

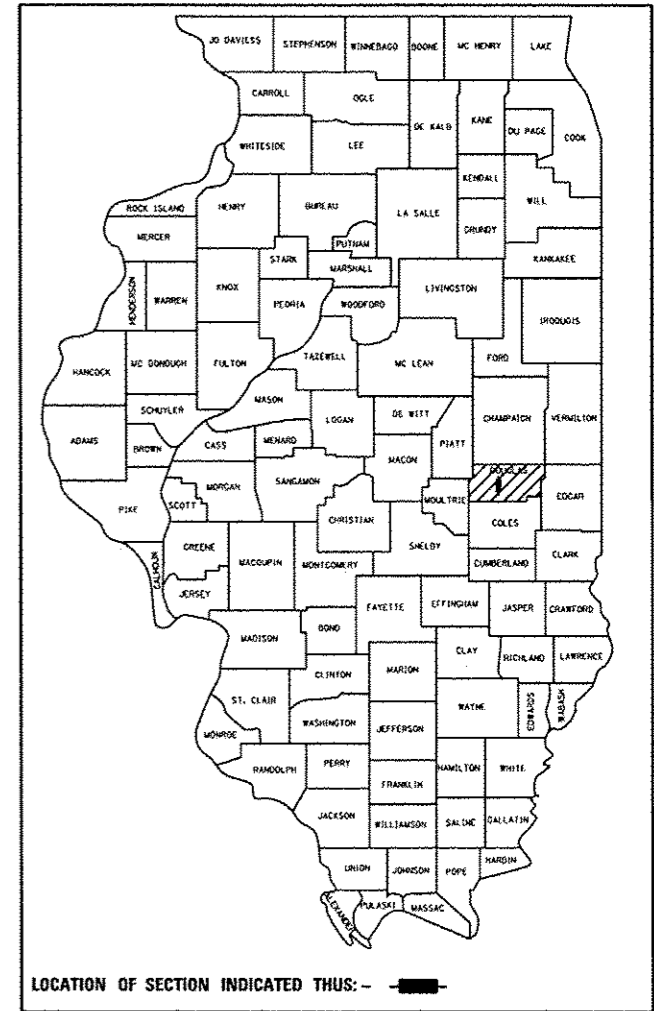
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED
HIGHWAY PLANS

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|---------|----------|--------------------|-----------|
| 1671 | 21CR | DOUGLAS | 39 | 1 |
| | | ILLINOIS | CONTRACT NO. 70694 | |

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR SUMMARY OF QUANTITIES, SEE SHEETS NO. 4-6

D-95-075-07

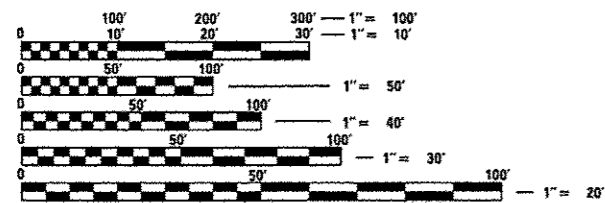


FAS ROUTE 1671 (US 45)
SECTION 21CR
PROJECT ACRS - 1671 (109)
CULVERT REPLACEMENT
DOUGLAS COUNTY

C-95-075-07

| CURRENT TRAFFIC DATA | |
|----------------------|-------|
| 2014 ADT | 2,100 |
| 2024 ADT | 2,200 |
| PU + PC% | 95.6 |
| SU% | 2.8 |
| MU% | 1.6 |

DESIGN DESIGNATION
MAJOR COLLECTOR



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.

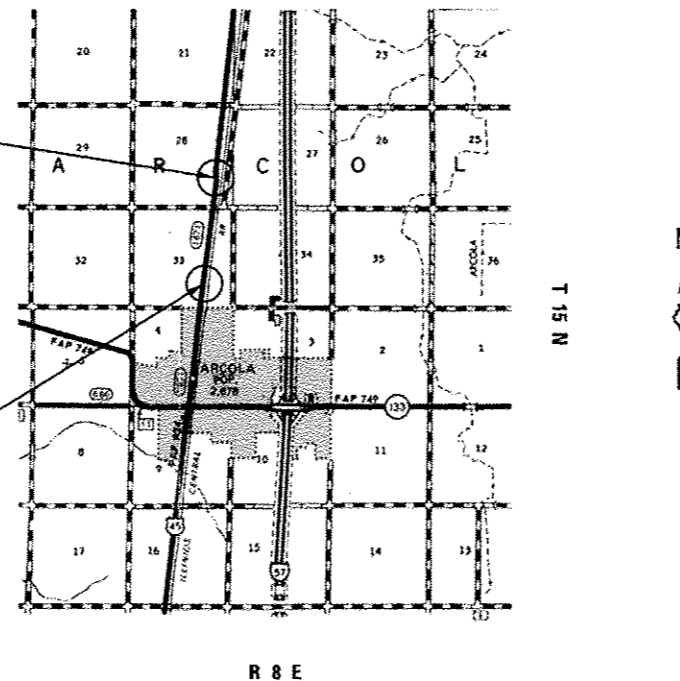
J.U.L.I.E.
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
 1-800-892-0123
 OR 811
 ARCOLA TOWNSHIP

PROJECT ENGINEER: JASON W. STULTS (217) 465-4181
SQUAD LEADER: RYAN T. CARROLL
DESIGNER: AVOREE S. GORE
CONTRACT NO. 70694

DITCH N OF ARCOLA

CULVERT NO. 2
 EXST. S. N. 021-8046
 PROP. S. N. 021-2028
 STA. 510+10.26
 PROP. PCC BOX CULVERT
 2 @ 12' X 3'

CULVERT NO. 1
 EXST. S. N. 021-8047
 PROP. S. N. 021-2029
 STA. 793+44.00
 PROP. PCC BOX CULVERT
 2 @ 12' X 2'



GROSS LENGTH = 550.00 FT. = 0.104 MILE
 NET LENGTH = 550.00 FT. = 0.104 MILE

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED October 16, 2015

Janice A. Janice
 DEPUTY DIRECTOR OF HIGHWAYS, REGION 3 ENGINEER

Jan 30 2015
John D. Baramzadi, P.E.
 ENGINEER OF DESIGN AND ENVIRONMENT

Jan 30 2015
Onur Osman, P.E.
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|-----------|---|
| 1 | COVER SHEET |
| 2 | INDEX OF SHEETS & LIST OF HIGHWAY STANDARDS |
| 3 | GENERAL NOTES |
| 4-6 | SUMMARY OF QUANTITIES |
| 7-8 | TYPICAL CROSS SECTIONS |
| 9-10 | SCHEDULE OF QUANTITIES |
| 11 | PLAN/PROFILE, PROPOSED S.N. 021-2029 |
| 12-18 | PROPOSED STRUCTURE PLANS, S.N. 021-2029 |
| 19 | PLAN/PROFILE, PROPOSED S.N. 021-2028 |
| 20-26 | PROPOSED STRUCTURE PLANS, S.N. 021-2028 |
| 27 | FIELD TILE SYSTEMS (TREATMENT OF EXISTING) |
| 28-35 | CROSS-SECTIONS |
| 36-39 | PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS) |

HIGHWAY STANDARDS

| STANDARD NO. | DESCRIPTION |
|--------------|--|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS |
| 001001-02 | AREAS OF REINFORCEMENT BARS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 280001-07 | TEMPORARY EROSION CONTROL SYSTEMS |
| 420001-08 | PAVEMENT JOINTS |
| 442201-03 | CLASS C & D PATCHES |
| 515001-03 | NAME PLATES FOR BRIDGES |
| 667101-02 | PERMANENT SURVEY MARKERS |
| 701001-02 | OFF-RD MOVING OPERATIONS 2L, 2W, 4.5 m MIN. AWAY FOR SPEEDS \geq 45 MPH |
| 701006-05 | OFF-RD OPERATIONS 2L, 2W, 4.5 m TO PAVEMENT EDGE FOR SPEEDS \geq 45 MPH |
| 701011-04 | OFF-RD MOVING OPERATIONS 2L, 2W, - DAY ONLY FOR SPEEDS \geq 45 MPH |
| 701201-04 | LANE CLOSURE 2L, 2W - DAY ONLY FOR SPEEDS \geq 45 MPH |
| 701206-03 | LANE CLOSURE 2L, 2W - NIGHT ONLY, FOR SPEEDS \geq 45 MPH |
| 701301-04 | LANE CLOSURE 2L, 2W, SHORT TIME OPERATIONS FOR SPEEDS \geq 45 MPH |
| 701311-03 | LANE CLOSURE 2L, 2W, MOVING OPERATIONS - DAY ONLY FOR SPEEDS \geq 45 MPH |
| 701901-04 | TRAFFIC CONTROL DEVICES |
| 780001-05 | TYPICAL PAVEMENT MARKINGS |

| | | | | | | | | | | | | |
|--------------------------------------|------------------------------|---------------|-----------|---|--|--|---------------------|---------|--------------|-----------------|---------------------------|--|
| FILE NAME * | USER NAME * gornas | DESIGNED JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | INDEX OF SHEETS & LIST OF HIGHWAY STANDARDS | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| c:\pwork\p\idot\gornas\0219486\05706 | ahnt-gennote.dgn | DRAWN JMS | REVISED - | | | | 1671 | 21CR | DOUGLAS | 39 | 2 | |
| | PLOT SCALE * 48.0000 1/4 in. | CHECKED - | REVISED - | | SCALE: NONE | | SHEET 1 OF 1 SHEETS | | STA. TO STA. | | ILLINOIS FED. AID PROJECT | |
| #MODELNAME* | PLOT DATE * 10/16/2014 | DATE 06-24-14 | REVISED - | | CONTRACT NO. 70694 | | | | | | | |

GENERAL NOTES

G.N.-100

ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-100A

ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.

G.N.-105.09A

ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

G.N.-107.12

THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE LOCAL RAILROAD CONTACT IS:

Mr. Paul Chojewski
Manager of Public Projects, CN
CN Railroad
17641 South Ashland Avenue
Homewood, IL 60430
(708) 332-3557

SPECIAL ATTENTION IS CALLED TO ARTICLE 107.12 REGARDING RAILROAD FLAGGERS. THE NAME, ADDRESS, AND TELEPHONE NUMBER OF THE RAILROAD CONTACT PERSON FOR FLAGGERS IS:

Ms. MaryEllen Carmody
700 Pershing Road
Pontiac, MI 48340
(248) 452-4705

SOME RAILROADS REQUIRE CONTRACTORS TO OBTAIN A RIGHT-OF-ENTRY PERMIT BEFORE ENTERING UPON RAILROAD RIGHT-OF-WAY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A RAILROAD RIGHT-OF-ENTRY PERMIT FROM THE RAILROAD IF REQUIRED BY THE RAILROAD(S).

G.N.-107.37

UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C & OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800)892-0123 OR 811.

G.N.-250C

SEEDING, CLASS 7 AND MULCH, METHOD 2 IS INCLUDED IN THIS CONTRACT TO SEED NEW EARTH SHOULDERS DURING TIME PERIODS WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE CLASS 7 SEEDING AND MULCH WILL BE DELETED IF IT IS POSSIBLE TO PLACE PERMANENT SEEDING ON EARTH SHOULDERS AT THE TIME OF THEIR COMPLETION.

G.N.-280

TEMPORARY EROSION CONTROL SEEDING IS INCLUDED IN THIS CONTRACT TO SEED DISTURBED EARTH DURING TIME PERIODS WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE TEMPORARY EROSION CONTROL SEEDING WILL BE DELETED IF IT IS POSSIBLE TO PLACE PERMANENT SEEDING ON EARTH AT THE TIME OF THEIR COMPLETION.

G.N.-540

THE CONTRACTOR SHALL ASSEMBLE AND MATCH-MARK THE PRECAST BOX CULVERT SECTIONS AND END SECTIONS PRIOR TO SHIPMENT OF THESE COMPONENTS FROM THE MANUFACTURER, AND AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER FIT ON EACH JOINT. ANY SECTIONS OR END SECTIONS WHICH DO NOT PROVIDE A PROPER FIT AT THE JOINT SHALL BE REJECTED BY THE ENGINEER AND REPLACED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION BEING ALLOWED.

THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER FOOT FOR PRECAST CONCRETE BOX CULVERTS OF THE SIZE SPECIFIED.

G.N.-667

THE RESIDENT ENGINEER SHALL CONTACT THE PROGRAM DEVELOPMENT CHIEF OF SURVEYS PRIOR TO THE PRE-CONSTRUCTION CONFERENCE FOR INSTRUCTION AS TO SETTING OF TEMPORARY OR PERMANENT TIES FOR CENTERLINE ALIGNMENT CONTROL SURVEY MARKERS (PC'S, PT'S, AND PI'S). PROJECT IMPLEMENTATION PERSONNEL WILL BE RESPONSIBLE FOR LAYOUT OF THESE MARKERS.

G.N.-1004.01

COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

G.N.-Z0038

AN ALUMINUM TABLET OF THE TYPE SHOWN ON STANDARD 667101 SHALL BE PLACED ON THE PROPOSED STRUCTURE AS DIRECTED BY THE ENGINEER. THE BENCH MARK ELEVATION WILL BE ESTABLISHED AND MARKED BY THE DEPARTMENT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR PERMANENT BENCH MARKS.

NO COMMITMENTS

| | | | | | | | | | | | |
|-------------------------------------|------------------------------|---------------|-----------|---|----------------------|--|---------|---------|-----------------|--------------|--|
| FILE NAME * | USER NAME * gorea | DESIGNED JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | GENERAL NOTES | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| c:\pwork\p\dot\gorea\02059406\05780 | 4-shi-gannote.dgn | DRAWN JMS | REVISED - | | | 1671 | 21CR | DOUGLAS | 39 | 3 | |
| | PLOT SCALE * 48.0000 1 / in. | CHECKED ASQ | REVISED - | | | CONTRACT NO. 70694 | | | | | |
| #MODELNAME# | PLOT DATE * 10/10/2014 | DATE 06-24-14 | REVISED - | | | ILLINOIS FED. AID PROJECT | | | | | |
| | | | | | | SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA. | | | | | |

SUMMARY OF QUANTITIES

LOCATION OF WORK:

CULVERT NO. 1

CULVERT NO. 2

STA. 793+44.00

STA. 510+10.26

S.N. 021-2029

S.N. 021-2028

PROP. DBL 12x2

PROP. DBL 12x3

PCC BOX

PCC BOX

FUNDING BREAKOUT:

80% FED

80% FED

20% STATE

20% STATE

CONSTRUCTION TYPE CODE:

0040

0040

| CODE NO | ITEM | UNIT | TOTAL QUANTITY | QUANTITY | QUANTITY |
|----------|-----------------------------------|-------|----------------|----------|----------|
| 20200100 | EARTH EXCAVATION | CU YD | 244.0 | 119.0 | 125.0 |
| 20700220 | POROUS GRANULAR EMBANKMENT | CU YD | 125.0 | 36.0 | 89.0 |
| 21301052 | EXPLORATION TRENCH 52" DEPTH | FOOT | 1,100.0 | 600.0 | 500.0 |
| 25000210 | SEEDING, CLASS 2A | ACRE | 1.2 | 0.6 | 0.6 |
| 25000350 | SEEDING, CLASS 7 | ACRE | 1.2 | 0.6 | 0.6 |
| 25000400 | NITROGEN FERTILIZER NUTRIENT | POUND | 108.0 | 54.0 | 54.0 |
| 25000500 | PHOSPHORUS FERTILIZER NUTRIENT | POUND | 108.0 | 54.0 | 54.0 |
| 25000600 | POTASSIUM FERTILIZER NUTRIENT | POUND | 108.0 | 54.0 | 54.0 |
| 25100115 | MULCH, METHOD 2 | ACRE | 1.2 | 0.6 | 0.6 |
| 28000250 | TEMPORARY EROSION CONTROL SEEDING | POUND | 120.0 | 60.0 | 60.0 |
| 28000305 | TEMPORARY DITCH CHECKS | FOOT | 240.0 | 120.0 | 120.0 |
| 28000400 | PERIMETER EROSION BARRIER | FOOT | 1,100.0 | 600.0 | 500.0 |
| 28100101 | STONE RIPRAP, CLASS A1 | SQ YD | 426.0 | 212.0 | 214.0 |
| 35102000 | AGGREGATE BASE COURSE, TYPE B B" | SQ YD | 470.0 | 231.0 | 239.0 |

* SPECIALTY ITEM

| | | | | | | | | | | | | |
|---|------------------------------|-----------------|-----------|---|------------------------------|---------|-------------|-------------|---------|---------------------------|--------------|-----------|
| FILE NAME * | USER NAME * gprasa | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| c:\pwork\pwork\gprasa\02154426\057804\shl-500.dgn | PLDT SCALE * 48.0000 1/2 in. | DRAWN - JMS | REVISED - | | | | | 1671 | 21CR | DOUGLAS | 39 | 4 |
| MODELNAME* | PLOT DATE * 10/10/2014 | CHECKED - ASG | REVISED - | | SCALE: | SHEET 1 | OF 3 SHEETS | STA. | TO STA. | CONTRACT NO. 70694 | | |
| | | DATE - 06-24-14 | REVISED - | | | | | | | ILLINOIS FED. AID PROJECT | | |

SUMMARY OF QUANTITIES

LOCATION OF WORK:

CULVERT NO. 1

CULVERT NO. 2

STA. 793+44.00

STA. 510+10.26

S.N. 021-2029

S.N. 021-2028

PROP. DBL 12x2

PROP. DBL 12x3

PCC BOX

PCC BOX

FUNDING BREAKOUT:

80% FED

80% FED

20% STATE

20% STATE

CONSTRUCTION TYPE CODE:

0040

0040

| CODE NO | ITEM | UNIT | TOTAL QUANTITY | QUANTITY | QUANTITY |
|----------|---|--------|----------------|----------|----------|
| 44201335 | CLASS C PATCHES, TYPE IV, 8 INCH | SQ YD | 223.0 | 95.0 | 128.0 |
| 44213100 | PAVEMENT FABRIC | SQ YD | 223.0 | 95.0 | 128.0 |
| 44213204 | TIE BARS 3/4" | EACH | 32.0 | 16.0 | 16.0 |
| 48101500 | AGGREGATE SHOULDERS, TYPE B 6" | SQ YD | 35.0 | 17.5 | 17.5 |
| 50100300 | REMOVAL OF EXISTING STRUCTURES NO. 1 | EACH | 1.0 | 1.0 | 0.0 |
| 50100400 | REMOVAL OF EXISTING STRUCTURES NO. 2 | EACH | 1.0 | 0.0 | 1.0 |
| 51500100 | NAME PLATES | EACH | 2.0 | 1.0 | 1.0 |
| 54001001 | BOX CULVERT END SECTIONS, CULVERT NO. 1 | EACH | 2.0 | 2.0 | .0 |
| 54001002 | BOX CULVERT END SECTIONS, CULVERT NO. 2 | EACH | 2.0 | .0 | 2.0 |
| 54011202 | PRECAST CONCRETE BOX CULVERTS 12' X 2' | FOOT | 80.0 | 80.0 | 0.0 |
| 54011203 | PRECAST CONCRETE BOX CULVERTS 12' X 3' | FOOT | 80.0 | .0 | 80.0 |
| 67000500 | ENGINEER'S FIELD OFFICE, TYPE B | CAL MO | 3.0 | 1.5 | 1.5 |
| 67100100 | MOBILIZATION | L SUM | 1.0 | .5 | .5 |
| 70100450 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701201 | L SUM | 1.0 | .5 | .5 |

14

* SPECIALTY ITEM

| | | | | | | | | | | | |
|---|------------------------|-----------------|-----------|---|------------------------------|----------------------------|---------|--------------|--------------|--------------------|--|
| FILE NAME * | USER NAME * gorean | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| c:\pwork\pwork\dot\gorean\059406\057804\shy-500.dgn | | DRAWN - JMS | REVISED - | | | 1671 | 21CR | DOUGLAS | 39 | 5 | |
| PLOT SCALE * 48.0329' / in. | | CHECKED - ASG | REVISED - | | | SCALE: SHEET 2 OF 3 SHEETS | | STA. TO STA. | | CONTRACT NO. 70694 | |
| *MODEL NAME* | PLOT DATE * 10/16/2014 | DATE - 06-24-14 | REVISED - | | | ILLINOIS FED. AID PROJECT | | | | | |

SUMMARY OF QUANTITIES

LOCATION OF WORK:

CULVERT NO. 1

CULVERT NO. 2

STA. 793+44.00

STA. 510+10.26

S.N. 021-2029

S.N. 021-2028

PROP. DBL 12x2

PROP. DBL 12x3

PCC BOX

PCC BOX

FUNDING BREAKOUT:

80% FED

80% FED

20% STATE

20% STATE

CONSTRUCTION TYPE CODE:

0040

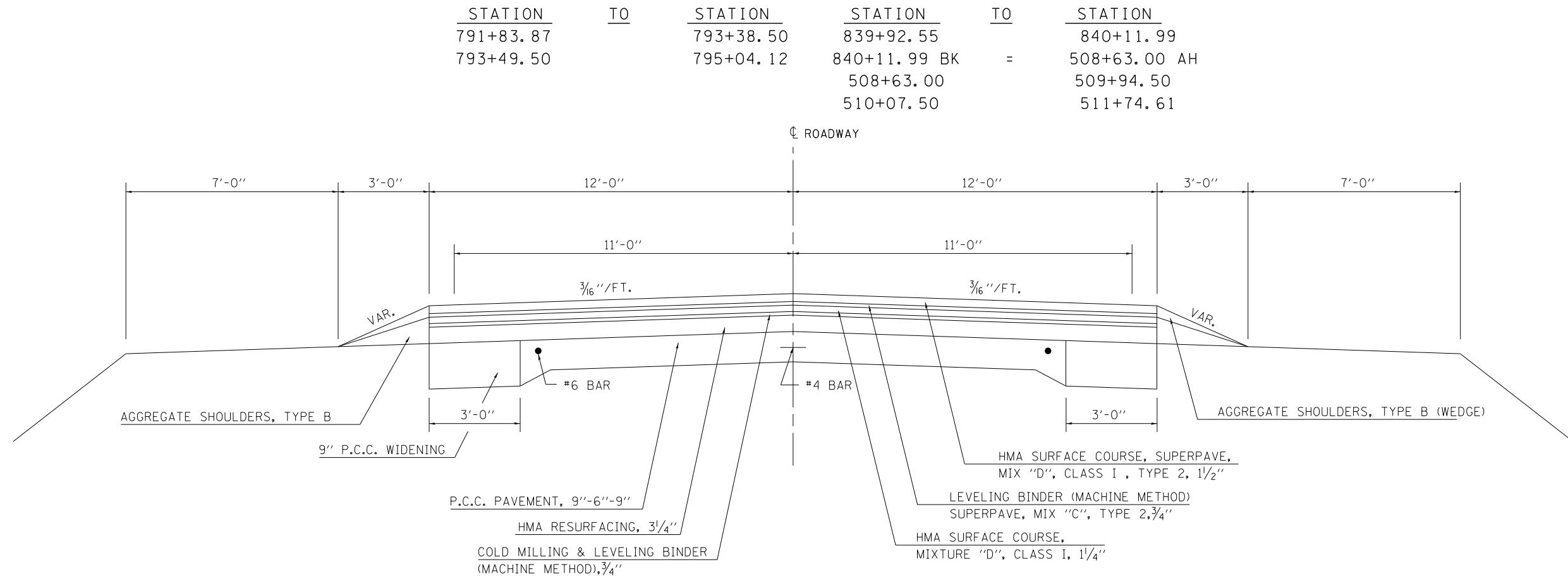
0040

| CODE NO | ITEM | UNIT | TOTAL QUANTITY | QUANTITY | QUANTITY |
|------------|---|--------|----------------|----------|----------|
| 70100455 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701206 | L SUM | 1.0 | .5 | .5 |
| 70200100 | NIGHTTIME WORK ZONE LIGHTING | L SUM | 1.0 | .5 | .5 |
| * 78001110 | PAINT PAVEMENT MARKING - LINE 4" | FOOT | 192.0 | 82.0 | 110.0 |
| X7015005 | CHANGEABLE MESSAGE SIGN | CAL DA | 20.0 | 10.0 | 10.0 |
| Z0037200 | PAVEMENT GRINDING | SQ YD | 223.0 | 95.0 | 128.0 |
| Z0038700 | PERMANENT BENCH MARKS | EACH | 2.0 | 1.0 | 1.0 |
| 7 Z0048665 | RAILROAD PROTECTIVE LIABILITY INSURANCE | L SUM | 1.0 | 0.5 | 0.5 |

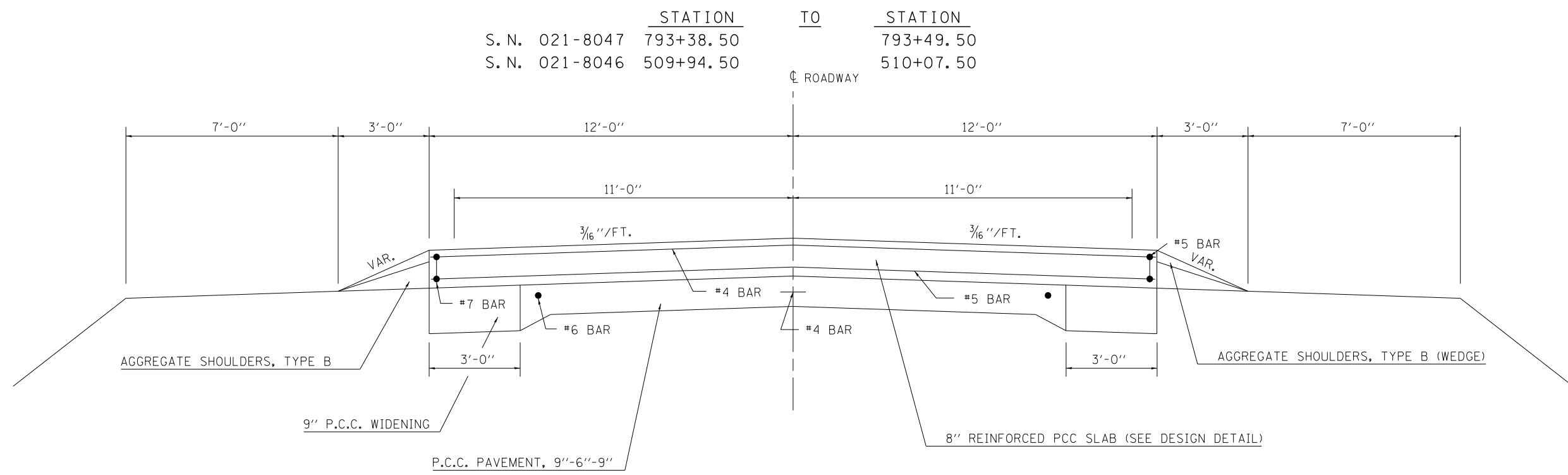
* SPECIALTY ITEM

| | | | | | | | | | | | | | |
|---|------------------------------|-----------------|-----------|---|---|------|---------|----|--------------------|---------|--------|--------------|-----------|
| FILE NAME = | USER NAME = gareae | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES | | | | P.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| cd:\ppl\work\ppl\dot\gareae\ad0159485\05786 | 4-shr\SQ.dgn | DRAWN - JMS | REVISED - | | 1671 | 21CR | DOUGLAS | 39 | 6 | | | | |
| *MODELNAME* | PLOT SCALE = 40,0000 1 / in. | CHECKED - ASC | REVISED - | | SCALE: SHEET 3 OF 3 SHEETS STA. TO STA. | | | | CONTRACT NO. 70694 | | | | |
| | PLOT DATE = 10/17/2014 | DATE - 06-24-14 | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | | |

EXISTING TYPICAL SECTION



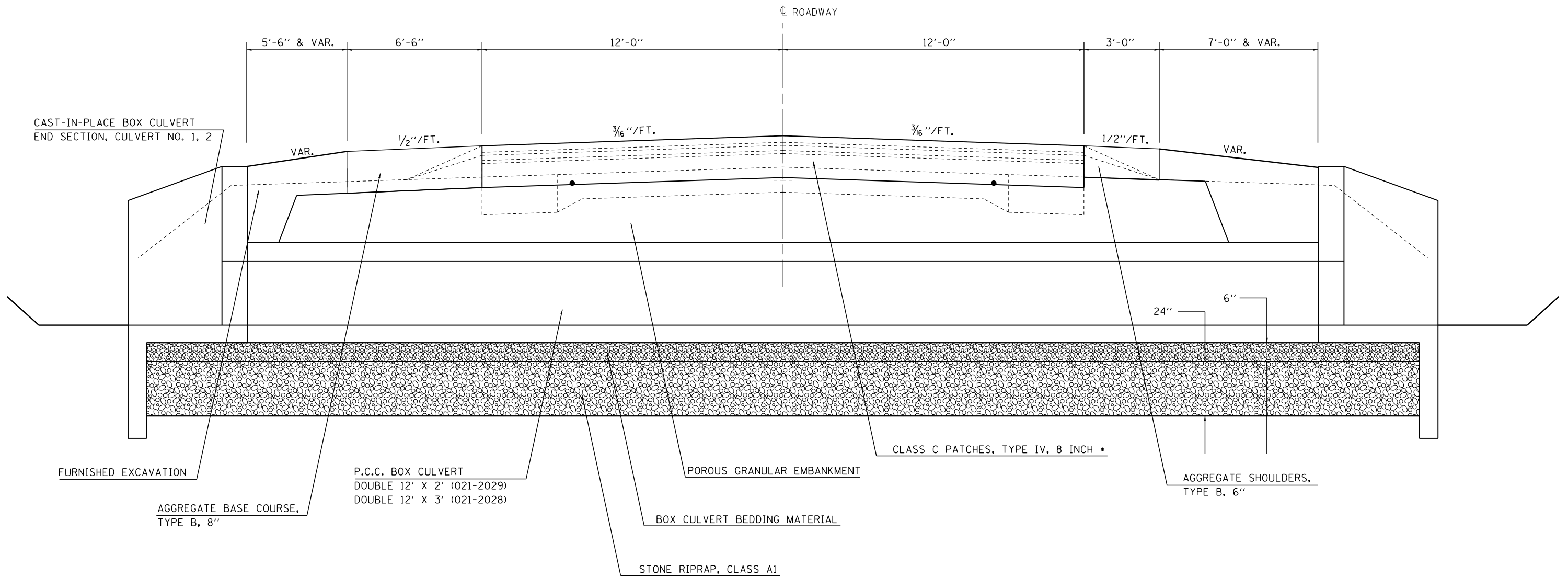
EXISTING TYPICAL SECTION



| | | | | | | | | | | | | | |
|---|------------------------------|----------------|-----------|---|-------------------------------|-------------------------|------|----------------|---------|--------|-----------------|--------------|---|
| FILE NAME = | USER NAME = gorees | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TYPICAL CROSS-SECTIONS | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| ci:\pw\work\p\dot\gorees\d0159406\05706 | 94-sh-t-typicols.dgn | DRAWN - JMS | REVISED - | | SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA. | 1671 | 21CR | DOUGLAS | 39 | 7 |
| | PLOT SCALE = 100.0000' / in. | CHECKED - | REVISED - | | CONTRACT NO. 70694 | | | | | | | | |
| | PLOT DATE = 10/16/2014 | DATE - 031710 | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | | |

