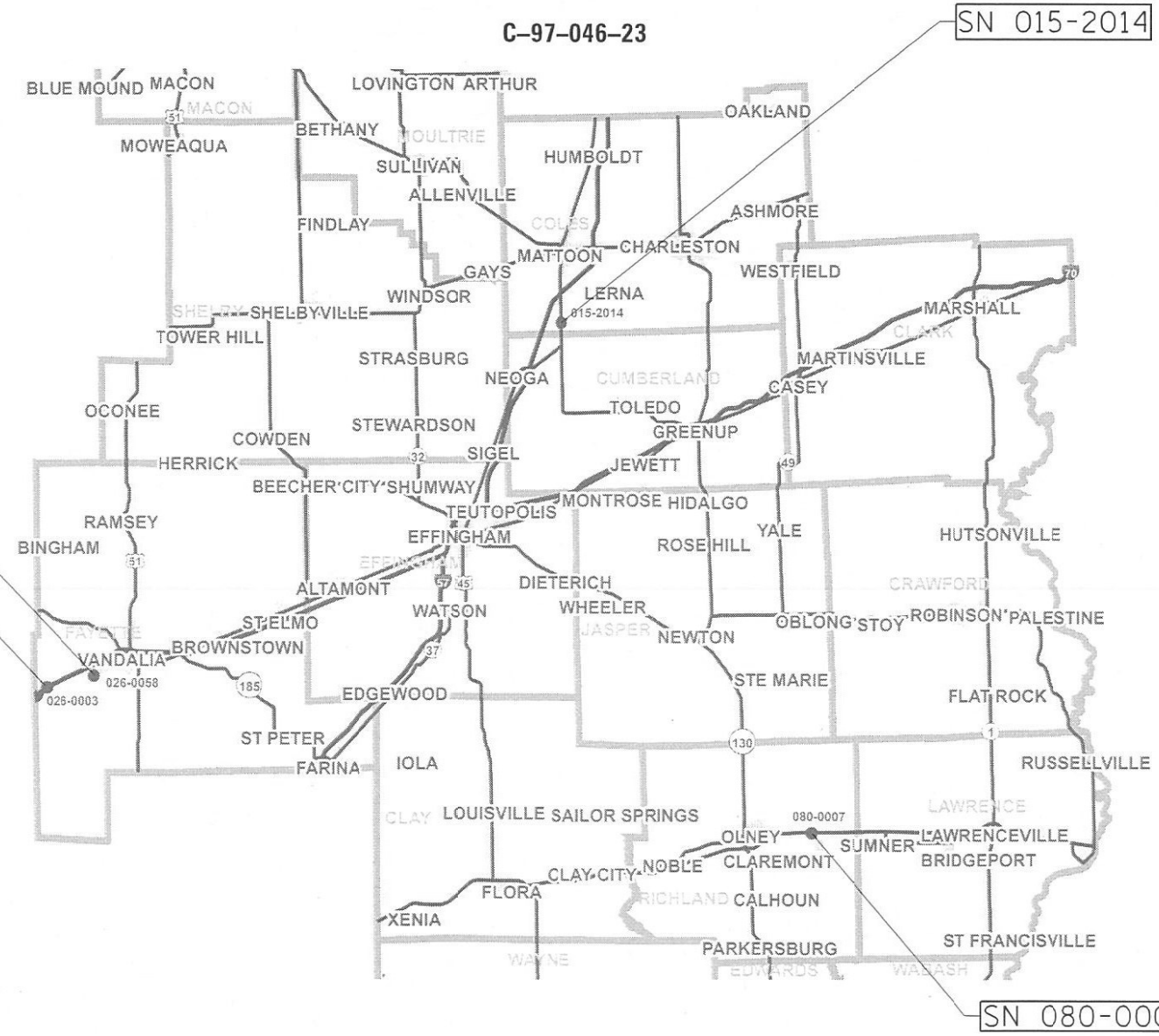
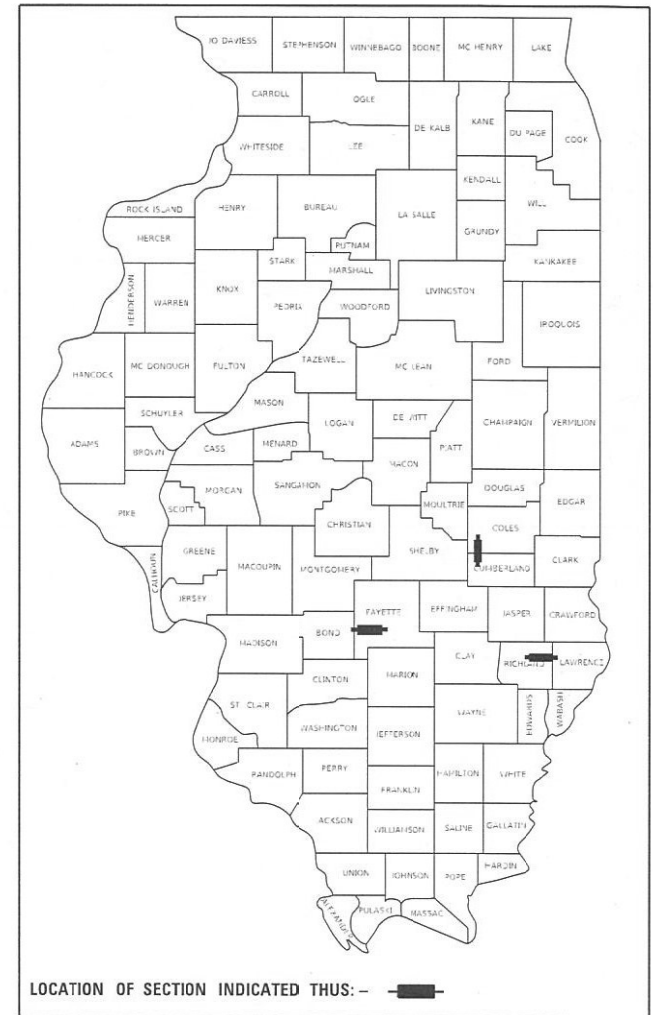
* D7 BRIDGE REPAIRS 2023-8
** FAYETTE, COLES, RICHLAND

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

VARIOUS ROUTES SECTION D7 BRIDGE REPAIRS 2023-8

BRIDGE REPAIRS VARIOUS COUNTIES



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 EXCAVATORS
1-800-892-0123
OR 811

PROJECT ENGINEER BRIAN LEWIS
PROJECT MANAGER BRIAN LEWIS

CONTRACT NO. 74B98

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED *April 3* 20 *23*
Jeffrey P. Myrland
REGIONAL ENGINEER

May 12, 2023
Scott A. Etk
ENGINEER OF DESIGN AND ENVIRONMENT

May 12, 2023
Stephen M. Smith
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

| | | | |
|---------------------------|----------|---|---------|
| USER NAME = jessica.hille | DESIGNED | - | REVISED |
| | DRAWN | - | REVISED |
| | CHECKED | - | REVISED |
| | DATE | - | REVISED |

| | | | | | |
|---|-------|----|--------|------|---------|
| SCALE: | SHEET | OF | SHEETS | STA. | TO STA. |
| STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | | | | | |
| INDEX OF SHEETS, GENERAL NOTES | | | | | |
| LIST OF STANDARDS | | | | | |

| | | | | |
|-----------------------------|--------|--------|---------|-----------|
| TOTAL SHEET NO. | SHEETS | COUNTY | SECTION | F.A. RTE. |
| 16 | ** | | * | |
| CONTRACT NO. 74898 | | | | |
| ** FAYETTE, COLES, RICHLAND | | | | |

GENERAL NOTES

THIS PROJECT IS LOCATED IN COLES, FAYETTE, AND RICHLAND COUNTIES.

THE WORK INCLUDED IN SECTION D-7 BRIDGE REPAIRS 2023-8 CONSISTS OF PARAPET REPAIRS, GUARDRAIL, TRAFFIC CONTROL, AND ANY OTHER WORK NECESSARY TO COMPLETE THE SECTION.

SN015-2014 IS IN COLES COUNTY ON US 45 AT ETNA ROAD APPROXIMATELY 2.6 MILES SOUTH OF THE I-57 MATTOON INTERCHANGE.

SN026-0003 IS IN FAYETTE COUNTY ON FAI 70 APPROXIMATELY 1.7 MILES EAST OF THE BOND COUNTY LINE.

SN026-0058 IS IN FAYETTE COUNTY ON OLD IL 140 APPROXIMATELY 0.2 MILE EAST OF 475TH STREET.

SN080-0007 IS IN RICHLAND COUNTY ON OLD IL 250 APPROXIMATELY 0.6 MILE WEST OF CLAREMONT ROAD.

A QUANTITY OF PAVEMENT MARKING BACKCUT TAPE, 5" IS PROVIDED FOR COVERING THE CONFLICTING CENTERLINE MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS IN THE TAPER AREAS OF T&P STANDARD 701321 ON US-45. AN ADDITIONAL QUANTITY IS INCLUDED FOR COVERING RAISED REFLECTIVE PAVEMENT MARKERS.

A QUANTITY OF PAVEMENT MARKING BACKCUT TAPE, 7" IS PROVIDED FOR COVERING THE CONFLICTING CENTERLINE MARKINGS IN THE TAPER AREA OF T&P STANDARD 701402 ON I-70. AN ADDITIONAL QUANTITY IS INCLUDED FOR COVERING RAISED REFLECTIVE PAVEMENT MARKERS.

A QUANTITY OF GUARDRAIL REMOVAL IS INCLUDED FOR THE REMOVAL OF THE TYPE C GUARDRAIL ON SN026-0003 AND A PORTION OF THE GUARDRAIL IN ADVANCE OF THE STRUCTURE.

100' OF TEMPORARY CONCRETE BARRIER SHALL BE PLACED ACROSS THE LENGTH OF SN026-0003 AND FOR A DISTANCE OF 100' UPSTREAM OF THE STRUCTURE AT A LATERAL DISTANCE OF 4' BETWEEN THE CENTERLINE OF THE EASTBOUND LANES AND THE TRAFFIC SIDE OF THE TCB. AN ADDITIONAL 100' OF TCB SHALL BE PLACED ON A 1:12 TAPER AS SHOWN ON STANDARD 701402.

INDEX OF SHEETS

| ITEM | SHEET NO. |
|--|-----------|
| COVER SHEET | 1 |
| INDEX OF SHEETS, HIGHWAY STANDARDS AND GENERAL NOTES | 2 |
| SUMMARY OF QUANTITIES | 3-4 |
| LOCATION MAPS | 5-7 |
| STRUCTURE PLANS | 8-15 |
| TRAFFIC CONTROL DETAILS | 16 |

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET OF THE PLANS

STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS

001001-02 AREAS OF REINFORCEMENT BARS

001006 DECIMAL OF AN INCH AND OF A FOOT

631066 TRAFFIC BARRIER TERMINAL, TYPE 14

701001-02 OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY

701006-05 OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE

701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS

701321-18 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER

701400-11 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY

701402-12 LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER

701901-08 TRAFFIC CONTROL DEVICES

704001-08 TEMPORARY CONCRETE BARRIER

BLR 21-9 TYP. APP. OF TRAFF. CONT. DEVICES FOR CONST. ON RURAL LOCAL HIGHWAYS

630001-12 STEEL PLATE BEAM GUARDRAIL

REV. - MS

| | | |
|---------------------------------------|------------|-----------|
| USER NAME = jshen-jshen | DESIGNED - | REVISOR - |
| | DRAWN - | REVISOR - |
| | CHECKED - | REVISOR - |
| PLOT SCALE = 100.0000' / 1" / 1" / 1" | | |
| PLOT DATE = 4/4/2023 | | |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

| | | | | | |
|-----------------------|--|--------------------|--|--------|---------|
| SCALE: SHEET | | SHEETS | | STA. | TO STA. |
| SUMMARY OF QUANTITIES | | VAR. | | F.A. | SECTION |
| TOTAL SHEET | | SHEETS | | COUNTY | |
| CONTRACT NO. 74B98 | | CONTRACT NO. 74B98 | | | |

| CODE NO | ITEM | UNIT | COLES COUNTY 015-2014 | FAYETTE COUNTY 026-0003 | FAYETTE COUNTY 026-0058 | RICHLAND COUNTY 080-0007 | TOTAL |
|------------------|--|-------|--------------------------|----------------------------|----------------------------|-----------------------------|-------|
| 50102400 | CONCRETE REMOVAL | CU YD | 8.2 | 4.4 | 1.7 | 0.4 | |
| 50300225 | CONCRETE STRUCTURES | CU YD | 4.4 | 4.4 | | | |
| 50300255 | CONCRETE SUPERSTRUCTURE | CU YD | 0.4 | | | 0.4 | |
| 50300300 | PROTECTIVE COAT | SO YD | 41 | 20 | 15 | 5 | 1 |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 480 | 480 | | | |
| 50900207 | STEEL RAILING, TYPE CO-10 | FOOT | 135 | 106 | 29 | | |
| 50900305 | STEEL RAILING, TYPE T1 | FOOT | 53 | 53 | | | |
| * 63100119 | TRAFFIC BARRIER TERMINAL, TYPE 14 | EACH | 1 | 1 | | | |
| 63200310 | GUARDRAIL REMOVAL | FOOT | 150 | 150 | | | |
| 67100100 | MOBILIZATION | L SUM | 1 | 0.25 | 0.25 | 0.25 | |
| 70100207 | TRAFFIC CONTROL AND PROTECTION, STANDARD | EACH | 1 | 1 | | | |
| 701402 | | | | | | | |
| 70100405 | TRAFFIC CONTROL AND PROTECTION, STANDARD | EACH | 1 | 1 | | | |
| 701321 | | | | | | | |
| * SPECIALTY ITEM | | | | | | | |
| REV. - MS | | | | | | | |

