

| RTE.                | SECTION                          | COUNTY                | TOTAL SHEETS | SHEET NO. |
|---------------------|----------------------------------|-----------------------|--------------|-----------|
| TR 5                | 10-01125-00-BR<br>10-11138-00-BR | CUMBERLAND<br>COLES   | 9            | 1         |
| FED. ROAD DIST. NO. |                                  | ILLINOIS CONTRACT NO. | 95828        |           |

**INDEX OF SHEETS**

- 1 COVER SHEET
- 2 SUMMARY OF QUANTITIES
- 3 PLAN AND PROFILE
- 4 BRIDGE PLAN AND ELEVATION
- 5 GENERAL BRIDGE DETAILS
- 6-9 CROSS SECTIONS

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

**PLANS FOR PROPOSED  
STP BRIDGE**

**CUMBERLAND SECTION 10-01125-00-BR  
COLES SECTION 10-11138-00-BR**

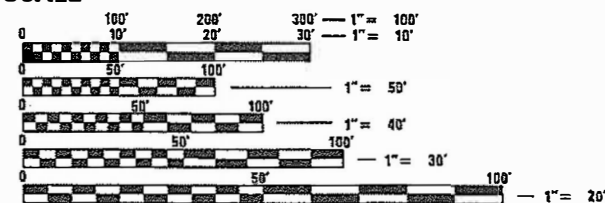
**COTTONWOOD TOWNSHIP  
TR 5  
CUMBERLAND COUNTY**

**HIGHWAY STANDARDS**

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-03 NAME PLATES FOR BRIDGES
- 701901-07 TRAFFIC CONTROL DEVICES
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

**ADT-CURRENT 125 DESIGN ADT 150  
CLASS-RURAL LOCAL ROAD  
DESIGN SPEED-30 MPH**

**SCALE**

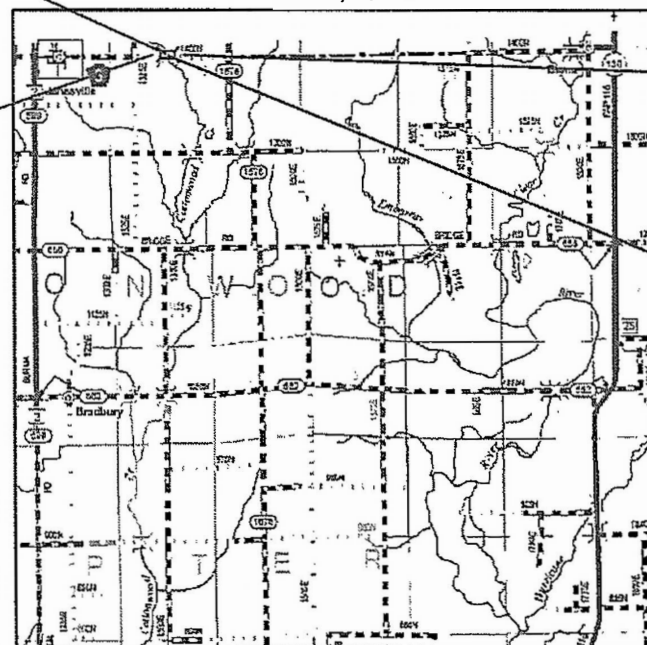


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

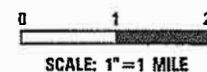
J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

EXISTING STRUCTURE # 018-3023  
STA 15+00, 14' WIDE X 30' LONG  
SINGLE SPAN STEEL BEAM WITH  
CONCRETE DECK, ON CLOSED CONCRETE  
ABUTMENTS.

PROJECT BEGINS  
STA. 13+00



**LOCATION MAP**



TOTAL AND NET LENGTH OF PROJECT = 500 FT. = 0.09 MI.

JOB NO. C-97-034-13  
PROJECT NO. 06KM(859)

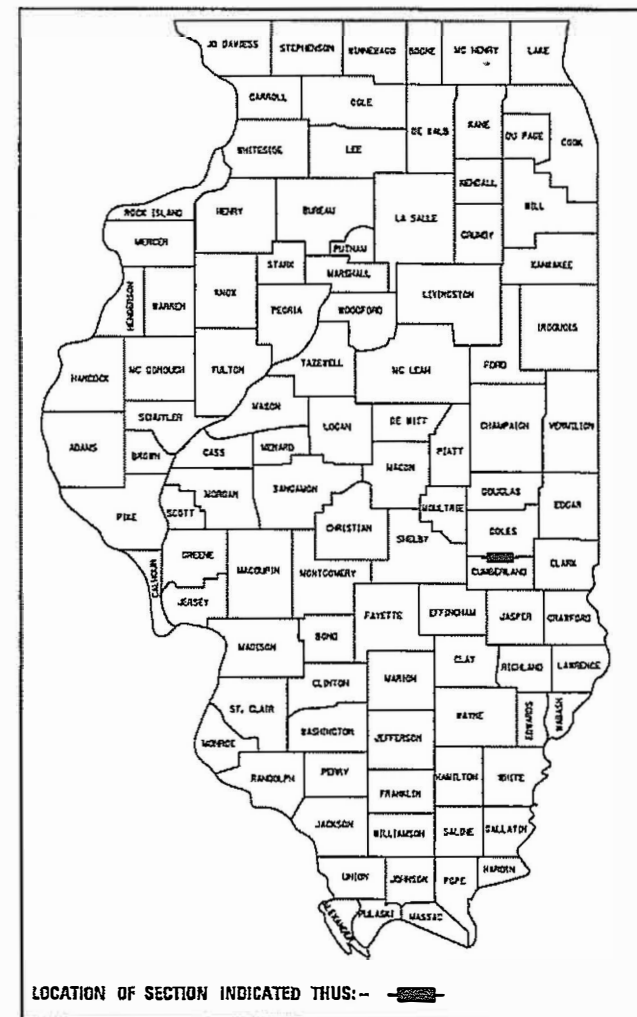
R 9 E, 3 PM

PROJECT ENDS  
STA. 18+00

PROPOSED STRUCTURE # 018-5020  
STA. 15+05, 31'-0" WIDE x 54'-0" LONG  
ALUMINUM STRUCTURAL PLATE  
BOX CULVERT, SKEWED 10° RIGHT



*Andy L. Baker*  
ANDY L. BAKER, P.E.  
LICENSE EXP. DATE 11-30-19



LOCATION OF SECTION INDICATED THIS: -

|   |   |
|---|---|
| APPROVED  | <i>2/10/2018</i><br><i>[Signature]</i><br>COUNTY ENGINEER   |
| APPROVED  | 01-03-2018<br><i>Brad Jones</i><br>HIGHWAY COMMISSIONER   |
| PASSED  | 01-08-2018<br><i>[Signature]</i><br>DISTRICT SEVEN ENGINEER OF<br>LOCAL ROADS AND STREETS                     |
| RELEASING FOR<br>BID BASED ON<br>LIMITED REVIEW | 01-08-2018<br><i>[Signature]</i><br>REGION FOUR ENGINEER<br>STATE OF ILLINOIS<br>DEPARTMENT OF TRANSPORTATION |

CONTRACT NO. 95828

|                     |                                  |                     |              |           |
|---------------------|----------------------------------|---------------------|--------------|-----------|
| F.A. RTE.           | SECTION                          | COUNTY              | TOTAL SHEETS | SHEET NO. |
| TR 5                | 10-01125-00-BR<br>10-11138-00-BR | CUMBERLAND<br>COLES | 9            | 2         |
| STA.                |                                  | TO STA.             |              |           |
| FED. ROAD DIST. NO. | ILLINOIS                         | FED. AID PROJECT    |              |           |

**GENERAL NOTES**

**II - ALUMINUM BOX CULVERT**

**1.0 GENERAL**

1.1 Manufacturer shall fabricate the aluminum structural plate box culvert (special) as shown on the plans. Fabrication shall conform to the requirements of ASTM B-864 and shall consist of plates, ribs, and appurtenant items.

Plate thickness, rib spacing, end treatment and type of invert and foundation shall be as indicated on the plans. All manufacturing processes including corrugating, punching, curving and required galvanizing shall be performed within the United States of America.

