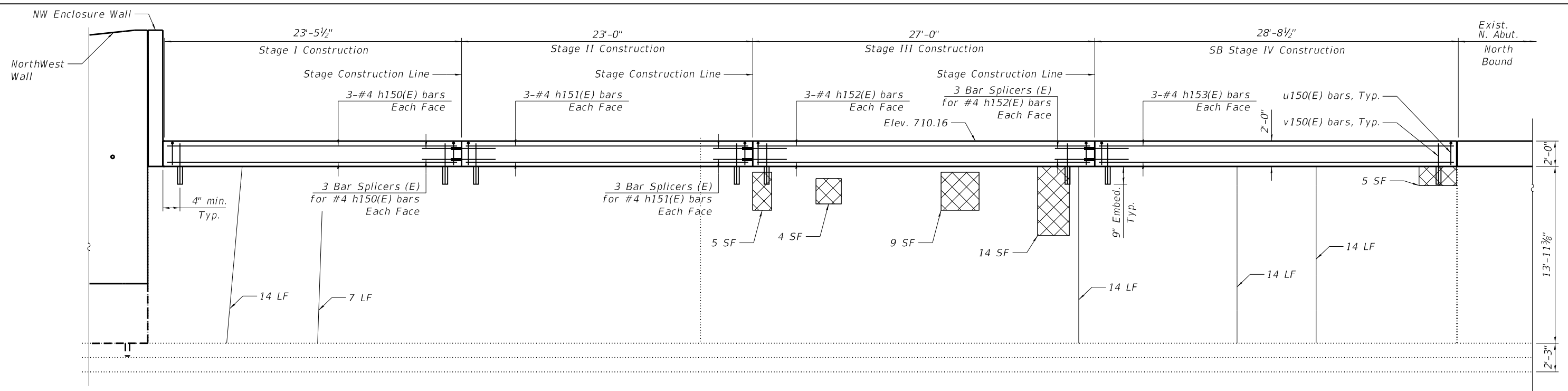
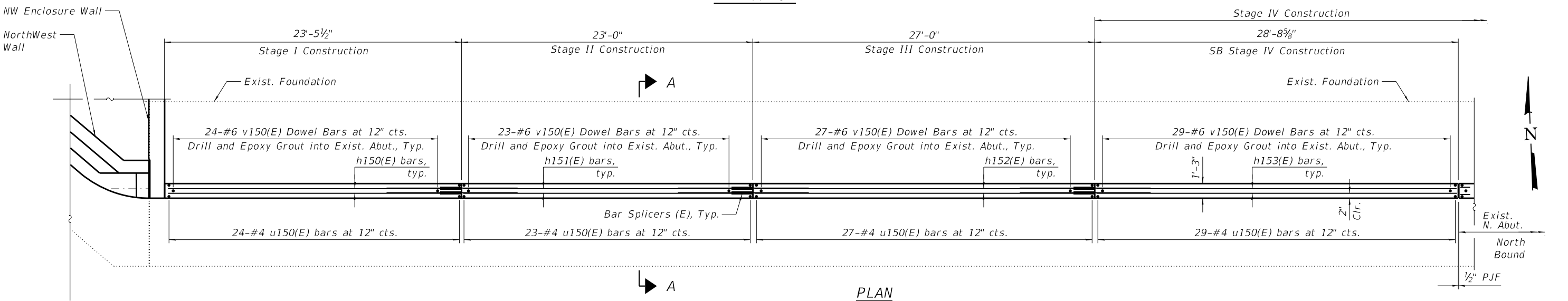




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**ELEVATION**

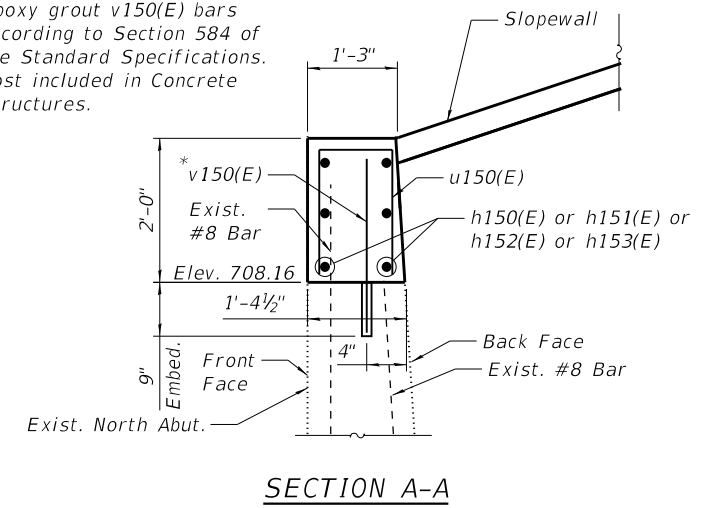


**PLAN**

**NOTES:**

- Reinforcement bars designated (E) shall be epoxy coated.
- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- For Slope Wall details, see Sheet SB-03.
- For NW Enclosure Wall details, see Sheet SB-65.

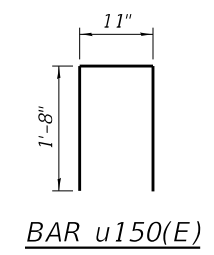
\*Epoxy grout v150(E) bars according to Section 584 of the Standard Specifications. Cost included in Concrete Structures.



**SECTION A-A**

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- LF Linear Foot
- SF Square Foot



**BILL OF MATERIAL**

| Bar  | No. | Size | Length | Shape |       |
|--|-----|------|--------|-------|-------|
| h150(E)  | 6   | #4   | 23'-1" | —     |       |
| h151(E)  | 6   | #4   | 22'-8" | —     |       |
| h152(E)  | 6   | #4   | 26'-8" | —     |       |
| h153(E)  | 6   | #4   | 28'-4" | —     |       |
| v150(E)  | 103 | #6   | 2'-7"  | —     |       |
| u150(E)  | 103 | #4   | 4'-3"  | □     |       |
| Concrete Structures  |     |      |        | Cu Yd | 10.0  |
| Concrete Sealer  |     |      |        | Sq Ft | 333   |
| Reinforcement Bars, Epoxy Coated                                     |     |      |        | Pound | 1,100 |
| Epoxy Crack Injection  |     |      |        | Foot  | 63    |
| Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches) |     |      |        | Sq Ft | 37    |



|              |                   |           |
|--------------|-------------------|-----------|
| USER NAME =  | DESIGNED - AGJ    | REVISED - |
| PLOT SCALE = | CHECKED - MI, JJS | REVISED - |
| PLOT DATE =  | DRAWN - AGJ       | REVISED - |
|              | CHECKED - MI, JJS | REVISED - |

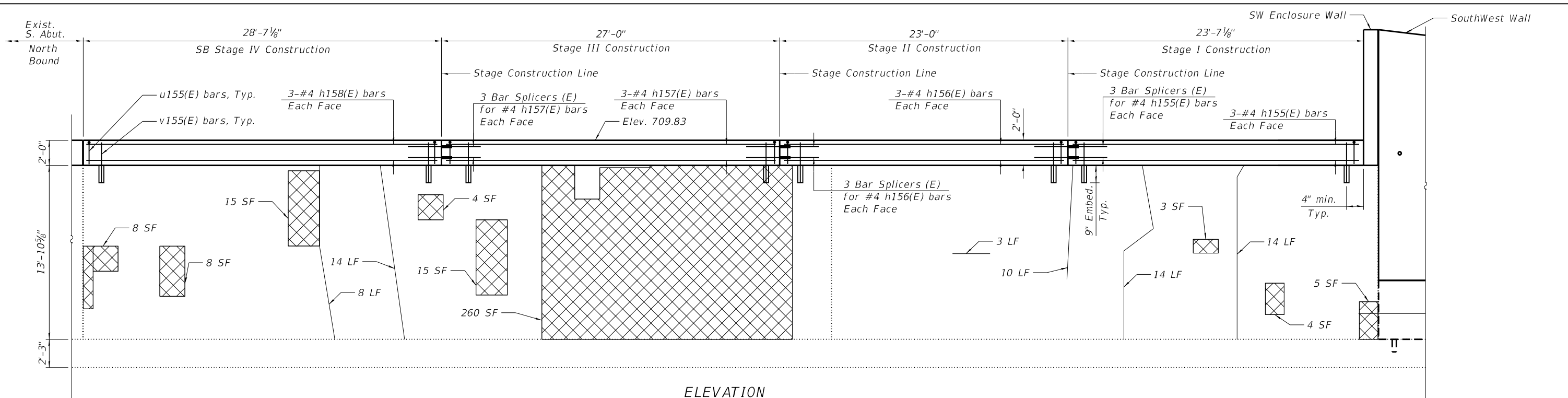
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SB EXIST. N. ABUT. MODIFICATIONS PLAN, ELEV. AND SECTIONS  
STRUCTURE NO. 016-1195**

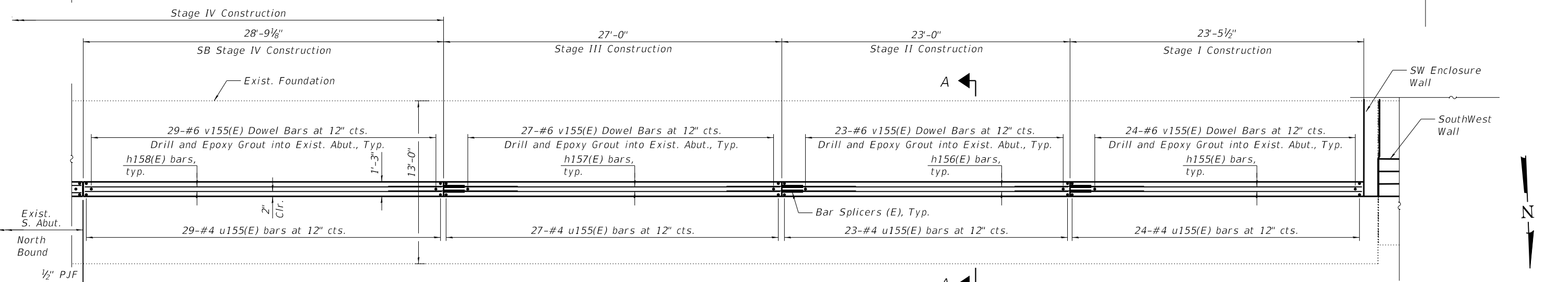
SHEET SB-48 OF SB-75 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 901       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

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**ELEVATION**

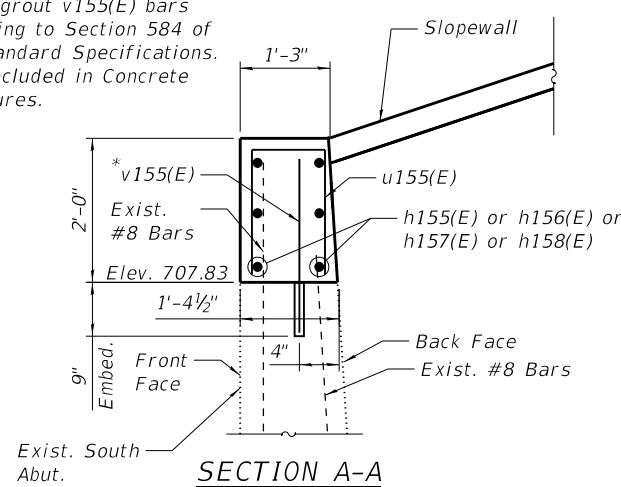


**PLAN**

**NOTES**

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
3. For Slope Wall details, see Sheet SB-03.
4. For SW Enclosure Wall details, see Sheet SB-64.

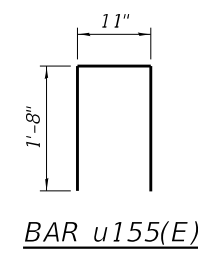
\* Epoxy grout v155(E) bars according to Section 584 of the Standard Specifications. Cost included in Concrete Structures.



