

055

03-08-2019 LETTING ITEM 055

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.S. SITE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------------------------|-----------|--------|--------------|-----------|
| 379 | 111C-5)CR | KNOX | 62 | 1 |
| ILLINOIS CONTRACT NO. 11-2010 | | | | |

INDEX OF SHEETS

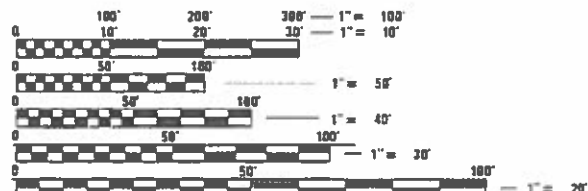
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PROPOSED HIGHWAY PLANS

F.A.S. ROUTE 379 (IL ROUTE 167)
SECTION (111C-5)CR
PROJECT STP-39JA(266)
CULVERT REPLACEMENT
KNOX COUNTY

FUNCTIONAL ROADWAY CLASSIFICATION
OTHER PRINCIPAL ARTERIAL

IL 167
ADT = 775 (2015)
SU = 40
MU = 50

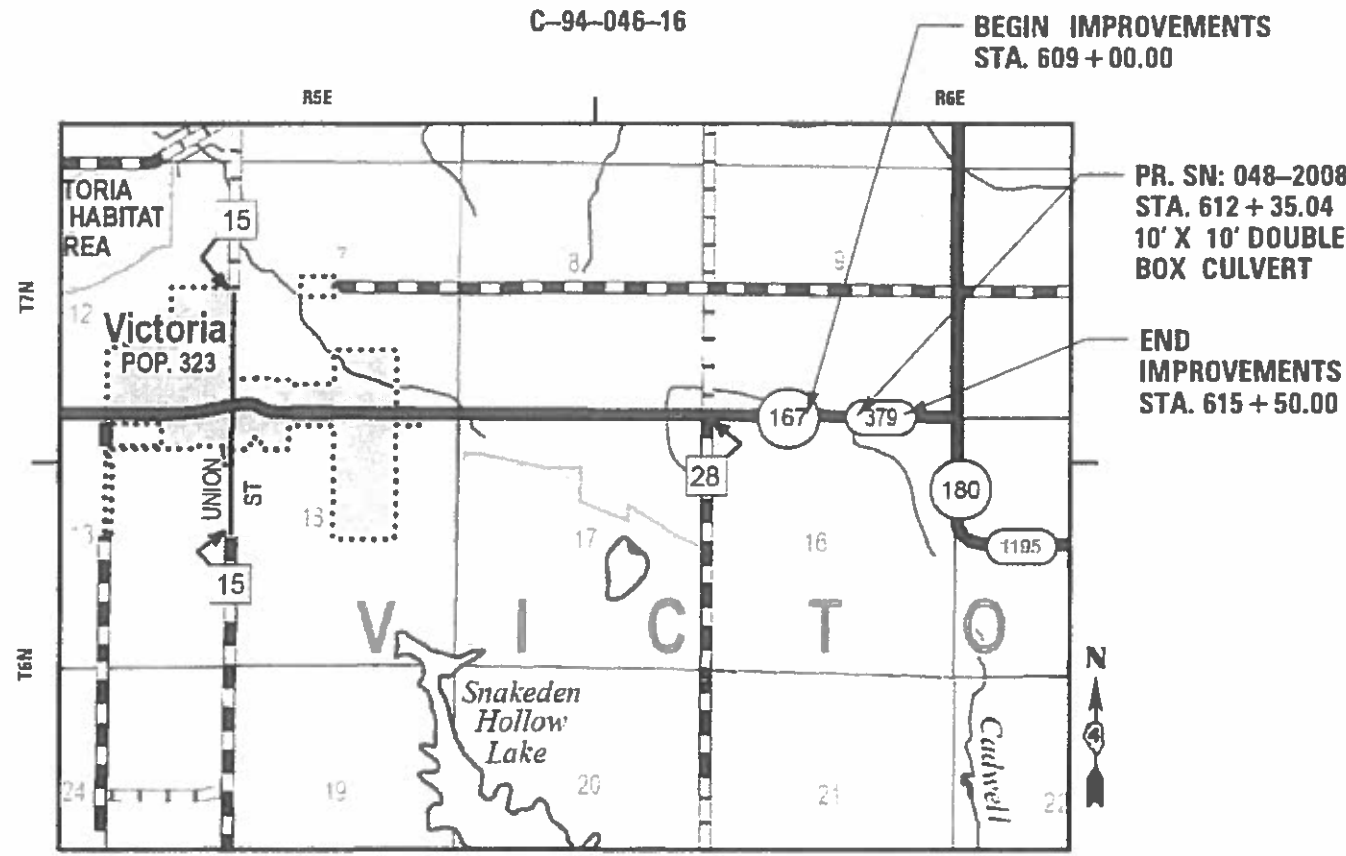


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: RICH DOTSON (309) 671-3455
PROJECT MANAGER: RON NOLTE (309) 671-3470

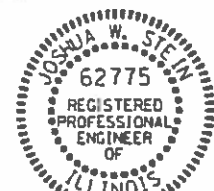
CONTRACT NO. 68D10
CATALOG NO. 031247-02



LOCATION MAP
N.T.S.

GROSS LENGTH = 650 FT. = 0.1231 MILE
NET LENGTH = 650 FT. = 0.1231 MILE

**THOUVENOT,
WADE &
MOERCHEN, INC.**
CORPORATE OFFICE
4940 Old Collinsville Road
Swansea, Illinois 62226
Tel: 618.624.4488
Fax: 618.624.6688
SWANSEA • WATERLOO • EDWARDSVILLE • ST. LOUIS • ST. CHARLES



JOSHUA W. STEIN, P.E. EXPIRATION DATE
LICENSE NO. 062-062775 11-30-2019



PROJECT DESCRIPTION
THIS PROJECT CONSISTS OF REPLACING THE EXISTING 10' X 10' BOX CULVERT WITH A NEW DOUBLE 10' X 10' BOX CULVERT. THIS PROJECT ALSO CONSISTS OF PLACING HOT-MIX ASPHALT PAVEMENT, GUARDRAIL, CHANNEL REALIGNMENT, EARTHWORK AND OTHER COLLATERAL WORK NEEDED TO COMPLETE THIS PROJECT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Dec 14 2018
Kensil A Barnett (RSD)
REGION THREE ENGINEER

Feb 1 2019
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

Feb 1 2019
[Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

DISTRICT 4 GENERAL NOTES

AVAILABILITY OF ELECTRONIC FILES

MICROSTATION AND GEOPAK FILES OF THIS PROJECT WILL BE MADE AVAILABLE TO THE CONTRACTOR AFTER CONTRACT AWARD. IF THERE IS A CONFLICT BETWEEN THE ELECTRONIC FILES AND THE PRINTED CONTRACT PLANS AND DOCUMENTS, THE PRINTED CONTRACT PLANS AND DOCUMENTS SHALL TAKE PRECEDENCE OVER THE ELECTRONIC FILES. THE CONTRACTOR SHALL ACCEPT ALL RISK ASSOCIATED WITH USING THE ELECTRONIC FILES AND SHALL HOLD THE DEPARTMENT HARMLESS FOR ANY ERRORS OR OMISSIONS IN THE ELECTRONIC FILES AND THE DATA CONTAINED THEREIN. ERRORS OR DELAYS RESULTING FROM THE USE OF THE ELECTRONIC FILES BY THE CONTRACTOR SHALL NOT RESULT IN AN EXTENSION OF TIME FOR ANY INTERIM OR FINAL COMPLETION DATE OR SHALL NOT BE CONSIDERED CAUSE FOR ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL NOT USE, SHARE, OR DISTRIBUTE THESE ELECTRONIC FILES EXCEPT FOR THE PURPOSE OF CONSTRUCTING THIS CONTRACT. ANY CLAIMS BY THIRD PARTIES DUE TO USE OR ERRORS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL INCLUDE THIS DISCLAIMER WITH THE TRANSFER OF THESE ELECTRONIC FILES TO ANY OTHER PARTIES AND SHALL INCLUDE APPROPRIATE LANGUAGE BINDING THEM TO SIMILAR RESPONSIBILITIES.

PLAN ELEVATIONS - U.S.G.S. MEAN SEA LEVEL DATUM

ALL ELEVATIONS SHOWN ON THE PLANS ARE ESTABLISHED FROM U.S.G.S. MEAN SEA LEVEL DATUM.

TREE REMOVAL

THE RESIDENT ENGINEER SHOULD BE CONTACTED AND PRIOR APPROVAL OBTAINED FOR ANY TREE REMOVAL BEYOND THE LIMITS/LOCATIONS INCLUDED IN THE PLANS.

ENVIRONMENTAL REVIEWS

PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

- BDE FORM 2289 (BORROW SITE REVIEW)
- BDE FORM 2290 (WASTE/USE SITE REVIEW)
- A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
- SIGNED PROPERTY OWNER AGREEMENT FORM
- COLOR PHOTOGRAPHS DEPICTING THE USE AREA
- BORROW AREA ENTRY AGREEMENT FORM - D4 PLO101

PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS SHALL BE OBTAINED AND FILED BY THE CONTRACTOR. EXCESS WASTE PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS.

ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED DISPOSAL SITES.

PLEASE NOTE THAT A MINIMUM OF FOUR WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED WASTE SITE ENVIRONMENTAL CLEARANCES AND SIX WEEKS FOR THE REQUIRED BORROW SITE ENVIRONMENTAL CLEARANCES.

SEEDING - SIDESLOPE RIPPING

ALL SLOPES STEEPER THAN 3 TO 1 AND OVER 15 FT. IN HEIGHT SHALL BE RIPPED. THIS SHALL CONSIST OF RIPPING BETWEEN 18 INCHES TO 24 INCHES DEEP NORMAL TO THE SLOPE. THE INTERVAL OF RIPPING ALONG THE SLOPE SHALL BE 12 FT. THIS WORK SHALL BE DONE AFTER THE SEED BED HAS BEEN PREPARED BUT BEFORE ANY FERTILIZER OR SEED HAS BEEN APPLIED. THE FERTILIZER AND SEED SHALL BE APPLIED WITHIN A 24-HOUR PERIOD AFTER THE RIPPING HAS BEEN DONE. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE VARIOUS ITEMS OF SEEDING INVOLVED.

PAVEMENT STATION NUMBERS & PLACEMENT

THE CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS REQUIRED TO IMPRINT PAVEMENT STATION NUMBERS IN THE FINISHED SURFACE OF THE PAVEMENT AND/OR OVERLAY. THE NUMBERS SHALL BE APPROXIMATELY 3/4 INCH WIDE, 5 INCHES HIGH AND 5/8 INCH DEEP.

THE PAVEMENT STATION NUMBERS SHALL BE INSTALLED AS SPECIFIED HEREIN:

INTERVAL 200 FEET

BOTTOM OF NUMBERS - 6 INCHES FROM THE INSIDE EDGE OF THE PAVEMENT MARKING.

LOCATION:

- 2,3 & 5 LANE PAVEMENTS - RIGHT EDGE OF PAVEMENT IN DIRECTION OF INCREASING STATIONS
- MULTI-LANE DIVIDED ROADWAYS - OUTSIDE EDGE OF PAVEMENT IN BOTH DIRECTIONS
- RAMPS - ALONG BASELINE EDGE OF PAVEMENT

POSITION - STATIONS SHALL BE PLACED SO THEY CAN BE READ FROM THE ADJACENT SHOULDER

FORMAT - XX+XX WHERE X REPRESENTS THE PAVEMENT STATION

THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE COST OF THE ASSOCIATED PAVEMENT AND/OR OVERLAY PAY ITEMS.

POLYMERIZED BITUMINOUS MATERIALS (TACK COAT) RATES

| SURFACE TYPE | RESIDUAL RATE |
|-----------------------------|---------------|
| MILLED (HMA OR PCC) | 0.08 LB/SF |
| EXISTING PAVEMENT | 0.04 LB/SF |
| FOG COAT (BETWEEN LIFTS) | 0.04 LB/SF |

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

| MIXTURE USE(S) | MAINLINE & SHOULDER SURFACE 1 1/2" | BINDER, BASE COURSE WIDENING, & LOWER SHLDR LIFTS (6 1/2") |
|---|------------------------------------|--|
| AC/PG | PG64-22 | PG64-22 |
| DESIGN AIR VOIDS | 4.0% @ Ndes = 50 | 4.0% @ Ndes = 50 |
| MIX COMPOSITION (GRADUATION MIXTURE) | IL 9.5 | IL 19.0 |
| FRICTION AGG | MIXTURE "C" | N/A |
| QUALITY MANAGEMENT | QCQA | QCQA |

NOTES:

INDIVIDUAL LIFT THICKNESS OF EACH MIX TYPE WILL BE NO LESS THAN 3 TIMES NOMINAL MAXIMUM AGGREGATE SIZE AND NO MORE THAN 6 TIMES NOMINAL MAXIMUM AGGREGATE SIZE.

PLAN QUANTITIES FOR BITUMINOUS CONCRETE ITEMS ARE CALCULATED USING A UNIT WEIGHT OF 112 LB/SOYD/INCH.

BUTT JOINT CUTTING TIME RESTRICTION

BUT JOINTS SHALL NOT BE MILLED MORE THAN THREE (3) DAYS PRIOR TO PLACEMENT OF THE HMA SURFACE COURSE.

PAVING SURFACE COURSE

CONTINUOUS PAVING OPERATIONS ON THE MAIN ROADWAY SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION OF THE HOT-MIX ASPHALT SURFACE. NO INTERRUPTIONS FOR SIDE ROADS, ENTRANCES, TURN LANES, ETC. WILL BE ALLOWED.

ORDERING LENGTH CONFIRMATION - DRAINAGE ITEMS

THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IN REGARD TO THE EXACT LENGTH OF THE BOX/PIPE CULVERTS, STORM SEWERS, AND/OR PIPE DRAINS REQUIRED PRIOR TO ORDERING THESE ITEMS.

RIGHT-OF-WAY MARKERS

WHEN INSTALLING RIGHT-OF-WAY MARKERS, CARE SHALL BE TAKEN TO NOT DISTURB ANY EXISTING PROPERTY/RIGHT-OF-WAY PINS. IF A PROPERTY/RIGHT-OF-WAY PIN IS FOUND AT THE LOCATION OF A PROPOSED RIGHT-OF-WAY MARKER, THE MARKER SHALL BE PLACED ONE (1) FOOT IN FRONT OF THE PIN.

PROJECT SPECIFIC GENERAL NOTES

UTILITIES - LOCATIONS/INFORMATION ON PLANS

UNLESS NOTED OTHERWISE, THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.

SIGNS

EXISTING SIGNS WITHIN THE LIMITS OF THE PROJECT WHICH ARE IN CONFLICT WITH THE PROPOSED CONSTRUCTION SHALL BE REMOVED, STORED, AND REINSTALLED AT THE COMPLETION OF THE PROJECT (PRIOR TO OPENING ROADWAY BACK UP TO TRAFFIC). SEE SPECIAL PROVISIONS.

DISTRICT 4 STANDARDS

| | |
|-----------|--|
| 205001-D4 | SLOPE STEPS DETAIL |
| 440001-D4 | HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING) |
| 540000-D4 | DETAIL OF EXCAVATION AND BACKFILL FOR BOX CULVERTS |
| 606101-D4 | TYPE A GUTTER (SPECIAL), (OUTLET) |
| 630101-D4 | GUARDRAIL EROSION CONTROL TREATMENTS |
| 667101-D4 | PERMANENT SURVEY MARKER, TY. I |
| 780001-D4 | TYPICAL PAVEMENT MARKINGS |

HIGHWAY STANDARDS

| | |
|-----------|---|
| 000001-07 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 001001-02 | AREA OF REINFORCEMENT BARS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 280001-07 | TEMPORARY EROSION CONTROL SYSTEMS |
| 515001-03 | NAME PLATE FOR BRIDGES |
| 630001-12 | STEEL PLATE BEAM GUARDRAIL |
| 630301-09 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS |
| 666001-01 | RIGHT OF WAY MARKERS |
| 701001-02 | OFF-RD OPERATIONS 2L, 2W, MORE THAN 15' AWAY |
| 701006-05 | OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE |
| 701201-05 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH |
| 701306-04 | LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS > 45 MPH |
| 701311-03 | LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY |
| 701901-08 | TRAFFIC CONTROL DEVICES |
| 720001-01 | SIGN PANEL MOUNTING DETAILS |
| 720006-04 | SIGN PANEL ERECTION DETAILS |
| 720011-01 | METAL POSTS FOR SIGNS, MARKERS & DELINEATORS |
| 725001-01 | OBJECT AND TERMINAL MARKERS |
| 728001-01 | TELESCOPING STEEL SIGN SUPPORT |
| 729001-01 | APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS) |
| 780001-05 | TYPICAL PAVEMENT MARKINGS |
| 782006 | GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS |
| BLR21-9 | TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS |

COMMITMENTS

- COMMITMENTS ARE NOT TO BE ALTERED WITHOUT THE WRITTEN APPROVAL OF ALL PARTIES TO WHICH THE COMMITMENT WAS MADE.
- THERE ARE NO COMMITMENTS FOR THIS PROJECT.

| | | | | | | | | | | |
|--|----------------------------------|-----------------|-----------|---|--|--------------------|---------------------|--------------|---------------------------|-----------|
| FILE NAME = | USER NAME = jstein | DESIGNED - MLS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | GENERAL NOTES, HIGHWAY STANDARDS, & COMMITMENTS | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| P:\090072\IL 167\4 CADD - DWG\4.7 Tran | Sheets\0468D10-shit-gennotes.dgn | DRAWN - MLS | REVISED - | | | 379 | (111C-5)CR | KNOX | 62 | 2 |
| Default | PLOT SCALE = 100.0000' / in. | CHECKED - JWS | REVISED - | | | CONTRACT NO. 68D10 | | | | |
| | PLOT DATE = 8/15/2018 | DATE - AUG 2018 | REVISED - | | | SCALE: NTS | SHEET 1 OF 1 SHEETS | STA. TO STA. | ILLINOIS FED. AID PROJECT | |

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | |
|----------|---|-------|----------------|-------------------|--|
| | | | | 0004 | |
| | | | | ROADWAY | |
| | | | | 80% FED | |
| | | | | 20% STATE | |
| RURAL | | | | | |
| 20100500 | TREE REMOVAL, ACRES | ACRE | 0.5 | 0.5 | |
| 20200100 | EARTH EXCAVATION | CU YD | 2975 | 2975 | |
| 20201200 | REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL | CU YD | 740 | 740 | |
| 20700110 | POROUS GRANULAR EMBANKMENT | TON | 1390 | 1390 | |
| 21101615 | TOPSOIL FURNISH & PLACE, 4" | SQ YD | 4109 | 4109 | |
| 25000210 | SEEDING, CLASS 2A | ACRE | 0.75 | 0.75 | |
| 25000400 | NITROGEN FERTILIZER NUTRIENT | POUND | 70 | 70 | |
| 25000500 | PHOSPHORUS FERTILIZER NUTRIENT | POUND | 70 | 70 | |
| 25000600 | POTASSIUM FERTILIZER NUTRIENT | POUND | 70 | 70 | |
| 25100115 | MULCH, METHOD 2 | ACRE | 0.75 | 0.75 | |
| 28000250 | TEMPORARY EROSION CONTROL SEEDING | POUND | 160 | 160 | |
| 28000305 | TEMPORARY DITCH CHECKS | FOOT | 68 | 68 | |
| 28000400 | PERIMETER EROSION BARRIER | FOOT | 404 | 404 | |
| 28100707 | STONE DUMPED RIPRAP, CLASS A4 | SQ YD | 714 | 714 | |

MODEL: #MODEL NAME*
FILE NAME: #FILE#

| | | |
|----------------------|------------|-----------|
| USER NAME = #USER* | DESIGNED - | REVISED - |
| | DRAWN - | REVISED - |
| PLOT SCALE = #SCALE* | CHECKED - | REVISED - |
| PLOT DATE = #DATE* | DATE - | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

| | | | | |
|--------------------|------------|--------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 3 |
| CONTRACT NO. 68D10 | | | | |

ILLINOIS FED. AID PROJECT

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | |
|----------|---|-------|----------------|-------------------|--|
| | | | | 0004 | |
| | | | | ROADWAY | |
| | | | | 80% FED | |
| | | | | 20% STATE | |
| RURAL | | | | | |
| 28200200 | FILTER FABRIC | SQ YD | 1391 | 1391 | |
| 31100910 | SUB-BASE GRANULAR MATERIAL, TYPE A 12" | SQ YD | 536 | 536 | |
| 35600724 | HOT - MIX ASPHALT BASE COURSE WIDENING, 12" | SQ YD | 420 | 420 | |
| 40600275 | BITUMINOUS MATERIALS (PRIME COAT) | POUND | 1026 | 1026 | |
| 40600295 | POLYMERIZED BITUMINOUS MATERIALS (TACK COAT) | POUND | 1369 | 1369 | |
| 40600982 | HOT - MIX ASPHALT SURFACE REMOVAL - BUTT JOINT | SQ YD | 40 | 40 | |
| 40603080 | HOT - MIX ASPHALT BINDER COURSE, IL - 19.0, N50 | TON | 202 | 202 | |
| 40603310 | HOT - MIX ASPHALT SURFACE COURSE, MIX "C", N50 | TON | 156 | 156 | |
| 42001300 | PROTECTIVE COAT | SQ YD | 62 | 62 | |
| 44000100 | PAVEMENT REMOVAL | SQ YD | 283 | 283 | |
| 44000155 | HOT - MIX ASPHALT SURFACE REMOVAL, 1 1/2" | SQ YD | 1256 | 1256 | |
| 44000400 | GUTTER REMOVAL | FOOT | 302 | 302 | |
| 44004250 | PAVED SHOULDER REMOVAL | SQ YD | 149 | 149 | |
| 44300200 | STRIP REFLECTIVE CRACK CONTROL TREATMENT | FOOT | 945 | 945 | |

MODEL - MODEL NAME*
FILE NAME - FILE#

| | | |
|----------------------|------------|-----------|
| USER NAME = *USER* | DESIGNED - | REVISED - |
| | DRAWN - | REVISED - |
| PLOT SCALE = *SCALE* | CHECKED - | REVISED - |
| PLOT DATE = *DATE* | DATE - | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

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|---------------------------|------------|--------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 4 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | |
|------------|--|--------|----------------|-------------------|--|
| | | | | 0004 | |
| | | | | ROADWAY | |
| | | | | 80% FED | |
| | | | | 20% STATE | |
| RURAL | | | | | |
| 48203029 | HOT - MIX ASPHALT SHOULDERS, 8" | SQ YD | 405 | 405 | |
| 50200100 | STRUCTURE EXCAVATION | CU YD | 956.7 | 956.7 | |
| 50300225 | CONCRETE STRUCTURES | CU YD | 86.2 | 86.2 | |
| 50800105 | REINFORCEMENT BARS | POUND | 8790 | 8790 | |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 1150 | 1150 | |
| 51500100 | NAME PLATES | EACH | 1 | 1 | |
| 54001001 | BOX CULVERT END SECTIONS, CULVERT NO. 1 | EACH | 2 | 2 | |
| 59300100 | CONTROLLED LOW - STRENGTH MATERIAL | CU YD | 172.8 | 172.8 | |
| * 63000001 | STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS | FOOT | 512.5 | 512.5 | |
| * 63100167 | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT | EACH | 4 | 4 | |
| 63200310 | GUARDRAIL REMOVAL | FOOT | 542 | 542 | |
| 66600105 | FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS | EACH | 8 | 8 | |
| * 66700205 | PERMANENT SURVEY MARKERS, TYPE I | EACH | 1 | 1 | |
| 67000400 | ENGINEER'S FIELD OFFICE, TYPE A | CAL MO | 3 | 3 | |

*= SPECIALTY ITEM

MODEL NUMBER
FILE NAME

| | | |
|----------------------|------------|-----------|
| USER NAME = *USER* | DESIGNED - | REVISED - |
| | DRAWN - | REVISED - |
| PLOT SCALE = *SCALE* | CHECKED - | REVISED - |
| PLOT DATE = *DATE* | DATE - | REVISED - |

**STATE OF ILLINOIS
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|---------------------------|------------|--------|--------------|-----------|
| 379 | (111C-5)CR | KNOX | 62 | 5 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | |
|------------|---|---------|----------------|-------------------|--|
| | | | | 0004 | |
| | | | | ROADWAY | |
| | | | | 80% FED | |
| | | | | 20% STATE | |
| RURAL | | | | | |
| 67100100 | MOBILIZATION | L SUM | 1 | 1 | |
| 70107025 | CHANGEABLE MESSAGE SIGN | CAL DAY | 120 | 120 | |
| 70300100 | SHORT-TERM PAVEMENT MARKING | FOOT | 136 | 136 | |
| 70300150 | SHORT TERM PAVEMENT MARKING REMOVAL | SQ FT | 45 | 45 | |
| * 72000100 | SIGN PANEL - TYPE 1 | SQ FT | 18 | 18 | |
| * 72501000 | TERMINAL MARKER - DIRECT APPLIED | EACH | 4 | 4 | |
| 72800100 | TELESCOPING STEEL SIGN SUPPORT | FOOT | 31 | 31 | |
| * 78009004 | MODIFIED URETHANE PAVEMENT MARKING - LINE 4" | FOOT | 1463 | 1463 | |
| * 78200005 | GUARDRAIL REFLECTORS, TYPE A | EACH | 8 | 8 | |
| X1200213 | PRECAST CONCRETE BOX CULVERTS 10' X 10' (SPECIAL) | FOOT | 264 | 264 | |
| X2020410 | EARTH EXCAVATION (SPECIAL) | CU YD | 1420 | 1420 | |
| X2810110 | STONE RIPRAP, CLASS A5 (SPECIAL) | SQ YD | 677 | 677 | |
| X5012650 | CONCRETE HEADWALL REMOVAL SPECIAL | EACH | 2 | 2 | |
| X6060097 | CLASS SI CONCRETE (OUTLET), SPECIAL | CU YD | 16 | 16 | |

*= SPECIALTY ITEM

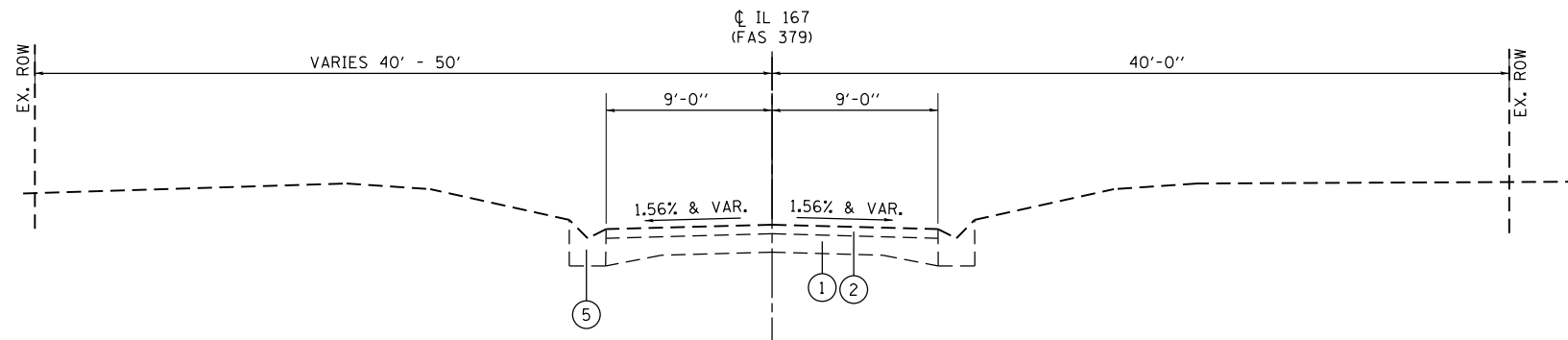
MODEL: #MODEL NAME
FILE NAME: #FILE #

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| USER NAME = #USER* | DESIGNED - | REVISED - |
| | DRAWN - | REVISED - |
| PLOT SCALE = #SCALE* | CHECKED - | REVISED - |
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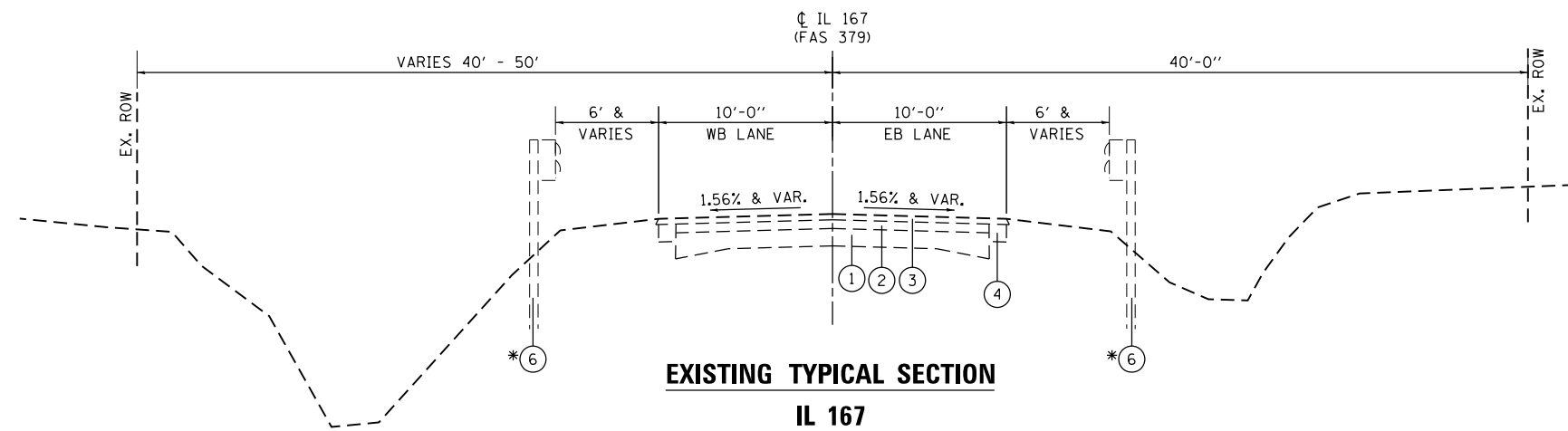
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|--------|--------------------|-----------|
| 379 | (111C-5)CR | KNOX | 62 | 6 |
| ILLINOIS FED. AID PROJECT | | | CONTRACT NO. 68D10 | |



EXISTING TYPICAL SECTION
IL 167
 STA. 609+00 TO STA. 611+00

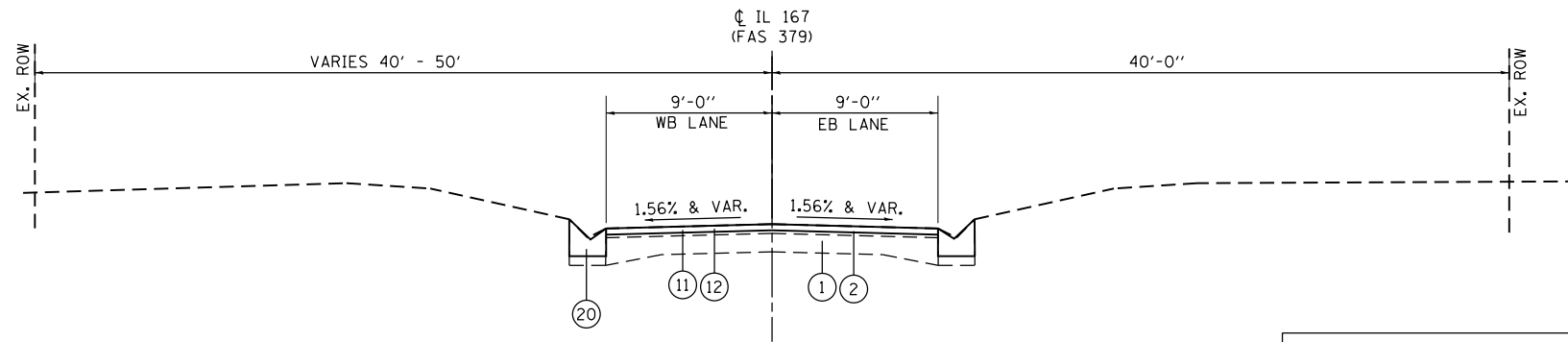


EXISTING TYPICAL SECTION
IL 167
 STA. 611+00 TO STA. 615+50

* GUARDRAIL LEFT
 STA. 610+77.51 TO STA. 612+76.25
 * GUARDRAIL RIGHT
 STA. 610+87.97 TO STA. 614+31.04

LEGEND

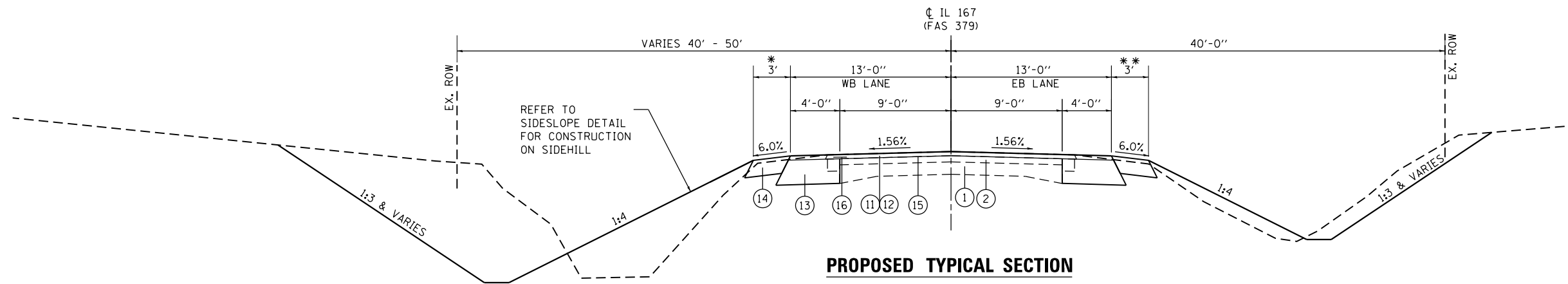
- | | |
|------------------------------|--|
| ① EX. 9'-6"-9" PCC PAVEMENT | ⑪ PR. HMA SURFACE REMOVAL, 1 1/2" |
| ② EX. HMA OVERLAY | ⑫ PR. HMA SURFACE COURSE, MIX "C", N50, 1 1/2" |
| ③ EX. HMA SURFACE COURSE, 2" | ⑬ PR. HMA BASE COURSE WIDENING, 12" |
| ④ EX. HMA SHOULDER | ⑭ PR. HMA SHOULDER, 8" |
| ⑤ EX. CONCRETE GUTTER | ⑮ PR. POLY. BIT. MATERIALS (TACK COAT) |
| ⑥ EX. GUARDRAIL | ⑯ PR. STRIP REFLECTIVE CRACK CONTROL TREATMENT |
| ⑦ | ⑰ PR. HMA BINDER COURSE, IL-19.0, N50, 8 1/2" |
| ⑧ | ⑱ PR. SUBBASE GRANULAR MATERIAL, TYPE A, 12" |
| ⑨ | ⑲ PR. BIT. MATERIALS (PRIME COAT) |
| ⑩ | ⑳ PR. CLASS SI CONC. (OUTLET), SPECIAL |
| | ㉑ PR. GUARDRAIL AGG. EROSION CONTROL |



**PROPOSED TYPICAL SECTION
IL 167**

STA. 609+00.00 TO STA. 609+36.00

NOTE:
SEE PAVEMENT MARKING PLAN FOR TRANSITION
OF TRAFFIC LANE FROM 9'-13' WIDTH



**PROPOSED TYPICAL SECTION
IL 167**

STA. 609+36.00 TO STA. 610+72.83
STA. 614+72.83 TO STA. 615+50.00

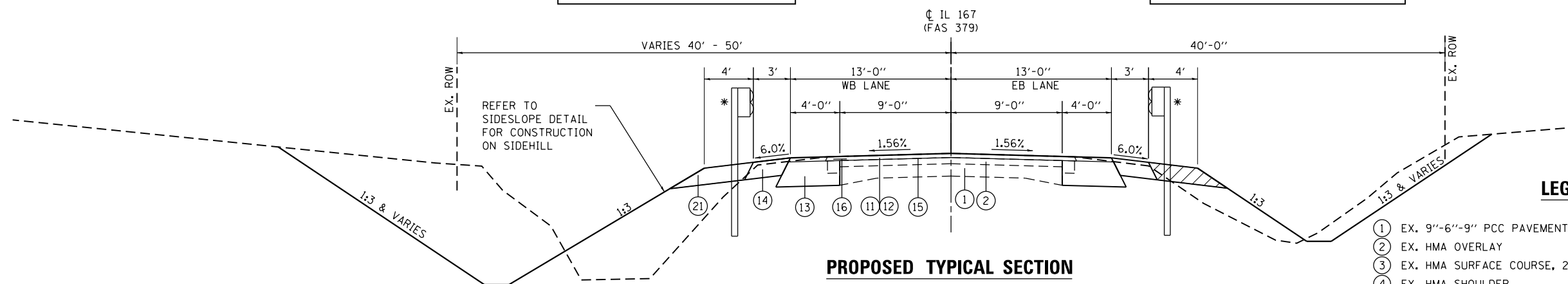
* SHOULDER TRANSITION (3'-7') LEFT
STA. 610+44.84 TO STA. 610+67.86

* SHOULDER TRANSITION (7'-3') LEFT
STA. 614+00.36 TO STA. 614+25.42

** SHOULDER TRANSITION (3'-7') RIGHT
STA. 610+37.76 TO STA. 610+62.83

** SHOULDER TRANSITION (7'-3') RIGHT
STA. 614+82.83 TO STA. 615+05.85

NOTES:
1. SEE CROSS SECTIONS FOR
MORE INFORMATION



**PROPOSED TYPICAL SECTION
IL 167**

STA. 610+72.83 TO STA. 611+43.50
STA. 612+85.00 TO STA. 614+72.83

* GUARDRAIL LEFT
STA. 610+77.86 TO STA. 612+90.36

* GUARDRAIL RIGHT
STA. 610+72.83 TO STA. 614+72.83

- LEGEND**
- ① EX. 9"-6"-9" PCC PAVEMENT
 - ② EX. HMA OVERLAY
 - ③ EX. HMA SURFACE COURSE, 2"
 - ④ EX. HMA SHOULDER
 - ⑤ EX. CONCRETE GUTTER
 - ⑥ EX. GUARDRAIL
 - ⑦
 - ⑧
 - ⑨
 - ⑩
 - ⑪ PR. HMA SURFACE REMOVAL, 1 1/2"
 - ⑫ PR. HMA SURFACE COURSE, MIX "C", N50, 1 1/2"
 - ⑬ PR. HMA BASE COURSE WIDENING, 12"
 - ⑭ PR. HMA SHOULDER, 8"
 - ⑮ PR. POLY. BIT. MATERIALS (TACK COAT)
 - ⑯ PR. STRIP REFLECTIVE CRACK CONTROL TREATMENT
 - ⑰ PR. HMA BINDER COURSE, IL-19.0, N50, 8 1/2"
 - ⑱ PR. SUBBASE GRANULAR MATERIAL, TYPE A, 12"
 - ⑲ PR. BIT. MATERIALS (PRIME COAT)
 - ⑳ PR. CLASS SI CONC. (OUTLET), SPECIAL
 - ㉑ PR. GUARDRAIL AGG. EROSION CONTROL

| | | | |
|--|-----------------------------|-----------------|-----------|
| FILE NAME = D468010-sht-typical.dgn | USER NAME = jstein | DESIGNED - JWS | REVISED - |
| Default | PLOT SCALE = 10.0000' / in. | DRAWN - TMG | REVISED - |
| | PLOT DATE = 8/14/2018 | CHECKED - JWS | REVISED - |
| | | DATE - AUG 2018 | REVISED - |

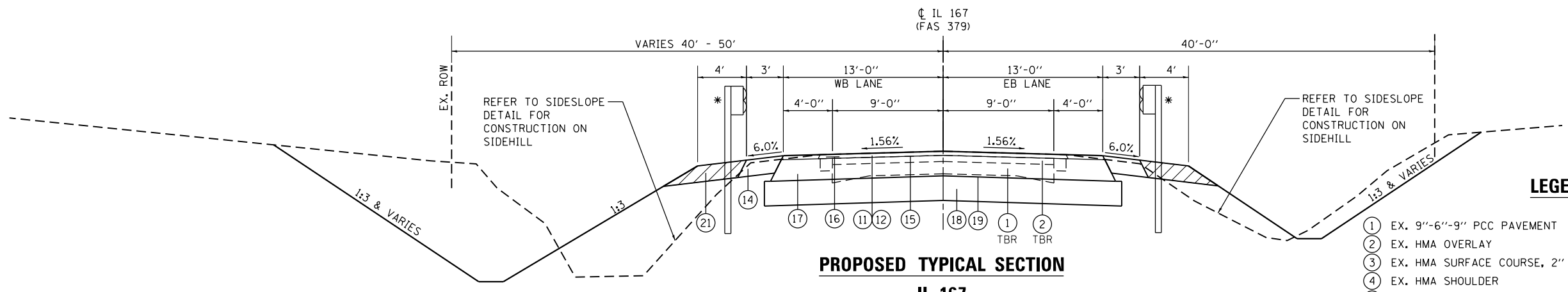
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED TYPICAL SECTIONS

SCALE: NTS SHEET 2 OF 3 SHEETS STA. TO STA.