1.2 The contractor shall verify all field dimensions and conditions prior to ordering materials.

**2.0 DIMENSIONS**

2.1 The proposed structure shall be an ALUMINUM STRUCTURAL PLATE BOX CULVERT (SPECIAL) with the following dimensions:

Designation: ALBC 108-L2 Haunch Gage: .125  
 Span: 31'-0" Haunch Rib Type: TYPE VI  
 Rise: 11'-0" Haunch Rib Spacing: 9"  
 Min. Cover: 1.4 or 2.9 Crown Gage: .125  
 Max. Cover: 5 Crown Rib Type: TYPE VI  
 Loading: HL 93 Crown Rib Spacing: 9"

2.2 All plan dimensions on the contract drawings are measured in a true horizontal plan unless otherwise noted.

**3.0 ASSEMBLY AND INSTALLATION**

See special provisions.

**SUMMARY OF QUANTITIES**

| CODE     | ITEM  | UNIT  | QUANTITY |
|----------|---|-------|----------|
| 20100500 | TREE REMOVAL, ACRES   | ACRE  | 0.25     |
| 20200100 | EARTH EXCAVATION  | CUYD  | 1857     |
| 20300100 | CHANNEL EXCAVATION  | CUYD  | 327      |
| 25000200 | SEEDING, CLASS 2  | ACRE  | 0.9      |
| 25000400 | NITROGEN FERTILIZER NUTRIENT  | POUND | 81       |
| 25000500 | PHOSPHORUS FERTILIZER NUTRIENT  | POUND | 81       |
| 25000600 | POTASSIUM FERTILIZER NUTRIENT   | POUND | 81       |
| 25100115 | MULCH, METHOD 2   | ACRE  | 0.9      |
| 28000250 | TEMPORARY EROSION CONTROL SEEDING                                     | POUND | 150      |
| 28000305 | TEMPORARY DITCH CHECKS  | FOOT  | 20       |
| 28000400 | PERIMETER EROSION BARRIER   | FOOT  | 100      |
| 28100207 | STONE RIPRAP, CLASS A4  | TON   | 254      |
| 28200200 | FILTER FABRIC   | SOYD  | 378      |
| 40200800 | AGGREGATE SURFACE COURSE, TYPE B                                      | TON   | 493      |
| 50100100 | REMOVAL OF EXISTING STRUCTURES  | EACH  | 1        |
| 50200100 | STRUCTURE EXCAVATION  | CUYD  | 157      |
| 51500100 | NAME PLATES   | EACH  | 1        |
| 67100100 | MOBILIZATION  | LSUM  | 1        |
| X2090210 | POROUS GRANULAR BACKFILL, SPECIAL                                     | CUYD  | 481      |
| XX009213 | ALUMINUM STRUCTURAL PLATE BOX CULVERT (SPECIAL),<br>281.8 SQUARE FEET | FT    | 54.0     |

**EARTHWORK SCHEDULE**

| 1<br>LOCATION          | 2<br>EARTH<br>EXCAVATION | 3<br>STRUCTURE<br>EXCAVATION | 4<br>CHANNEL<br>EXCAVATION | 5<br>EXCAVATION<br>ADJUSTED FOR<br>SHRINKAGE | 6<br>EMBANKMENT | 7<br>EARTHWORK<br>BALANCE<br>WASTE (+) OR<br>SHORTAGE (-) |
|------------------------|--------------------------|------------------------------|----------------------------|--|-----------------|---|
|                        | CU YD                    | CU YD                        | CU YD                      | CU YD  | CU YD           | CU YD   |
| STA 13+00 TO STA 18+00 | 1857                     | 157                          | 327                        | 1756   | 923             | 833   |
| TOTAL                  | 1857                     | 157                          | 327                        | 1756   | 923             | 833   |

COLUMN 1,2,&6 - LOCATION AND QUANTITIES FROM CROSS SECTIONS,  
 CUT = EARTH EXCAVATION FILL = EMBANKMENT  
 COLUMN 4 - QUANTITY OF CHANNEL EXCAVATION (CUT) REDUCED 10% FOR UNSUITABLE MATERIAL FOR USE AS FILL  
 COLUMN 5 - QUANTITY OF EARTH EXCAVATION (CUT) ADJUSTED FOR A SHRINKAGE FACTOR OF 25%  
 COLUMN 7 - EARTHWORK BALANCE (-) = QUANTITY OF FURNISHED EXCAVATION NEEDED EARTHWORK BALANCE  
 (+) = QUANTITY OF EARTH EXCAVATION ADJUSTED FOR SHRINKAGE TO BE WASTED

**TREE REMOVAL SCHEDULE**

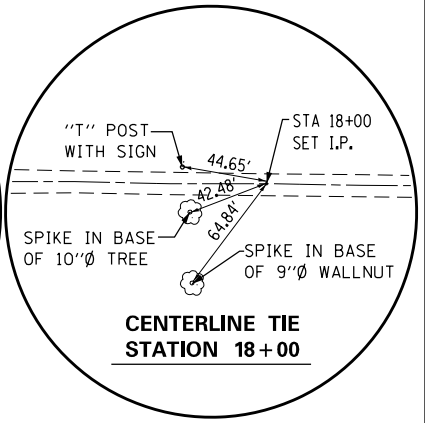
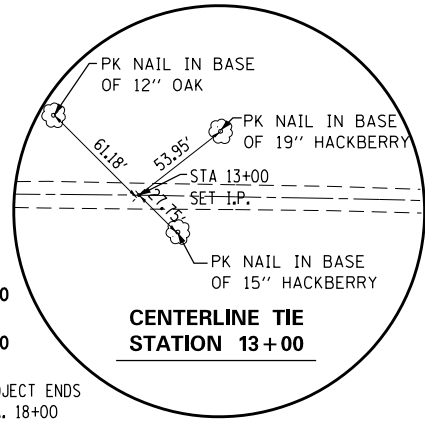
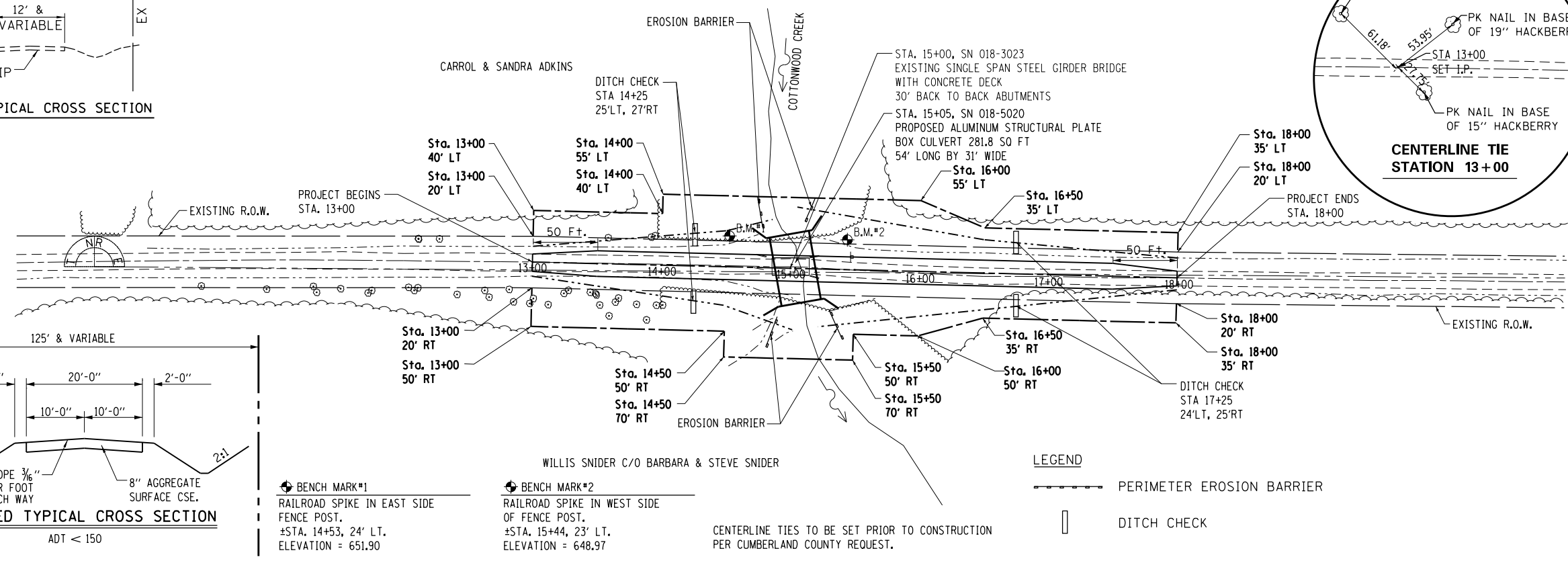
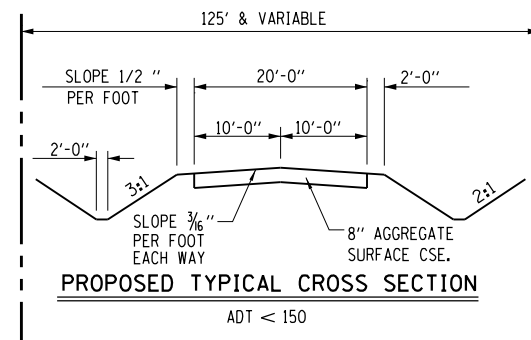
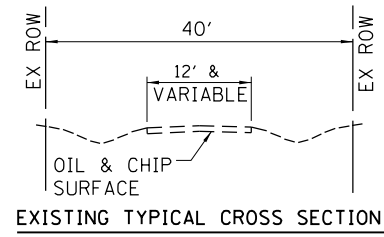
STA 14+00 TO STA 15+50 LT = 0.11 ACRE  
 STA 13+25 TO STA 14+85 RT = 0.10 ACRE  
 STA 15+20 TO STA 16+00 RT = 0.04 ACRE  
 TOTAL = 0.25 ACRES