**SECTION A-A**

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- LF Linear Foot
- SF Square Foot



**BILL OF MATERIAL**

| Bar  | No. | Size  | Length | Shape |
|--|-----|-------|--------|-------|
| h155(E)  | 6   | #4    | 28'-5" | —     |
| h156(E)  | 6   | #4    | 26'-8" | —     |
| h157(E)  | 6   | #4    | 22'-8" | —     |
| h158(E)  | 6   | #4    | 23'-1" | —     |
| v155(E)  | 103 | #6    | 2'-7"  | —     |
| u155(E)  | 103 | #4    | 4'-3"  | □     |
| Concrete Structures  |     | Cu Yd | 10.0   |       |
| Concrete Sealer  |     | Sq Ft | 333    |       |
| Reinforcement Bars, Epoxy Coated                                     |     | Pound | 1,100  |       |
| Epoxy Crack Injection  |     | Foot  | 63     |       |
| Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches) |     | Sq Ft | 322    |       |



|              |                   |           |
|--------------|-------------------|-----------|
| USER NAME =  | DESIGNED - AGJ    | REVISED - |
| PLOT SCALE = | CHECKED - MI, JJS | REVISED - |
| PLOT DATE =  | DRAWN - AGJ       | REVISED - |
|              | CHECKED - MI, JJS | REVISED - |

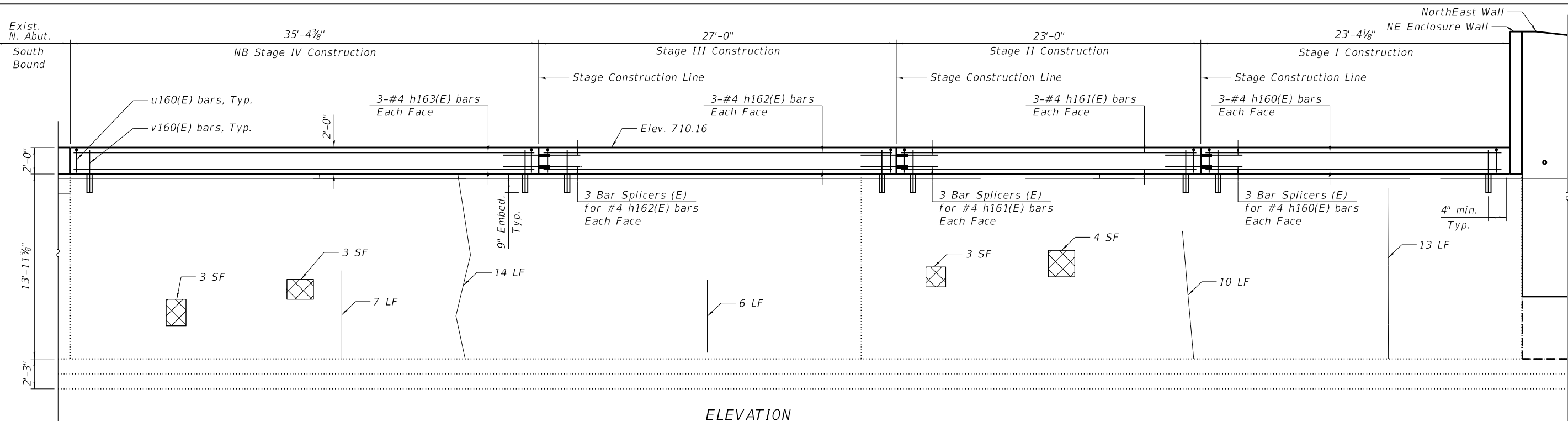
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SB EXIST. S. ABUT. MODIFICATIONS PLAN, ELEV. AND SECTIONS  
STRUCTURE NO. 016-1195**

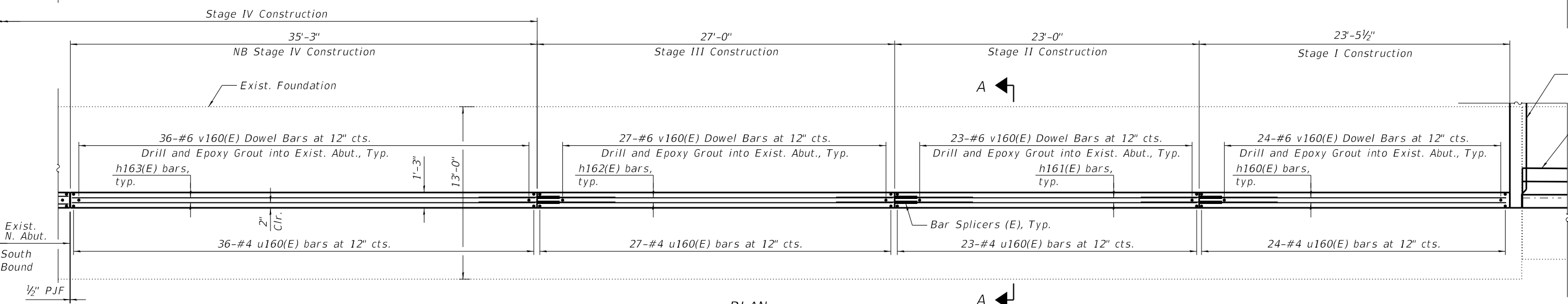
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| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 902       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

SHEET SB-49 OF SB-75 SHEETS

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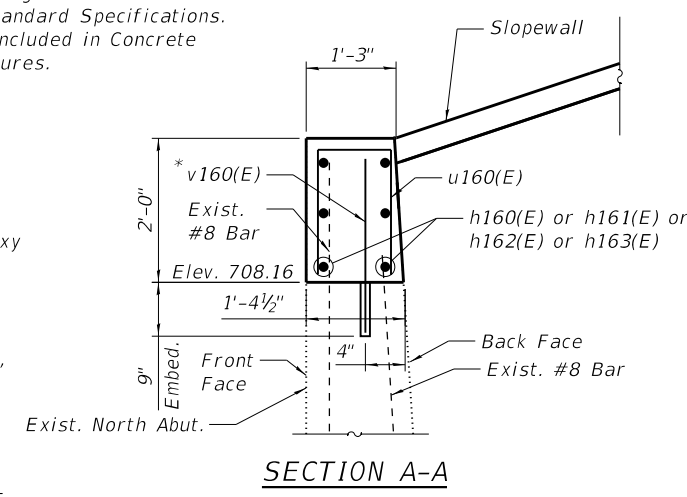


ELEVATION



PLAN

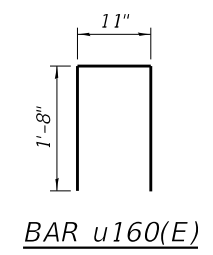
\*Epoxy grout v160(E) bars according to Section 584 of the Standard Specifications. Cost included in Concrete Structures.



SECTION A-A

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- LF Linear Foot
- SF Square Foot



BAR u160(E)

**BILL OF MATERIAL**

| Bar  | No. | Size  | Length  | Shape |
|--|-----|-------|---------|-------|
| h160(E)  | 6   | #4    | 34'-11" | —     |
| h161(E)  | 6   | #4    | 26'-8"  | —     |
| h162(E)  | 6   | #4    | 22'-8"  | —     |
| h163(E)  | 6   | #4    | 23'-1"  | —     |
|  |     |       |         |       |
| v160(E)  | 110 | #6    | 2'-7"   | —     |
|  |     |       |         |       |
| u160(E)  | 110 | #4    | 4'-3"   | ⊏     |
| Concrete Structures  |     | Cu Yd | 10.6    |       |
| Concrete Sealer  |     | Sq Ft | 354     |       |
| Reinforcement Bars, Epoxy Coated                                     |     | Pound | 1,170   |       |
| Epoxy Crack Injection  |     | Foot  | 50      |       |
| Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches) |     | Sq Ft | 13      |       |

- NOTES:**
- Reinforcement bars designated (E) shall be epoxy coated.
  - Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
  - For Slope Wall details, see Sheet SB-03.
  - For NE Enclosure Wall details, see Sheet SB-65.



|              |                   |             |
|--------------|-------------------|-------------|
| USER NAME =  | DESIGNED - AGJ    | REVISIONS - |
| PLOT SCALE = | CHECKED - MI, JJS | REVISIONS - |
| PLOT DATE =  | DRAWN - AGJ       | REVISIONS - |
|              | CHECKED - MI, JJS | REVISIONS - |

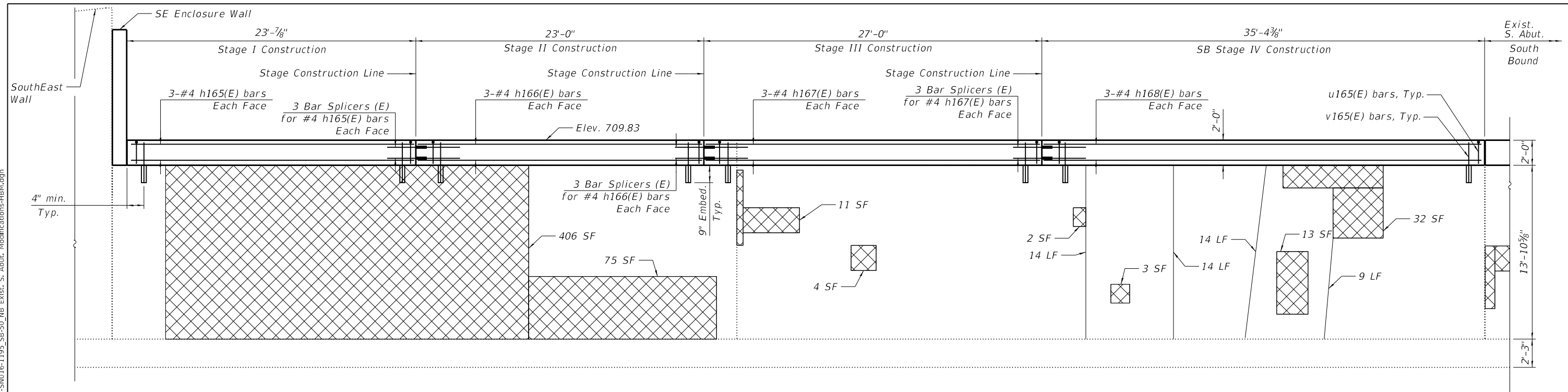
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**NB EXIST. N. ABUT. MODIFICATIONS PLAN, ELEV. AND SECTIONS STRUCTURE NO. 016-1195**

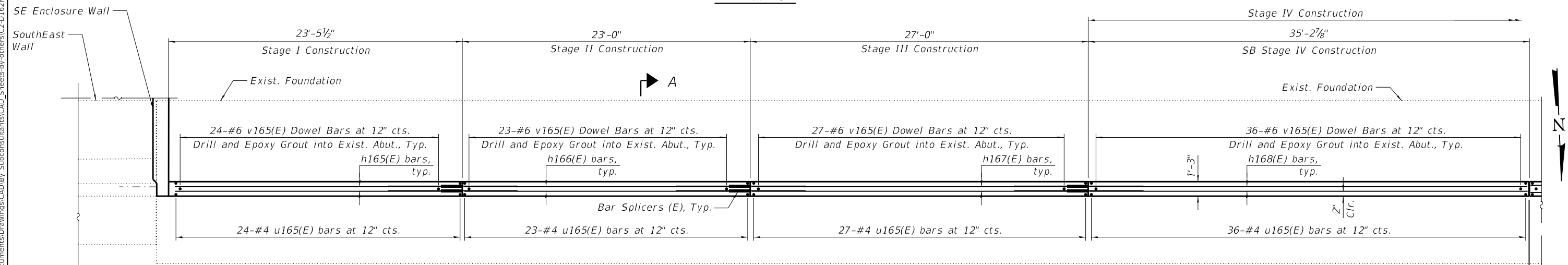
SHEET SB-50 OF SB-75 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 903       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

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**ELEVATION**

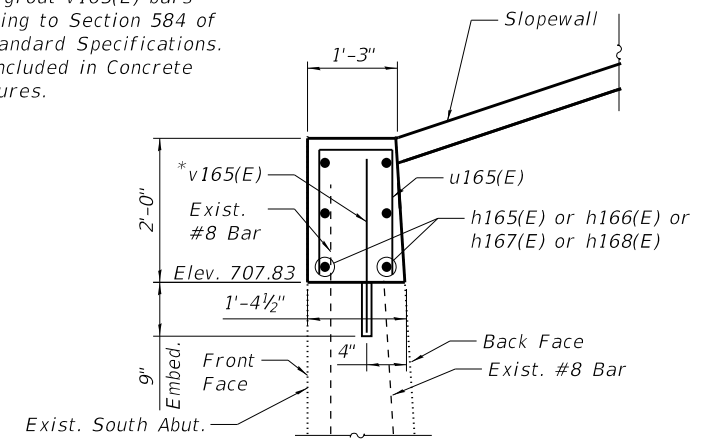


**PLAN**

\* Epoxy grout v165(E) bars according to Section 584 of the Standard Specifications. Cost included in Concrete Structures.