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|--------|--------------|-----------|
| 379 | (111C-5)CR | KNOX | 62 | 9 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

NOTES:
1. SEE CROSS SECTIONS FOR MORE INFORMATION



LEGEND

- ① EX. 9"-6"-9" PCC PAVEMENT
- ② EX. HMA OVERLAY
- ③ EX. HMA SURFACE COURSE, 2"
- ④ EX. HMA SHOULDER
- ⑤ EX. CONCRETE GUTTER
- ⑥ EX. GUARDRAIL
- ⑦
- ⑧
- ⑨
- ⑩
- ⑪ PR. HMA SURFACE REMOVAL, 1 1/2"
- ⑫ PR. HMA SURFACE COURSE, MIX "C", N50, 1 1/2"
- ⑬ PR. HMA BASE COURSE WIDENING, 12"
- ⑭ PR. HMA SHOULDER, 8"
- ⑮ PR. POLY. BIT. MATERIALS (TACK COAT)
- ⑯ PR. STRIP REFLECTIVE CRACK CONTROL TREATMENT
- ⑰ PR. HMA BINDER COURSE, IL-19.0, N50, 8 1/2"
- ⑱ PR. SUBBASE GRANULAR MATERIAL, TYPE A, 12"
- ⑲ PR. BIT. MATERIALS (PRIME COAT)
- ⑳ PR. CLASS SI CONC. (OUTLET), SPECIAL
- ㉑ PR. GUARDRAIL AGG. EROSION CONTROL

*GUARDRAIL LEFT
STA. 610+77.86 TO STA. 612+90.36

*GUARDRAIL RIGHT
STA. 610+72.83 TO STA. 614+72.83

**PROPOSED TYPICAL SECTION
IL 167**

STA. 611+43.50 TO STA. 612+85.00

NOTE:
SEE POROUS GRANULAR EMBANKMENT DETAIL
FOR LIMITS AROUND PROPOSED 10' X 10' BOX CULVERT (DOUBLE)

| | | | |
|--|-----------------------|-----------------|-----------|
| FILE NAME = D468010-sh1-typical.dgn | USER NAME = jstein | DESIGNED - MLS | REVISED - |
| | | DRAWN - MLS | REVISED - |
| | | CHECKED - JWS | REVISED - |
| Default | PLOT DATE = 8/14/2018 | DATE - AUG 2018 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED TYPICAL SECTIONS

SCALE: NTS SHEET 3 OF 3 SHEETS STA. TO STA.

| | | | | |
|---------------------------|-----------------------|----------------|--------------------|-----------------|
| F.A.S. RTE. 379 | SECTION (111C-5)CR | COUNTY KNOX | TOTAL SHEETS 62 | SHEET NO. 10 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

| EARTHWORK SCHEDULE | | | | | | | | | | |
|--------------------|-----------|----|-----------|------------------|---|----------------------------|----------------------|---|------------|--------------------------------|
| LOCATION | | | | EARTH EXCAVATION | REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL | EARTH EXCAVATION (SPECIAL) | STRUCTURE EXCAVATION | FOR INFORMATION ONLY | | |
| | | | | | | | | EARTH EXCAVATION ADJUSTED FOR 25% SHRINKAGE | EMBANKMENT | BALANCE WASTE (+) SHORTAGE (-) |
| ROUTE | STATION | TO | STATION | SUITABLE CU YD | UNSUITABLE CU YD | BOX CULVERT CU YD | DROP STR. CU YD | CU YD | CU YD | CU YD |
| IL 167 | | | | | | | | | | |
| IL 167 | 609+00.00 | TO | 615+50.00 | 2973 | 740 | | | 2784.8 | 1467 | 1317.8 |
| BOX CULVERT | 611+85.78 | TO | 612+97.85 | | | 1421 | | 1065.8 | | 1065.8 |
| DROP STRUCTURE | 611+63.87 | TO | 611+94.55 | | | | 956.7 | 717.5 | | 717.5 |
| SUB-TOTAL# | | | | 2973 | 740 | 1421 | 956.7 | 4568 | 1467 | 3101 |
| PAY TOTAL# | | | | 2975 | 740 | 1420 | | | | |

• SEE CULVERT SN 048-2008 SHEETS

| POROUS GRANULAR EMBANKMENT SCHEDULE | | | | |
|-------------------------------------|-----------|----|-----------|----------------------------|
| LOCATION | | | | POROUS GRANULAR EMBANKMENT |
| ROUTE | STATION | TO | STATION | TON |
| IL 167 | | | | |
| Box Culvert | 611+78.14 | TO | 612+97.15 | 1390.0 |
| TOTAL# | | | | 1390 |

| TREE REMOVAL SCHEDULE | | | | | | | | |
|-----------------------|--------|-------|----|-----------|--------|-------|-------|---------------------|
| LOCATION | | | | | | | | TREE REMOVAL, ACRES |
| STATION | OFFSET | LT/RT | TO | STATION | OFFSET | LT/RT | ACRE | |
| IL 167 | | | | | | | | |
| 609+20.99 | 77.22 | LT | TO | 610+52.13 | 42.59 | LT | 0.054 | |
| 609+34.44 | 109.78 | LT | TO | 611+84.42 | 36.3 | LT | 0.151 | |
| 609+49.24 | 28.26 | RT | TO | 609+93.11 | 29.5 | RT | 0.004 | |
| 610+53.52 | 41.81 | RT | TO | 614+33.57 | 31.55 | RT | 0.219 | |
| 610+66.84 | 26.60 | LT | TO | 611+81.88 | 24.1 | LT | 0.006 | |
| 612+88.23 | 97.94 | RT | TO | 614+01.26 | 81.36 | RT | 0.024 | |
| TOTAL# | | | | | | | 0.458 | |
| PAY TOTAL# | | | | | | | 0.50 | |

| REMOVAL SCHEDULE | | | | | | | | | |
|------------------|----|-----------|-------|------------------|---|---|----------------|------------------------|-------------------|
| LOCATION | | | | PAVEMENT REMOVAL | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JT | HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2" | GUTTER REMOVAL | PAVED SHOULDER REMOVAL | GUARDRAIL REMOVAL |
| STATION | TO | STATION | NOTES | SQ YD | SQ YD | SQ YD | FOOT | SQ YD | FOOT |
| IL 167 | | | | | | | | | |
| 609+00.00 | TO | 609+10.00 | | | 19.6 | | | | |
| 609+00.00 | TO | 610+50.30 | LT | | | | 152.0 | | |
| 609+00.00 | TO | 610+48.93 | RT | | | | 150.0 | | |
| 609+10.00 | TO | 611+43.50 | | | | 463.3 | | | |
| 610+30.72 | TO | 615+50.00 | RT | | | | | 86.3 | |
| 610+77.51 | TO | 612+76.25 | | | | | | | 198.86 |
| 610+78.92 | TO | 615+50.00 | LT | | | | | 62.7 | |
| 610+87.97 | TO | 614+31.04 | | | | | | | 343.32 |
| 611+43.50 | TO | 612+85.00 | | 283.0 | | 283.0 | | | |
| 612+85.00 | TO | 615+40.00 | | | | 510.0 | | | |
| 615+40.00 | TO | 615+50.00 | | | 20.0 | | | | |
| TOTAL# | | | | 283 | 40 | 1256 | 302 | 149 | 542 |

| PAVING SCHEDULE | | | | | | | | | | | |
|-----------------|----|-----------|--|--|---|--|-----------------------------------|---|--|--|------------|
| LOCATION | | | | SUBBASE GRANULAR MATERIAL, TYPE A, 12" | HOT-MIX ASPHALT BASE COURSE WIDENING, 12" | POLYMERIZED BITUMINOUS MATERIALS (TACK COAT) | BITUMINOUS MATERIALS (PRIME COAT) | HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 | HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 | STRIP REFLECTIVE CRACK CONTROL TREATMENT | |
| | | | | | | 0.08 LB/SF (MILL) | | | | | |
| STATION | TO | STATION | NOTES | SQ YD | SQ YD | 0.04 LB/SF (FOG) | 0.25 LB/SQ FT | 8 1/2" | 1 1/2" | FOOT | |
| IL 167 | | | | | | | | | | | |
| 609+00.00 | TO | 609+36.00 | TAPER | | | | 50.7 | | 5.9 | | |
| 609+36.00 | TO | 611+43.50 | 1 1/2" MILL | | | | 298.8 | | | | |
| 609+36.00 | TO | 611+43.50 | LT/RT (WIDENING) | | 184.4 | | • 146.6 | | | 415.0 | |
| 611+43.50 | TO | 612+85.00 | FULL RECONSTRUCTION | 455.9 | | | • 303.8 | 1025.9 | 201.8 | 149.6 | |
| 611+59.35 | TO | 611+73.02 | ADDITIONAL DEPTH TO MATCH TOP OF EXISTING AND PROPOSED BOX CULVERT | 2.6 | | | | | | | |
| 611+92.00 | TO | 612+01.03 | | 4.1 | | | | | | | |
| 611+92.80 | TO | 612+06.83 | | 2.6 | | | | | | | |
| 611+93.53 | TO | 612+32.54 | | 33.2 | | | | | | | |
| 612+37.53 | TO | 612+76.54 | | 33.2 | | | | | | | |
| 612+69.04 | TO | 612+78.04 | 4.1 | | | | | | | | |
| 612+85.00 | TO | 615+50.00 | 1 1/2" MILL | | | | 381.6 | | | | |
| 612+85.00 | TO | 615+50.00 | LT/RT (WIDENING) | | 235.6 | | • 187.3 | | | 530.0 | |
| TOTAL: | | | | 536 | 420 | | 1369 | 1026 | 202 | 156 | 945 |

• INCLUDES 2 FOG COATS

| GUTTER SCHEDULE | | | | | | | |
|-----------------|----|-----------|-------|-------------------------------------|-----------------|--|--|
| LOCATION | | | | CLASS SI CONCRETE (OUTLET), SPECIAL | PROTECTIVE COAT | | |
| STATION | TO | STATION | NOTES | CU YD | SQ YD | | |
| IL 167 | | | | | | | |
| 609+00.00 | TO | 609+68.53 | RT | 7.8 | 31.2 | | |
| 609+00.00 | TO | 609+68.53 | LT | 7.8 | 31.2 | | |
| TOTAL: | | | | 16 | 62 | | |

| SHOULDER SCHEDULE | | | | | | |
|-------------------|----|-----------|-------|-------------------------------|--|--|
| LOCATION | | | | HOT-MIX ASPHALT SHOULDERS, 8" | | |
| STATION | TO | STATION | NOTES | SQ YD | | |
| IL 167 | | | | | | |
| 609+36.00 | TO | 615+50.00 | LT | 202.4 | | |
| 609+36.00 | TO | 615+50.00 | RT | 202.9 | | |
| TOTAL: | | | | 405 | | |

| SEEDING SCHEDULE | | | | | | | | | | |
|-------------------|----|-----------|-------|-------------------|------------------------------|--------------------------------|-------------------------------|-----------------|--|-------------------------------|
| LOCATION | | | | SEEDING, CLASS 2A | NITROGEN FERTILIZER NUTRIENT | PHOSPHORUS FERTILIZER NUTRIENT | POTASSIUM FERTILIZER NUTRIENT | MULCH, METHOD 2 | TEMP. EROSION CONTROL SEEDING (2 APPL.) | TOPSOIL FURNISH AND PLACE, 4" |
| STATION | TO | STATION | LT/RT | ACRE | POUND | POUND | POUND | ACRE | POUND | SO YD |
| IL 167 | | | | | | | | | | |
| 609+00.00 | TO | 615+50.00 | LT/RT | 0.79 | 71.2 | 71.2 | 71.2 | 0.79 | 158.20 | 4108.9 |
| TOTAL: | | | | 0.79 | 71.2 | 71.2 | 71.2 | 0.79 | 158.20 | 4108.9 |
| PAY TOTAL: | | | | 0.75 | 70 | 70 | 70 | 0.75 | 160 | 4109 |

| RIPRAP SCHEDULE | | | | | |
|-----------------|----|-----------|-------|-------------------------------|---------------|
| LOCATION | | | | STONE DUMPED RIPRAP, CLASS A4 | FILTER FABRIC |
| STATION | TO | STATION | NOTES | SO YD | SO YD |
| IL 167 | | | | | |
| 609+50.00 | TO | 611+38.73 | LT | 349.8 | 349.8 |
| 609+68.53 | TO | 610+00.00 | RT | 51.2 | 51.2 |
| 609+68.53 | TO | 609+98.98 | LT | 46.4 | 46.4 |
| 610+00.00 | TO | 612+67.50 | RT | 266.6 | 266.6 |
| TOTAL: | | | | 714 | 714 |

SEE CULVERT SHEETS FOR ADDITIONAL QUANTITY

| TEMPORARY DITCH CHECKS SCHEDULE | | | |
|---------------------------------|--------|-------|------------------------|
| LOCATION | | | TEMPORARY DITCH CHECKS |
| STATION | OFFSET | NOTES | FOOT |
| IL 167 | | | |
| 612+19.98 | 58.85 | LT | 14 |
| 612+59.93 | 44.27 | LT | 12 |
| 612+99.97 | 29.40 | LT | 10 |
| 613+49.96 | 74.94 | RT | 22 |
| 614+42.00 | 26.53 | LT | 10 |
| TOTAL: | | | 68 |

| PERIMETER EROSION BARRIER SCHEDULE | | | |
|------------------------------------|----|-----------|---------------------------|
| LOCATION | | | PERIMETER EROSION BARRIER |
| STATION | TO | STATION | FOOT |
| IL 167 | | | |
| 609+00.00 | TO | 609+66.68 | LT 68 |
| 609+00.00 | TO | 609+83.94 | RT 87 |
| 611+28.14 | TO | 612+19.30 | LT 99 |
| 614+00.00 | TO | 615+50.00 | RT 150 |
| TOTAL: | | | 404 |

| PRECAST BOX CULVERT SCHEDULE (ASTM C 1577) | | | | | |
|--|----------------------|-------|----------------------|------|-----------------------|
| STATION | SIZE (SPAN X HEIGHT) | SKEW* | DESIGN FILL (FT.) | | PGE BACKFILL REQUIRED |
| | | | EDGE OF SHLDR. (MIN) | MAX. | |
| 612+35.04 | 2 - 10' X 10' | 45° | 4.1' | 4.6' | YES |

*SKEWS > 30° WITH DESIGN FILLS < 5 FT. REQUIRE A SPECIAL DESIGN. SEE BDE SPECIAL PROVISION "CONCRETE BOX CULVERTS WITH SKEWS > 30 DEGREES AND DESIGN FILLS < 5 FEET (BDE)". THE SKEW ANGLE BETWEEN A PERPENDICULAR LINE TO THE BOX CULVERT AND THE CENTERLINE OF THE ROADWAY.

| GUARDRAIL SCHEDULE | | | | | | |
|--------------------|--------------|--|--|--------------------------------|------------------------------|-------------------------------------|
| LOCATION | | STEEL PLATE BEAM GUARDRAIL, TA, 6' POSTS | TRAFFIC BARRIER TERMINAL, T1 (SPL) TANGENT | TERMINAL MARKER DIRECT APPLIED | GUARDRAIL REFLECTORS, TYPE A | GUARDRAIL AGGREGATE EROSION CONTROL |
| STATION | | FOOT | EACH | EACH | EACH | TON |
| IL 167 | | | | | | |
| 610+37.76 | TO 615+05.85 | RT | | | | 92.1 |
| 610+44.84 | TO 614+25.42 | LT | | | | 73.95 |
| 610+72.83 | TO 611+22.83 | RT | 1 | 1 | | |
| 610+77.86 | TO 611+27.86 | LT | 1 | 1 | | |
| 611+22.83 | TO 614+22.83 | RT | 300.0 | | 4 | |
| 611+27.86 | TO 613+40.36 | LT | 212.5 | | 4 | |
| 613+40.36 | TO 613+90.36 | LT | | 1 | 1 | |
| 614+22.83 | TO 614+72.83 | RT | | 1 | 1 | |
| TOTAL# | | 512.5 | 4 | 4 | 8 | 166 |

| PAVEMENT MARKING SCHEDULE | | | | | | | |
|---------------------------|----|-----------|----------|------------------|--------------|------------------------------------|-------------|
| LOCATION | | | | | | MODIFIED URETHANE PAVEMENT MARKING | |
| | | | | | | LINE - 4" | |
| | | | | | | YELLOW | WHITE |
| STATION | TO | STATION | LOCATION | TYPE | FOOT | FOOT | |
| IL 167 | | | | | | | |
| 609+00.00 | TO | 615+50.00 | CL | YELLOW SKIP-DASH | 162.5 | | |
| 609+00.00 | TO | 615+50.00 | LT EDGE | WHITE SINGLE | | 650.0 | |
| 609+00.00 | TO | 615+50.00 | RT EDGE | WHITE SINGLE | | 650.0 | |
| TOTAL# | | | | | 162.5 | 1300.0 | 1463 |

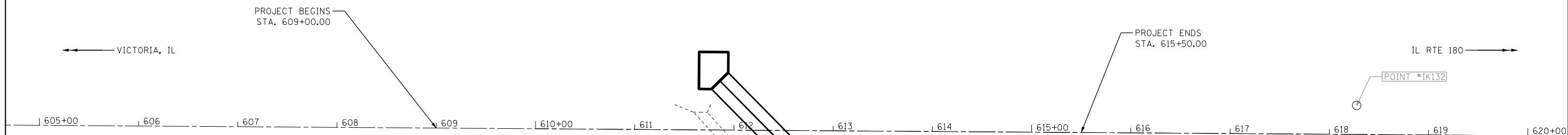
| PERMANENT SURVEY MARKERS SCHEDULE | | | |
|-----------------------------------|-------|--------------------------------|----------|
| STATION | | PERMANENT SURVEY MARKERS, TY I | |
| | | EACH | |
| IL 167 | | | |
| 611+93.29 | 58.42 | LT | 1 |
| TOTAL# | | | 1 |

NOTE: MARKER TO BE PLACED ON HEADWALL OR AS DIRECTED BY ENGINEER

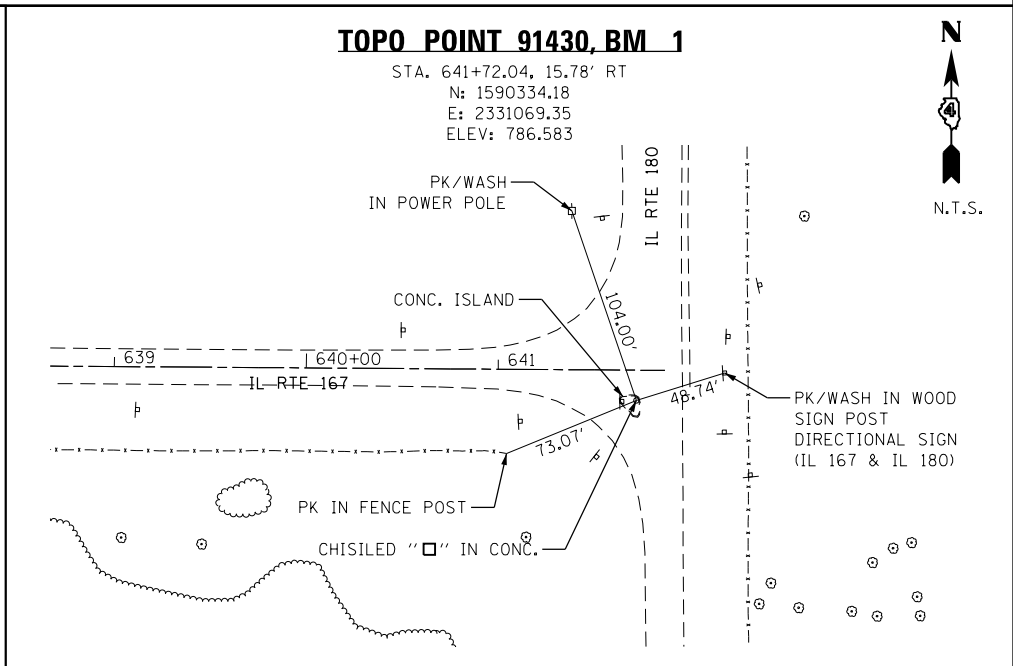
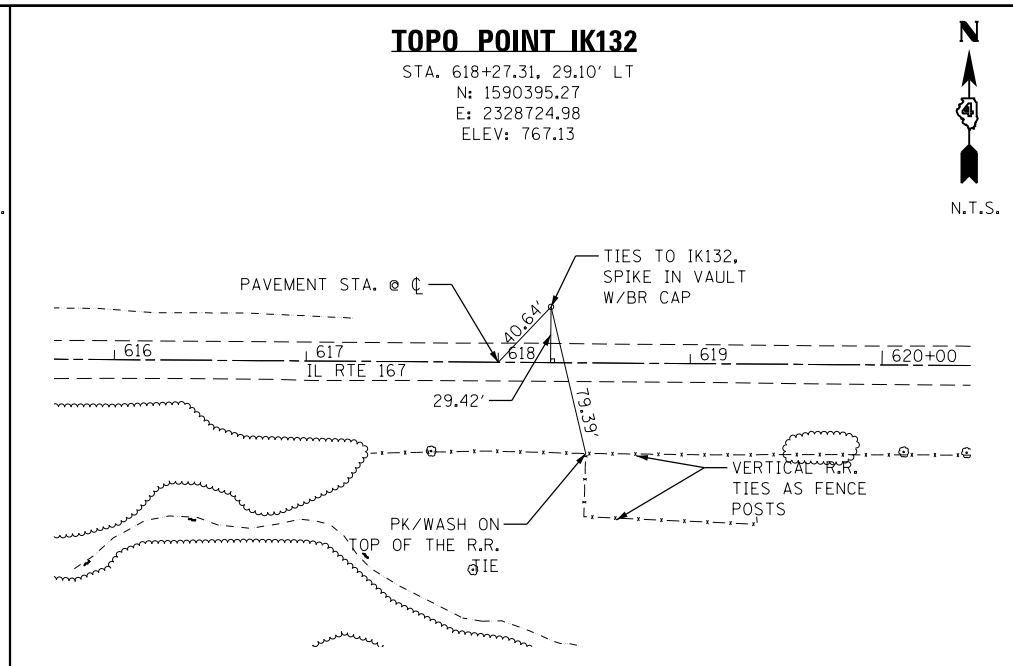
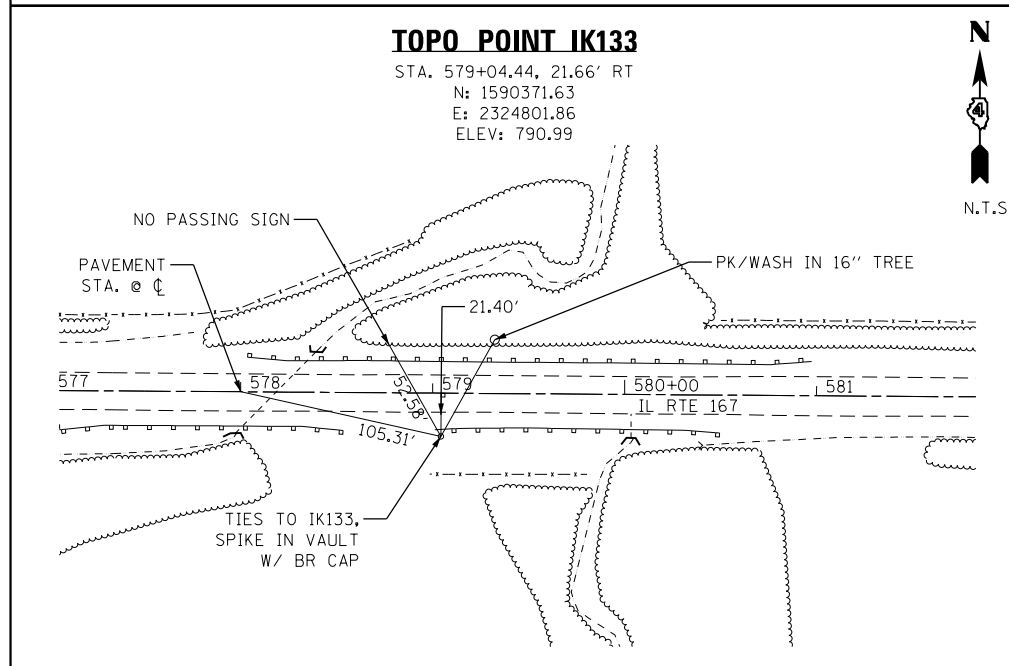
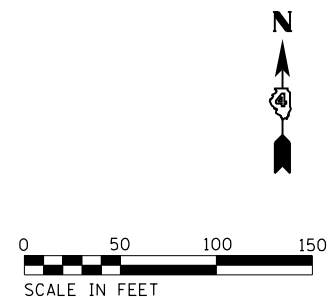
| SHORT TERM PAVEMENT MARKING SCHEDULE | | | | | |
|--------------------------------------|----|-----------|-----------------------------|-------------------------------------|-----------|
| LOCATION | | | SHORT TERM PAVEMENT MARKING | SHORT TERM PAVEMENT MARKING REMOVAL | |
| STATION | TO | STATION | NUMBER TO APPS | FOOT | SO FT |
| IL 167 | | | | | |
| 609+00.00 | TO | 615+50.00 | 2 | 136 | 45 |
| TOTAL# | | | | 136 | 45 |

| RIGHT OF WAY MARKERS SCHEDULE | | | |
|-------------------------------|--------|--|----------|
| STATION | | FURNISHING AND ERECTING RIGHT OF WAY MARKERS | |
| | | EACH | |
| IL 167 | | | |
| 609+00.00 | 46.52 | LT | 1 |
| 610+00.00 | 115.00 | LT | 1 |
| 610+00.00 | 40.70 | RT | 1 |
| 612+00.00 | 115.00 | LT | 1 |
| 612+00.00 | 120.00 | RT | 1 |
| 613+00.00 | 43.55 | LT | 1 |
| 614+00.00 | 120.00 | RT | 1 |
| 615+00.00 | 40.66 | RT | 1 |
| TOTAL# | | | 8 |

| SIGNAGE SCHEDULE | | | | | | | |
|------------------|-------|-------------|---------------------|-----------|---------|--------------------|--------------------------------|
| LOCATION | | DESCRIPTION | | | | SIGN PANEL -TYPE 1 | TELESCOPING STEEL SIGN SUPPORT |
| STATION | | SIGN | SHAPE | SIZE | SO FT | FOOT | |
| IL 167 | | | | | | | |
| 611+43.28 | 25.05 | LT | W5-1 (ROAD NARROWS) | RECTANGLE | 36 X 36 | 9.00 | 15.7 |
| 614+51.07 | 25.05 | RT | W5-1 (ROAD NARROWS) | RECTANGLE | 36 X 36 | 9.00 | 15.7 |
| TOTAL# | | | | | | 18 | 31 |



| BENCHMARKS | | | | |
|------------|-----------|-----------|-----------|--|
| MONUMENT | ELEVATION | STATION | OFFSET | DESCRIPTION |
| BM 1 | 786.583 | 641+72.04 | 15.78' RT | CHISELED SQUARE ON ISLAND IN S.W. QUAD ON IL RTE 180 & IL RTE 167 |
| BM 903 | 766.199 | 611+72.94 | 17.12' LT | CHISELED SQUARE ON HEADWALL ON NORTH SIDE OF IL RTE 167, 1/2 MILE WEST OF THE INTERSECTION OF IL RTE 167 WITH IL RTE 180 |



| | | | |
|--|------------------------------|----------------|-----------|
| FILE NAME = P:\090072\IL 167\4 CADD - DWG\4.7 Tran | USER NAME = jstein | DESIGNED - JWS | REVISED - |
| Sheets\0468D10-sh1-ATB.dgn | | DRAWN - TMG | REVISED - |
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| | PLOT DATE = 8/14/2018 | DATE - | REVISED - |

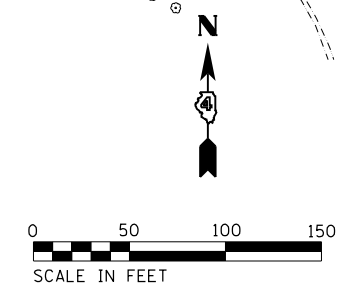
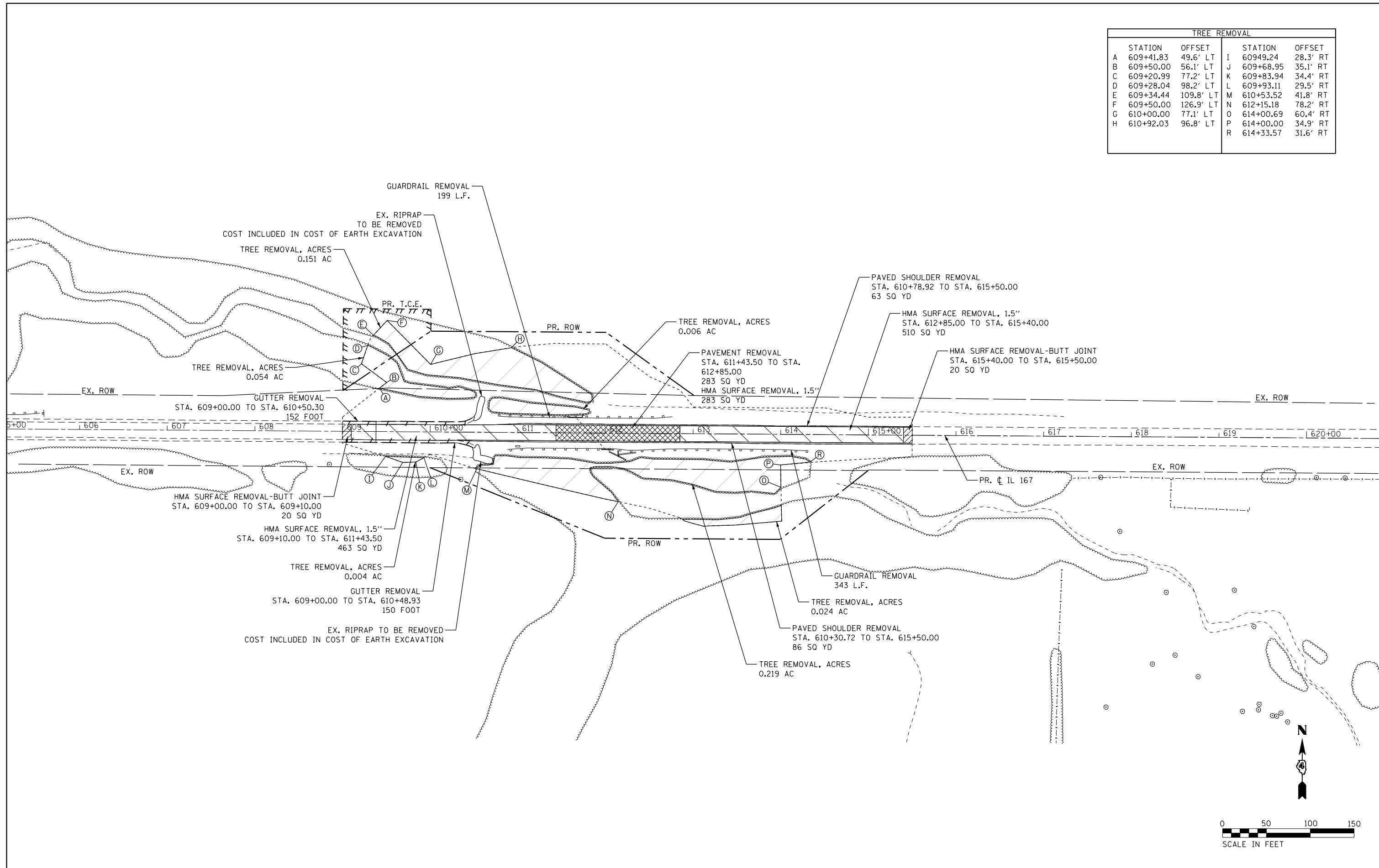
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ALIGNMENTS, TIES, AND BENCHMARKS

SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. 609+00.00 TO STA. 615+50.00

| | | | | |
|---------------------------|--------------------|-------------|-----------------|--------------|
| F.A.S. RTE. 379 | SECTION (111C-5)CR | COUNTY KNOX | TOTAL SHEETS 62 | SHEET NO. 15 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

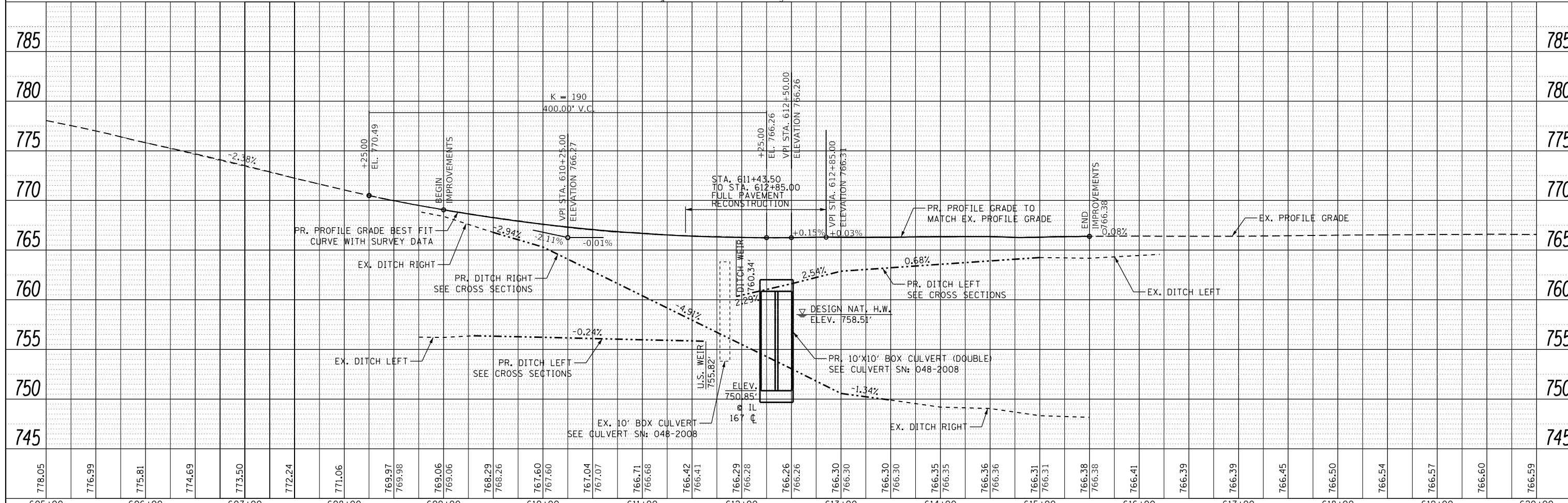
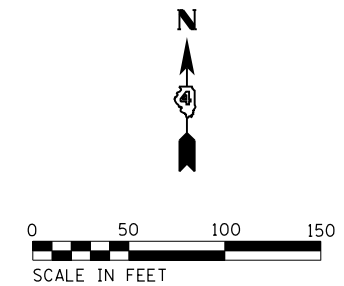
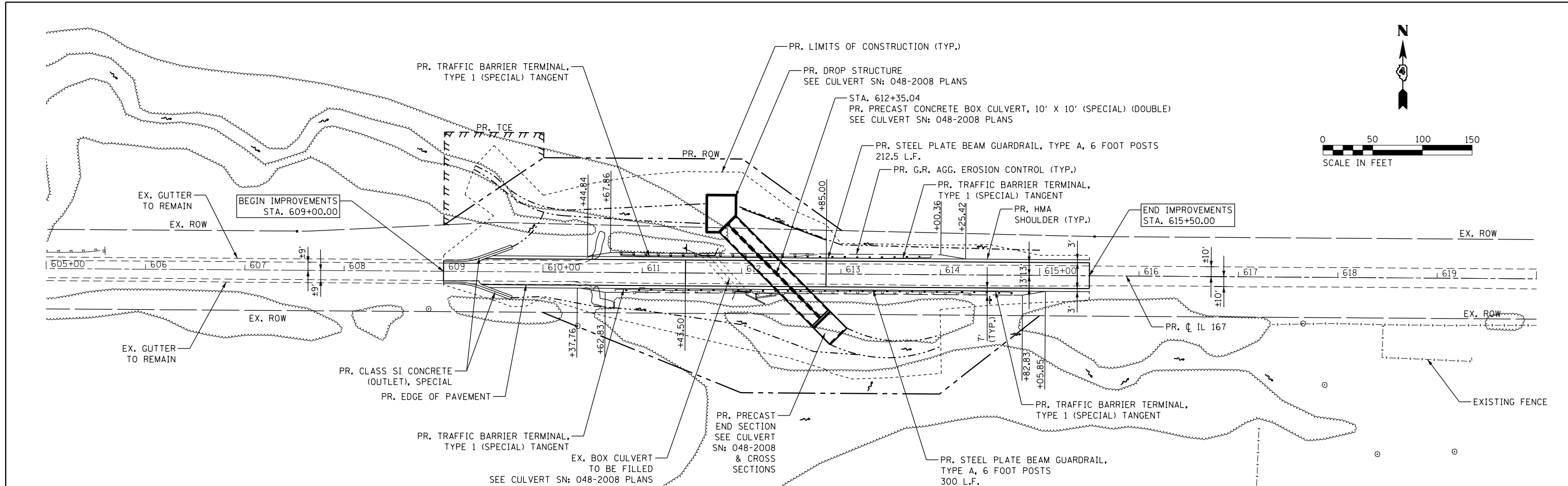
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|--------------|---------------------|---------|--------------------|
| STATION | OFFSET | STATION | OFFSET |
| A | 609+41.83 49.6' LT | I | 60949.24 28.3' RT |
| B | 609+50.00 56.1' LT | J | 609+68.95 35.1' RT |
| C | 609+20.99 77.2' LT | K | 609+83.94 34.4' RT |
| D | 609+28.04 98.2' LT | L | 609+93.11 29.5' RT |
| E | 609+34.44 109.8' LT | M | 610+53.52 41.8' RT |
| F | 609+50.00 126.9' LT | N | 612+15.18 78.2' RT |
| G | 610+00.00 77.1' LT | O | 614+00.69 60.4' RT |
| H | 610+92.03 96.8' LT | P | 614+00.00 34.9' RT |
| | | R | 614+33.57 31.6' RT |



| | | | | | | | | | | | | |
|-------------|---------------------|-----------------|-----------|---|---------------------------|---------------------|----------------------------------|--------------------|-------------|-----------------|--------------|--|
| FILE NAME = | USER NAME = \$USER* | DESIGNED - JWS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | REMOVAL SHEET | | F.A.S. RTE. 379 | SECTION (111C-5)CR | COUNTY KNOX | TOTAL SHEETS 62 | SHEET NO. 16 | |
| *FILEL* | | DRAWN - TMG | REVISED - | | SCALE: 1" = 50' | SHEET 1 OF 1 SHEETS | STA. 609+00.00 TO STA. 615+00.00 | CONTRACT NO. 68D10 | | | | |
| *MODELNAME* | | CHECKED - JWS | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | |
| | | DATE - AUG 2018 | REVISED - | | | | | | | | | |

| | | |
|------|--------------------------|------|
| PLAN | SURVEYED | DATE |
| | PLOTTED | BY |
| | GRADES CHECKED | |
| | STRUCTURE NOTATIONS OK'D | |
| | NOTE BOOK NO. | |
| | FILE NAME | |

| | | |
|---------|--------------------------|------|
| PROFILE | SURVEYED | DATE |
| | PLOTTED | BY |
| | GRADES CHECKED | |
| | STRUCTURE NOTATIONS OK'D | |
| | NOTE BOOK NO. | |
| | FILE NAME | |