1 PROPOSED TYPICAL SECTION

| | STATION | TO | STATION |
|----------------|-----------|----|-----------|
| S. N. 021-2029 | 793+27.87 | | 793+60.12 |
| S. N. 021-2028 | 509+84.87 | | 510+17.12 |



•PLACE CLASS C PATCH PAVEMENT 1/4" HIGHER THAN THE ADJACENT PAVEMENT TO FACILITATE PAVEMENT GRINDING.

| | | | | | | | | | | | | | |
|--|--------------------|----------------|-----------|---|-------------------------------|-------------------------|------|--------------------|---------|--------|-----------------|--------------|---|
| FILE NAME = | USER NAME = gorees | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TYPICAL CROSS-SECTIONS | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| ct:\pw\work\p1dot\gorees\d0159406\0570694-sh1-typicals.dgn | | DRAWN - JMS | REVISED - | | SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA. | 1671 | 21CR | DOUGLAS | 39 | 8 |
| | | CHECKED - | REVISED - | | | | | CONTRACT NO. 70694 | | | | | |
| | | DATE - 031710 | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | | |

EARTHWORK SCHEDULE

| STATION | TO | STATION | 20200100 EARTH EXCAVATION (CU YD) | ADJUSTED FOR SHRINKAGE (CU YD) | EMBANKMENT (CU YD) | *FURNISHED EXCAVATION (CU YD) | |
|----------------------|-----------|---------|--|---|-----------------------|-------------------------------------|-------------------|
| CULVERT NO. 1 | | | | | | | |
| LT/RT | 792+00.00 | LT/RT | 795+00.00 | 119.0 | 89.3 | 9.0 | 80.3 |
| | | | SUB-TOTAL = | 119.0 | 89.3 | 9.0 | 80.3 |
| CULVERT NO. 2 | | | | | | | |
| LT/RT | 509+00.00 | LT/RT | 511+50.00 | 125.0 | 93.8 | 29.0 | 64.8 |
| | | | SUB-TOTAL = | 125.0 | 93.8 | 29.0 | 64.8 |
| | | | TOTAL = | 244.0 | 183.0 | 38.0 | 145.0 (EXCESS) |

*FURNISHED EXCAVATION = EARTH EXCAVATION X ADJUSTMENT FACTOR (0.75) - EMBANKMENT

LANDSCAPING SCHEDULE

| STATION | TO | STATION | AREA (ACRE) | 28000250 TEMPORARY EROSION SEEDING (POUND) | 25000350 SEEDING CLASS 7 (ACRE) | 25000210 SEEDING CLASS 2A (ACRE) | 25000400 NITROGEN FERT. (POUNDS) | 25000500 PHOS FERT. (POUNDS) | 25000600 POTAS. FERT. (POUNDS) | 25100115 MULCH METHOD 2 (ACRE) | |
|----------------------|-----------|---------|--------------------|--|--|---|---|---------------------------------------|---|---|-----|
| CULVERT NO. 1 | | | | | | | | | | | |
| LT | 792+00.00 | LT | 795+00.00 | 0.3 | 30.0 | 0.3 | 0.3 | 27.0 | 27.0 | 27.0 | 0.3 |
| RT | 792+00.00 | RT | 795+00.00 | 0.3 | 30.0 | 0.3 | 0.3 | 27.0 | 27.0 | 27.0 | 0.3 |
| | | | SUB-TOTAL = | 0.6 | 60.0 | 0.6 | 0.6 | 54.0 | 54.0 | 54.0 | 0.6 |
| CULVERT NO. 2 | | | | | | | | | | | |
| LT | 509+00.00 | LT | 511+50.00 | 0.3 | 30.0 | 0.3 | 0.3 | 27.0 | 27.0 | 27.0 | 0.3 |
| RT | 509+00.00 | RT | 511+50.00 | 0.3 | 30.0 | 0.3 | 0.3 | 27.0 | 27.0 | 27.0 | 0.3 |
| | | | SUB-TOTAL = | 0.6 | 60.0 | 0.6 | 0.6 | 54.0 | 54.0 | 54.0 | 0.6 |
| | | | TOTAL = | 1.2 | 120.0 | 1.2 | 1.2 | 108.0 | 108.0 | 108.0 | 1.2 |

SCHEDULE NOTE: IT IS THE INTENT THAT CLASS 7 SEEDING BE PLACED ALONG WITH THE CLASS 2A SEEDING AS A SUPPLEMENTAL SEEDING TO PROMOTE ACCELERATED VEGETATION GROWTH.

21301052 EXPLORATION TRENCH 52"

| STATION | TO | STATION | FOOT | |
|----------------------|-----------|---------|--------------------|--------|
| CULVERT NO. 1 | | | | |
| RT | 792+00.00 | RT | 795+00.00 | 300.0 |
| LT | 792+00.00 | LT | 795+00.00 | 300.0 |
| | | | SUB-TOTAL = | 600.0 |
| CULVERT NO. 2 | | | | |
| RT | 509+00.00 | RT | 511+50.00 | 250.0 |
| LT | 509+00.00 | LT | 511+50.00 | 250.0 |
| | | | SUB-TOTAL = | 500.0 |
| | | | TOTAL = | 1100.0 |

28000305 TEMPORARY DITCH CHECKS

| STATION | FOOT | |
|----------------------|-----------|-------|
| CULVERT NO. 1 | | |
| LT | 792+63.00 | 15.0 |
| RT | 792+63.00 | 15.0 |
| LT | 793+09.54 | 15.0 |
| RT | 793+19.56 | 15.0 |
| RT | 793+69.62 | 15.0 |
| LT | 793+70.49 | 15.0 |
| LT | 794+31.00 | 15.0 |
| RT | 794+31.00 | 15.0 |
| SUB-TOTAL = | | 120.0 |
| CULVERT NO. 2 | | |
| LT | 509+40.00 | 15.0 |
| RT | 509+40.00 | 15.0 |
| LT | 509+08.56 | 15.0 |
| RT | 509+82.32 | 15.0 |
| RT | 510+35.82 | 15.0 |
| LT | 510+36.21 | 15.0 |
| LT | 510+90.00 | 15.0 |
| RT | 510+90.00 | 15.0 |
| SUB-TOTAL = | | 120.0 |
| TOTAL = | | 240.0 |

28000400 PERIMETER EROSION BARRIER

| STATION | TO | STATION | FOOT | |
|----------------------|-----------|---------|--------------------|--------|
| CULVERT NO. 1 | | | | |
| RT | 792+00.00 | RT | 795+00.00 | 300.0 |
| LT | 792+00.00 | LT | 795+00.00 | 300.0 |
| | | | SUB-TOTAL = | 600.0 |
| CULVERT NO. 2 | | | | |
| RT | 509+00.00 | RT | 511+50.00 | 250.0 |
| LT | 509+00.00 | LT | 511+50.00 | 250.0 |
| | | | SUB-TOTAL = | 500.0 |
| | | | TOTAL = | 1100.0 |

SCHEDULE OF DRAINAGE STRUCTURES

| | | 20700220 POROUS GRAN EMBANKMENT (CUYD) | 28100101 STONE RIPRAP CLASS A1 (SQ YD) | 44201335 CLASS C PATCHES TYPE IV, 8" SQ YD | 50100300 REM EXST STRUCT NUMBER 1 (EACH) | 50100400 REM EXST STRUCT NUMBER 2 (EACH) | 51500100 NAME PLATES (EACH) | 54001001 BOX CUL END SECT CULV. NO. 1 (EACH) | 54001002 BOX CUL END SECT CULV. NO. 2 (EACH) | 54011202 PCBC 12X2 (FOOT) | 54011203 PCBC 12X3 (FOOT) | Z0037200 PAVT. GRINDING (SQ YD) | Z0038700 PERM. BENCH MARK (EACH) |
|---------------|-----------|---|---|---|---|---|-----------------------------------|--|--|------------------------------------|------------------------------------|--|--|
| STATION | | | | | | | | | | | | | |
| CULVERT NO. 1 | 793+44.00 | 36.0 | 212.0 | 95.0 | 1.0 | | 1.0 | 2.0 | | 80.0 | | 95.0 | 1.0 |
| CULVERT NO. 2 | 510+10.26 | 89.0 | 214.0 | 128.0 | | 1.0 | 1.0 | | 2.0 | | 80.0 | 128.0 | 1.0 |
| TOTALS = | | 125.0 | 426.0 | 223.0 | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 | 80.0 | 80.0 | 223.0 | 2.0 |

35102000 AGGREGATE BASE COURSE, TYPE B, 8"







| | STATION | TO | STATION | LENGTH (FT) | WIDTH (FT) | AREA (SQ YD) |
|---------------|-----------|----|-----------|----------------|---------------|-----------------|
| CULVERT NO. 1 | | | | | | |
| LT | 791+83.87 | | 795+04.12 | 320.3 | 6.5 | 231.3 |
| SUB-TOTAL = | | | | | | 231.3 |
| CULVERT NO. 2 | | | | | | |
| LT | 839+92.55 | | 840+11.99 | 19.4 | 6.5 | 14.0 |
| ST EQ | 840+11.99 | = | 508+63.00 | | | |
| LT | 508+63.00 | | 511+74.61 | 311.6 | 6.5 | 225.1 |
| SUB-TOTAL = | | | | | | 239.1 |
| TOTAL = | | | | | | 470.0 |

48101500 AGGREGATE SHOULDERS, TYPE B, 6"

| | STATION | TO | STATION | LENGTH (FT) | WIDTH (FT) | AREA (SQ YD) |
|---------------|-----------|----|-----------|----------------|---------------|-----------------|
| CULVERT NO. 1 | | | | | | |
| RT | 793+17.88 | | 793+70.13 | 52.3 | 3.0 | 17.4 |
| SUB-TOTAL = | | | | | | 17.4 |
| CULVERT NO. 2 | | | | | | |
| RT | 509+84.11 | | 510+36.36 | 52.3 | 3.0 | 17.4 |
| SUB-TOTAL = | | | | | | 17.4 |
| TOTAL = | | | | | | 35.0 |

ADDITIONAL PAVEMENT PATCHING ITEMS

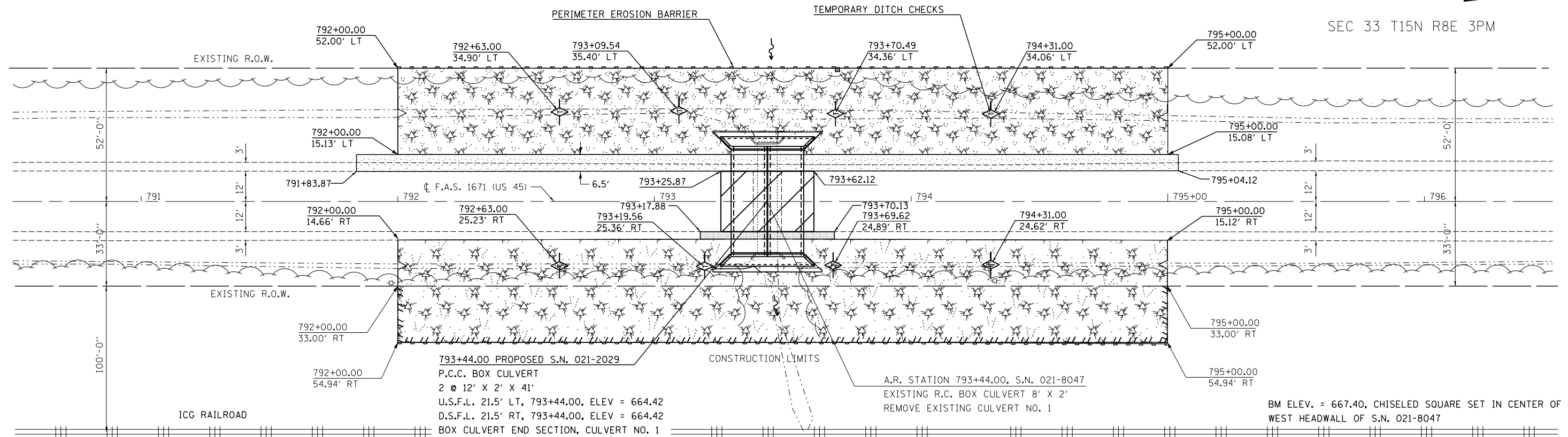
| | 44213100 PVT. FABRIC (SQ YD) | 44213204 TIE BARS 3/4" (EACH) | 78001110 PAINT PVT. MK LN 4" (FOOT) |
|---------------|------------------------------------|--|--|
| CULVERT NO. 1 | 95.0 | 16.0 | 82.0 |
| CULVERT NO. 2 | 128.0 | 16.0 | 110.0 |
| TOTAL = | | | 192.0 |

 CLASS C PATCHES, TYPE IV, 8 INCH
 AGG WEDGE SHOULDERS, TYPE B
 AGGREGATE BASE COURSE, TYPE B 8"
 SEEDING, CLASS 2A
 SEEDING, CLASS 7
 MULCH METHOD 2

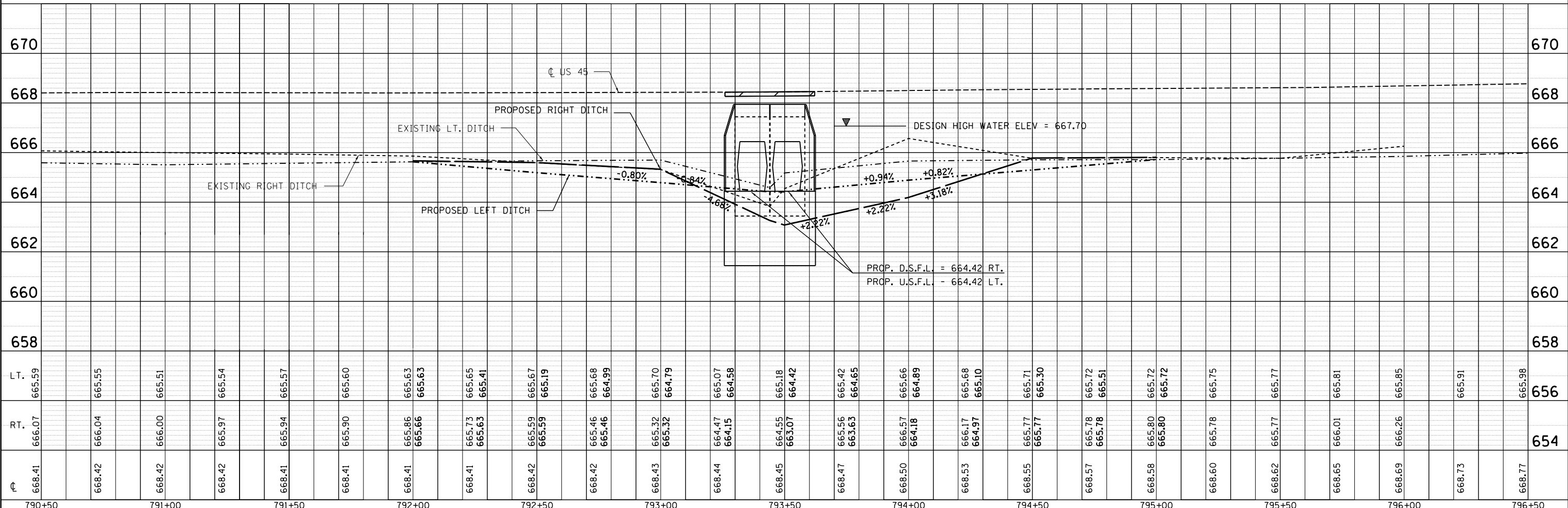
SEC 33 T15N R8E 3PM



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



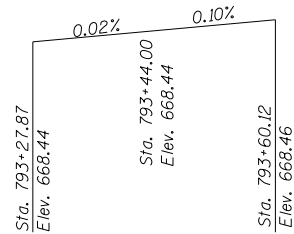
| | | |
|---------|--------------------------|------|
| PROFILE | SURVEYED | DATE |
| | PLOTTED | BY |
| | GRADES CHECKED | |
| | STRUCTURE NOTATIONS OK'D | |
| | NOTE BOOK NO. | |
| | CADD FILE NAME | |



| | | | | | | | | | | | | |
|--|-----------------------------|----------------|-----------|---|---|------------------|-------------------------|----------------------------------|---------------------------|--------------|--|--|
| FILE NAME = | USER NAME = goreas | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | DETAIL OF ACROSS ROAD BOX CULVERT NO. 1 STATION 793 + 44.00, S.N. 021-2029 | F.A.S. RTE. 1671 | SECTION 21CR | COUNTY DOUGLAS | TOTAL SHEETS 39 | SHEET NO. 11 | | |
| c:\pwork\pwork\goreas\d0159406\0570694-shr-plnpr.f.dgn | PLOT SCALE = 40.0000' / in. | CHECKED - JMS | REVISED - | | | SCALE: 1:20 | SHEET NO. 1 OF 8 SHEETS | STA. 790+50.00 TO STA. 796+50.00 | ILLINOIS FED. AID PROJECT | | | |
| | PLOT DATE = 10/16/2014 | DATE - 033010 | REVISED - | | | | | | | | | |
| | | | | | | | | | | | | |

EXISTING STRUCTURE: S.N. 021-8047 was constructed in 1923 at STA. 793+40 as an 8'x2'x31'-4" cast-in-place box culvert with concrete headwalls as S.B.I. 25, Sec. 21 in Douglas County. In 1954 the box was extended to 43'-4" under Section (19,20,21,22X)W & 22W-1. In 2010 reinforced concrete patches placed over the top of the structure.

The existing structure is to be completely removed and replaced. There will be no salvage of any materials. Stage Construction will be utilized. BENCHMARK ELEV. = 667.40 Chiseled square on top of center of west headwall of S.N. 021-8047 at STA. 793+43.90, 22.84' LT.



PROFILE GRADE

Along ϕ Roadway

STATION 793+44.00
BUILT 2015 BY
STATE OF ILLINOIS
F.A.S. RT. 1671 SEC. 21CR
LOADING HS 20
STRUCTURE NO. 021-2029

NAME PLATE

See Std. 515001

INDEX OF SHEETS

1. Plan & Profile
2. As Built Plan
3. Porous Granular Embankment Detail
4. General Plan and Elevation
5. Box Culvert End Section Details

DESIGN SPECIFICATIONS

2002 AASHTO

LOADING HS20-44

Allow 50#/sq.ft. for future wearing surface

DESIGN STRESSES

FIELD UNITS

$f'c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 65,000$ psi (welded wire fabric)

PRECAST UNITS

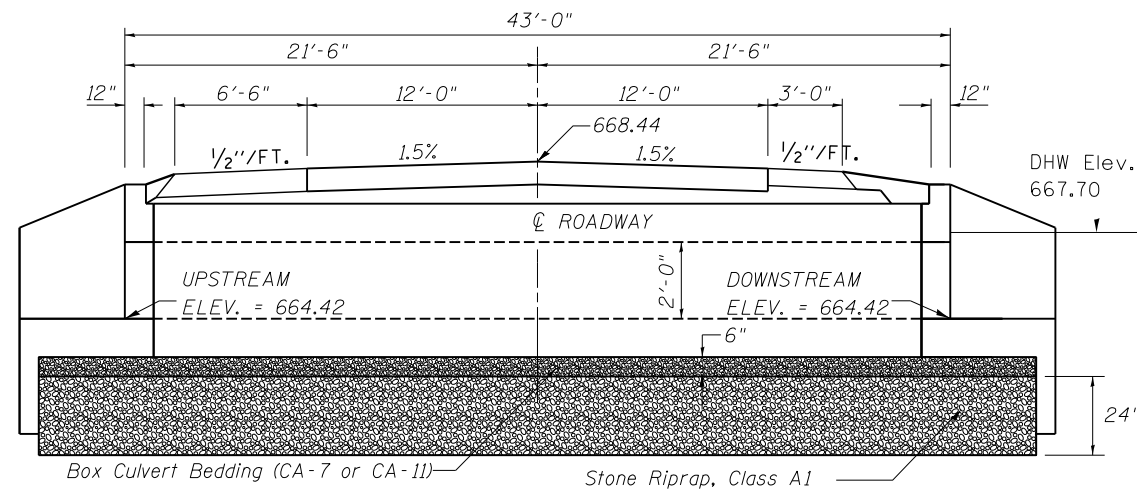
$f'c = 5,000$ psi
 $f_y = 65,000$ psi (welded wire fabric)

WATERWAY INFORMATION

Drainage Area = 0.77 sq. mi. Low Grade Elev. 668.36 @ Sta. 789+50.00

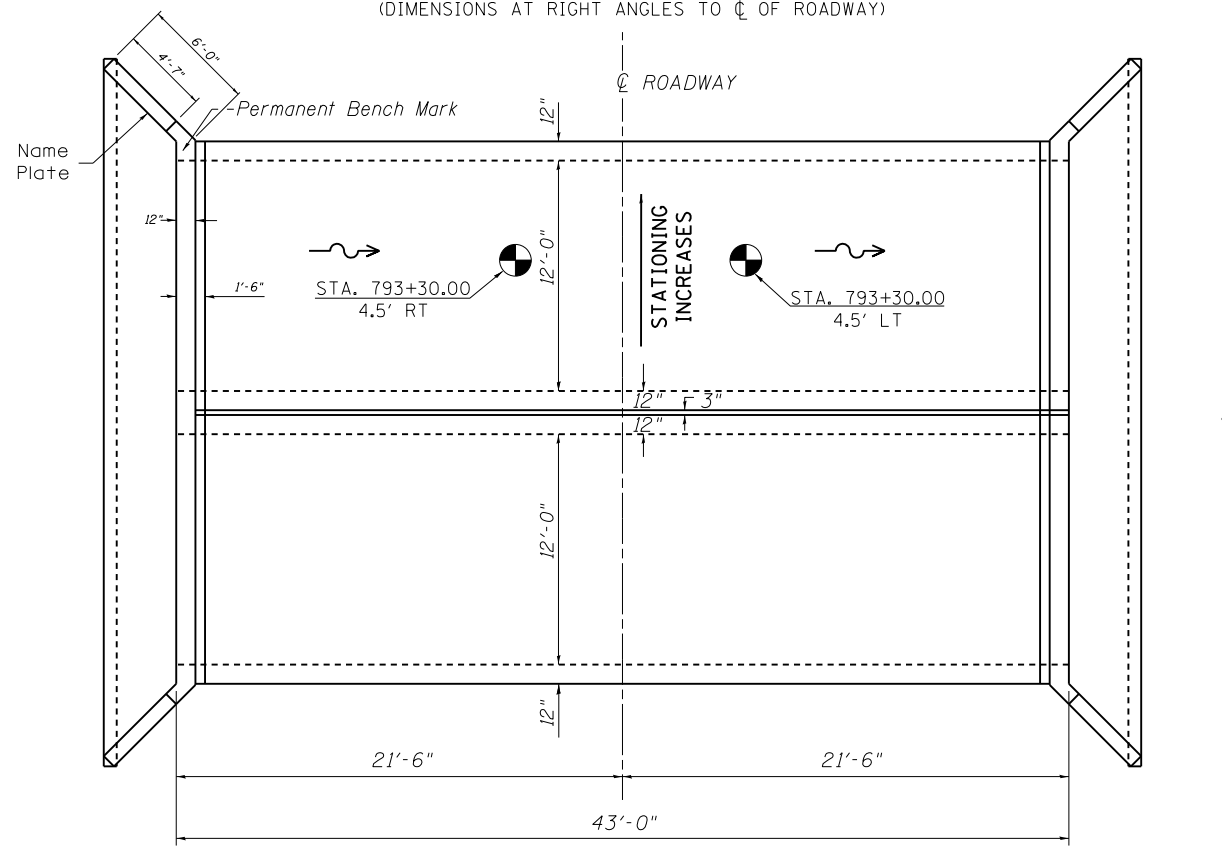
| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. | | Nat. H.W.E. | Head - Ft. | | Headwater El. | |
|-------------|-----------|----------|-----------------|-------|-------------|------------|-------|---------------|--------|
| | | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| | 10 | 211 | 16 | 48 | | | | over | 666.80 |
| Design | 50 | 347 | 16 | 48 | | | | over | 667.70 |
| Base | 100 | 409 | 16 | 48 | | | | over | over |
| Overtopping | | | | | | | | | |
| Max. Calc. | 500 | 561 | 16 | 48 | | | | over | over |

Note: Information provided using the Regression Method.



ELEVATION

(DIMENSIONS AT RIGHT ANGLES TO ϕ OF ROADWAY)



PLAN

R 8 E



PROP. S.N. 021-2029
STA. 793+44.00

Design Scour Elevation Table

| Design Scour Elevation (ft.) | Upstream | Downstream |
|------------------------------|----------|------------|
| | 661.42 | 661.42 |

General Notes

Build tops of headwalls parallel to the grade lines.

All construction joints shall be bonded according to Article 503.09 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of ASTM A706 Gr. (IL Modified). See Special Provisions.

All bars should be rounded and conform to the requirements of Article 1006.10 of the Standard Specification.

The 6" Porous Granular Material required per Art. 540.06 of the Standard Specifications shall also extend beneath the Box Culvert End Sections and shall be considered included in the cost of Precast Concrete Box Culverts and Box Culvert End Sections.

When lapping sheets of welded wire fabric, the overlap measured between the outermost cross wires of each fabric sheet shall not be less than 8"

End Sections will be paid for at the contract unit price per each for BOX CULVERT END SECTIONS, as outlined in Section 540 of the Standard Specifications.

Class SI Concrete shall be used throughout.

Concrete, Rebar, and Welded Wire Fabric quantities and lengths calculated for the cast-in-place End Sections may vary based on the precast box culverts supplied.

Drain holes shall be provided in accordance with Article 503.11 of the Standard Specifications.

The precast manufacturer shall design and detail a connection/construction joint between the precast concrete box sections and the cast-in-place apron and wingwall. The minimum area of reinforcement passing through these construction joints shall be 0.20 sq. in./lineal ft. of welded wire fabric. The design shall be detailed in the shop drawings. The cost of the connection is included in the cost of the end section.

The box culvert end section shall be built in the field and a precast option is not allowed except the cut-off wall may be precast. If the contractor elects to use precast construction methods, shop drawings and a proposed construction sequence shall be submitted to the Engineer for approval. See Special Provisions.

The design fill height for this box is greater than 2 feet. The Precast Concrete Box Culvert Sections shall conform to the requirements of ASTM C1577.

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.

All dimensions are in FEET (') - INCHES (") unless otherwise noted.

Drawings not to scale.