| REVISIONS |      | ILLINOIS DEPARTMENT OF TRANSPORTATION<br>SUMMARY OF QUANTITIES & GENERAL NOTES<br>TR 5 OVER COTTONWOOD CREEK<br>CUMBERLAND SECTION 10-01125-00-BR<br>COLES SECTION 10-11138-00-BR<br>CUMBERLAND COUNTY STA. 15+05<br>STRUCTURE NO. 018-5020 |
|-----------|------|---|
| NAME      | DATE |   |
|           |      | SCALE: N.T.S. DRAWN BY ALB<br>DATE CHECKED BY   |
|           |      |   |
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|           |      |   |

PLOT DATE = 1/2/2018 USER = AND.COURTNEY@upchurch.com  
 PLOT SCALE = 25000 / IN. USER NAME = ETOB

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

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

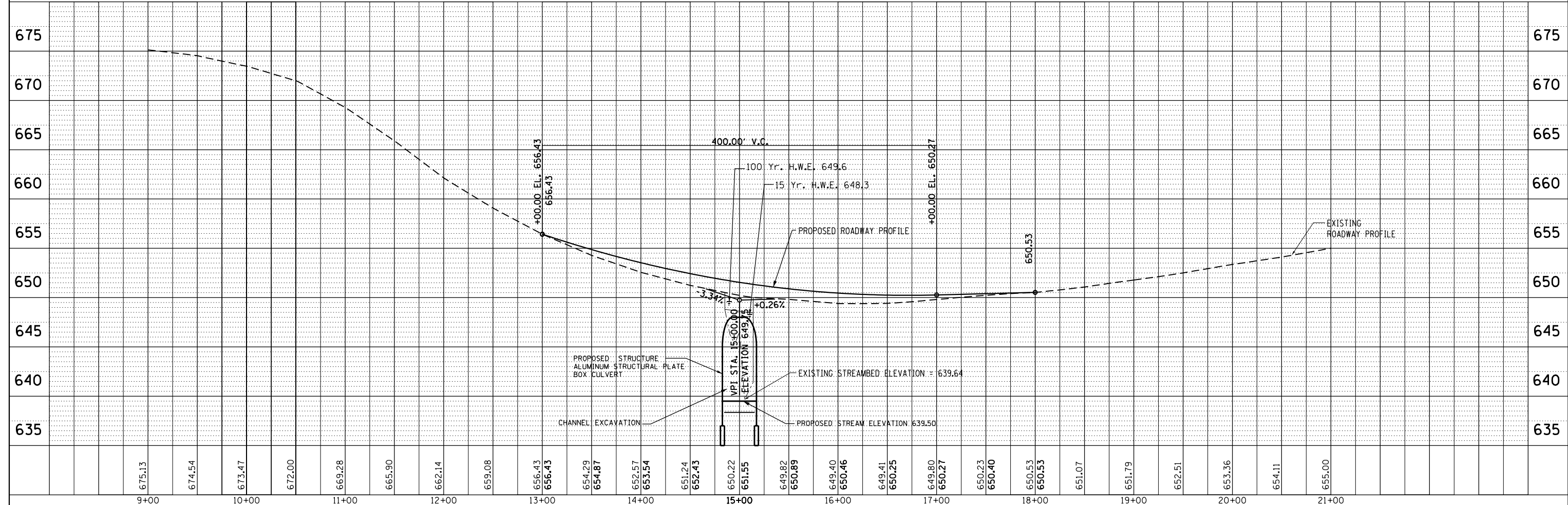
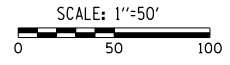


BENCH MARK #1  
RAILROAD SPIKE IN EAST SIDE OF FENCE POST.  
+STA. 14+53, 24' LT.  
ELEVATION = 651.90

BENCH MARK #2  
RAILROAD SPIKE IN WEST SIDE OF FENCE POST.  
+STA. 15+44, 23' LT.  
ELEVATION = 648.97

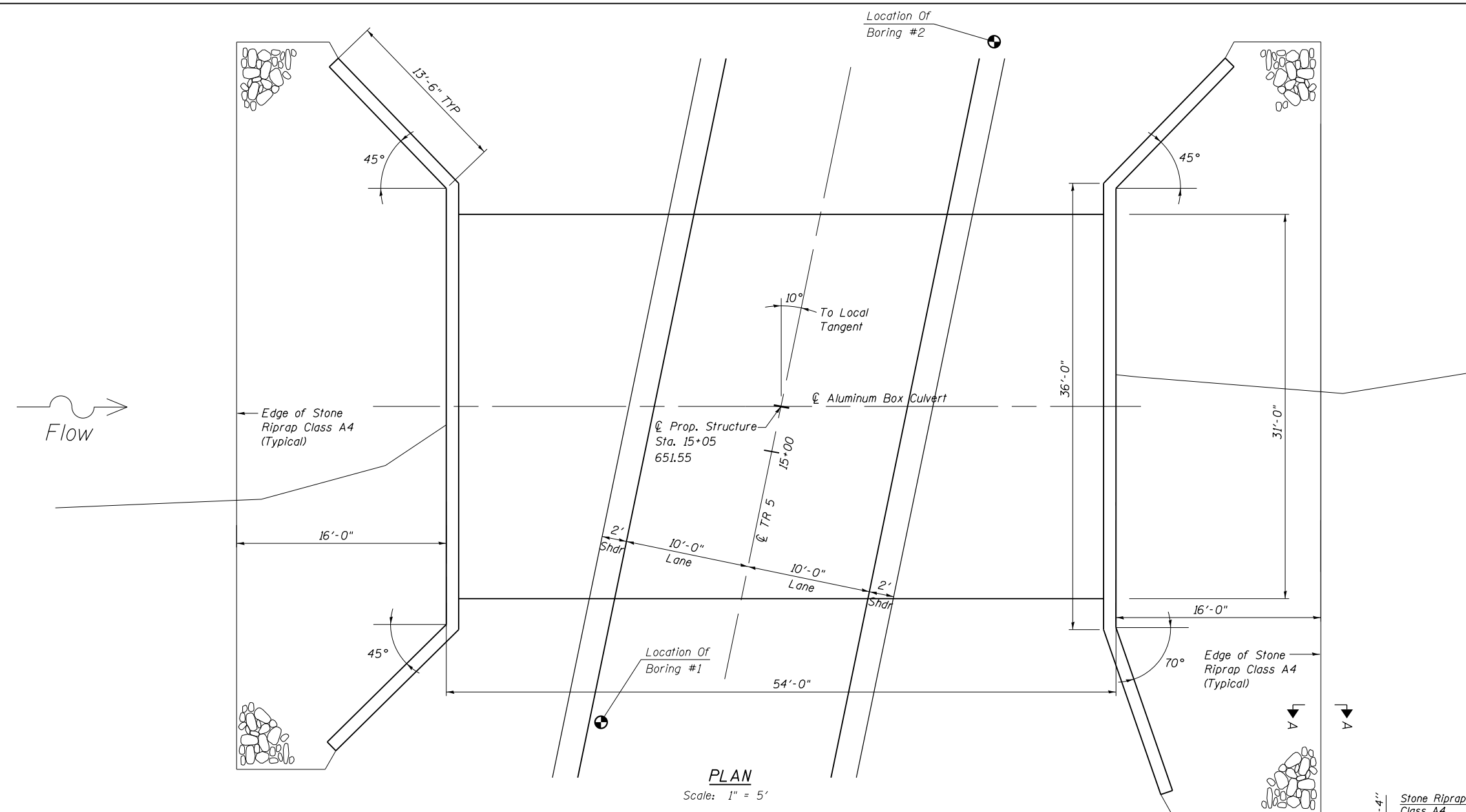
CENTERLINE TIES TO BE SET PRIOR TO CONSTRUCTION PER CUMBERLAND COUNTY REQUEST.