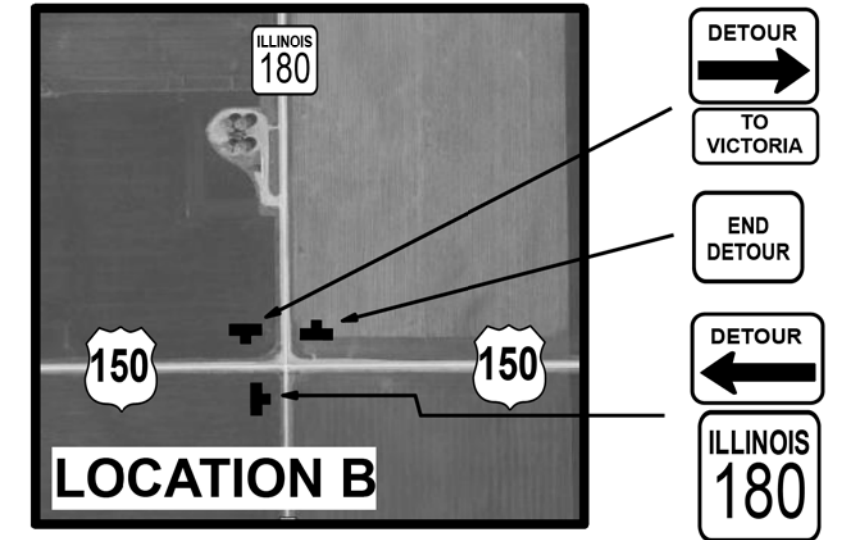
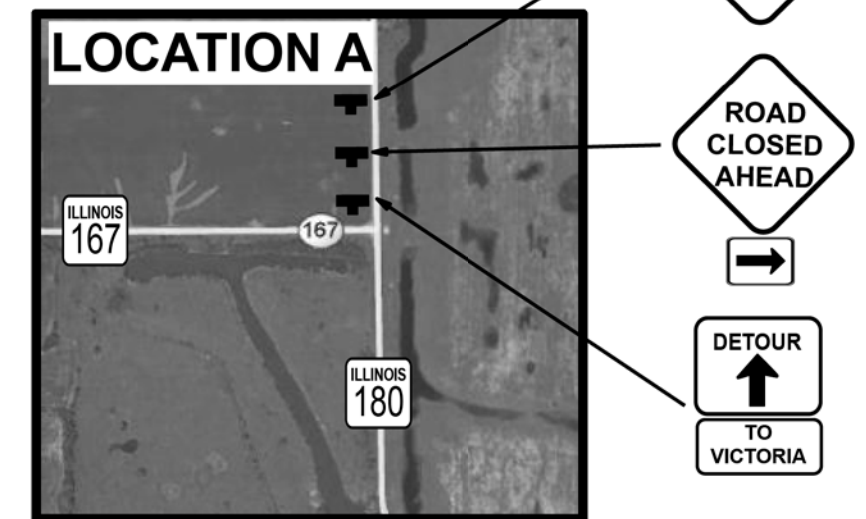
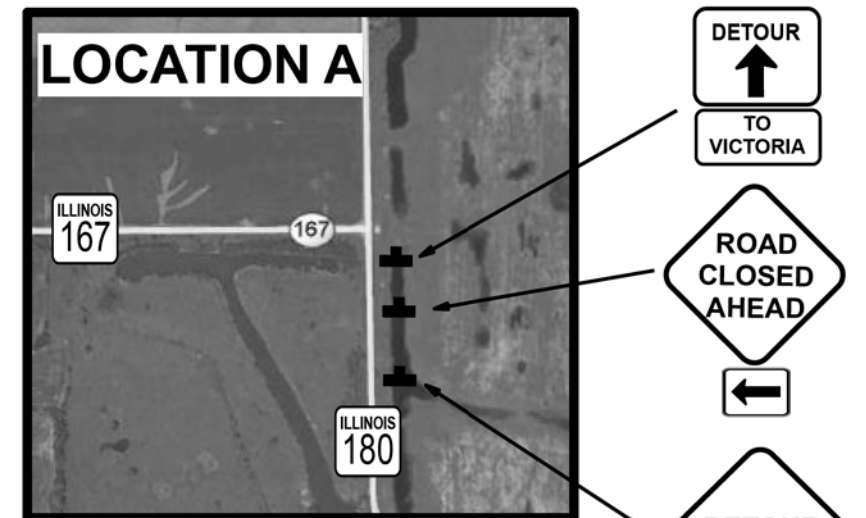
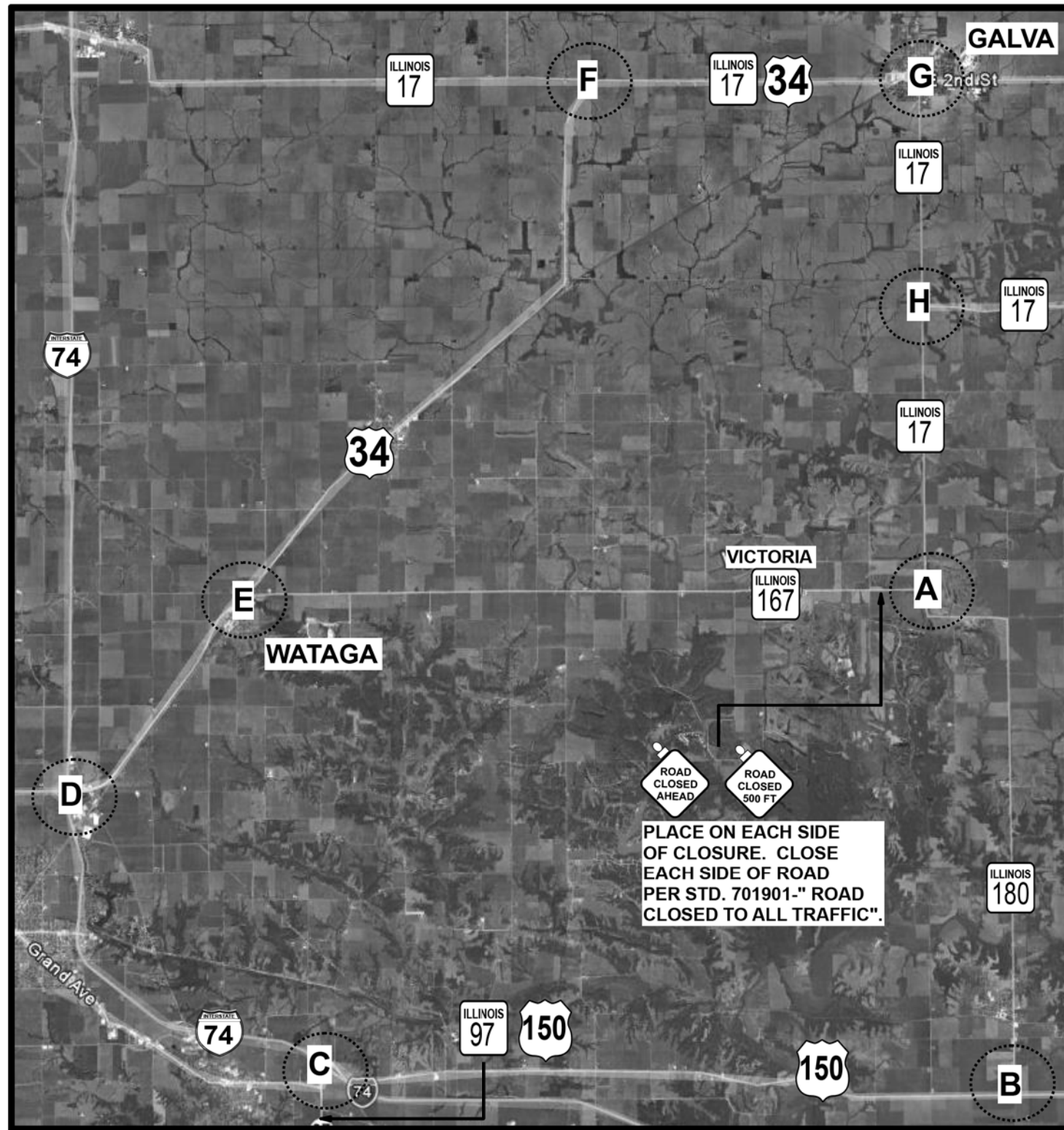
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| Default | | CHECKED - JWS | REVISED - |
| | | DATE - AUG 2018 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN AND PROFILE SHEET

SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. TO STA.

| | | | | |
|---------------------------|------------|--------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 17 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



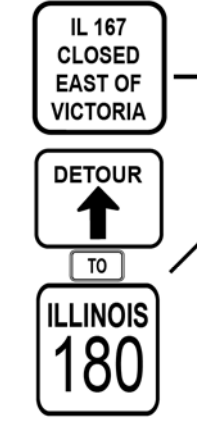
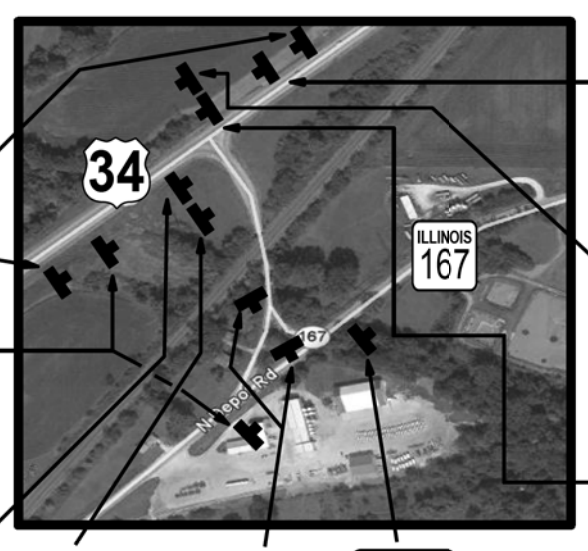
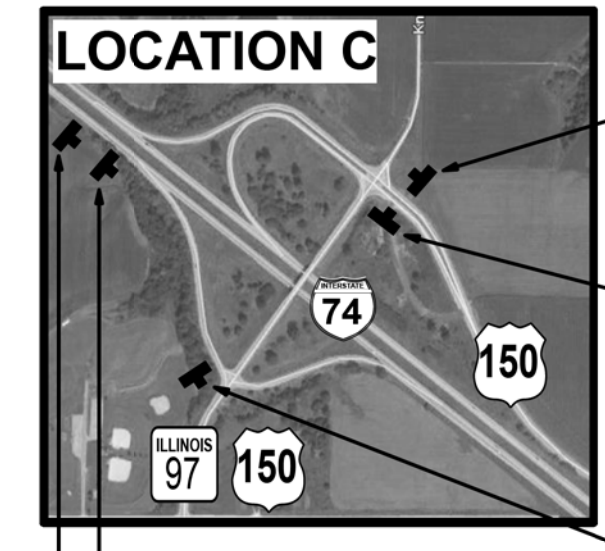
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| | | DRAWN - MLS | REVISED - |
| | | CHECKED - JWS | REVISED - |
| | | DATE - AUG 2018 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

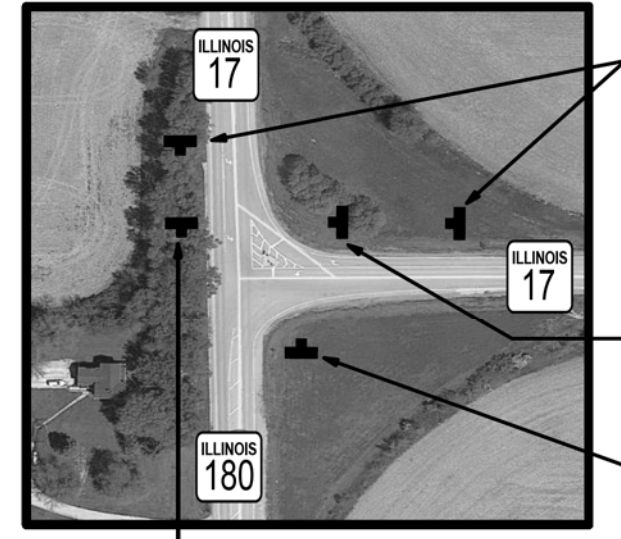
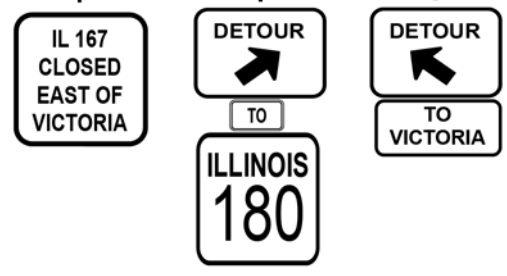
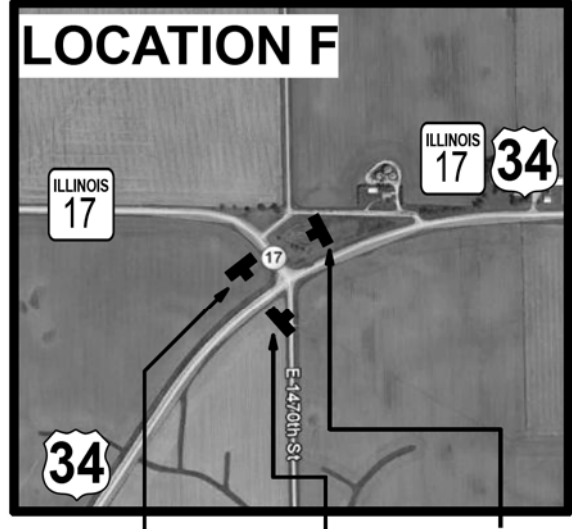
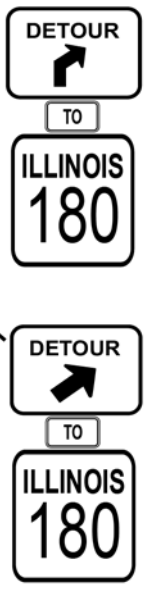
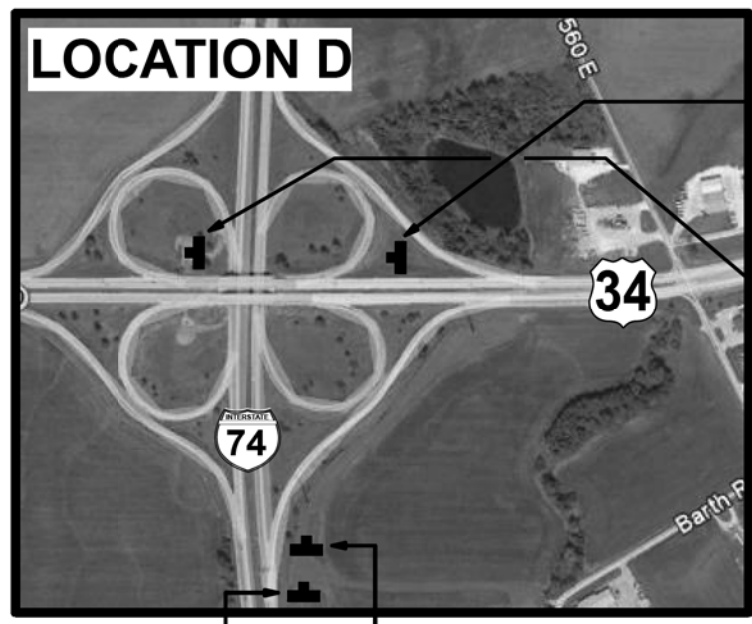
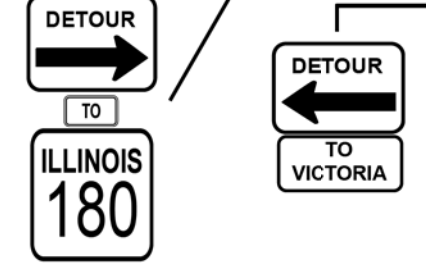
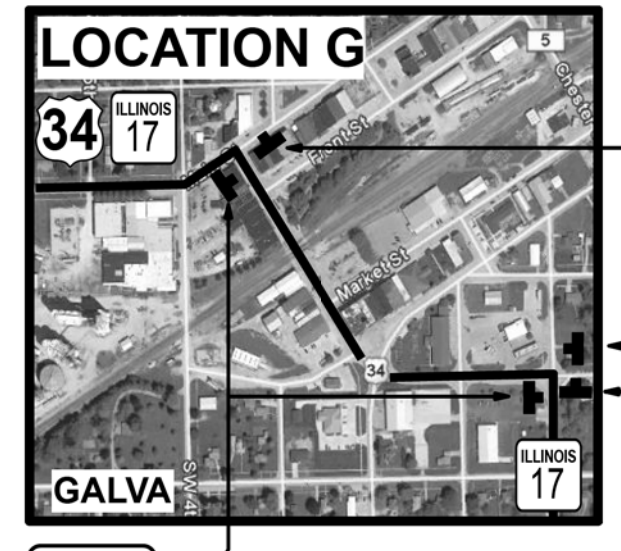
DETOUR PLAN

SCALE: 1" = 50' SHEET 1 OF 2 SHEETS STA. TO STA.

| | | | | |
|---------------------------|------------|--------|--------------|-----------|
| F.A.B. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 18 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



LOCATION E



LOCATION H



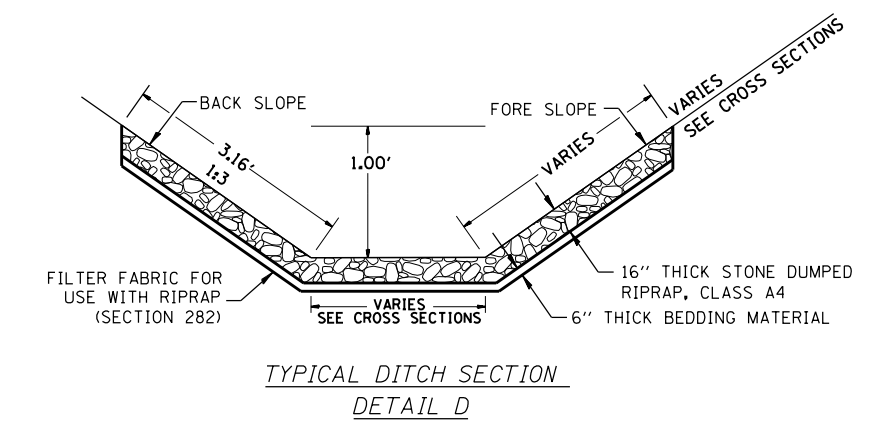
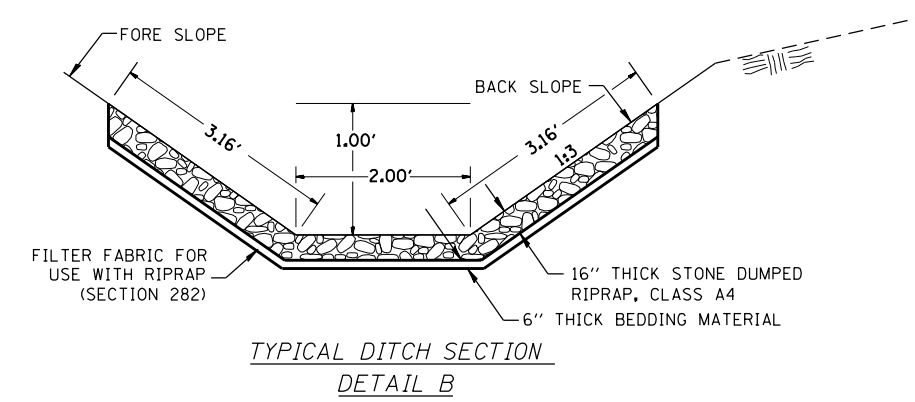
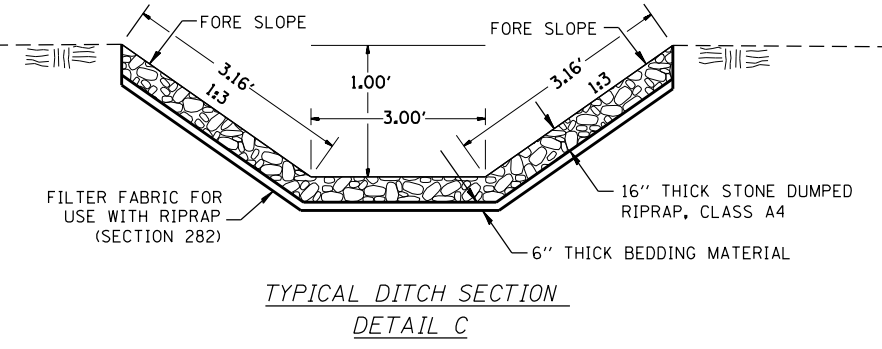
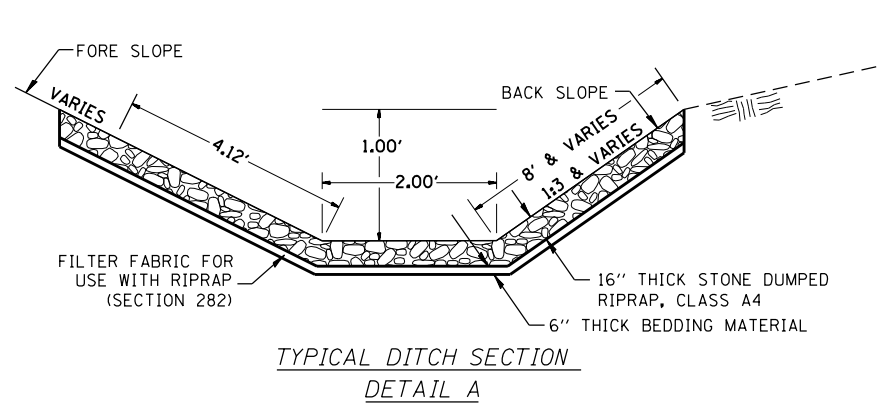
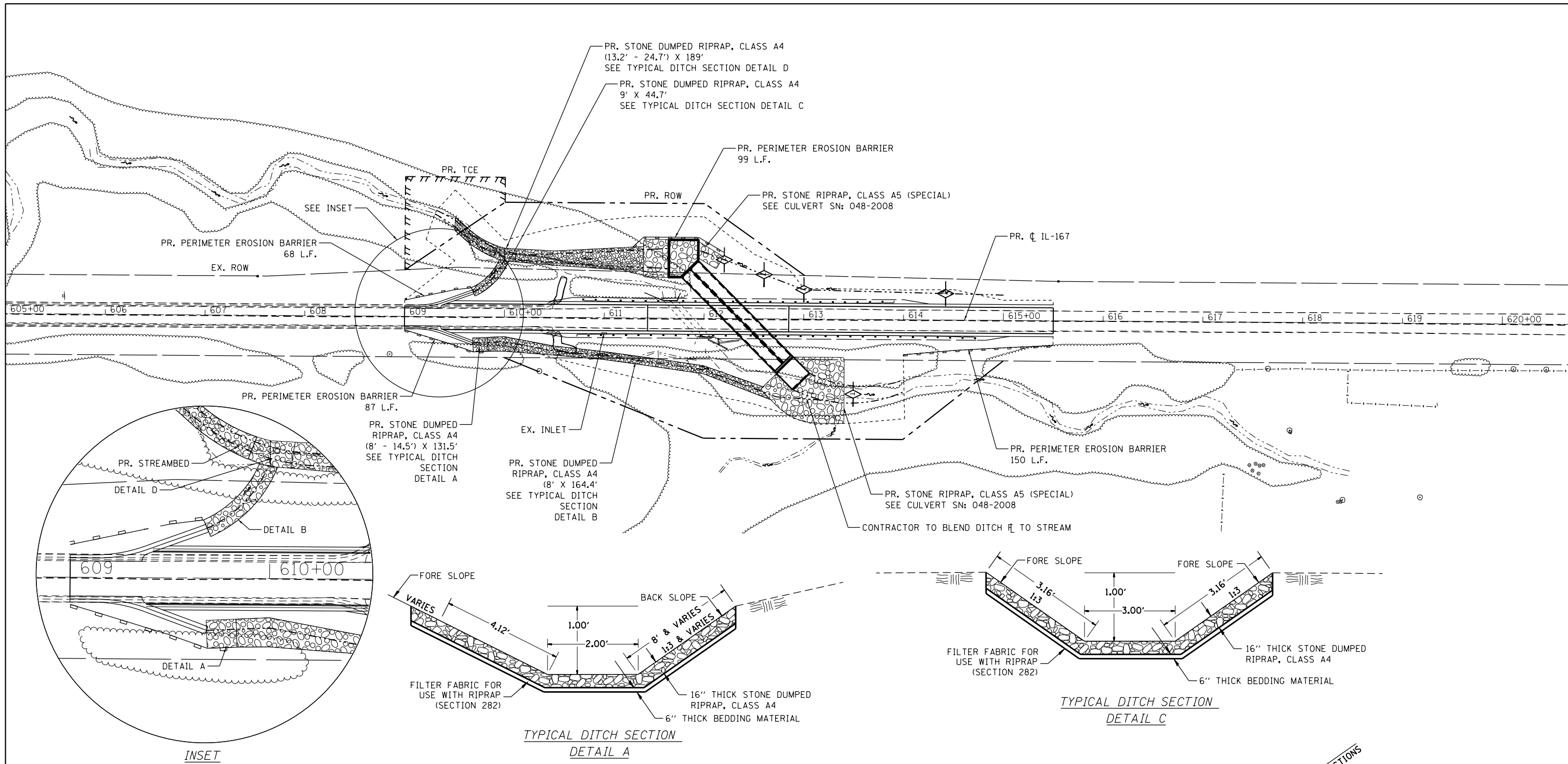
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| | | CHECKED - JWS | REVISED - |
| | | DATE - AUG 2018 | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR PLAN

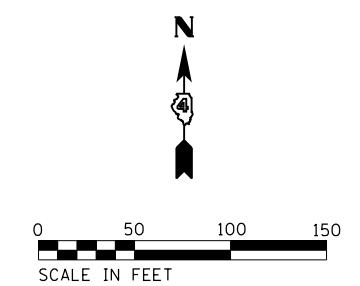
SCALE: 1" = 50' SHEET 2 OF 2 SHEETS STA. TO STA.

| F.A.B. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|--------|--------------|-----------|
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| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

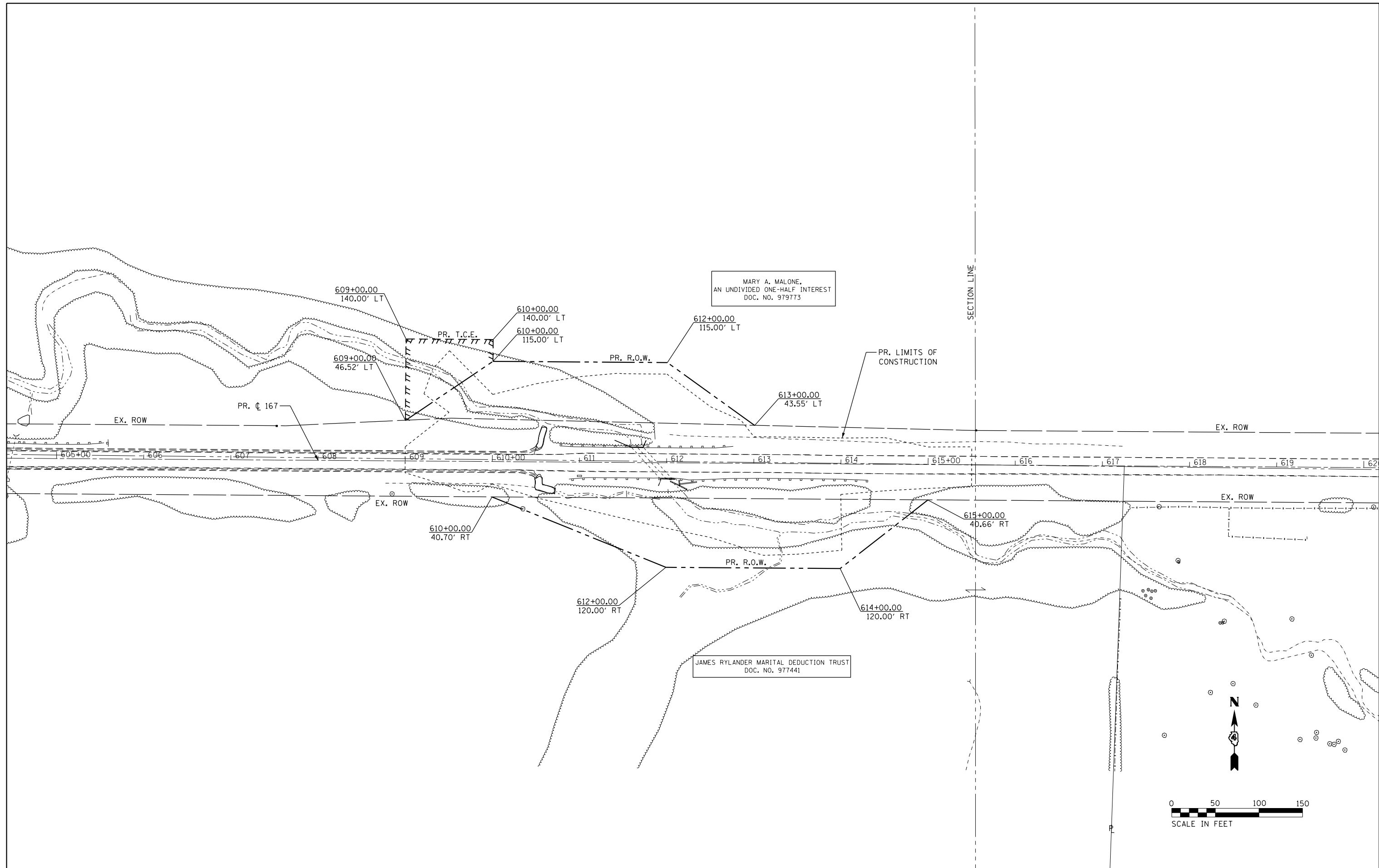


LEGEND

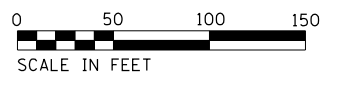
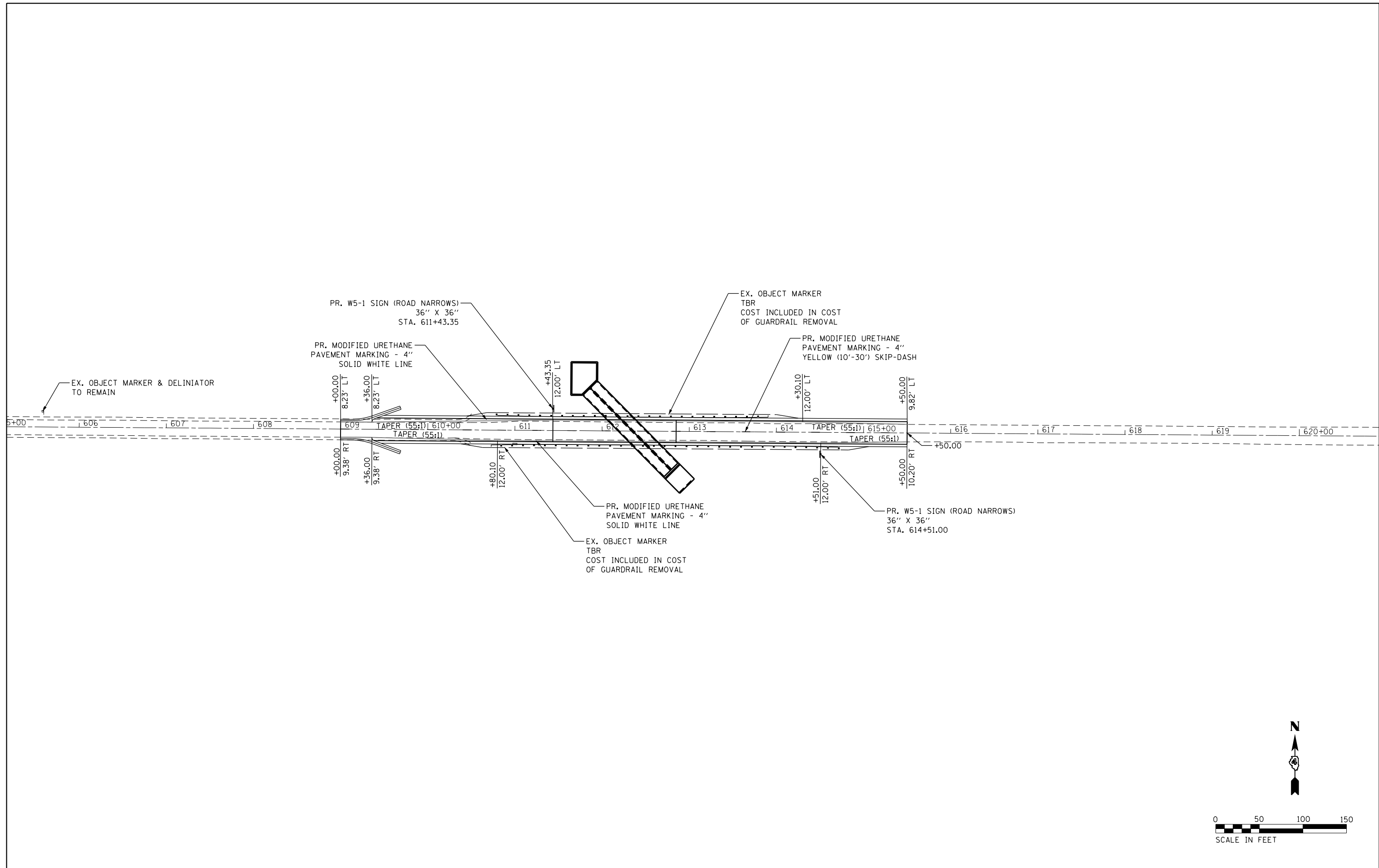
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- PROPOSED DITCH FLOWLINE
- CONSTRUCTION LIMITS
- PROPOSED RIPRAP, CLASS A4
- PROPOSED RIPRAP, CLASS A5 (SPECIAL)



| | | | | | | | | | | | | |
|--|------------------------------|-----------------|-----------|---|-----------------------------|---------------------|----------------------------------|--------------------|--------------------|-------------|-----------------|--------------|
| FILE NAME = P:\090072\IL 167\4 CADD - DWG\4.7 Tran | USER NAME = jstein | DESIGNED - MLS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | EROSION CONTROL PLAN | | | F.A.S. RTE. 379 | SECTION (111C-5)CR | COUNTY KNOX | TOTAL SHEETS 62 | SHEET NO. 20 |
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| | PLOT SCALE = 100.0000' / in. | CHECKED - JWS | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | |
| | PLOT DATE = 8/14/2018 | DATE - AUG 2018 | REVISED - | | | | | | | | | |



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| | PLOT DATE = 8/14/2018 | DATE - AUG 2018 | REVISED - | | SCALE: 1" = 50' | SHEET 1 OF 1 SHEETS | STA. TO STA. | ILLINOIS FED. AID PROJECT | | | | |



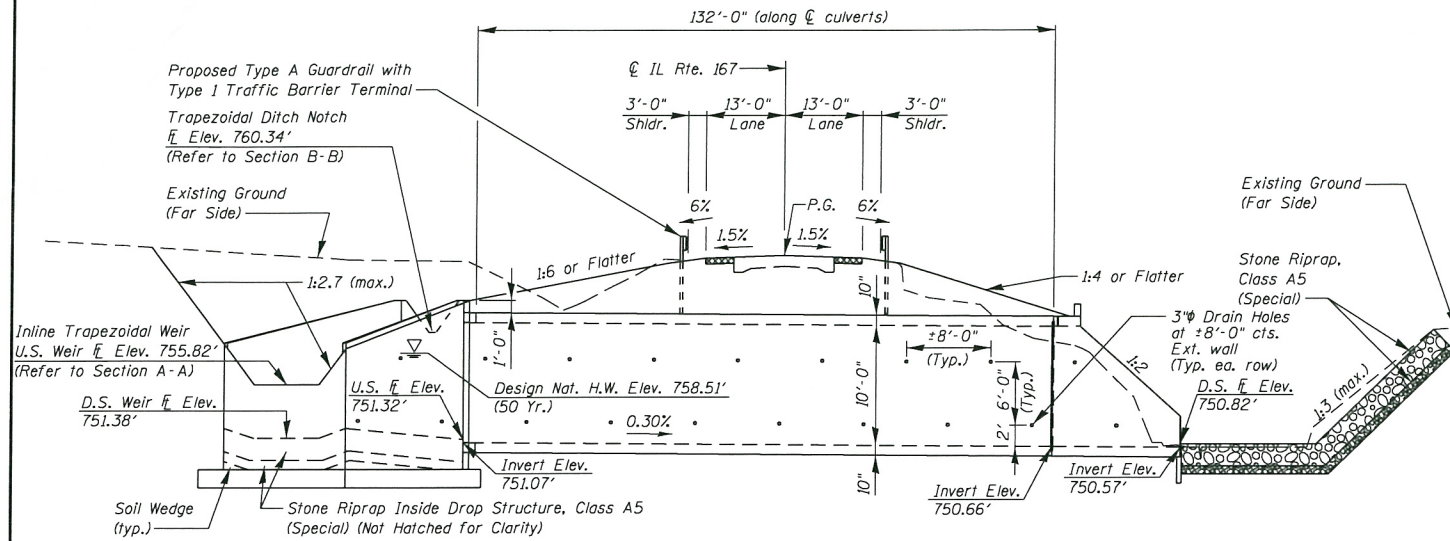
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| | PLOT DATE = 8/14/2018 | DATE - AUG 2018 | REVISED - | | | | | CONTRACT NO. 68D10 | | | | |
| Default | | | | SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. 609+00.00 TO STA. 615+00.00 | | | ILLINOIS FED. AID PROJECT | | | | | |

Bench Mark: Chiseled \square on headwall on N. Side of IL 167; 1/2 mi W. of Intersection of IL 180 & IL 167 Elev. 766.20.

Existing Structure: S.N. (none). The existing RCBC was built in 1932 as part of S.B.I. Route 180, Section 111. The existing culvert is located at Sta. 611+83.04 and has a total length of 50'-5" with a pavement width of 21'-0". The existing culvert wingwalls shall be removed and the culvert barrel filled with Controlled Low-Strength Material.