TOTAL BILL OF MATERIAL

| Item | Unit | Total |
|--|--------|-------|
| Removal of Existing Structures No. 1 | Each | 1.0 |
| Precast Concrete Box Culvert 12'x2' | Foot | 80.0 |
| Box Culvert End Section, Culvert No. 1 | Each | 2.0 |
| Name Plates | Each | 1.0 |
| Permanent Bench Marks | Each | 1.0 |
| Porous Granular Embankment | Cu.Yd. | 36.0 |
| Stone Riprap, Class A1 | Sq.Yd. | 212.0 |

**GENERAL PLAN AND ELEVATION
DOUBLE 12'x2' PRECAST BOX CULVERT
F.A.S. ROUTE 1671 - SECTION 21CR
DOUGLAS COUNTY
STATION 793+44.00 S.N. 021-2029
CULVERT NO. 1**

| | | | |
|---|-----------------------------|----------------|-----------|
| FILE NAME = | USER NAME = gorees | DESIGNED - JMS | REVISED - |
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| | PLOT SCALE = 40.0000' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 11/21/2014 | DATE - 032310 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BOX CULVERT END SECTION DETAILS
PROPOSED CULVERT NO. 1**

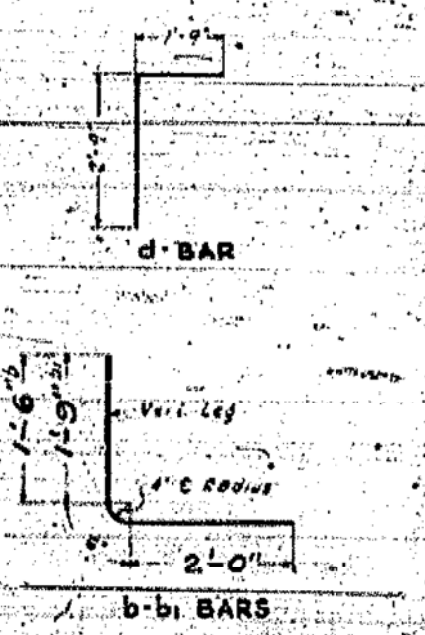
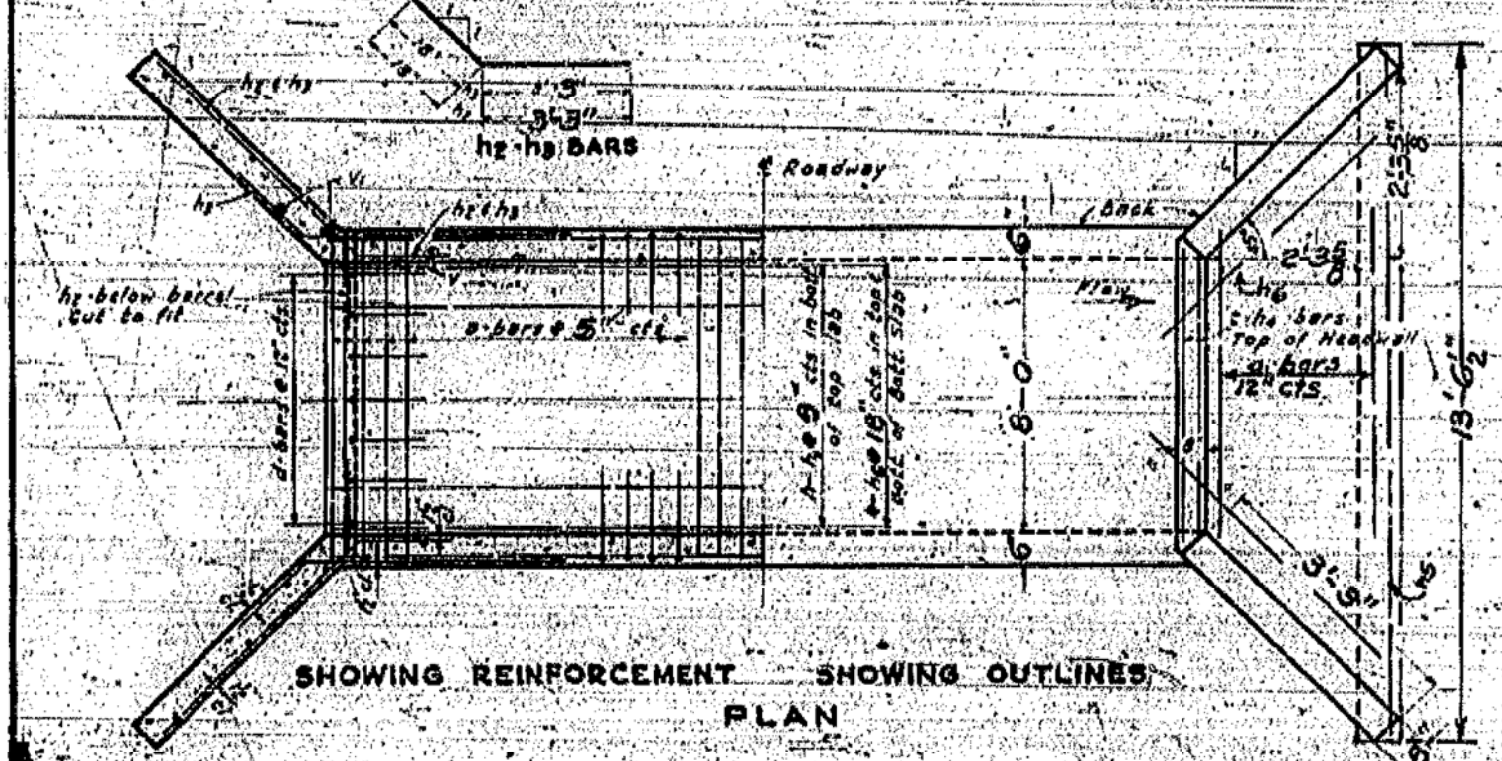
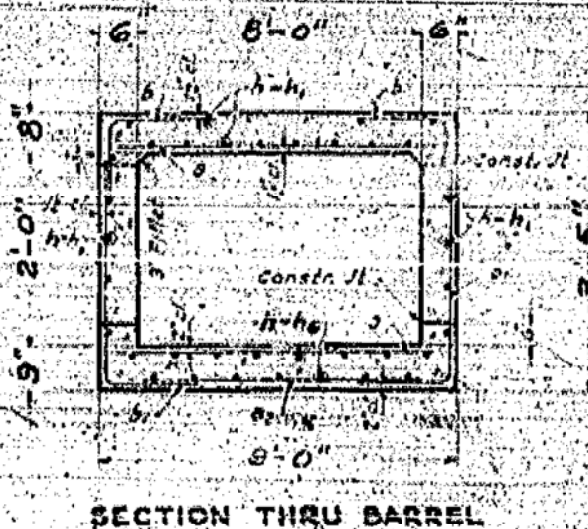
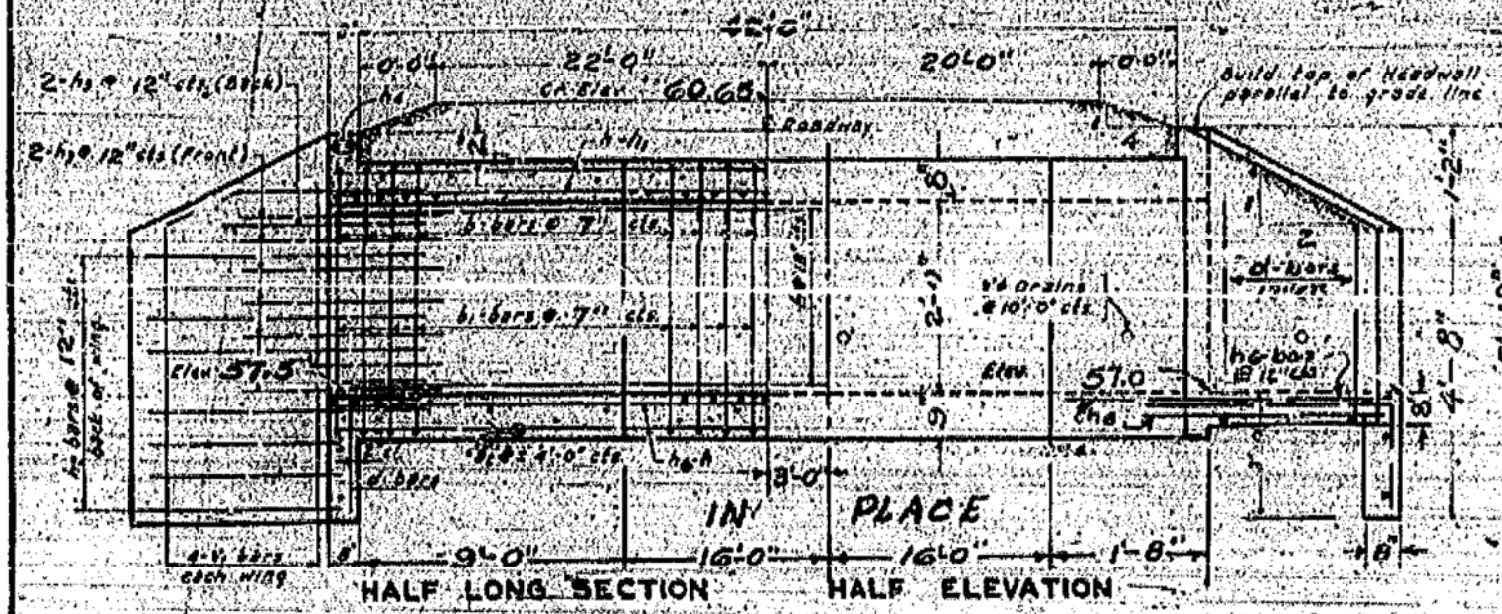
SCALE: NONE SHEET NO. 2 OF 8 SHEETS STA. TO STA.

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 1671 | 21CR | DOUGLAS | 39 | 12 |
| CONTRACT NO. 70694 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

AS BUILTS - FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

25
S. B. I. 25
222-1
SHEET NO. 39



| BILL OF MATERIAL | | | |
|------------------|-----|------|--------|
| BAR | NO. | SIZE | LENGTH |
| a | 52 | #5 | 8'-6" |
| a | 5 | #4 | 8'-6" |
| a | 5 | #4 | 5'-0" |
| b | 38 | #4 | 4'-0" |
| b | 38 | #4 | 4'-3" |
| h | 2 | #4 | 13'-0" |
| v | 4 | #4 | 3'-0" |
| v | 18 | #4 | 5'-0" |
| d | 30 | #4 | 4'-3" |
| h | 15 | #4 | 3'-9" |
| b | 32 | #4 | 9'-6" |
| h | 19 | #4 | 1'-6" |
| h | 16 | #4 | 4'-9" |
| h | 8 | #4 | 4'-9" |
| h | 4 | #4 | 8'-6" |

Class X Concrete 6449.9
Reinforcement Bars 661.250

Note: Remove old Headwall and straighten old steel. Tie new steel on to old steel.

GENERAL NOTES

Class X Concrete shall be used throughout. Culvert walls and slab may be poured monolithically. Exposed edges shall be beveled. The wing walls shall be poured monolithically with barrel for a distance of six feet along the barrel.

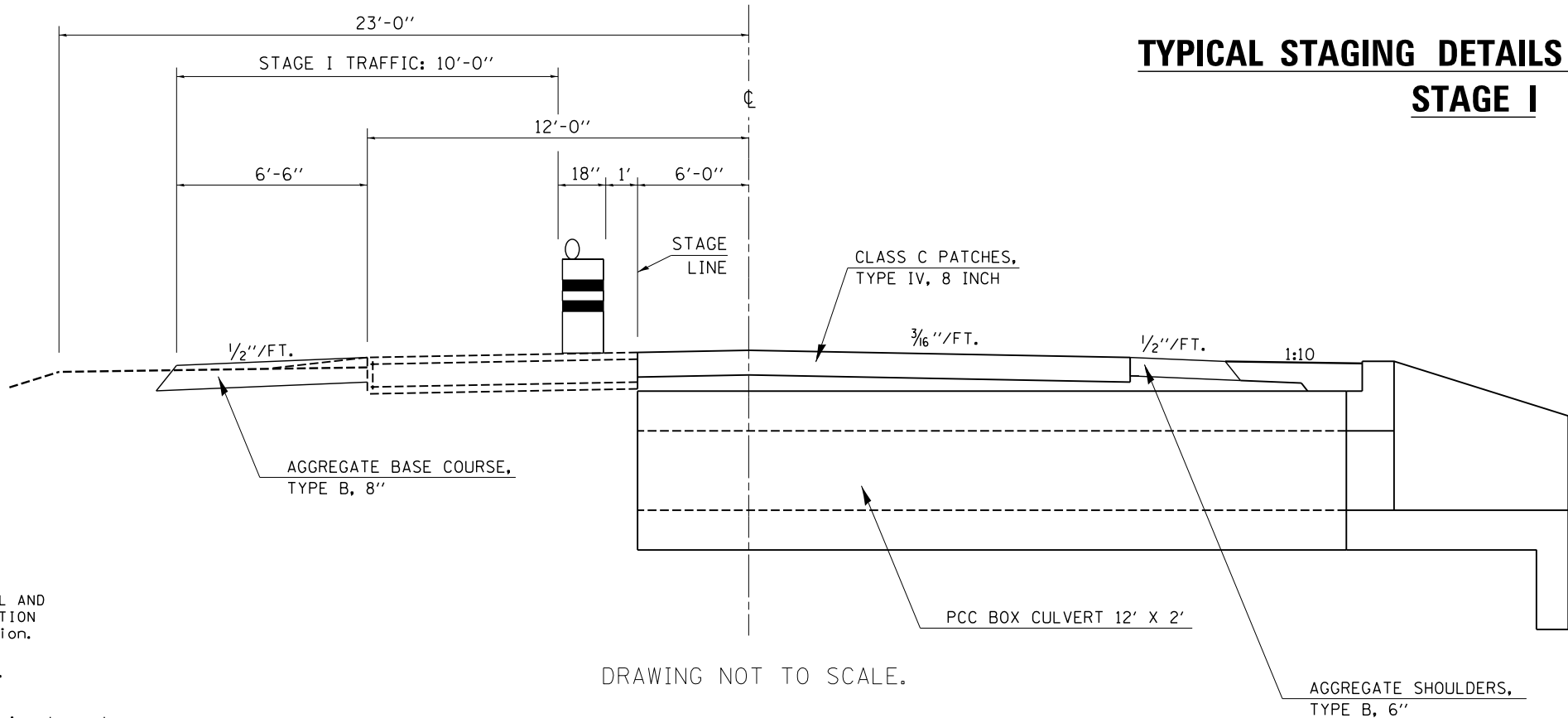
Note: All bars shall be round ASTM A305 - 11. The size number is the number of 16 inches in the nominal diameter.

SPECIAL CULVERT EXTENSION
S.B.I. AT 25 SEG 21 W
CONTRACT NO. 70694

DESIGNED - JMS
DRAWN - JMS
CHECKED -
DATE - 032310

APPROVED - W. E. Hanson
DATE - 6-11-13

TYPICAL STAGING DETAILS CULVERT NO. 1
STAGE I

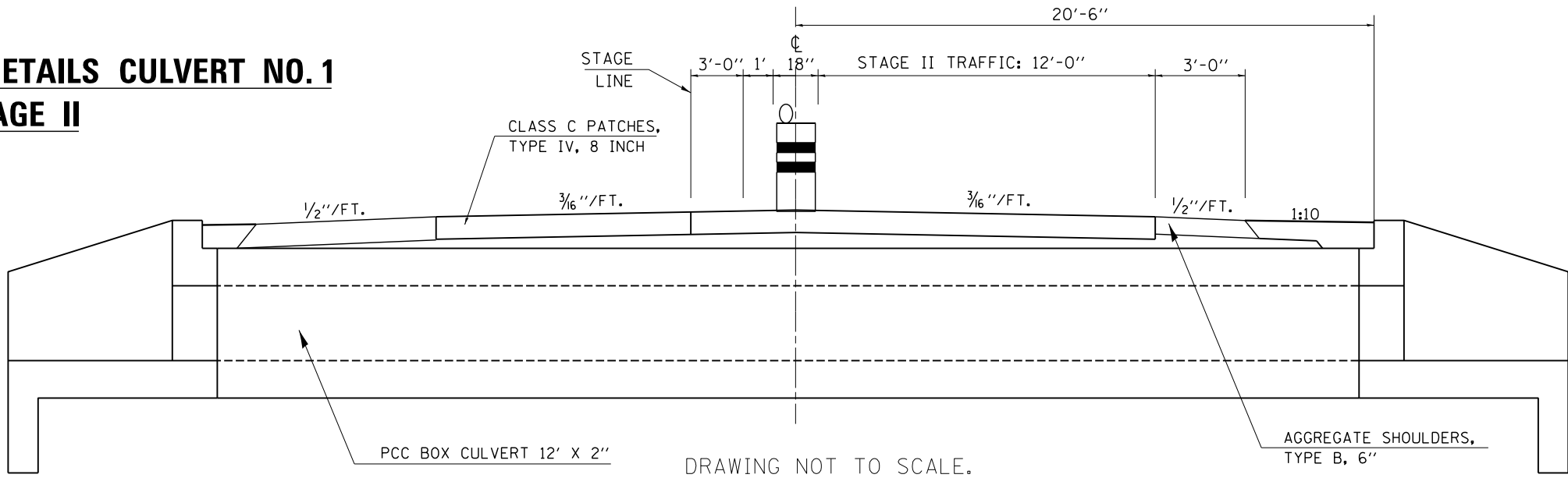


DRAWING NOT TO SCALE.

NOTES

1. Refer to Special Provisions for TRAFFIC CONTROL AND PROTECTION, STANDARD 701206 and STAGE CONSTRUCTION ACROSS ROAD STRUCTURES for additional information.
2. Construct downstream end of A.R. culvert first.
3. CMS boards shall be placed 3 days in advance prior to work.




TYPICAL STAGING DETAILS CULVERT NO. 1
STAGE II



DRAWING NOT TO SCALE.

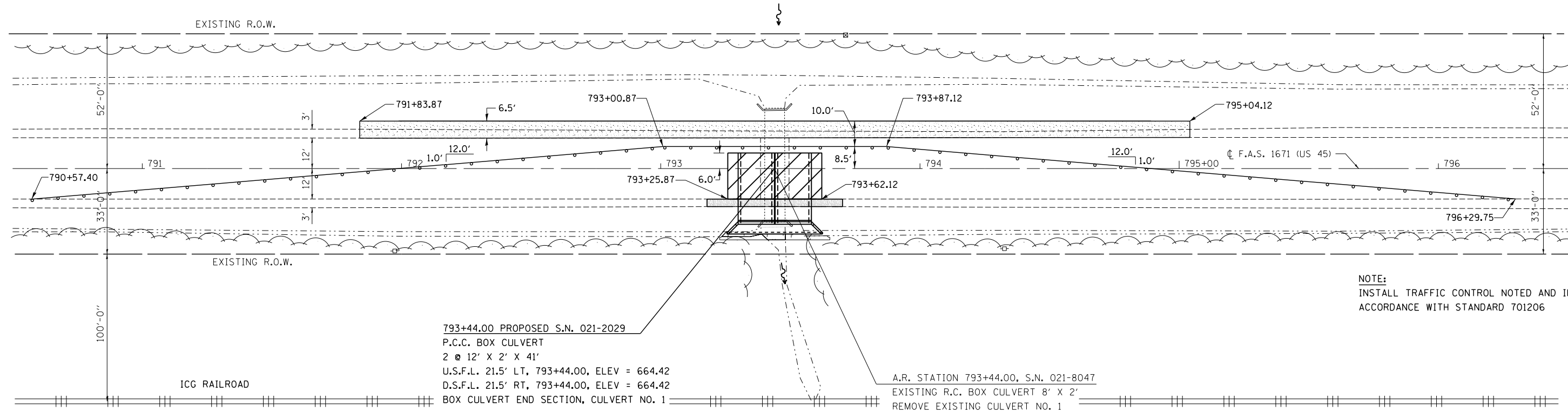
| A. R. CULVERT LOCATION | TRAFFIC CONTROL STANDARD | ESTIMATED TIME | CHANGEABLE MESSAGE SIGNS |
|------------------------|--------------------------|---|--|
| STA. 793+44.00 | 701206 | 2 Days - 48 hrs. - Non-Stop (2) - 12 hr. Day Shifts (2) - 12 hr. Night Shifts | 2 EACH AT 5.0 CAL DAY = 10.0 CAL DAY |

TYPICAL STAGING DETAIL
DOUBLE 12'x2' PRECAST BOX CULVERT
F.A.S. ROUTE 1671 - SECTION 21CR
DOUGLAS COUNTY
STATION 793+44.00, S.N. 021-2029
CULVERT NO. 1




 CLASS C PATCHES, TYPE IV, 8 INCH
 AGG WEDGE SHOULDERS, TYPE B
 AGGREGATE BASE COURSE, TYPE B 8"

TYPICAL CULVERT STAGE I PLAN

SEC 24 T14N R8E 3PM

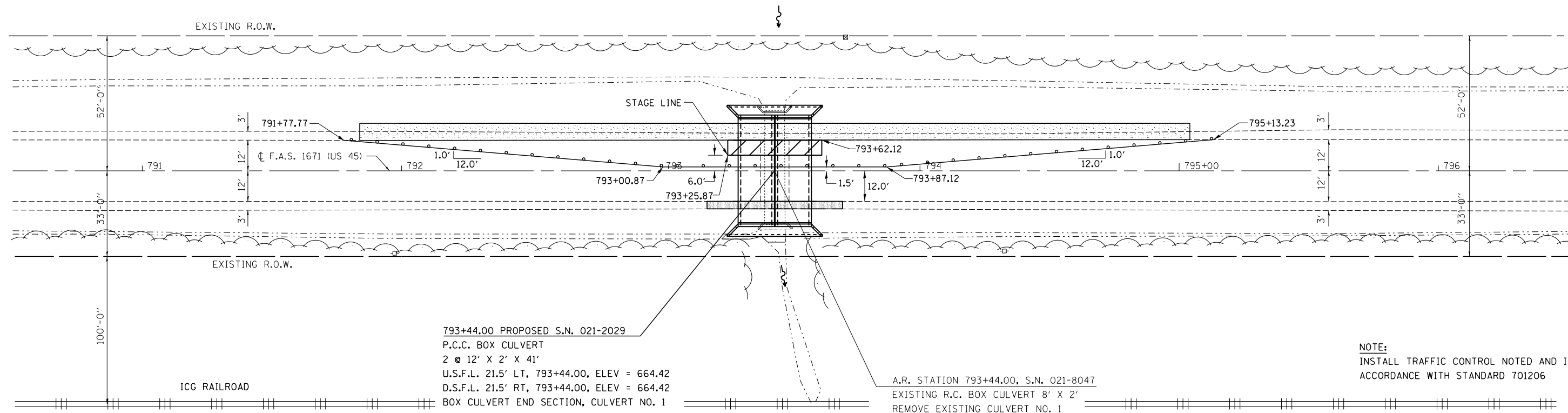


NOTE:
 INSTALL TRAFFIC CONTROL NOTED AND IN ACCORDANCE WITH STANDARD 701206

 CLASS C PATCHES, TYPE IV, 8 INCH
 AGG WEDGE SHOULDERS, TYPE B
 AGGREGATE BASE COURSE, TYPE B 8"

TYPICAL CULVERT STAGE II PLAN

SEC 24 T14N R8E 3PM



NOTE:
 INSTALL TRAFFIC CONTROL NOTED AND IN ACCORDANCE WITH STANDARD 701206




| | | | |
|--|-----------------------------|-----------------|-----------|
| FILE NAME = | USER NAME = gorees | DESIGNED - RTC | REVISED - |
| ci:\pw\work\p\dot\gorees\d0159406\0570694-shit-staging.dgn | | DRAWN - RTC | REVISED - |
| \$MODELNAME\$ | PLOT SCALE = 40.0000' / in. | CHECKED - ASG | REVISED - |
| | PLOT DATE = 10/16/2014 | DATE - 10/10/14 | REVISED - |

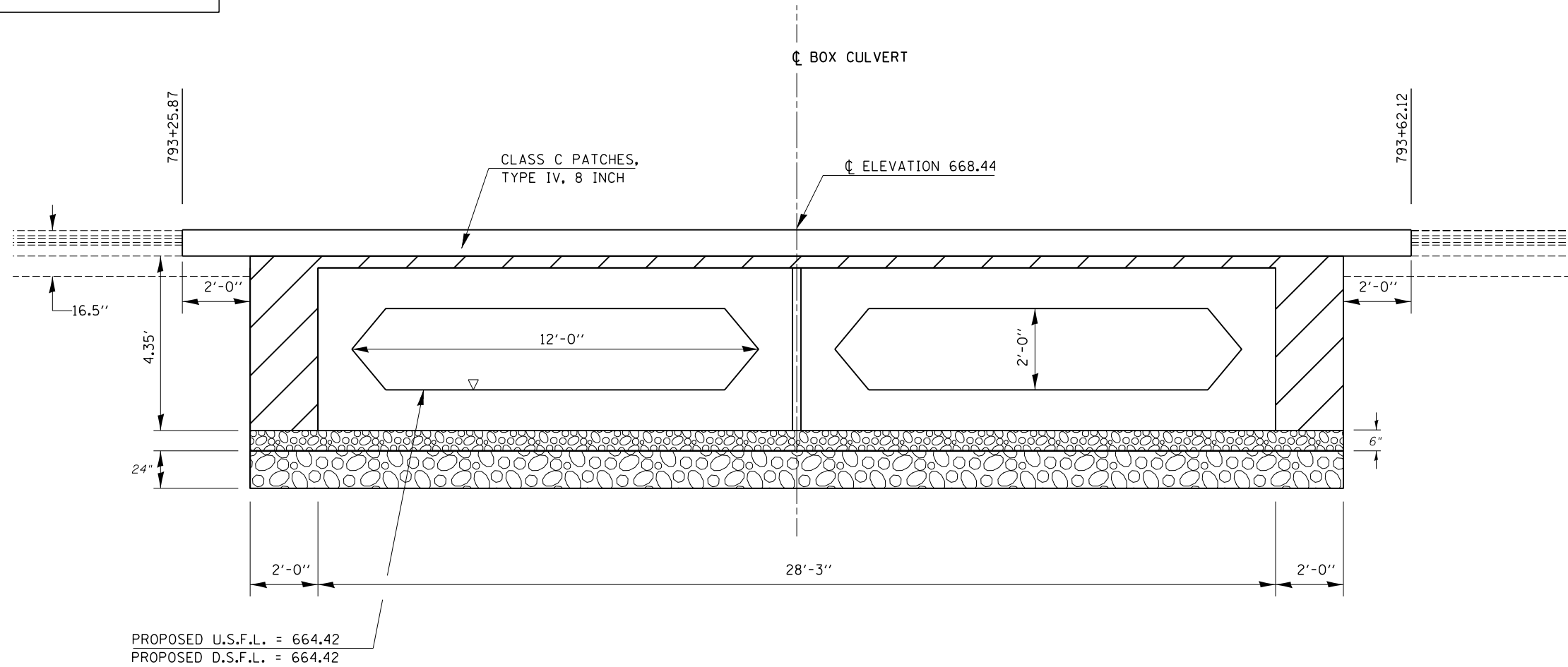
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL STAGING PLAN
CULVERT NO. 1

SCALE: NONE SHEET 5 OF 8 SHEETS STA. 790+50.00 TO STA. 796+50.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 1671 | 21CR | DOUGLAS | 39 | 15 |
| CONTRACT NO. 70694 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

| LEGEND | |
|---|-------------------------------------|
|  | POROUS GRANULAR EMBANKMENT |
|  | BOX CULVERT BEDDING (CA-7 OR CA-11) |
|  | STONE RIPRAP, CLASS A1 |



STONE RIPRAP, CLASS A1

STONE RIPRAP, CLASS A1 SHALL BE USED WHERE A.R. CULVERTS ARE REQUIRED TO BE UNDERCUT DUE TO UNSTABLE SOIL CONDITIONS.

WORK SHOWN IN THE DETAIL SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 281 AND SECTION 282 OF THE STANDARD SPECIFICATIONS.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQ YD FOR STONE RIPRAP, CLASS A1. FILTER FABRIC WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED WITH THE PAY ITEM FOR STONE RIPRAP, CLASS A1.

THE EXCAVATION AND REMOVAL OF UNSUITABLE MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED WITH THE PAY ITEM FOR STONE RIPRAP, CLASS A1.

POROUS GRANULAR EMBANKMENT

POROUS GRANULAR EMBANKMENT SHALL EXTEND 2 FT. BEYOND THE AGGREGATE SHOULDER

WORK SHOWN IN THE DETAIL SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 207 AND SECTION 540 OF THE STANDARD SPECIFICATIONS.

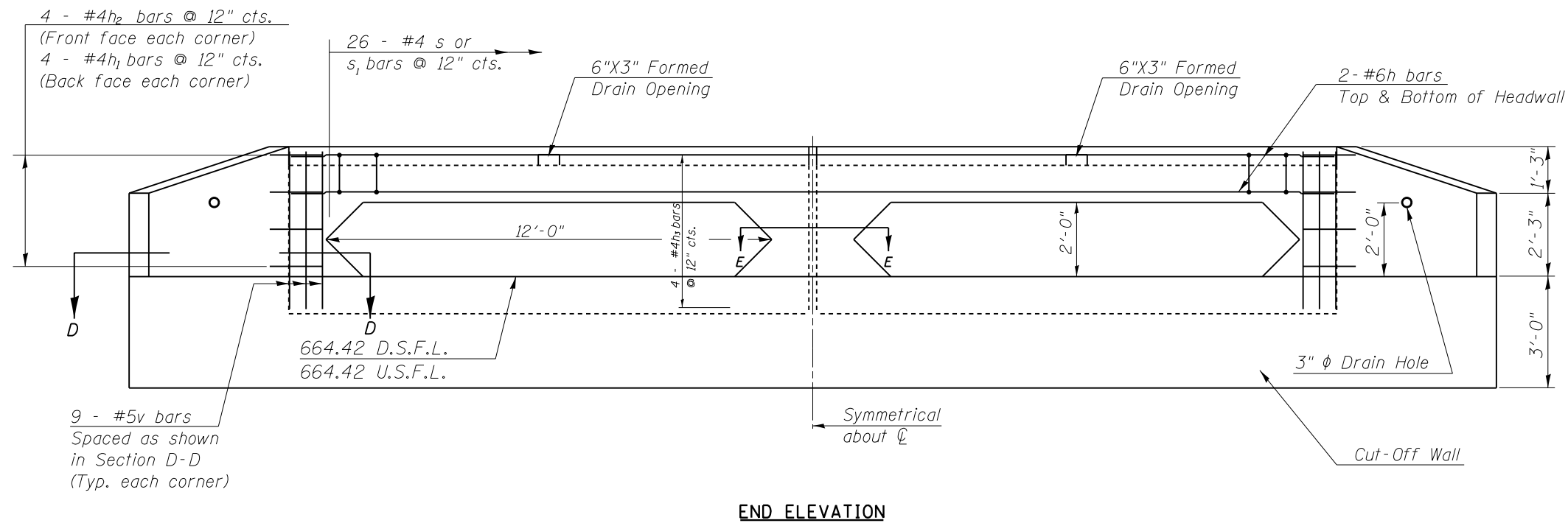
BILL OF MATERIAL

| Item | Unit | Total |
|----------------------------|--------|-------|
| Porous Granular Embankment | Cu.Yd. | 36.0 |
| Stone Riprap, Class A1 | Sq.Yd. | 212.0 |

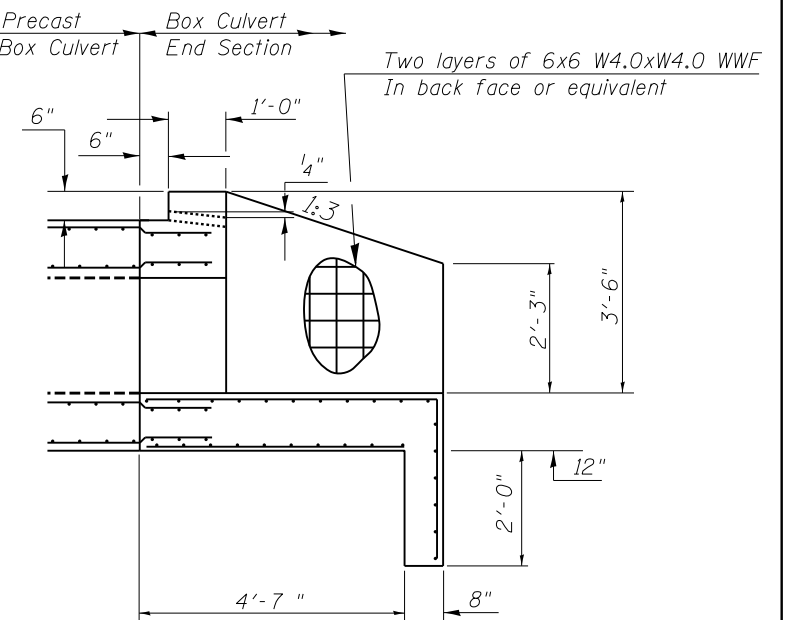
DRAWING NOT TO SCALE.