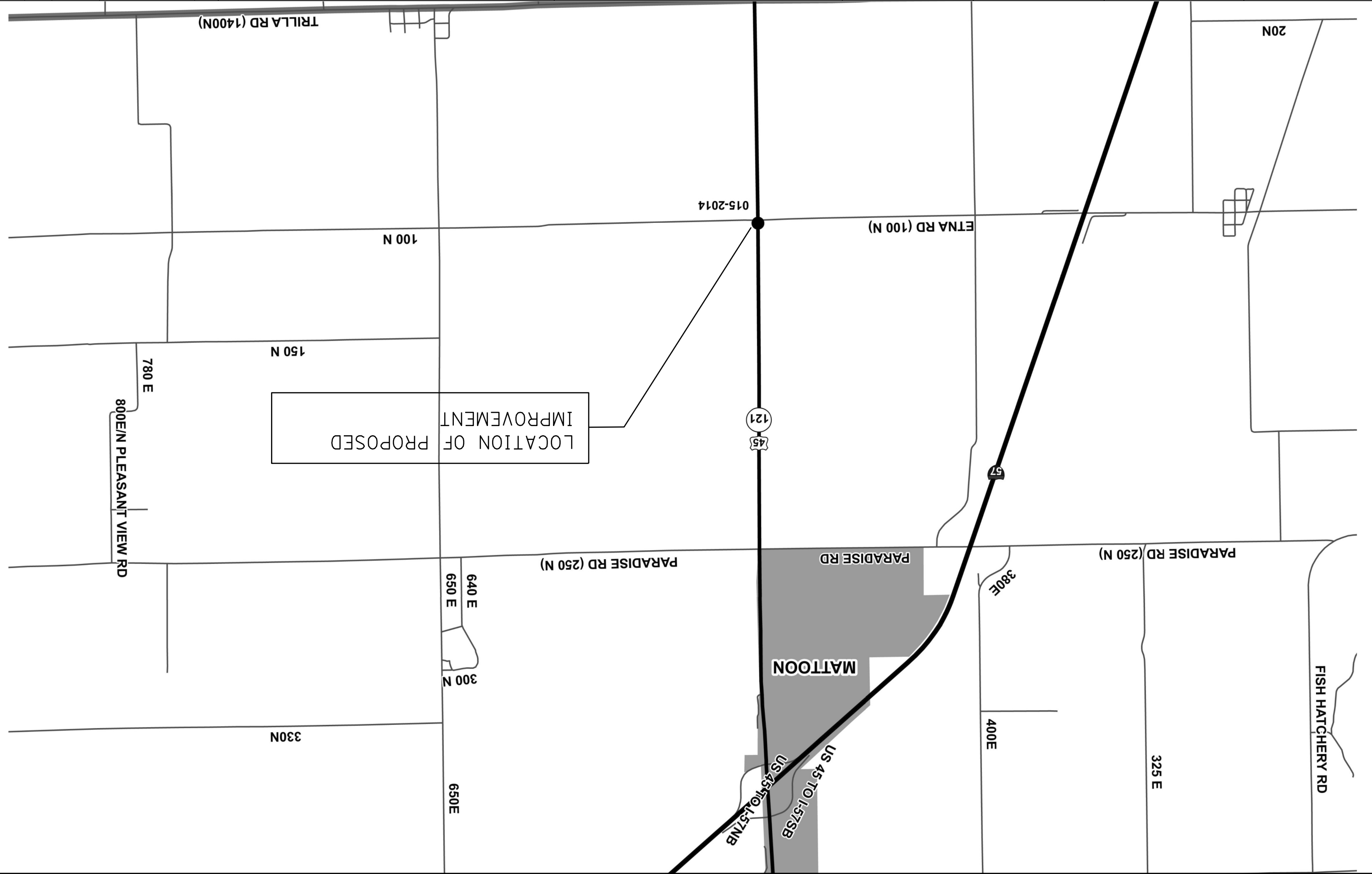
**ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES**

0013

| | | |
|----------|---|----------|
| DESIGNED | - | REVISION |
| DRAWN | - | REVISION |
| CHECKED | - | REVISION |
| DATE | - | REVISION |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

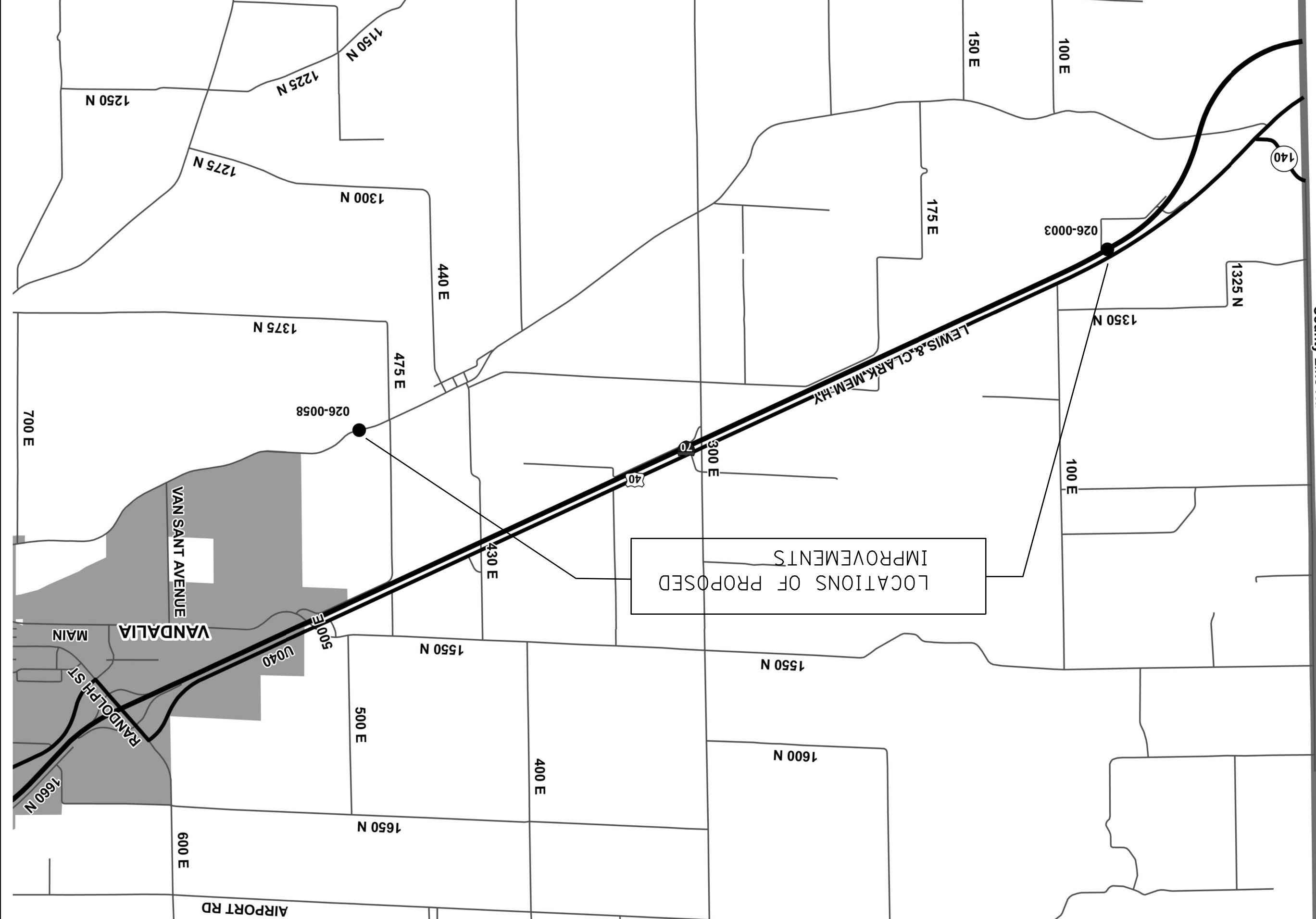
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|-----------|--|---------|--------|--------------|------|--------------------|
| SCALE: | | SHEET | OF | SHEETS | STA. | TO STA. |
| F.A. RTE. | | SECTION | COUNTY | TOTAL SHEETS | NO. | CONTRACT NO. 74898 |
| 5 | | 16 | ** | 5 | | |



| | |
|--|------------|
| USER NAME = jessica.hill | DESIGNED - |
| DATE = 4/12/23 | REVISOR |
| REVISIONS | REVISIONS |
| PLotted SCALE = 100,000 / 1" = 100' / 1" | REVISIONS |
| PLotted SCALE = 100,000 / 1" = 100' / 1" | REVISIONS |
| DATE = 4/12/23 | REVISIONS |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

| | | | | | |
|--------------------------|---------|--------|--------------|--------|---------|
| SCALE: | SHEET | OF | SHEETS | STA. | TO STA. |
| FAYETTE COUNTY LOCATIONS | | | | | |
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEETS | NO. |
| ** | * | ** | 16 | 6 | 6 |
| CONTRACT NO. 74B98 | | | | | |



LOCATIONS OF PROPOSED IMPROVEMENTS

County Line Rd

AIRPORT RD

600 E

1650 N

400 E

1600 N

500 E

1550 N

U040

E1005

MAIN

VANDALIA

VAN SANT AVENUE

700 E

1375 N

475 E

026-0058

40

300 E

70

100 E

1350 N

026-0003

175 E

140

1325 N

100 E

150 E

1300 N

440 E

1275 N

1225 N

1150 N

1250 N

Expires: November 30, 2024

DESIGNED - Stephen M. Ryan
 CHECKED - Adhian T. Halloway
 DRAWN - STEFFEN
 CHECKED - SMR ATH

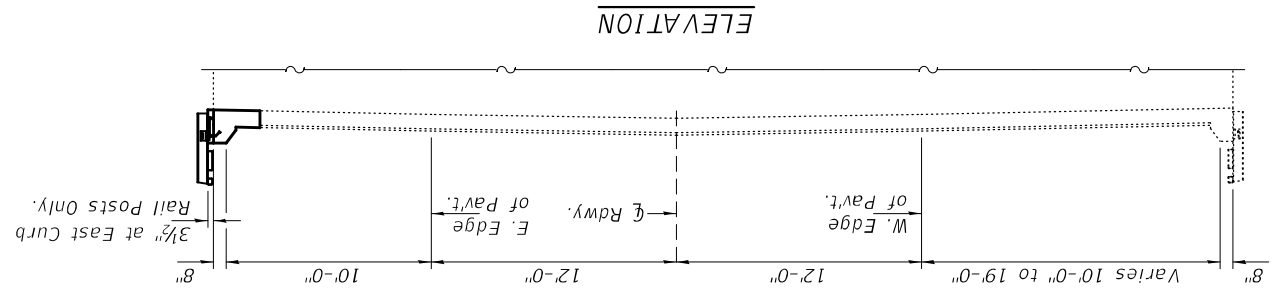
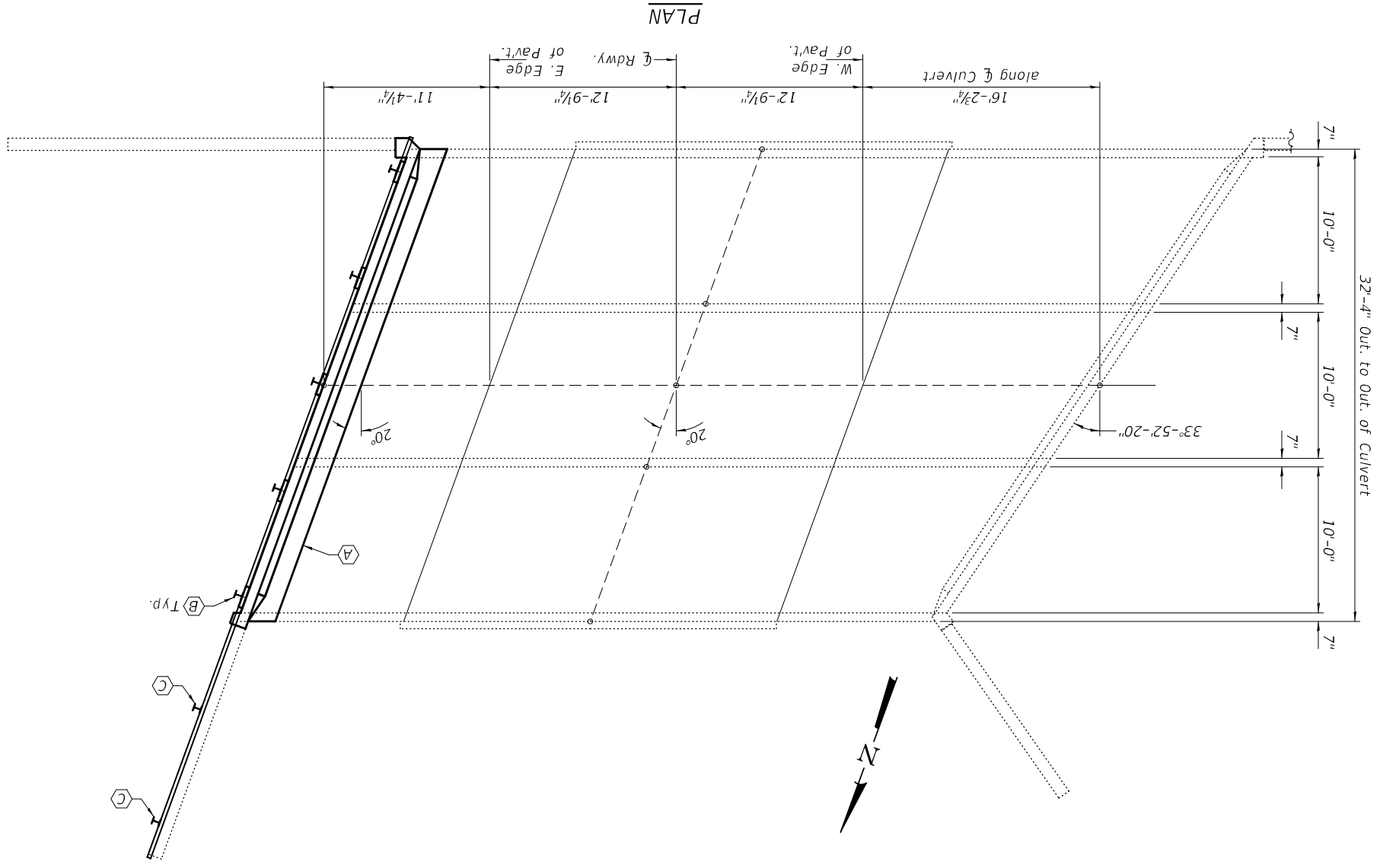


ENGINEER OF BRIDGES AND STRUCTURES
 PASSED
 DATE - MAY 1, 2023
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 3 SHEETS
 U.S. 45 (F.A.P. 824) OVER BRANCH OF BUTTERMILK DITCH
 GENERAL PLAN & ELEVATION
 CONTRACT NO. 74B98
 SECTION
 COUNTY
 TOTAL SHEETS

- (A) - Full Depth Removal & Replacement of Existing Curb.
- (B) - Remove & Replace Existing Railing, Rail Posts, & Rail Post Anchorage Devices. (5-Locations)
- (C) - Remove & Replace Existing Railing & Rail Post. (Anchorage Device to be re-used). (2-Locations)