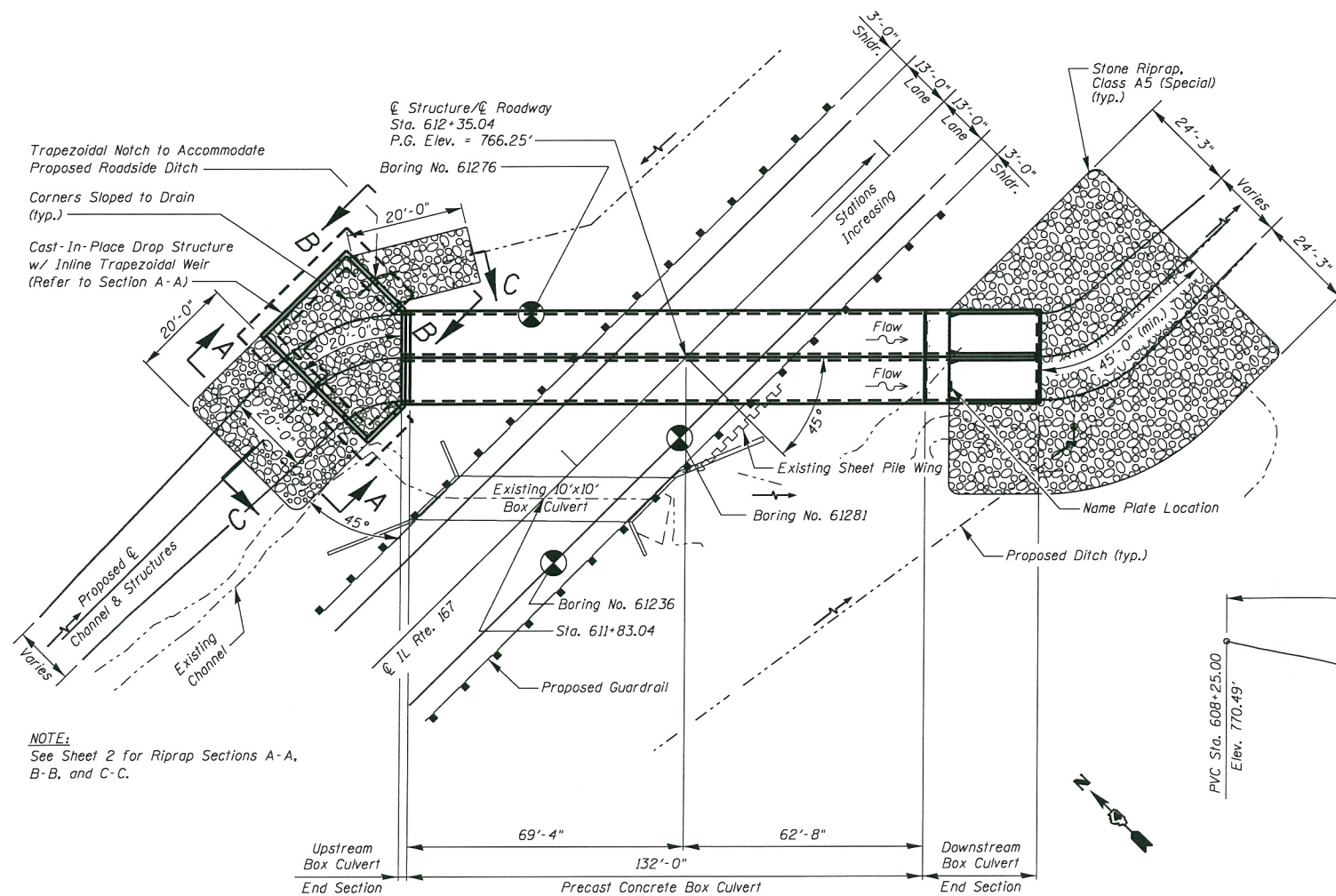
Roadway will be closed during construction. Traffic to be detoured.

No Salvage



ELEVATION - LOOKING NORTHEAST

(all dimensions and slopes given at right angles to centerline unless noted otherwise)



PLAN

(Refer to Roadway Plans for additional channel information)

NOTE: See Sheet 2 for Riprap Sections A-A, B-B, and C-C.

THOUVENOT, WADE & MOERCHEN, INC.
SWANSEA • WATERLOO • EDWARDSVILLE • ST. LOUIS • ST. CHARLES

| | | |
|------------------------|----------------|---------|
| USER NAME = jstein | DESIGNED - ALN | REVISED |
| PLAT SCALE = 1/2" = 1' | CHECKED - TJR | REVISED |
| PLAT DATE = 8/14/2018 | DRAWN - TJR | REVISED |
| | CHECKED - ALN | REVISED |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
STRUCTURE NO. 048-2008

SHEET NO. 1 OF 13 SHEETS

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|--------|--------------------|-----------|
| 379 | (111C-5)CR | KNOX | 62 | 23 |
| | | | CONTRACT NO. 68D10 | |
| ILLINOIS FED. AID PROJECT | | | | |

GENERAL NOTES:

- Exposed edges shall have a 3/4" chamfer unless otherwise noted.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- This box culvert has a design fill height of 4.6 ft. The Precast Concrete Box Culvert shall be designed in accordance with the special provision for "Concrete Box Culverts with Skews > 30 Degrees and Design Fills \leq 5 feet"
- The joints between precast box sections shall be sealed, all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13 inch wide external sealing band. The seal shall be centered over the joint, secured in place and protected during the backfilling process.
- Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard. See roadway plans for backfilling requirements.
- All sections of precast 10'x10' box culvert shall be tied together as shown in the detail entitled "Multi-Cell Precast Box Culvert Tapered End Sections." See Sheets 9 and 10 of 13 and the Special Provisions.

TOTAL BILL OF MATERIAL

| ITEM | UNIT | TOTAL |
|--|-------|-------|
| Stone Riprap, Class A5 (Special) | Sq Yd | 677 |
| Filter Fabric | Sq Yd | 677 |
| Concrete Headwall Removal, Special | Each | 2 |
| Structure Excavation | Cu Yd | 956.7 |
| Concrete Structures | Cu Yd | 86.2 |
| Reinforcement Bars | Pound | 8790 |
| Reinforcement Bars, Epoxy Coated | Pound | 1150 |
| Name Plates | Each | 1 |
| Box Culvert End Sections, Culvert No. 1 | Each | 2 |
| Precast Concrete Box Culverts, 10'x10' (Special) | Ft. | 264 |
| Controlled Low-Strength Material | Cu Yd | 172.8 |

* Quantity includes excavation for the Drop Structure only.

LOADING HL-93

Allow 50#/sq. ft. Future Wearing Surface

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims

DESIGN STRESSES

FIELD UNITS

f'c=3.5 ksi
fy=60 ksi (reinforcement bars)

PRECAST UNITS

f'c=5 ksi
fy=60 ksi (reinforcement bars)
fy=65 ksi (welded wire fabric)

INDEX OF SHEETS

- General Plan and Elevation
- Riprap Sections
- Drop Structure Footing Plan
- Drop Structure Plan and Details
- Drop Structure Walls A-B & C-D
- Drop Structure Walls B-C & E-A
- Upstream Box Culvert End Section Details
- Upstream Box Culvert End Section Details
- Downstream Box Culvert End Section Details
- Downstream Box Culvert End Section Details
- CLSM Details
- Bar Splicer Assembly and Mechanical Splicer Detail
- Soil Boring Log

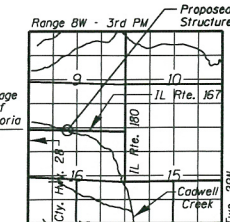
WATERWAY INFORMATION

Drainage Area = 0.84 sq. mi. Low Grade Elev. 766.25 @ Sta. 612+35

| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. Exist. | Nat. H.W.E. | Head - Ft. Exist. | Head - Ft. Prop. | Headwater E.L. Exist. | Headwater E.L. Prop. |
|-------------|-----------|----------|------------------------|-------------|-------------------|------------------|-----------------------|----------------------|
| 10 | - | - | - | - | - | - | - | - |
| Design | 50 | 640 | 72 | 149 | 758.51 | 2.94 | 761.45 | 758.51 |
| Base | 100 | 752 | 98 | 153 | 758.71 | 3.54 | 763.97 | 758.71 |
| Overtopping | - | - | - | - | - | - | - | - |
| Max. Calc. | 500 | 1,030 | 100 | 200 | 759.33 | 5.04 | 766.26 | 759.33 |

STATION 612+35.04
BUILT 20 BY
STATE OF ILLINOIS
F.A.S. RT. 379-SEC. (111C-5)CR
LOADING HL-93
STRUCTURE NO. 048-2008

NAME PLATE
See Std. 515001



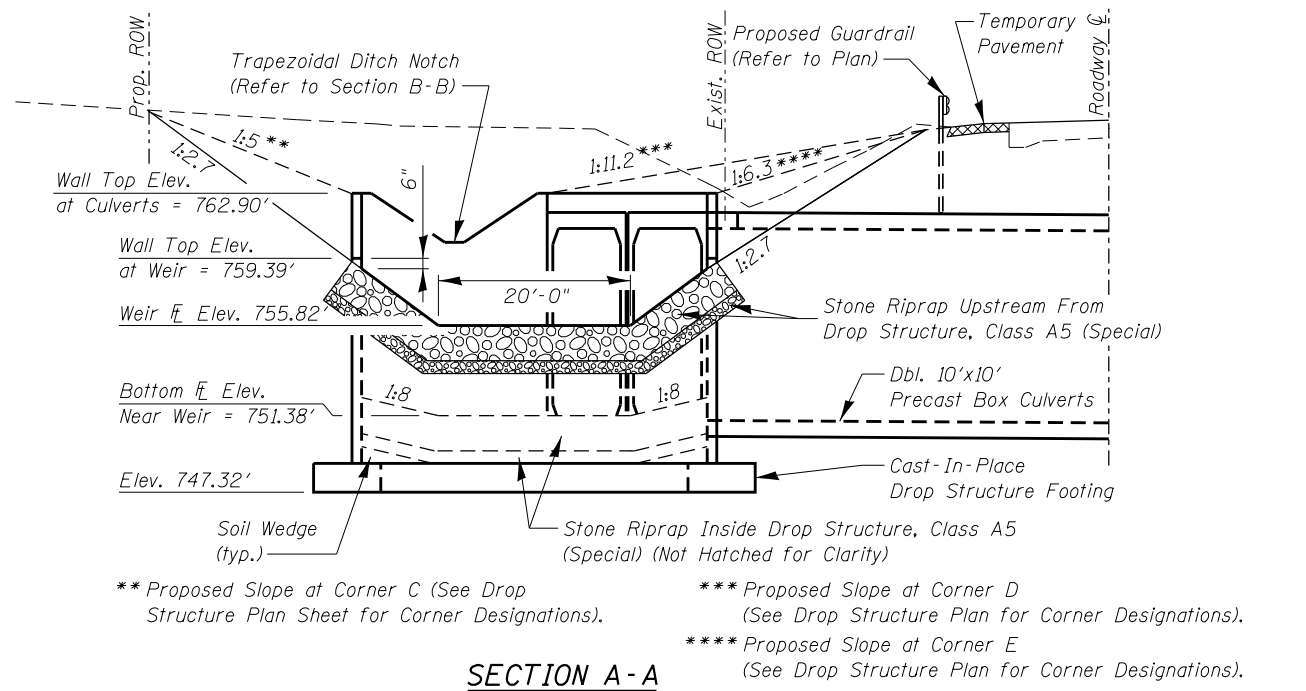
LOCATION SKETCH



8/14/2018
Angela L. Nemsky
EXPIRES 11/30/2018

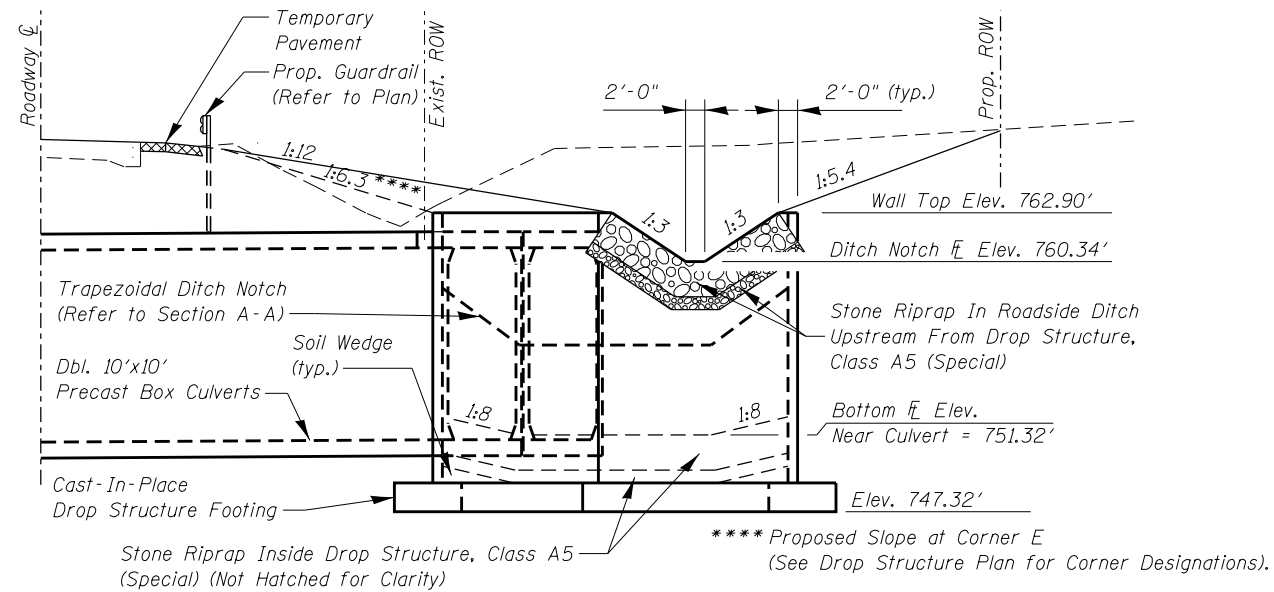
GENERAL PLAN AND ELEVATION
ILL. ROUTE 167 OVER
TRIBUTARY TO CADWELL CREEK
F.A.S. ROUTE 379 - SEC. (111C-5)CR
KNOX COUNTY
STATION 612+35.04
STRUCTURE NO. 048-2008

FILE NAME: P:\980072\IL 167\4 CAD - DWG\4.4 Srvs\9462808-68D10-081-General Plan.dgn



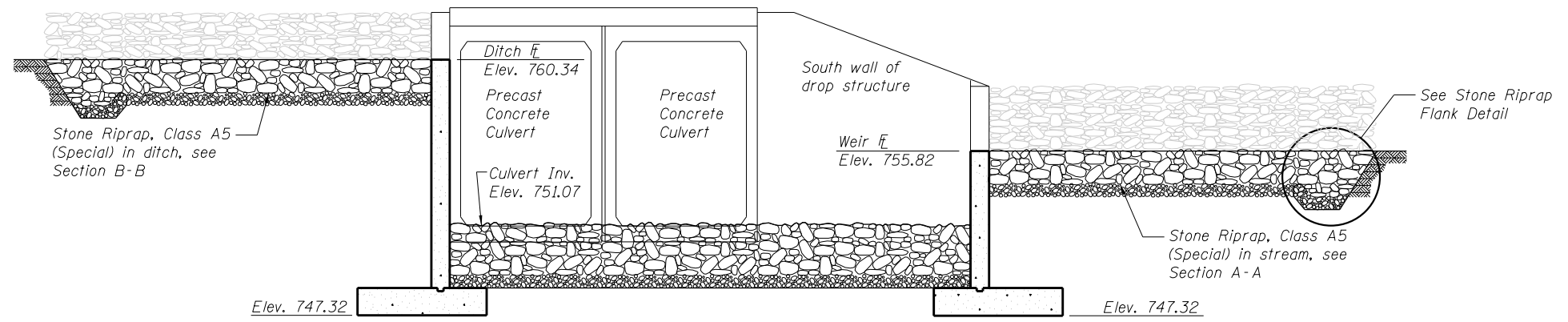
SECTION A-A

(all slopes given at right angles to centerline unless noted otherwise)

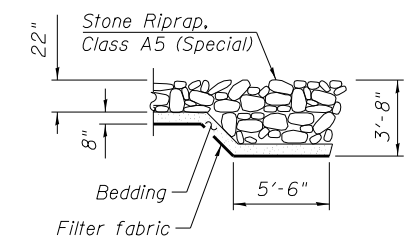


SECTION B-B

(all slopes given at right angles to centerline unless noted otherwise)



SECTION C-C



STONE RIPRAP FLANK DETAIL

(Typical upstream and downstream ends and upstream at ditch)

FILE NAME = P:\090072\1167\4 CAD - DWG\4.4 Struc\0482008-68D10-002-Riprap sections and Temp. Soil Retention Detail.dwg

THOUVENOT, WADE & MOERCHEN, INC.

 SWANSEA • WATERLOO • EDWARDSVILLE • ST. LOUIS • ST. CHARLES

| | | |
|------------------------------|----------------|---------|
| USER NAME = jstein | DESIGNED - ALN | REVISED |
| | CHECKED - TJR | REVISED |
| PLOT SCALE = 1/2" = 1' / in. | DRAWN - RCS | REVISED |
| PLOT DATE = 8/14/2018 | CHECKED - ALN | REVISED |

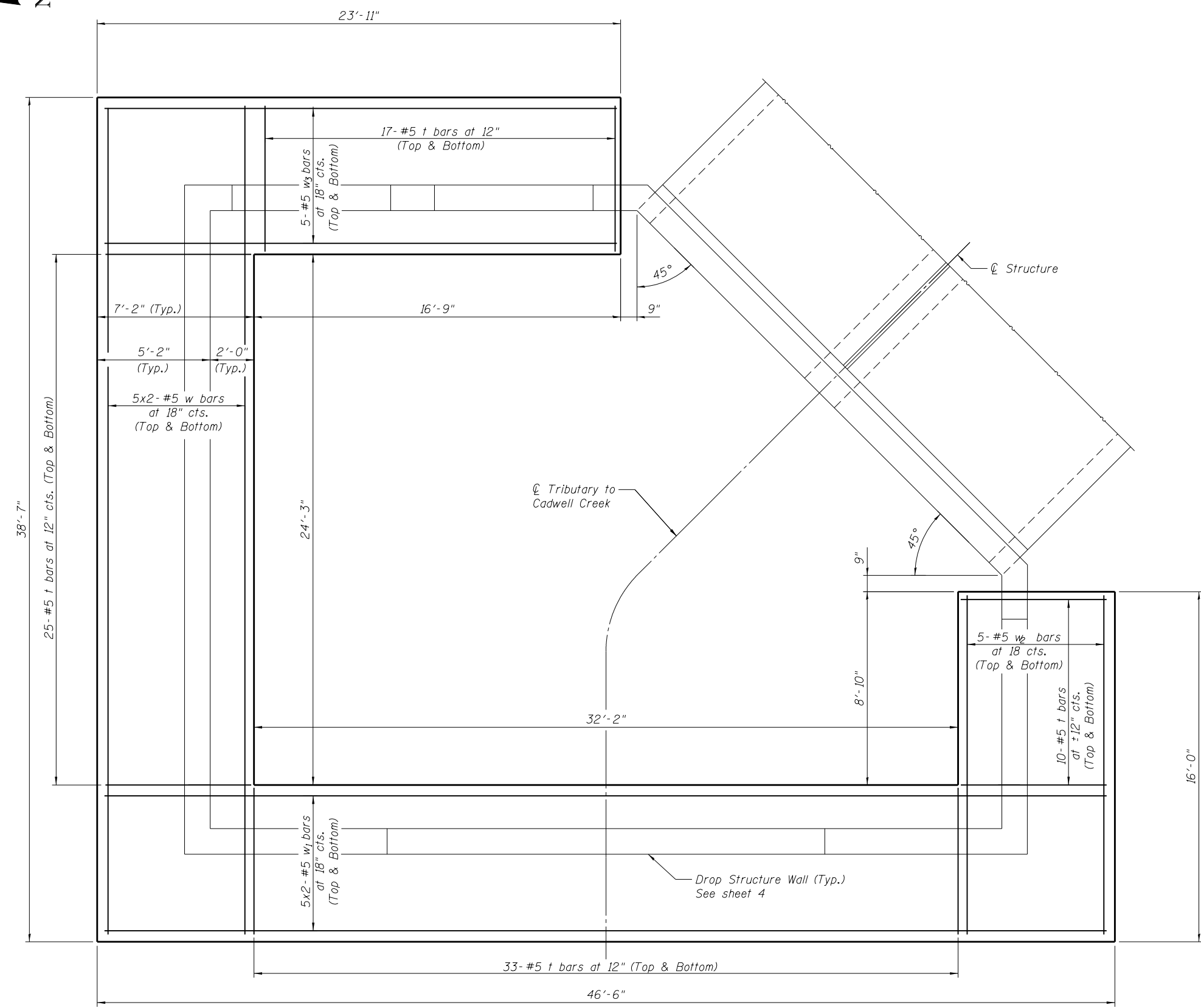
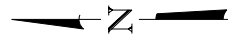
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIPRAP SECTIONS
STRUCTURE NO. 048-2008

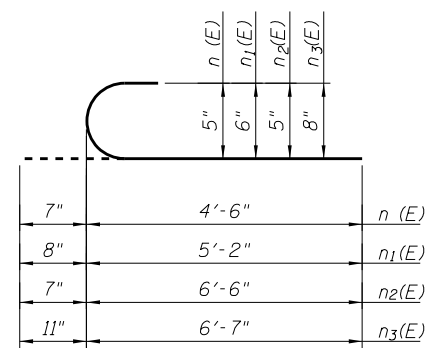
SHEET NO. 2 OF 13 SHEETS

| | | | | |
|--------------------|------------|--------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 24 |
| CONTRACT NO. 68D10 | | | | |

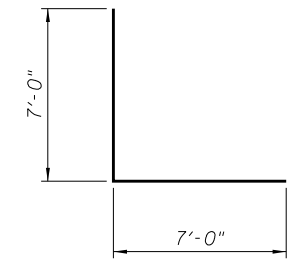
ILLINOIS FED. AID PROJECT



FOOTING PLAN



n (E), n₁(E), n₂(E) & n₃(E) BARS



h₂ BARS

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|---------|---------|-------|
| h | 11 | #4 | 27'-1" | — |
| h ₁ | 7 | #4 | 37'-0" | — |
| h ₂ | 53 | #7 | 14'-0" | — |
| h ₃ | 18 | #4 | 9'-0" | — |
| h ₄ | 17 | #4 | 15'-0" | — |
| h ₅ | 12 | #4 | 19'-6" | — |
| h ₆ | 20 | #4 | 19'-9" | — |
| h ₇ | 13 | #5 | 29'-0" | — |
| h ₈ | 16 | #4 | 7'-6" | — |
| h ₉ | 16 | #4 | 12'-3" | — |
| n(E) | 39 | #5 | 5'-1" | — |
| n ₁ (E) | 32 | #6 | 5'-10" | — |
| n ₂ (E) | 41 | #5 | 7'-1" | — |
| n ₃ (E) | 22 | #7 | 7'-5" | — |
| t | 170 | #5 | 6'-10" | — |
| v | 21 | #4 | 6'-9" | — |
| v ₁ | 8 | #4 | 16'-9" | — |
| v ₂ | 9 | #5 | 17'-3" | — |
| v ₃ | 16 | #6 | 25'-1" | — |
| v ₄ | 10 | #6 | 25'-1" | — |
| v ₅ | 21 | #5 | 10'-2" | — |
| v ₆ | 20 | #5 | 11'-10" | — |
| v ₇ | 16 | #4 | 24'-0" | — |
| v ₈ | 11 | #7 | 24'-0" | — |
| v ₉ | 7 | #5 | 24'-0" | — |
| v ₁₀ | 21 | #5 | 6'-9" | — |
| w | 20 | #5 | 20'-6" | — |
| w ₁ | 20 | #5 | 24'-5" | — |
| w ₂ | 10 | #5 | 15'-10" | — |
| w ₃ | 10 | #5 | 23'-7" | — |
| Concrete Structures | | Cu. Yd. | 86.2 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 1150 | |
| Reinforcement Bars | | Pound | 8790 | |
| Structure Excavation | | Cu. Yd. | 956.7 | |

NOTE:
 Bars designated thus 5 x 2 - #5, etc. indicates 5 lines of bars with 2 lengths per line.
 See Sheets 5 - 6 of 13 for Footing Sections and n bar placement.

MIN. BAR LAP
 #5 - 2'-2"

FILE NAME = P:\090072\1.167\4 CAD - DWG\4.4 Structure\048-2008-68010-003-Footing Plan.dgn

THOUVENOT, WADE & MOERCHEN, INC.
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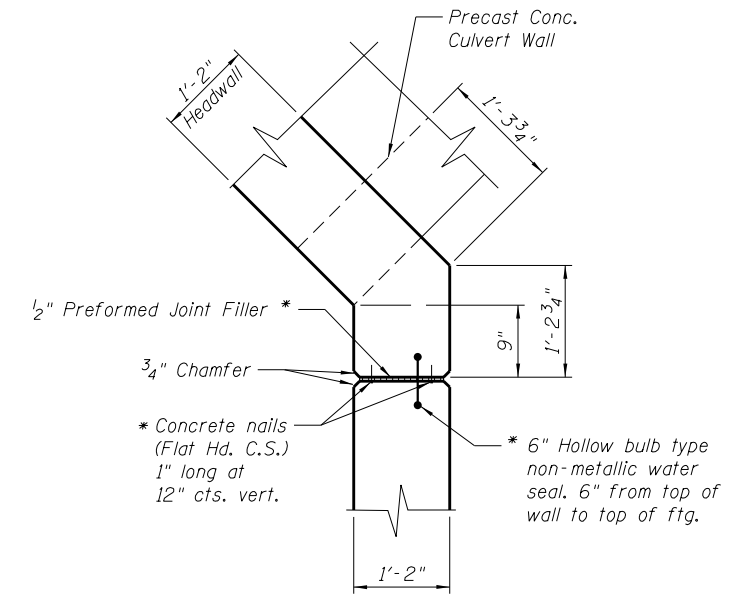
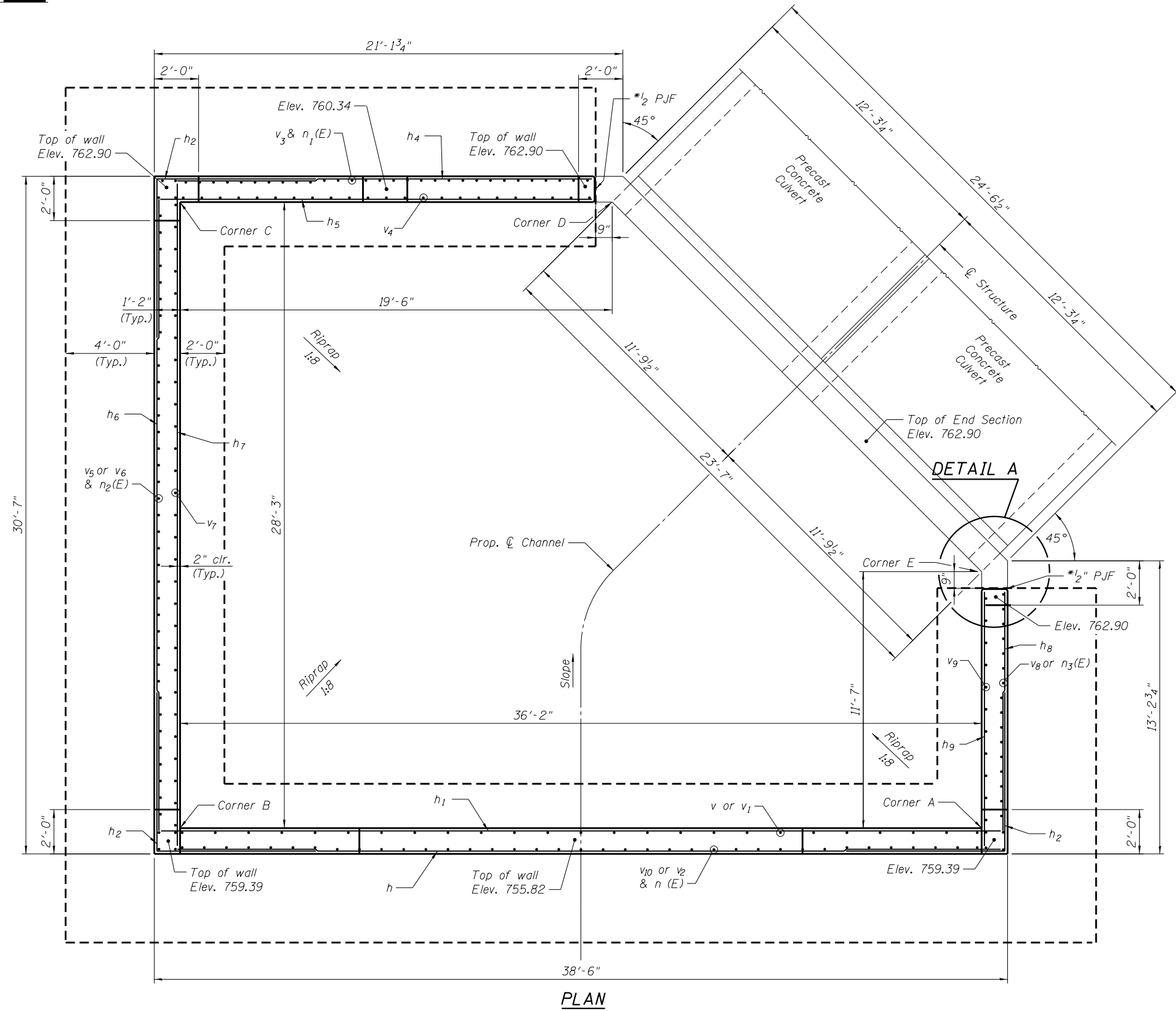
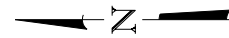
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| USER NAME = jstein | DESIGNED - ALN | REVISED |
| | CHECKED - TJR | REVISED |
| PLOT SCALE = 0.1 5/8" = 1' | DRAWN - TJR | REVISED |
| PLOT DATE = 8/14/2018 | CHECKED - ALN | REVISED |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DROP STRUCTURE FOOTING PLAN STRUCTURE NO. 048-2008

SHEET NO. 3 OF 13 SHEETS

| | | | | |
|---------------------------|--------------------|-------------|-----------------|--------------|
| F.A.S. RTE. 379 | SECTION (111C-5)CR | COUNTY KNOX | TOTAL SHEETS 62 | SHEET NO. 25 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



DETAIL A

* Included in the cost of Box Culvert End Sections.

NOTE:
See Sheet Nos. 5 - 6 of 13 for Wall Sections.

FILE NAME = P:\090072\1.167\4 CAD - DWG\4.4 Structure\048-2008-68D10-004-Plan And Details.dwg

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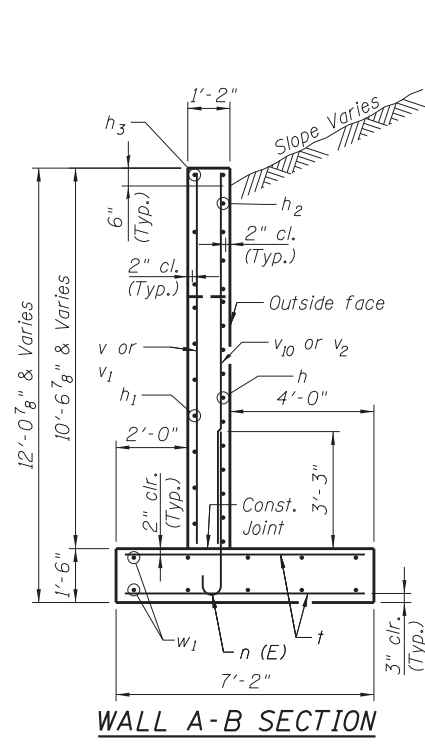
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| USER NAME = jstein | DESIGNED - ALN | REVISED |
| | CHECKED - TJR | REVISED |
| PLOT SCALE = 0.1 5/8" = 1' | DRAWN - TJR | REVISED |
| PLOT DATE = 8/14/2018 | CHECKED - ALN | REVISED |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

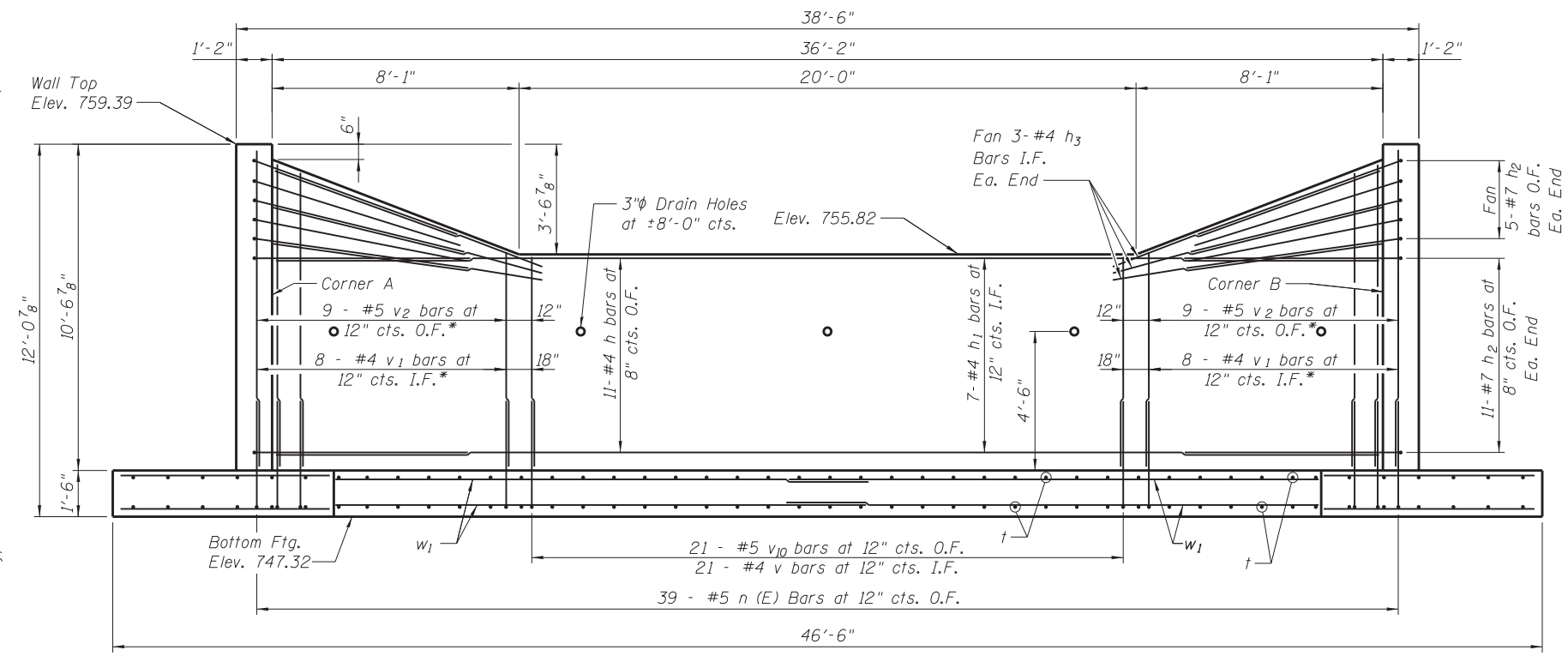
**DROP STRUCTURE PLAN & DETAILS
STRUCTURE NO. 048-2008**

SHEET NO. 4 OF 13 SHEETS

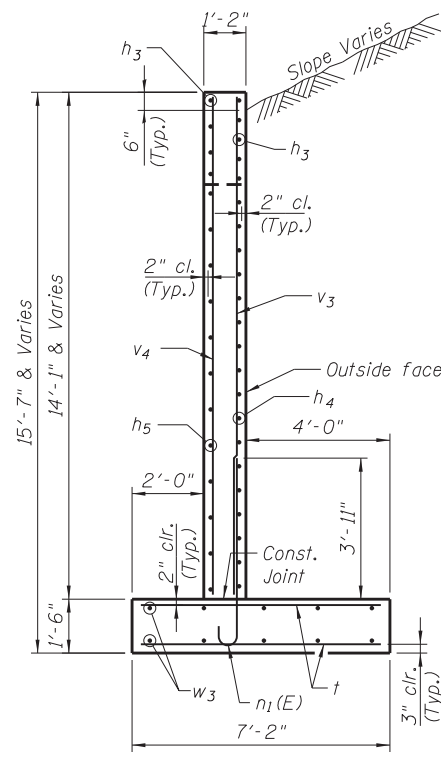
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|---------------------------|--------------------|-------------|-----------------|--------------|
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| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



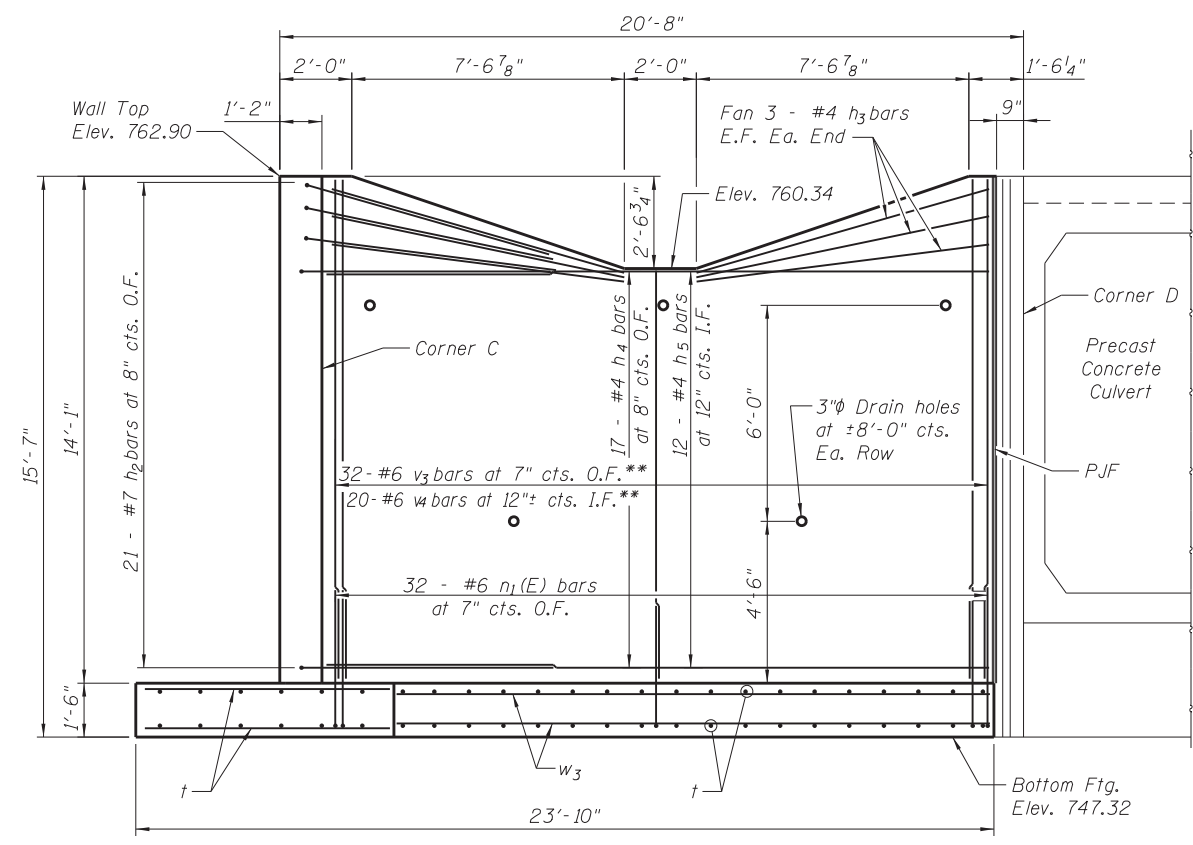
WALL A-B SECTION



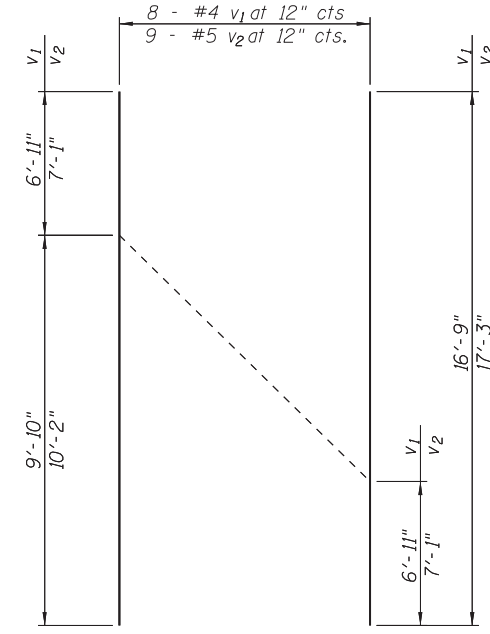
WALL A-B ELEVATION
(Looking West)



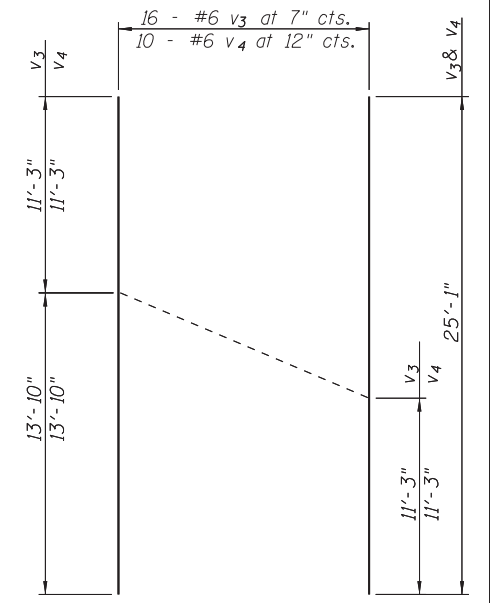
WALL C-D SECTION



WALL C-D ELEVATION
(Looking East)