**POROUS GRANULAR EMBANKMENT
DOUBLE 12'x2' PRECAST BOX CULVERT
F.A.S. ROUTE 1671 - SECTION 21CR
DOUGLAS COUNTY
STATION 793+44.00, S.N. 021-2029
CULVERT NO. 1**

| | | | | | | | | | | | | | |
|---|--------------------|----------------|-----------|---|---|--|--|-------------------------|---------|--------------|--------------|--------------------|--|
| FILE NAME = | USER NAME = gorees | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | DETAIL OF POROUS GRANULAR EMBANKMENT | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| ct:\pw\work\p\dot\gorees\0159406\0570694-shit-Details.dgn | | DRAWN - JMS | REVISED - | | | | | 1671 | 21CR | DOUGLAS | 39 | 16 | |
| | | CHECKED - | REVISED - | | SCALE: NONE | | | SHEET NO. 6 OF 8 SHEETS | | STA. TO STA. | | CONTRACT NO. 70694 | |
| | | DATE - 032310 | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | | |



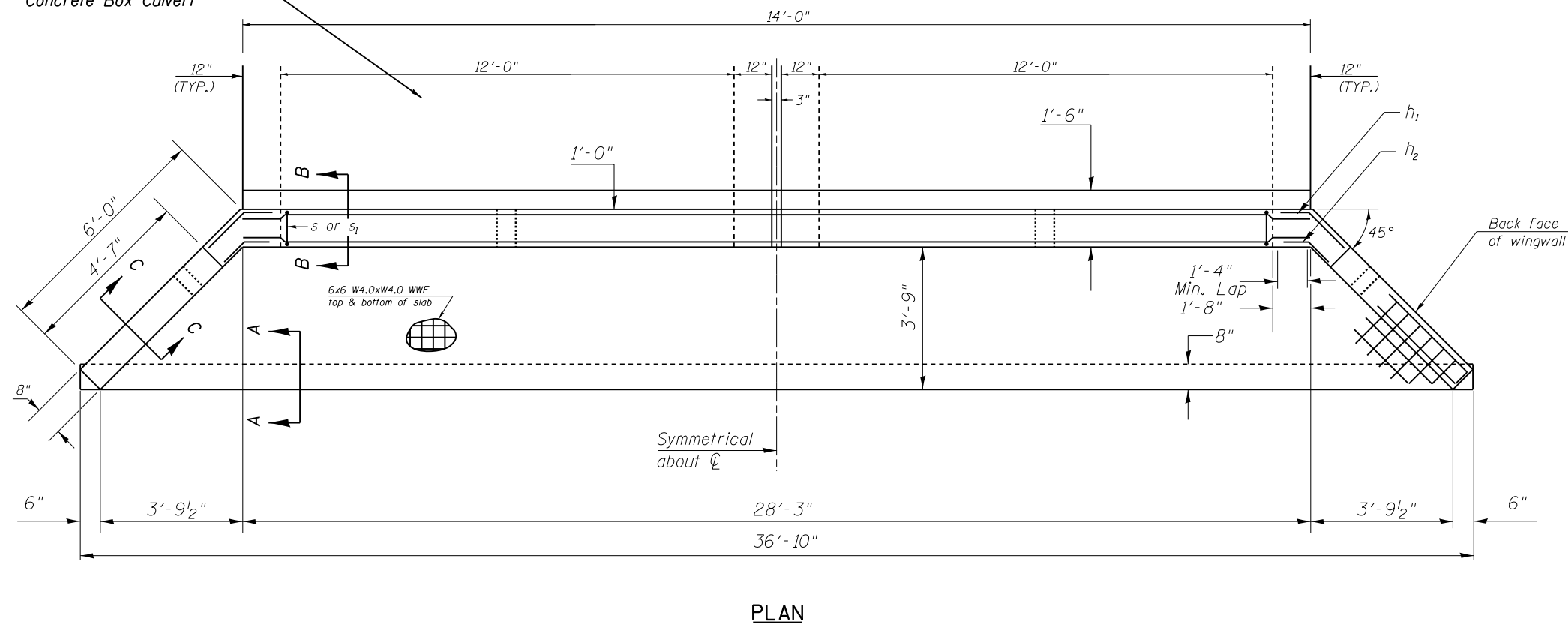
END ELEVATION



HALFSIDE ELEVATION

(DIMENSIONS AT RIGHT ANGLES TO CL ROADWAY)

DBL. 12'-0" x 2'-0" Precast Concrete Box Culvert



PLAN

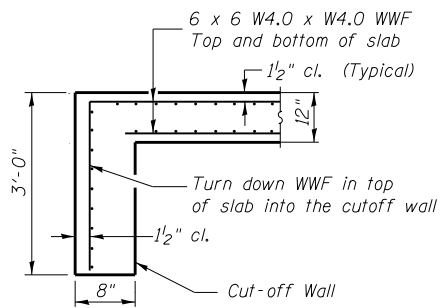
BILL OF MATERIAL

For Information Only
(One End Section)

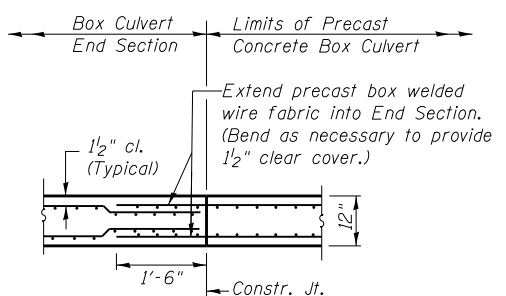
| Bar | No. | Size | Length | Shape |
|---------------------|-----|---------|--------|-------|
| h | 4 | #6 | 28'-0" | — |
| h ₁ | 4 | #4 | 2'-10" | — |
| h ₂ | 4 | #4 | 2'-6" | — |
| h ₃ | 4 | #4 | 3'-4" | — |
| s or s ₁ | 26 | #4 | 3'-4" | — |
| v | 18 | #5 | 4'-3" | — |
| Item | | Unit | Total | |
| Class SI Concrete | | Cu. Yd. | 13.0 | |
| Reinforcement Bars | | Pound | 329.0 | |
| Welded Wire Fabric | | Sq. Ft. | 472.0 | |

END SECTION DETAILS
DOUBLE 12'x2' PRECAST BOX CULVERT
F.A.S. ROUTE 1671 - SECTION 21CR
DOUGLAS COUNTY
STATION 793+44.00, S.N. 021-2029
CULVERT NO. 1

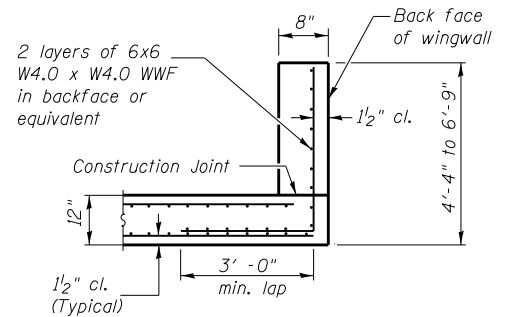
| | | | | | | | | | | |
|---|-----------------------------|----------------|-----------|---|---|---------------------------|---------|---------|--------------|-----------|
| FILE NAME = | USER NAME = gorees | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | BOX CULVERT END SECTION DETAILS PROPOSED CULVERT NO. 1 | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ct:\pw\work\p\idot\gorees\d0159406\0570694-sh-t-Details.dgn | PLOT SCALE = 40.0000' / in. | DRAWN - JMS | REVISED - | | | 1671 | 21CR | DOUGLAS | 39 | 17 |
| PLOT DATE = 10/16/2014 | DATE - 032310 | CHECKED - | REVISED - | | | CONTRACT NO. 70694 | | | | |
| | | DATE - 032310 | REVISED - | | | ILLINOIS FED. AID PROJECT | | | | |



SECTION A-A
DOWNSTREAM END

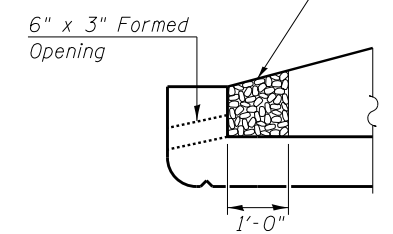


SECTION B-B
BOTTOM SLAB

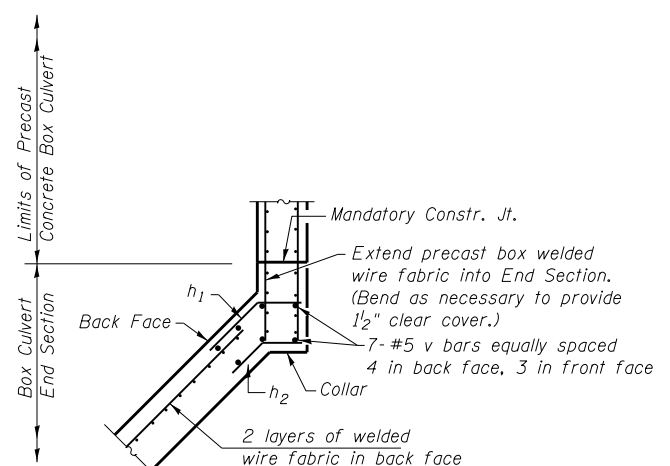


SECTION C-C
WINGWALLS

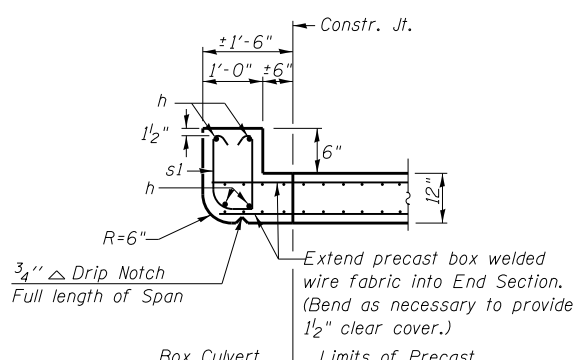
Coarse aggregate full length of both headwalls. To be placed by Grading Contractor. Cost included with Box Culvert End Sections.



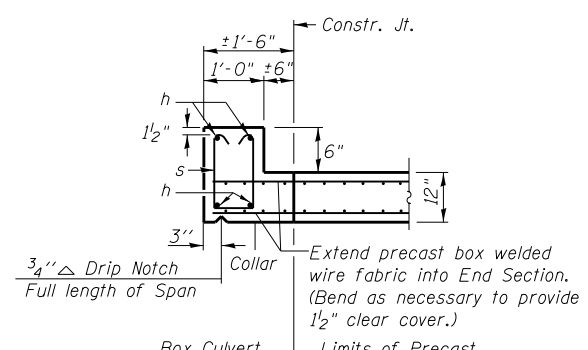
DRAIN DETAIL



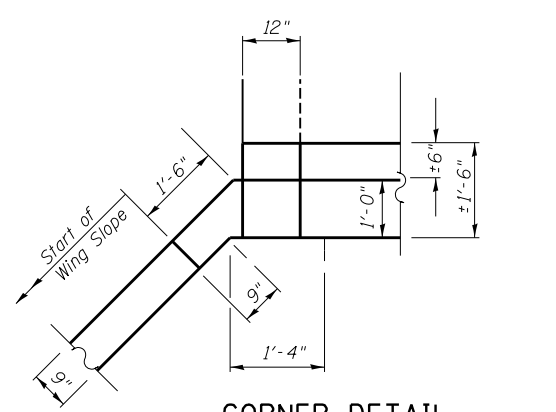
SECTION D-D



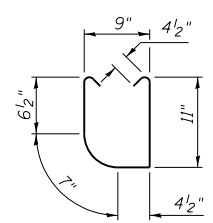
SECTION E-E
TOP SLAB / HEADWALL UPSTREAM END



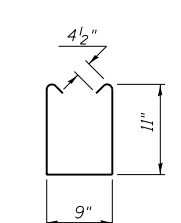
SECTION E-E
TOP SLAB / HEADWALL DOWNSTREAM END



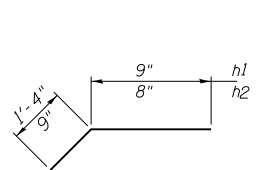
CORNER DETAIL
(Showing dimensions and weep hole)



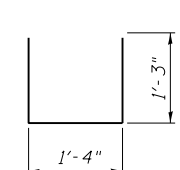
s1 BARS
UPSTREAM END



s BARS
DOWNSTREAM END



h1 & h2 BARS



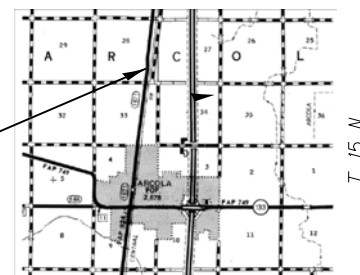
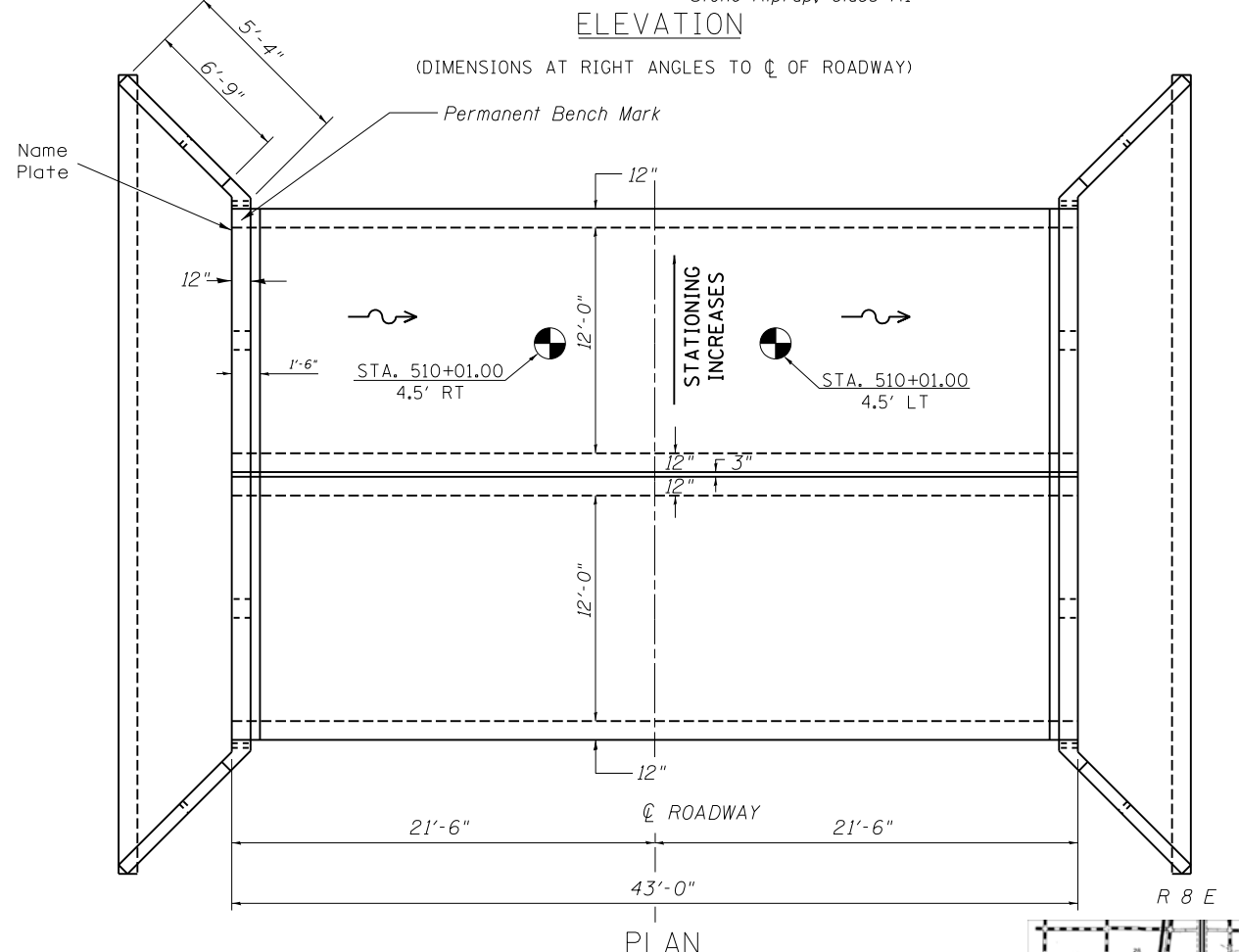
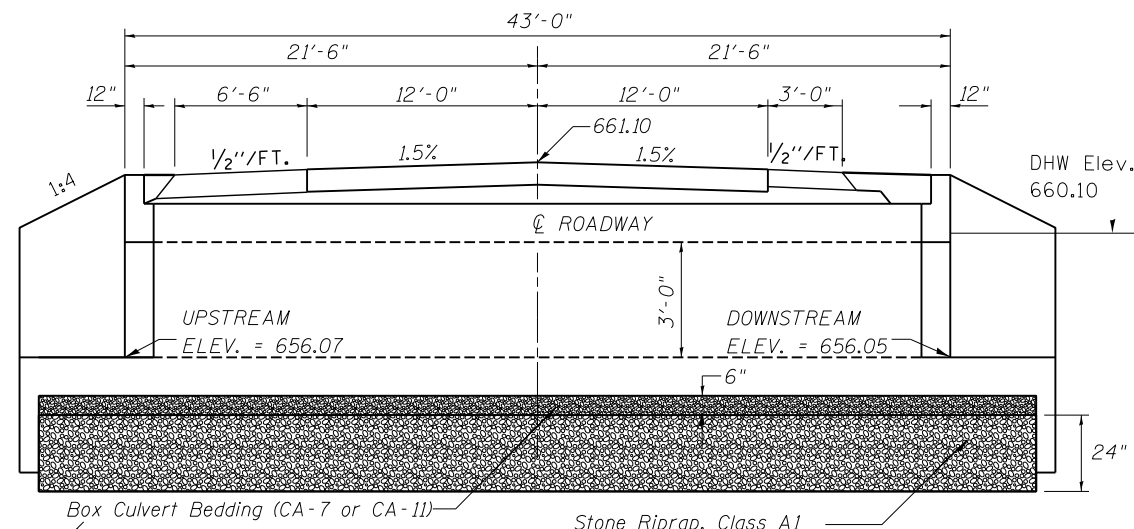
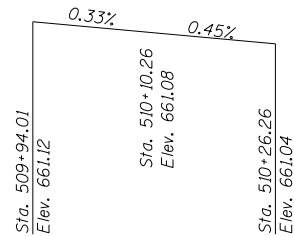
h3 BARS
DOWNSTREAM END

END SECTION DETAILS
DOUBLE 12'x2' PRECAST BOX CULVERT
F.A.S. ROUTE 1671 - SECTION 21CR
DOUGLAS COUNTY
STATION 793+44.00, S.N. 021-2029
CULVERT NO. 1

| | | | | | | | | | | | | |
|--|--------------------|----------------|---------------------------|---|---|------|---------|-------------|---------|--------|--------------|-----------|
| FILE NAME = | USER NAME = gorees | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | BOX CULVERT END SECTION DETAILS PROPOSED CULVERT NO. 1 | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ct:\pwwork\pwwork\gorees\d0159406\0570684-sh-t-Details.dgn | DRAWN - JMS | REVISED - | 1671 | | | | | 21CR | DOUGLAS | 39 | 18 | |
| PLOT SCALE = 40.0000' / in. | CHECKED - | REVISED - | CONTRACT NO. 70694 | | | | | | | | | |
| PLOT DATE = 10/16/2014 | DATE - 032310 | REVISED - | ILLINOIS FED. AID PROJECT | | | | | | | | | |
| | | | | SCALE: NONE | SHEET NO. 8 OF 8 SHEETS | STA. | TO STA. | | | | | |

EXISTING STRUCTURE: S.N. 021-8046 was constructed in 1923 at STA. 842+80 as an 10'x3'x32' cast-in-place box culvert with concrete headwalls as S.B.I. 25, Sec. 21 in Douglas County. In 1954 the box was extended to 43'-4" under Section (19,20,21,22X)W & 22W-1. In 2010 reinforced concrete patches were placed over the structure.

The existing structure is to be completely removed and replaced. There will be no salvage of any materials. Stage Construction will be utilized. BENCHMARK ELEV. = 660.28 Chiseled square on top of center of south headwall of S.N. 021-8046 at STA. 509+99.62, 22.41' LT.



Design Scour Elevation Table

| | | |
|------------------------------|----------|------------|
| Design Scour Elevation (ft.) | Upstream | Downstream |
| | 653.07 | 653.05 |

General Notes

- Build tops of headwalls parallel to the grade lines.
- All construction joints shall be bonded according to Article 503.09 of the Standard Specifications.
- Reinforcement bars shall conform to the requirements of ASTM A706 Gr. (IL Modified). See Special Provisions.
- All bars should be rounded and conform to the requirements of Article 1006.10 of the Standard Specification.
- The 6" Porous Granular Material required per Art. 540.06 of the Standard Specifications shall also extend beneath the Box Culvert End Sections and shall be considered included in the cost of Precast Concrete Box Culverts and Box Culvert End Sections.
- When lapping sheets of welded wire fabric, the overlap measured between the outermost cross wires of each fabric sheet shall not be less than 8"
- End Sections will be paid for at the contract unit price per each for BOX CULVERT END SECTIONS, as outlined in Section 540 of the Standard Specifications.
- Class SI Concrete shall be used throughout.
- Concrete, Rebar, and Welded Wire Fabric quantities and lengths calculated for the cast-in-place End Sections may vary based on the precast box culverts supplied.
- Drain holes shall be provided in accordance with Article 503.11 of the Standard Specifications.
- The precast manufacturer shall design and detail a connection/construction joint between the precast concrete box sections and the cast-in-place apron and wingwall. The minimum area of reinforcement passing through these construction joints shall be 0.20 sq. in./lineal ft. of welded wire fabric. The design shall be detailed in the shop drawings. The cost of the connection is included in the cost of the end section.
- The box culvert end section shall be built in the field and a precast option is not allowed except the cut-off wall may be precast. If the contractor elects to use precast construction methods, shop drawings and a proposed construction sequence shall be submitted to the Engineer for approval. See Special Provisions.
- The design fill height for this box is greater than 2 feet. The Precast Concrete Box Culvert Sections shall conform to the requirements of ASTM C1577.
- 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.
- All dimensions are in FEET (') - INCHES (") unless otherwise noted.
- Drawings not to scale.

STATION 510+10.26
BUILT 2015 BY
STATE OF ILLINOIS
F.A.P. RT. 1671 SEC. 21CR
LOADING HS 20
STRUCTURE NO. 021-2028

NAME PLATE
See Std. 515001

- INDEX OF SHEETS**
- Plan & Profile
 - As Built Plan
 - Porous Granular Embankment Detail
 - General Plan and Elevation
 - Box Culvert End Section Details

DESIGN SPECIFICATIONS
2002 AASHTO

LOADING HS20-44
Allow 50#/sq.ft. for future wearing surface

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 65,000 psi (welded wire fabric)

PRECAST UNITS
f'c = 5,000 psi
fy = 65,000 psi (welded wire fabric)

WATERWAY INFORMATION

Drainage Area = 1.1 sq. mi. Low Grade Elev. 660.60 @ Sta. 512+50.00

| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. | | Nat. H.W.E. | Head - Ft. | | Headwater El. | |
|-------------|-----------|----------|-----------------|-------|-------------|------------|-------|---------------|-------|
| | | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| | 10 | 302 | 30 | 72 | | | over | 659.1 | |
| Design | 50 | 500 | 30 | 72 | | | over | 660.1 | |
| Base | 100 | 590 | 30 | 72 | | | over | over | |
| Overtopping | | | | | | | | | |
| Max. Calc. | 500 | 810 | 30 | 72 | | | over | over | |

Note: Information provided using the Regression Method.

| | | | |
|--|-----------------------------|----------------|-----------|
| FILE NAME = | USER NAME = gorees | DESIGNED - JMS | REVISED - |
| ca:\pwwork\p1dot\gorees\0159406\0570694-shd-Detail.dgn | | DRAWN - JMS | REVISED - |
| | PLOT SCALE = 40.0000' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 11/21/2014 | DATE - 032310 | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BOX CULVERT END SECTION DETAILS
PROPOSED CULVERT NO. 2

SCALE: NONE SHEET NO. 2 OF 8 SHEETS STA. TO STA.