LEGEND  
 PERIMETER EROSION BARRIER  
 DITCH CHECK

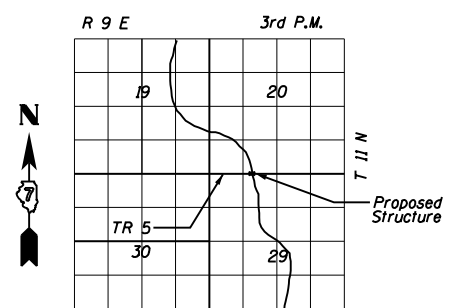


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|---|------------------------------|----------------|-----------|---|--|-----------------|---------------------------|---------|--------|--------------|-----------|
| FILE NAME =                             | USER NAME = St615            | DESIGNED - ALB | REVISED - | <b>STATE OF ILLINOIS</b><br><b>DEPARTMENT OF TRANSPORTATION</b> | <b>PLAN AND PROFILE</b><br><b>TR 5 OVER COTTONWOOD CREEK</b> |                 | F.A. RE.                  | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| P:\Civil\CUMBERLAND_COUNTY\Cottonwood.L | 113083\Survey\PlanProf.dgn   | DRAWN - ALB    | REVISED - |   | TR-5   | 10-01125-00-BR  | Cumberland                | 9       | 3      |              |           |
| Default                                 | PLOT SCALE = 100.0000' / in. | CHECKED -      | REVISED - |   | CONTRACT NO. 95828   |                 | ILLINOIS FED. AID PROJECT |         |        |              |           |
|   | PLOT DATE = 1/3/2018         | DATE -         | REVISED - |   | SCALE:   | SHEET OF SHEETS | STA. TO STA.              |         |        |              |           |

| F.A. RTE.           | SECTION                          | COUNTY                    | TOTAL SHEETS | SHEET NO. |
|---------------------|----------------------------------|---------------------------|--------------|-----------|
| TR 5                | 10-01125-00-BR<br>10-11138-00-BR | CUMBERLAND<br>COLES       | 9            | 4         |
| STA.                |                                  | TO STA.                   |              |           |
| FED. ROAD DIST. NO. |                                  | ILLINOIS FED. AID PROJECT |              |           |



**PLAN**  
Scale: 1" = 5'

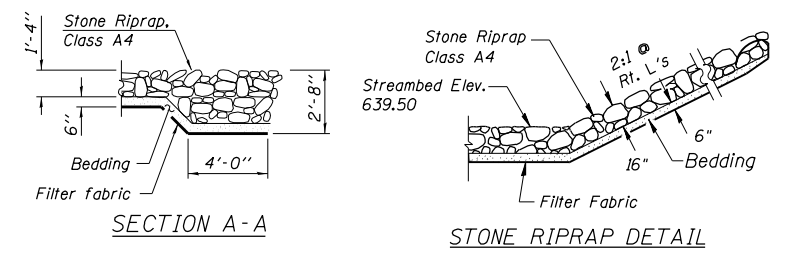


**LOCATION SKETCH**

COTTONWOOD CREEK  
BUILT 20\_\_ BY  
CUMBERLAND COUNTY  
SEC. 10-01125-00-BR  
STATION 15+05  
STR. NO. 018-5020 LOADING HL 93

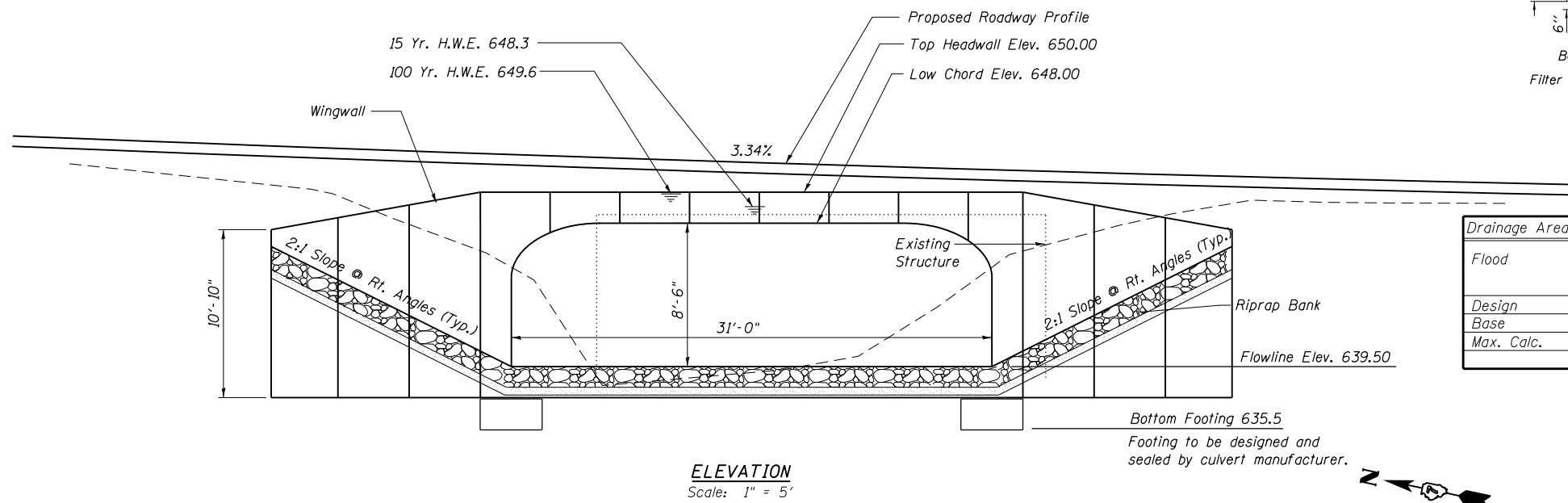
**LETTERING FOR NAME PLATE**  
(SEE STD 515001)