GENERAL NOTES

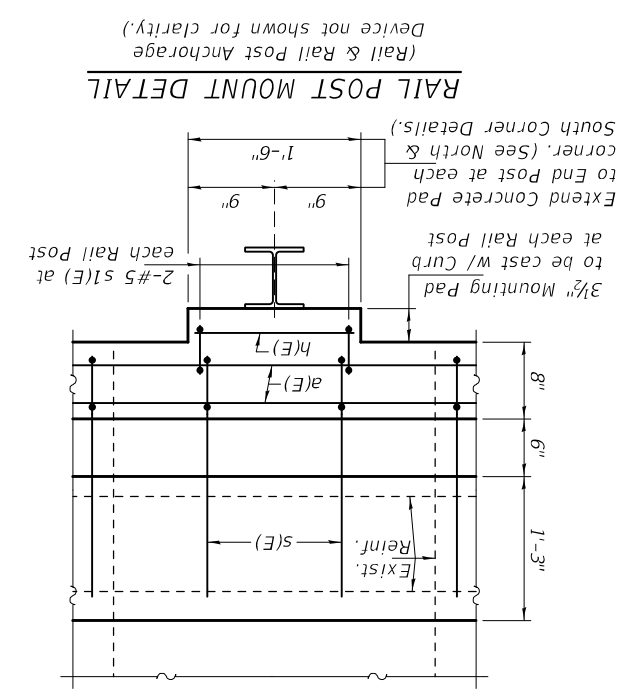
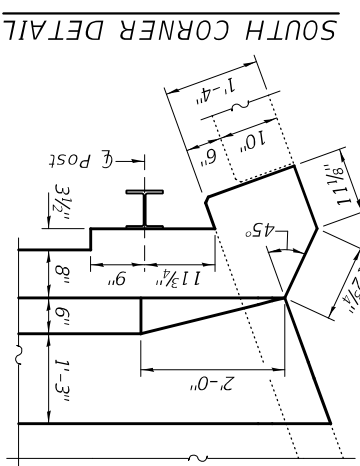
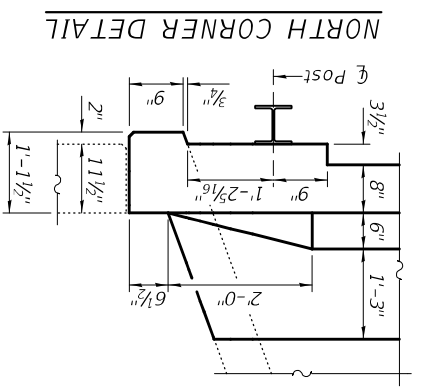
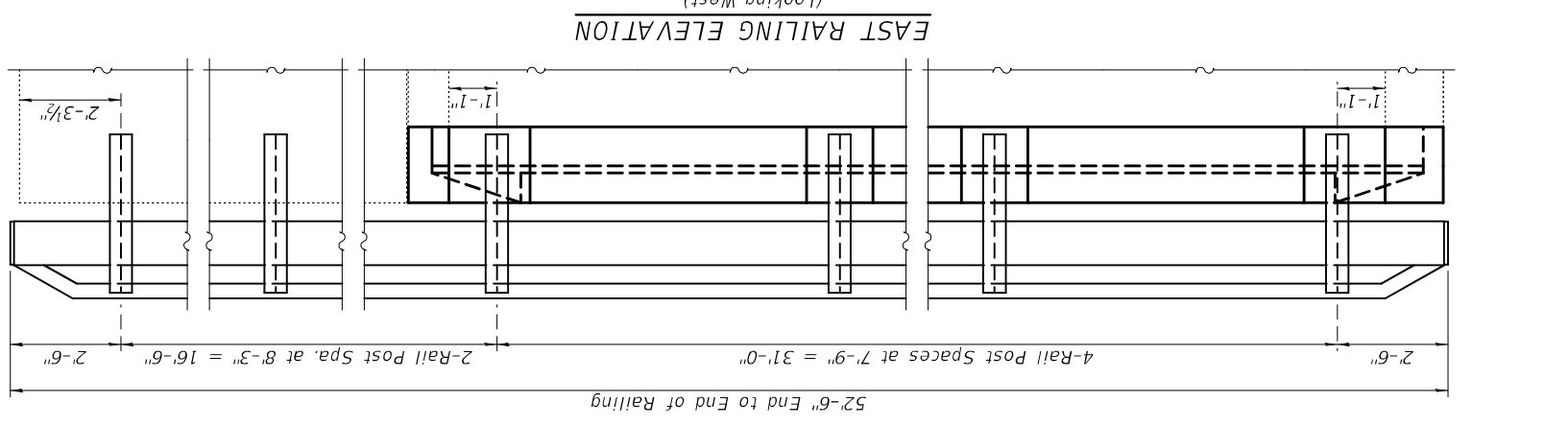
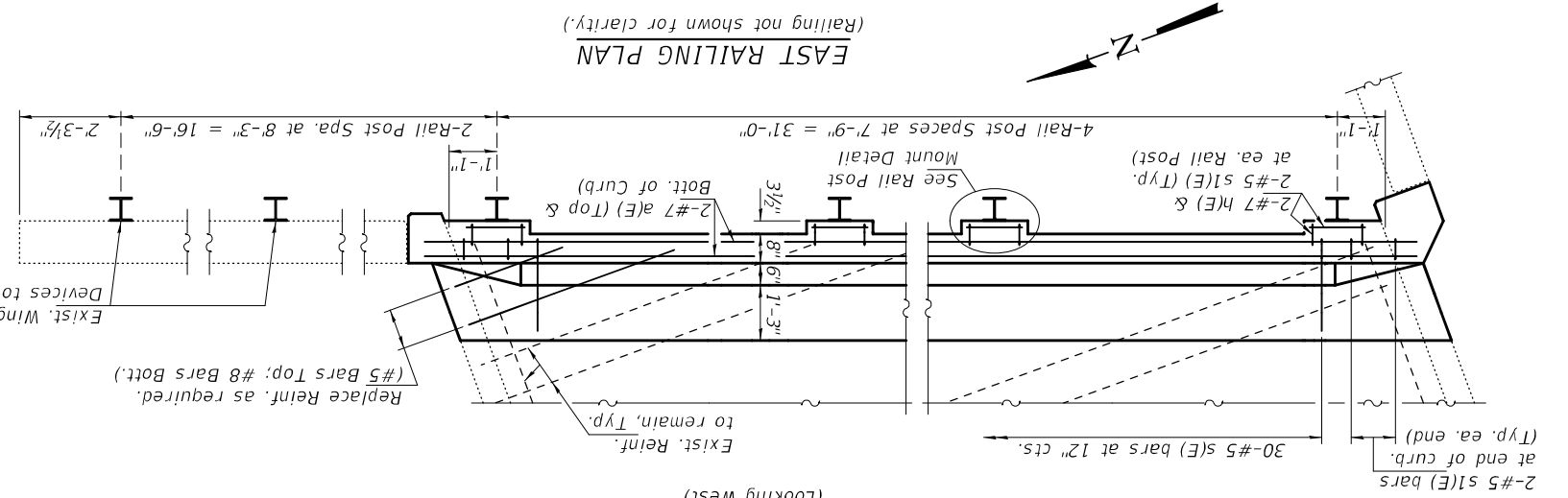
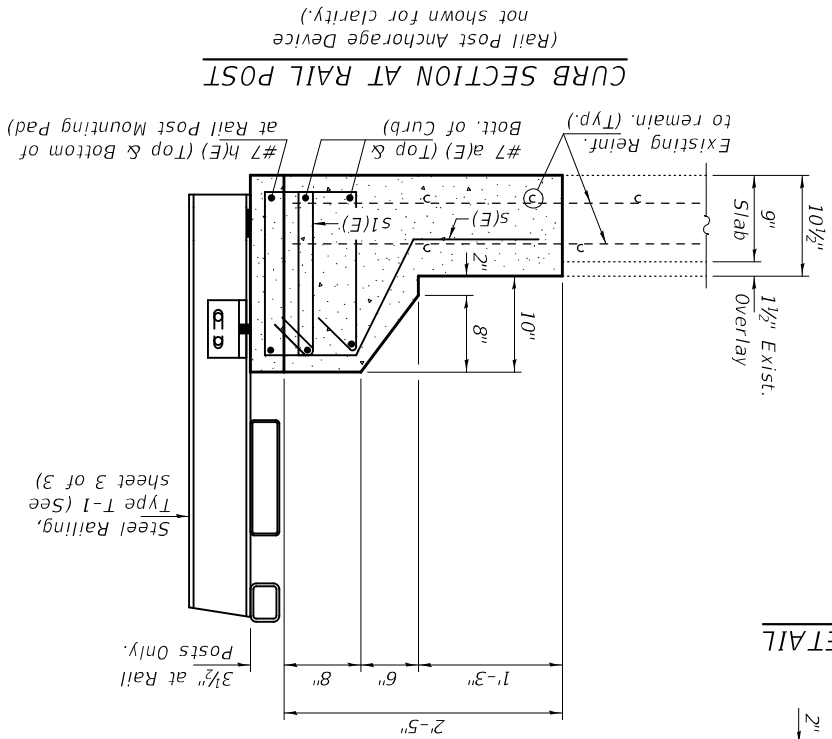
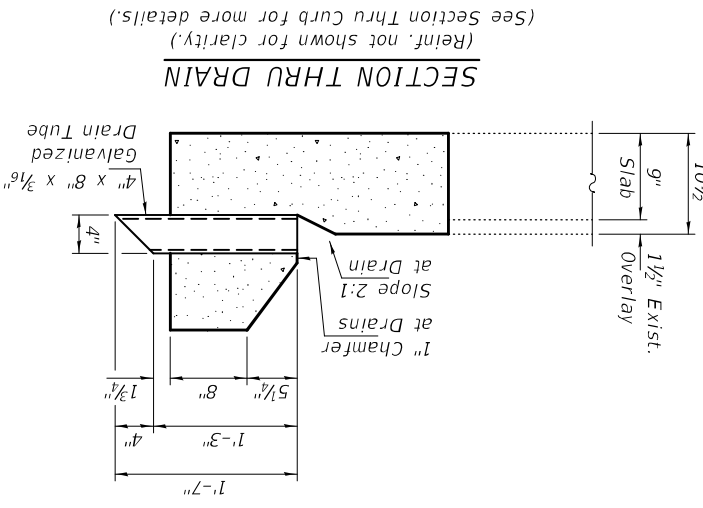
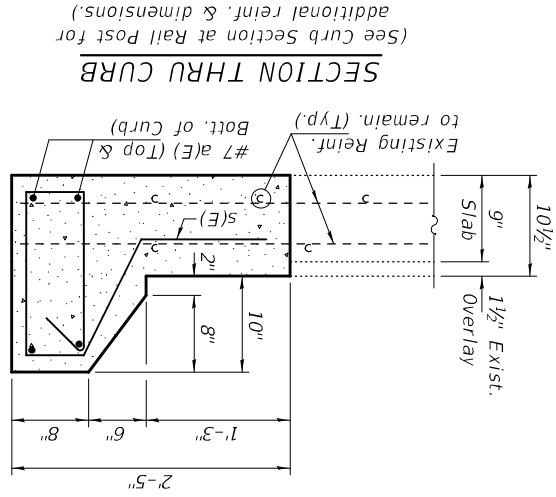
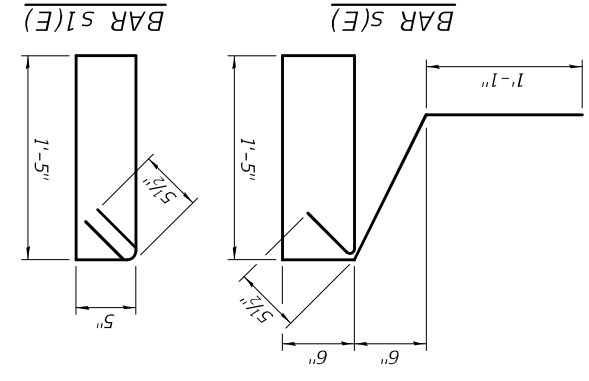
All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 Reinforcement bars designated (E) shall be epoxy coated.
 Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
 Protective Coat shall be applied to the new concrete surfaces of proposed top of the barrel, face of curb, top of curb, and outside face of headwall. Included are the proposed concrete at the exterior railings and portions adjacent to the existing roadway curb and/or barrel sidewall extension.

TOTAL BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|----------------------------------|---------|----------|
| Concrete Removal | Cu. Yd. | 4.4 |
| Concrete Structures | Cu. Yd. | 4.4 |
| Reinforcement Bars, Epoxy Coated | Pound | 480 |
| Steel Railing, Type T-1 | Foot | 53 |
| Protective Coat | Sq. Yd. | 20 |

BILL OF MATERIAL

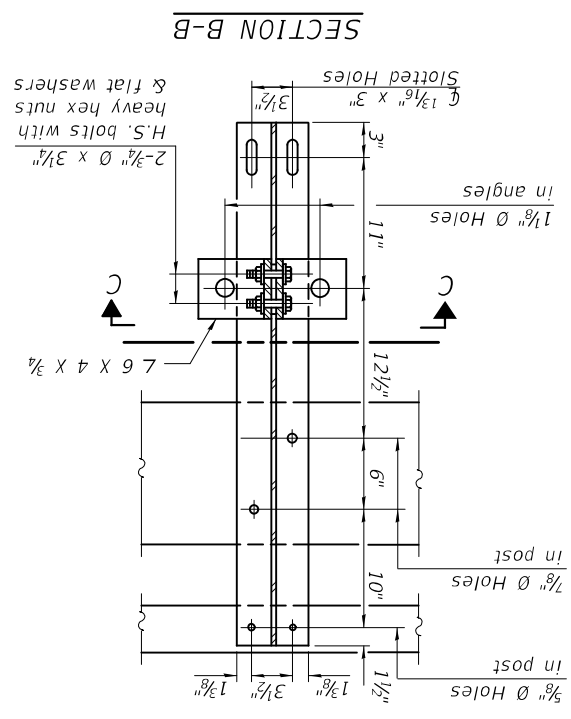
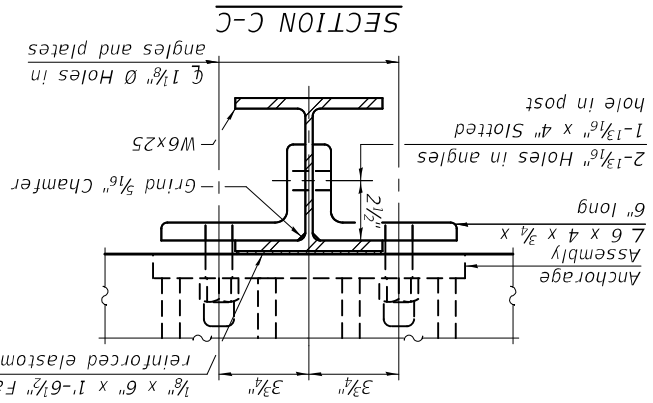
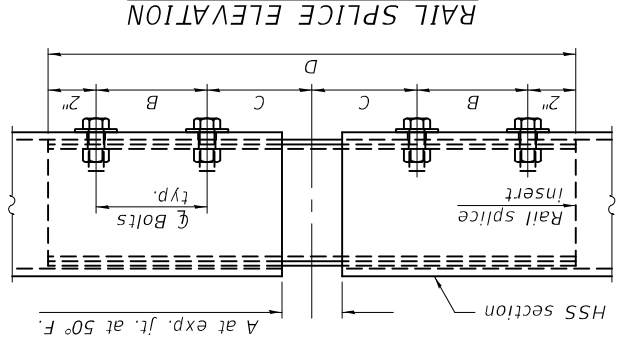
| Bar No. | Size | Length | Shape |
|----------------------------------|------|---------|-------|
| a(E) | #7 | 28'-10" | — |
| h(E) | #7 | 1'-3" | — |
| s(E) | #5 | 6'-7" | □ |
| s1(E) | #5 | 4'-3" | □ |
| Reinforcement Bars, Epoxy Coated | | | |
| Pound | 480 | | |



| | |
|------------|---------|
| DESIGNED - | SMR |
| CHECKED - | ATH |
| DRAWN - | STEFFEN |
| CHECKED - | SMR |
| ATH | |

| | |
|--------------------------|-----------------|
| RAILING CRITERIA | |
| NCHRP 350 Test Level | 2 |
| Railing Weight (plf) | 70 |
| Max Post Spacing | 9'-6" |
| HMA thickness range (in) | 1 1/2" - 3 3/8" |