*** BAR CUTTING DIAGRAM**
Order v1 and v2 bars full length. Cut as shown and use remainder of bars in opposite end.



**** BAR CUTTING DIAGRAM**
Order v3 and v4 bars full length. Cut as shown and use remainder of bars in opposite end.

MIN. BAR LAP

| | |
|----|--------|
| #5 | 3'-2" |
| #6 | 3'-10" |

FILE NAME = \\tmswdf3\Projects\09072\IL 1674 CADD - DWG\4.4 Struc\0482008-68D10-005-Wall Details 1 of 2.dgn

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| | | |
|-------------------------------|----------------|---------|
| USER NAME = jswitzer | DESIGNED - ALN | REVISED |
| PLOT SCALE = 0=0 1/8" = 1'-0" | CHECKED - TJR | REVISED |
| PLOT DATE = 1/16/2019 | DRAWN - TJR | REVISED |
| | CHECKED - ALN | REVISED |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

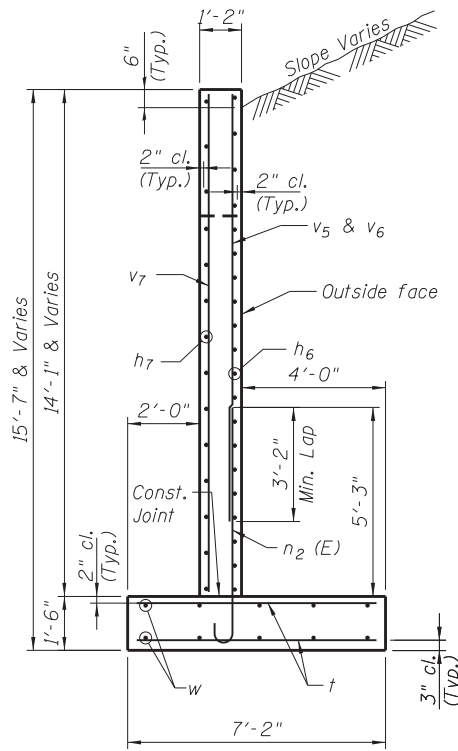
WALLS A-B & C-D STRUCTURE NO. 048-2008

SHEET NO. 5 OF 13 SHEETS

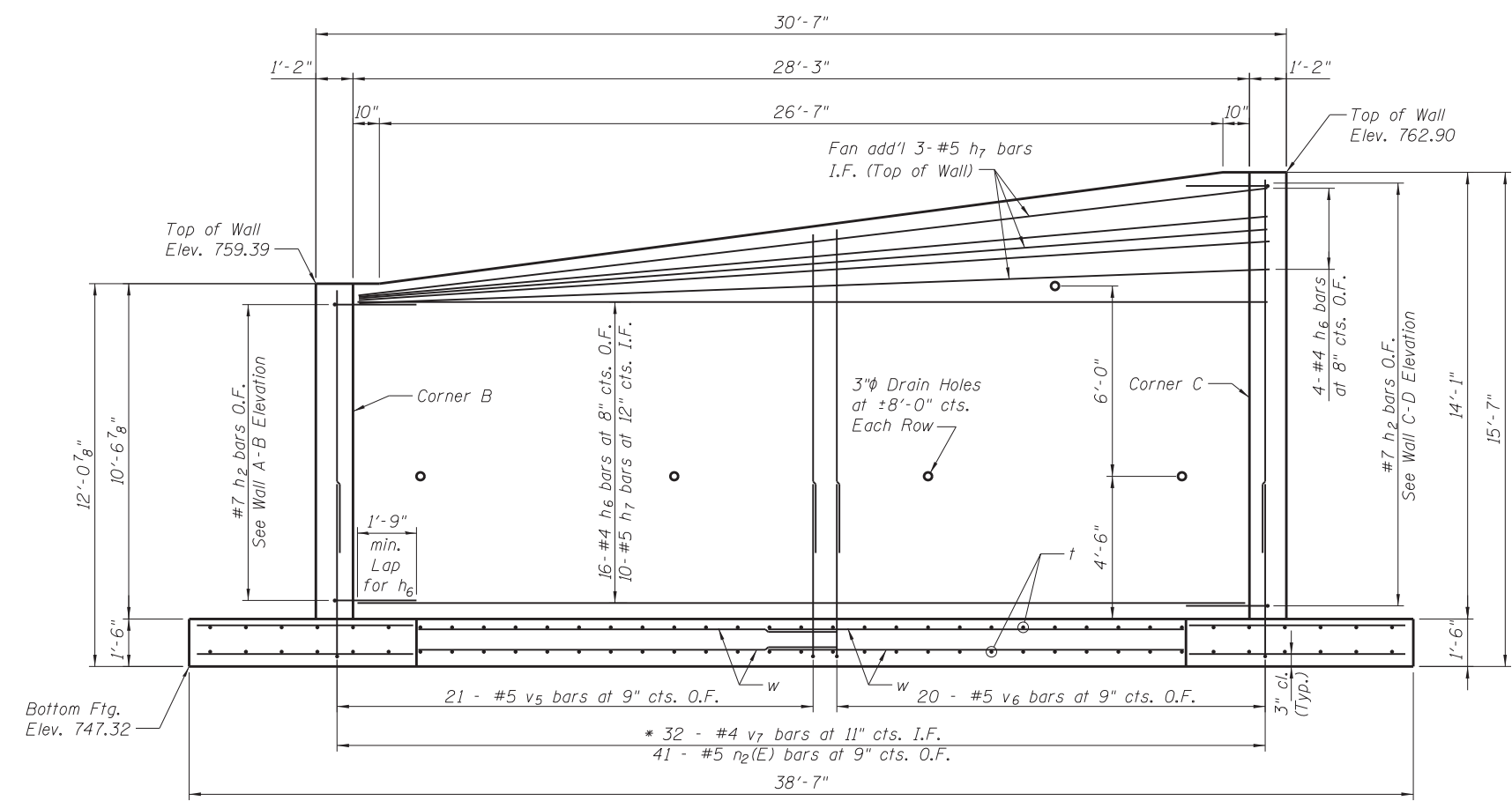
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| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 27 |
| CONTRACT NO. 68D10 | | | | |

ILLINOIS FED. AID PROJECT

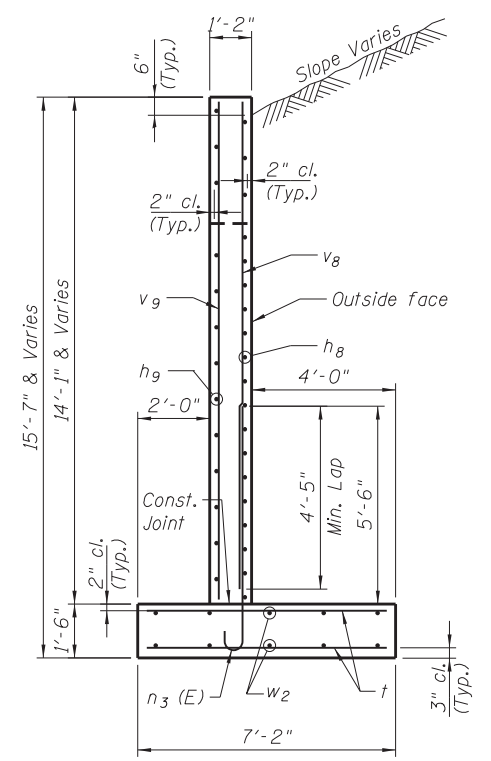
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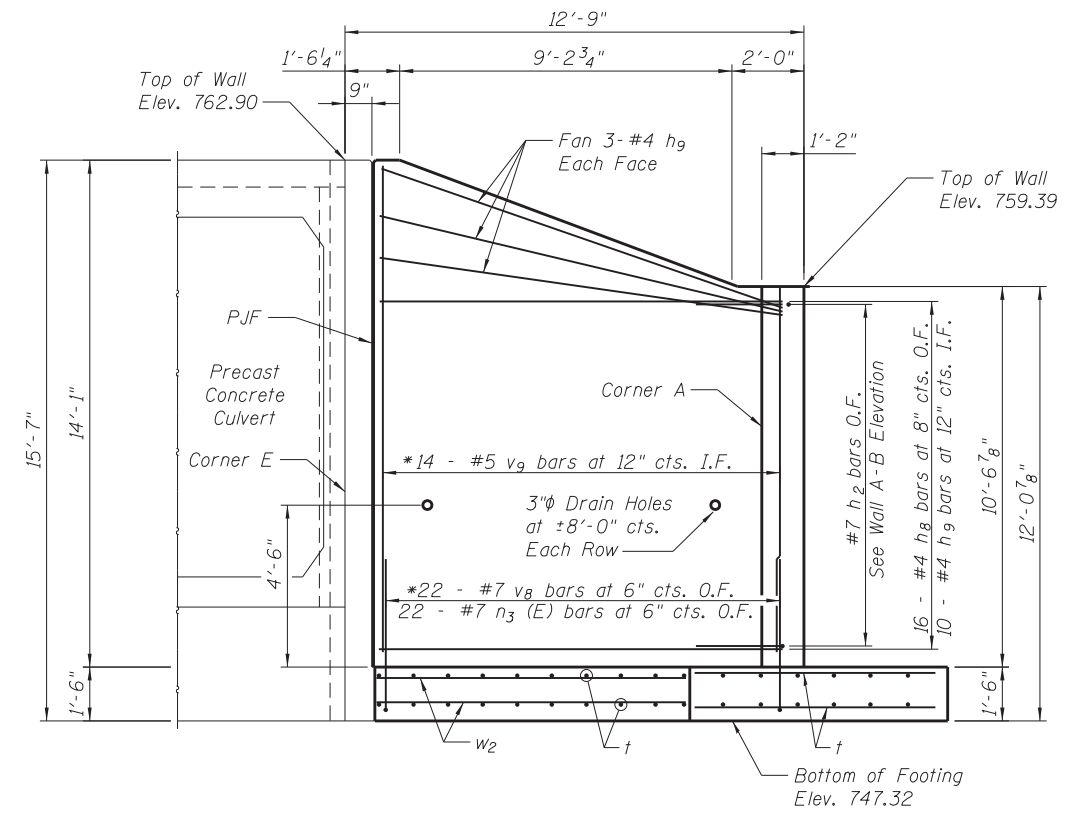
WALL B-C SECTION



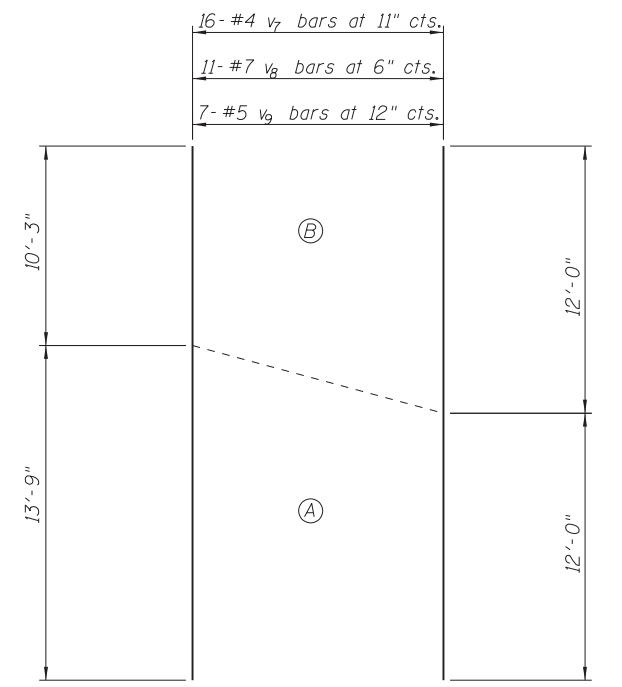
WALL B-C ELEVATION
(Looking North)



WALL E-A SECTION



WALL E-A ELEVATION
(Looking South)



*** BAR CUTTING DIAGRAM**
Order v7, v8 and v9 bars full length.
Cut as shown. Use (A) bars in one end and (B) bars in opposite end.

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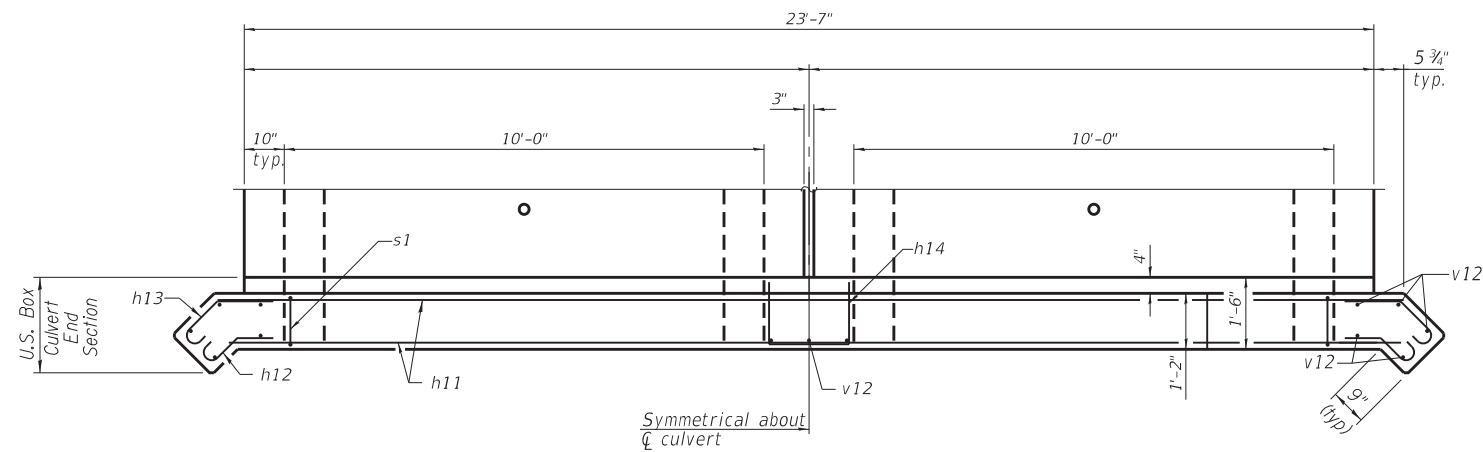


| | | |
|-------------------------------|----------------|---------|
| USER NAME = jswitzer | DESIGNED - ALN | REVISED |
| CHECKED - TJR | REVISIONS | |
| PLOT SCALE = 0=0 1/8" = 1'-0" | DRAWN - TJR | REVISED |
| PLOT DATE = 1/16/2019 | CHECKED - ALN | REVISED |

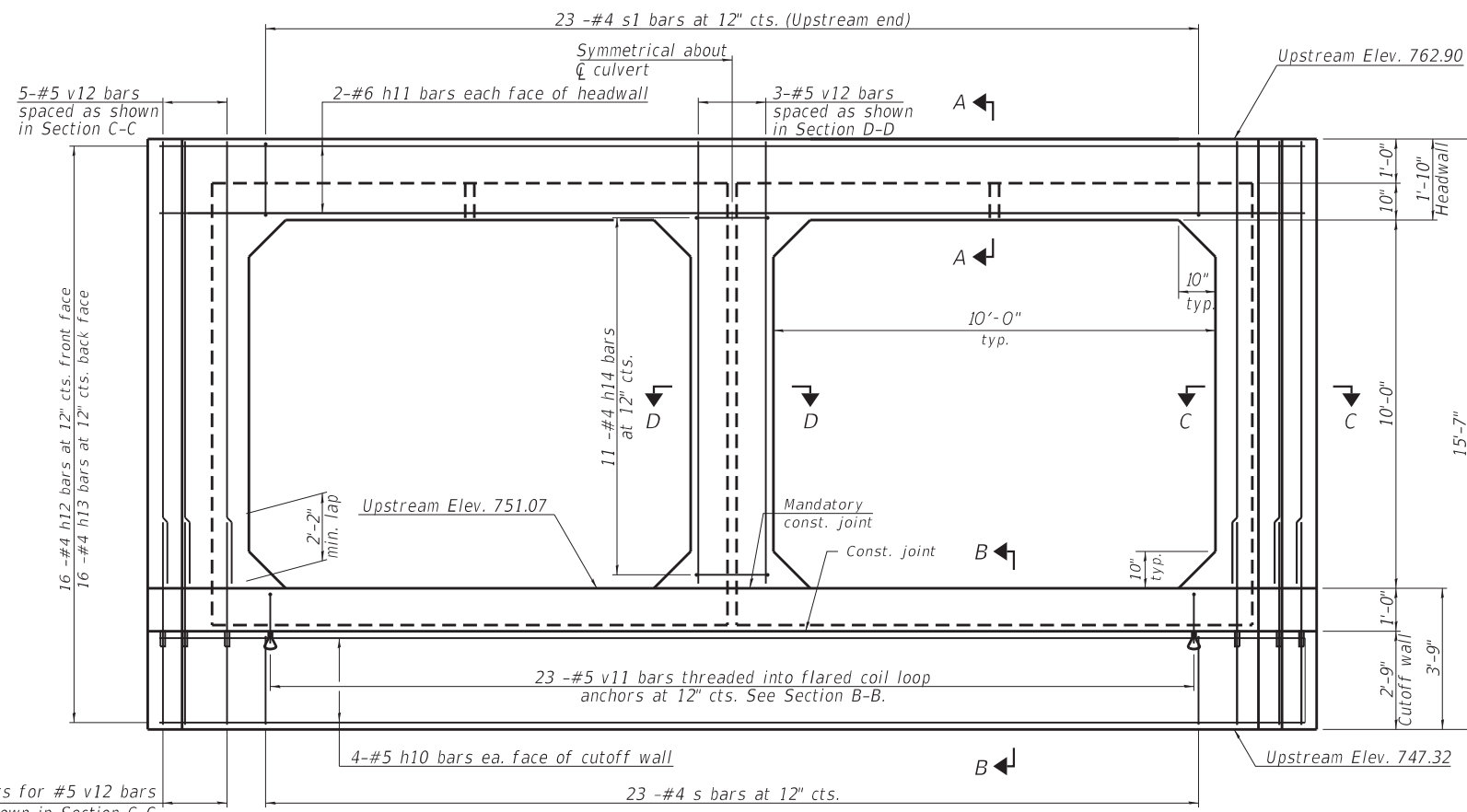
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALLS B-C & E-A
STRUCTURE NO. 048-2008
SHEET NO. 6 OF 13 SHEETS

| | | | | |
|---------------------------|------------|--------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 28 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



PLAN
(Drop Structure omitted in this view for clarity)



UPSTREAM END ELEVATION
(Drop Structure omitted in this view for clarity.)

Note:
Work this sheet with Sheet 8 of 13. Bar call-outs and details apply to these 2 sheets only.
The box culvert end section shall be built in the field and a precast option is not allowed except the cutoff wall may be precast. If the Contractor elects to use a precast cutoff wall, shop drawings and a proposed construction sequence shall be submitted to the Engineer for approval.
Areas of the precast box culvert in contact with cast-in-place concrete shall be sandblasted, cleaned, and wetted prior to placing concrete in the field according to Article 503.09(b).
The ends of the precast box sections adjacent to the end section shall be formed without male and female shapes.
Tilt h2 and h3 bars as required to maintain clearance. Extend precast concrete box culvert welded wire fabric into end section. Bend as necessary to provide 1" clear cover.
See sheet 8 of 13 for Section A-A, B-B, C-C and D-D. See sheet 4 of 13 for drop structure details. See sheet 9 and 10 of 13 for downstream box culvert end sections details.

BILL OF MATERIAL

| Item | Unit | Total |
|---|------|-------|
| Box Culvert End Sections, Culvert No. 1 | Each | 1 |

FILE NAME = \\swmswdf\p3\Projects\090072\IL 1674 CADD - DWG\4.4 Struc\0482008-68D10-007-Upstream Box Culvert End Section Details.dgn

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| | | |
|---------------------------------|----------------|---------|
| USER NAME = jswitzer | DESIGNED - ALN | REVISED |
| PLOT SCALE = 0=0 1/8" = 1' / mm | CHECKED - TJR | REVISED |
| PLOT DATE = 1/16/2019 | DRAWN - TJR | REVISED |
| | CHECKED - ALN | REVISED |

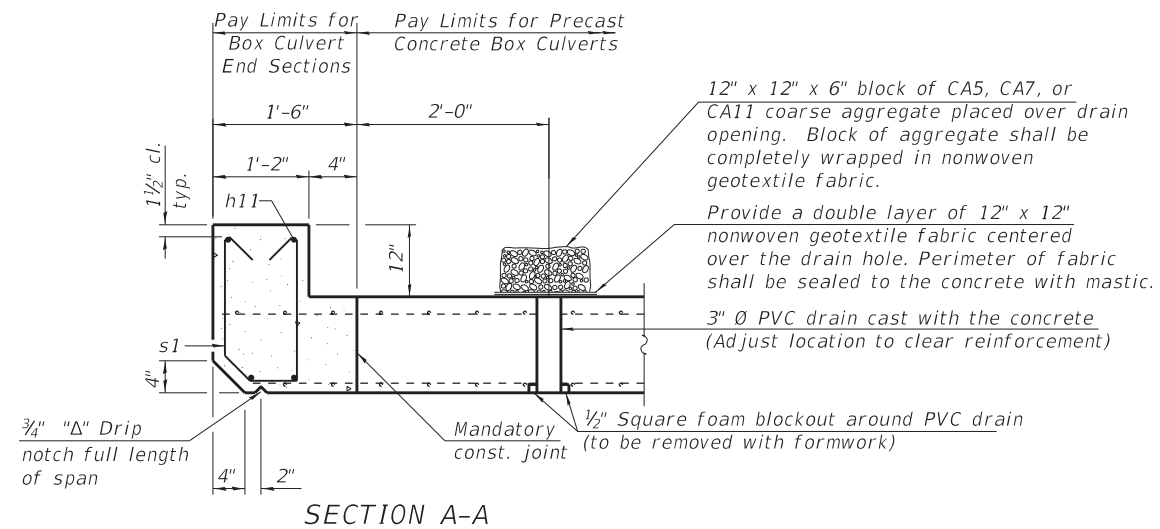
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**UPSTREAM BOX CULVERT END SECTION DETAILS
STRUCTURE NO. 048-2008**

(Sheet 1 of 2)

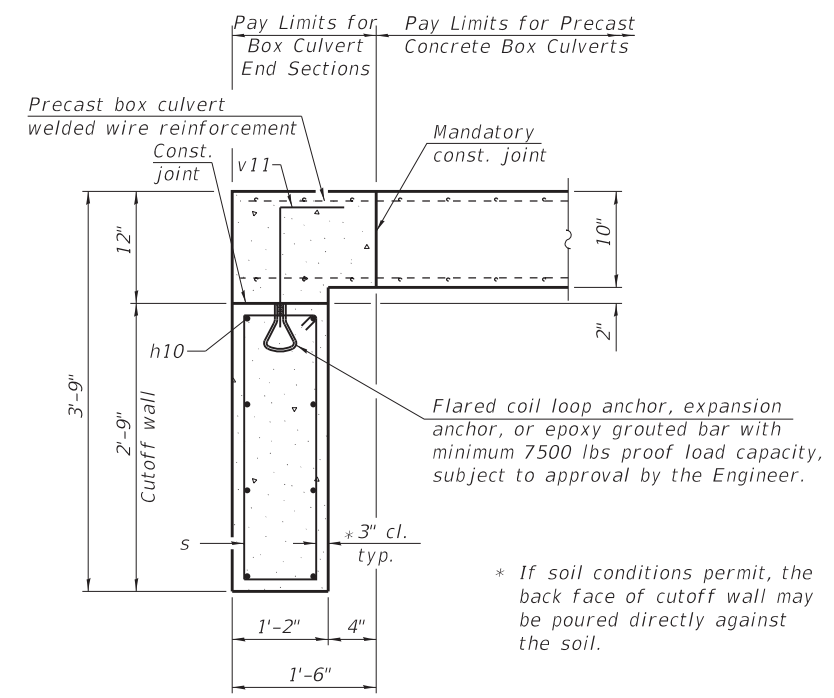
SHEET NO. 7 OF 13 SHEETS

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| F.A.S. RTE. 379 | SECTION (111C-5)CR | COUNTY KNOX | TOTAL SHEETS 62 | SHEET NO. 29 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



SECTION A-A

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

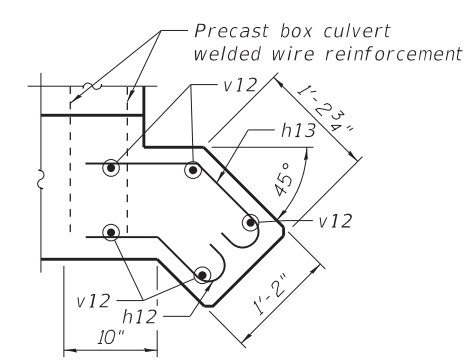


SECTION B-B

* If soil conditions permit, the back face of cutoff wall may be poured directly against the soil.

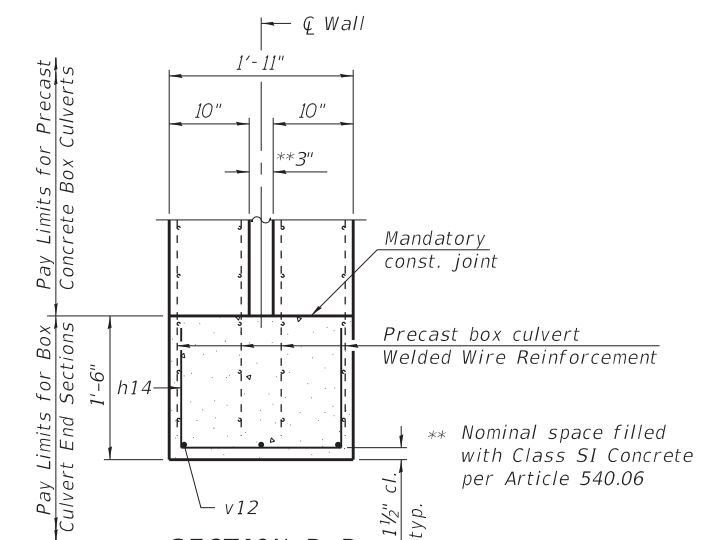
ONE END SECTION BILL OF MATERIAL
(For information only)

| Bar | No. | Size | Length | Shape |
|-----------------------|---------|------|--------|-------|
| h10 | 8 | #5 | 24'-5" | — |
| h11 | 4 | #6 | 24'-5" | — |
| h12 | 32 | #4 | 2'-0" | ⌋ |
| h13 | 32 | #4 | 2'-8" | ⌋ |
| h14 | 11 | #4 | 3'-11" | ⌋ |
| s | 23 | #4 | 6'-7" | ⌋ |
| s1 | 23 | #4 | 4'-8" | ⌋ |
| v11 | 23 | #5 | 1'-9" | ⌋ |
| v12 | 13 | #5 | 11'-6" | — |
| Concrete Box Culverts | Cu. Yd. | 10.0 | | |
| Reinforcement Bars | Pound | 860 | | |
| Bar Splicers | Each | 10 | | |



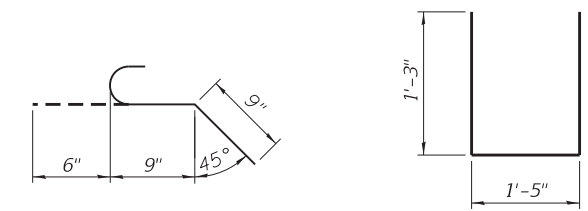
SECTION C-C

(See Detail A on sheet 4 of 13 for additional information)



SECTION D-D

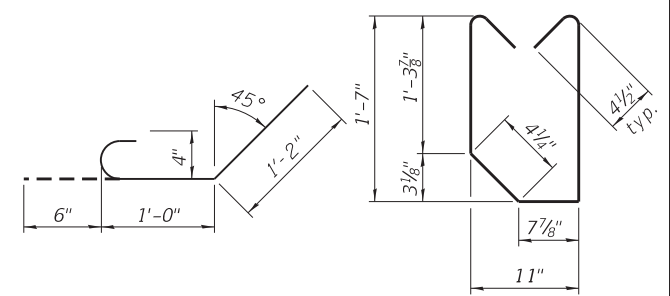
(For multiple cells only)



BAR h12

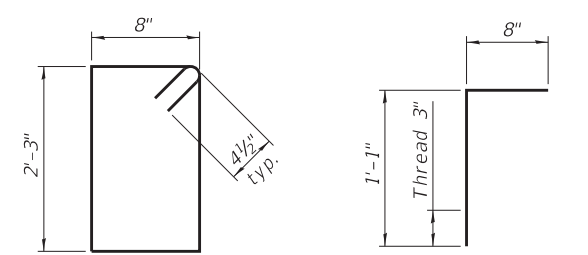
BAR h14

(For multiple cells only)



BAR h13

BAR s1



BAR s

BAR v11

(Sheet 2 of 2)

FILE NAME = \\tmswdf3\Projects\09072\IL 1674 CADD - DWG\4.4 Struc\0482008-68D10-008-Upstream Box Culvert End Section Details.dgn

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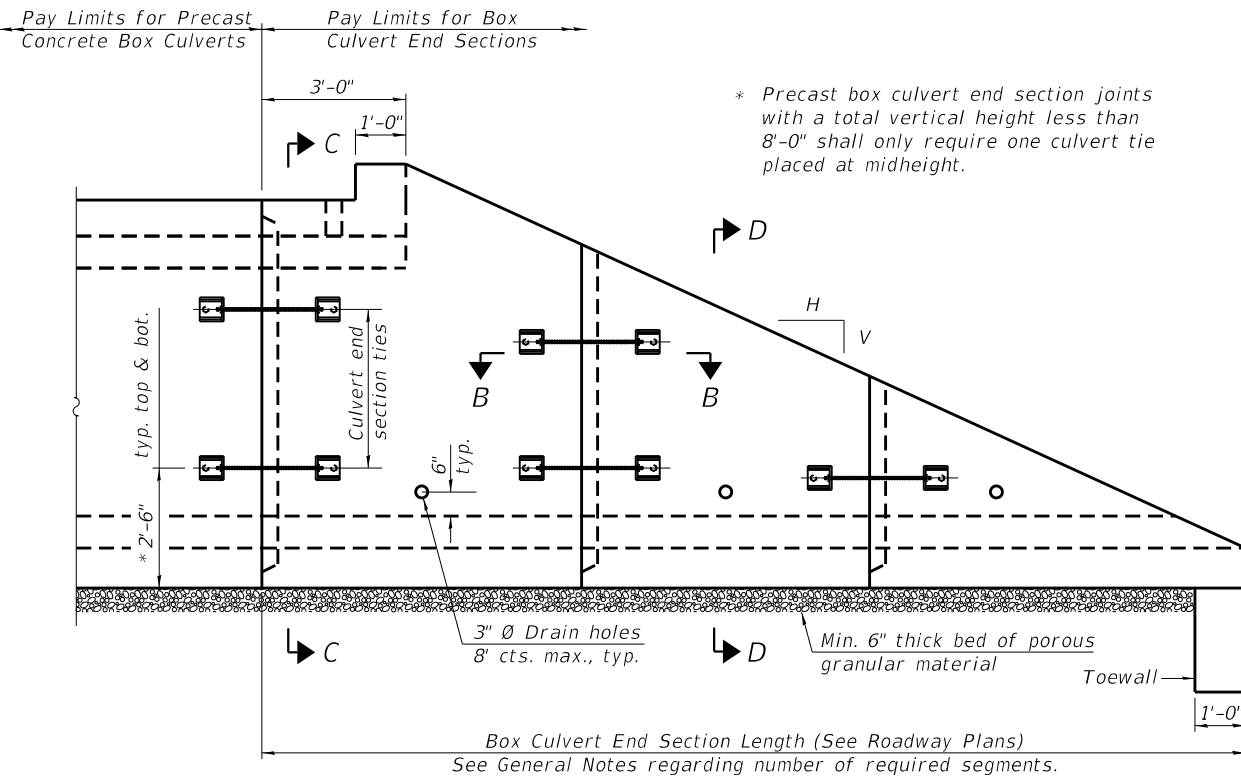
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| USER NAME = jswitzer | DESIGNED - ALN | REVISED |
| CHECKED - TJR | REVISOR | |
| PLOT SCALE = 0.00 1/8" = 1'-0" | DRAWN - TJR | REVISOR |
| PLOT DATE = 1/16/2019 | CHECKED - ALN | REVISOR |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

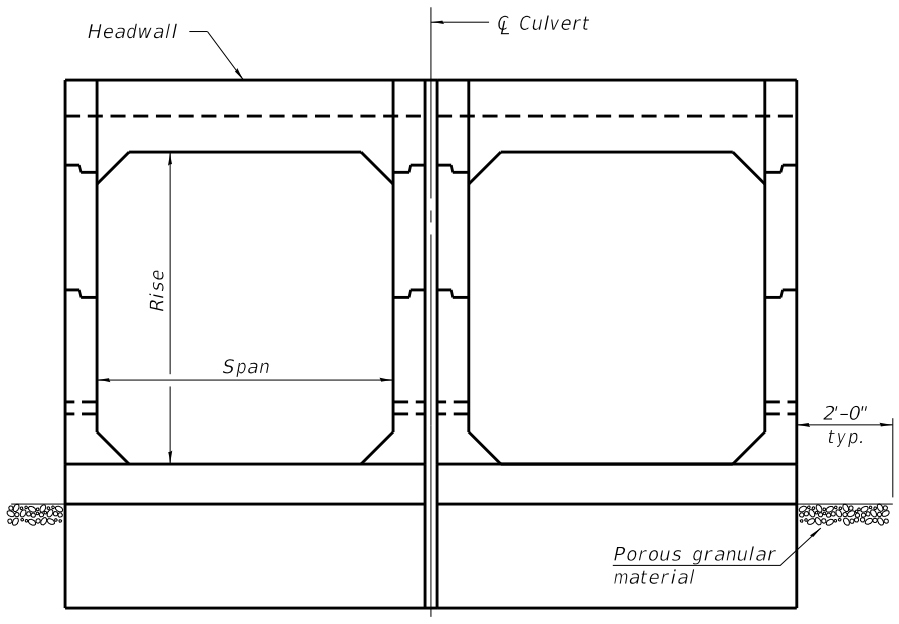
UPSTREAM BOX CULVERT END SECTION DETAILS STRUCTURE NO. 048-2008

SHEET NO. 8 OF 13 SHEETS

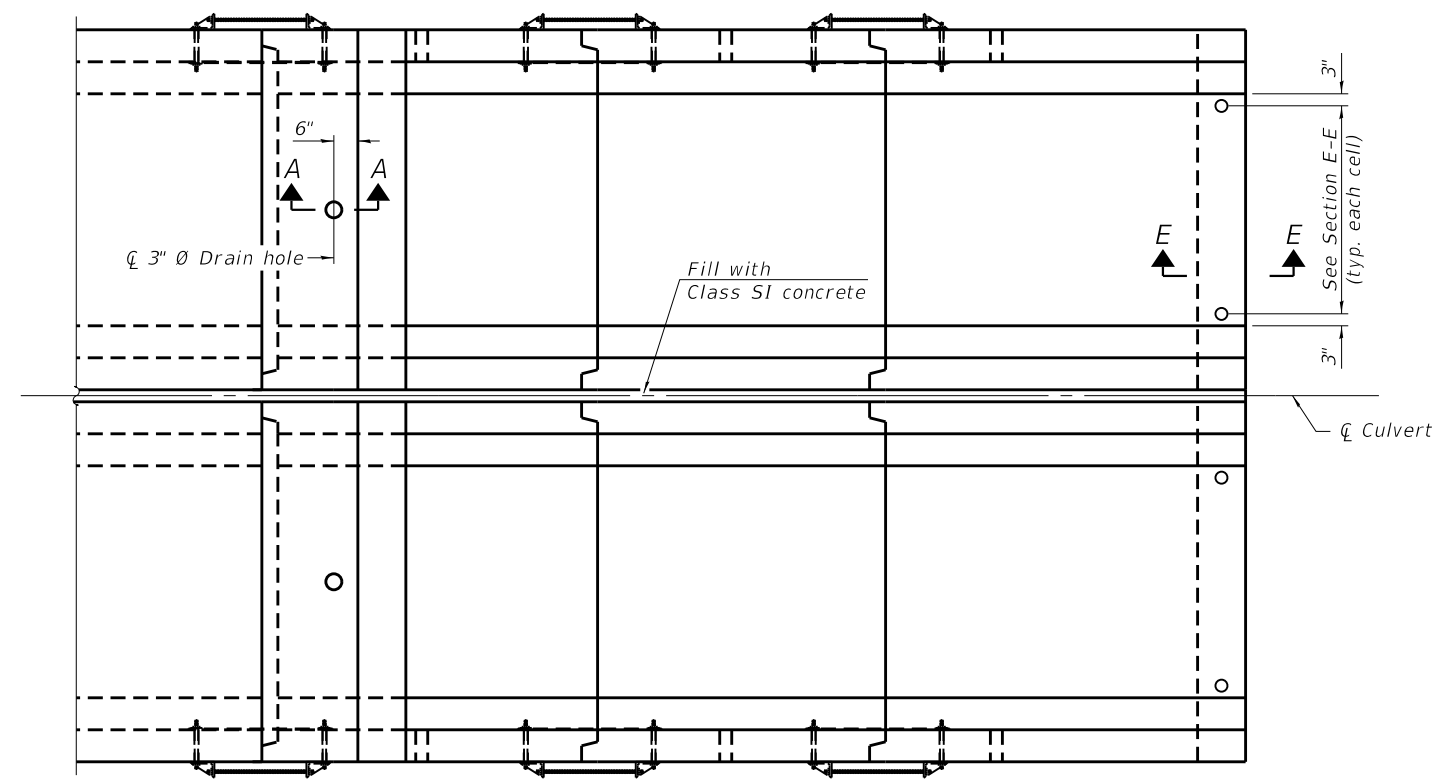
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|--------|--------------|-----------|
| 379 | (111C-5)CR | KNOX | 62 | 30 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



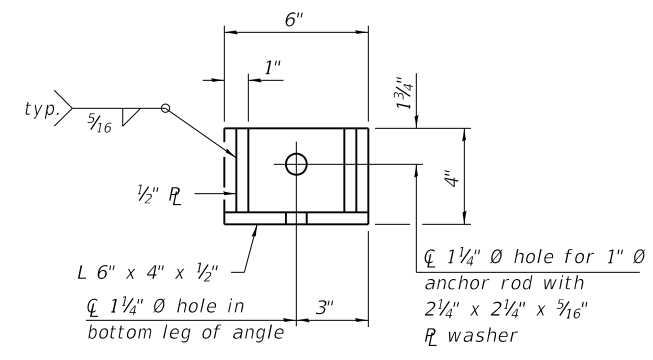
ELEVATION



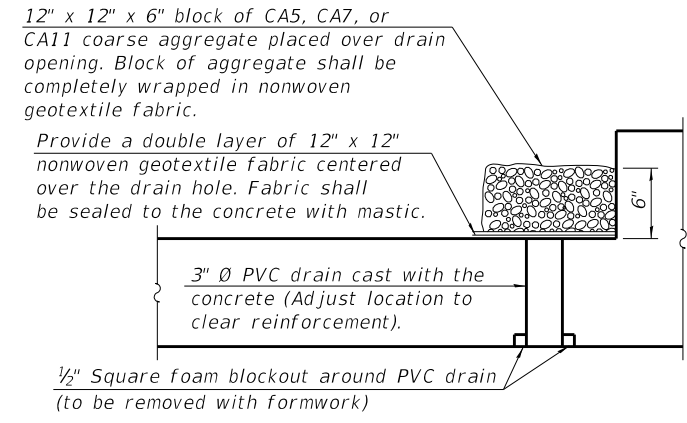
END VIEW



PLAN



RESTRAINT ANGLE DETAIL



SECTION A-A

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. This work will be measured for payment as each, with each end of each culvert being one each. End sections will be paid for at the contract unit price per each for Box Culvert End Sections of the culvert number specified.