**LOADING HL-93**



**SECTION A-A**

**STONE RIPRAP DETAIL**



**ELEVATION**  
Scale: 1" = 5'

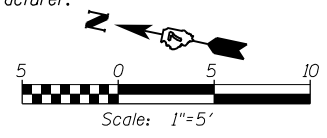
**WATERWAY INFORMATION**

Drainage Area = 2.59 Sq. Mi. Low Grade Elev. 650.25 ft @ Sta. 16+50

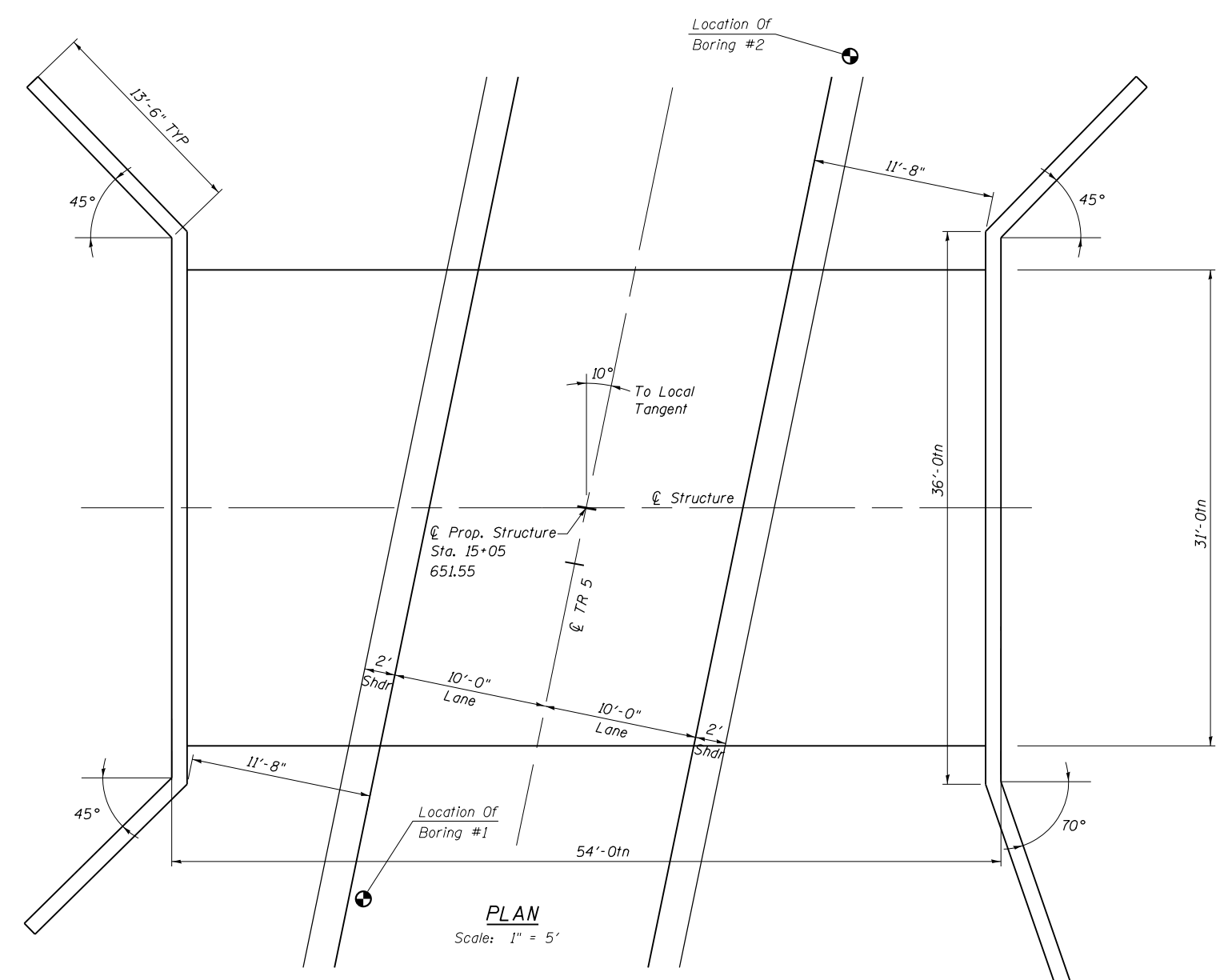
| Flood      | Freq. Yr. | Q cfs | Opening Sq. Ft. |       | Nat. H.W.E. EXIST | Nat. H.W.E. PROP | Head - ft. |       | Headwater Elev. - ft. |       |
|------------|-----------|-------|-----------------|-------|-------------------|------------------|------------|-------|-----------------------|-------|
|            |           |       | Exist.          | Prop. |                   |                  | Exist.     | Prop. | Exist.                | Prop. |
| Design     | 15        | 1058  | 151             | 239   | 649.1             | 648.3            | 0.8        | 0.0   | 649.9                 | 648.3 |
| Base       | 100       | 1872  | 151             | 239   | 652.2             | 649.6            | 2.4        | 0.0   | 654.6                 | 649.6 |
| Max. Calc. | 500       | 2600  | 151             | 239   | 651.7             | 651.8            | 0.8        | 0.9   | 652.5                 | 652.7 |

| REVISIONS |      |
|-----------|------|
| NAME      | DATE |
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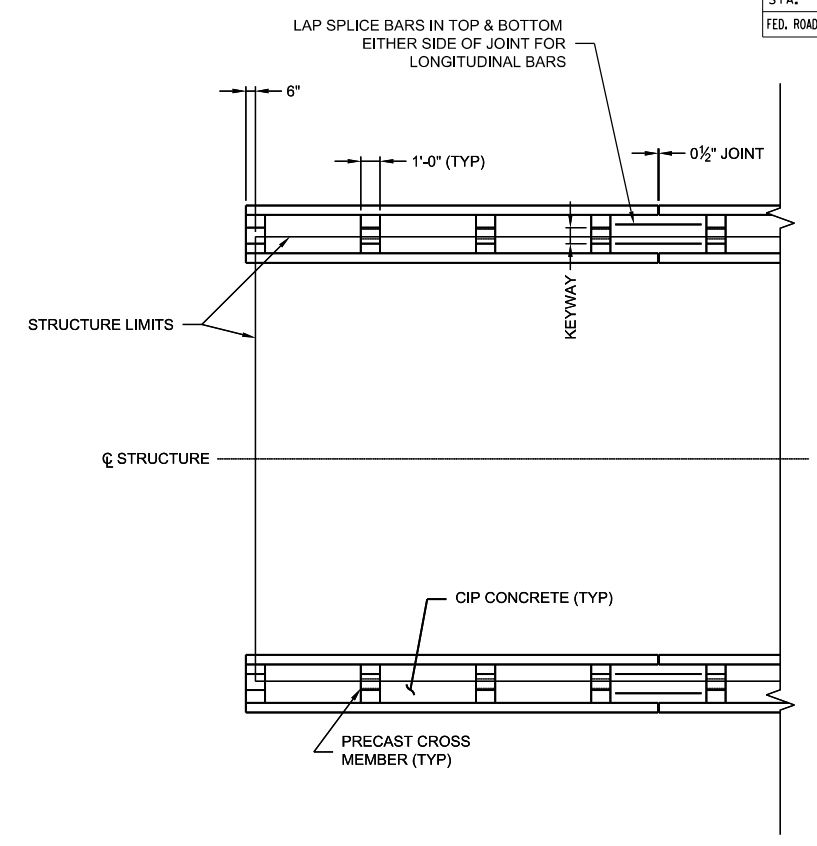
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**BRIDGE PLAN AND ELEVATION**  
TR 5 OVER COTTONWOOD CREEK  
CUMBERLAND SECTION 10-01125-00-BR  
COLES SECTION 10-11138-00-BR  
CUMBERLAND COUNTY STA. 15+05  
STRUCTURE NO. 018-5020  
SCALE: N.T.S. DRAWN BY ALB  
DATE CHECKED BY