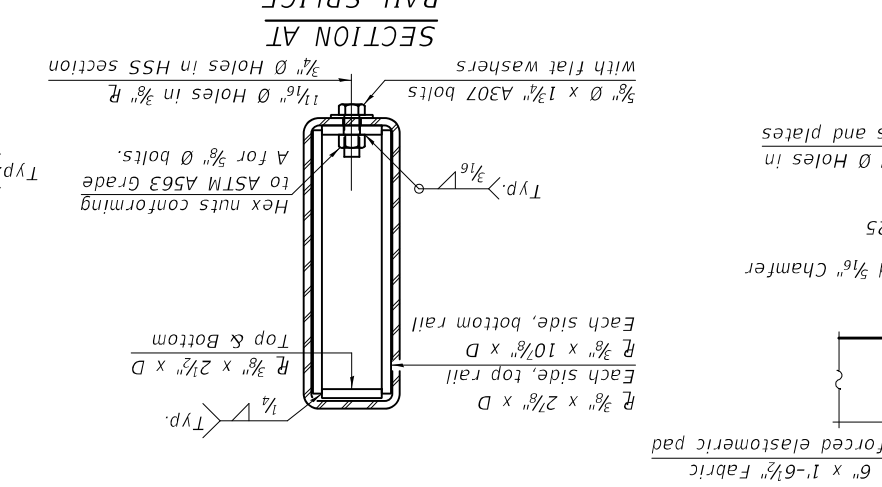
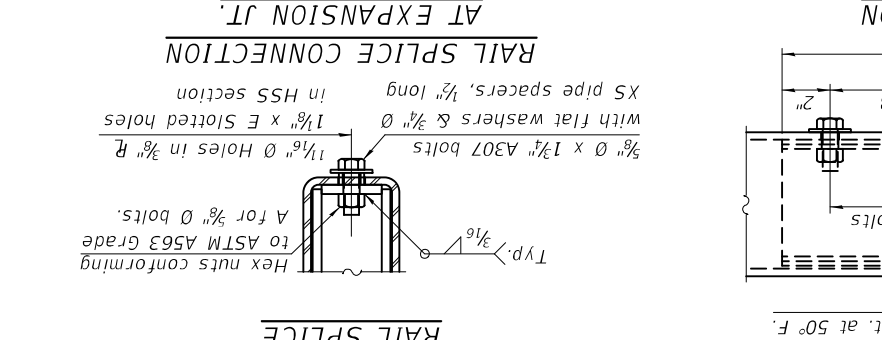
R-24A
10-12-2021



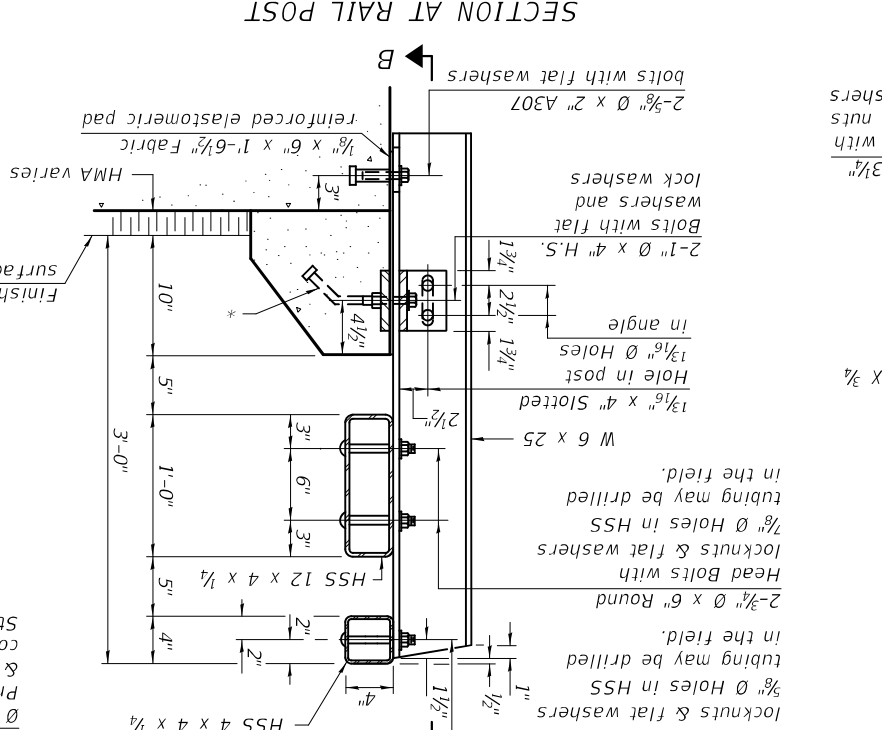
| | |
|-----------|-------------|
| DATE - | MAY 1, 2023 |
| REVISIONS | |
| REVISIONS | |

| | | | | | | |
|------------------------------|---------|--------|---------|--------|-----------|-----------|
| Location | T | A | B | C | D | E |
| All locs. not over exp. jts. | 0 | 1/4" | 4" | 4" | 1'-8" | - |
| Over Strip Seal Jt. | ≤4" | 2 1/2" | 4 3/8" | 4 3/8" | 1'-10" | 3 1/2" |
| Over Finger or Modular Jt. | ≤9 1/2" | 5 1/2" | 7 3/8" | 7 1/4" | 2'-9 1/4" | 5 1 3/16" |
| Over Finger or Modular Jt. | ≤15" | 8 1/4" | 10 1/8" | 10" | 3'-8 1/4" | 8 9/16" |

T = : total movement along centerline of roadway at expansion joint.

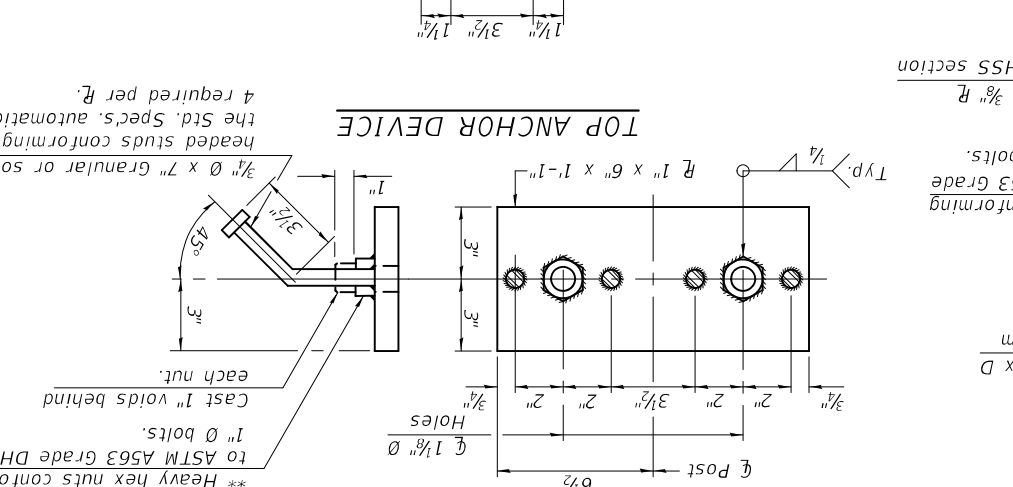
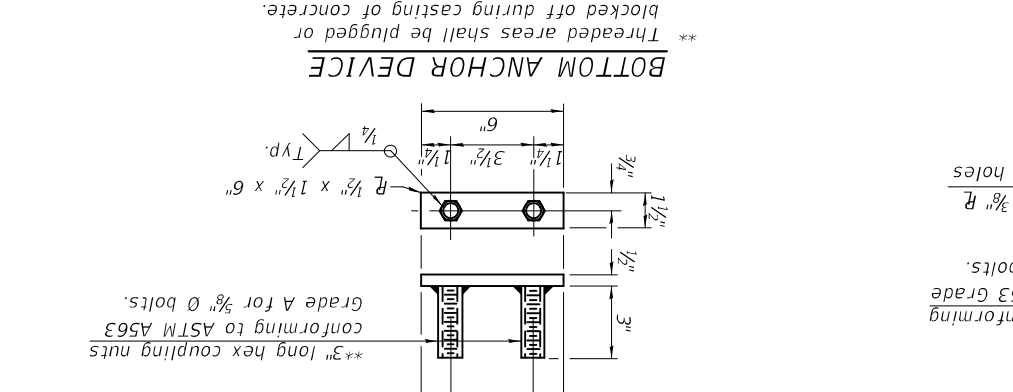


* The outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchorage assembly.

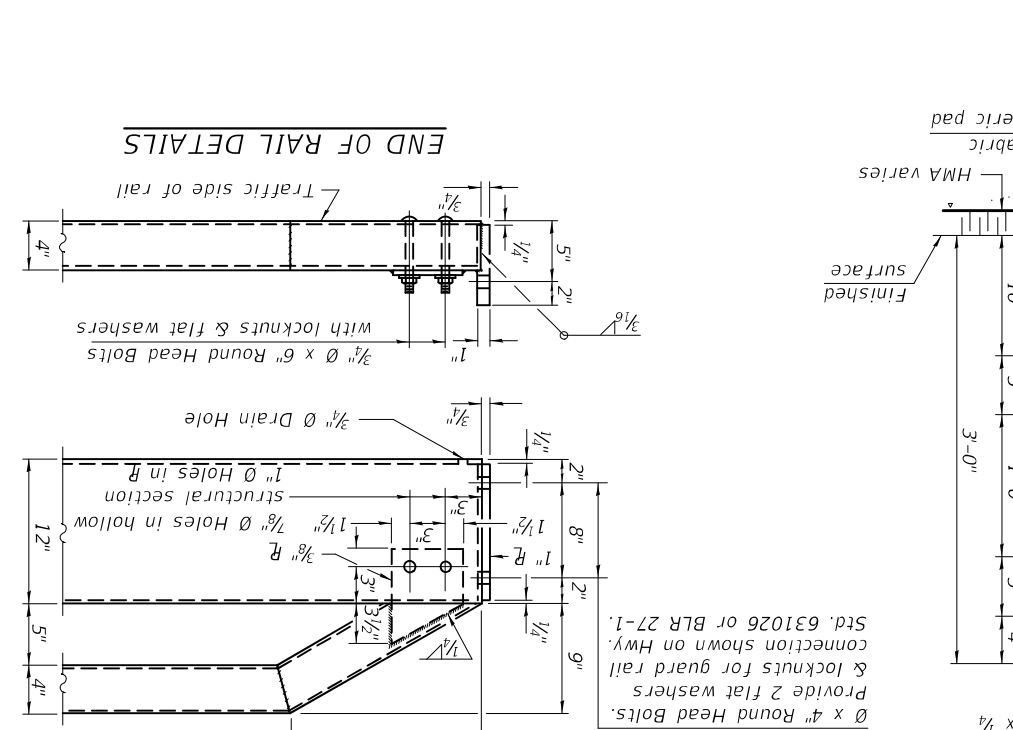


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 3 OF 3 SHEETS
SN 015-2014
STEEL RAILING, TYPE T-1



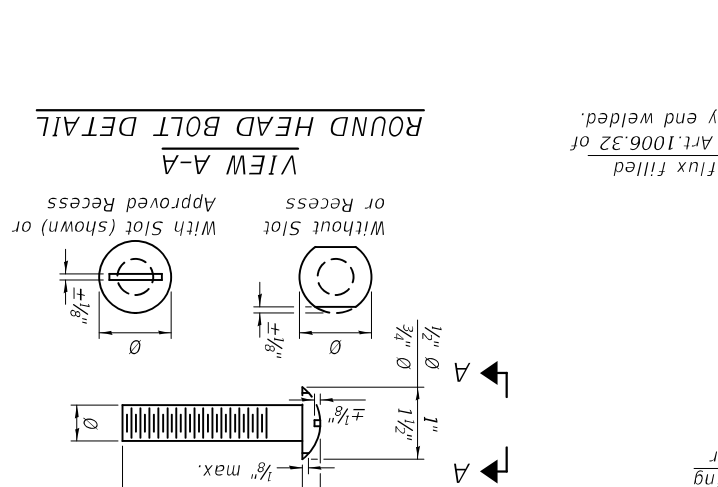
** Heavy hex nuts conforming to ASTM A563 Grade DH for 1" Ø bolts.
Cast 1" voids behind each nut.