**NOTES**

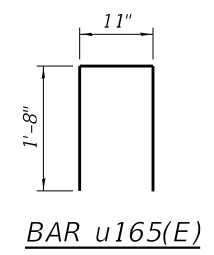
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
3. For Slope Wall details, see Sheet SB-03.
4. For SE Enclosure Wall details, see Sheet SB-64.



**SECTION A-A**

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- LF Linear Foot
- SF Square Foot



**BILL OF MATERIAL**

| Bar  | No. | Size | Length  | Shape |
|--|-----|------|---------|-------|
| h165(E)  | 6   | #4   | 23'-1"  | —     |
| h166(E)  | 6   | #4   | 22'-8"  | —     |
| h167(E)  | 6   | #4   | 26'-8"  | —     |
| h168(E)  | 6   | #4   | 34'-10" | —     |
| v165(E)  | 110 | #6   | 2'-7"   | —     |
| u165(E)  | 110 | #4   | 4'-3"   | □     |
| Concrete Structures  |     |      | Cu Yd   | 10.6  |
| Concrete Sealer  |     |      | Sq Ft   | 354   |
| Reinforcement Bars, Epoxy Coated                                     |     |      | Pound   | 1,170 |
| Epoxy Crack Injection  |     |      | Foot    | 51    |
| Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches) |     |      | Sq Ft   | 546   |



|              |                   |           |
|--------------|-------------------|-----------|
| USER NAME =  | DESIGNED - AGJ    | REVISED - |
|              | CHECKED - MI, JJS | REVISED - |
| PLOT SCALE = | DRAWN - AGJ       | REVISED - |
| PLOT DATE =  | CHECKED - MI, JJS | REVISED - |

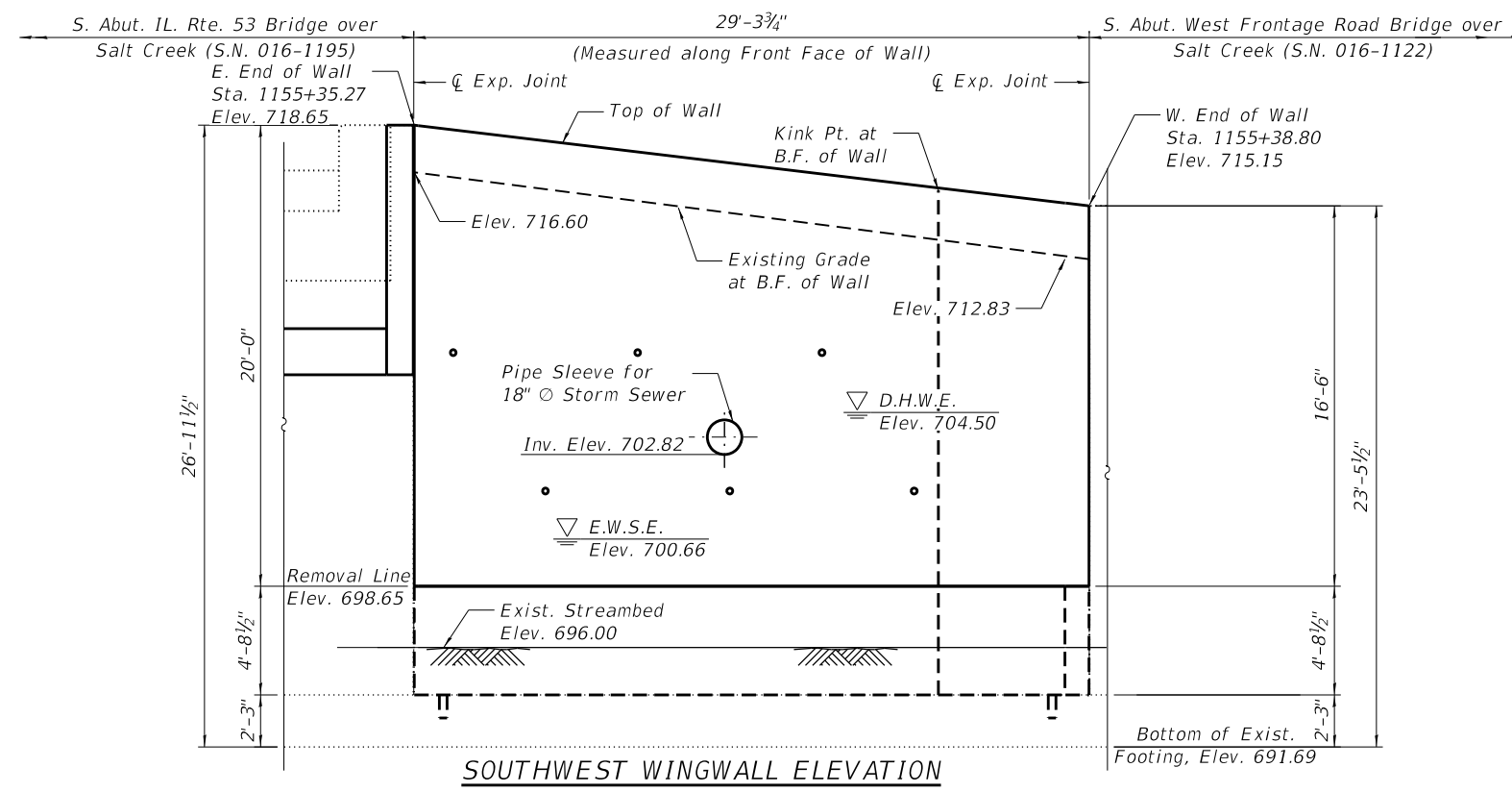
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**NB EXIST. S. ABUT. MODIFICATIONS PLAN, ELEV. AND SECTIONS  
STRUCTURE NO. 016-1195**

SHEET SB-51 OF SB-75 SHEETS

| F.A.P. RTE.        | SECTION     | COUNTY   | TOTAL SHEETS     | SHEET NO. |
|--------------------|-------------|----------|------------------|-----------|
| 342                | 2018-100-BR | COOK     | 1351             | 904       |
| CONTRACT NO. 62N91 |             |          |                  |           |
|                    |             | ILLINOIS | FED. AID PROJECT |           |

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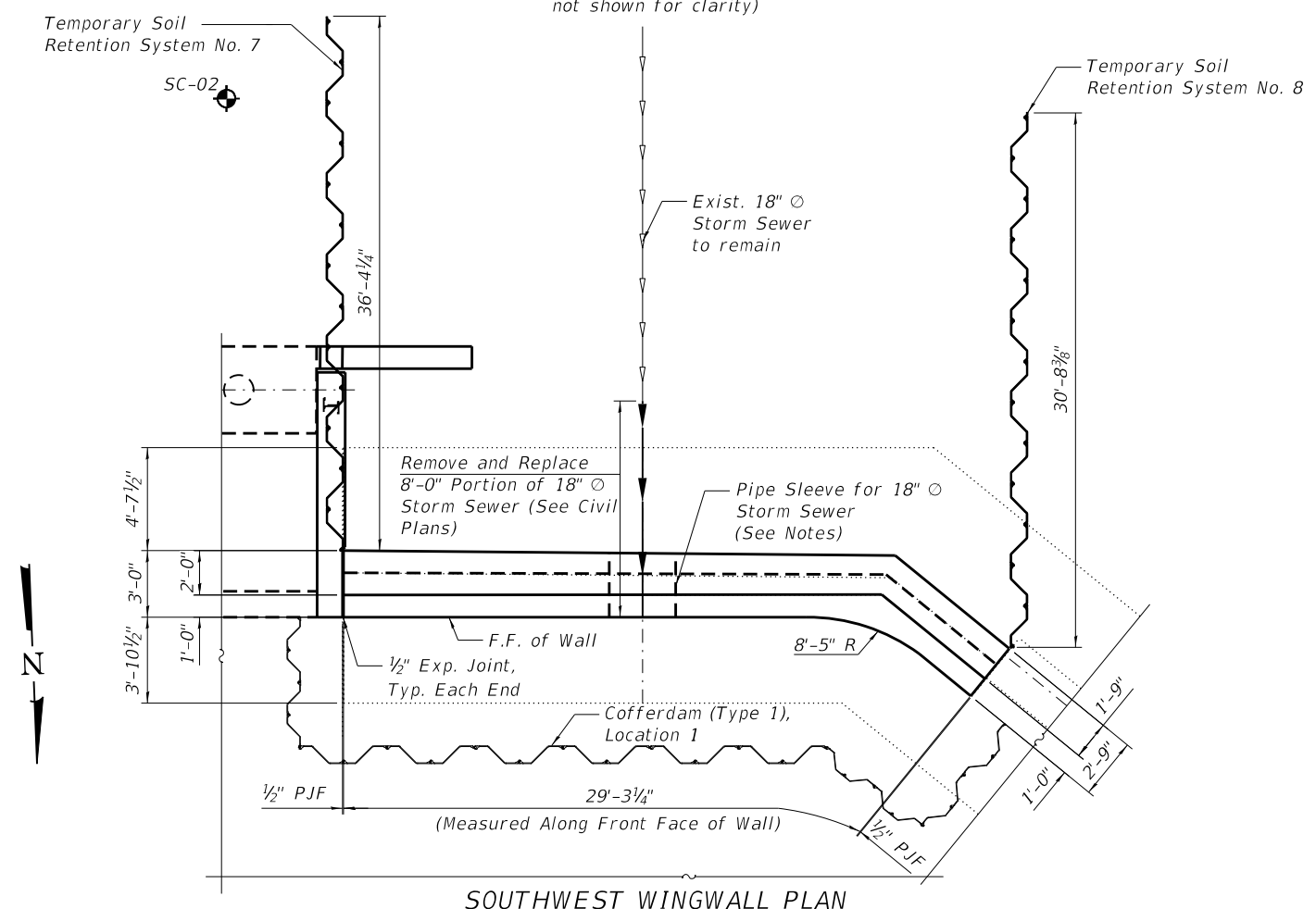
**SOUTHWEST WINGWALL ELEVATION**  
(Looking South)  
(Exist. Untreated Timber Piles not shown for clarity)

**NOTES:**

1. The Contractor shall take all necessary precautions to protect the existing 18"  $\varnothing$  storm sewer, existing conduits and adjacent structures during removal/reconstruction of the wingwall. Any damage to these, or other, elements caused by the Contractor during performance of the work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
2. Existing Storm Sewer to be supported during removal and construction operations. Method of support to be approved by the Engineer. Cost of supporting existing storm sewer shall not be paid separately and shall be included with Structure Excavation.
3. Existing elevations have been taken from historical plans and shall be verified prior to Construction.
4. The required steel sleeve diameter and steel sleeve wall thickness shall be determined by the Contractor prior to reconstructing the wall.
5. For Structure Excavation and Removal details, see Sheet SB-54.
6. For Temporary Soil Retention Systems and Backfill Details, see Sheet SB-55.
7. The Contractor shall exercise extreme caution during removal and construction operations to make certain that all related activities, live load surcharge, structure excavation, installation of Temporary Soil Retention Systems and other loads applied will not have detrimental effects on the adjacent abutments and roadway. Any damage to the adjacent abutments or roadway during removal and construction operations shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.