Typical box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements of ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Number of segments shown in Elevation is for example only. Length and number of precast box sections required to construct Box Culvert End Sections shall be determined by the Contractor.

See roadway plans for embankment slope (V:H).

1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4" x 2 1/4" x 3/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified.

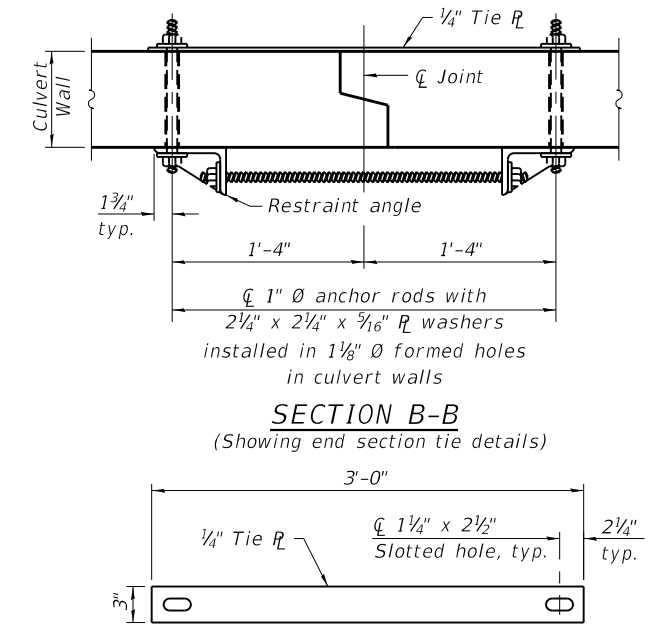
Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd..

For end sections with traversable pipe grate systems, see grate detail sheet for required modifications.

The 3" nominal space between adjacent end sections shall be filled with Class SI concrete in accordance with Article 540.06 of the Standard Specifications. Cost included with Box Culvert End Sections.

Details for double cell box culvert shown. Details for other multi-cell box culverts similar.



TIE PLATE DETAIL

MCB-TES

2-17-2017

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| | | |
|----------------------------|----------------|---------|
| USER NAME = jstein | DESIGNED - ALN | REVISED |
| | CHECKED - TJR | REVISED |
| PLOT SCALE = 0.1 5/8" = 1' | DRAWN - TJR | REVISED |
| PLOT DATE = 8/14/2018 | CHECKED - ALN | REVISED |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MULTI-CELL PRECAST BOX CULVERT TAPERED END SECTIONS
STRUCTURE NO. 048-2008

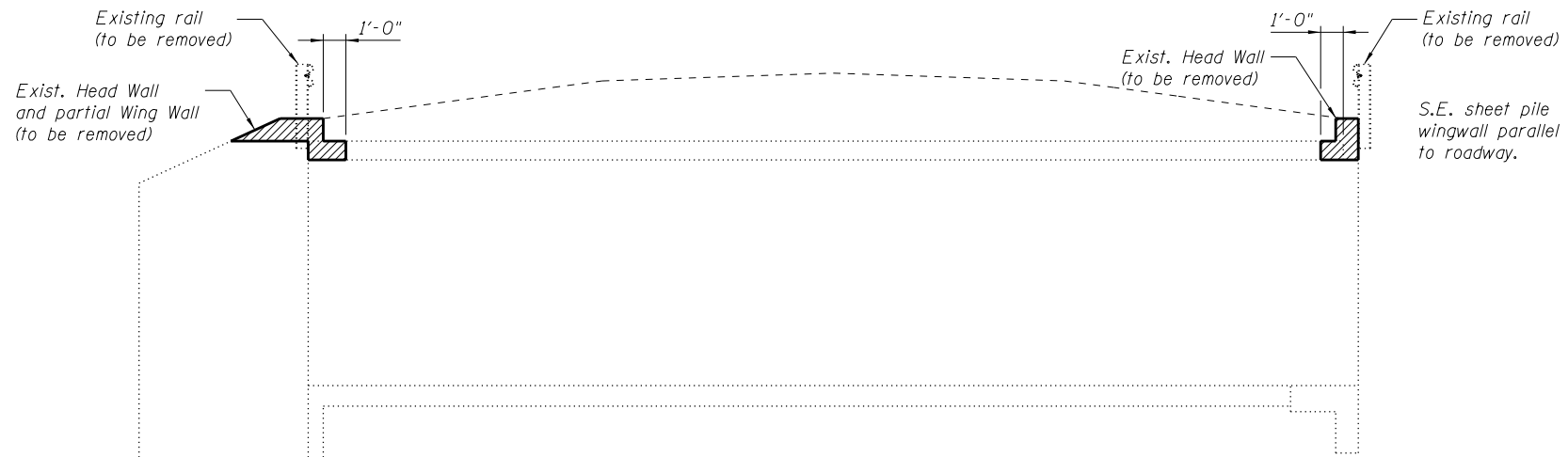
SHEET NO. 9 OF 13 SHEETS

| | | | | |
|--------------------|------------|--------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 31 |
| CONTRACT NO. 68D10 | | | | |

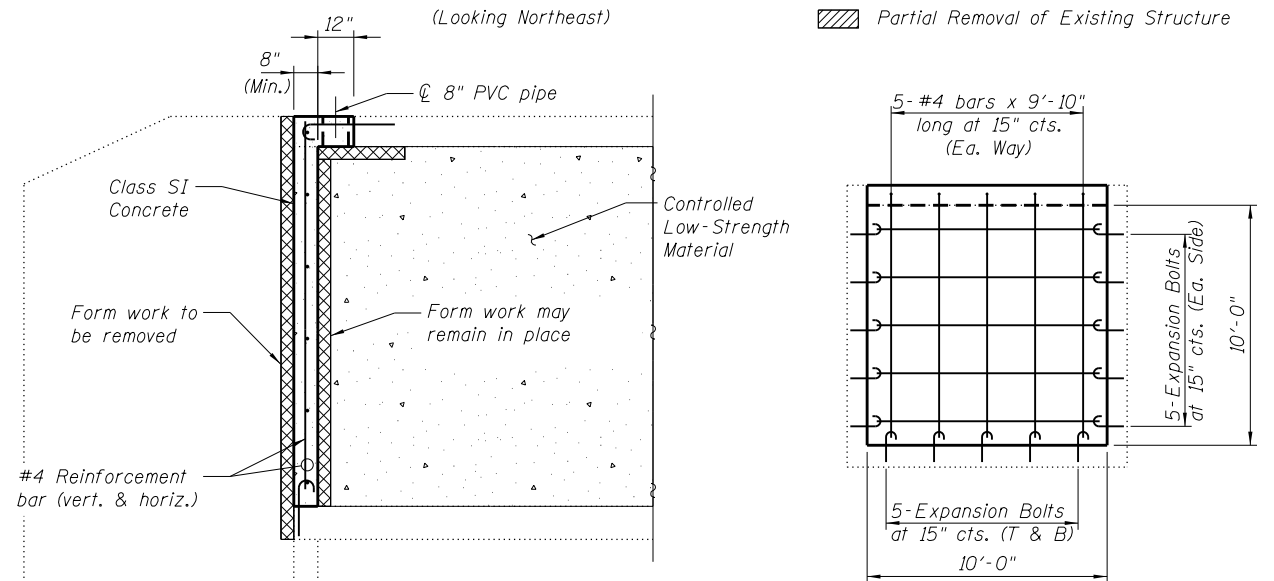
ILLINOIS FED. AID PROJECT

FILE NAME = P:\090072\1.167.4 CAD - DWG\4.4 Struc\0482008-68D10-009\Multi-Cell Precast Box Culvert Tapered End Sections.dgn

(Sheet 1 of 2)



LONGITUDINAL SECTION THRU EXISTING STRUCTURE



- NOTES:**
- Recommended Construction Sequence for placing Controlled Low Strength Material:
 - After stream flow is routed through proposed double box culvert, headwall concrete and the tops of existing concrete wing walls shall be removed as indicated on the plans. If top portion of steel sheet piling wing wall (SE corner) interferes with the construction of the bulkhead, limited portions may be removed as directed by the Engineer.
 - Build concrete bulkhead on each end of existing culvert as shown on the plans.
 - Provide two 8" PVC pipe openings in top slab for CLSM placement and capacity verification. Place CLSM according to the Standard Specifications.
 - Expansion bolts shall consist of self drilling expansion shields & 3/4" hooked bolts. Bolts shall extend a minimum of 9" into existing concrete.
 - Materials (expansion bolts, reinforcement bars, and Class SI Concrete, PVC pipe, etc.) and labor associated with constructing the bulkheads shall not be paid for separately, but shall be included in the contract unit price per CU.YD. for CONTROLLED LOW-STRENGTH MATERIAL.

BULKHEAD FORMING DETAIL

- (West End shown, East End similar)
- Suggested Form Work Locations
 - Controlled Low-Strength Material (CLSM)

BILL OF MATERIALS

| Item | Unit | Quantity |
|------------------------------------|---------|----------|
| Controlled Low-Strength Material | Cu. Yd. | 172.8 |
| Concrete Headwall Removal, Special | Each | 2 |
| | | |
| | | |
| | | |
| | | |

FILE NAME = P:\090072\1167\4 CAD - DWG\4.4 Struc\0482008-6810-011-Controlled Low Strength Material Detail.dgn

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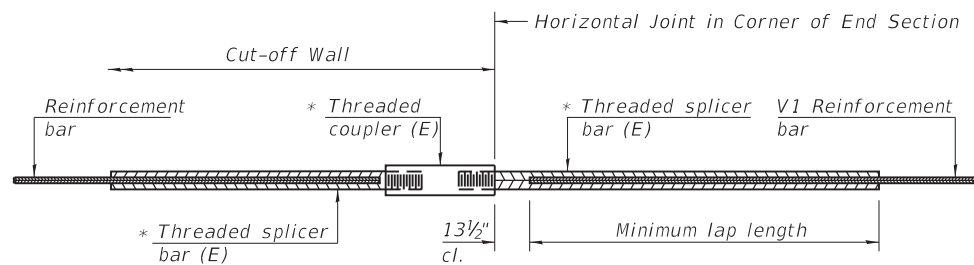
| | | |
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| USER NAME = jstein | DESIGNED - ALN | REVISED |
| | CHECKED - TJR | REVISED |
| PLOT SCALE = 0.2' / in. | DRAWN - TJR | REVISED |
| PLOT DATE = 8/14/2018 | CHECKED - ALN | REVISED |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CONTROLLED LOW STRENGTH MATERIAL DETAIL
STRUCTURE NO. 048-2008**

SHEET NO. 11 OF 13 SHEETS

| | | | | |
|---------------------------|------------|--------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 33 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

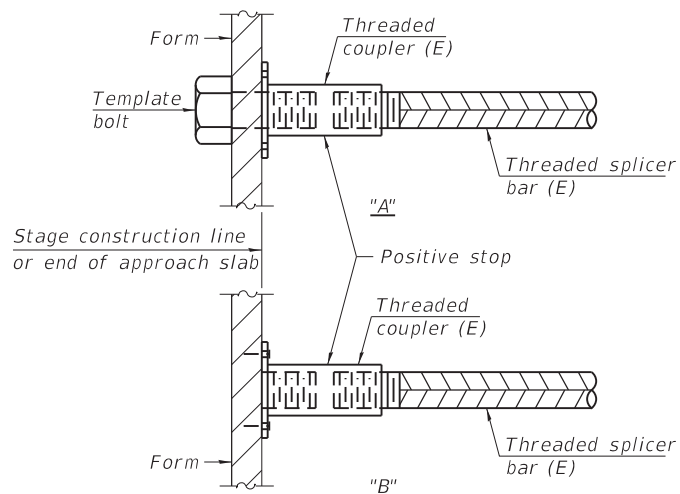


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

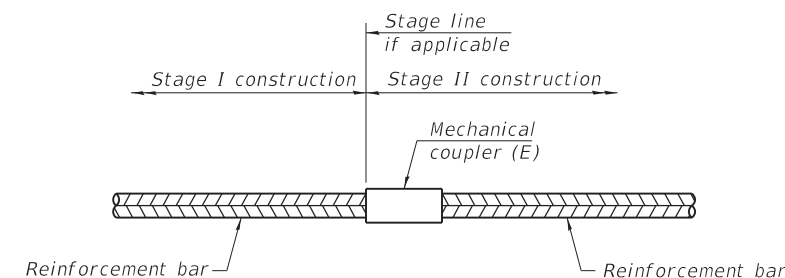
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

| Location | Bar size | No. assemblies required | Minimum lap length |
|-----------------|----------|-------------------------|--------------------|
| Upstream Box | | | |
| Culvert End | | | |
| Section Cut-off | | | |
| Wall | #5 | 10 | 2'-2" |



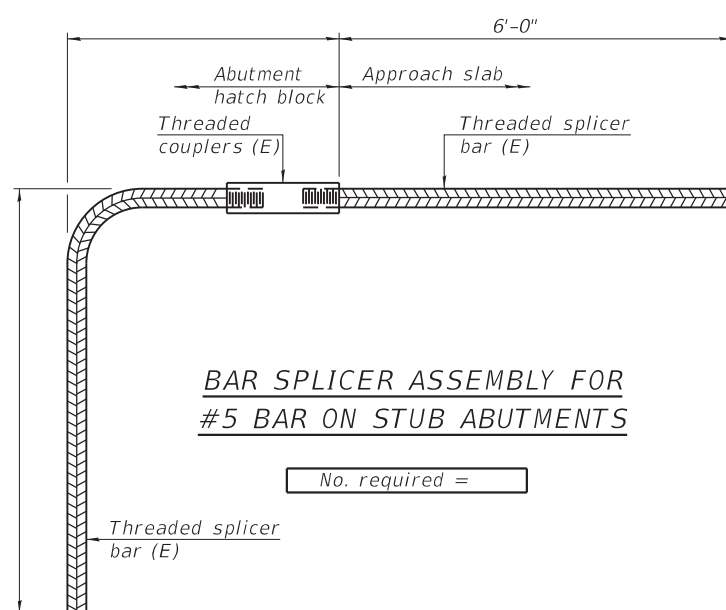
INSTALLATION AND SETTING METHODS

"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.



STANDARD MECHANICAL SPLICER

| Location | Bar size | No. assemblies required |
|----------|----------|-------------------------|
| | | |
| | | |
| | | |



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

FILE NAME = \\swansea\dfs3\Projects\09072\IL 1674 CADD - DWG\4.4 Struct\0482008-68D10-012-Bar-Splicer Assembly and Mechanical Splicer Details.dgn

BSD-1

2-17-2017

THOUVENOT, WADE & MOERCHEN, INC.



| | | |
|-------------------------------|----------------|---------|
| USER NAME = jswitzer | DESIGNED - ALN | REVISED |
| | CHECKED - TJR | REVISED |
| PLOT SCALE = 0=0 1/8" = 1'-0" | DRAWN - TJR | REVISED |
| PLOT DATE = 1/16/2019 | CHECKED - ALN | REVISED |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 048-2008**

SHEET NO. 12 OF 13 SHEETS

| | | | | |
|---------------------------|--------------------|-------------|-----------------|--------------|
| F.A.S. RTE. 379 | SECTION (111C-5)CR | COUNTY KNOX | TOTAL SHEETS 62 | SHEET NO. 34 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



SOIL BORING LOG

ROUTE FAS 379 (IL 167) DESCRIPTION IL 167 Double 10'x6' Box Culvert LOGGED BY JAR

SECTION 101W-1& RS-2(110,111), LOCATION W&RS-2 LOCATION SEC. 16, TWP. 12 N, RNG. 4 E, 4th PM.

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. Station 612+94.23 BORING NO. 61276 (N. End) Station 612+76 Offset 32.00ft Lt of CL Ground Surface Elev. 763.01 ft

Table with columns for Depth (ft), Blows (blows/6"), Unconfined Compressive Strength (tsf), Moisture Content (%), and Soil Description. Includes soil types like Brown SILTY CLAY LOAM, Gray, Dk Gray SHALEY CLAY, and reddish-brown.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

ROUTE FAS 379 (IL 167) DESCRIPTION Box Culvert Boring at shoulder failure LOGGED BY Syed (SAM)

SECTION 101W-1& RS-2(110,111), LOCATION W&RS-2 LOCATION IL 167 E of Victoria, SEC. 16, TWP. 12 N, RNG. 4 E, 4th PM.

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. Station 612+47 EX BORING NO. 61236 Station 612+36 Offset 12.0 ft RT Ground Surface Elev. 767.00 ft

Table with columns for Depth (ft), Blows (blows/6"), Unconfined Compressive Strength (tsf), Moisture Content (%), and Soil Description. Includes soil types like SAND & GRAVEL, SANDY CLAY, CLAY, and SHALEY CLAY.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

ROUTE FAS 379 (IL 167) DESCRIPTION Box Culvert Boring at shoulder failure LOGGED BY Syed (SAM)

SECTION 101W-1& RS-2(110,111), LOCATION W&RS-2 LOCATION IL 167 E of Victoria, SEC. 16, TWP. 12 N, RNG. 4 E, 4th PM.

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. Station 612+47 EX BORING NO. 61281 Station 612+81 Offset 13.0 ft RT Ground Surface Elev. 767.00 ft

Table with columns for Depth (ft), Blows (blows/6"), Unconfined Compressive Strength (tsf), Moisture Content (%), and Soil Description. Includes soil types like SAND & GRAVEL, CLAY, and SHALEY CLAY.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)

Note: Elevations shown in the boring logs should be adjusted by -0.39 ft. to match current datum. Stations shown in the boring logs should be adjusted by -58.75 ft. to match current alignment.

FILE NAME = P:\090072\IL 167\4 CAD - DWG\4.4 Struc\9462008-68010-013-Soil Boring Data.dgn

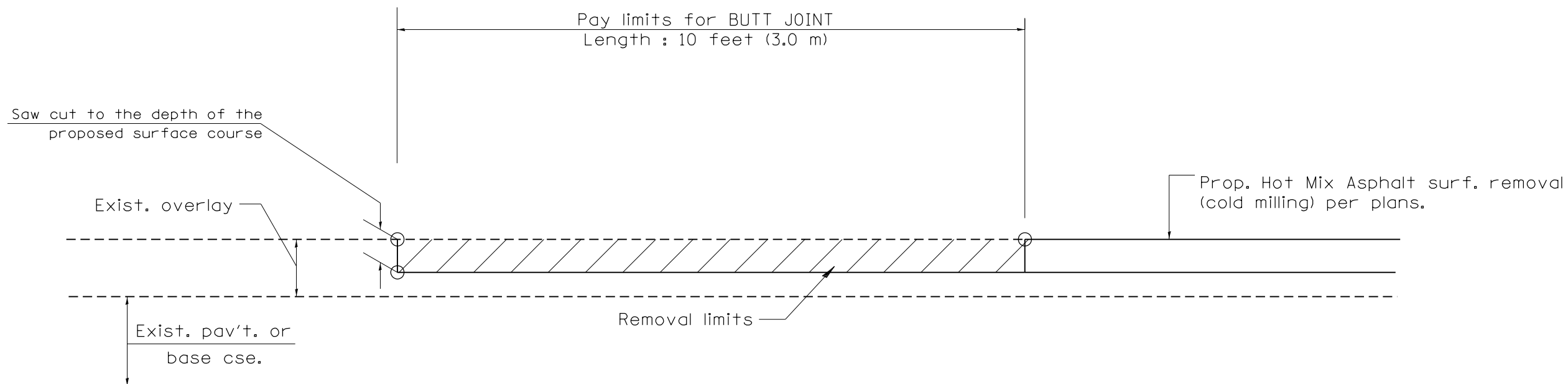
THOUVENOT, WADE & MOERCHEN, INC. logo and address: SWANSEA • WATERLOO • EDWARDSVILLE • ST. LOUIS • ST. CHARLES

Table with columns: USER NAME, DESIGNED, CHECKED, DRAWN, PLOT DATE, REVISED.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING DATA STRUCTURE NO. 048-2008 SHEET NO. 13 OF 13 SHEETS

Table with columns: F.A.S. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO.



CASE 4 : SINGLE LIFT OVERLAY WITH EQUIVALENT DEPTH
HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER

All dimensions are in inches (millimeters) unless otherwise noted.

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
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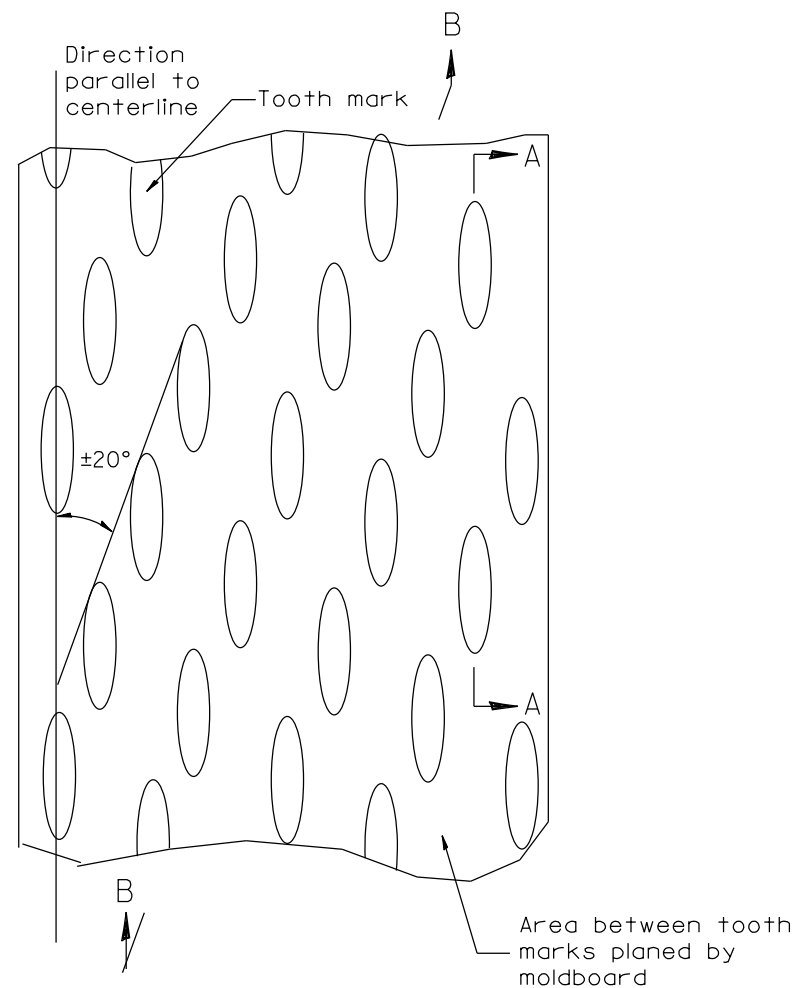
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE

CADD STD. 406101-D4

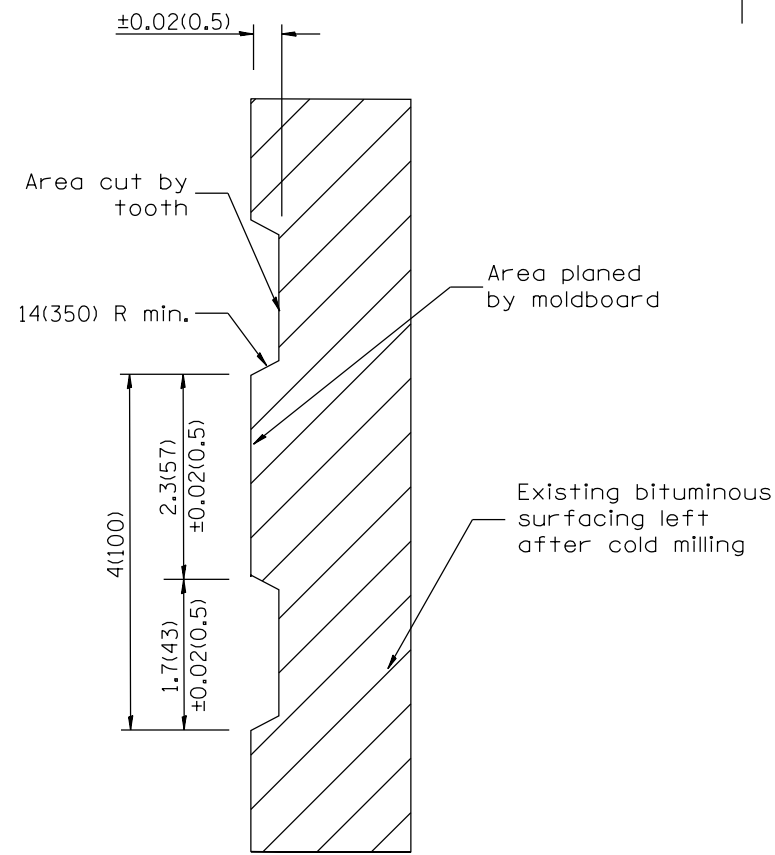
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|-----------|--------|---------------------------|-----------|
| 379 | (111-5)CR | KNOX | 62 | 37 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | |
| | | | CONTRACT NO. 68D10 | |



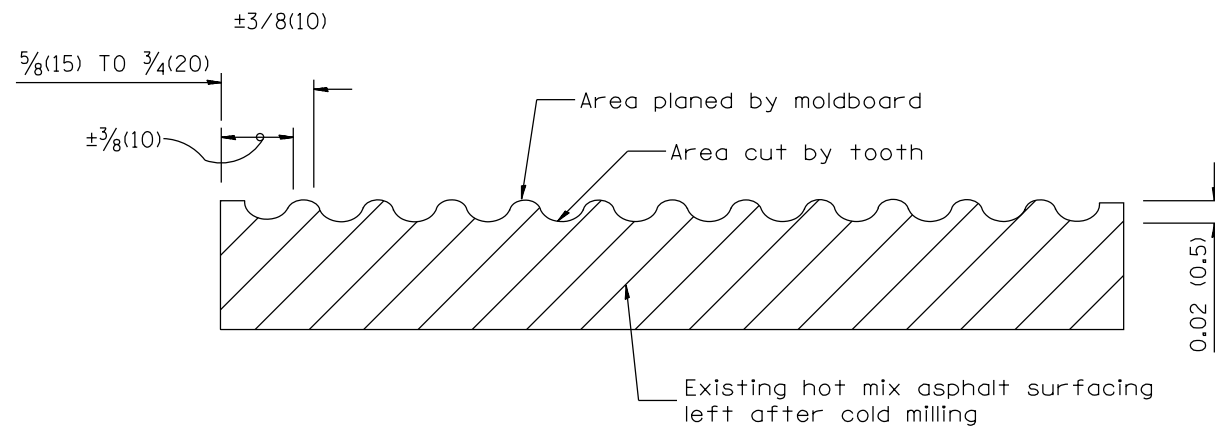
PLAN

General notes:

1. Coldmilling shall consist of two processes: Cutting with carbide teeth mounted on a rotating drum, and planing with a moldboard mounted immediately behind the cutting drum.
2. Other similar patterns will be acceptable if they consist of a smooth, flat, planed surface interspersed with a pattern of discontinuous longitudinal striations.



SECTION A-A



SECTION B-B PROJECTED
PERPENDICULAR TO CENTERLINE

All dimensions are in inches (millimeters) unless otherwise noted.

| | | |
|----------|--------------------------------------|------|
| 01-01-97 | RENUM. C-104.01, NEW REVISION BOX | T.P. |
| 04-20-98 | REMOVED MILLING DETAIL FROM STANDARD | J.A. |
| 09-08-98 | CORRECT NOTE LEADER PLACEMENT | R.W. |
| 10-16-06 | REVISED TO 2007 SPEC. | M.A. |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

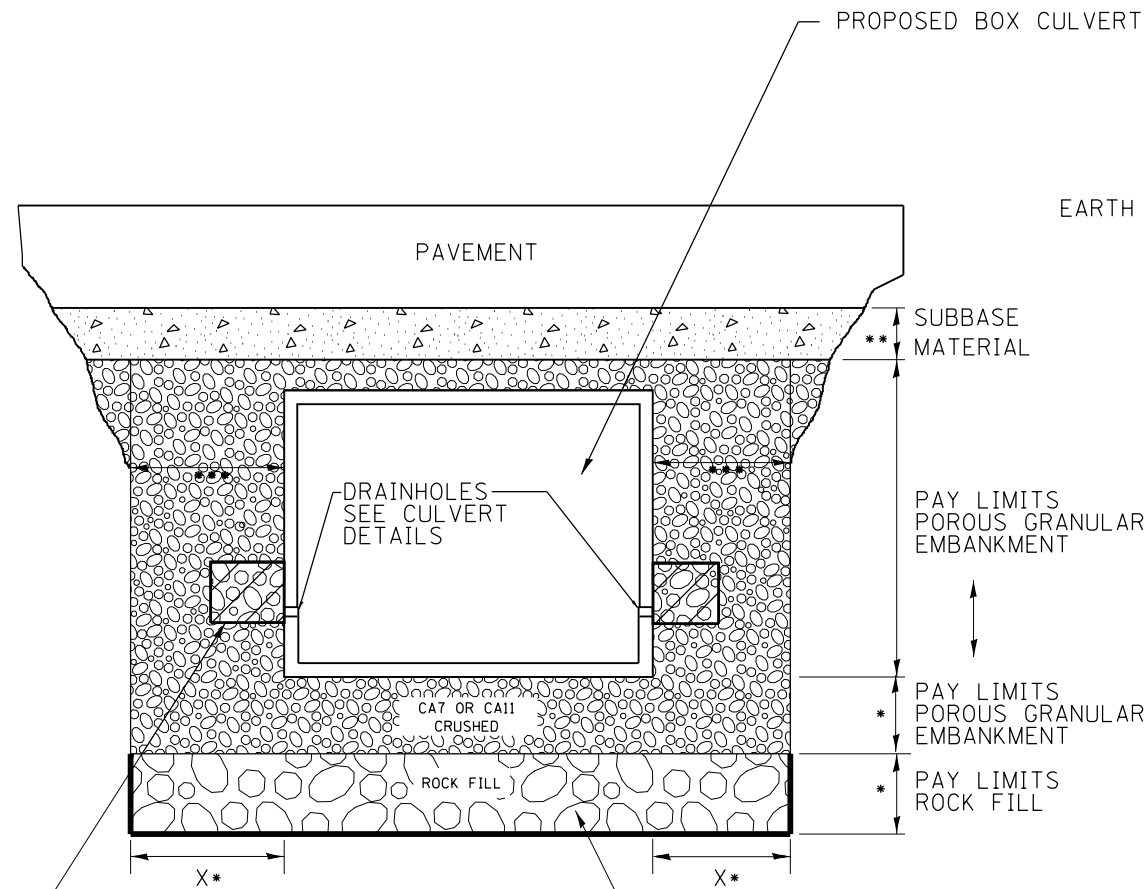
HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

NOT TO SCALE

CADD STD. 440001-D4

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|------------|--------|--------------|-----------|
| 379 | (111C-5)CR | KNOX | 62 | 38 |
| CONTRACT NO. 68D10 | | | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |

ROADWAY PROFILE VIEW

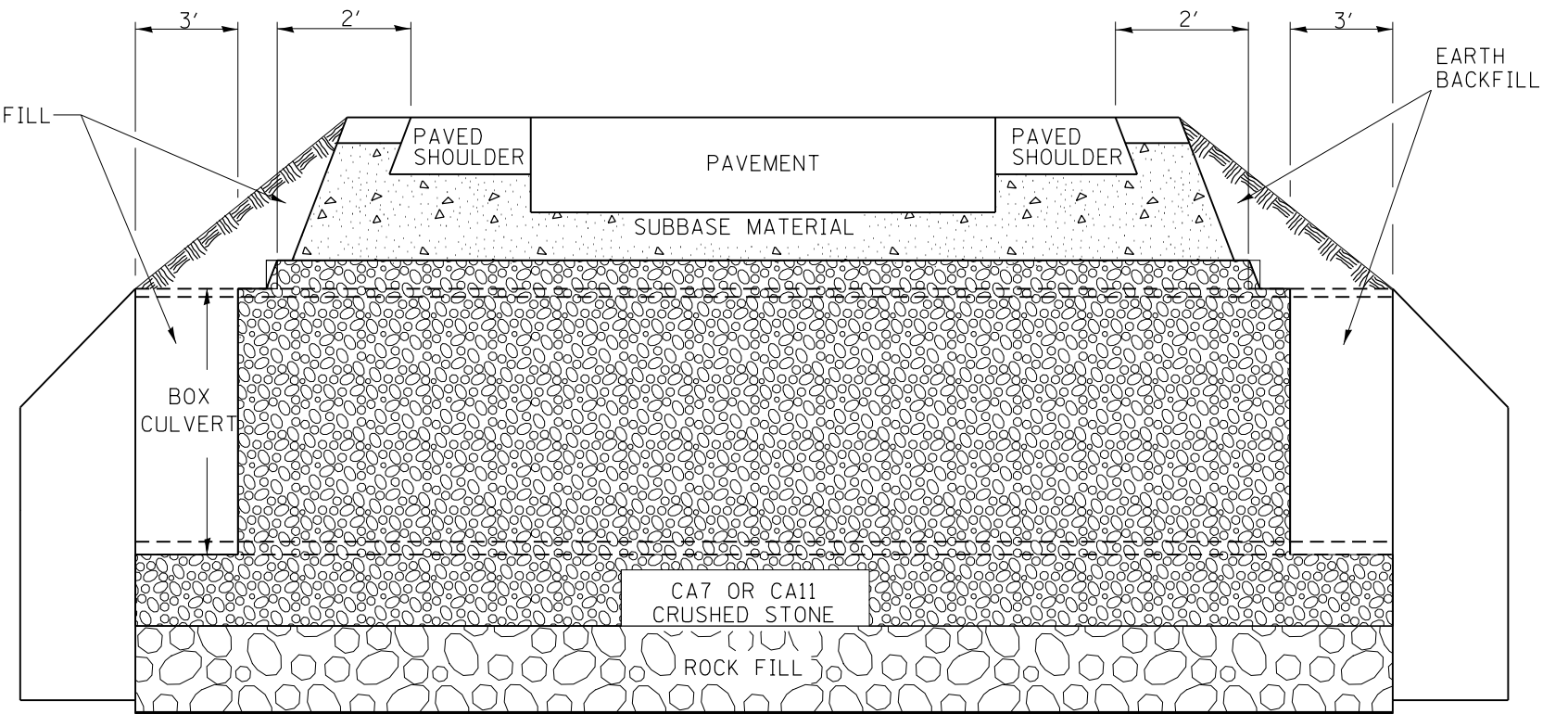


2' x 2' x 2' DEPOSIT OF CA 5, 7, OR 11 IN FABRIC ENVELOPE IN ACCORDANCE WITH ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS (TYPICAL)

(IF UNDERCUT IS REQUIRED) PROPOSED REMOVAL & DISPOSAL OF UNSUITABLE, AND REPLACE WITH ROCK FILL WITH GEOTECHNICAL FABRIC FOR GROUND STABILIZATION. PAID FOR BY RESPECTIVE PAY ITEMS.

- * IF APPLICABLE, SEE UNDERCUT DETAIL FOR DEPTHS AND WIDTHS. IF THERE IS NO UNDERCUT, X = 2 FEET AND SEE NOTE 3 THIS SHEET.
- ** SUBBASE SHALL BE 6" MINIMUM LAYER OF CA6 CRUSHED STONE OR OTHER MATERIAL AS SPECIFIED IN THE PLANS.
- *** PAY LIMITS OF POROUS GRANULAR EMBARKMENT SHALL BE 2 FEET UNLESS OTHERWISE SHOWN IN THE PLANS.

ROADWAY CROSS SECTION VIEW



(IF UNDERCUT IS REQUIRED) GEOTECHNICAL FABRIC FOR GROUND STABILIZATION

NOTES:

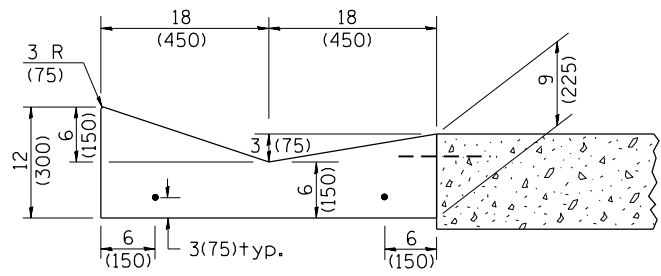
1. EXCEPT AS SPECIFIED IN THIS DETAIL, THE PLACEMENT AND COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.
2. POROUS GRANULAR EMBARKMENT SHALL BE PLACED IN ACCORDANCE WITH SECTION 207 OF THE STANDARD SPECIFICATIONS.
3. IF NO UNDERCUT IS REQUIRED, A 6" MINIMUM LAYER OF POROUS GRANULAR EMBARKMENT SHALL BE PLACED BELOW THE ELEVATION OF THE BOTTOM OF BOX CULVERT.

All dimensions are in inches (millimeters) unless otherwise noted.