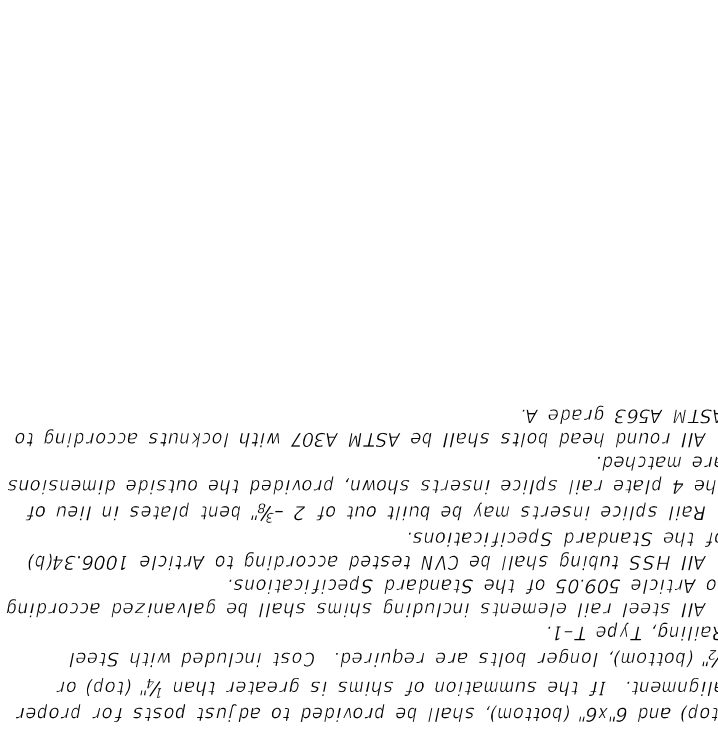
Notes:
A sufficient number of shims of various thicknesses, sized 5"x11 1/2" (top) and 6"x6" (bottom), shall be provided to adjust posts for proper alignment. If the summation of shims is greater than 1/4" (top) or 1/2" (bottom), longer bolts are required. Cost included with Steel Railing, Type T-1.
All steel rail elements including shims shall be galvanized according to Article 509.05 of the Standard Specifications.
All HSS tubing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.
Rail splice inserts may be built out of 2-3/8" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.
All round head bolts shall be ASTM A307 with locknuts according to ASTM A563 grade A.

| | | | |
|--------------------|--------------------------|---------|--------------|
| F.A.P. RTE. | SECTION | COUNTRY | TOTAL SHEETS |
| 824 | D7 BRIDGE REPAIRS 2023-8 | | 16 |
| ILLINOIS | FED. AID PROJECT | | 10 |
| CONTRACT NO. 74B98 | | | |

| | |
|-------------------------|----------|
| BILL OF MATERIAL | |
| Item | Quantity |
| Steel Railing, Type T-1 | Foot |
| | 53 |



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



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

Expires: November 30, 2024



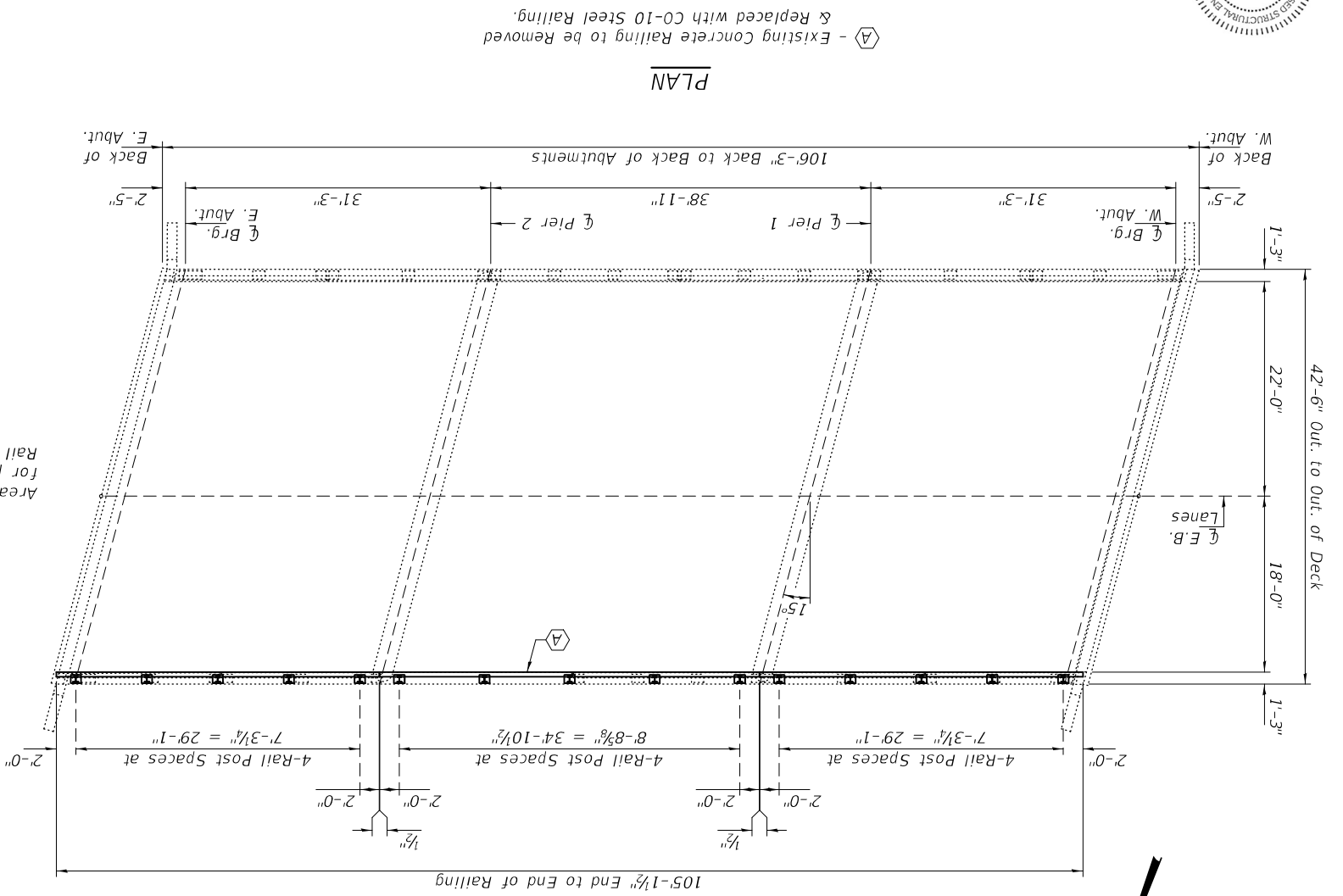
| | |
|------------|--------------------|
| DESIGNED - | Stephen M. Ryan |
| CHECKED - | Adrian T. Halloway |
| DRAWN - | STEFFEN |
| CHECKED - | SMR ATH |

| | |
|-----------|-------------|
| DATE - | MAY 1, 2023 |
| REVISED - | |
| REVISED - | |

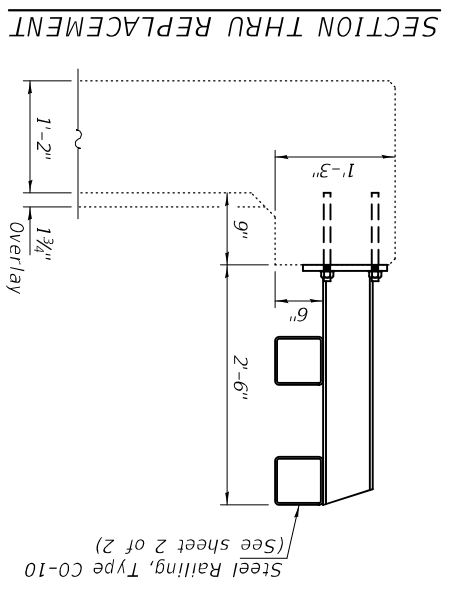
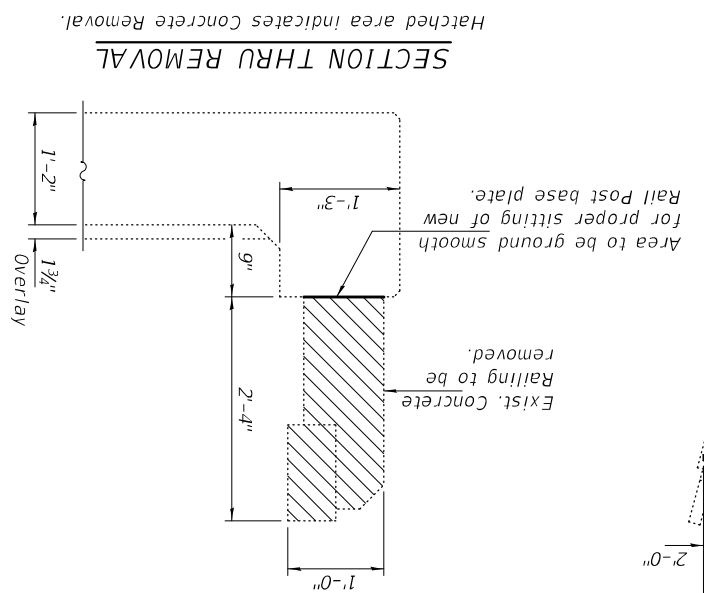
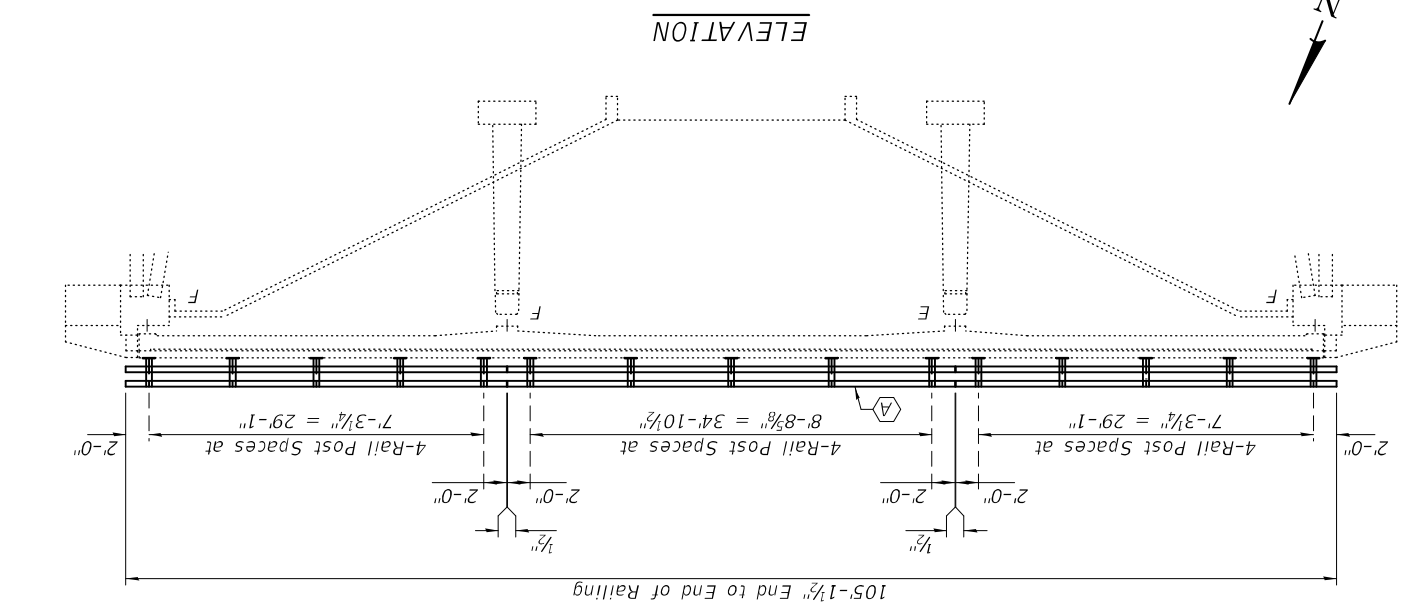
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN, ELEVATION, & REPAIR DETAILS
F.A.I. 70 (E.B.) OVER LICK CREEK
SN 026-003 (E.B.)

| | |
|---------------------------|--------------------------|
| TOTAL SHEETS | 11 |
| SHEETS NO. | 16 |
| COUNTRY | |
| SECTION | D7 BRIDGE REPAIRS 2023-8 |
| F.A.I. RTE. | 70 |
| ILLINOIS FED. AID PROJECT | |
| CONTRACT NO. | 74B98 |



(A) - Existing Concrete Railing to be Removed & Replaced with CO-10 Steel Railing.



TOTAL BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---------------------------|---------|----------|
| Concrete Removal | Cu. Yd. | 1.7 |
| Steel Railing, Type CO-10 | Foot | 106 |
| Protective Coat | Sq. Yd. | 15 |

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work. Protective Coat shall be applied to the top of the proposed, smooth ground top surface of the existing horizontal concrete curb at the proposed railing.

DESIGNED BY SMR
 CHECKED BY ATH
 DRAWN BY STEFFEN
 CHECKED BY SMR ATH

PASSED

ENGINEER OF BRIDGES AND STRUCTURES
 John F. [Signature]

DATE - MAY 1, 2023

REVISD -
 REVISD -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE CO-10
 SN 026-0003

SHEET NO. 2 OF 2 SHEETS

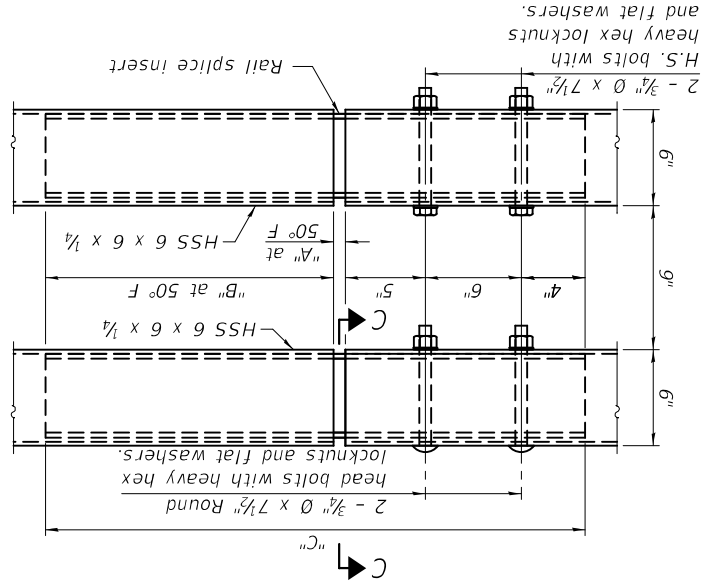
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|-----------------------------|------------------|--------------------|
| ILLINOIS | FED. AID PROJECT | CONTRACT NO. 74B98 |
| SECTION | COUNTRY | TOTAL SHEETS |
| 70 DT BRIDGE REPAIRS 2023-8 | | 12 |
| RTA | | 16 |
| 70 | | 12 |