**SCOPE OF WORK**

1. Install Temporary Soil Retention Systems and Cofferdam (Type 1).
2. Excavate behind the existing retaining wall to the top of existing footing elevation; provide temporary support for existing 18"  $\varnothing$  Storm Sewer as required.
3. Remove Existing Concrete Retaining wall to the elevation indicated on the Plans.
4. Remove and replace northernmost 8'-0" of existing 18"  $\varnothing$  Storm Sewer. See Civil Plans.
5. Perform Epoxy Crack Injection for existing crack on F.F. of retaining wall portion to remain.
6. Drill and grout dowel bars and reconstruct proposed concrete retaining wall.
7. Backfill at B.F. of retaining wall to the elevations indicated on the plans and apply Protective Coat to all exposed faces of new concrete.



**SOUTHWEST WINGWALL PLAN**  
(Exist. Untreated Timber Piles not shown for clarity)

**LEGEND**

- Exist. Storm Sewer
- Soil Boring Log
- Prop. Temporary Soil Retention System
- Cofferdam (Type 1), Location 1
- Prop. Storm Sewer
- F.F. Front Face
- B.F. Back Face



|              |                    |             |
|--------------|--------------------|-------------|
| USER NAME =  | DESIGNED - FL, AGJ | REVISIONS - |
|              | CHECKED - MI, JJS  | REVISIONS - |
| PLOT SCALE = | DRAWN - FL, AGJ    | REVISIONS - |
| PLOT DATE =  | CHECKED - MI, JJS  | REVISIONS - |

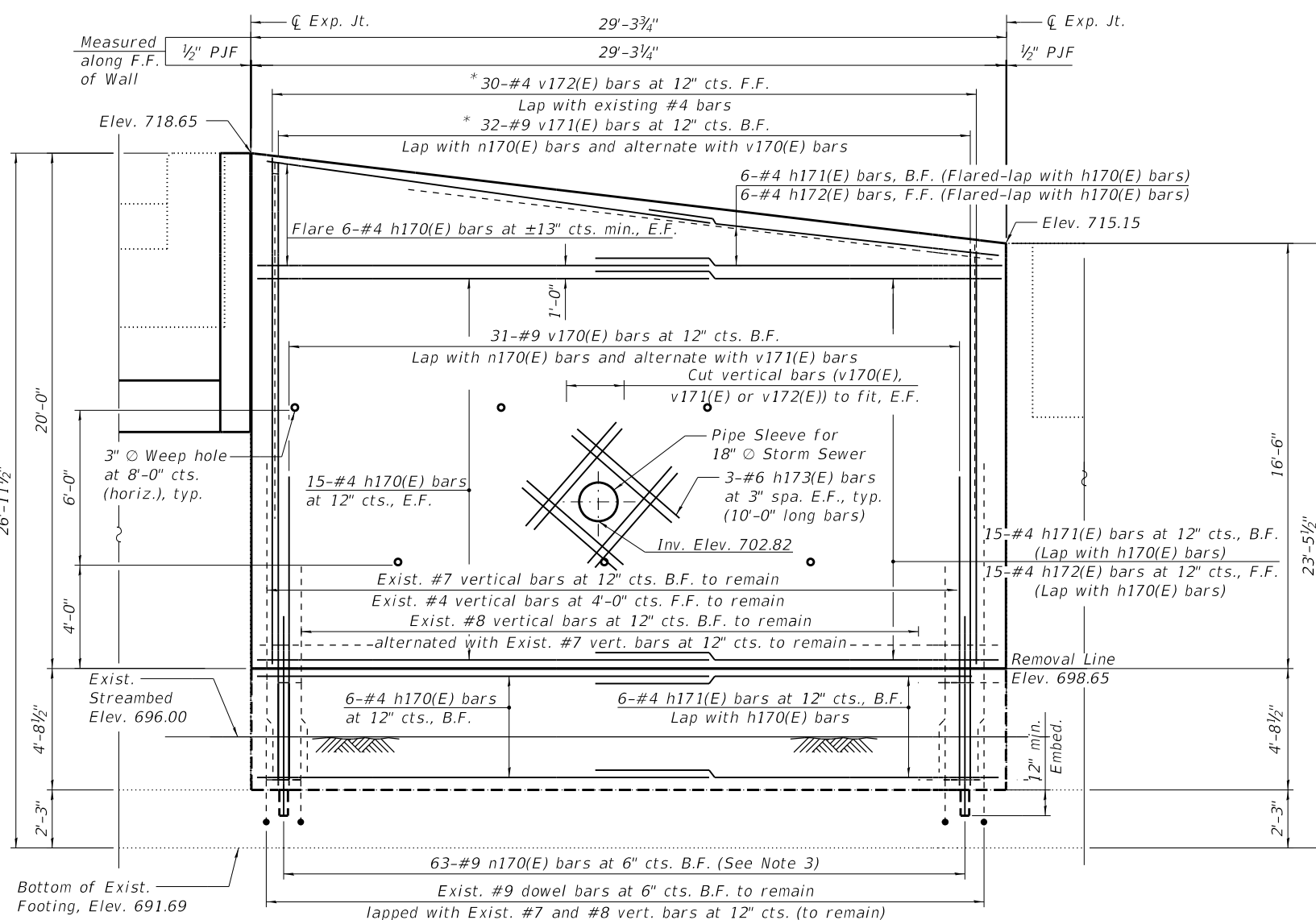
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOUTHWEST WALL - PLAN AND ELEVATION  
STRUCTURE NO. 016-1195**

SHEET SB-52 OF SB-75 SHEETS

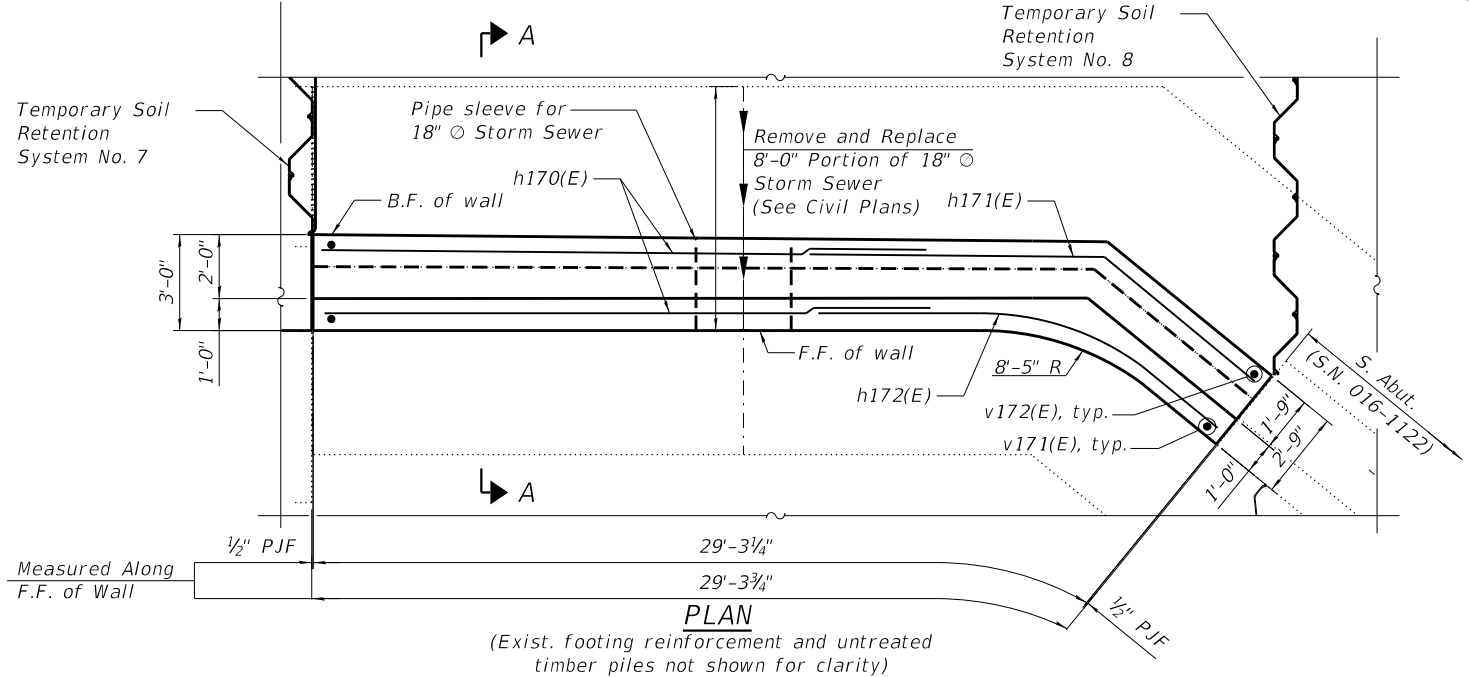
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| F.A.P. RTE.        | SECTION     | COUNTY   | TOTAL SHEETS     | SHEET NO. |
| 342                | 2018-100-BR | COOK     | 1351             | 905       |
| CONTRACT NO. 62N91 |             |          |                  |           |
|                    |             | ILLINOIS | FED. AID PROJECT |           |

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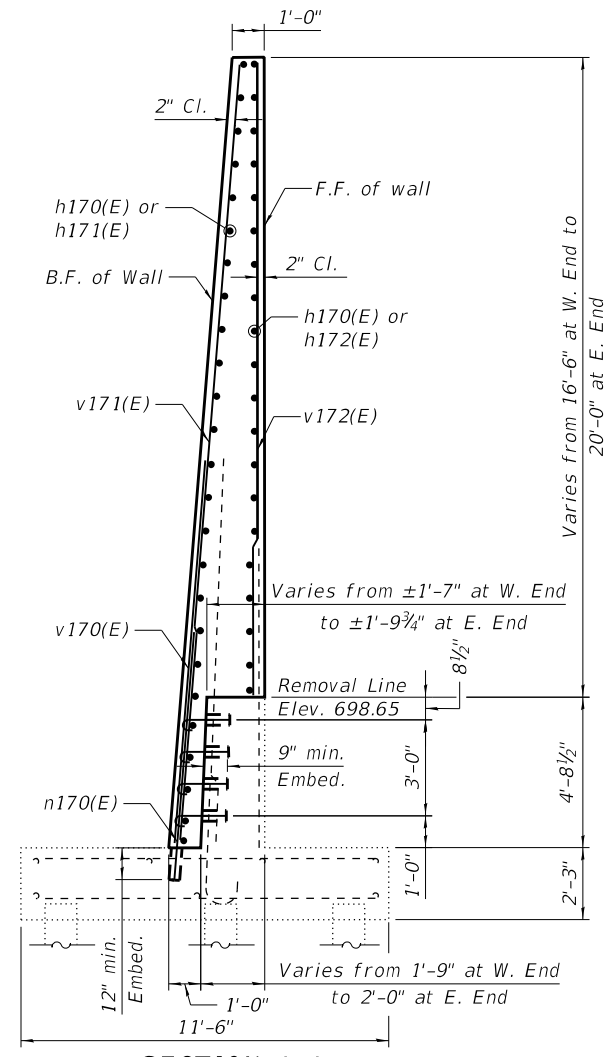
**ELEVATION**  
(Looking South)

(Exist. Untreated Timber Piles not shown for clarity)



**PLAN**

(Exist. footing reinforcement and untreated timber piles not shown for clarity)

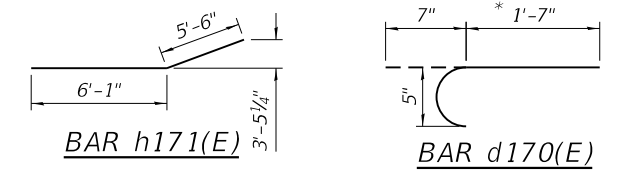


**SECTION A-A**

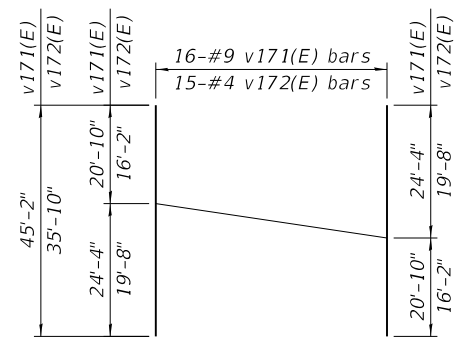
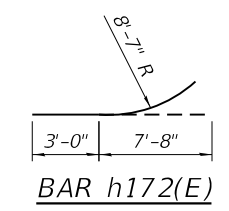
\* Cut to Fit in Field