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--|---------|---------|--------------|-----------|
| 1671 | 21CR | DOUGLAS | 39 | 20 |
| ILLINOIS FED. AID PROJECT CONTRACT NO. 70694 | | | | |

TOTAL BILL OF MATERIAL

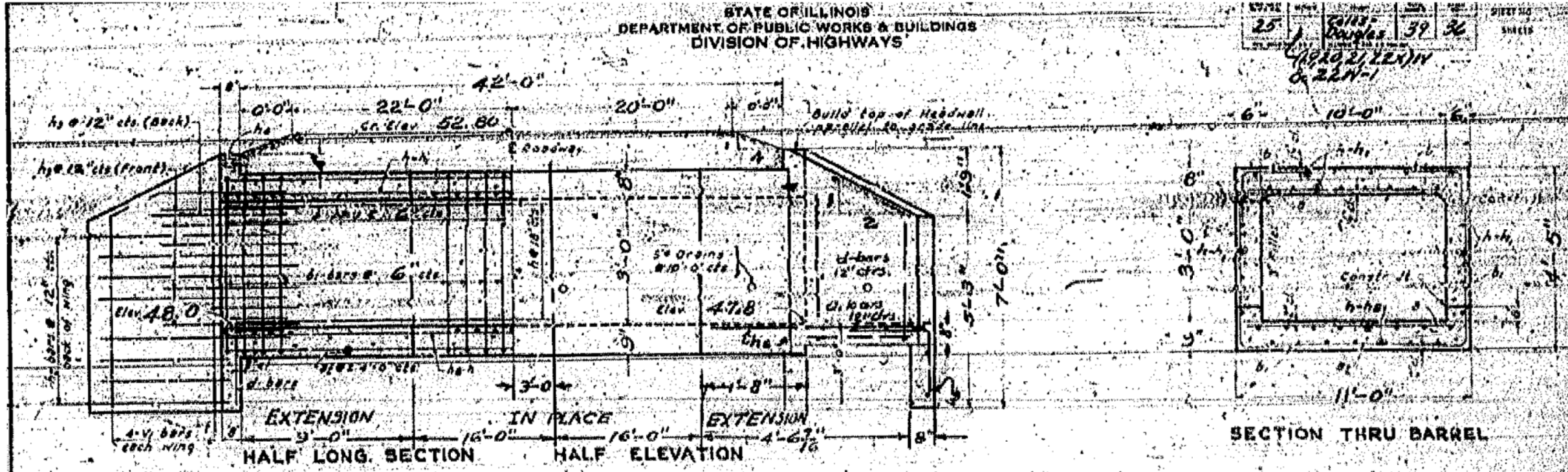
| Item | Unit | Total |
|--|--------|-------|
| Removal of Existing Structures No. 2 | Each | 1.0 |
| Precast Concrete Box Culvert 12'x3' | Foot | 80.0 |
| Box Culvert End Section, Culvert No. 1 | Each | 2.0 |
| Name Plates | Each | 1.0 |
| Permanent Bench Marks | Each | 1.0 |
| Porous Granular Embankment | Cu.Yd. | 89.0 |
| Stone Riprap, Class A1 | Sq.Yd. | 214.0 |

**GENERAL PLAN AND ELEVATION
DOUBLE 12'x3' PRECAST BOX CULVERT
F.A.S. ROUTE 1671 - SECTION 21CR
DOUGLAS COUNTY
STATION 510+10.26 S.N. 021-2028
CULVERT NO. 2**

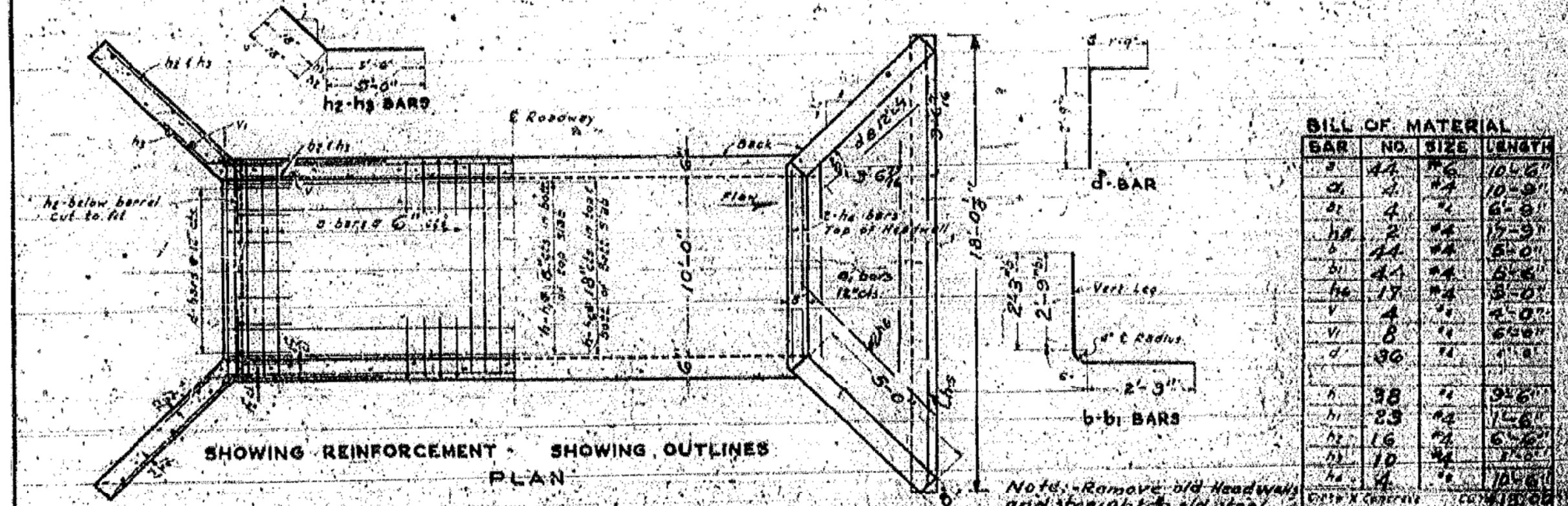
AS BUILTS - FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

25
39
36
SHEET NO.
SHEET



SECTION THRU BARREL



SHOWING REINFORCEMENT SHOWING OUTLINES
PLAN

BILL OF MATERIAL

| BAR | NO. | SIZE | LENGTH |
|-----|-----|------|--------|
| a | 44 | #6 | 10'-6" |
| a1 | 4 | #4 | 10'-9" |
| a2 | 4 | #4 | 6'-8" |
| h3 | 2 | #4 | 17'-9" |
| b | 44 | #4 | 5'-0" |
| b1 | 44 | #4 | 6'-6" |
| h2 | 17 | #4 | 5'-0" |
| v | 4 | #4 | 2'-0" |
| v1 | 8 | #4 | 6'-0" |
| d | 36 | #4 | 1'-8" |
| h | 38 | #4 | 3'-6" |
| h1 | 23 | #4 | 1'-6" |
| h2 | 16 | #4 | 6'-6" |
| h3 | 10 | #4 | 7'-0" |
| h4 | 4 | #4 | 10'-6" |

Notes: Remove old Headwall and straighten old steel tie new steel on to old steel.

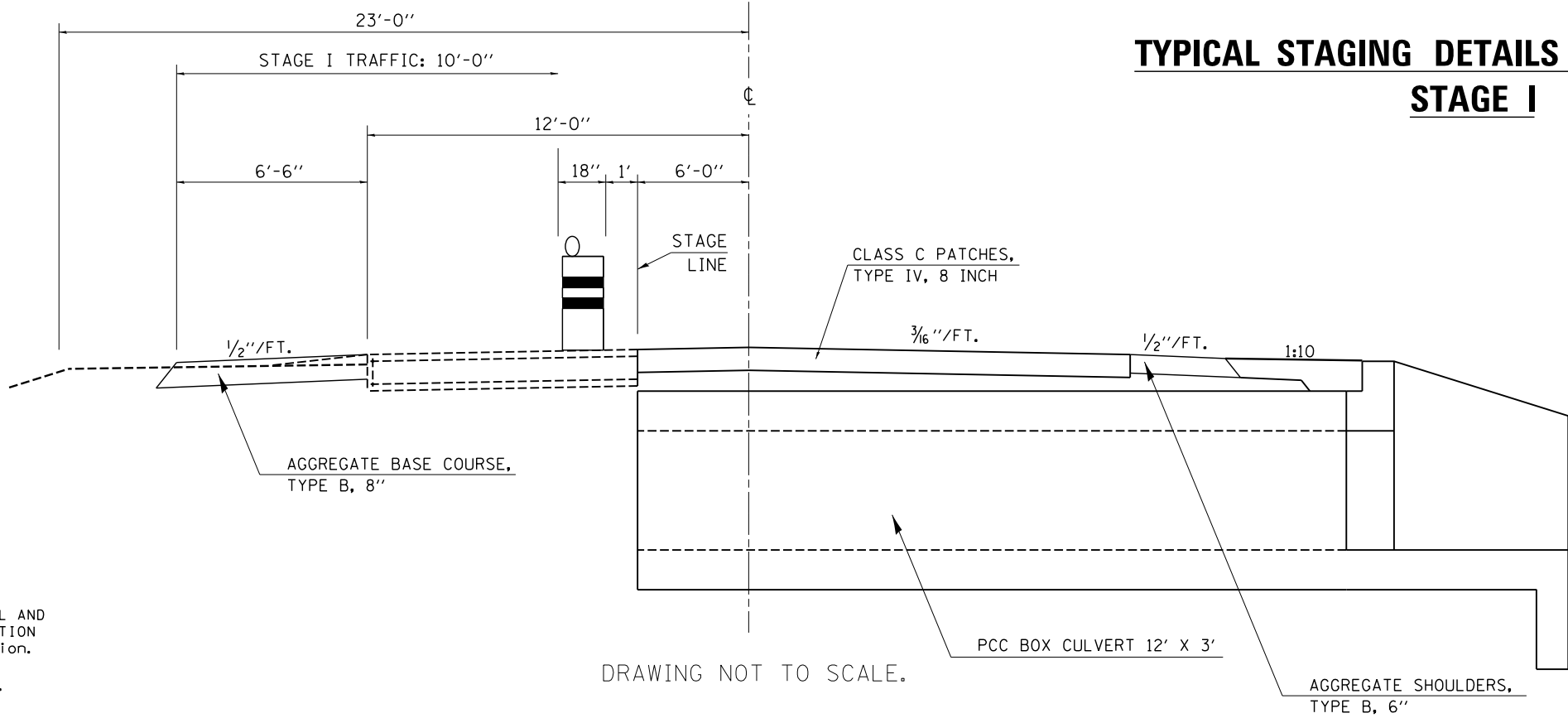
GENERAL NOTES

Class X concrete shall be used throughout. Culvert walls and slab may be poured monolithically. Exposed edges shall be beveled. The wing walls shall be poured monolithically with barrel for a distance of six feet along the barrel.

SPECIAL CONCRETE EXTENSION
S.B.T. RT. 26 SEC. 21 W.
COLS. DRIVE

DESIGNED - JMS
 DRAWN - JMS
 CHECKED -
 DATE - 032310
 W. E. Thompson
 0-21-8046-33

TYPICAL STAGING DETAILS CULVERT NO. 2
STAGE I

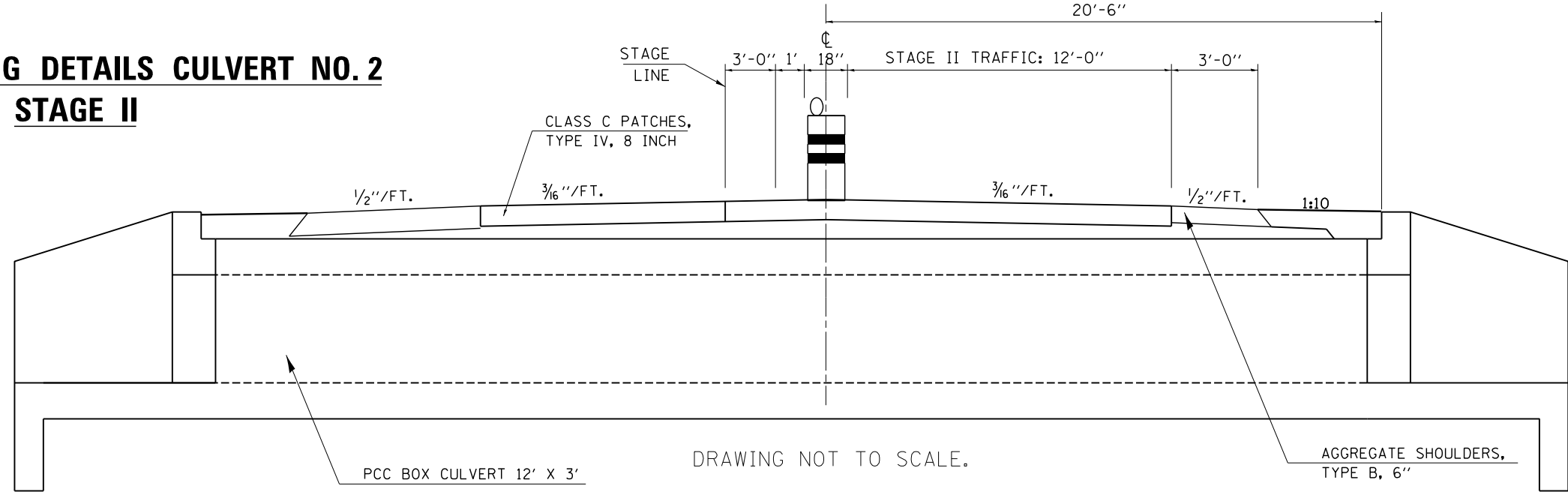


DRAWING NOT TO SCALE.

NOTES

1. Refer to Special Provisions for TRAFFIC CONTROL AND PROTECTION, STANDARD 701206 and STAGE CONSTRUCTION ACROSS ROAD STRUCTURES for additional information.
2. Construct downstream end of A.R. culvert first.
3. CMS boards shall be placed 3 days in advance prior to work.

TYPICAL STAGING DETAILS CULVERT NO. 2
STAGE II



DRAWING NOT TO SCALE.

| A. R. CULVERT LOCATION | TRAFFIC CONTROL STANDARD | ESTIMATED TIME | CHANGEABLE MESSAGE SIGNS |
|------------------------|--------------------------|---|--|
| STA. 793+44.00 | 701206 | 2 Days - 48 hrs. - Non-Stop (2) - 12 hr. Day Shifts (2) - 12 hr. Night Shifts | 2 EACH AT 5.0 CAL DAY = 10.0 CAL DAY |

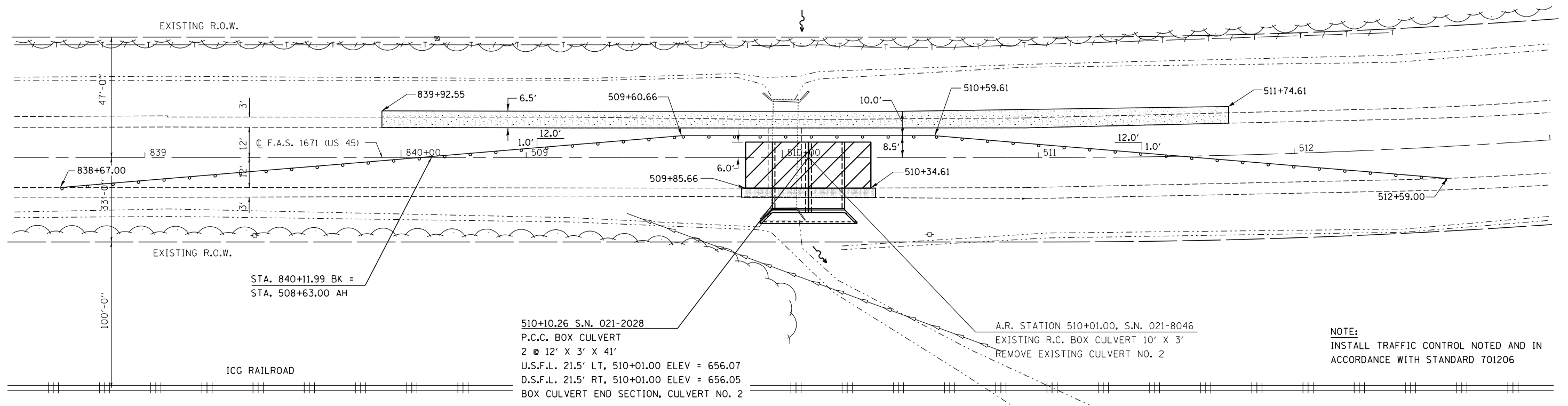
TYPICAL STAGING DETAIL
DOUBLE 12'x3' PRECAST BOX CULVERT
F.A.S. ROUTE 1671 - SECTION 21CR
DOUGLAS COUNTY
STATION 510+10.26, S.N. 021-2028
CULVERT NO. 2

TYPICAL CULVERT STAGE I PLAN

SEC 24 T15N R8E 3PM



- CLASS C PATCHES, TYPE IV, 8 INCH
- AGG WEDGE SHOULDERS, TYPE B
- AGGREGATE BASE COURSE, TYPE B 8"



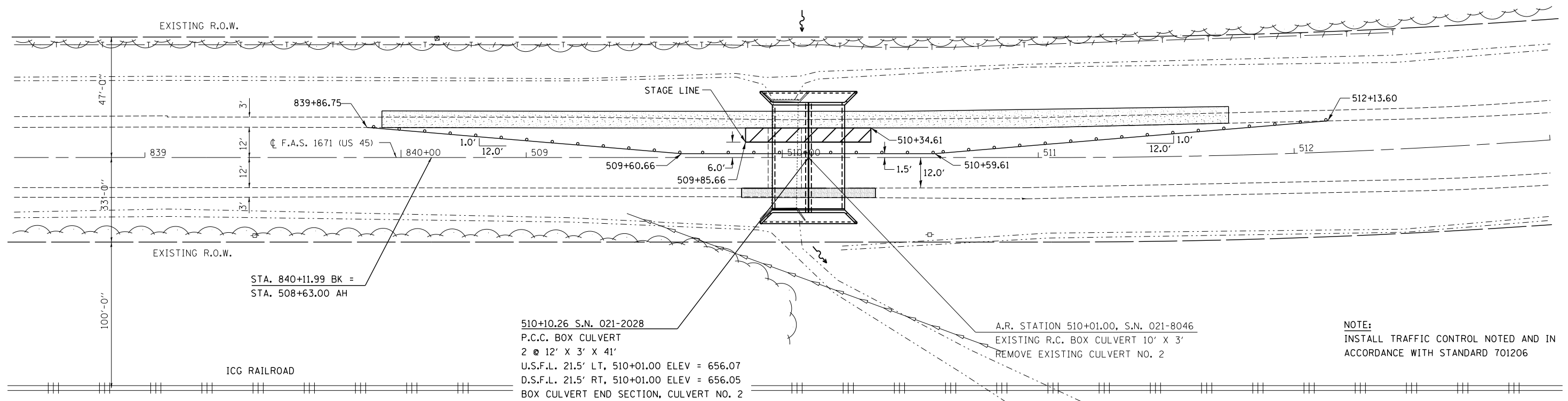
NOTE:
INSTALL TRAFFIC CONTROL NOTED AND IN ACCORDANCE WITH STANDARD 701206

TYPICAL CULVERT STAGE II PLAN

SEC 24 T15N R8E 3PM



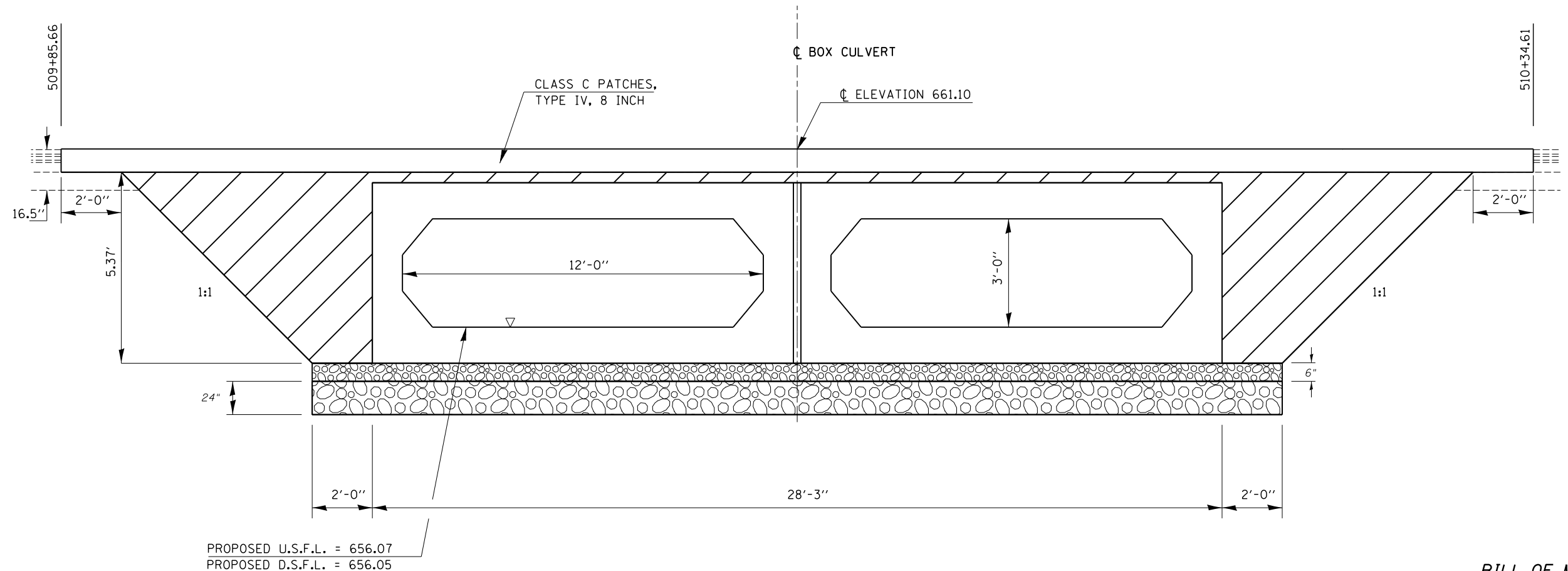
- CLASS C PATCHES, TYPE IV, 8 INCH
- AGG WEDGE SHOULDERS, TYPE B
- AGGREGATE BASE COURSE, TYPE B 8"



NOTE:
INSTALL TRAFFIC CONTROL NOTED AND IN ACCORDANCE WITH STANDARD 701206

| | | | | | | | | | | | | |
|--|--------------------|-----------------|-----------|---|---|---------|-------------|----------------|-------------------|--------|--------------|-----------|
| FILE NAME = | USER NAME = gorees | DESIGNED - RTC | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TYPICAL STAGING PLAN CULVERT NO. 2 | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ci:\pw\work\p\dot\gorees\d0159406\0570684-shit-staging.dgn | | DRAWN - RTC | REVISED - | | 1671 | 21CR | DOUGLAS | 39 | 23 | | | |
| PLOT SCALE = 40.0000' / in. | | CHECKED - ASG | REVISED - | | CONTRACT NO. 70694 | | | | | | | |
| \$MODELNAME\$ | | DATE - 10/10/14 | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | |
| | | | | | SCALE: NONE | SHEET 5 | OF 8 SHEETS | STA. 838+50.00 | TO STA. 513+00.00 | | | |

| LEGEND | |
|--------|-------------------------------------|
| | POROUS GRANULAR EMBANKMENT |
| | BOX CULVERT BEDDING (CA-7 OR CA-11) |
| | STONE RIPRAP, CLASS A1 |



STONE RIPRAP, CLASS A1

STONE RIPRAP, CLASS A1 SHALL BE USED WHERE A.R. CULVERTS ARE REQUIRED TO BE UNDERCUT DUE TO UNSTABLE SOIL CONDITIONS.

WORK SHOWN IN THE DETAIL SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 281 AND SECTION 282 OF THE STANDARD SPECIFICATIONS.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQ YD FOR STONE RIPRAP, CLASS A1. FILTER FABRIC WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED WITH THE PAY ITEM FOR STONE RIPRAP, CLASS A1.

THE EXCAVATION AND REMOVAL OF UNSUITABLE MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED WITH THE PAY ITEM FOR STONE RIPRAP, CLASS A1.

POROUS GRANULAR EMBANKMENT

POROUS GRANULAR EMBANKMENT SHALL EXTEND 2 FT. BEYOND THE AGGREGATE SHOULDER

WORK SHOWN IN THE DETAIL SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 207 AND SECTION 540 OF THE STANDARD SPECIFICATIONS.

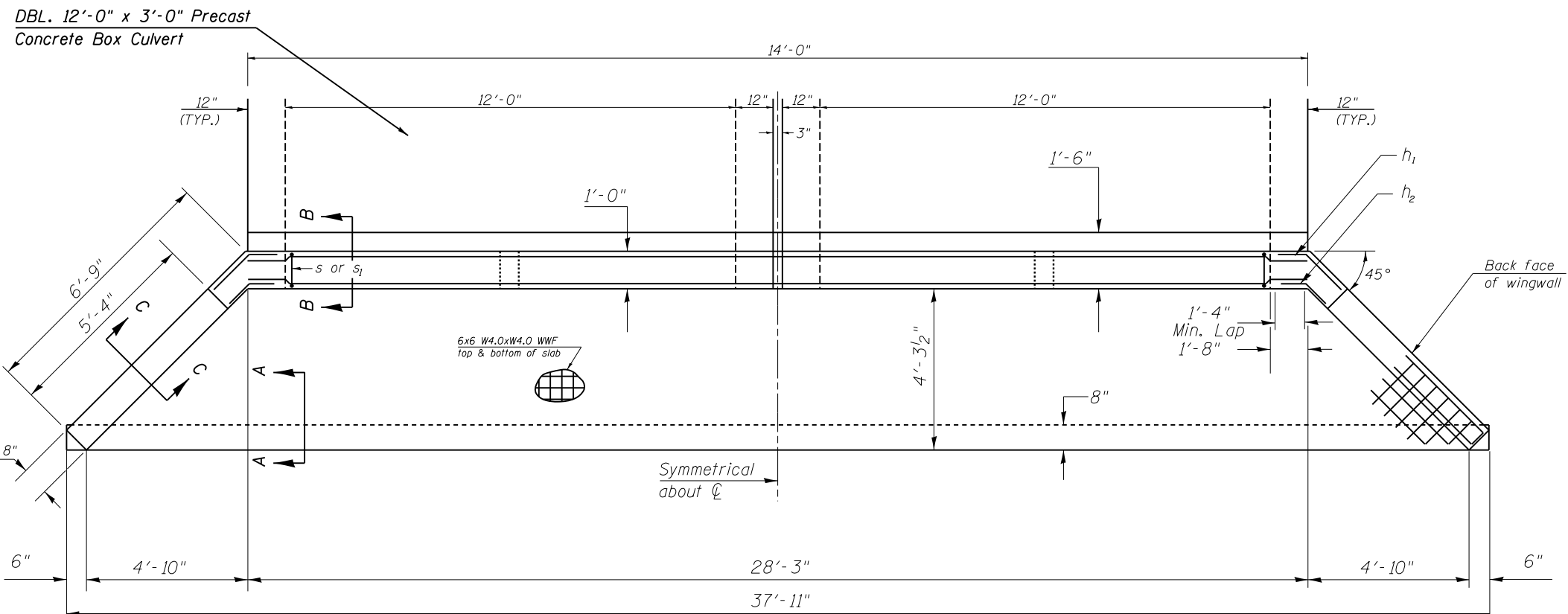
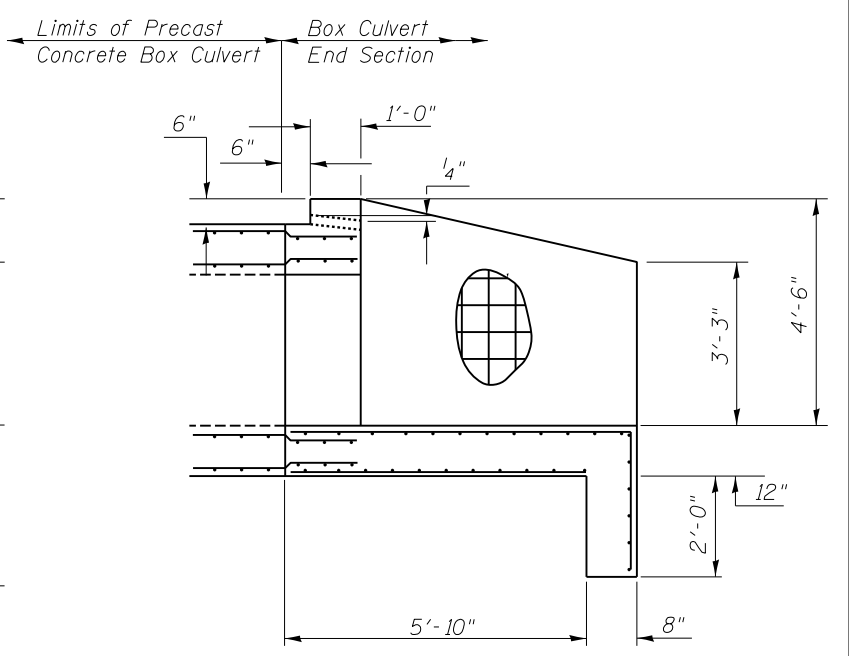
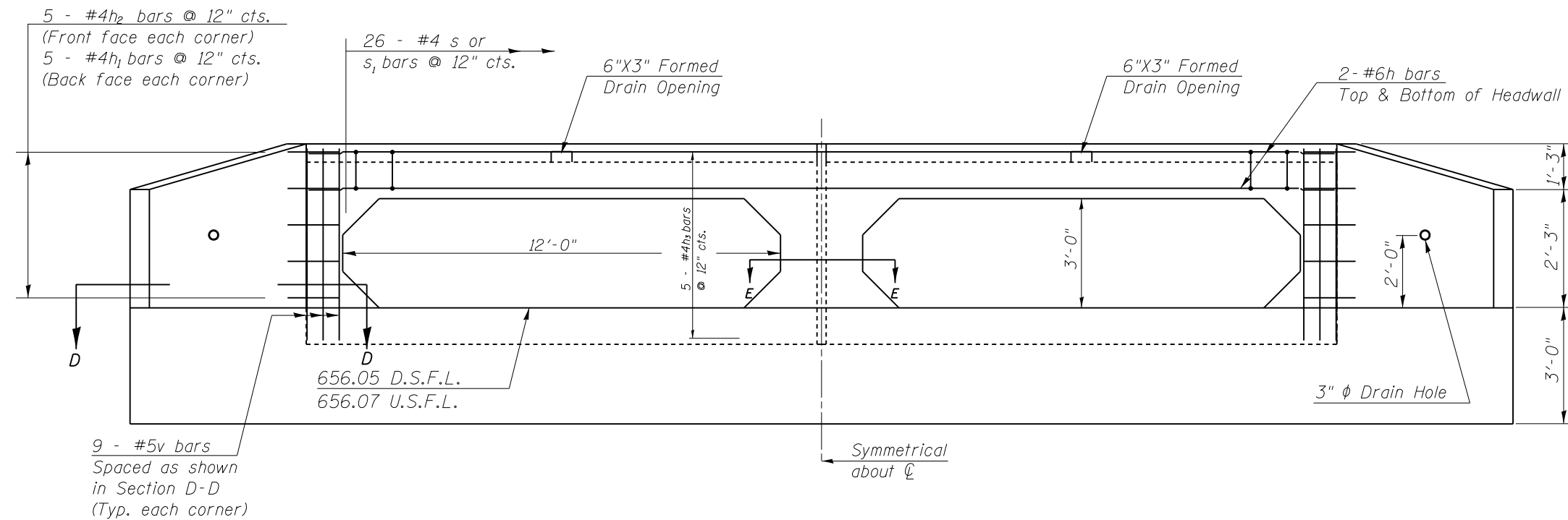
BILL OF MATERIAL

| Item | Unit | Total |
|----------------------------|--------|-------|
| Porous Granular Embankment | Cu.Yd. | 89.0 |
| Stone Riprap, Class A1 | Sq.Yd. | 214.0 |

DRAWING NOT TO SCALE.