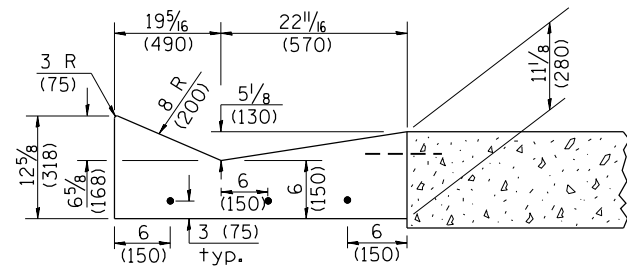
| | | | | | | | | | | | | | | | | | | |
|---|------------------|------|--|--|--|--|--|--|--|--|---|--|--|---------------------|------------|------------------|--------------|-----------|
| 6-12-12 | CREATED NEW STD. | R.D. | | | | | | | | | | | | | | | | |
| STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | | | | | | | | | | | DETAIL OF EXCAVATION AND BACKFILL FOR BOX CULVERTS | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | | | | | | | | | | | | | 379 | (111C-5_CR | KNOX | 62 | 39 |
| | | | | | | | | | | | | | | CONTRACT NO. 68D10 | | | | |
| | | | | | | | | | | | | | | FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

NOT TO SCALE

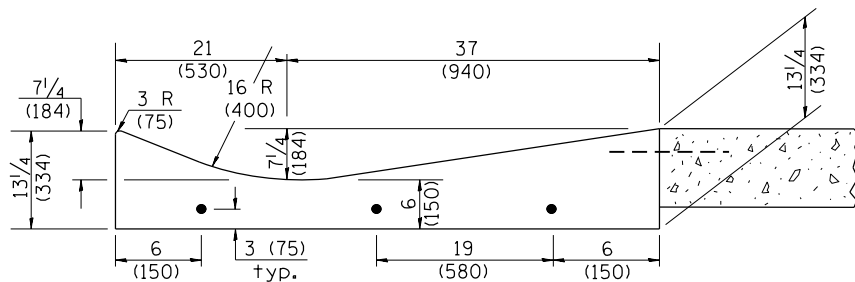
CADD STD. 540000-D4



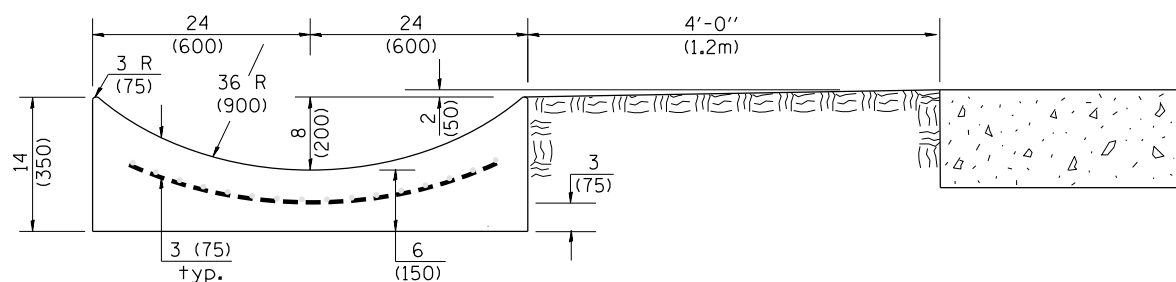
SECTION A-A



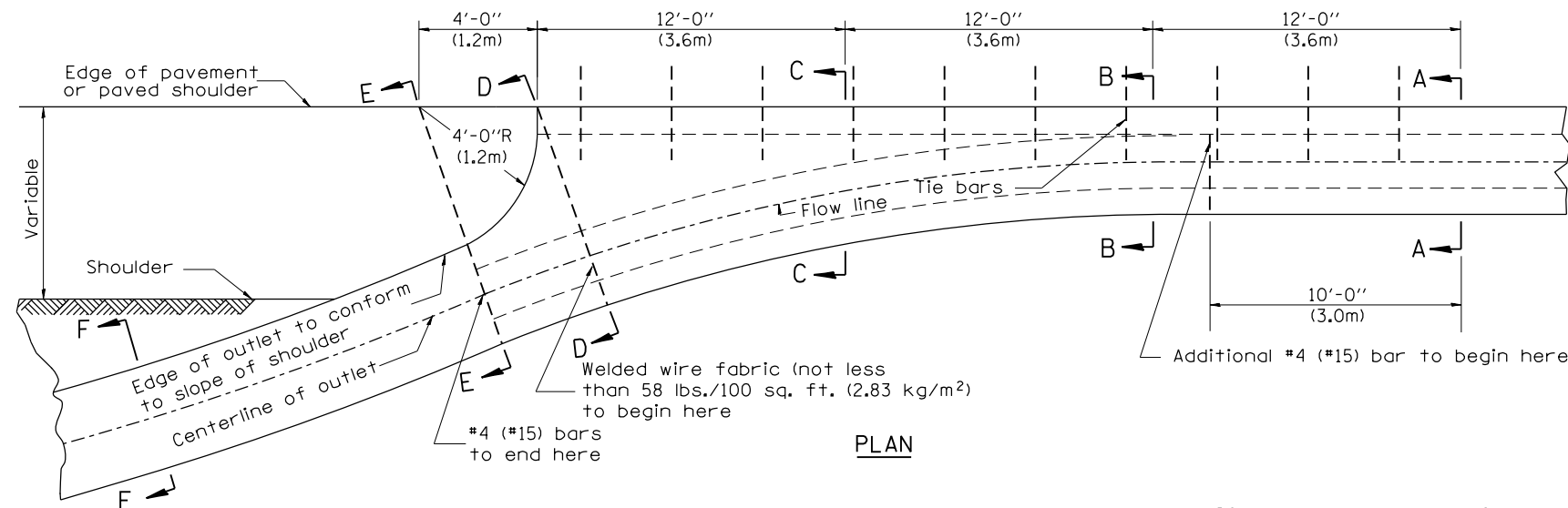
SECTION B-B



SECTION C-C



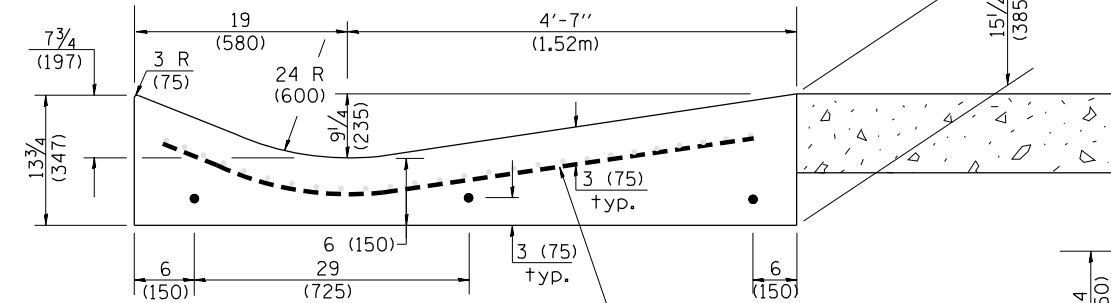
SECTION E-E



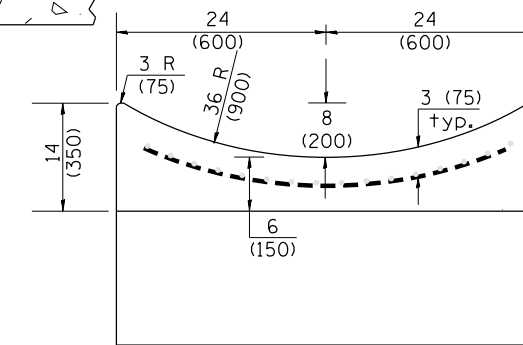
PLAN

QUANTITY
 Section A-A to E-E = 4.5 cu. yd. (3.36 m³) concrete.
 Section E-E to F-F = 0.10 cu. yd./ft. (0.26 m³/m) concrete.

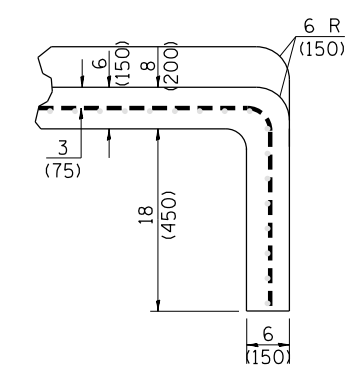
If the average grade of pavement for the distance from section A-A to section D-D exceeds 2%, this distance shall be increased 6 ft. (1.8 m) for each 1% increase in grade. A quantity adjustment is required.



SECTION D-D



SECTION F-F



SECTIONS AT END OF OUTLET (CURTAIN WALL)

QUANTITY
 Curtain Wall = 0.1 cu. yd. (0.08 m³) concrete.

QUANTITIES
 CALC. BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

OUTLET

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

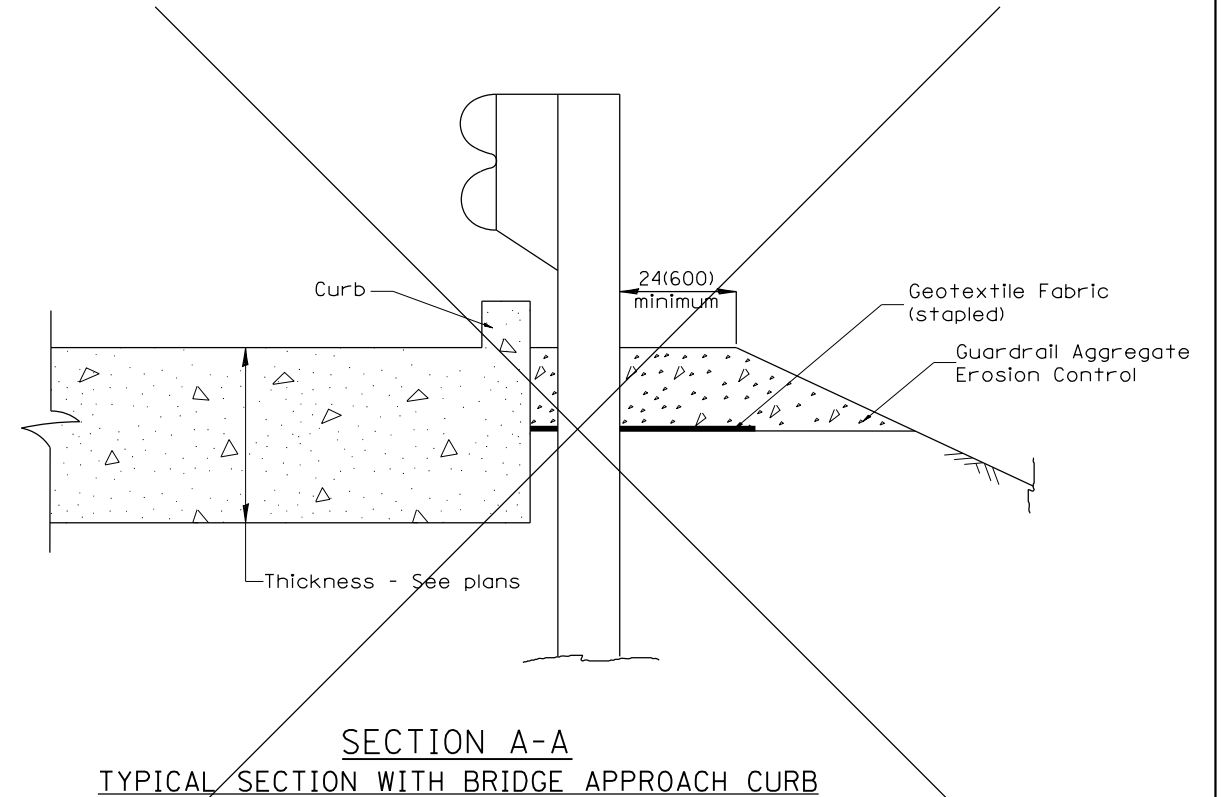
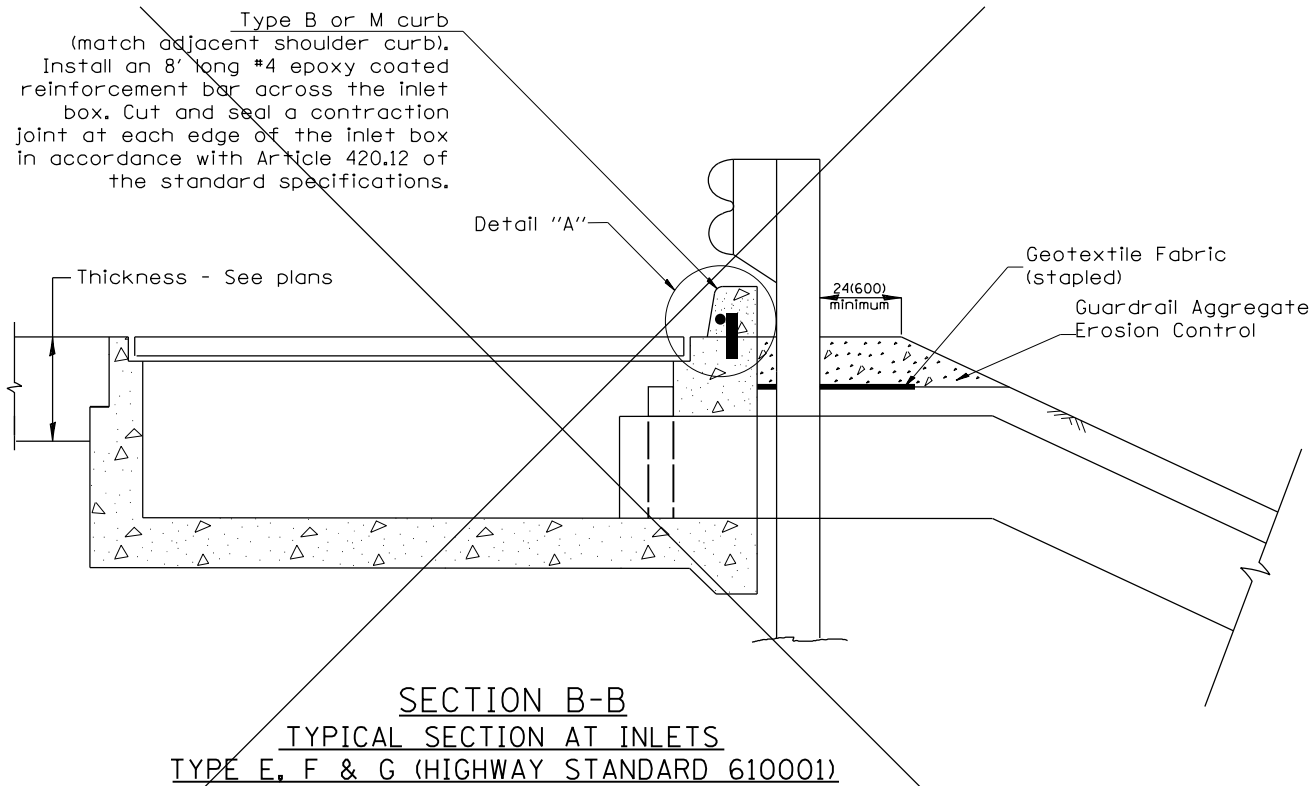
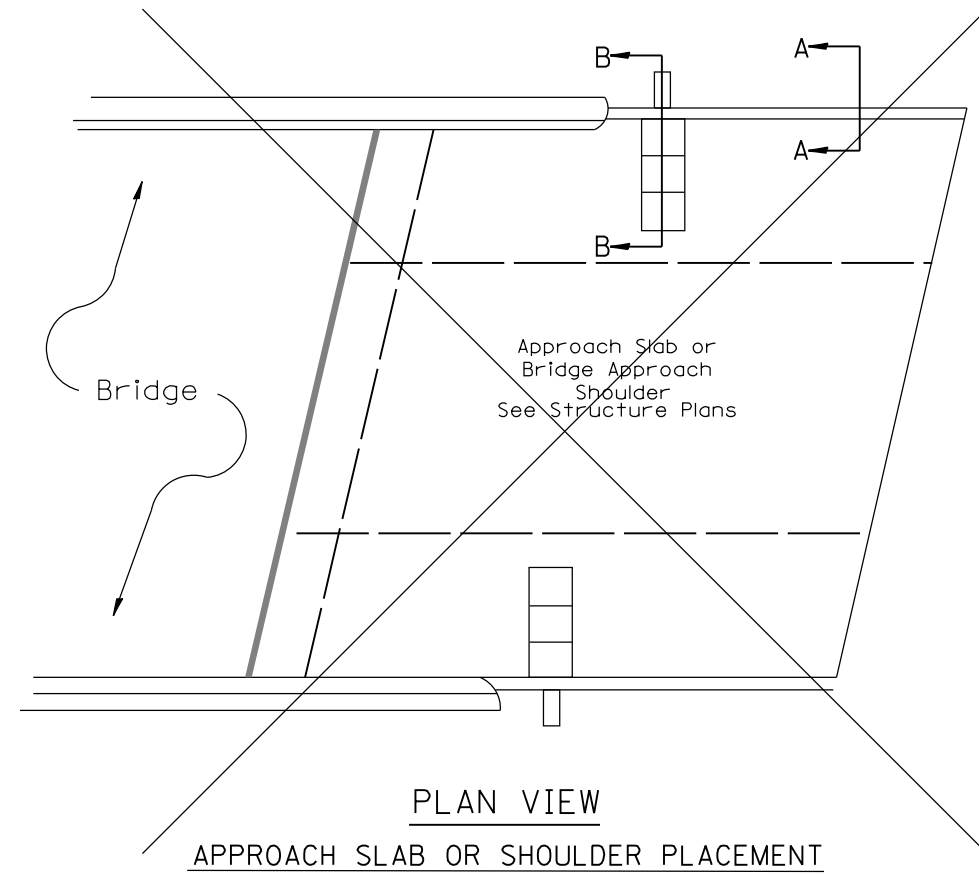
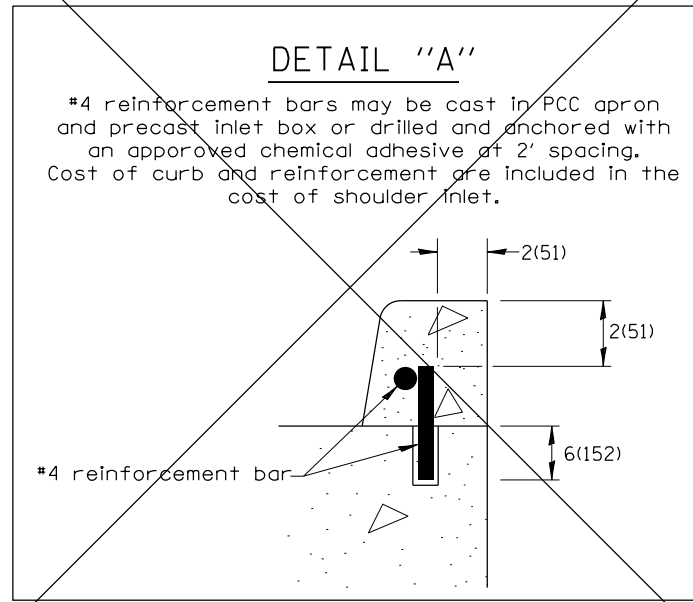
CONCRETE GUTTER, TYPE A, (SPECIAL)
 OUTLET

NOT TO SCALE

CADD STD. 606101-D4

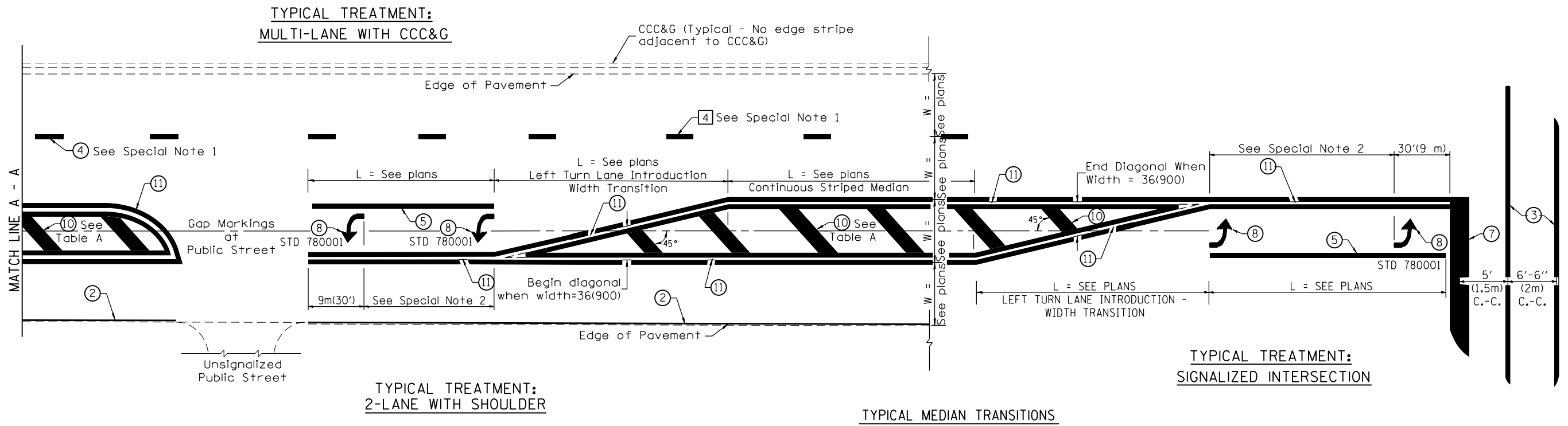
All dimensions are in inches (millimeters) unless otherwise noted.

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|------------|--------|--------------|-----------|
| 379 | (111C-5)CR | KNOX | 62 | 40 |
| CONTRACT NO. 68D10 | | | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |



All dimensions are in inches (millimeters) unless otherwise noted.

| | | | | | | | | | | | | |
|---|--|--|--|---|--|--|--|---|-----------|--------|-----------------|--------------|
| STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | | | | GUARDRAIL EROSION CONTROL TREATMENTS | | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | | | NOT TO SCALE | | | | 379 | (111-5)CR | KNOX | 62 | 42 |
| | | | | SHT. 2 OF 2 CADD STD. 630101-D4 | | | | CONTRACT NO. 68D10 | | | | |
| | | | | | | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |

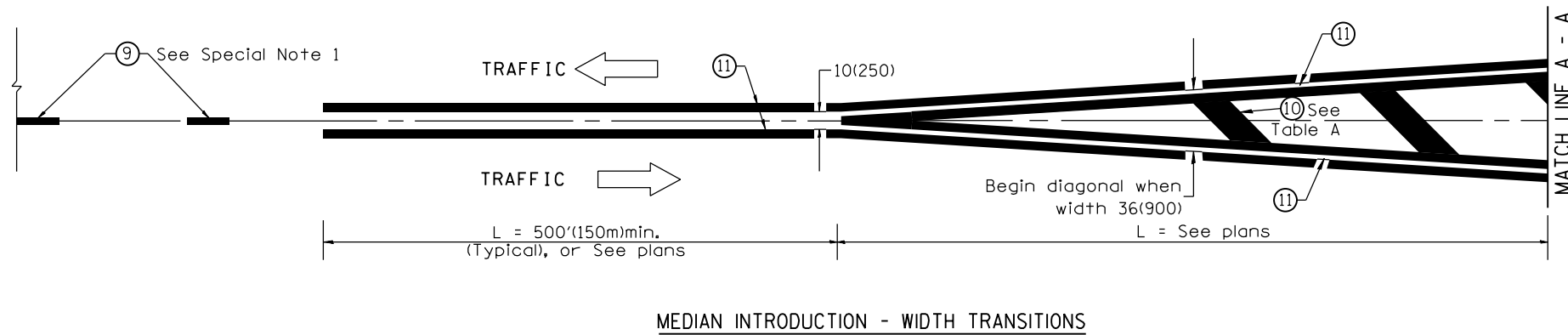


FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

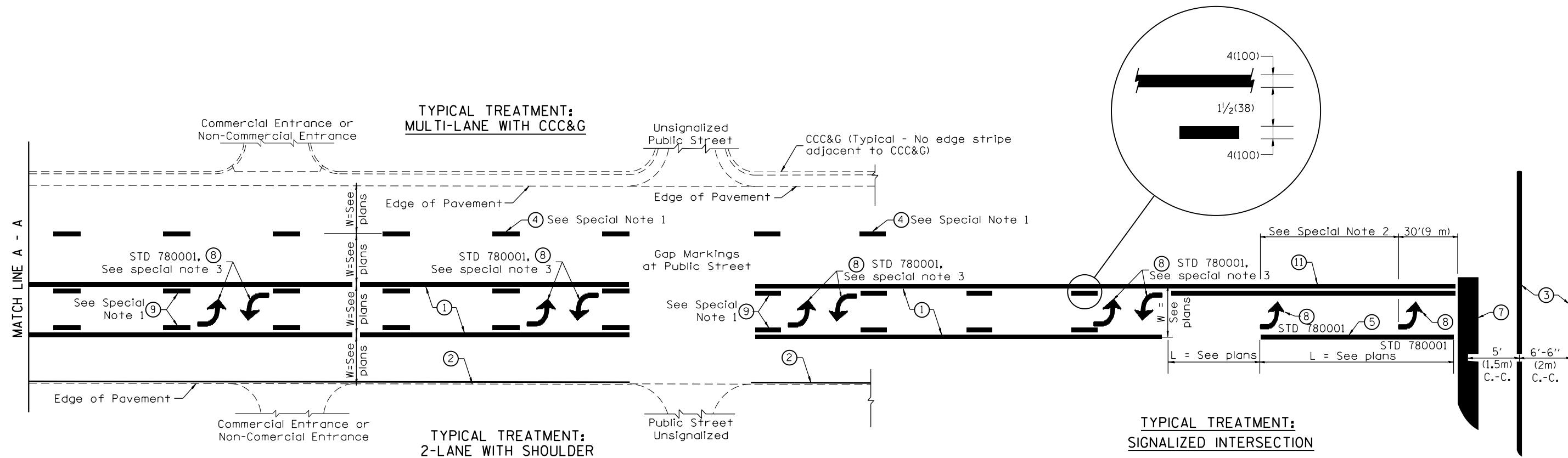
TABLE A

RECOMMENDED SPACING BETWEEN DIAGONAL LINES

| SPEED LIMIT RANGE | INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions) | |
|----------------------------|---|----------|
| | CONTINUOUS | |
| Less Than 30 mph (50 km/h) | 50' (15m) | 15' (5m) |
| 30 - 45 mph (50 - 70 km/h) | 75' (23m) | 20' (6m) |
| Over 45 mph (70 km/h) | 150' (46m) | 30' (9m) |



All dimensions are in inches (millimeters) unless otherwise noted.



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

- ① 4(100) Solid (Yellow)
- ② 4(100) Solid (White)
- ③ 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
- ④ 6(150) Skip-Dash (White) (See Special Note 1)
- ⑤ 8(200) Solid (White)
- ⑥ 12(300) Diagonal (White) (Item ⑥ is shown on Std. 780001)
- ⑦ 24(600) Stop Bar (White)
- ⑧ Letters & Arrows (See Std. 780001 and Special Notes 2 & 3)
- ⑨ 4(100) Skip-Dash (Yellow) (See Special Note 1)
- ⑩ 12(300) Diagonal (Yellow) (See Table A) ⑩
- ⑪ 4(100) Double Solid (Yellow) ⑪

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
 - A. A minimum of two (2) arrows is required.
 - B. The maximum spacing between arrows is 80' (24 m).
 - C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
 - A. A minimum of two (2) arrow pairs is required.
 - B. The maximum spacing between arrow pairs is 200' (61 m).
 - C. Arrow pairs shall be evenly spaced if three (3) or more are required.
 - D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.
3. Refer to Article 780.13 for letter, number and symbol areas (sq. ft.)
4. Areas are grooved 1" beyond each edge for the following symbols:
Through Arrow= 14.8 sq. ft.
Large Left or Right Arrow= 21.9 sq. ft.
2 Arrow Combination Left (or Right) and Through= 34.9 sq. ft.
Wrong Way Arrow= 29.5 sq. ft.
Railroad Crossing Symbol= 69.8 sq. ft.
(For further information, refer to BDE Special Provision: Grooving for Recessed Pavement Markings)

| | | | | | |
|----------|----------------------------------|------|----------|-----------------------|------|
| 01-01-97 | RENUM. F-8.03, NEW REVISION BOX | T.P. | 10-16-06 | REVISED TO 2007 SPEC. | |
| 02-07-97 | ADD BI DIRECTIONAL DIMENSION | J.A. | 2/29/16 | ADDED GROOVING AREAS | R.D. |
| 10-97 | CORRECT BI DIRECTIONAL DIMENSION | J.A. | | | |
| 08-02 | ADD CROSSWALK DMNS. WITH T.S. | M.A. | | | |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

NOT TO SCALE

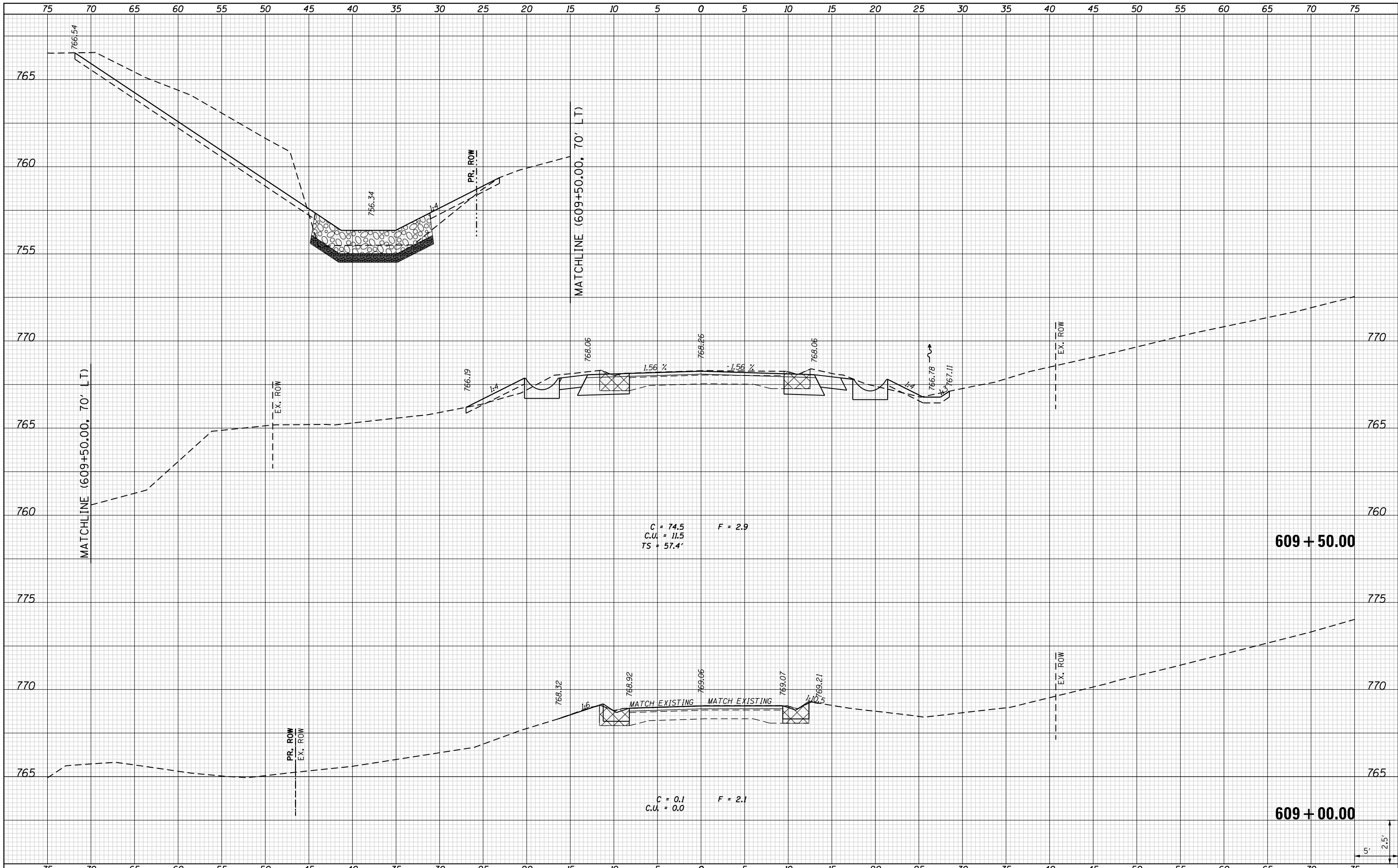
TYPICAL PAVEMENT MARKINGS

SHT. 1 OF 2
CADD STD. 780001-D4

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|------------|--------|---------------------------|-----------|
| 379 | (111C-5)CR | KNOX | 62 | 44 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | |
| | | | CONTRACT NO. 68D10 | |

| | |
|--------------|---------------|
| DATE | |
| BY | |
| FINAL SURVEY | SURVEYED |
| NOTE BOOK | PLOTTED |
| NO. | TEMPLATE |
| | AREAS CHECKED |

| | |
|-----------------|---------------|
| DATE | |
| BY | |
| ORIGINAL SURVEY | SURVEYED |
| NOTE BOOK | PLOTTED |
| NO. | TEMPLATE |
| | AREAS CHECKED |



| | |
|-------------|--------------------|
| FILE NAME | USER NAME = *USER* |
| *FILEL* | DESIGNED - JWS |
| | DRAWN - TMG |
| | CHECKED - JWS |
| *MODELNAME* | DATE - AUG 2018 |

| | |
|----------|----------|
| REVISD - | REVISD - |
| REVISD - | REVISD - |
| REVISD - | REVISD - |
| REVISD - | REVISD - |

| | |
|-----------------|----------|
| DESIGNED - JWS | REVISD - |
| DRAWN - TMG | REVISD - |
| CHECKED - JWS | REVISD - |
| DATE - AUG 2018 | REVISD - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

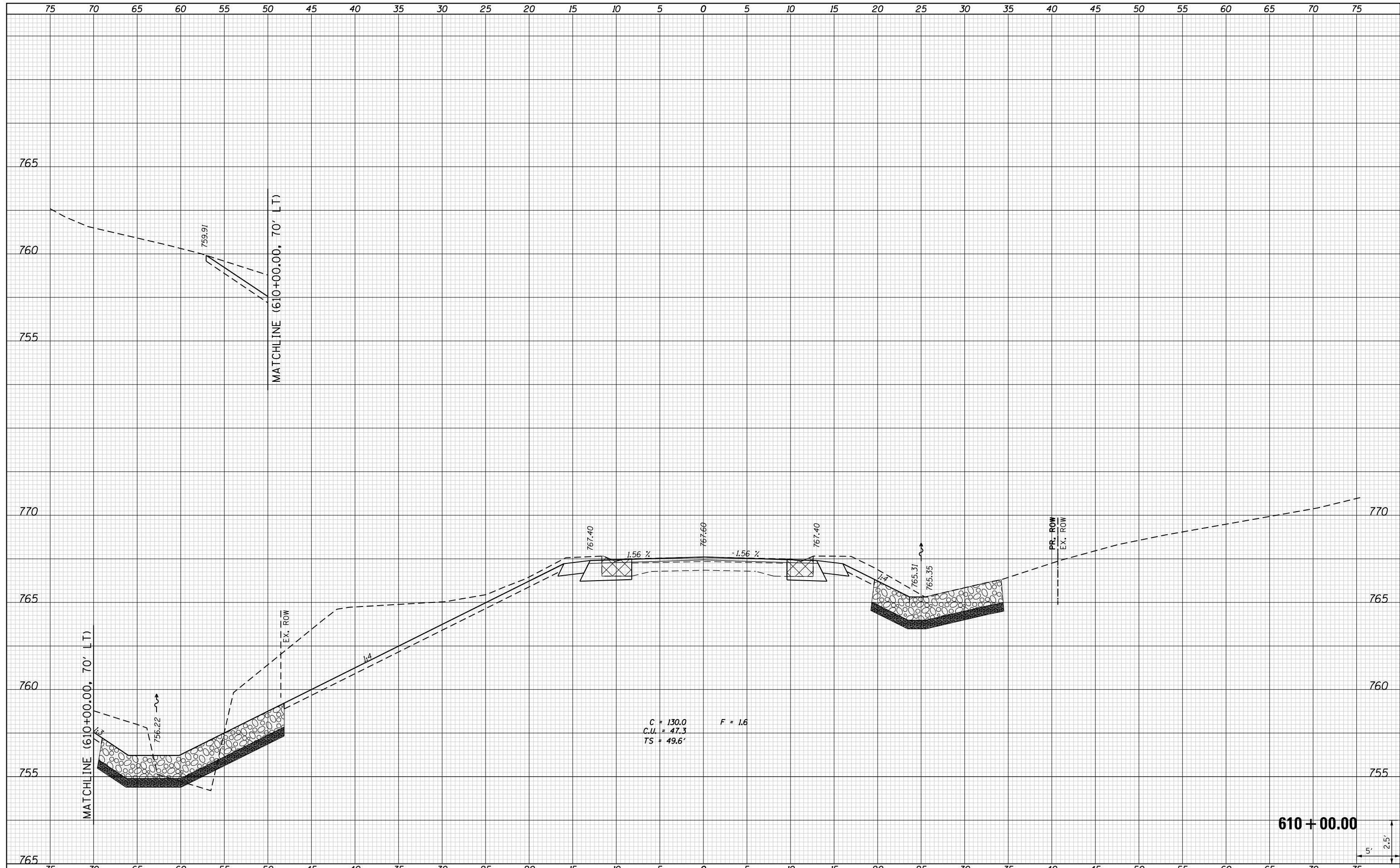
**CROSS SECTIONS
IL RTE 167**

SCALE: 1" = 5' SHEET 1 OF 17 SHEETS STA. 609+00.00 TO STA. 609+50.00

| | | | | |
|---------------------------|------------|--------|--------------|--------------------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 46 |
| | | | | CONTRACT NO. 68D10 |
| ILLINOIS FED. AID PROJECT | | | | |

| | |
|-----------|--|
| DATE | |
| BY | |
| SURVEYED | |
| PLOTTED | |
| TEMPLATE | |
| AREAS | |
| CHECKED | |
| FINAL | |
| SURVEY | |
| NOTE BOOK | |
| NO. | |

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| NOTE BOOK | |
| NO. | |



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| FILE NAME | |
| *FILEL* | |
| *MODELNAME* | |

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| USER NAME | = *USER* |
| DESIGNED | - JWS |
| DRAWN | - TMG |
| CHECKED | - JWS |
| DATE | - AUG 2018 |

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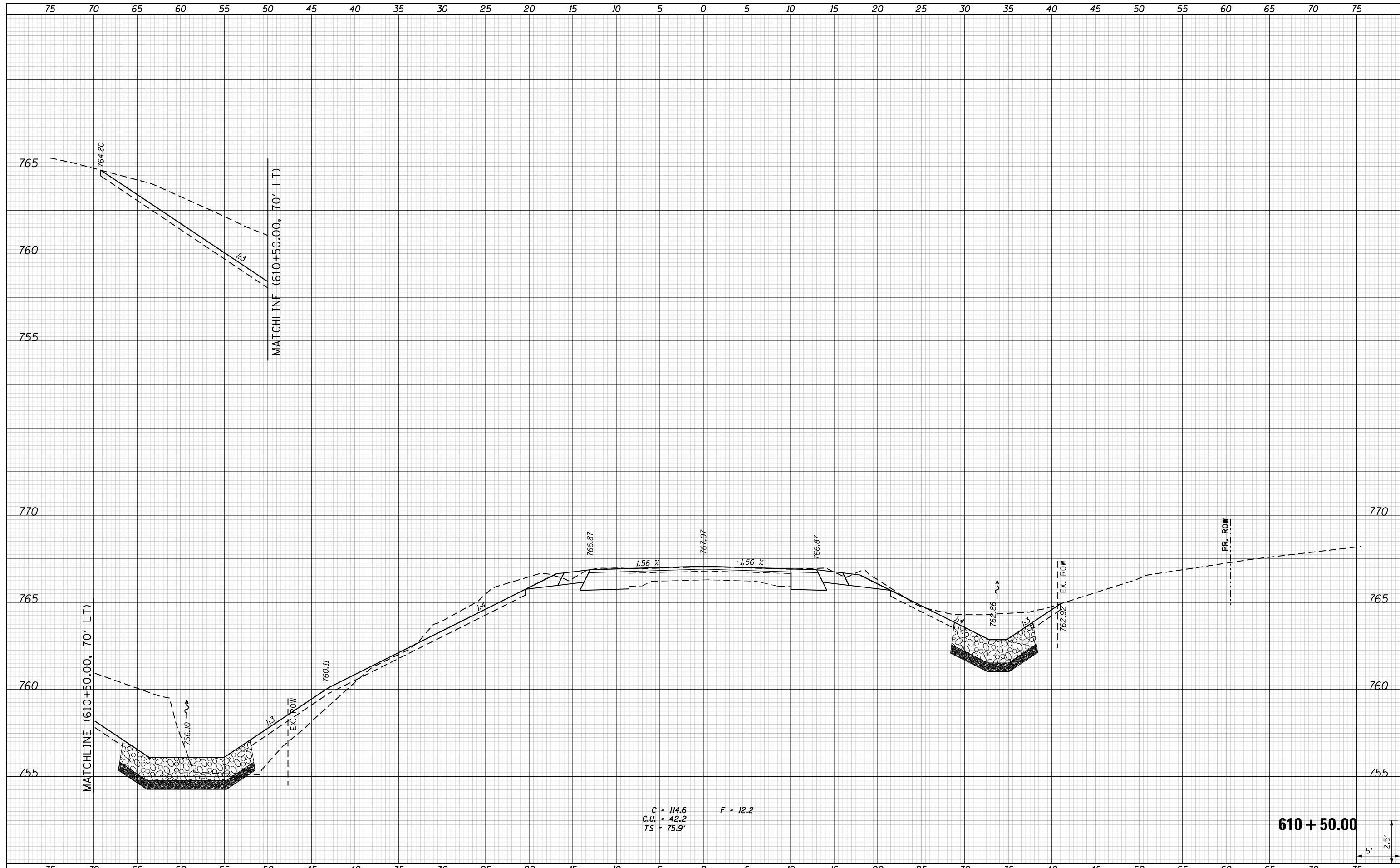
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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| CROSS SECTIONS IL RTE 167 | | | |
| SCALE: 1" = 5' | SHEET 2 OF 17 SHEETS | STA. 610+00.00 TO STA. 610+00.00 | |

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|---------------------------|------------|--------|--------------|--------------------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 47 |
| | | | | CONTRACT NO. 68D10 |
| ILLINOIS FED. AID PROJECT | | | | |

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| DATE | BY |
| SURVEYED | PLOTTED |
| NOTE BOOK | AREAS CHECKED |
| NO. | |

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| DATE | BY |
| SURVEYED | PLOTTED |
| NOTE BOOK | AREAS CHECKED |
| NO. | |



C = 114.6
 C.U. = 42.2
 TS = 75.9'