R-42
 10-12-2021

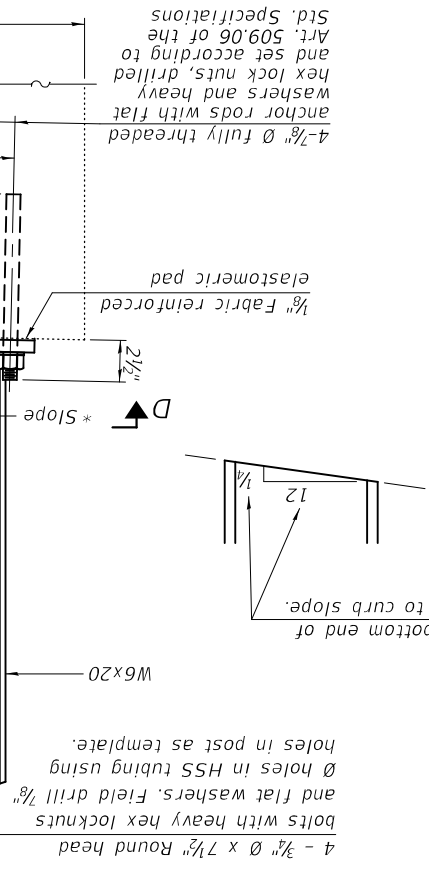
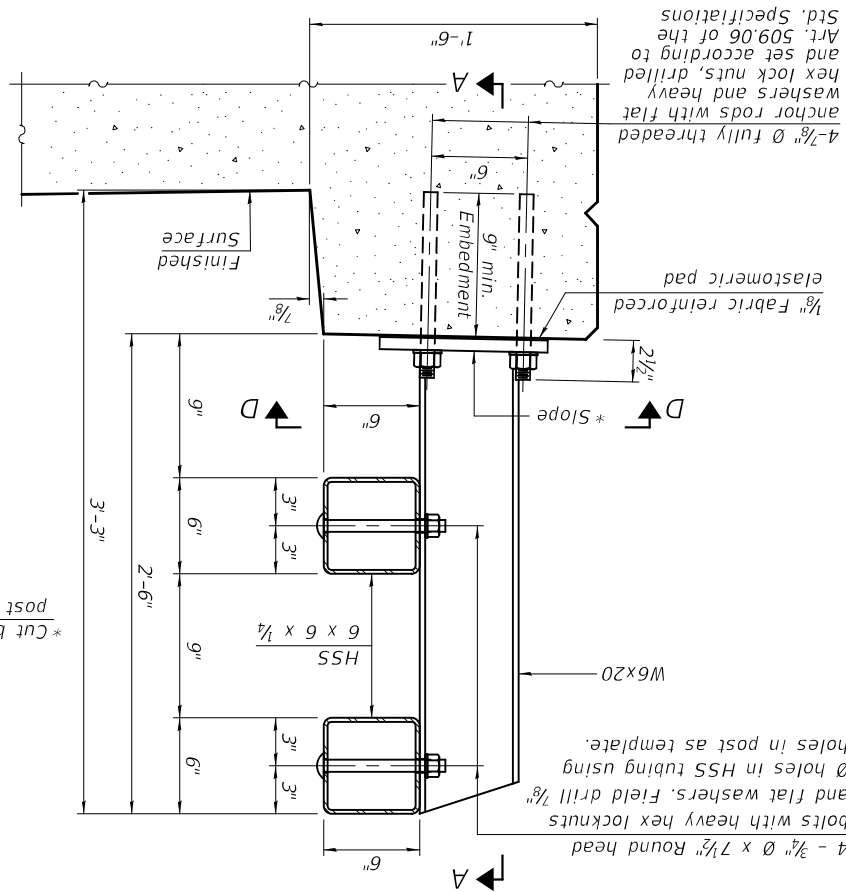
| | |
|--------------------------|----------------|
| MASH 2016 Test Level | 4 |
| Railing Weight (plf) | 75 |
| Min F _c (psi) | 4,500 |
| Post Spacing Range | 6'-8" - 10'-0" |

RAILING CRITERIA

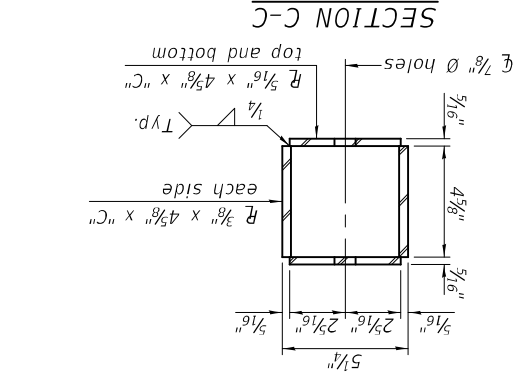
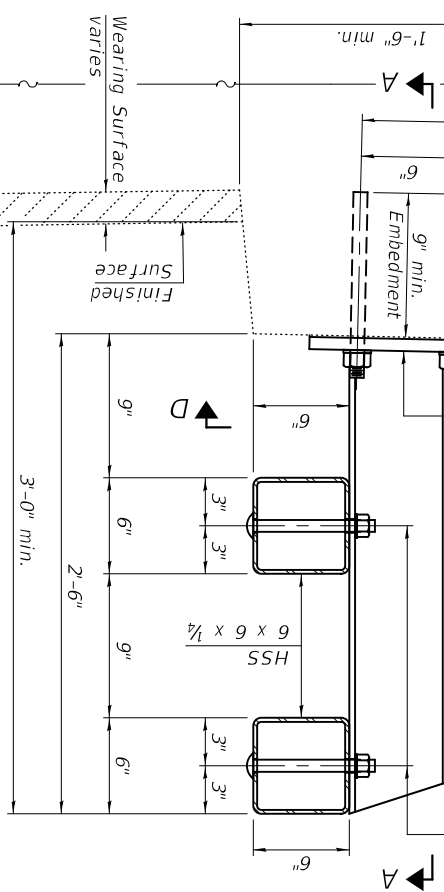
TOP AND BOTTOM RAIL
 SPLICE ELEVATION



SECTION AT RAIL POST
 (New construction)



SECTION AT RAIL POST
 (Retrofit construction)

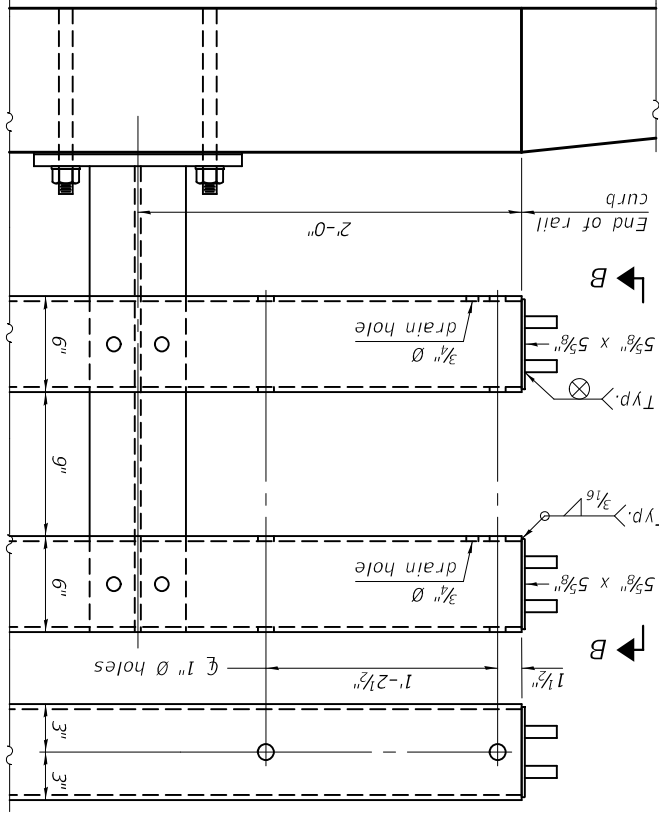
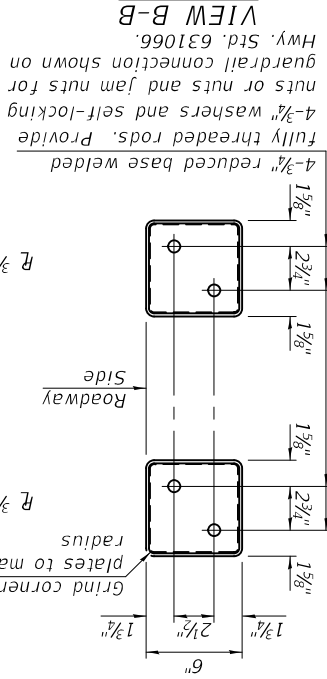


SPLICE DIMENSIONS

| Location | T | A | B | C |
|------------------------------|---------|--------|------------|-----------|
| All locs. not over exp. jts. | 0 | 1/2" | 1'-6" | 2'-9 1/2" |
| Over Strip Seal Jt. | ≤4" | 2 1/2" | 1'-8" | 3'-1 1/2" |
| Over Finger or Modular Jt. | ≤9 1/2" | 5 1/2" | 1'-10 1/2" | 3'-7 1/2" |
| Over Finger or Modular Jt. | ≤15" | 8 1/4" | 2'-1 1/2" | 4'-0 3/4" |

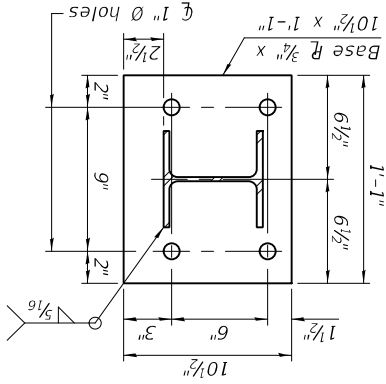
T = : total movement along centerline of roadway at expansion joint.

VIEW B-B



END OF RAIL DETAILS

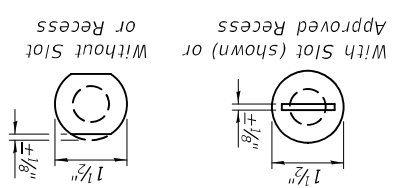
SECTION D-D



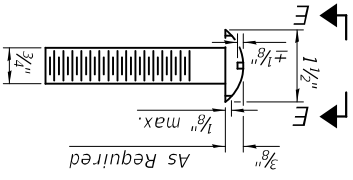
BILL OF MATERIAL

| Item | Unit | Quantity |
|---------------------------|------|----------|
| Steel Railing, Type CO-10 | Foot | 106 |

VIEW E-E



ROUND HEAD BOLT DETAIL



Notes:
 All HSS tubing shall be ASTM A500 grade C.
 All plates shall be A570 M270 grade 50.
 All heavy hex nuts shall be according to ASTM A563 grade DH.
 All fully threaded anchor rods shall be ASTM F1554 grade 105.
 The post base plate shall be fastened to the curb snug tight and given an additional 1/8" turn.
 Posts shall not be located closer than 2'-6" to a bridge expansion joint.
 Provide one 1/8" and two 1/8" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 All HSS tubing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.
 Rail splice inserts may be built out of 2-3/8" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.
 All round head bolts shall be ASTM A449.
 The centerline of rail splices shall be placed between 1'-8" to 2'-6" from the centerline of the posts.
 The free end of the splice tube shall be oriented away from the closest post.

Expires: November 30, 2024

DESIGNED - Victor H. Veltz
 CHECKED - Adrian T. Halloway
 DRAWN - Venkat Reddy
 STEFFEN PASSED

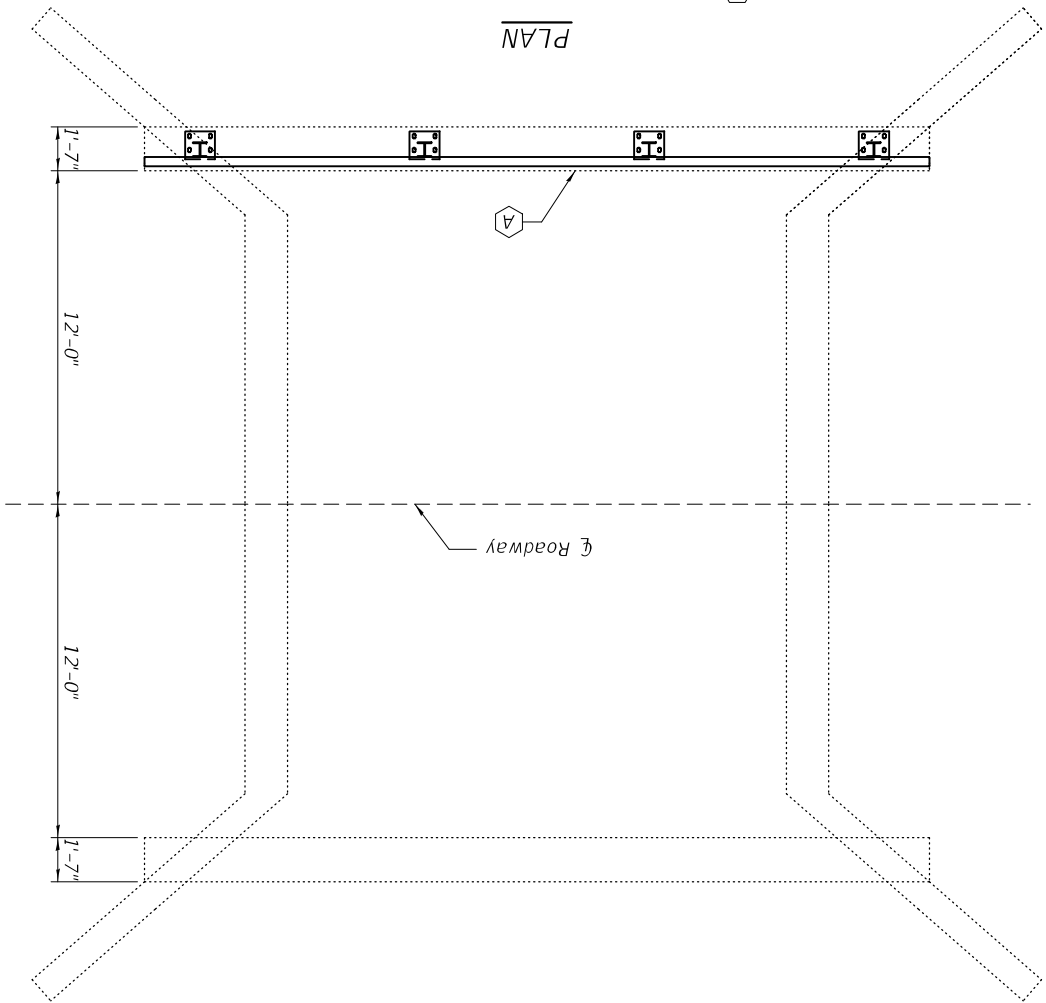
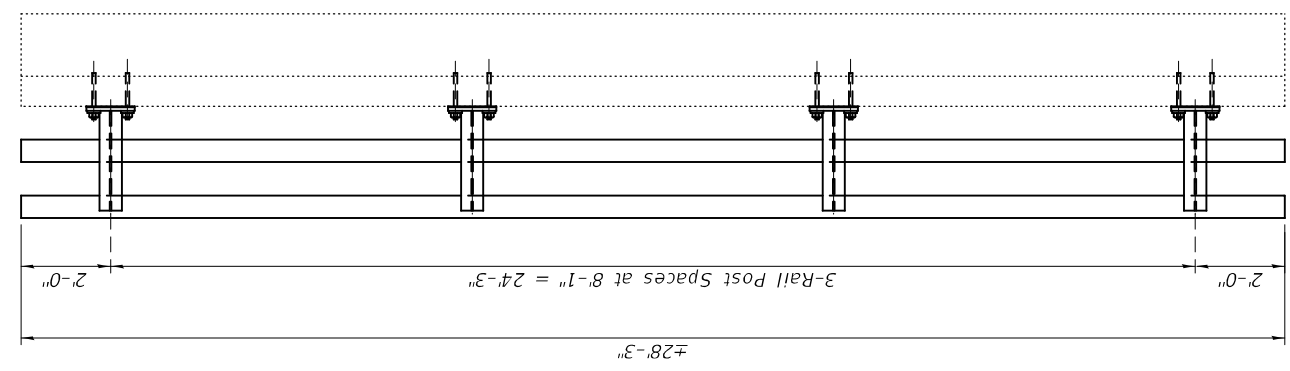