**BILL OF MATERIAL**

| Bar                              | No. | Size  | Length  | Shape |
|----------------------------------|-----|-------|---------|-------|
| d170(E)                          | 58  | #5    | 2'-2"   | C     |
| h170(E)                          | 48  | #4    | 21'-6"  | —     |
| h171(E)                          | 27  | #4    | 11'-7"  | —     |
| h172(E)                          | 21  | #4    | 10'-8"  | —     |
| h173(E)                          | 24  | #6    | 10'-0"  | —     |
| v170(E)                          | 31  | #9    | 14'-0"  | —     |
| v171(E)                          | 16  | #9    | 45'-2"  | —     |
| v172(E)                          | 15  | #4    | 35'-10" | —     |
| n170(E)                          | 63  | #9    | 10'-2"  | —     |
| Concrete Structures              |     | Cu Yd | 38.2    |       |
| Reinforcement Bars, Epoxy Coated |     | Pound | 8,010   |       |
| Concrete Sealer                  |     | Sq Ft | 544     |       |

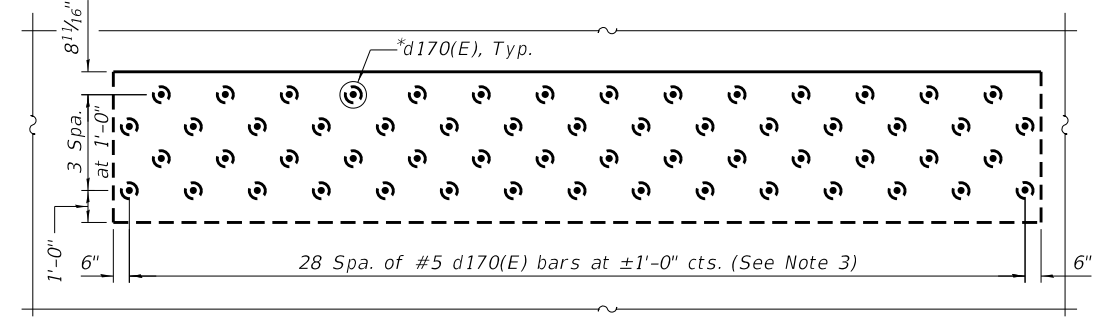


| Bar | Lap    |
|-----|--------|
| #4  | 2'-11" |
| #9  | 9'-2"  |



**FIELD CUTTING DIAGRAM**

Order v171(E) and v172(E) bars full length. Cut as shown and use remainder of bars in opposite side



**ELEVATION - DRILL & GROUT LOCATIONS**

**LEGEND**

- Prop. Storm Sewer
- B.F. Back Face
- F.F. Front Face
- E.F. Each Face

**NOTES:**

1. Bars indicated thus, 16x2 - #5 etc., indicates 16 lines of #5 bars with 2 lengths per line.
2. For proposed Temporary Soil Retention System Nos. 7 and 8, see Sheet SB-55.
3. Epoxy grout d170(E) and n170(E) bars according to Section 584 of the Standard Specifications. Drill to miss existing reinforcement.



|              |                    |           |
|--------------|--------------------|-----------|
| USER NAME =  | DESIGNED - FL, AGJ | REVISED - |
| PLOT SCALE = | CHECKED - MI, JJS  | REVISED - |
| PLOT DATE =  | DRAWN - FL, AGJ    | REVISED - |
|              | CHECKED - MI, JJS  | REVISED - |

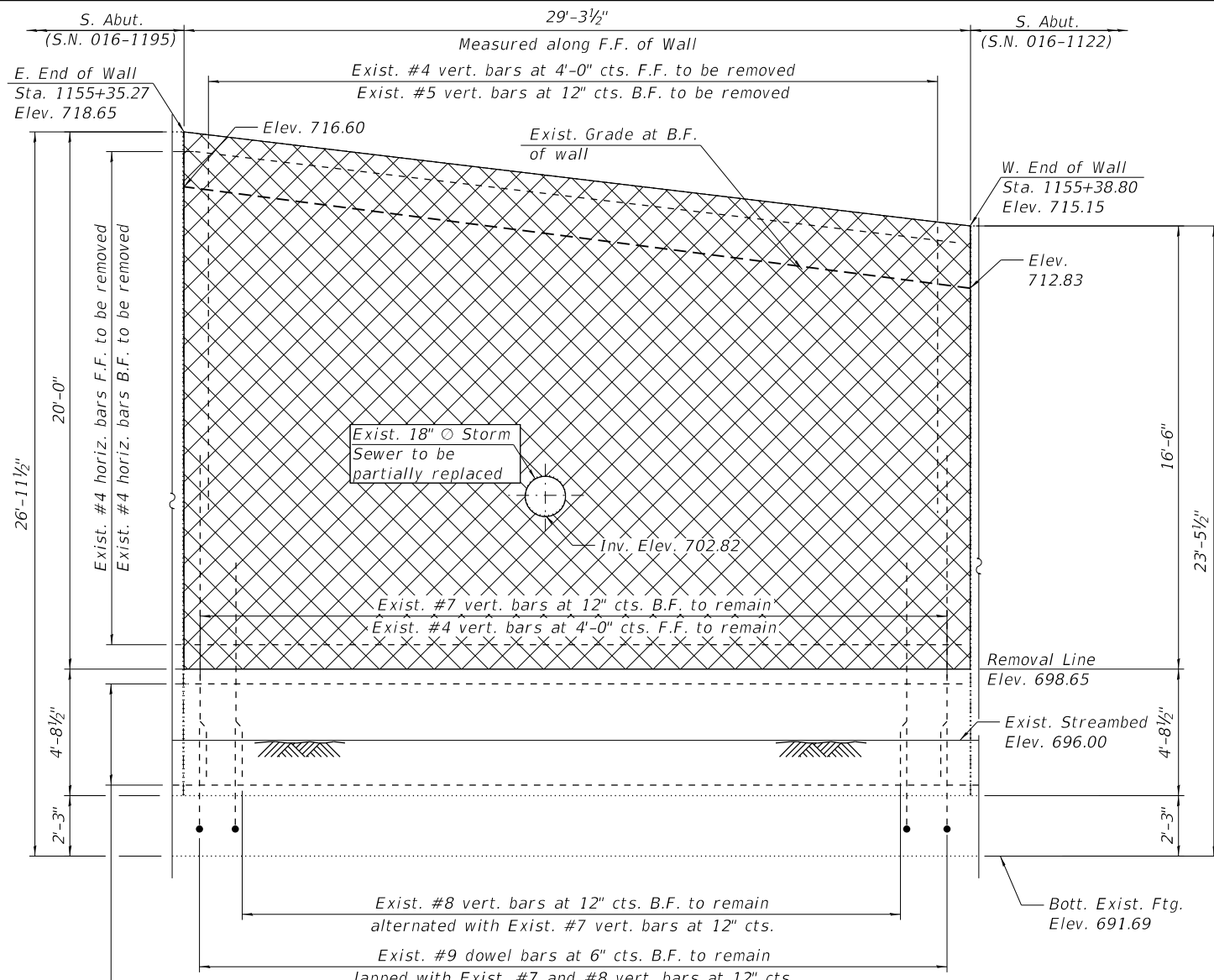
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOUTHWEST WALL - REINFORCEMENT, SECTIONS AND DETAILS  
STRUCTURE NO. 016-1195**

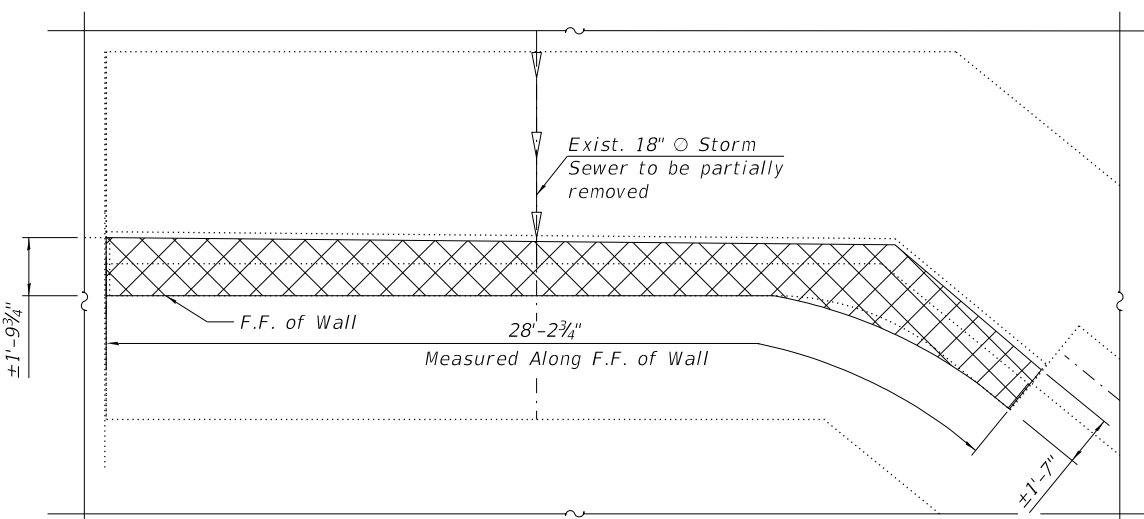
SHEET SB-53 OF SB-75 SHEETS

|                           |                       |               |                     |                 |
|---------------------------|-----------------------|---------------|---------------------|-----------------|
| F.A.P. R.T.E. = 342       | SECTION = 2018-100-BR | COUNTY = COOK | TOTAL SHEETS = 1351 | SHEET NO. = 906 |
| CONTRACT NO. 62N91        |                       |               |                     |                 |
| ILLINOIS FED. AID PROJECT |                       |               |                     |                 |