**POROUS GRANULAR EMBANKMENT
DOUBLE 12'x3' PRECAST BOX CULVERT
F.A.S. ROUTE 1671 - SECTION 21CR
DOUGLAS COUNTY
STATION 510+10.26, S.N. 021-2028
CULVERT NO. 2**

| | | | | | | | | | | | | |
|--|--------------------|----------------|--------------------|---|---|------|---------|---------------------------|---------|--------|--------------|-----------|
| FILE NAME = | USER NAME = gorees | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | BOX CULVERT END SECTION DETAILS PROPOSED CULVERT NO. 2 | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ct:\pw\work\p\dot\gorees\d0159406\0570694-shit-Details.dgn | DRAWN - JMS | REVISED - | 1671 | | | | | 21CR | DOUGLAS | 39 | 24 | |
| PLOT SCALE = 40.0000' / in. | CHECKED - | REVISED - | CONTRACT NO. 70694 | | | | | | | | | |
| PLOT DATE = 10/16/2014 | DATE - 032310 | REVISED - | SCALE: NONE | | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA. | ILLINOIS FED. AID PROJECT | | | | |

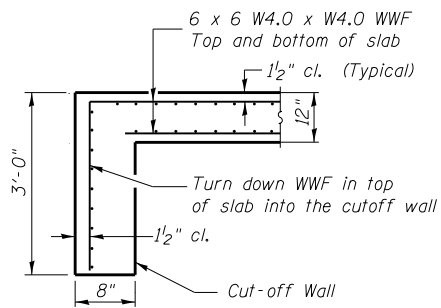


BILL OF MATERIAL

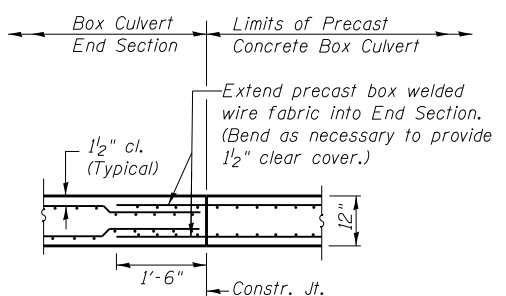
For Information Only
(One End Section)

| Bar | No. | Size | Length | Shape |
|---------------------|-----|---------|--------|-------|
| h | 4 | #6 | 28'-0" | — |
| h ₁ | 5 | #4 | 2'-10" | — |
| h ₂ | 5 | #4 | 2'-6" | — |
| h ₃ | 5 | #4 | 3'-4" | — |
| s or s ₁ | 26 | #4 | 3'-4" | — |
| v | 18 | #5 | 5'-3" | — |
| Item | | Unit | Total | |
| Class SI Concrete | | Cu. Yd. | 13.0 | |
| Reinforcement Bars | | Pound | 354.0 | |
| Welded Wire Fabric | | Sq. Ft. | 468.0 | |

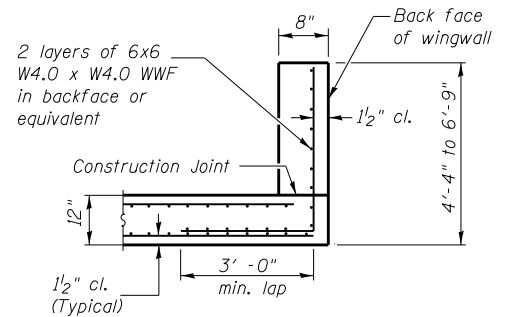
END SECTION DETAILS
DOUBLE 12'x3' PRECAST BOX CULVERT
F.A.S. ROUTE 1671 - SECTION 21CR
DOUGLAS COUNTY
STATION 510+10.26, S.N. 021-2028
CULVERT NO. 2



SECTION A-A
DOWNSTREAM END

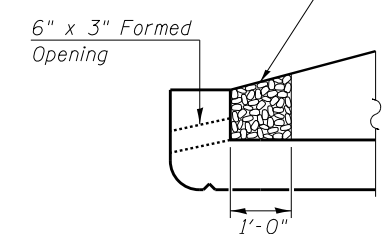


SECTION B-B
BOTTOM SLAB

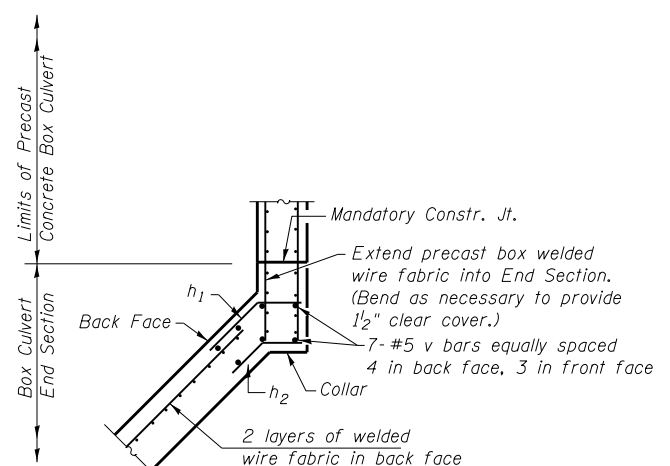


SECTION C-C
WINGWALLS

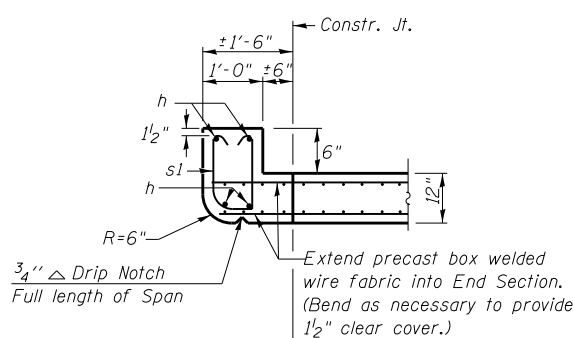
Coarse aggregate full length of both headwalls. To be placed by Grading Contractor. Cost included with Box Culvert End Sections.



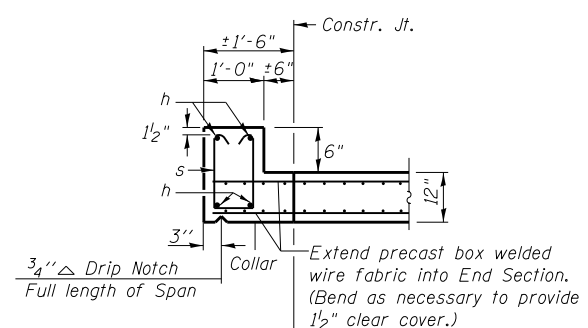
DRAIN DETAIL



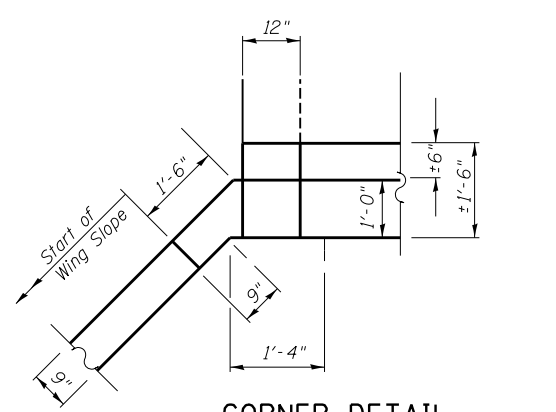
SECTION D-D



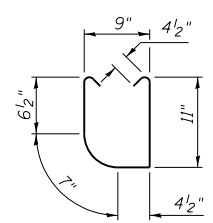
SECTION E-E
TOP SLAB / HEADWALL UPSTREAM END



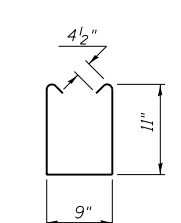
SECTION E-E
TOP SLAB / HEADWALL DOWNSTREAM END



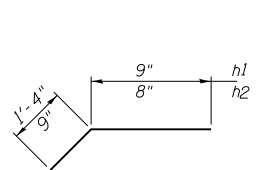
CORNER DETAIL
(Showing dimensions and weep hole)



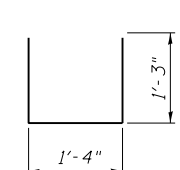
s1 BARS
UPSTREAM END



s BARS
DOWNSTREAM END



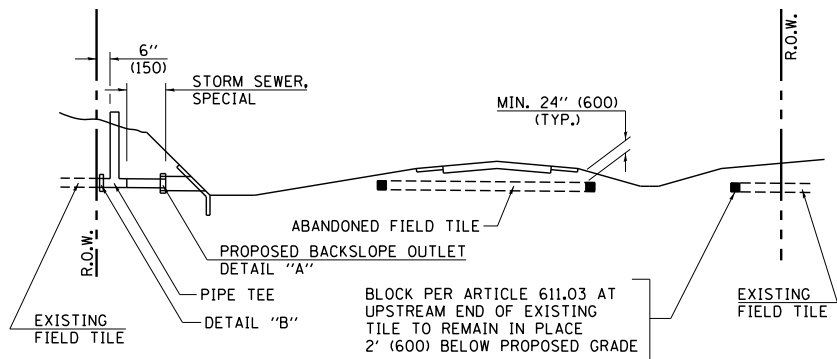
h1 & h2 BARS



h3 BARS
DOWNSTREAM END

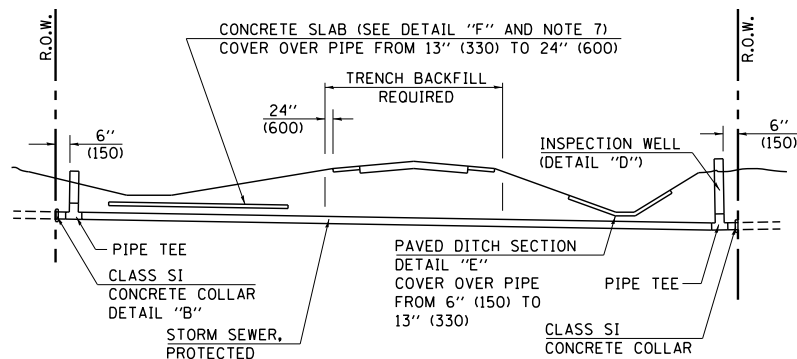
END SECTION DETAILS
DOUBLE 12'x3' PRECAST BOX CULVERT
F.A.S. ROUTE 1671 - SECTION 21CR
DOUGLAS COUNTY
STATION 510+10.26, S.N. 021-2028
CULVERT NO. 2

| | | | | | | | | | | | | |
|--|--------------------|----------------|-----------|---|---|------|---------|---------------------------|---------|---------|--------------|-----------|
| FILE NAME = | USER NAME = gorees | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | BOX CULVERT END SECTION DETAILS PROPOSED CULVERT NO. 2 | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ct:\pwwork\pwwork\gorees\d0159406\0570684-shit-Details.dgn | | DRAWN - JMS | REVISED - | | | | | 1671 | 21CR | DOUGLAS | 39 | 26 |
| PLOT SCALE = 40.0000' / in. | | CHECKED - | REVISED - | | | | | CONTRACT NO. 70694 | | | | |
| PLOT DATE = 10/16/2014 | | DATE - 032310 | REVISED - | | | | | ILLINOIS FED. AID PROJECT | | | | |
| | | | | SCALE: NONE | SHEET NO. 7 OF 7 SHEETS | STA. | TO STA. | | | | | |



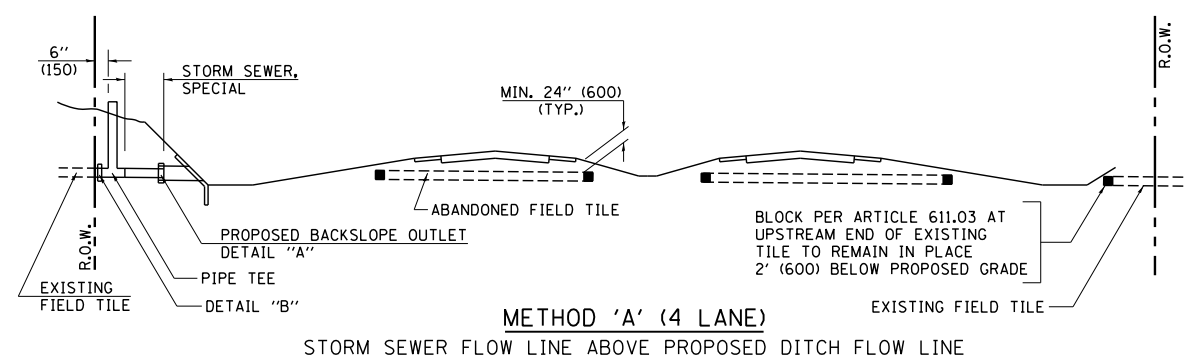
METHOD 'A' (2 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



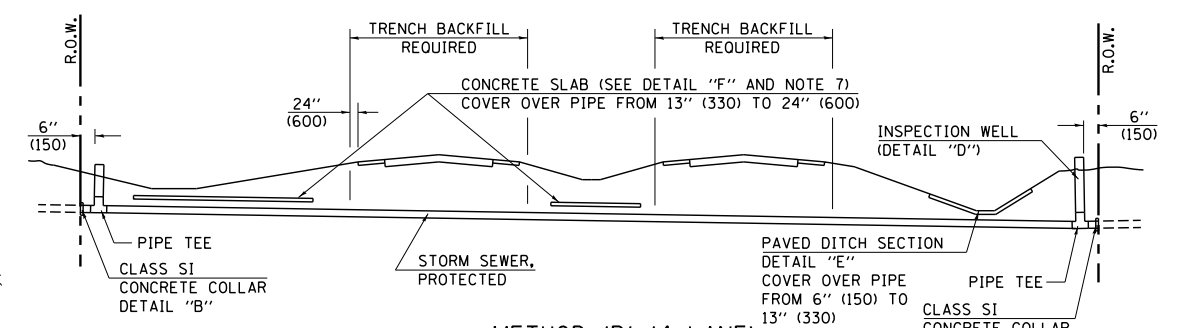
METHOD 'B' (2 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENT AND PAVED DITCH



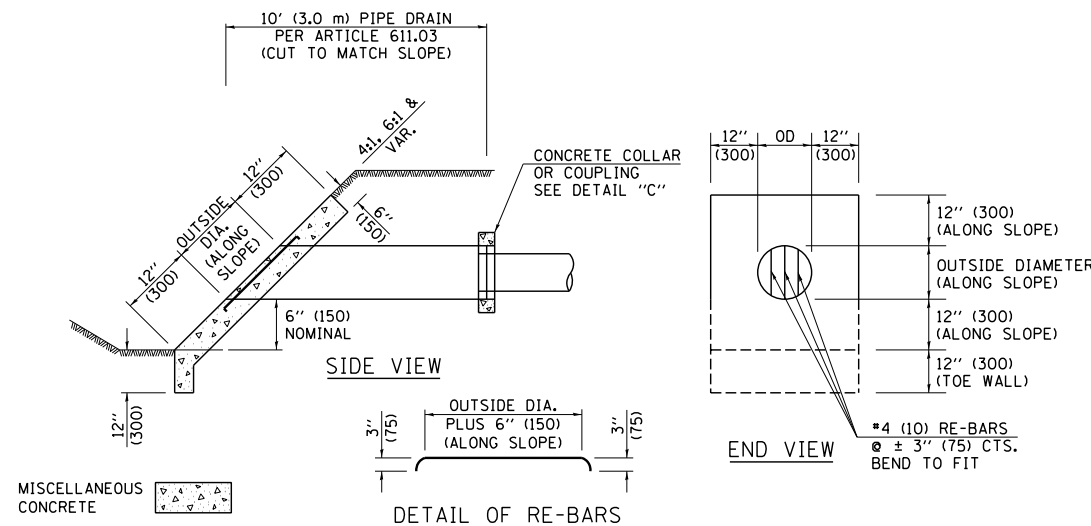
METHOD 'A' (4 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE

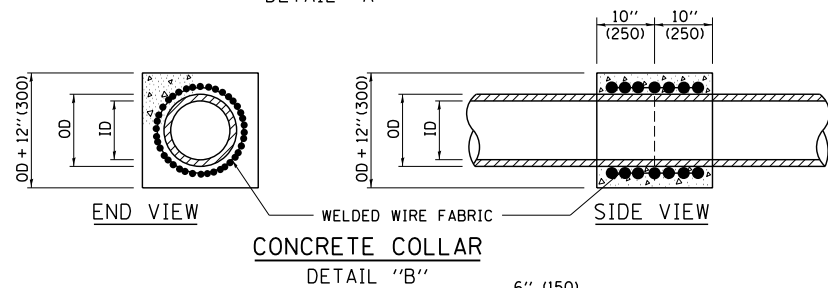


METHOD 'B' (4 LANE)

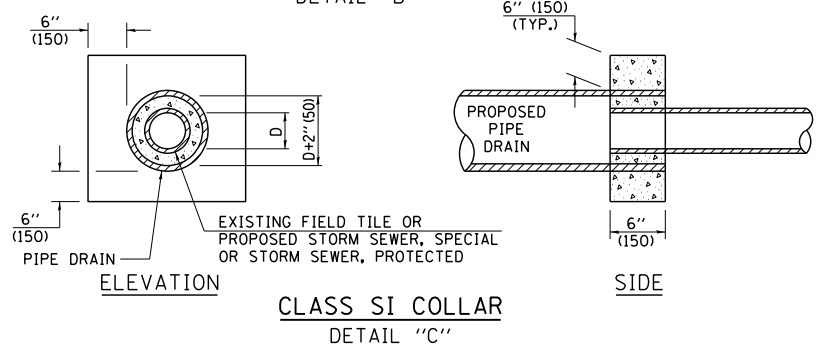
STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENTS AND PAVED DITCHES



**HEADWALL FOR BACKSLOPE OUTLET
DETAIL 'A'**



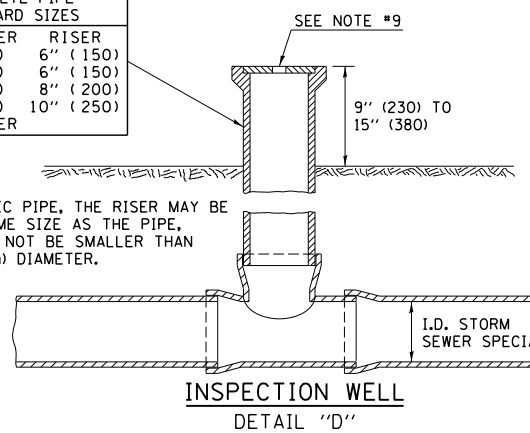
**CONCRETE COLLAR
DETAIL 'B'**



**CLASS SI COLLAR
DETAIL 'C'**

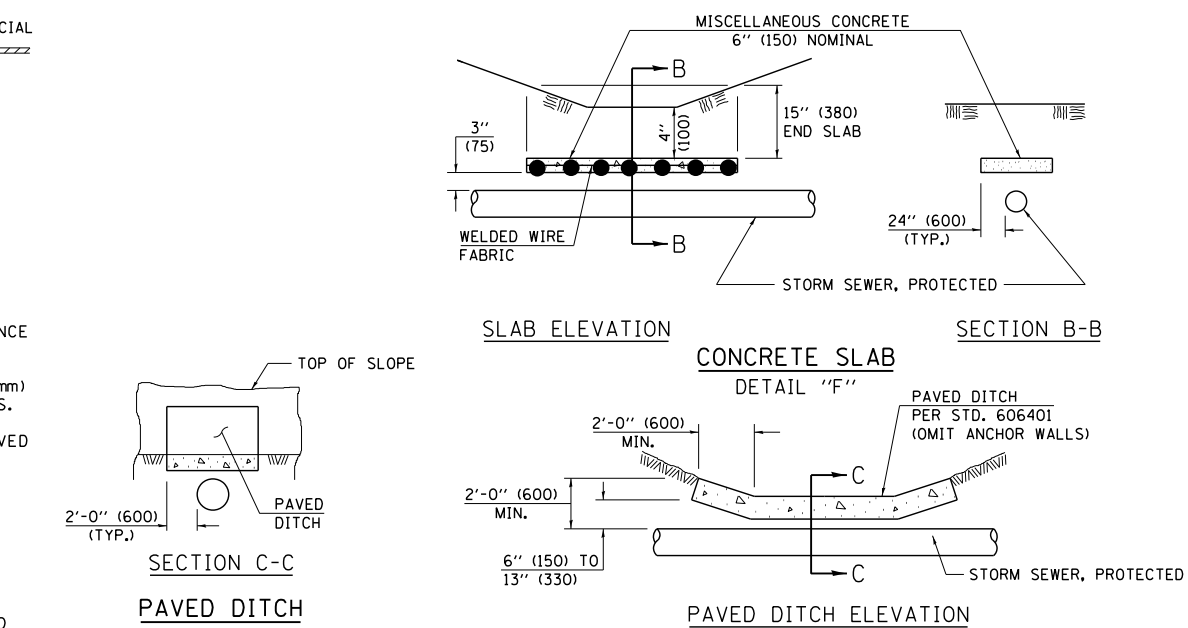
| CONCRETE PIPE STANDARD SIZES | |
|------------------------------|-----------|
| STORM SEWER RISER | |
| 6" (150) | 6" (150) |
| 8" (200) | 6" (150) |
| 10" (250) | 8" (200) |
| 12" (300) | 10" (250) |
| OR GREATER | |

FOR PLASTIC PIPE, THE RISER MAY BE OF THE SAME SIZE AS THE PIPE, BUT SHALL NOT BE SMALLER THAN 4" (100 mm) DIAMETER.



GENERAL NOTES

- EXISTING FIELD TILE ENCOUNTERED BY EXPLORATION TRENCH SHALL BE INSPECTED BY THE ENGINEER FOR UNOBSTRUCTED FLOW WITHIN THE LIMITS OF THE RIGHT-OF-WAY.
- ONLY FIELD TILE THAT DOES NOT HAVE SATISFACTORY FLOW AND OR HAS VISIBLE SIGNS OF DETERIORATION (SINK HOLES, ETC.) SHALL BE REPLACED WITHIN THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH METHOD "B".
- INSPECTION WELLS SHALL BE CONSTRUCTED APPROXIMATELY 6" (150 mm) INSIDE OF BOTH RIGHT-OF-WAY LINES AT ALL FIELD TILE LOCATIONS.
- EXISTING FIELD TILE ABANDONED UNDER EXISTING PAVEMENTS OR PAVED SHOULDERS SHALL BE FILLED WITH FLOWABLE GROUT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.
- NON-CIRCULAR FIELD TILE SHALL BE REPLACED WITH STORM SEWER, SPECIAL OF AT LEAST THE SAME CROSS SECTIONAL AREA. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE MINIMUM DEPTH OF COVER.
- THE 6" (150 mm) CONCRETE SLAB OR DITCH LINING SHALL BE POURED THE LENGTH OF THE TRENCH AT ALL DITCH FLOW LINE LOCATIONS WITHIN THE RIGHT-OF-WAY WITH LESS THAN 2' (600 mm) OF EARTH COVER. MISCELLANEOUS CONCRETE SHALL BE USED ACCORDING TO SECTION 611.
- ALL MISCELLANEOUS SLABS, APRONS AND DITCH LININGS SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN FOR PAVED DITCH IN STANDARD 606401.
- HEADWALL FOR BACKSLOPE OUTLET MAY BE USED FOR PIPE DRAIN DIAMETERS UP TO 10" (250 mm). SPECIAL DESIGNS WILL BE REQUIRED FOR LARGER SIZES.
- THE INSPECTION WELL LID FOR P.C.C. PIPE SHALL BE CONSTRUCTED OF 3/8" (10 mm) CAST IRON AND PROVIDED WITH A 1" (25 mm) DIAMETER HOLE IN CENTER. THE LID FOR THE OTHER PIPE MATERIALS SHALL BE A GRATE ASSEMBLY PREFABRICATED FOR AND COMPATIBLE WITH THE PIPE SYSTEM.



SLAB ELEVATION

SECTION B-B

**CONCRETE SLAB
DETAIL 'F'**

SECTION C-C

**PAVED DITCH
DETAIL 'E'**

PAVED DITCH ELEVATION

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 61101011A

| | | | |
|--|--------------------|------------|-----------------|
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| ca:\pwork\pwork\d0159406\057064-shd-Detail.dgn | | DRAWN - | REVISED - |
| | | CHECKED - | REVISED - |
| | | DATE - | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

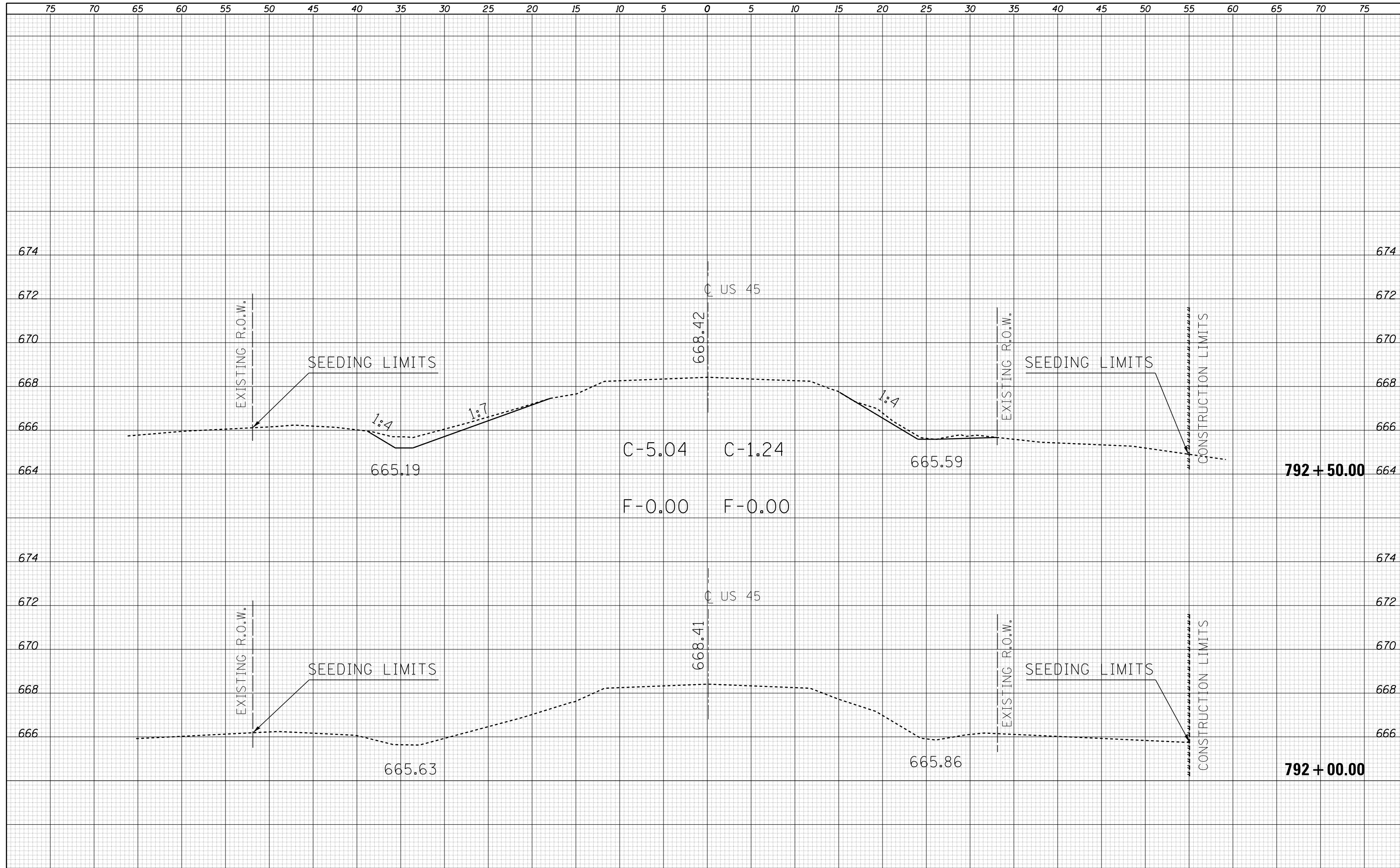
FIELD TILE SYSTEMS (TREATMENT OF EXISTING)

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|---------|--------------|-----------|
| 1671 | 21CR | DOUGLAS | 39 | 27 |
| CONTRACT NO. 70694 | | | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |

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

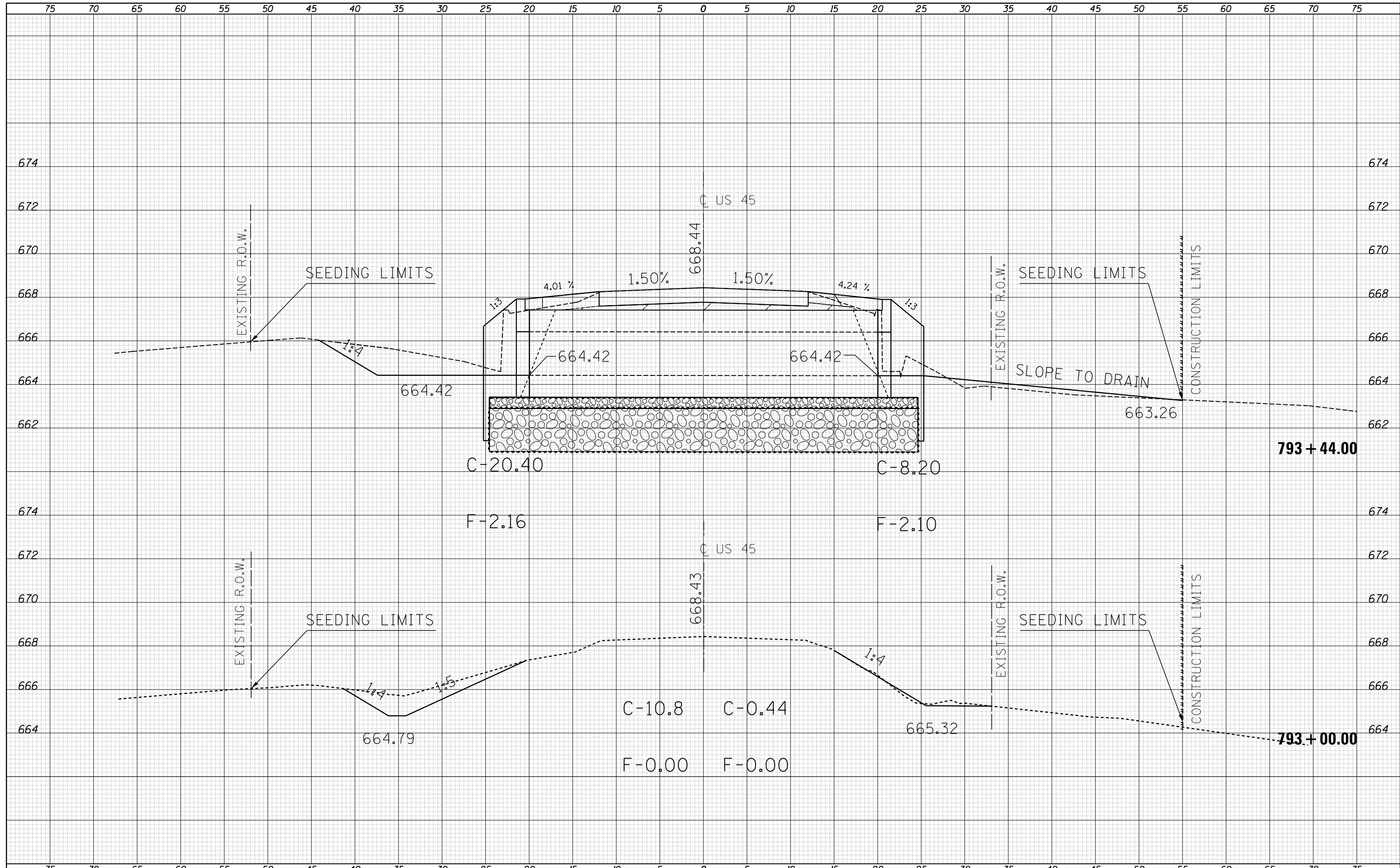
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|-----------------|---------------|
| DATE | |
| BY | |
| ORIGINAL SURVEY | SURVEYED |
| NOTE BOOK | PLOTTED |
| NO. | TEMPLATE |
| | AREAS CHECKED |