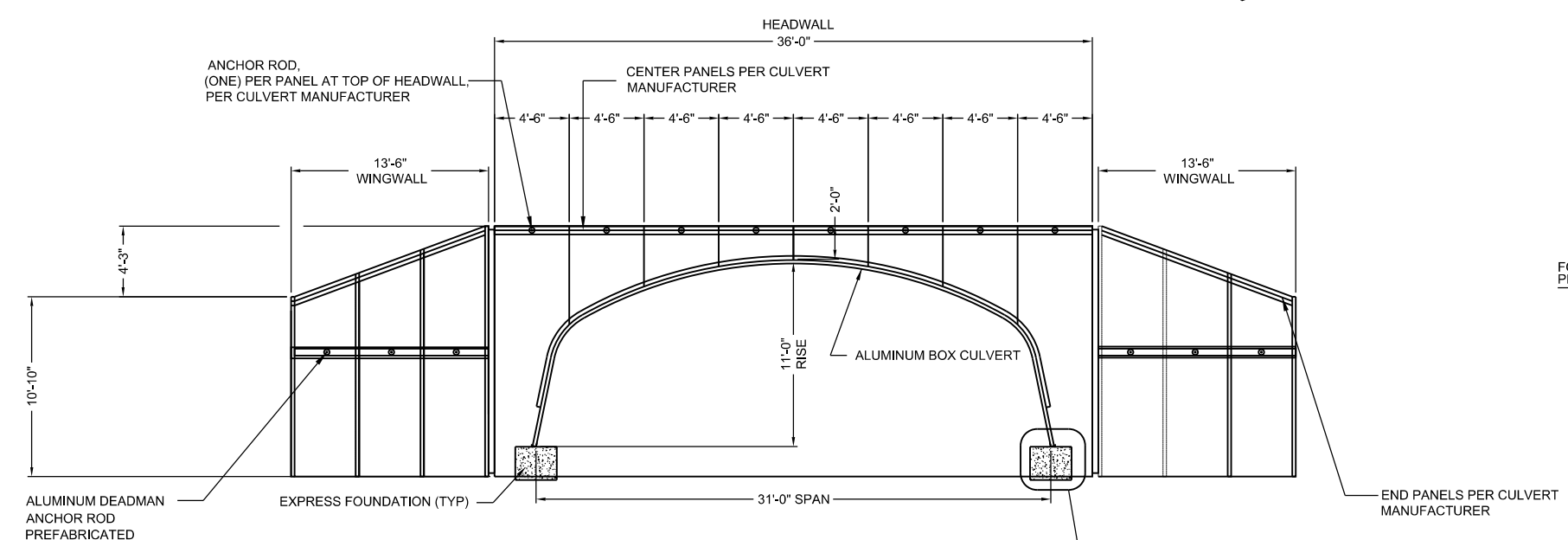
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 PLOT SCALE = 1/8"=1'-0"  
 USER NAME = ECRS



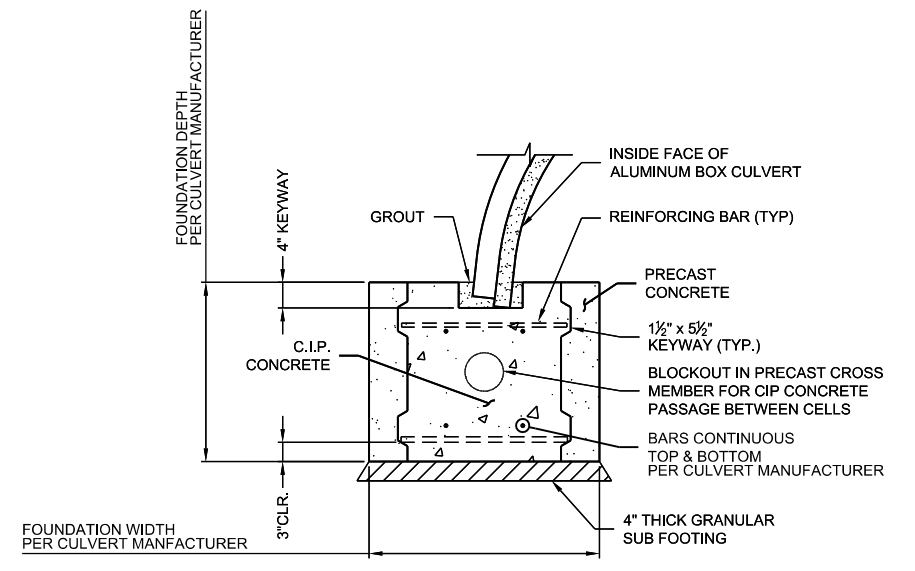
**PLAN**  
Scale: 1" = 5'



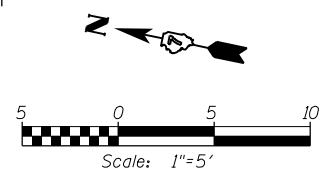
**TYPICAL FOUNDATION PLAN**  
(NOT PROJECT SPECIFIC WILL BE DESIGNED PER CULVERT MANUFACTURER)



**TYPICAL END ELEVATION**



**DETAIL 1**  
(NOT PROJECT SPECIFIC WILL BE DESIGNED PER CULVERT MANUFACTURER)



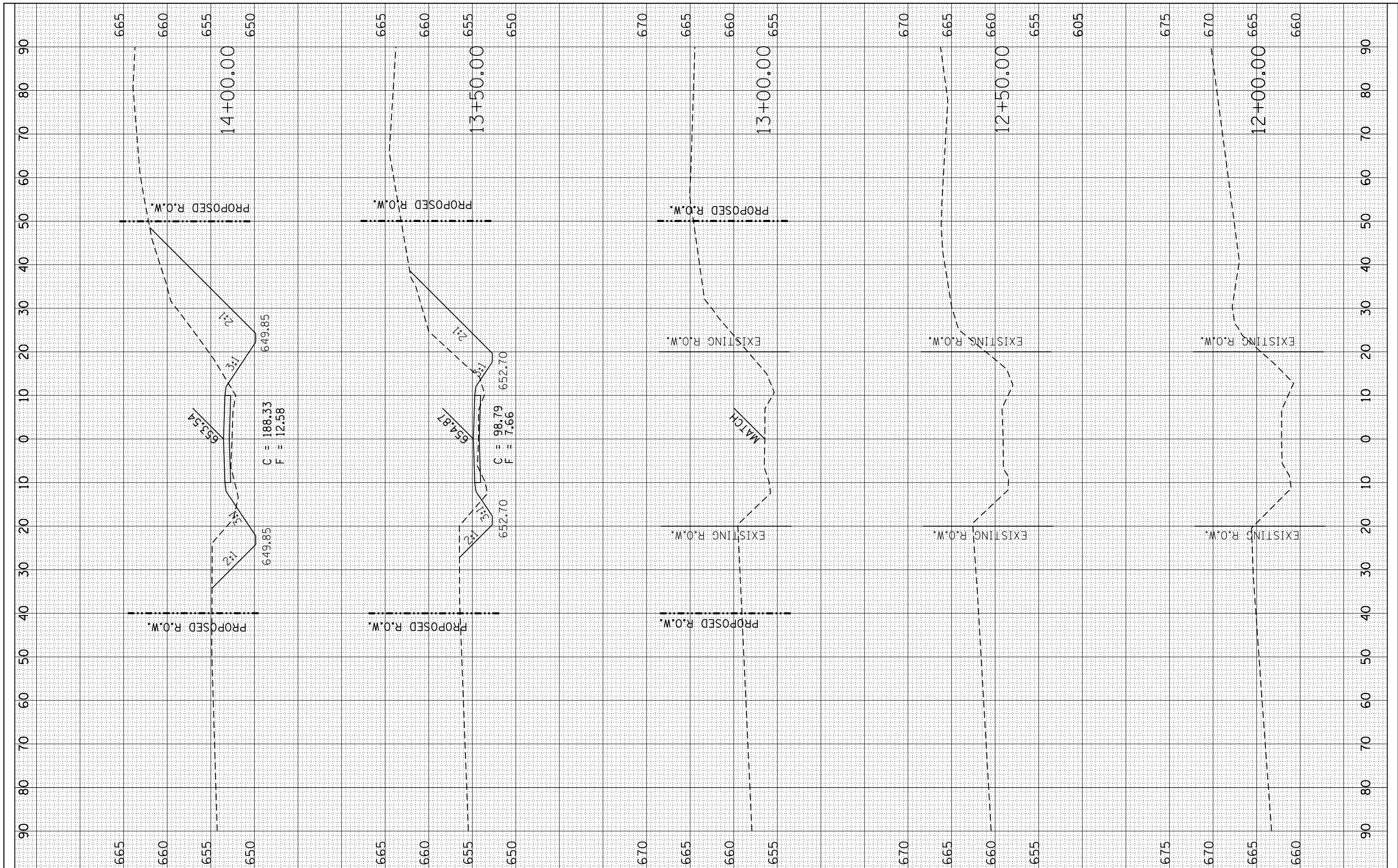
| REVISIONS |      |
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| NAME      | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL BRIDGE DETAILS**  
 TR 5 OVER COTTONWOOD CREEK  
 CUMBERLAND SECTION 10-01125-00-BR  
 COLES SECTION 10-11138-00-BR  
 CUMBERLAND COUNTY STA. 15+05  
 STRUCTURE NO. 018-5020  
 SCALE: N.T.S. DRAWN BY ALB  
 DATE CHECKED BY