ENGINEER OF BRIDGES AND STRUCTURES
 REVISIONS:
 -
 -
 -
 DATE - MAY 1, 2023

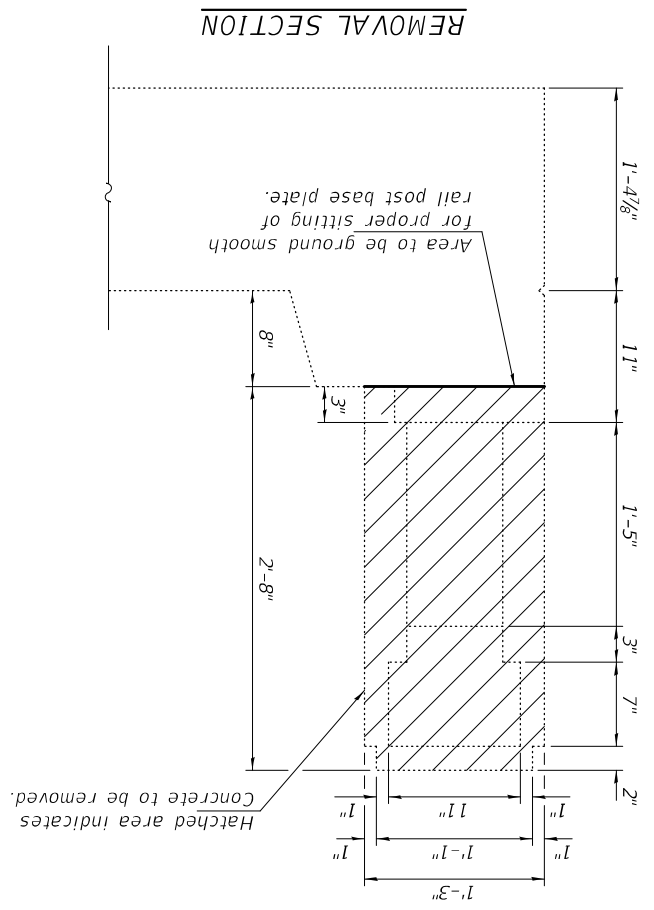
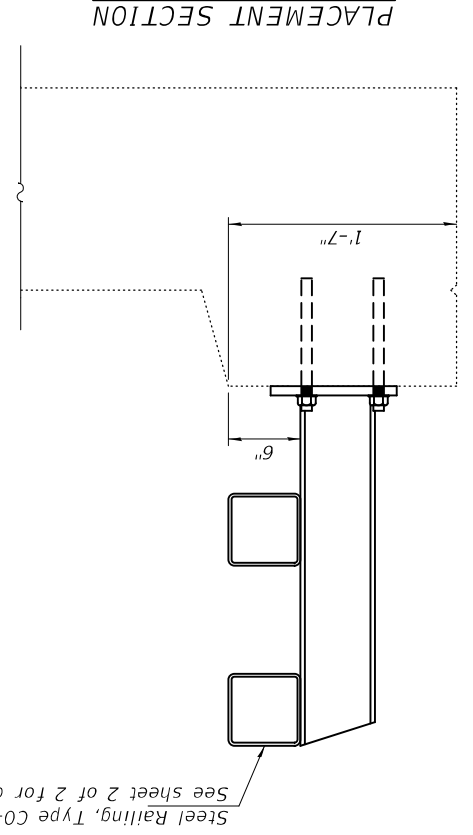
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
 ILL 140 OVER STREAM
 SN 026-0058

SHEET NO. 1 OF 2 SHEETS
 ILLINOIS FED. AID PROJECT
 CONTRACT NO. 74B98
 SECTION D7 BRIDGE REPAIRS 2023-8
 COUNTY
 TOTAL SHEETS 13
 SHEETS NO. 16



A - Remove existing concrete rail and install new Steel Railing, Type C0-10.



GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work. Protective Coat shall be applied to the top of the proposed, smoothly ground top surface of existing horizontal concrete curb at the proposed railing.

TOTAL BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---------------------------|---------|----------|
| Concrete Removal | Cu. Yd. | 1.7 |
| Steel Railing, Type C0-10 | Foot | 29 |
| Protective Coat | Sq. Yd. | 5.0 |

DESIGNED - VHV
 CHECKED - ATH
 DRAWN - STEFFEN
 CHECKED - VHV ATH

DATE - MAY 1, 2023
 REVISIONS -
 ENGINEER OF BRIDGES AND STRUCTURES
 JOHN F. [Signature]

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

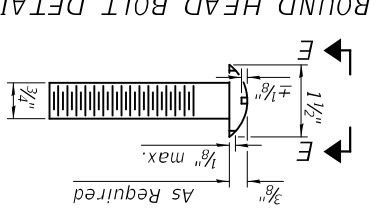
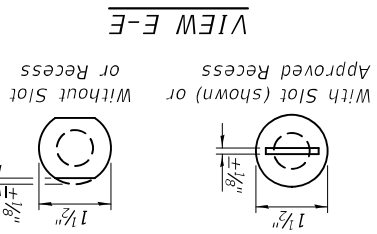
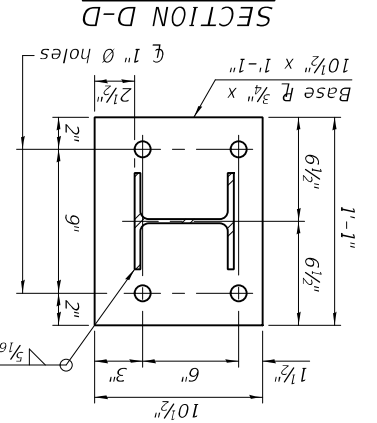
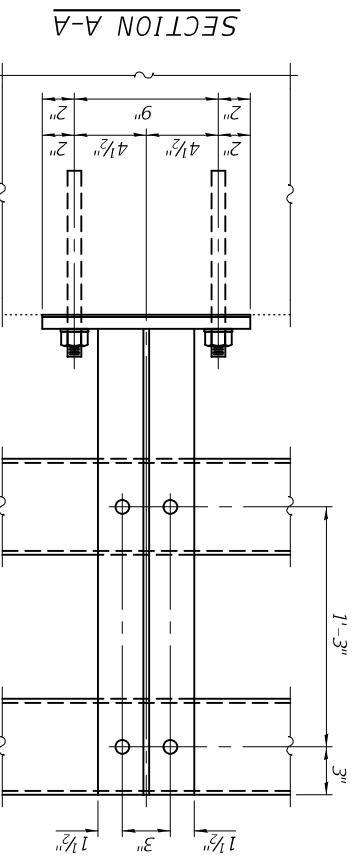
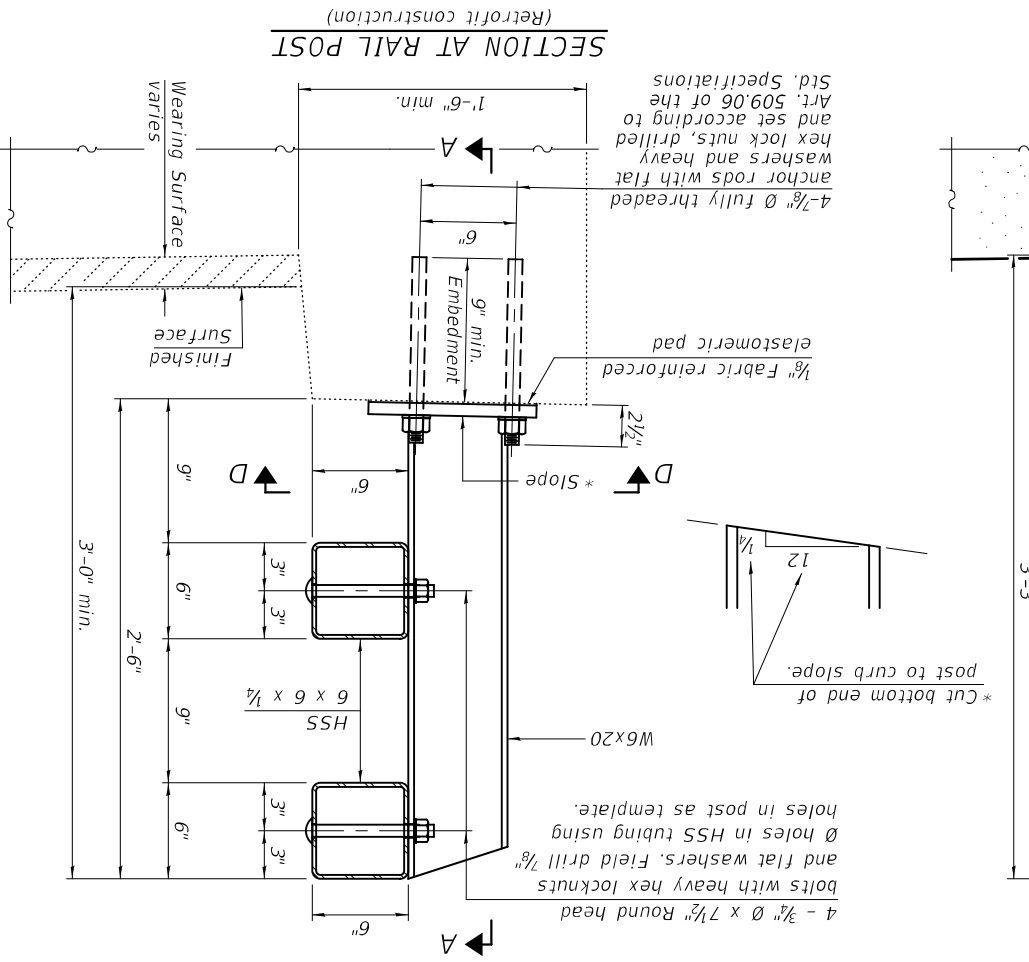
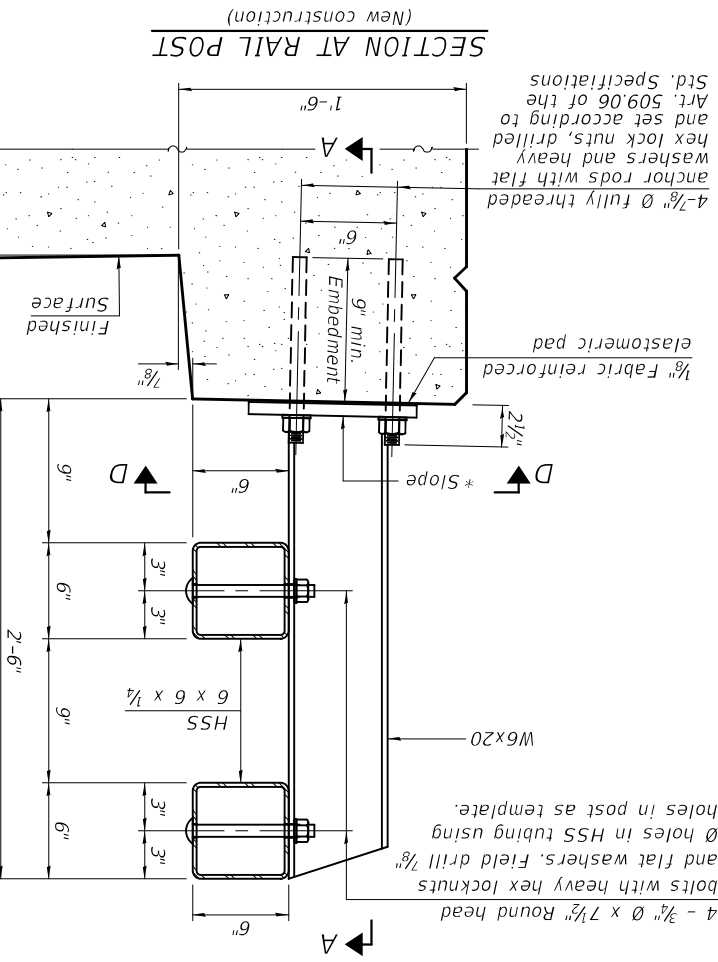
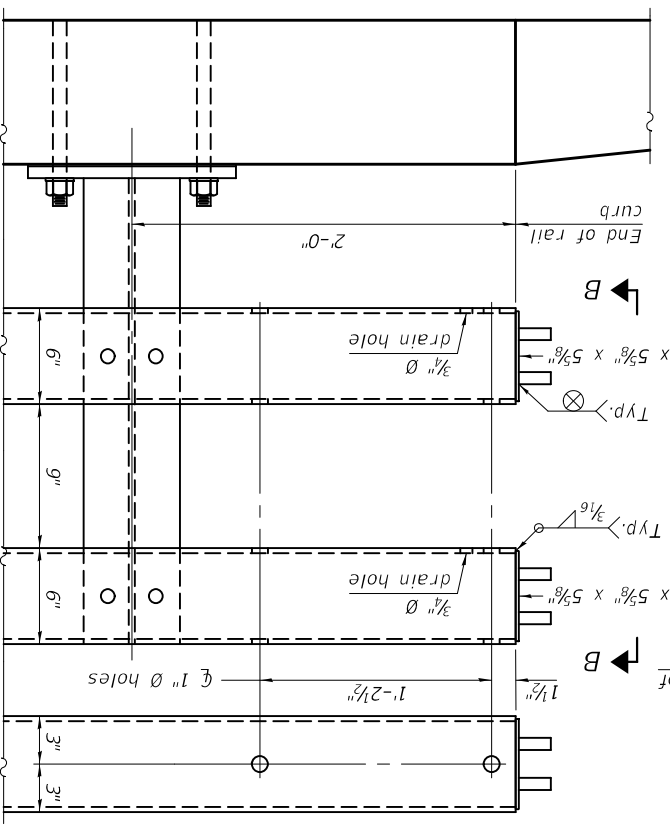
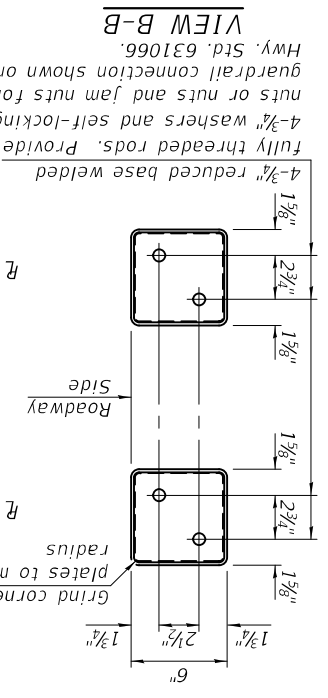
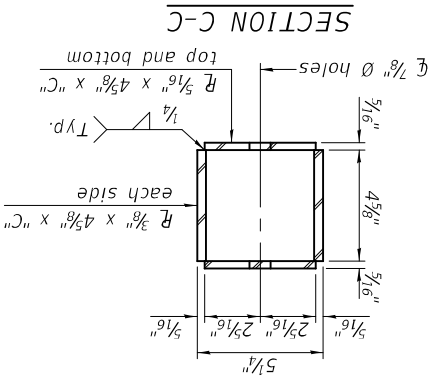
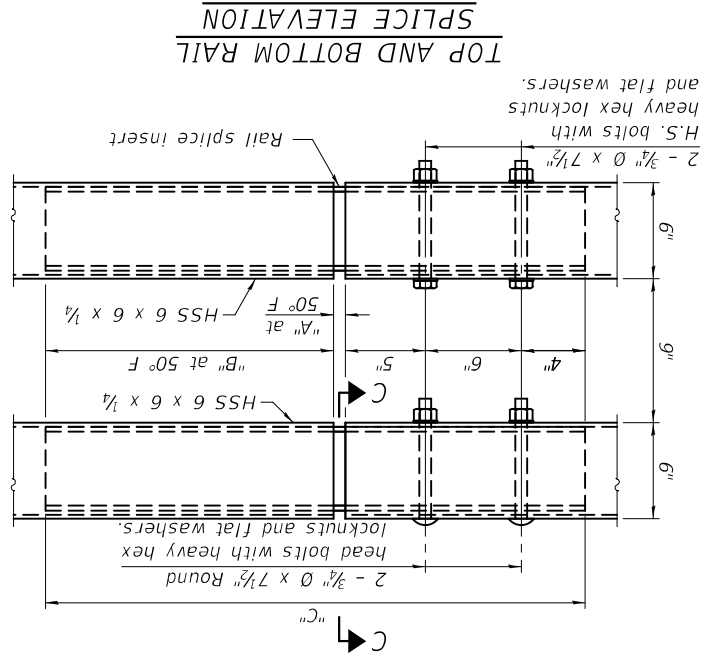
SHEET NO. 2 OF 2 SHEETS
 SN 026-0058
 STEEL RAILING, TYPE CO-10
 SECTION D7 BRIDGE REPAIRS 2023-8
 CONTRACT NO. 74B98
 COUNTY
 TOTAL SHEETS 14
 SHEETS NO. 16