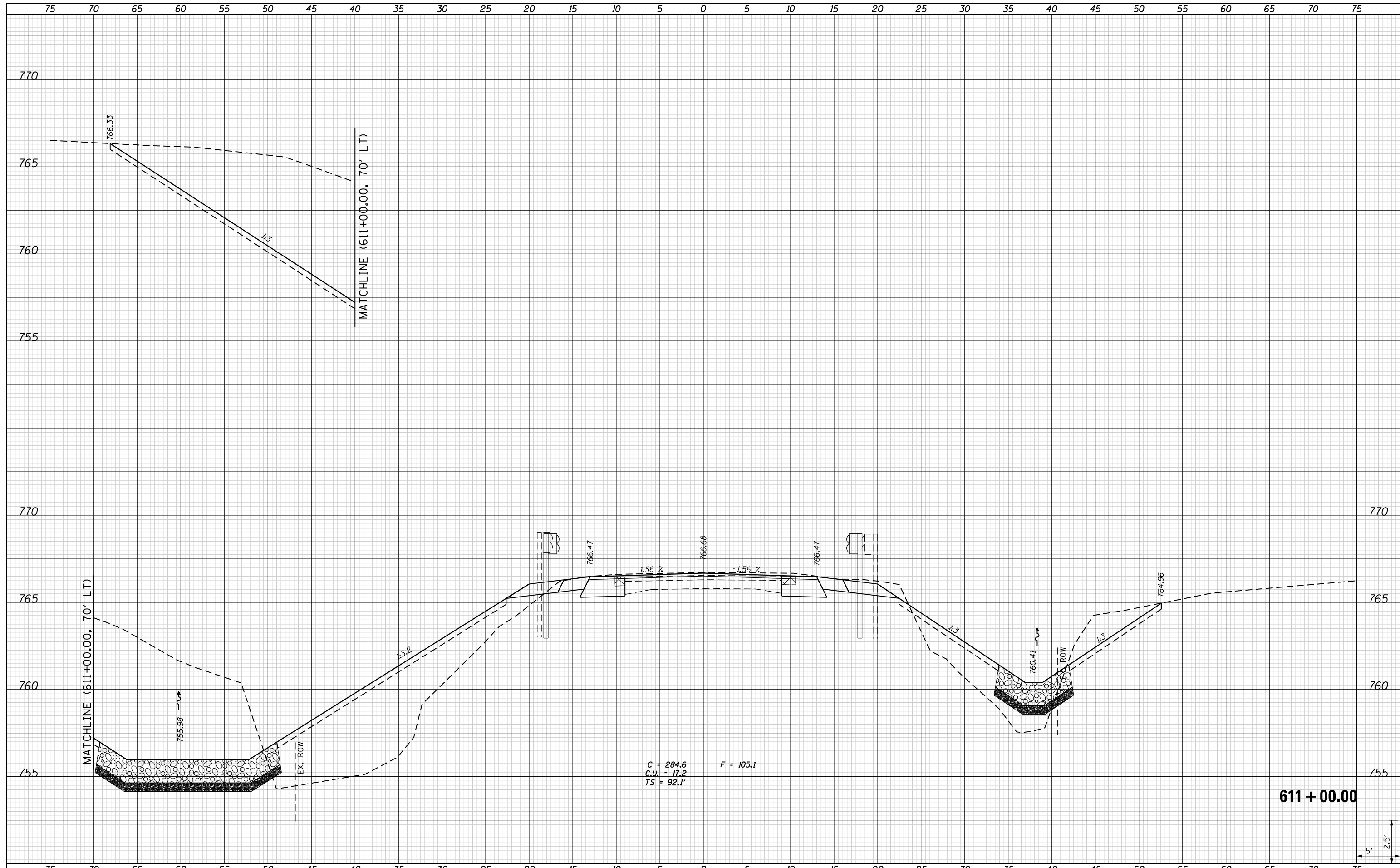
F = 12.2

610 + 50.00

| | | | | | | | | | | | | |
|-------------|----------------------|-----------------|-----------|---|--|--------------------|----------------------|---------------------------|-------------------|--------------|--|--|
| FILE NAME = | USER NAME = *USER* | DESIGNED - JWS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS SECTIONS IL RTE 167 | F.A.S. RTE. 379 | SECTION (111C-5)CR | COUNTY KNOX | TOTAL SHEETS 62 | SHEET NO. 48 | | |
| *FILEL* | PLOT SCALE = *SCALE* | CHECKED - JWS | REVISED - | | | CONTRACT NO. 68D10 | | ILLINOIS FED. AID PROJECT | | | | |
| *MODELNAME* | PLOT DATE = *DATE* | DATE - AUG 2018 | REVISED - | | | SCALE: 1" = 5' | SHEET 3 OF 17 SHEETS | STA. 610+50.00 | TO STA. 610+50.00 | | | |
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| SURVEYED | |
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| AREAS | |
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| NOTE BOOK | |
| NO. | |

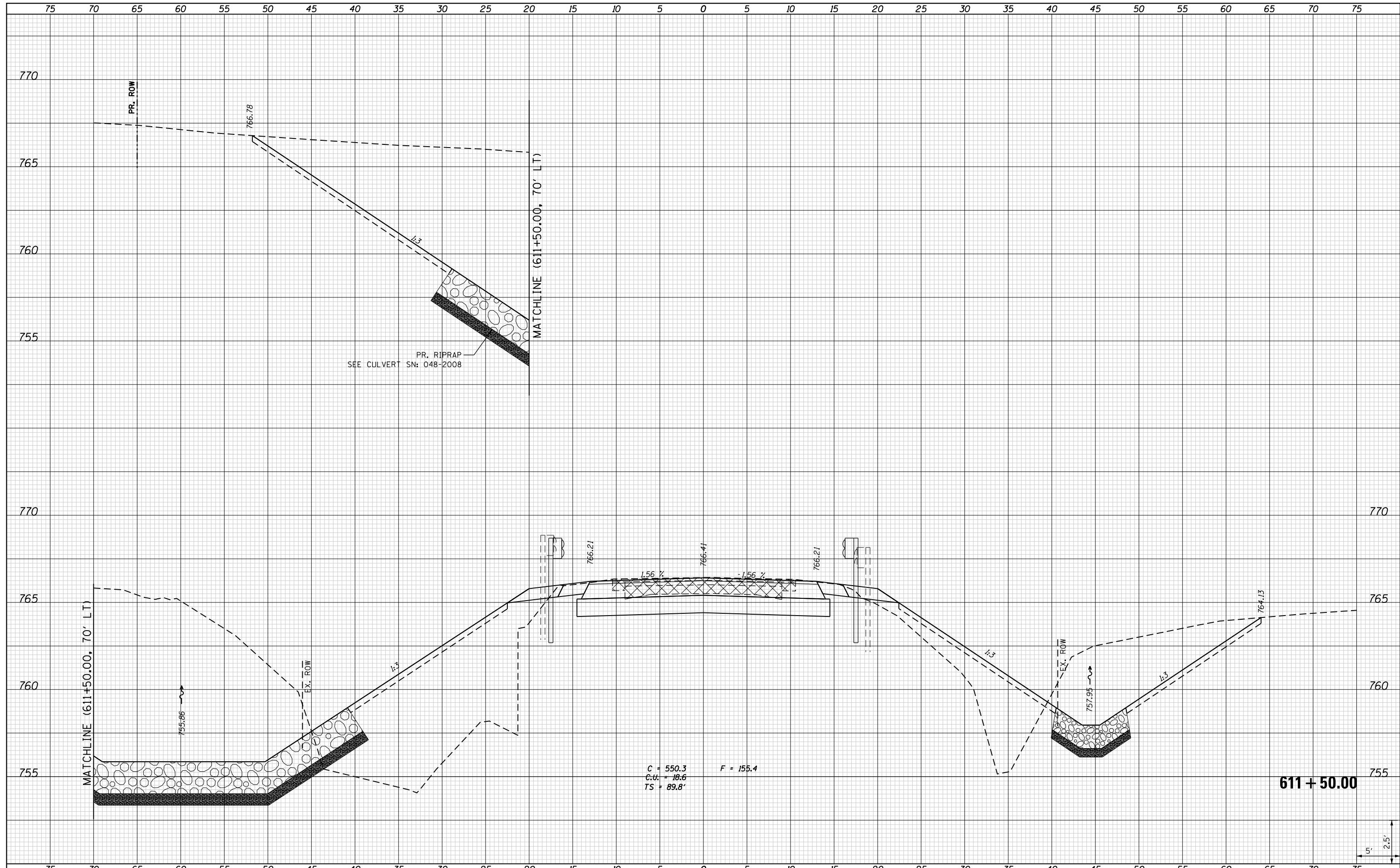
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| DATE | |
| BY | |
| SURVEYED | |
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| TEMPLATE | |
| AREAS | |
| CHECKED | |
| ORIGINAL SURVEY | |
| NOTE BOOK | |
| NO. | |



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| FILE NAME = | USER NAME = #USER# | DESIGNED - JWS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS SECTIONS IL RTE 167 | | | F.A.S. RTE. 379 | SECTION (111C-5)CR | COUNTY KNOX | TOTAL SHEETS 62 | SHEET NO. 49 |
| *FILEL# | | DRAWN - TMG | REVISED - | | SCALE: 1" = 5' | SHEET 4 | OF 17 SHEETS | STA. 611+00.00 | TO STA. 611+00.00 | CONTRACT NO. 68D10 | | |
| *MODELNAME# | | CHECKED - JWS | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | |
| | | DATE - AUG 2018 | REVISED - | | | | | | | | | |

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| DATE | |
| BY | |
| SURVEYED | |
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| AREAS | |
| CHECKED | |
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| DATE | |
| BY | |
| ORIGINAL SURVEY | |
| NOTE BOOK | |
| AREAS | |
| CHECKED | |
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| FILE NAME | USER NAME = *USER* |
| *FILEL* | DESIGNED - JWS |
| | DRAWN - TMG |
| | CHECKED - JWS |
| *MODELNAME* | DATE - AUG 2018 |

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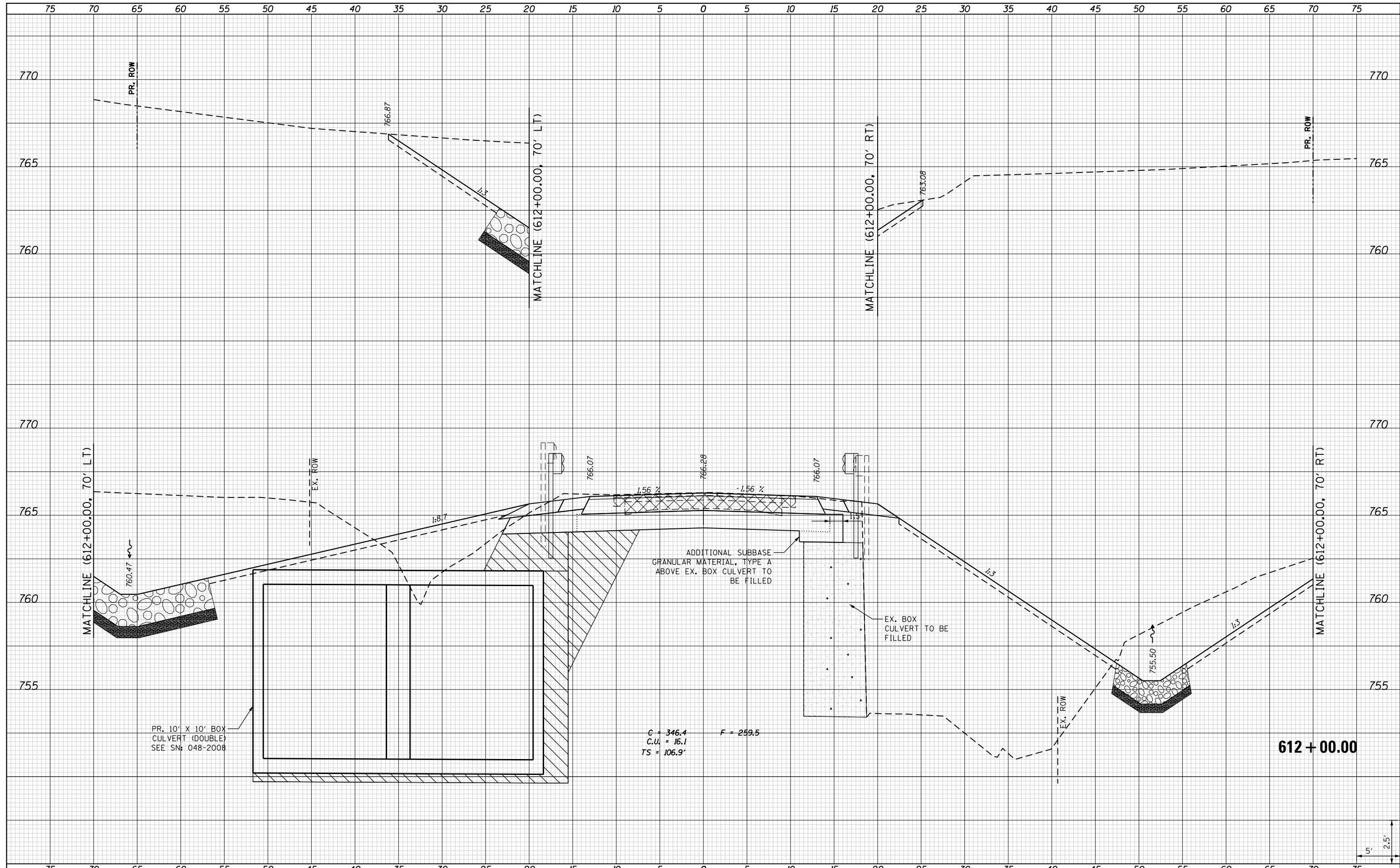
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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|----------------------------------|----------------------|
| CROSS SECTIONS | |
| IL RTE 167 | |
| SCALE: 1" = 5' | SHEET 6 OF 17 SHEETS |
| STA. 611+50.00 TO STA. 611+50.00 | |

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|---------------------------|------------|--------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 51 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

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| DATE | |
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| FILE NAME | |
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| *MODELNAME* | |

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| USER NAME | = *USER* |
| PLOT SCALE | = *SCALE* |
| PLOT DATE | = *DATE* |

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| DESIGNED | - JWS |
| DRAWN | - TMG |
| CHECKED | - JWS |
| DATE | - AUG 2018 |

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

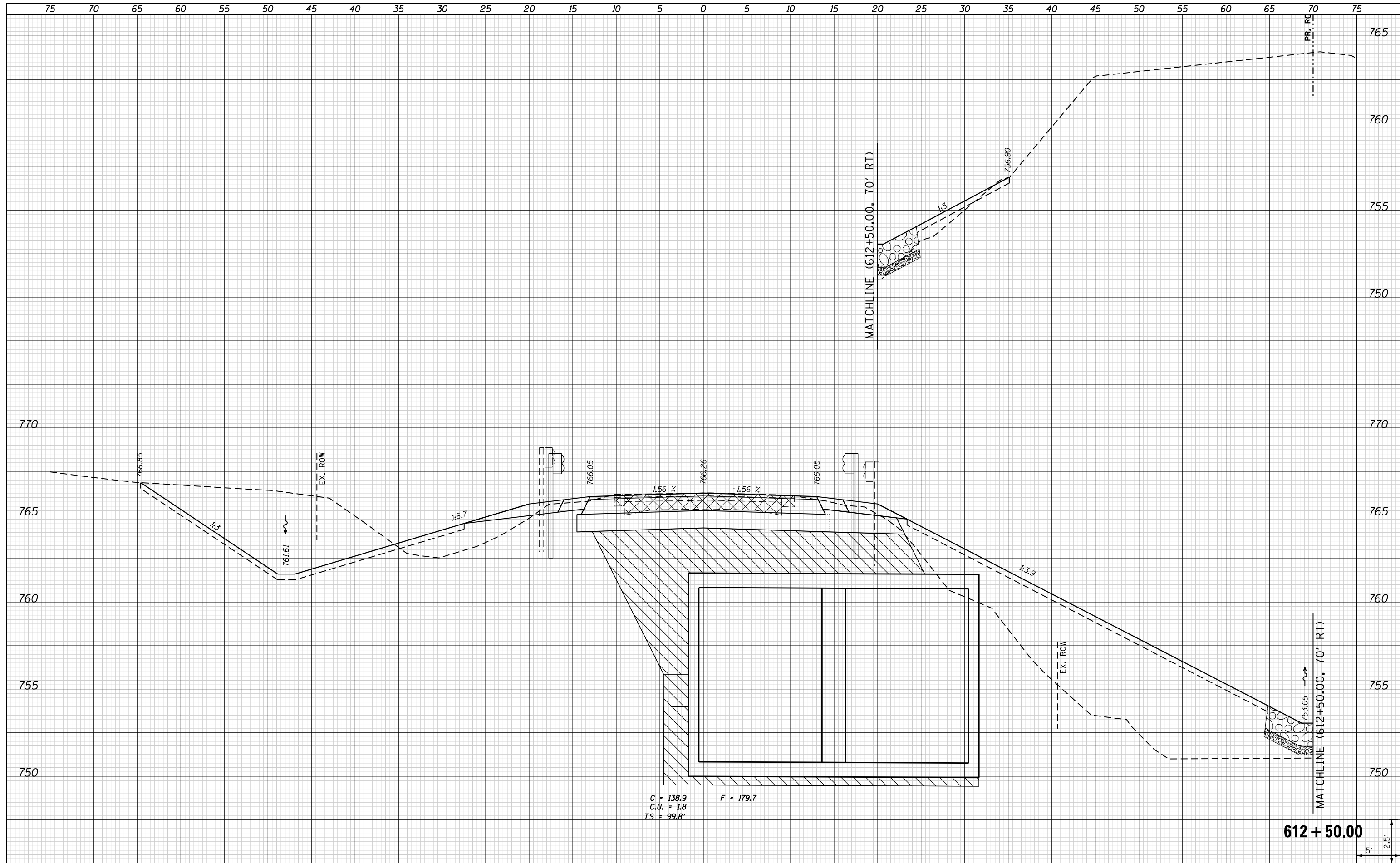
**CROSS SECTIONS
IL RTE 167**

SCALE: 1" = 5' SHEET 8 OF 17 SHEETS STA. 612+00.00 TO STA. 612+00.00

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| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 53 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

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| DATE | |
| BY | |
| SURVEYED | |
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| TEMPLATE | |
| AREAS | |
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| FINAL SURVEY | |
| NOTE BOOK | |
| NO. | |

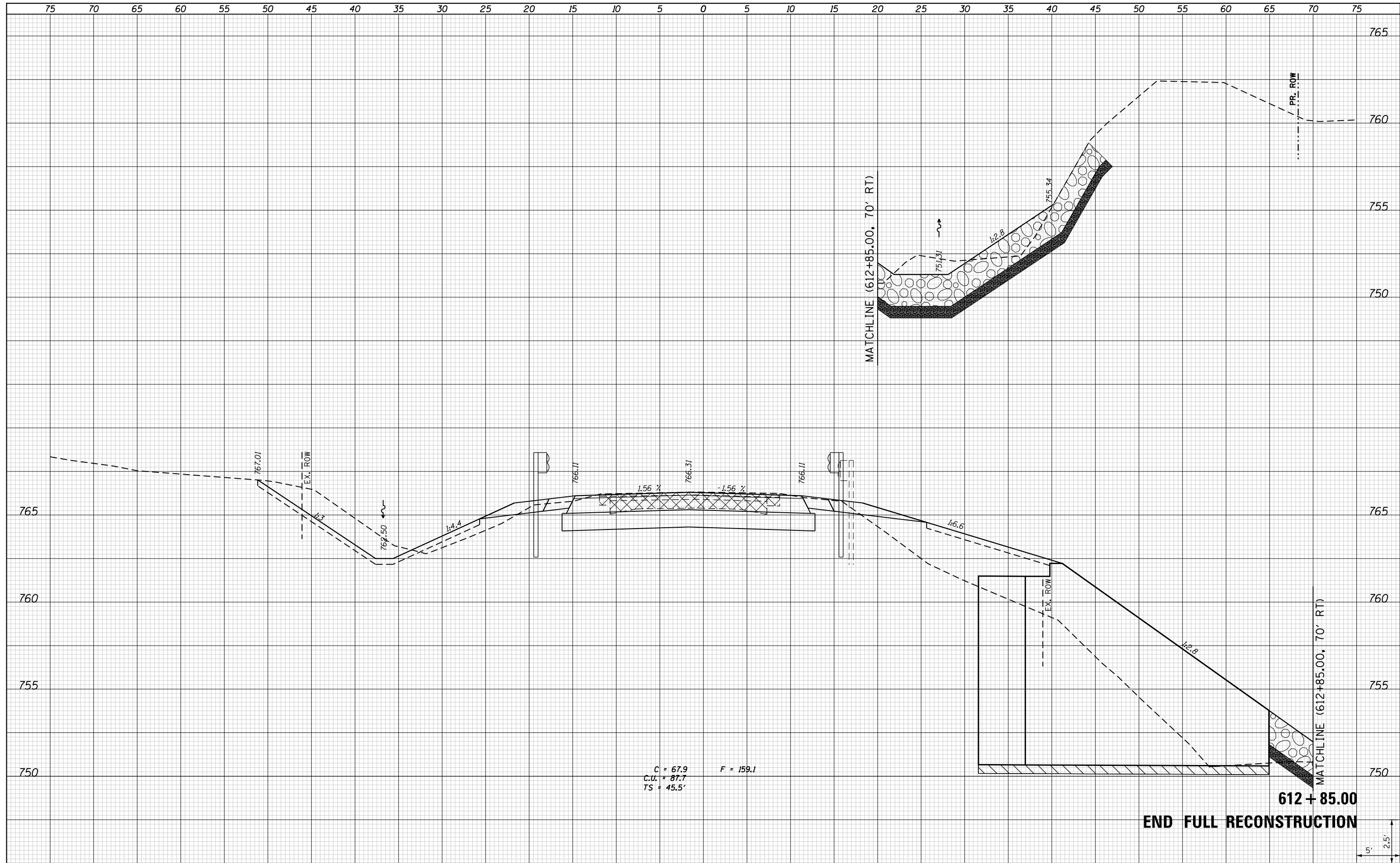
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| DATE | |
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| NOTE BOOK | |
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| FILE NAME = | USER NAME = *USER* | DESIGNED - JWS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS SECTIONS IL RTE 167 | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| *FILEL* | | DRAWN - TMG | REVISED - | | | | 379 | (111C-5)CR | KNOX | 62 | 55 |
| *MODELNAME* | | CHECKED - JWS | REVISED - | | CONTRACT NO. 68D10 | | | | | | |
| | | DATE - AUG 2018 | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | |

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| AREAS | |
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| DATE | |
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| SURVEYED | |
| PLOTTED | |
| TEMPLATE | |
| AREAS | |
| CHECKED | |
| NO. | |



C = 67.9
 C.U. = 87.7
 TS = 45.5'

F = 159.1

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| FILE NAME | |
| *FILEL* | |
| *MODELNAME* | |

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| USER NAME | = *USER* |
| DESIGNED | - JWS |
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| DATE | - AUG 2018 |

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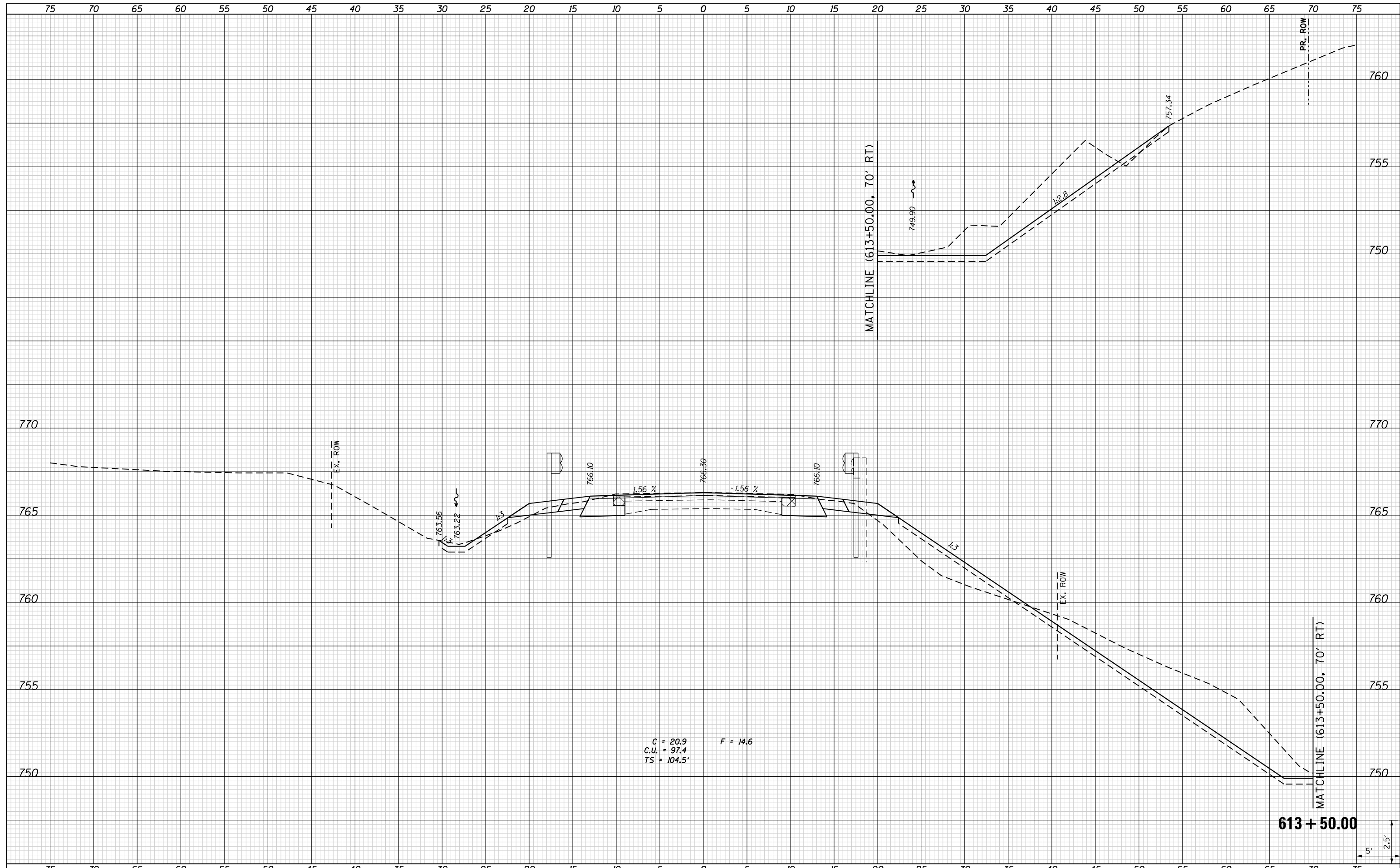
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

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| CROSS SECTIONS | |
| IL RTE 167 | |
| SCALE: 1" = 5' | SHEET 11 OF 17 SHEETS |
| STA. 612+85.00 TO STA. 612+85.00 | |

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|---------------------------|------------|--------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 56 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

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| USER NAME | = *USER* |
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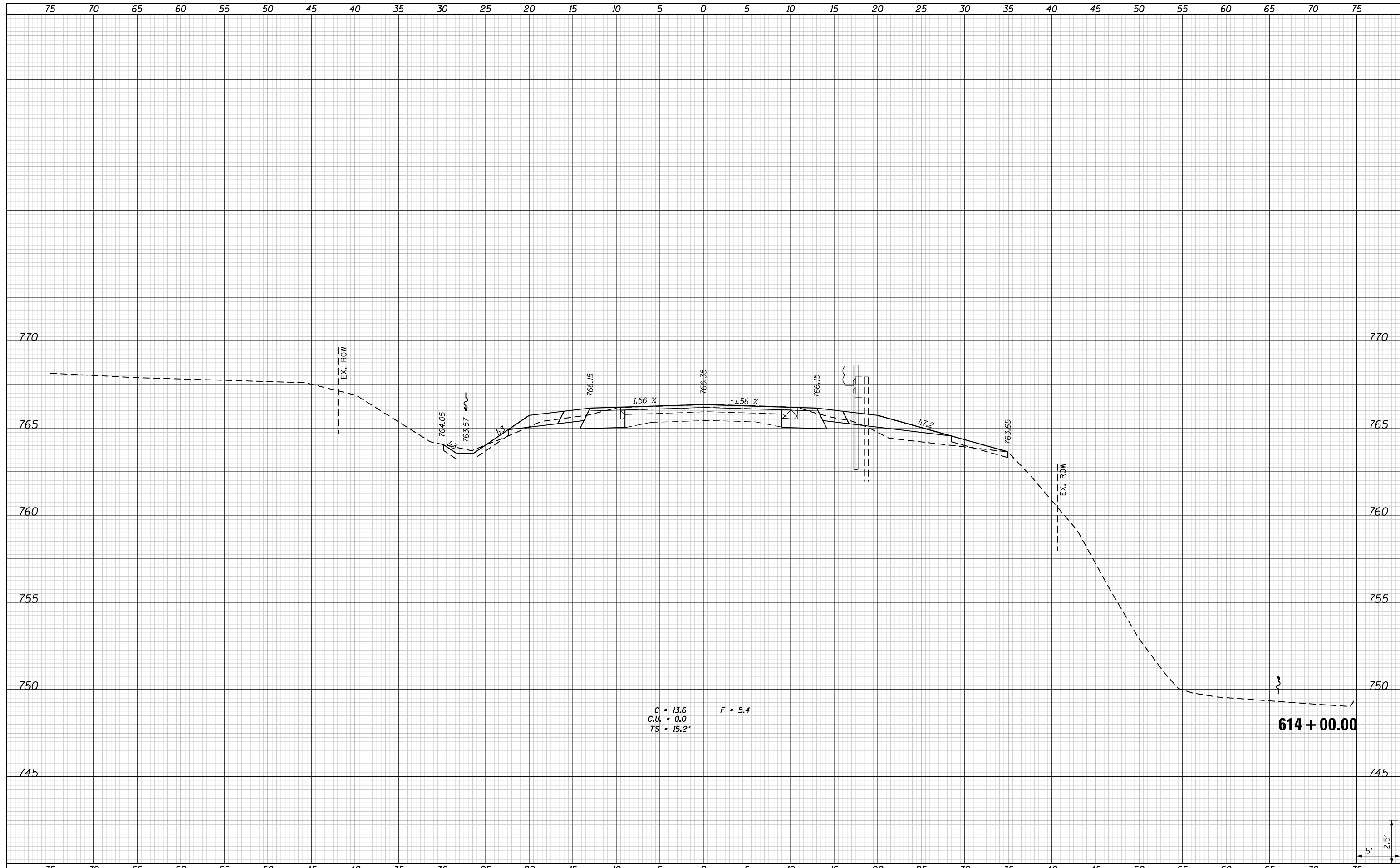
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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| CROSS SECTIONS | |
| IL RTE 167 | |
| SCALE: 1" = 5' | SHEET 13 OF 17 SHEETS |
| STA. 613+50.00 TO STA. 613+50.00 | |

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| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 379 | (111C-5)CR | KNOX | 62 | 58 |
| CONTRACT NO. 68D10 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

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| NOTE BOOK | |
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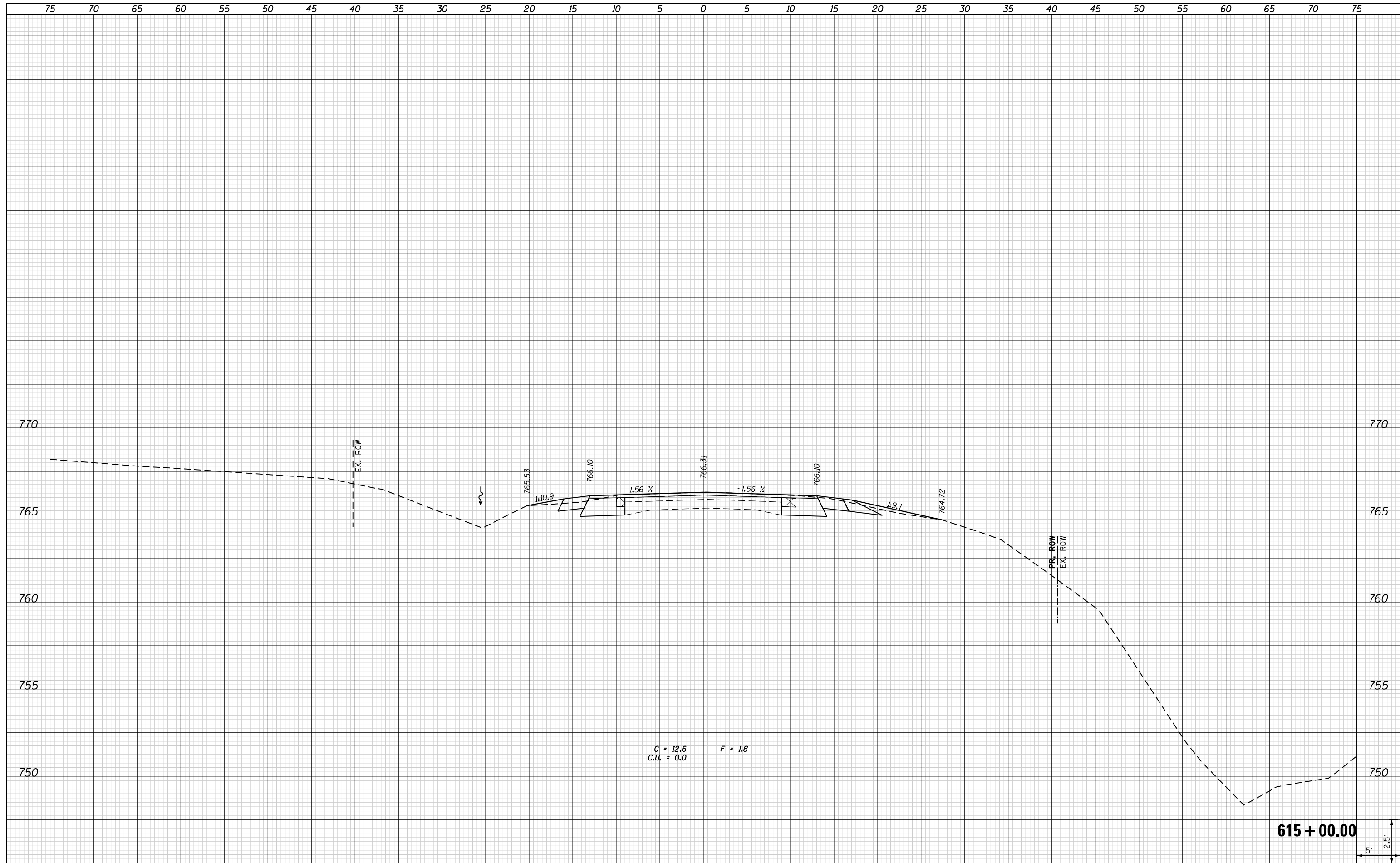
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| FILE NAME : | USER NAME : *USER* | DESIGNED - JWS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS SECTIONS IL RTE 167 | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| *FILEL* | | DRAWN - TMG | REVISED - | | | | | 379 | (111C-5)CR | KNOX | 62 | 59 | |
| *MODELNAME* | | CHECKED - JWS | REVISED - | | SCALE: 1" = 5' | | | SHEET 14 OF 17 SHEETS | | STA. 614+00.00 TO STA. 614+00.00 | | CONTRACT NO. 68D10 | |
| | | DATE - AUG 2018 | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | | |

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| NOTE BOOK | |
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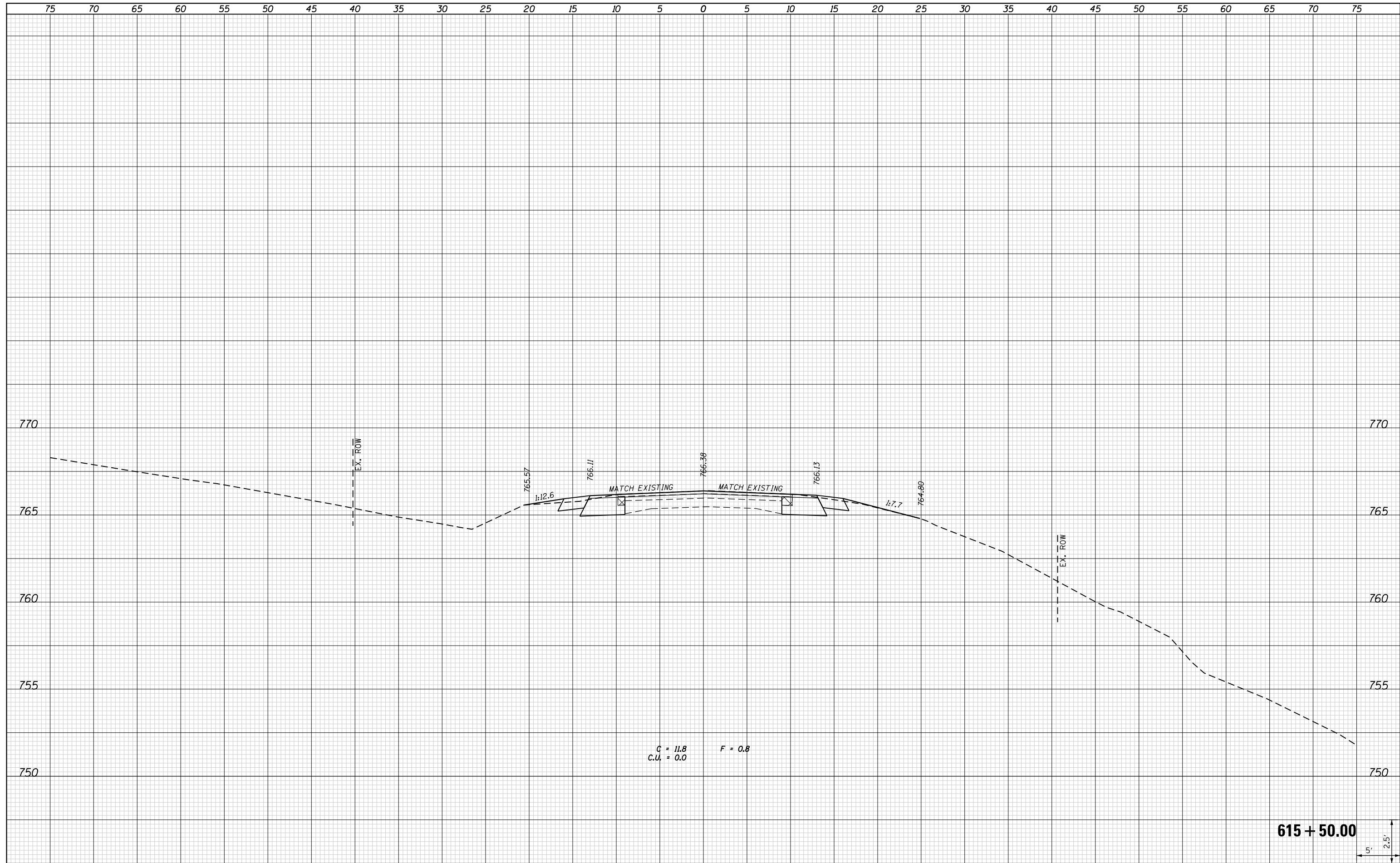
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| FILE NAME = | USER NAME = *USER* | DESIGNED - JWS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS SECTIONS IL RTE 167 | | F.A.S. RTE. 379 | SECTION (111C-5)CR | COUNTY KNOX | TOTAL SHEETS 62 | SHEET NO. 61 |
| *FILEL* | | DRAWN - TMG | REVISED - | | SCALE: 1" = 5' | SHEET 16 OF 17 SHEETS | STA. 615+00.00 TO STA. 615+00.00 | CONTRACT NO. 68D10 | | ILLINOIS FED. AID PROJECT | |
| *MODELNAME* | | CHECKED - JWS | REVISED - | | | | | | | | |
| | | DATE - AUG 2018 | REVISED - | | | | | | | | |

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| CHECKED | |
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| NOTE BOOK | |
| NO. | |



C = 11.8
C.U. = 0.0
F = 0.8

615 + 50.00

| | | | | | | | | | | | | |
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| FILE NAME = | USER NAME = *USER* | DESIGNED - JWS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS SECTIONS IL RTE 167 | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| *FILEL* | | DRAWN - TMG | REVISED - | | 379 | (111C-5)CR | KNOX | 62 | 62 | | | |
| *MODELNAME* | | CHECKED - JWS | REVISED - | | CONTRACT NO. 68D10 | | | | | | | |
| | | DATE - AUG 2018 | REVISED - | | SCALE: 1" = 5' | SHEET 17 OF 17 SHEETS | STA. 615+50.00 TO STA. 615+50.00 | ILLINOIS FED. AID PROJECT | | | | |