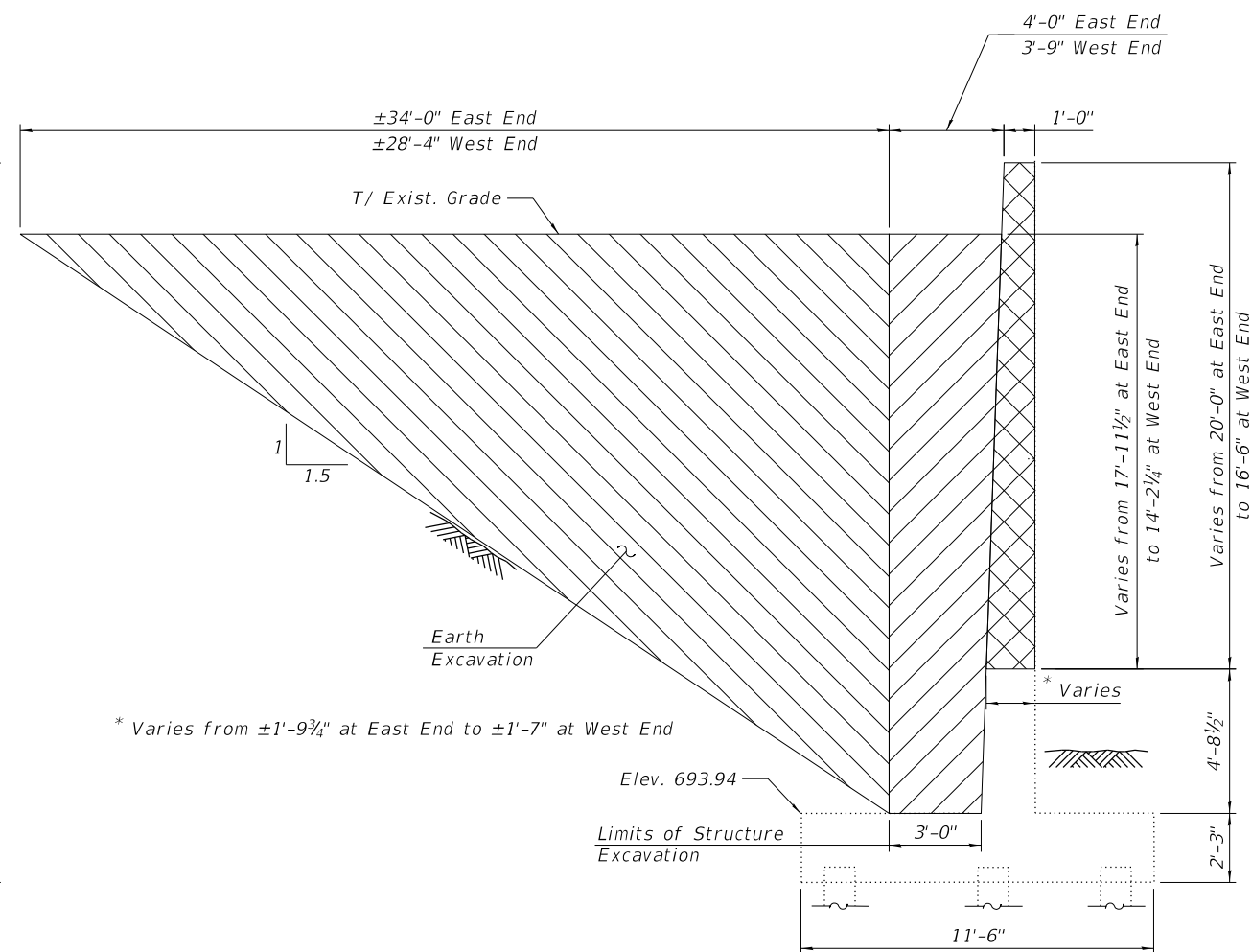
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**REMOVAL ELEVATION**  
 (Existing Untreated Timber Piles not shown for clarity)



**REMOVAL PLAN**  
 (Existing footing reinforcement and untreated timber piles not shown for clarity)



**STRUCTURE EXCAVATION**

\* Varies from ±1'-9 3/4" at East End to ±1'-7" at West End

**BILL OF MATERIAL**

| ITEM                 | UNIT  | QUANTITY |
|----------------------|-------|----------|
| Concrete Removal     | Cu Yd | 25.8     |
| Structure Excavation | Cu Yd | 85       |

**LEGEND**

- Concrete Removal
- Structure Excavation
- Earth Excavation
- Epoxy Crack Injection
- Exist. Storm Sewer
- B.F. Back Face
- F.F. Front Face
- LF Linear Feet

**NOTES:**

1. Existing Reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.
2. Any reinforcement bars that are damaged during concrete removal shall be replaced using an approved bar splicer or anchorage system. Cost incidental to Concrete Removal.



|              |                    |           |
|--------------|--------------------|-----------|
| USER NAME =  | DESIGNED - FL, AGJ | REVISED - |
| PLOT SCALE = | CHECKED - MI, JJS  | REVISED - |
| PLOT DATE =  | DRAWN - FL, AGJ    | REVISED - |
|              | CHECKED - MI, JJS  | REVISED - |

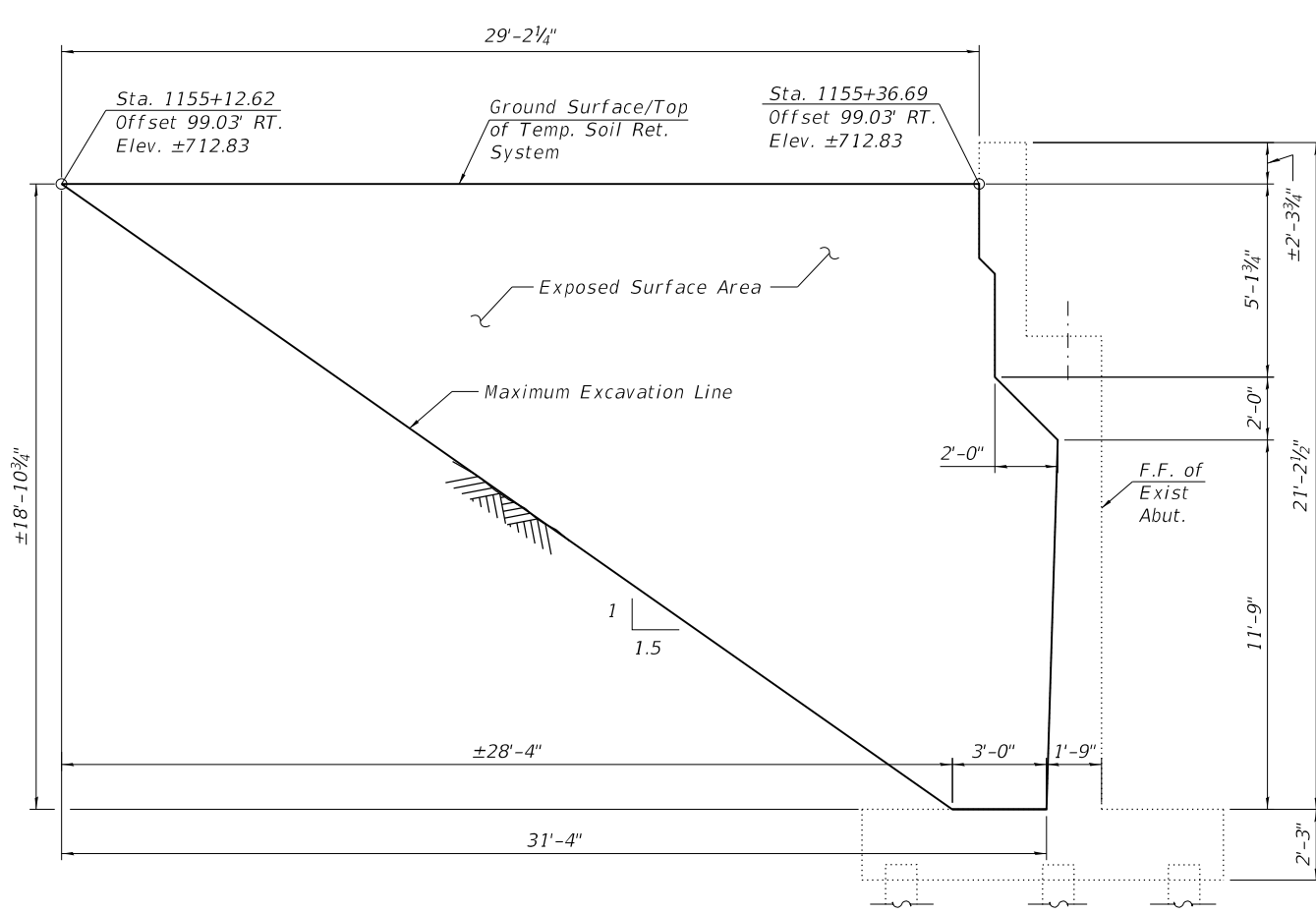
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SOUTHWEST WALL - PARTIAL REMOVAL & STR. EXCAV. DETAILS  
 STRUCTURE NO. 016-1195

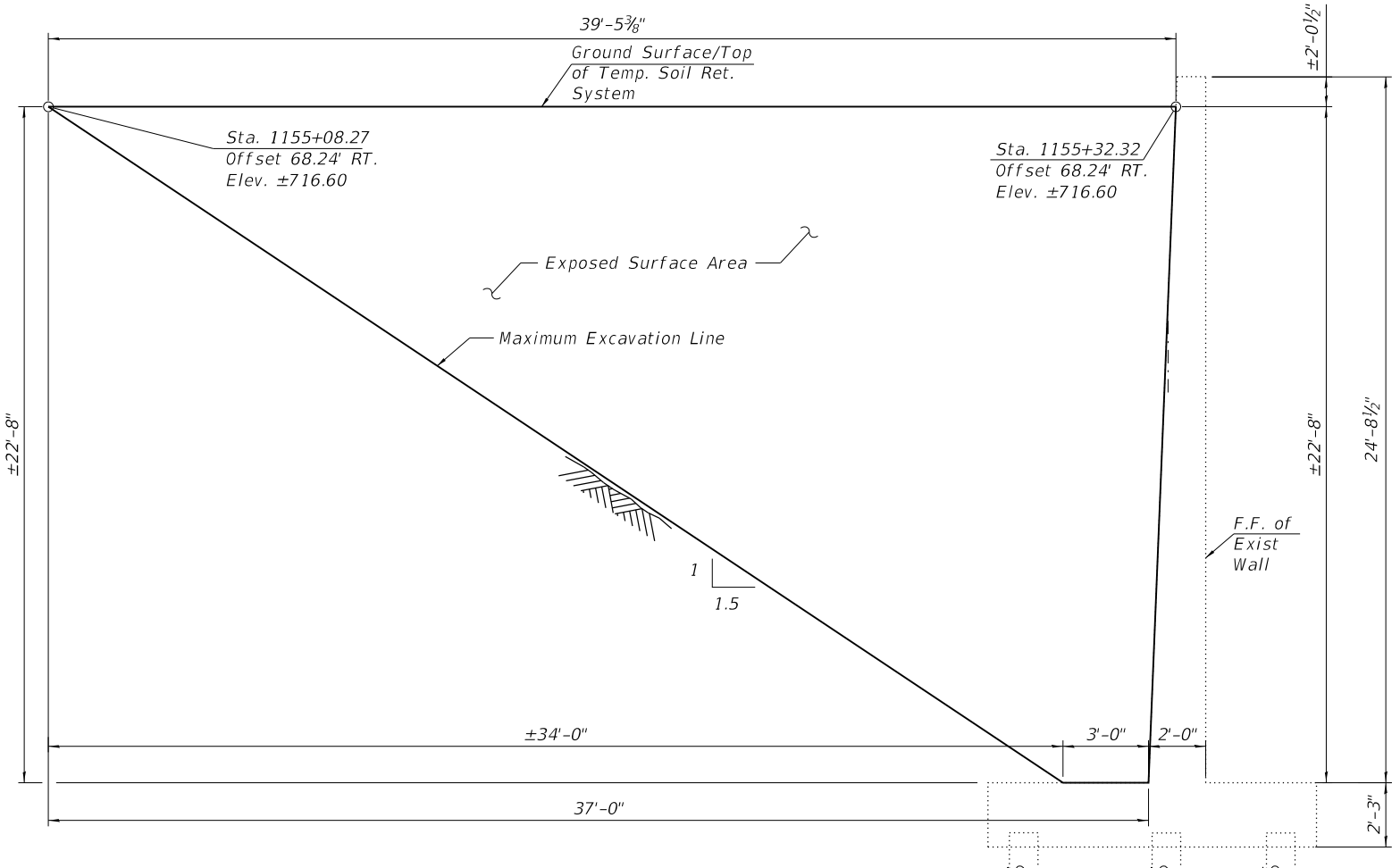
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| F.A.P. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1351 | SHEET NO. 907 |
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| ILLINOIS FED. AID PROJECT |                     |             |                   |               |