R-42
 10-12-2021

| RAILING CRITERIA | |
|--------------------------|----------------|
| MASH 2016 Test Level | 4 |
| Railing Weight (plf) | 75 |
| Min F _c (psi) | 4,500 |
| Post Spacing Range | 6'-8" - 10'-0" |

| SPLICE DIMENSIONS | |
|------------------------------|------------|
| Location | T |
| All locs. not over exp. fts. | 0 |
| Over Strip Seal Jt. | 2 1/2" |
| Over Finger or Modular Jt. | 1'-8" |
| Over Finger or Modular Jt. | ≤ 9 1/2" |
| Over Finger or Modular Jt. | ≤ 15" |
| 4'-0 3/4" | 2'-1 1/2" |
| 8 1/4" | 8 1/4" |
| 3'-7 1/4" | 1'-10 3/4" |
| 3'-1 1/2" | 3'-1 1/2" |
| 2'-9 1/2" | 1'-6" |
| 1/2" | 1/2" |
| 1'-6" | 1'-6" |
| A | B |
| C | C |

T = 3 3/8"; total movement along centerline of roadway at expansion joint.



Notes:
 All HSS tubing shall be ASTM A500 grade C.
 All plates shall be A570 M270 grade 50.
 All heavy hex nuts shall be according to ASTM A563 grade DH.
 All fully threaded anchor rods shall be ASTM F1554 grade 105.
 The post base plate shall be fastened to the curb snug tight and given an additional 1/8" turn.
 Posts shall not be located closer than 2'-6" to a bridge expansion joint.
 Provide one 1/8" and two 1/8" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 All HSS tubing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.
 Rail splice inserts may be built out of 2-3/8" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.
 All round head bolts shall be ASTM A449.
 The centerline of rail splices shall be placed between 1'-8" to 2'-6" from the centerline of the posts.
 The free end of the splice tube shall be oriented away from the closest post.

BILL OF MATERIAL

| Item | Unit | Quantity |
|---------------------------|------|----------|
| Steel Railing, Type CO-10 | Foot | 29 |

Expires: November 30, 2024



DESIGNED - Stephen M. Ryan
 CHECKED - Adrian T. Halloway
 DRAWN - STEFFEN
 CHECKED - SMR ATH

ENGINEER OF BRIDGES AND STRUCTURES
 PASSED
 DATE - MAY 1, 2023
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

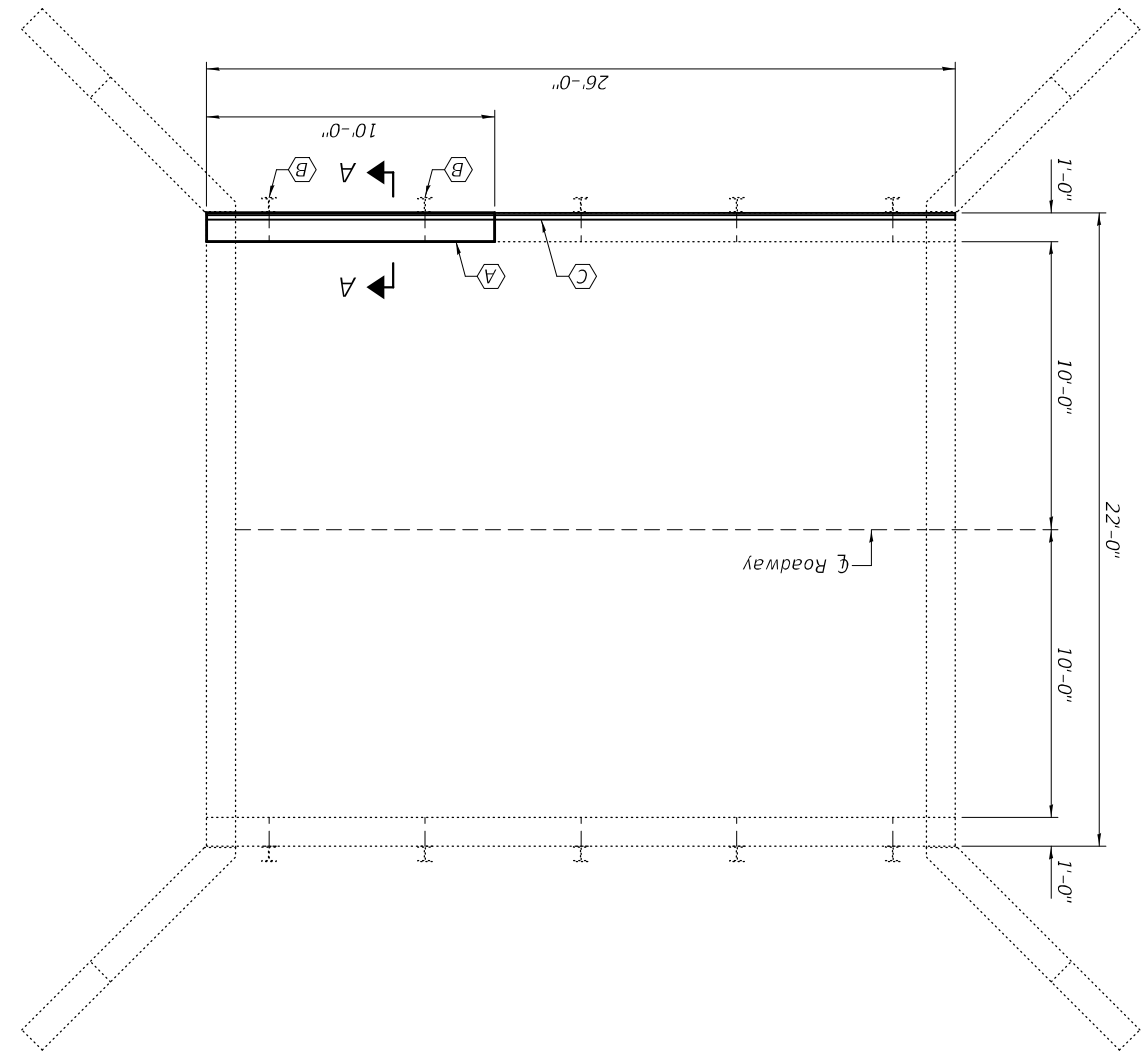
SHEET NO. 1 OF 1 SHEETS

GENERAL PLAN & ELEVATION
 OLD U.S. ROUTE 50 OVER STREAM
 SN 080-0007

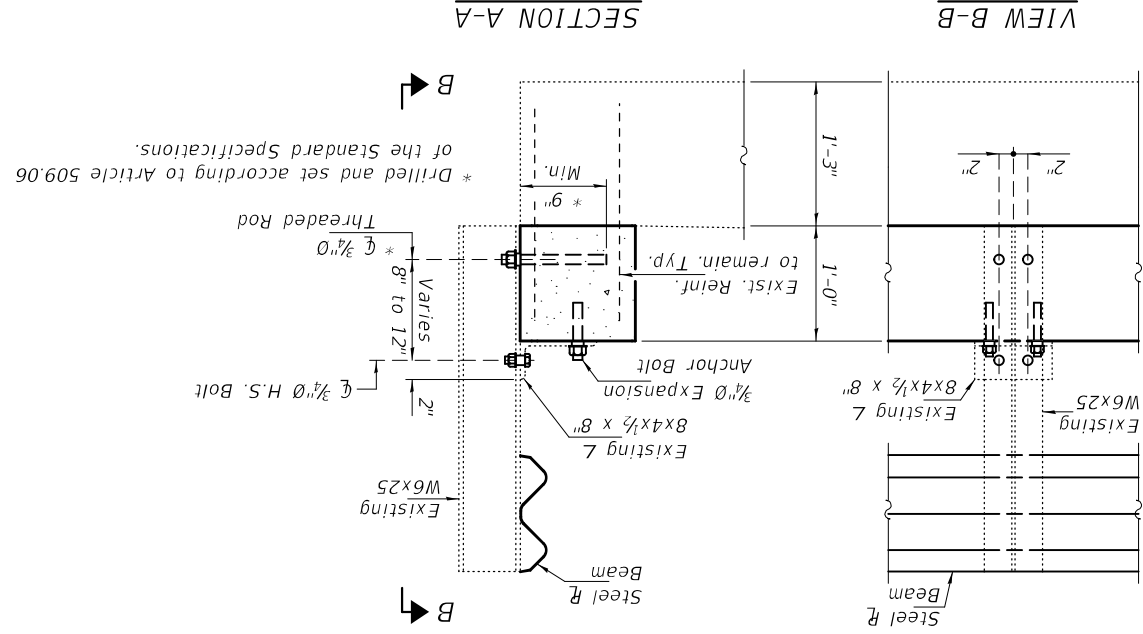
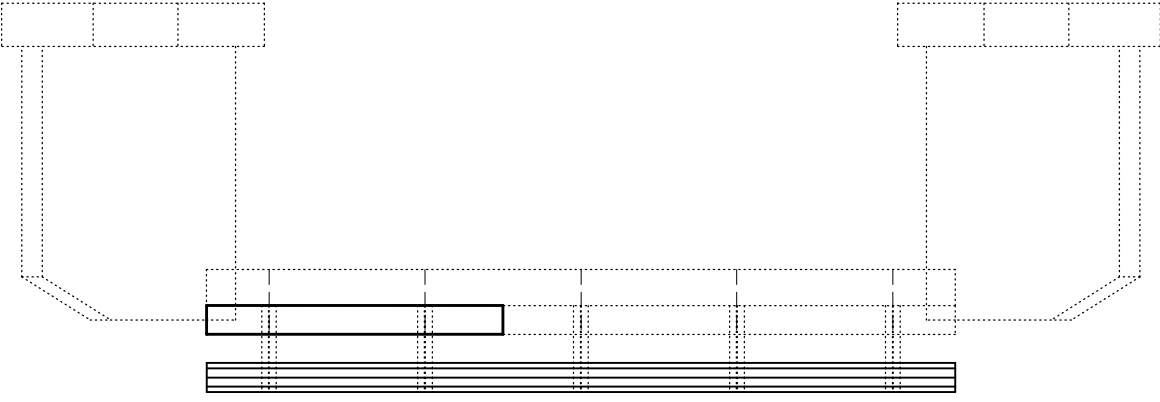
ILLINOIS FED. AID PROJECT
 CONTRACT NO. 74B98
 SECTION D7 BRIDGE REPAIRS 2023-8
 F.A.P. RTE. 327
 COUNTY
 TOTAL SHEETS 16
 SHEETS NO. 15

- (A) - Remove & Replace 10'-0" of Concrete Curb.
- (B) - Reattach Existing Guard Rail Post (2-Locations)
- (C) - Remove & Replace Guard Rail Steel R Beam

PLAN



ELEVATION



* Drilled and set according to Article 509.06 of the Standard Specifications.

| ITEM | UNIT | QUANTITY |
|-------------------------|---------|----------|
| Concrete Removal | Cu. Yd. | 0.4 |
| Concrete Superstructure | Cu. Yd. | 0.4 |
| Rail Element Plates | Each | 2 |
| Protective Coat | Sq. Yd. | 1.0 |

TOTAL BILL OF MATERIAL

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal. Protective Coat shall be applied to the inside face and top of proposed Concrete Curb.

GENERAL NOTES

| | | |
|---|---|----------|
| DESIGNED | - | REVISION |
| DRAWN | - | REVISION |
| CHECKED | - | REVISION |
| DATE | - | REVISION |
| USER NAME = jessica.hill PLOT SCALE = 100.0000' / 1" | | |
| PLOT DATE = 4/4/2023 | | |

- STAGE CONSTRUCTION LEGEND
- TEMPORARY BRIDGE SIGNALS
 - ⊗ IMPACT ATTENUATOR
 - ▬ TEMPORARY CONCRETE BARRIER

| | | | |
|-------------------------|--------|------------------------------|--------|
| STATE OF ILLINOIS | | DEPARTMENT OF TRANSPORTATION | |
| COLES COUNTY LOCATION | | | |
| TRAFFIC CONTROL DETAILS | | | |
| SCALE: | SHEET | OF | SHEETS |
| TO STA. | STA. | SHEETS | OF |
| F.A. RTE. | | SECTION | COUNTY |
| TOTAL SHEET | SHEETS | | |
| NO. | NO. | | |
| 16 | 16 | ** | |
| CONTRACT NO. 74898 | | ILLINOIS FED. AID PROJECT | |



SEE TRAFFIC CONTROL
STANDARD 701321
FOR ADDITIONAL DETAILS

SEE TRAFFIC CONTROL
STANDARD 701321
FOR ADDITIONAL DETAILS

SEE TRAFFIC CONTROL
STANDARD 701321
FOR ADDITIONAL DETAILS