PLOT DATE = 1/2/2018  
 PLOT SCALE = 1/8" = 1'-0"  
 USER NAME = Eros

|                  |                                |    |      |
|------------------|--------------------------------|----|------|
| FINAL SURVEY NO. | SURVEYED PLOTTED AREAS CHECKED | BY | DATE |
|                  |                                |    |      |
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FILE NAME = P:\Civil\1\CUMBERLAND\_COUNTY\Cottonwood.1.611308

USER NAME = Sts15  
 DRAWN -  
 CHECKED -  
 DATE -  
 PLOT SCALE = 20.0000' / in.  
 PLOT DATE = 1/3/2018

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

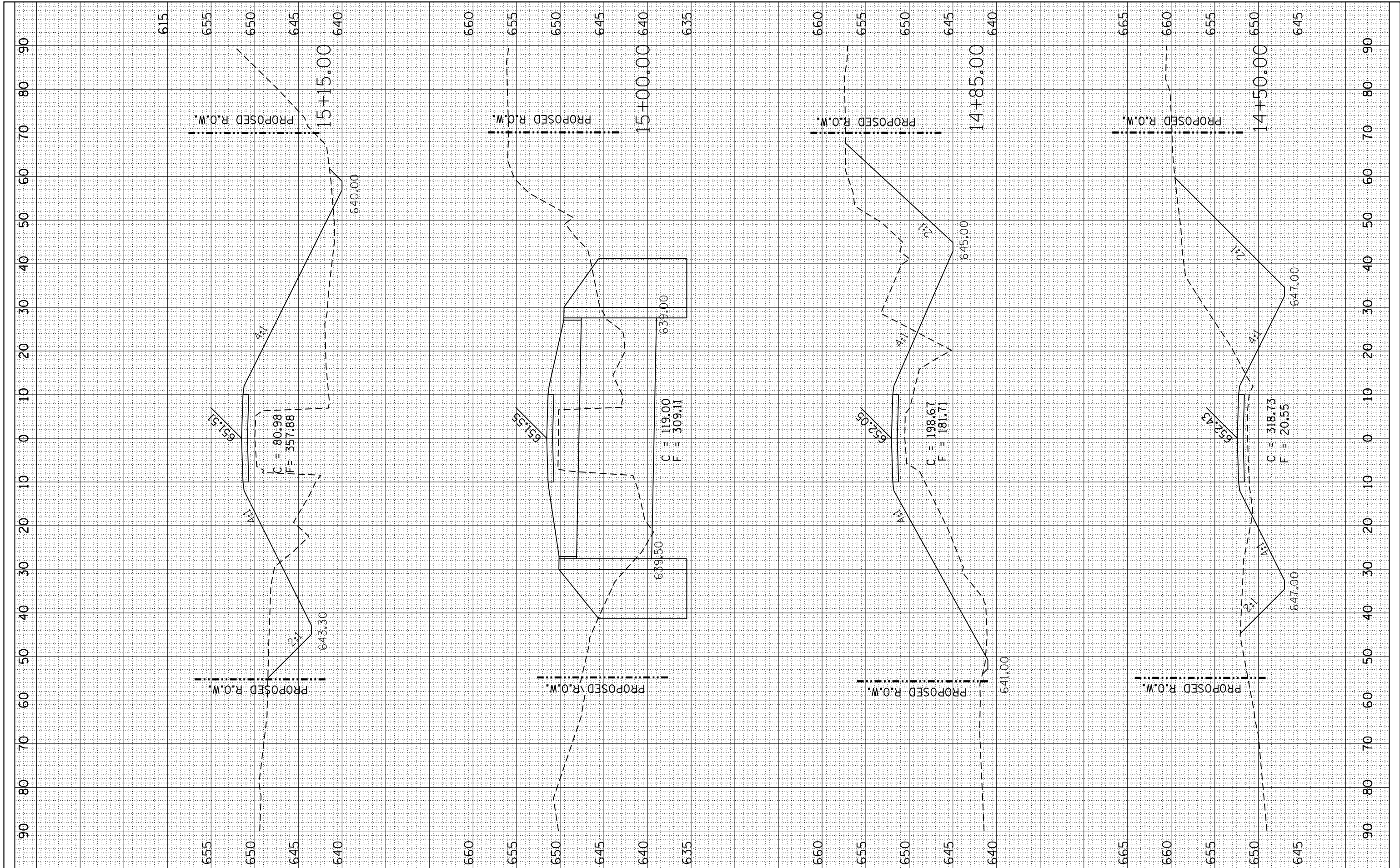
**CROSS SECTIONS  
 TR 5 OVER COTTONWOOD CREEK**

SCALE: SHEET OF SHEETS STA. 12+00.00 TO STA. 14+00.00

|                    |                                  |                     |                           |           |
|--------------------|----------------------------------|---------------------|---------------------------|-----------|
| F.A. RTE.          | SECTION                          | COUNTY              | TOTAL SHEETS              | SHEET NO. |
|                    | 10-01125-00-BR<br>10-11138-00-BR | Cumberland<br>Coles | 9                         | 6         |
| CONTRACT NO. 95828 |                                  |                     | ILLINOIS FED. AID PROJECT |           |