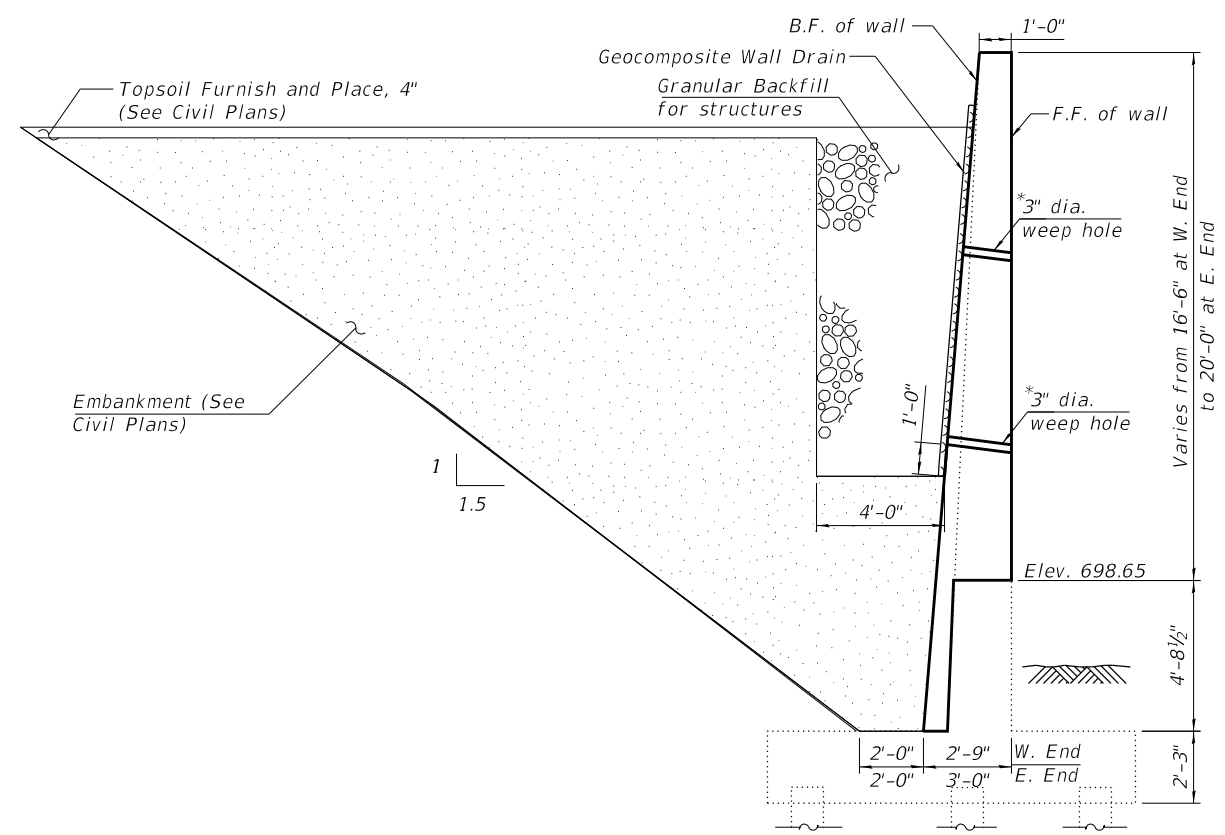
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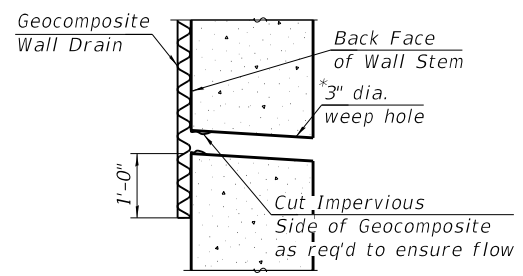
**TEMPORARY SOIL RETENTION SYSTEM NO. 8**



**TEMPORARY SOIL RETENTION SYSTEM NO. 7**

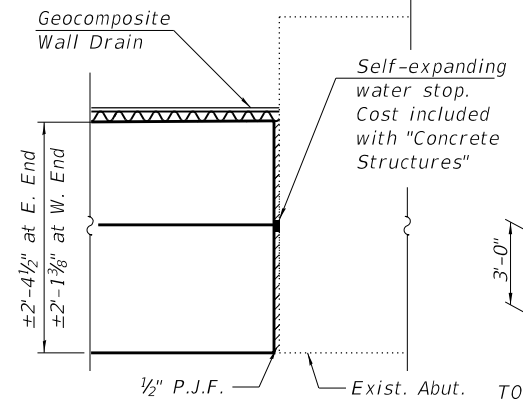


**GRANULAR BACKFILL**

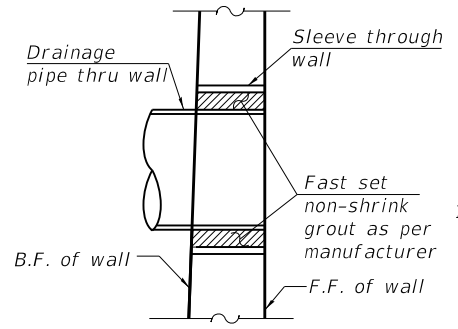


**WEEP HOLE DRAIN DETAIL**

\* Weep hole horizontal spacing shall be at 8'-0" cts. (max.)



**EXPANSION JOINT DETAIL**



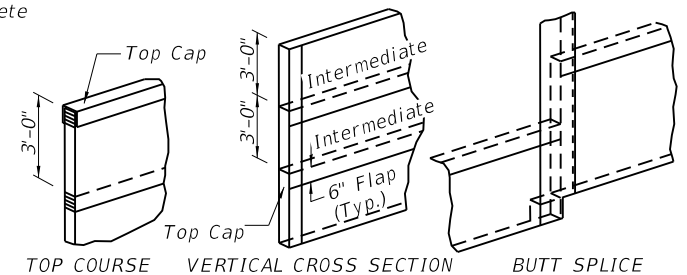
**SLEEVE THRU WALL DETAIL**

**BILL OF MATERIAL**

| ITEM                             | UNIT  | QUANTITY |
|----------------------------------|-------|----------|
| Temporary Soil Retention System  | Sq Ft | 834      |
| Granular Backfill For Structures | Cu Yd | 92       |
| Geocomposite Wall Drain          | Sq Yd | 58       |

**NOTE:**

1. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.



**GEOCOMPOSITE WALL DRAIN DETAILS**

**LEGEND**

- Embankment
- Granular Backfill for structures
- B.F. Back Face
- F.F. Front Face



|              |                    |           |
|--------------|--------------------|-----------|
| USER NAME =  | DESIGNED - FL, AGJ | REVISED - |
| PLOT SCALE = | CHECKED - MI, JJS  | REVISED - |
| PLOT DATE =  | DRAWN - FL, AGJ    | REVISED - |
|              | CHECKED - MI, JJS  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

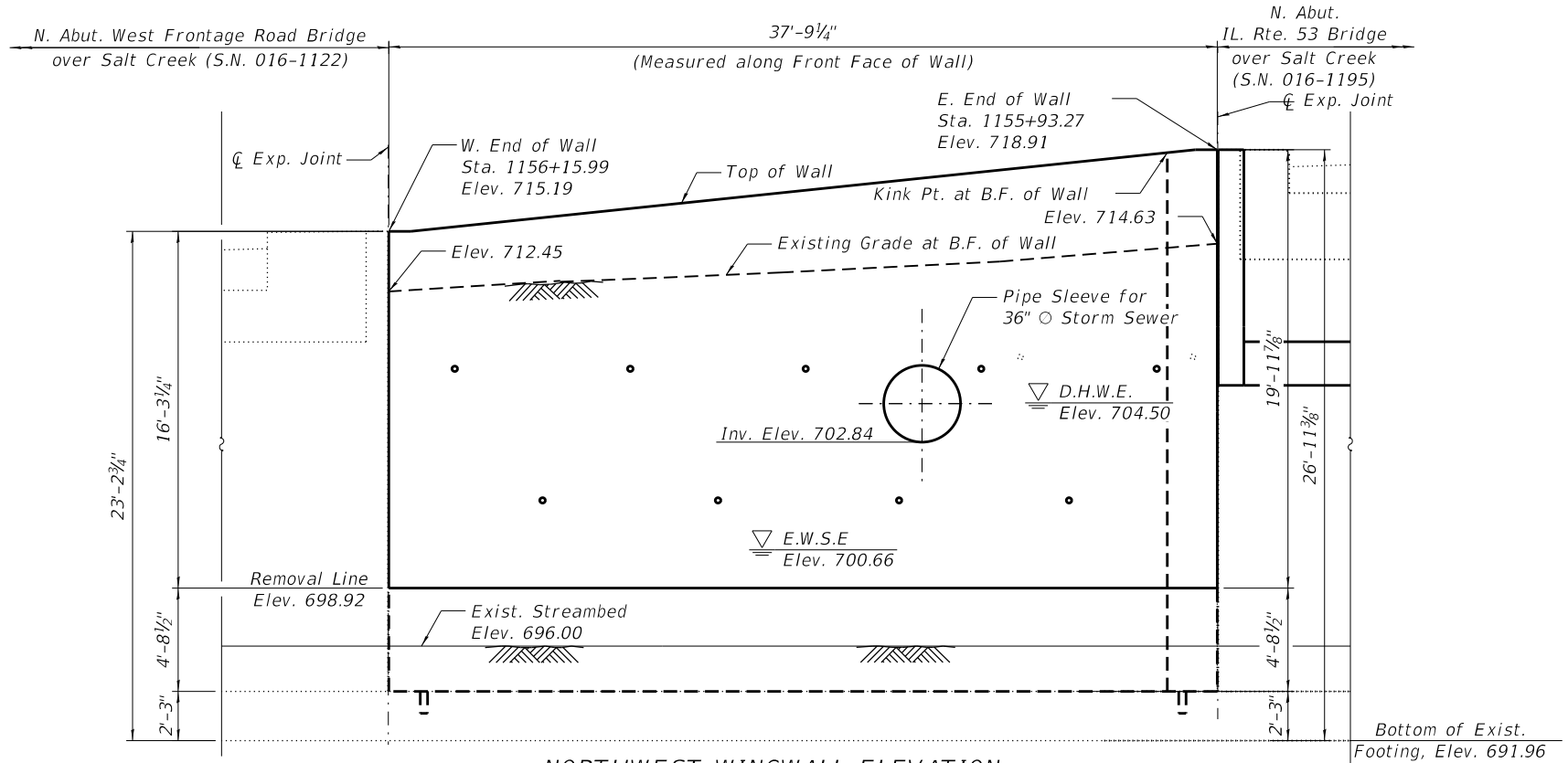
**SOUTHWEST WALL - TSRs, BACKFILL SECTION, AND DETAILS  
STRUCTURE NO. 016-1195**

SHEET SB-55 OF SB-75 SHEETS

|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 908       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT

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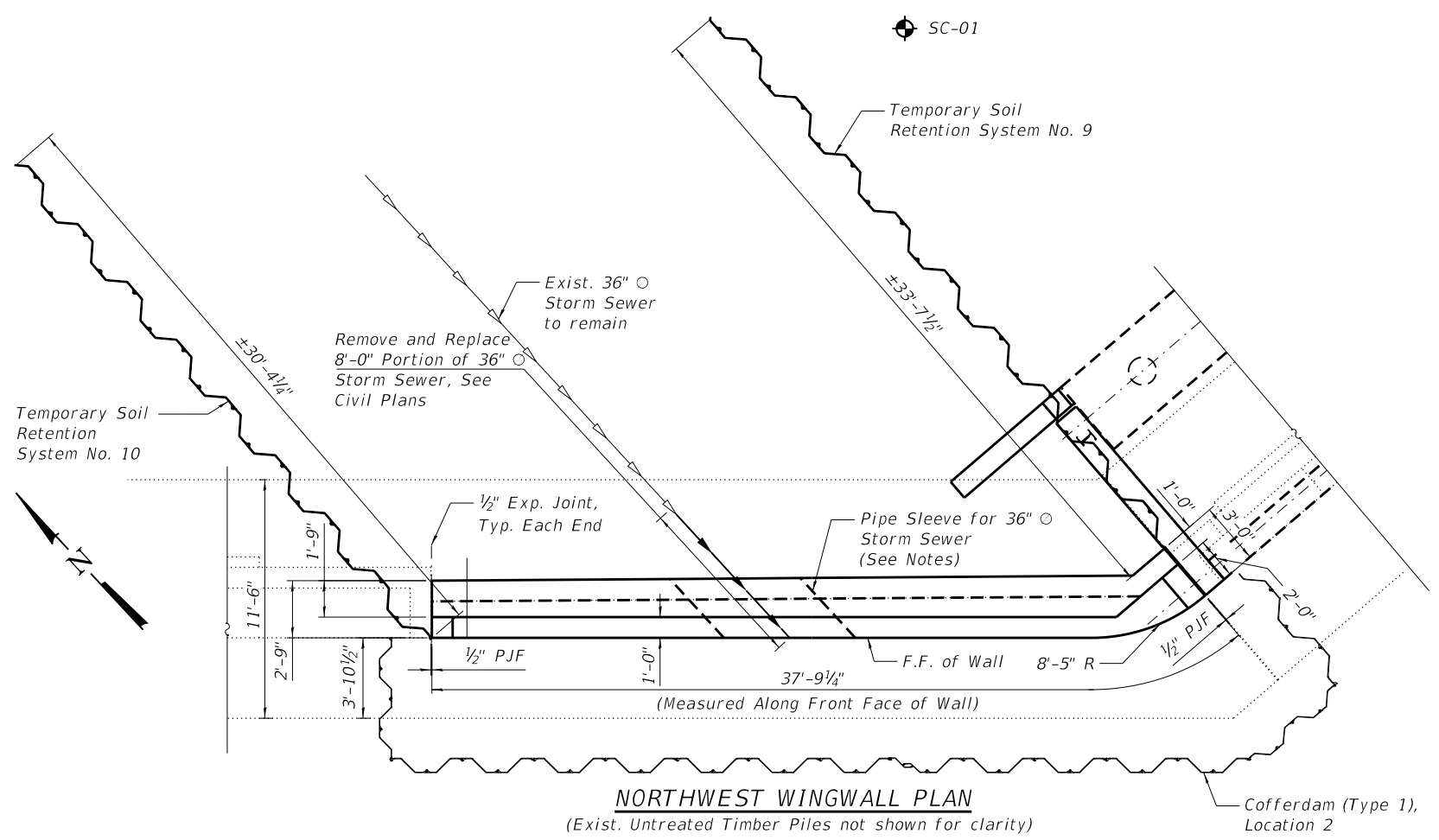