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|---|-----------------------------|------------|-----------|---|---|--|-------------------------|---------|----------------------------------|--------------|---------------------------|
| FILE NAME = | USER NAME = goreas | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS-SECTIONS S.N. 021-2029 | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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| | PLOT SCALE = 10.0000' / in. | CHECKED - | REVISED - | | CONTRACT NO. 70694 | | | | | | |
| | PLOT DATE = 10/16/2014 | DATE - | REVISED - | | SCALE: 5:2 | | SHEET NO. 1 OF 4 SHEETS | | STA. 792+00.00 TO STA. 792+50.00 | | ILLINOIS FED. AID PROJECT |

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

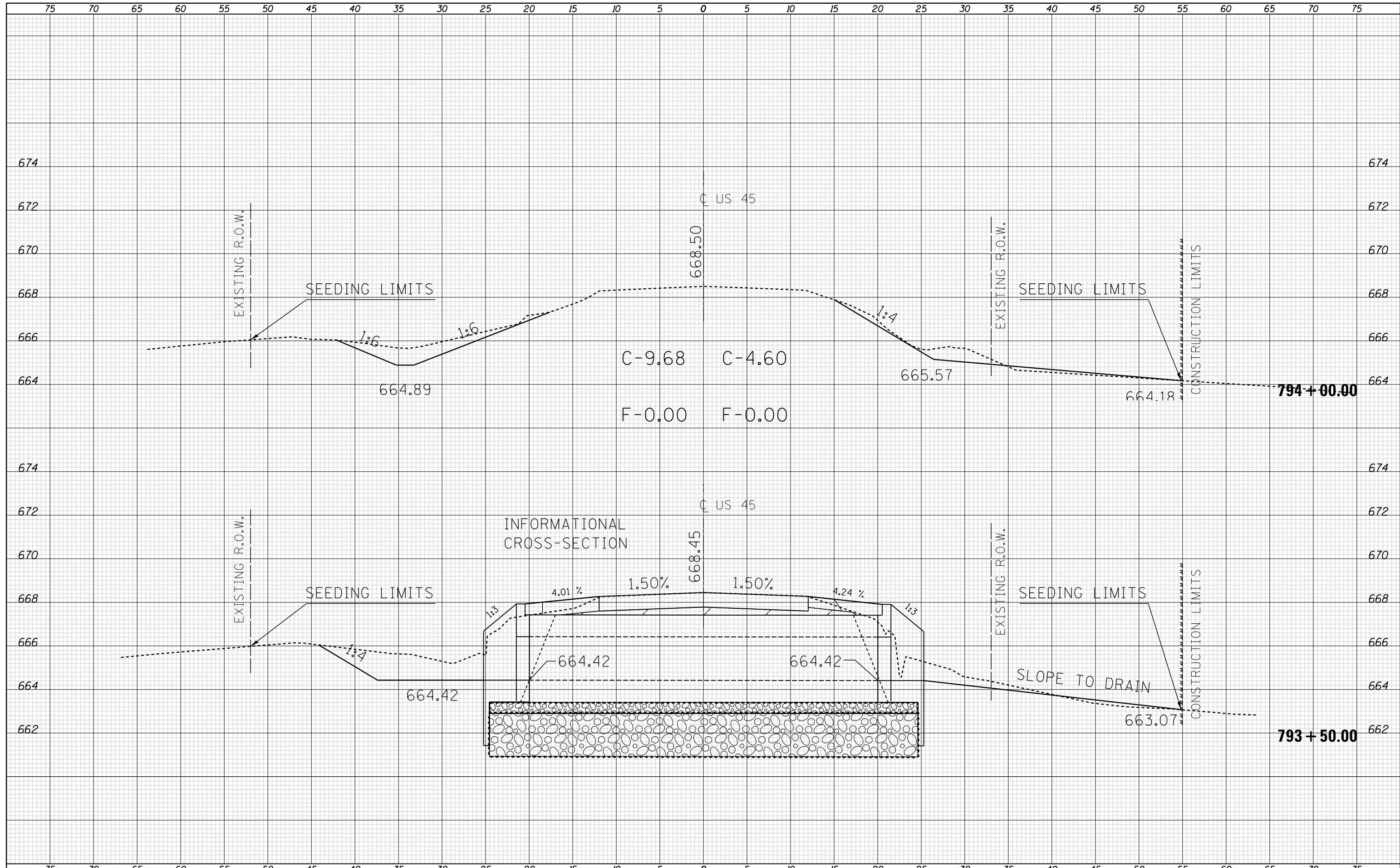
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| BY | |
| SURVEYED | |
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| TEMPLATE | |
| AREAS CHECKED | |
| ORIGINAL SURVEY | |
| NOTE BOOK | |
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| FILE NAME = | USER NAME = gorees | DESIGNED - | REVISIED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS-SECTIONS S.N. 021-2029 | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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| PLOT SCALE = 10.0000' / in. | CHECKED - | REVISIED - | SCALE: 5:2 | | SHEET NO. 2 OF 4 SHEETS | STA. 793+00.00 TO STA. 793+44.00 | CONTRACT NO. 70694 | | | | | |
| PLOT DATE = 10/16/2014 | DATE - | REVISIED - | ILLINOIS FED. AID PROJECT | | | | | | | | | |

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

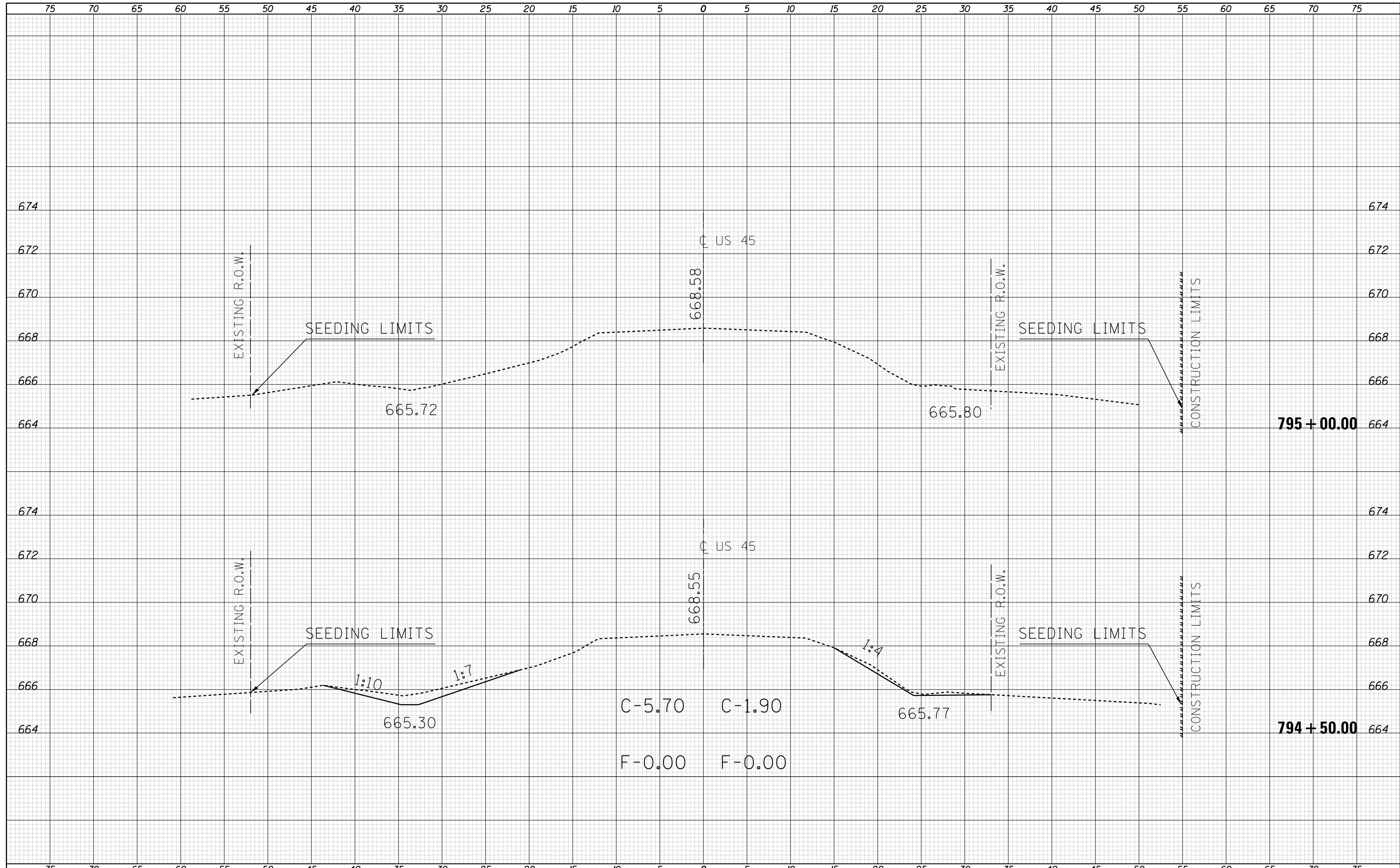
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| DATE | |
| BY | |
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| NOTE BOOK | PLOTTED |
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| PLOT DATE = 10/16/2014 | DATE - | REVISIED - | ILLINOIS FED. AID PROJECT | | | | | | | | | |

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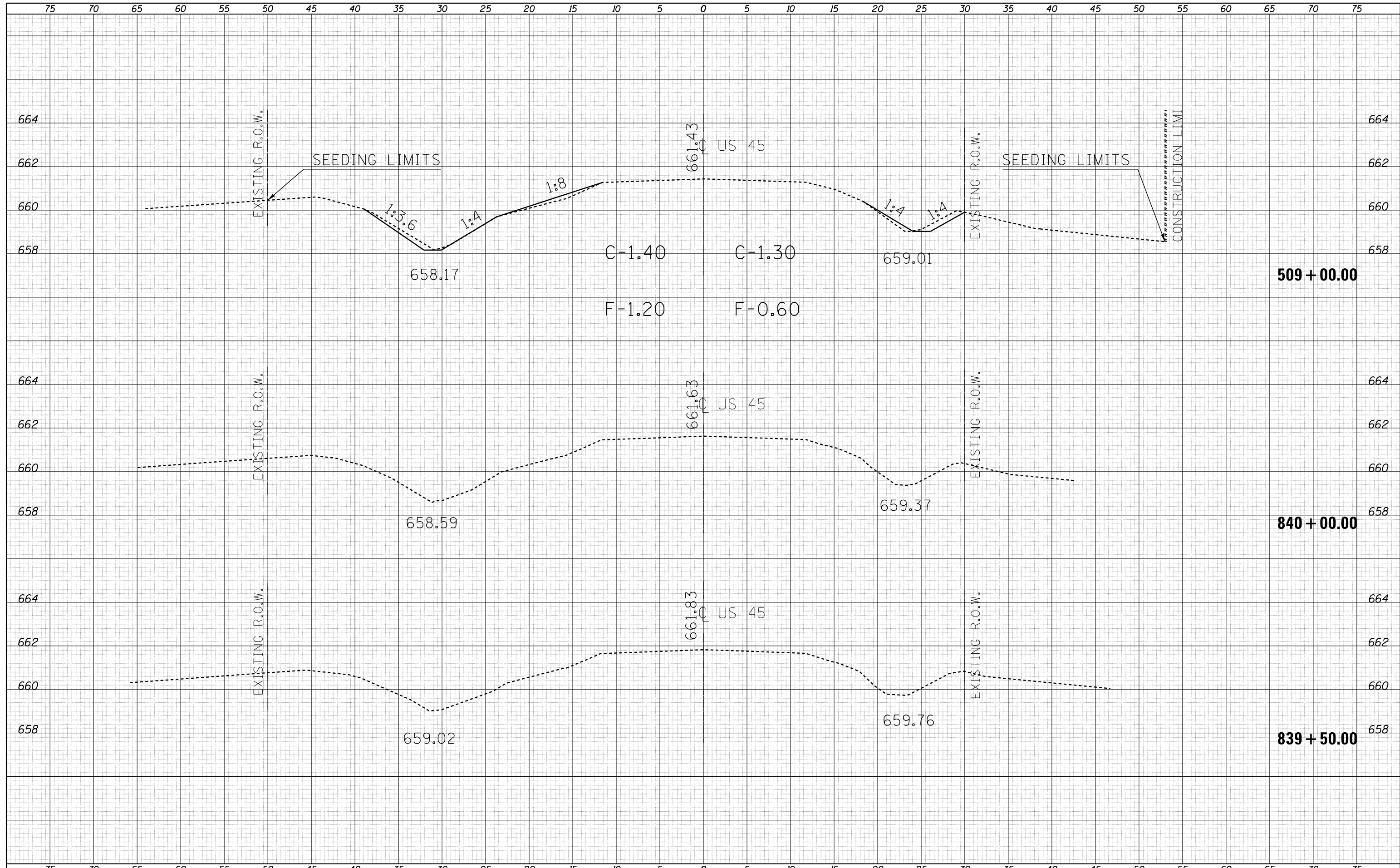
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| AREAS CHECKED | |
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| FILE NAME = | USER NAME = gorees | DESIGNED - | REVISIED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS-SECTIONS S.N. 021-2029 | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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| PLOT DATE = 10/16/2014 | DATE - | REVISIED - | ILLINOIS FED. AID PROJECT | | | | | | | | | |

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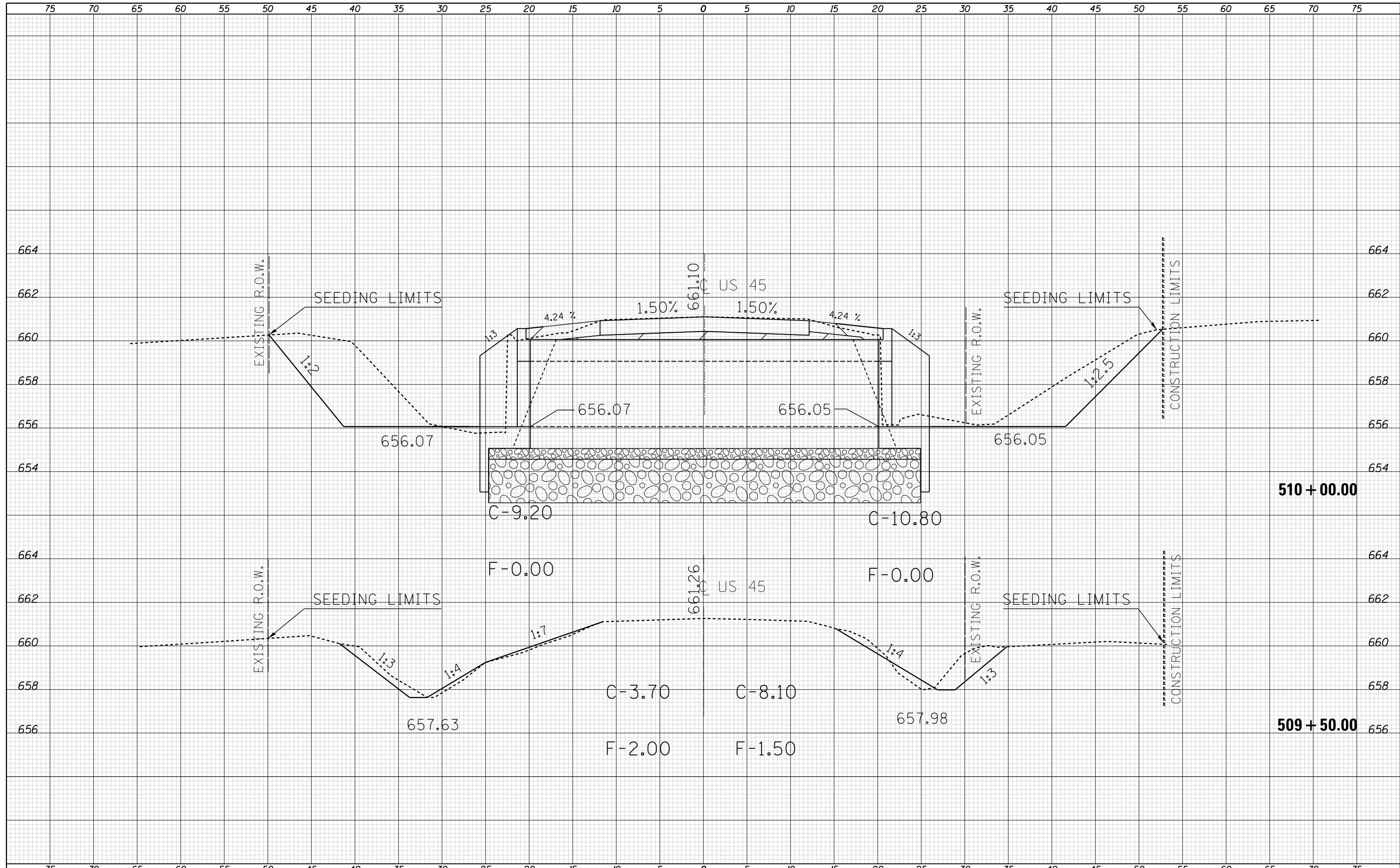
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| DATE | |
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| TEMPLATE | |
| AREAS CHECKED | |
| ORIGINAL SURVEY NOTE BOOK NO. | |



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| FILE NAME = | USER NAME = goreas | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS-SECTIONS S.N. 021-2028 | | | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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| PLOT SCALE = 10.0000' / in. | CHECKED - | REVISED - | SCALE: 5:2 | | SHEET NO. 1 OF 4 SHEETS | STA. 839+50.00 TO STA. 509+00.00 | CONTRACT NO. 70694 | | | | | |
| PLOT DATE = 10/16/2014 | DATE - | REVISED - | ILLINOIS FED. AID PROJECT | | | | | | | | | |

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| DATE | |
| BY | |
| FINAL SURVEY | |
| SURVEYED | |
| PLOTTED | |
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| AREAS CHECKED | |

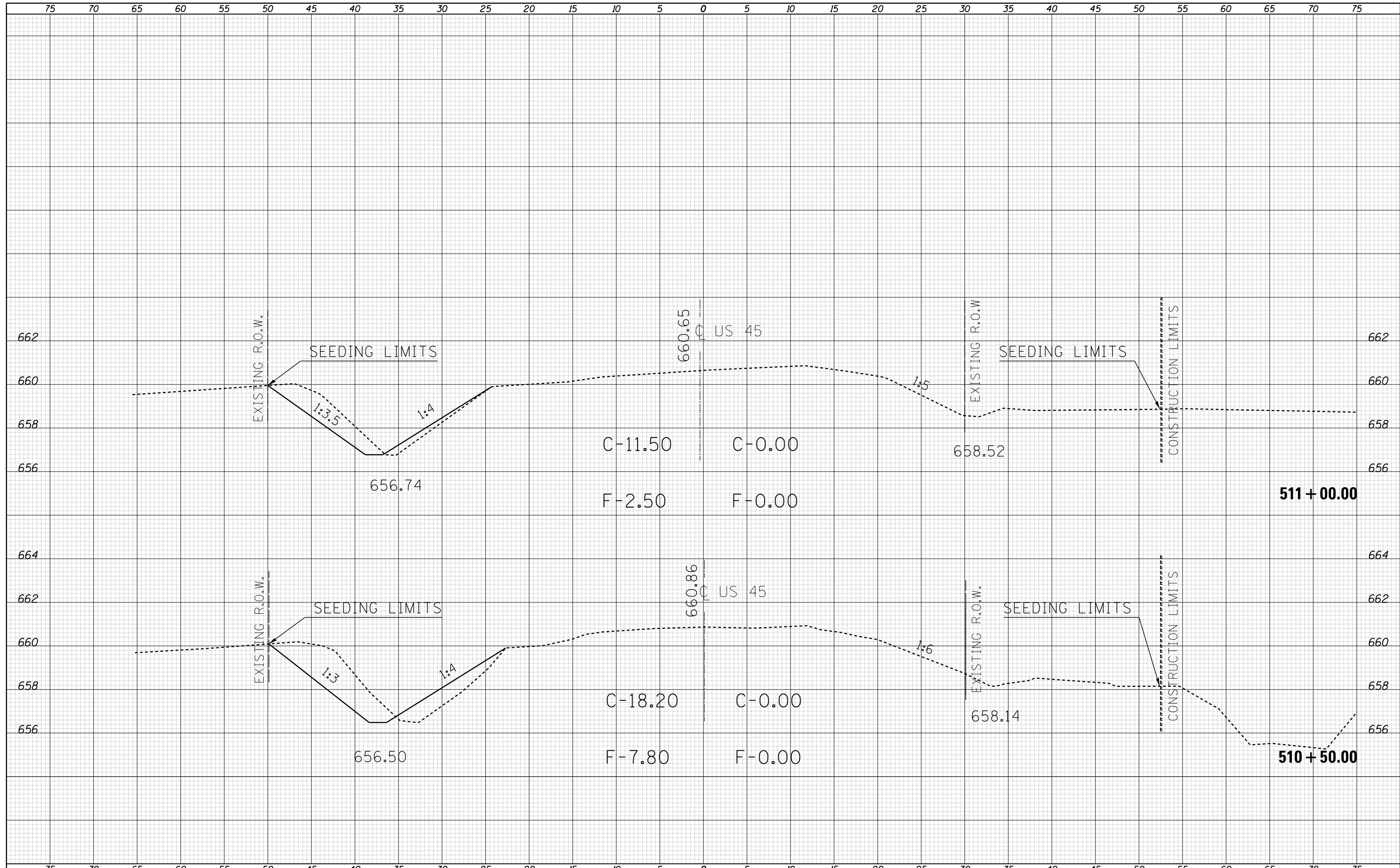
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| PLOTTED | |
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| NOTE BOOK | |
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|--|-----------------------------|------------|-----------|---|---|-------------------------|----------------------------------|---------------------------|---------|--------|--------------|-----------|
| FILE NAME = | USER NAME = goreas | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CROSS-SECTIONS S.N. 021-2028 | | | F.A.S. R.T.E. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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| | PLOT DATE = 10/16/2014 | DATE - | REVISED - | | SCALE: 5:2 | SHEET NO. 2 OF 4 SHEETS | STA. 509+50.00 TO STA. 510+00.00 | | | | | |

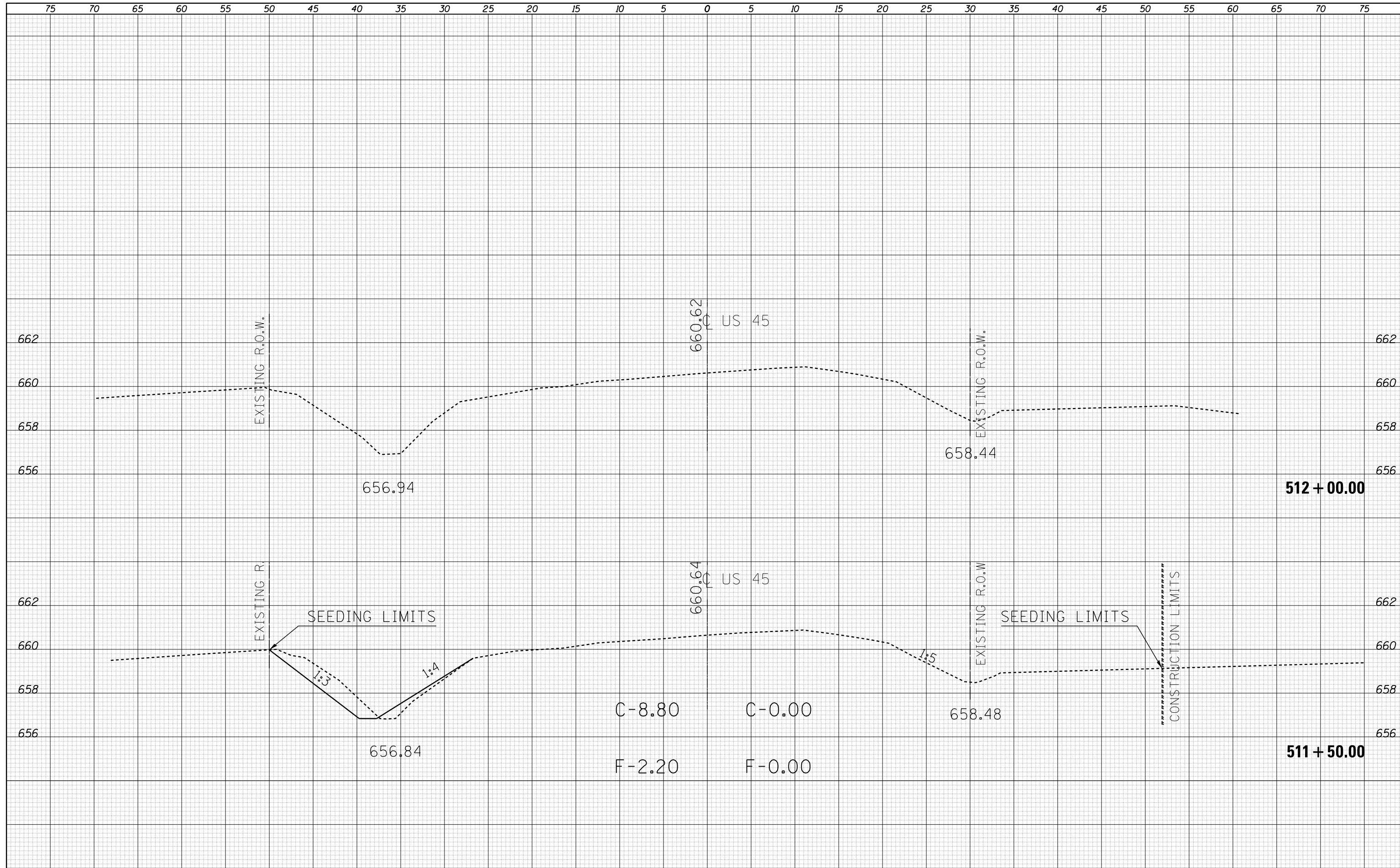
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| DATE | |
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| TEMPLATE | |
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| CHECKED | |
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| FINAL SURVEY | SURVEYED |
| NOTE BOOK | PLOTTED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

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



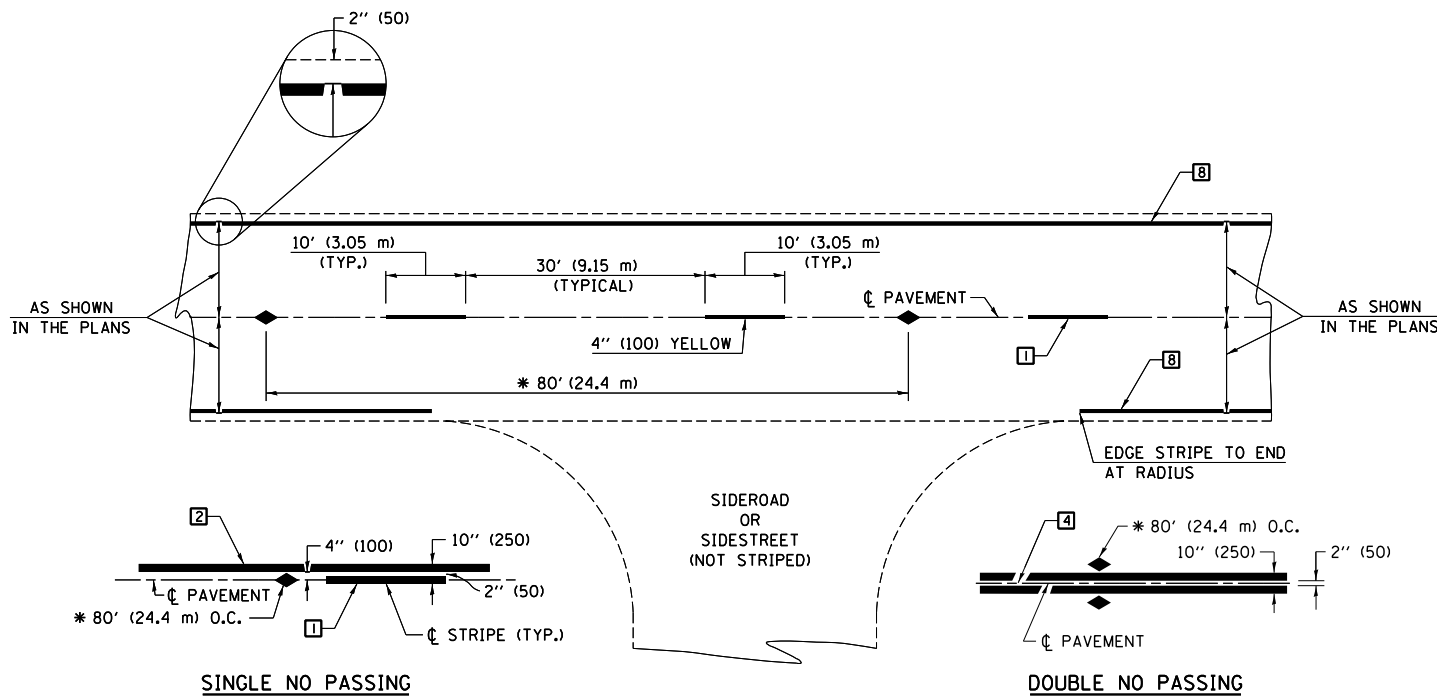
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| | PLOT SCALE = 10.0000' / 1" | CHECKED - | REVISIED - |
| | PLOT DATE = 10/16/2014 | DATE - | REVISIED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS-SECTIONS
S.N. 021-2028**