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

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



FILE NAME = P:\Civil\CUMBERLAND COUNTY\Cottonwood.1.611308

USER NAME = Sts15  
 PLOT SCALE = 20.0000' / in.  
 PLOT DATE = 1/3/2018

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

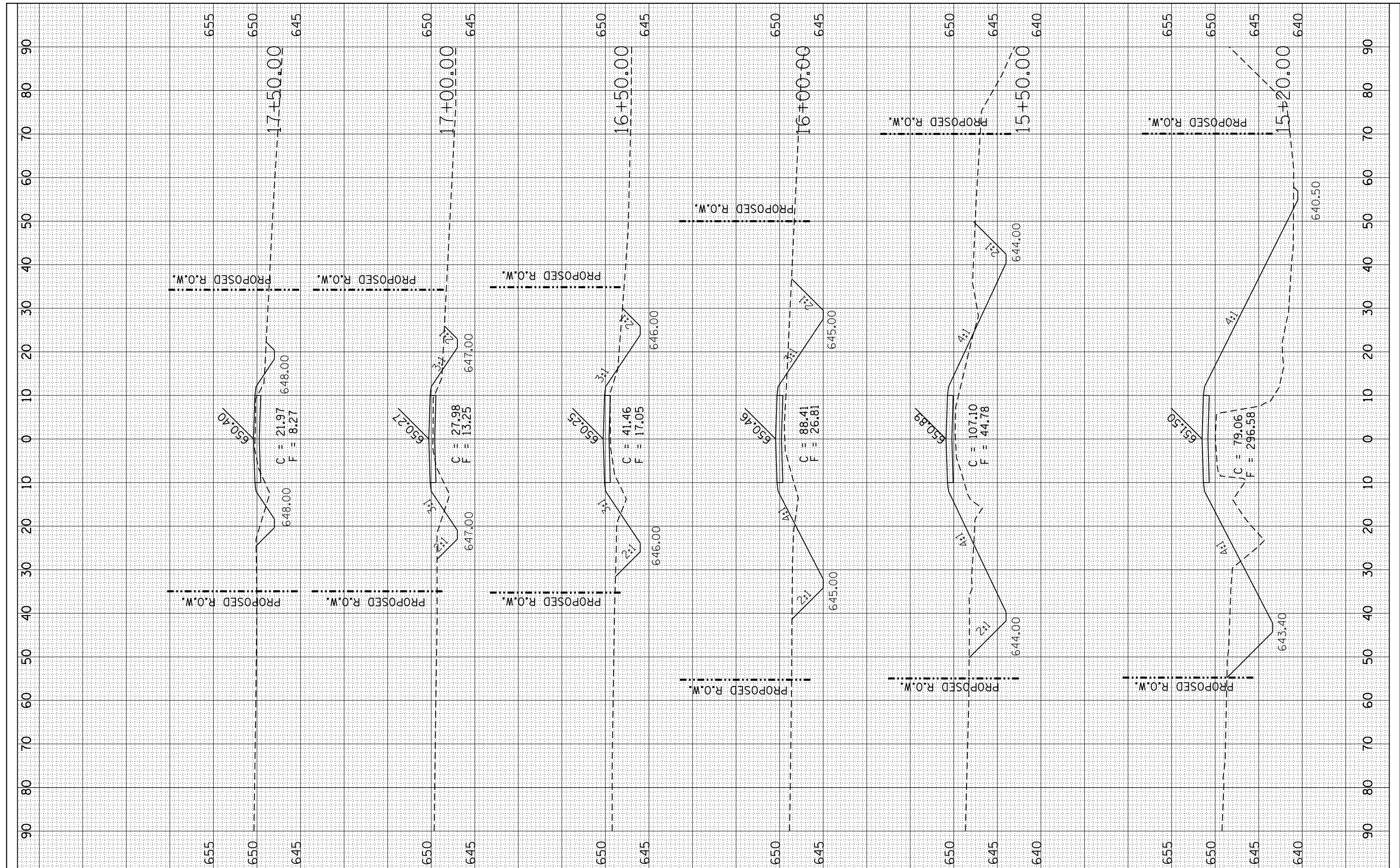
**CROSS SECTIONS  
 TR 5 OVER COTTONWOOD CREEK**

SCALE: SHEET OF SHEETS STA. 14+50.00 TO STA. 15+15.00

|                           |                |                  |              |           |
|---------------------------|----------------|------------------|--------------|-----------|
| F.A. RTE.                 | SECTION        | COUNTY           | TOTAL SHEETS | SHEET NO. |
|                           | 10-11138-00-BR | Cumberland Coles | 9            | 7         |
| CONTRACT NO. 95828        |                |                  |              |           |
| ILLINOIS FED. AID PROJECT |                |                  |              |           |

|                  |   |    |      |
|------------------|---|----|------|
| FINAL SURVEY NO. | SURVEYED PLOTTED TEMPLATE AREAS CHECKED | BY | DATE |
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| ORIGINAL SURVEY NO. | SURVEYED PLOTTED TEMPLATE AREAS CHECKED | BY | DATE |
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FILE NAME = P:\Civil\1\CUMBERLAND\_COUNTY\Cottonwood.1.611308

USER NAME = Ste15  
 DRAWN -  
 CHECKED -  
 DATE -  
 PLOT SCALE = 20.0000' / in.  
 PLOT DATE = 1/3/2018

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 TR 5 OVER COTTONWOOD CREEK**

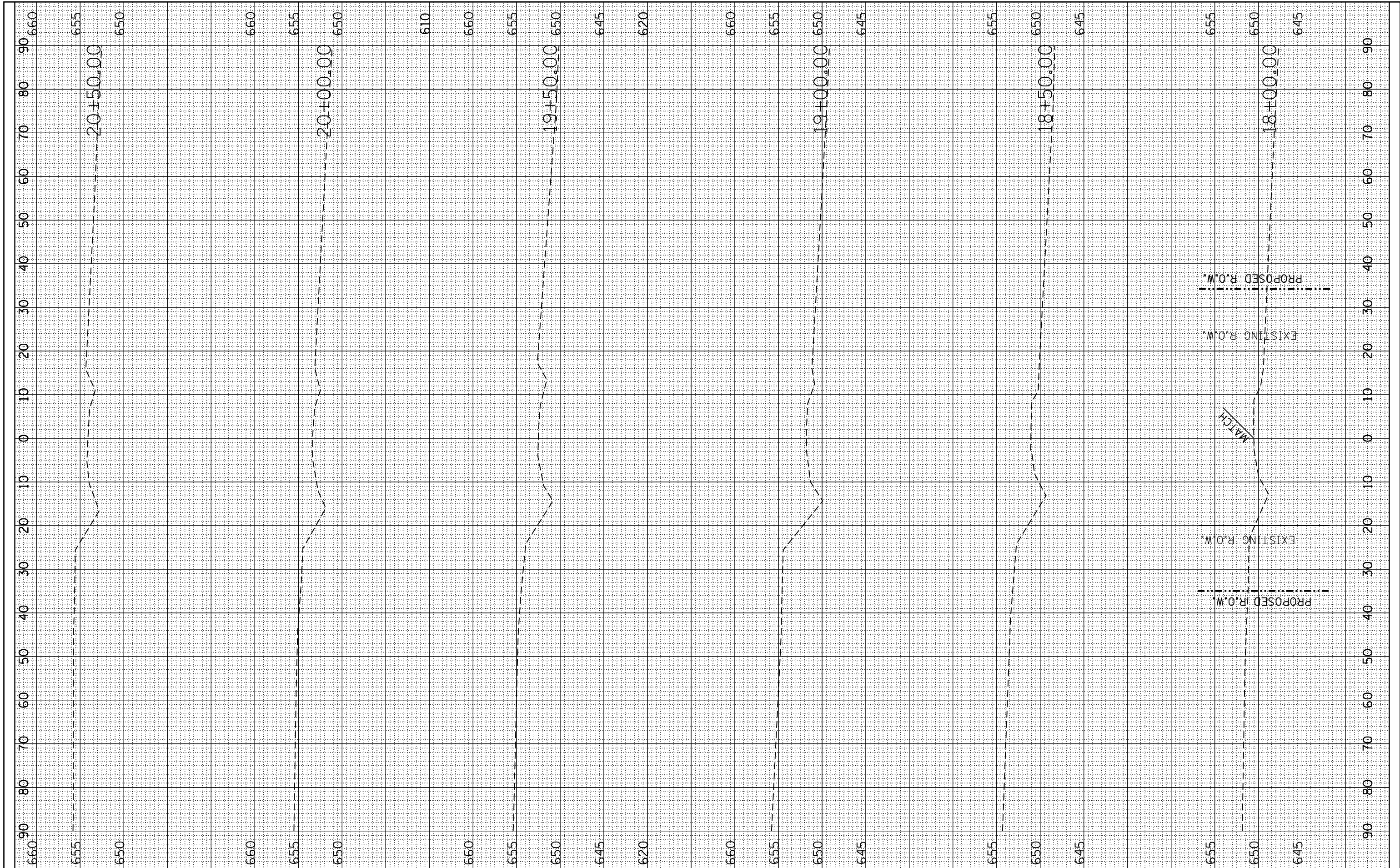
SCALE: SHEET OF SHEETS STA. 15+20.00 TO STA. 17+50.00

|                    |                                  |                     |                           |           |
|--------------------|----------------------------------|---------------------|---------------------------|-----------|
| F.A. RTE.          | SECTION                          | COUNTY              | TOTAL SHEETS              | SHEET NO. |
|                    | 10-01125-00-BR<br>10-11138-00-BR | Cumberland<br>Coles | 9                         | 8         |
| CONTRACT NO. 95828 |                                  |                     | ILLINOIS FED. AID PROJECT |           |



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

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



FILE NAME = P:\Civil\CUMBERLAND COUNTY\Cottonwood.1.611308

USER NAME = Sts15  
 PLOT SCALE = 20.0000' / in.  
 PLOT DATE = 1/3/2018

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET OF SHEETS STA. 18+50 TO STA. 20+50

|                    |                                  |                     |                           |           |
|--------------------|----------------------------------|---------------------|---------------------------|-----------|
| F.A. RTE.          | SECTION                          | COUNTY              | TOTAL SHEETS              | SHEET NO. |
|                    | 10-01125-00-BR<br>10-11138-00-BR | Cumberland<br>Coles | 9                         | 9         |
| CONTRACT NO. 95828 |                                  |                     | ILLINOIS FED. AID PROJECT |           |