SCALE: 5:2 SHEET NO. 4 OF 4 SHEETS STA. 511+50.00 TO STA. 512+00.00

| | | | | |
|---------------------------|---------|---------|--------------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 1671 | 21CR | DOUGLAS | 39 | 35 |
| | | | CONTRACT NO. 70694 | |
| ILLINOIS FED. AID PROJECT | | | | |



* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

TYPICAL PAVEMENT MARKING LEGEND

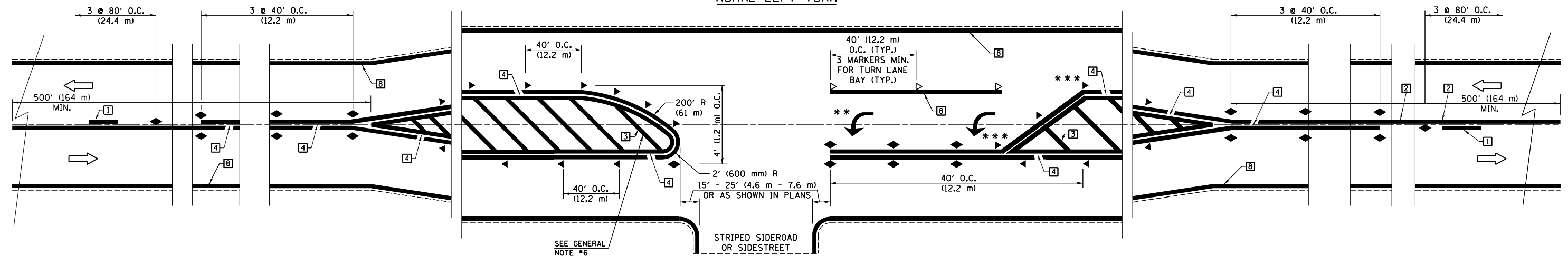
- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 4" (100) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) LANE LINE EXTENSIONS (WHITE)
- 14 4" (100) PARKING WHITE

TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

TWO LANE/TWO WAY

RURAL LEFT TURN



*** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.
 ** TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAA

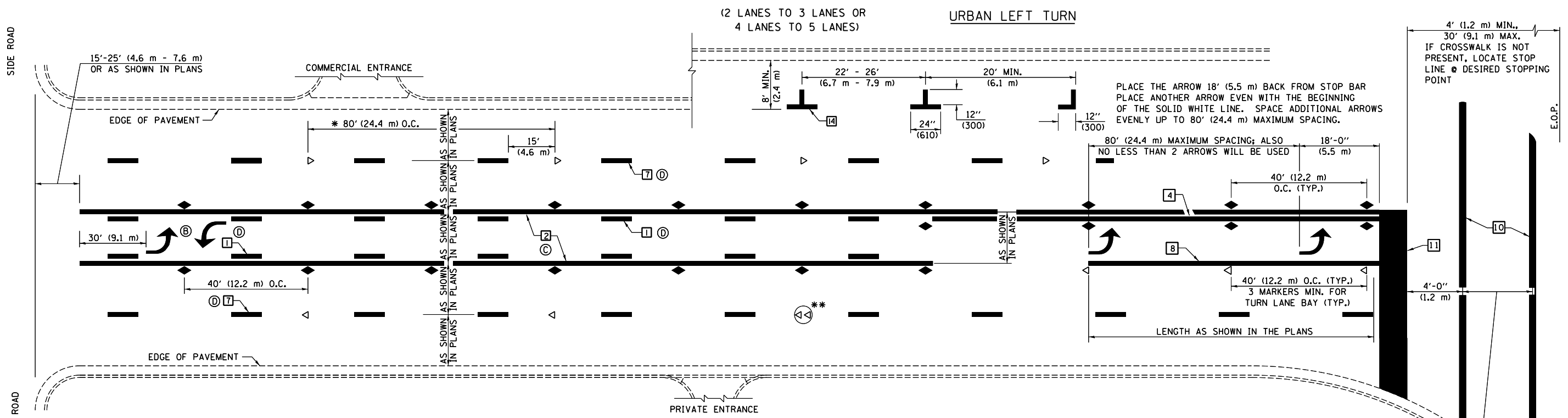
| | | | |
|---|-----------------------------|------------|-------------------------|
| FILE NAME = | USER NAME = gorees | DESIGNED - | REVISED - 11/06 |
| ct:\pw\work\p\idot\gorees\d0159406\0570694-shit-Details.dgn | | DRAWN - | REVISED - 09/2009 - KJT |
| | PLOT SCALE = 40.0000' / in. | CHECKED - | REVISED - 04/14 - JLA |
| | PLOT DATE = 10/16/2014 | DATE - | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)**

SCALE: SHEET NO. 1 OF 4 SHEETS STA. TO STA.

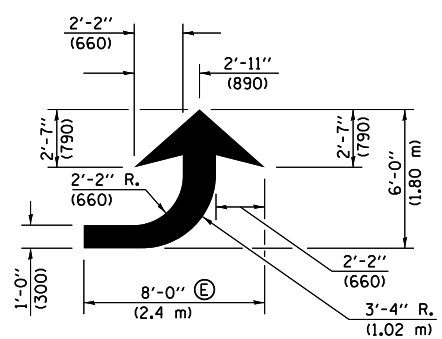
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|---------|--------------|-----------|
| 1671 | 21CR | DOUGLAS | 39 | 36 |
| CONTRACT NO. 70694 | | | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |



* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

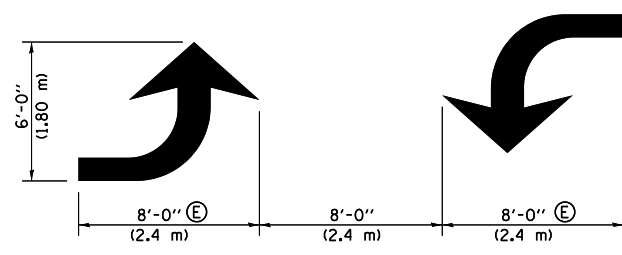
** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

- GENERAL NOTES:**
- ⓑ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.
 - ⓒ THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
 - ⓓ THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.
 - ⓔ USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)



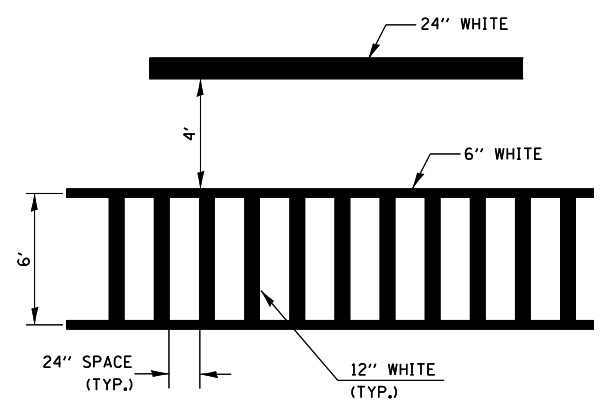
LEFT ARROW

REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m²)
(WHITE)

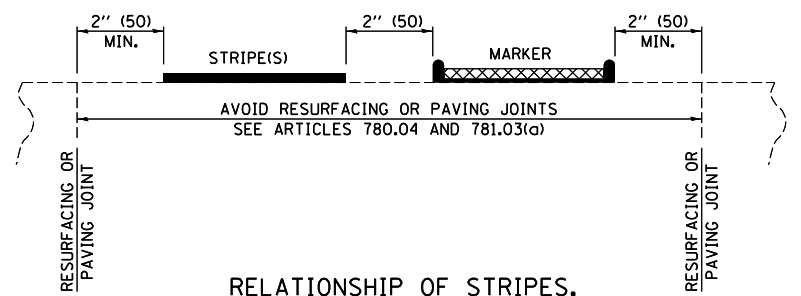


TYPICAL DOUBLE TURN ARROWS (WHITE)

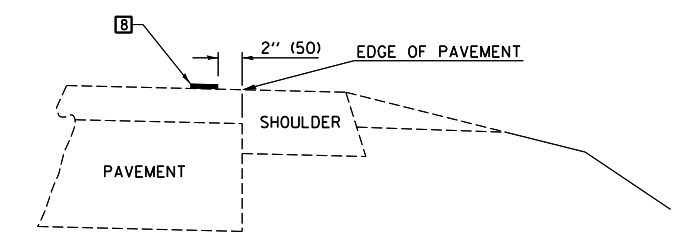
BLOOMINGTON-NORMAL CITY LIMITS ONLY



TYPICAL SPACING FOR CROSSWALKS & STOP BARS



RELATIONSHIP OF STRIPES, MARKERS AND JOINTS



RELATIONSHIP OF EDGE LINE TO EDGE OF PAVEMENT (SAFETY SHOULDER OR PAVED SURFACE) SEE ARTICLE 780.04

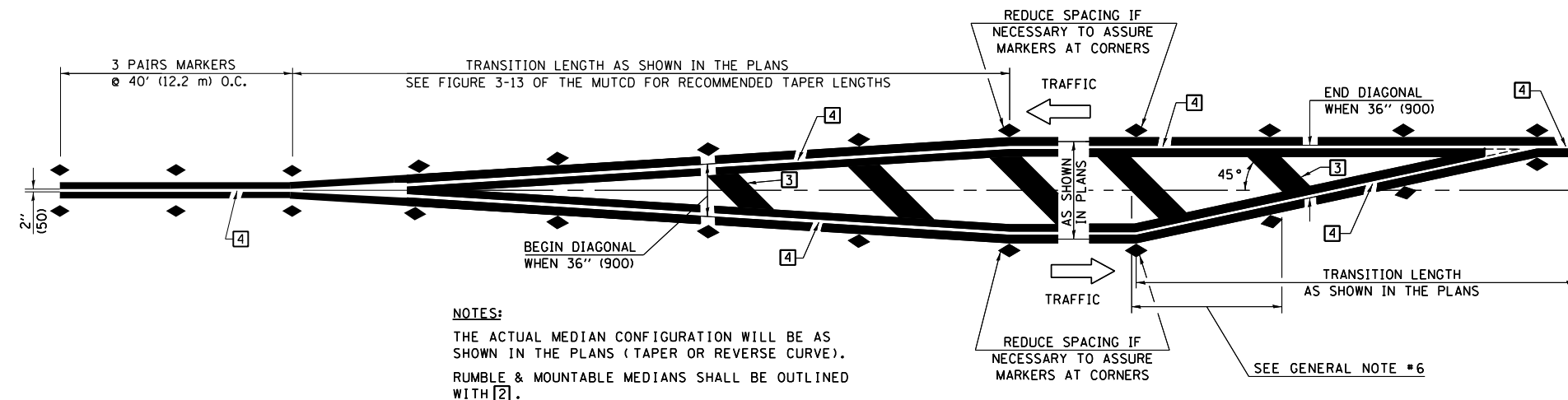
CROSSWALK WIDTH 6'-0" (1.8 m) OR AS SHOWN IN THE PLANS

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAA

| | | | | | | | | | | | |
|--|-----------------------------|------------|-------------------------|---|--|---|---------|---------|--------------|-----------|--|
| FILE NAME = | USER NAME = gorees | DESIGNED - | REVISED - 11/06 | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS) | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| ct:\pw\work\p\idot\gorees\d0159406\05706 | 44-shit-Details.dgn | DRAWN - | REVISED - 09/2009 - KJT | | | 1671 | 21CR | DOUGLAS | 39 | 37 | |
| | PLOT SCALE = 40.0000' / in. | CHECKED - | REVISED - 04/14 - JLA | | | CONTRACT NO. 70694 | | | | | |
| | PLOT DATE = 10/16/2014 | DATE - | REVISED - | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | |

SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.

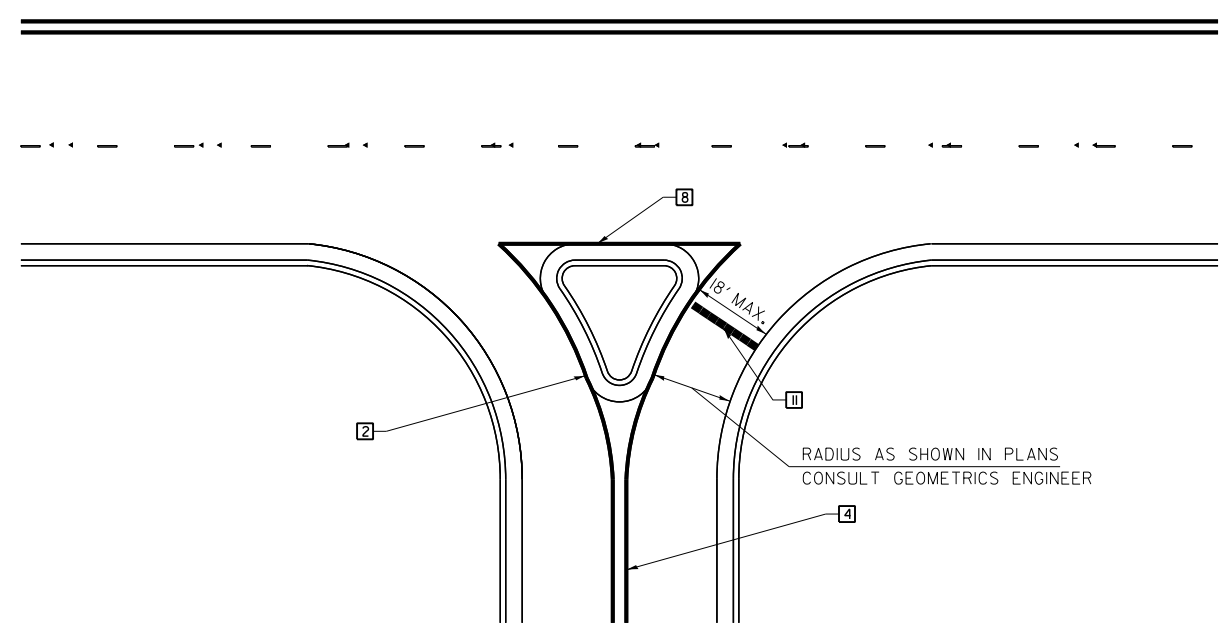


NOTES:
 THE ACTUAL MEDIAN CONFIGURATION WILL BE AS SHOWN IN THE PLANS (TAPER OR REVERSE CURVE).
 RUMBLE & MOUNTABLE MEDIANS SHALL BE OUTLINED WITH [2].

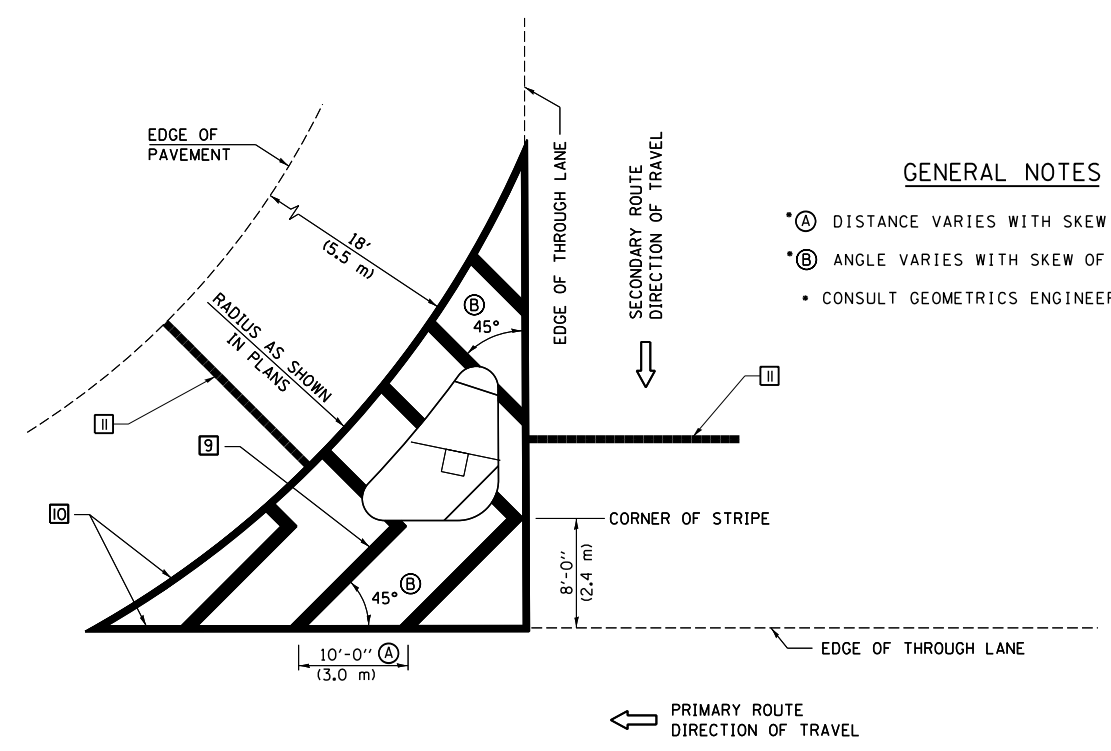
TYPICAL MEDIAN TRANSITIONS

GENERAL NOTES

1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,
 < 30 MPH USE 15' (< 50 km/h USE 4.5 m)
 30-45 MPH USE 20' (50-75 km/h USE 6.0 m)
 > 45 MPH USE 30' (> 75 km/h USE 9.0 m)



RIGHT IN - RIGHT OUT ACCESS



GENERAL NOTES

- (A) DISTANCE VARIES WITH SKEW OF INTERSECTION.
- (B) ANGLE VARIES WITH SKEW OF INTERSECTION.
- CONSULT GEOMETRICS ENGINEER

ISLAND

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

| | | | |
|---|-----------------------------|------------|-------------------------|
| FILE NAME = | USER NAME = gorees | DESIGNED - | REVISED - 11/06 |
| ct:\pw\work\pwidot\gorees\d0159406\0570694-shit-Details.dgn | | DRAWN - | REVISED - 09/2009 - KJT |
| | PLOT SCALE = 40.0000' / in. | CHECKED - | REVISED - 04/14 - JLA |
| | PLOT DATE = 10/16/2014 | DATE - | REVISED - |

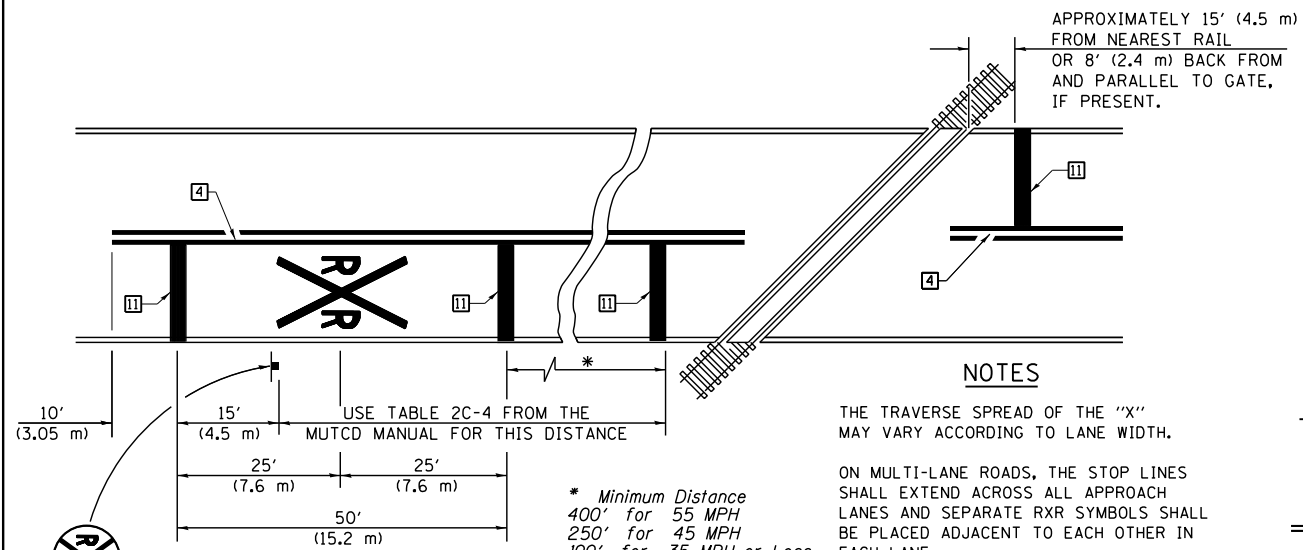
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS
 (RURAL & URBAN APPLICATIONS)**

SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. 7800AAA

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|---------|--------------|-----------|
| 1671 | 21CR | DOUGLAS | 39 | 38 |
| CONTRACT NO. 70694 | | | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |



PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

NOTES

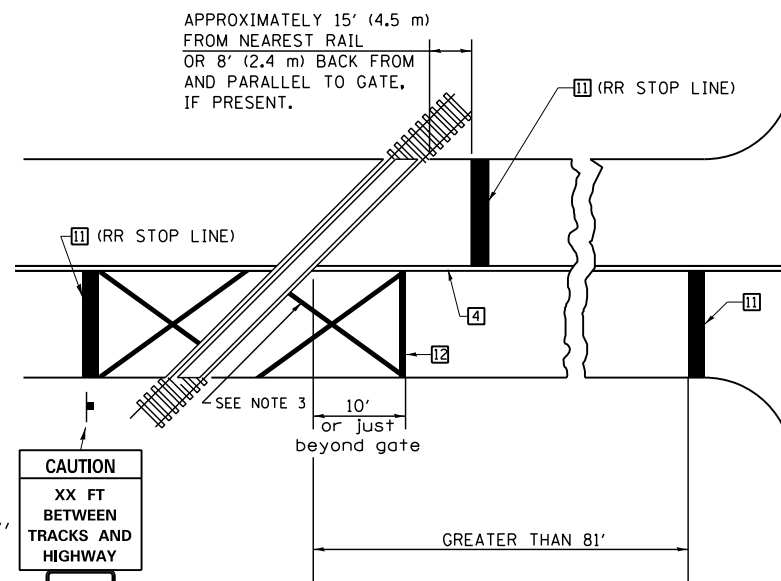
THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

* Minimum Distance
400' for 55 MPH
250' for 45 MPH
100' for 35 MPH or Less

RAILROAD CROSSING WITH INTERCONNECT ONLY



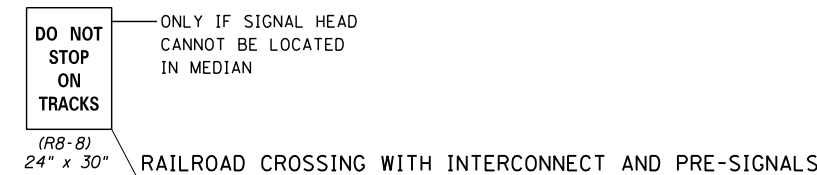
W10-1100
30" X 36"

CAUTION
XX FT
BETWEEN
TRACKS AND
HIGHWAY

DO NOT
STOP
ON
TRACKS

R8-8
24" X 30"

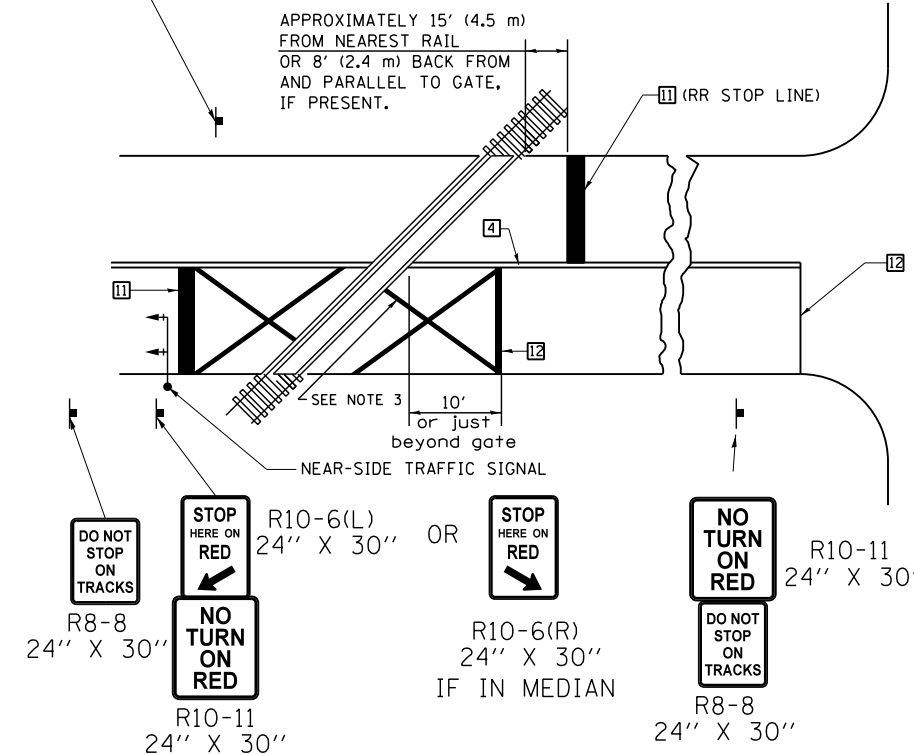
SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING



DO NOT
STOP
ON
TRACKS
(R8-8)
24" X 30"

ONLY IF SIGNAL HEAD CANNOT BE LOCATED IN MEDIAN

RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



DO NOT
STOP
ON
TRACKS
R8-8
24" X 30"

STOP
HERE ON
RED
R10-6(L)
24" X 30"

NO
TURN
ON
RED
R10-11
24" X 30"

STOP
HERE ON
RED
R10-6(R)
24" X 30"

IF IN MEDIAN

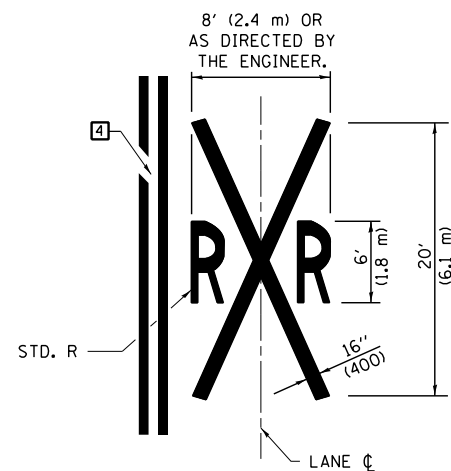
NO
TURN
ON
RED
R10-11
24" X 30"

DO NOT
STOP
ON
TRACKS
R8-8
24" X 30"

GENERAL NOTES

- SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
- 6" WHITE PAVEMENT MARKINGS AT 45° TO PAVEMENT, 8' CENTER TO CENTER.
- XX DISTANCE TO BE SHOWN ON SIGN MEASURED FROM A POINT 6 FEET FROM THE RAIL CLOSEST TO THE INTERSECTION OR FROM THE CLOSEST POINT ALONG THE EXIT GATE IF PRESENT OVER THE ROADWAY WHEN IN THE LOWERED POSITION TO THE STOP BAR OR CROSSWALK, WHICH EVER IS CLOSEST, ROUNDED DOWN TO NEAREST 5 FEET. WHERE THERE IS NO STOP LINE, MEASURE TO POINT WHERE DRIVER HAS A VIEW OF APPROACHING TRAFFIC.
- THE CLEARANCE SIGN IS ALSO TO BE USED AS AN INTERIM MEASURE AT LOCATIONS WITH INTERCONNECTED INTERSECTION TRAFFIC SIGNALS WHERE IT IS PLANNED TO CHANGE THEM TO NEAR-SIDE SIGNALS AT A FUTURE TIME. IN THIS CASE, THE DISTANCE TO BE SHOWN ON THE SIGN IS MEASURED FROM THE EDGE OF THE STRIPED-OUT AREA INSTEAD OF 6 FEET FROM THE RAIL. THE SIGN IS TO BE REMOVED WHEN THE NEAR-SIDE SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS EXTENDED TO THE INTERSECTION.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.



ALTERNATE SIGNS



| | | | |
|---|--------------------|------------|-------------------------|
| FILE NAME = | USER NAME = gorees | DESIGNED - | REVISED - 11/06 |
| ca:\pw\work\p1dot\gorees\d0159406\057064-shit-Details.dgn | | DRAWN - | REVISED - 09/2009 - KJT |
| | | CHECKED - | REVISED - 04/14 - JLA |
| | | DATE - | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. 7800AAAA

| | | | | |
|---|---------|---------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 1671 | 21CR | DOUGLAS | 39 | 39 |
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