**NOTES:**

1. The Contractor shall take all necessary precautions to protect the existing 36" Ø storm sewer, existing conduits and adjacent structures during removal/reconstruction of the wingwall. Any damage to these, or other, elements caused by the Contractor during performance of the work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
2. Existing Storm Sewer to be supported during removal and construction operations. Method of support to be approved by the Engineer. Cost of supporting existing storm sewer shall not be paid separately and shall be included with Structure Excavation.
3. Existing elevations have been taken from historical plans and shall be verified prior to construction.
4. The required steel sleeve diameter and steel sleeve wall thickness shall be determined by the Contractor prior to reconstructing the wall.
5. For Structure Excavation and removal details, see Sheet SB-58.
6. For Temporary Soil Retention Systems and Backfill Details, see Sheet SB-59.
7. The Contractor shall exercise extreme caution during removal and construction operations to make certain that all related activities, live load surcharge, structure excavation, installation of Temporary Soil Retention Systems and other loads applied will not have detrimental effects on the adjacent abutments and roadway. Any damage to the adjacent abutments or roadway during removal and construction operations shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.

**SCOPE OF WORK**

1. Install Temporary Soil Retention Systems and Cofferdam (Type 1).
2. Excavate behind the existing Retaining wall to the top of the existing footing elevation; provide temporary support for Exist. 36" Ø Storm Sewer, as required.
3. Remove Existing Concrete Retaining wall to the elevation indicated on the Plans.
4. Remove and replace southernmost 8'-0" of existing 36" Ø storm sewer. See Civil plans.
5. Perform Epoxy Crack Injection and Structural Repair of Concrete on F.F. of retaining wall portion to remain.
6. Drill and Grout dowel bars and reconstruct proposed Concrete Retaining wall.
7. Backfill at B.F. of retaining wall to the elevations indicated on the plans and apply Protective Coat to all exposed faces of new concrete.



**LEGEND**

- ▲—▲— Exist. Storm Sewer
- ⊕ Soil Boring Log
- ~ Prop. Temporary Soil Retention System
- ~ Cofferdam (Type 1), Location 2
- ▲— Prop. Storm Sewer
- F.F. Front Face
- B.F. Back Face



|              |                   |           |
|--------------|-------------------|-----------|
| USER NAME =  | DESIGNED - AGJ    | REVISED - |
| PLOT SCALE = | CHECKED - MI, JJS | REVISED - |
| PLOT DATE =  | DRAWN - AGJ       | REVISED - |
|              | CHECKED - MI, JJS | REVISED - |

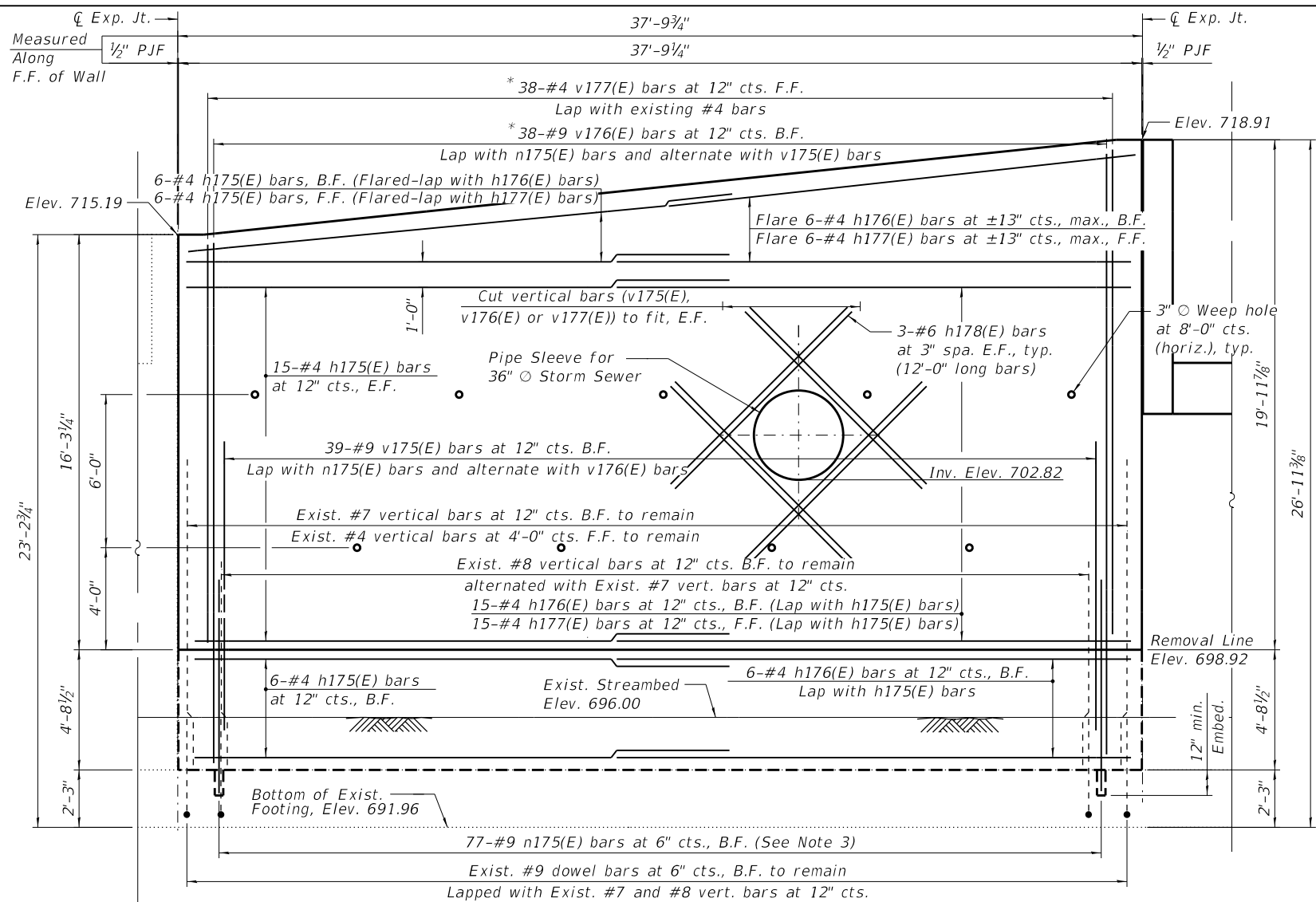
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**NORTHWEST WALL - PLAN AND ELEVATION  
 STRUCTURE NO. 016-1195**

SHEET SB-56 OF SB-75 SHEETS

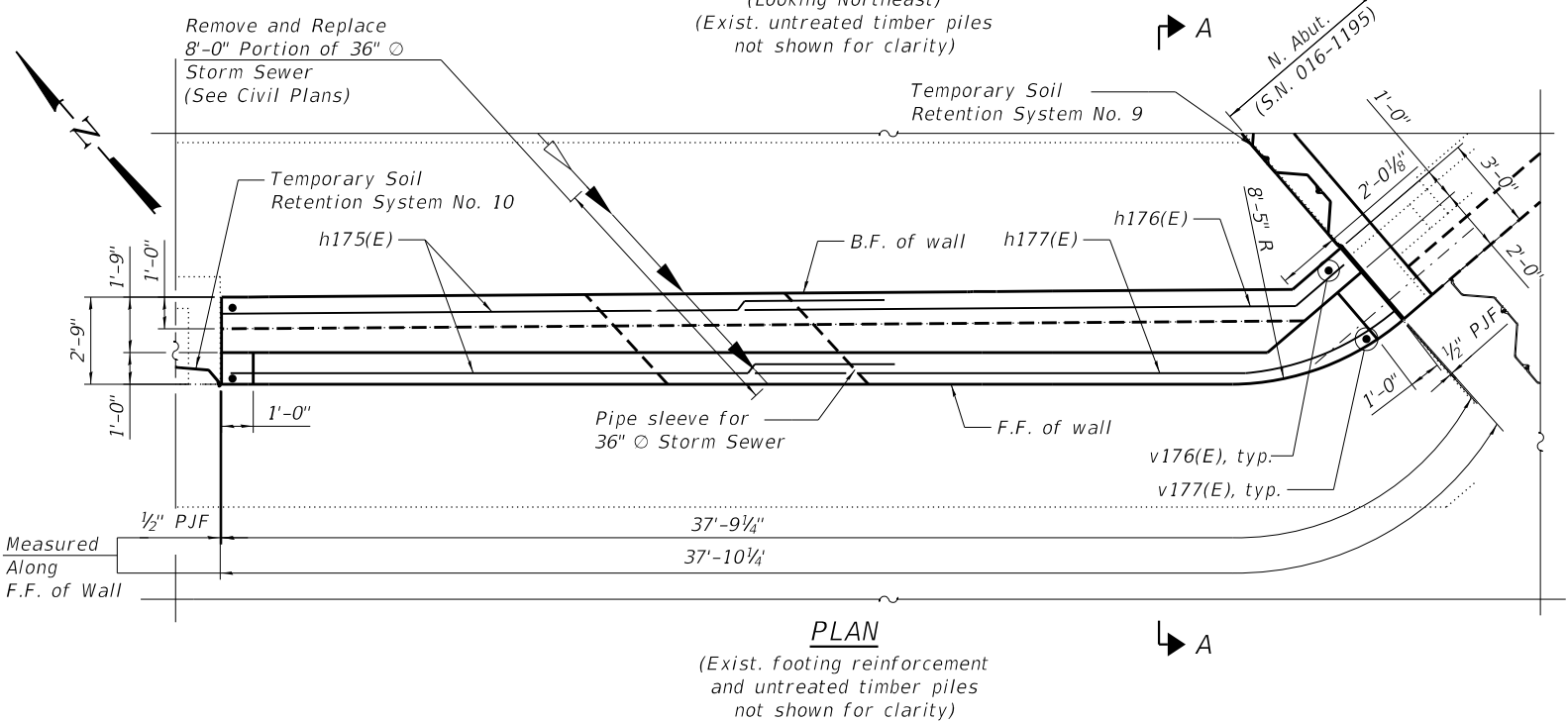
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| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 909       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

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**ELEVATION**

(Looking Northeast)  
(Exist. untreated timber piles not shown for clarity)

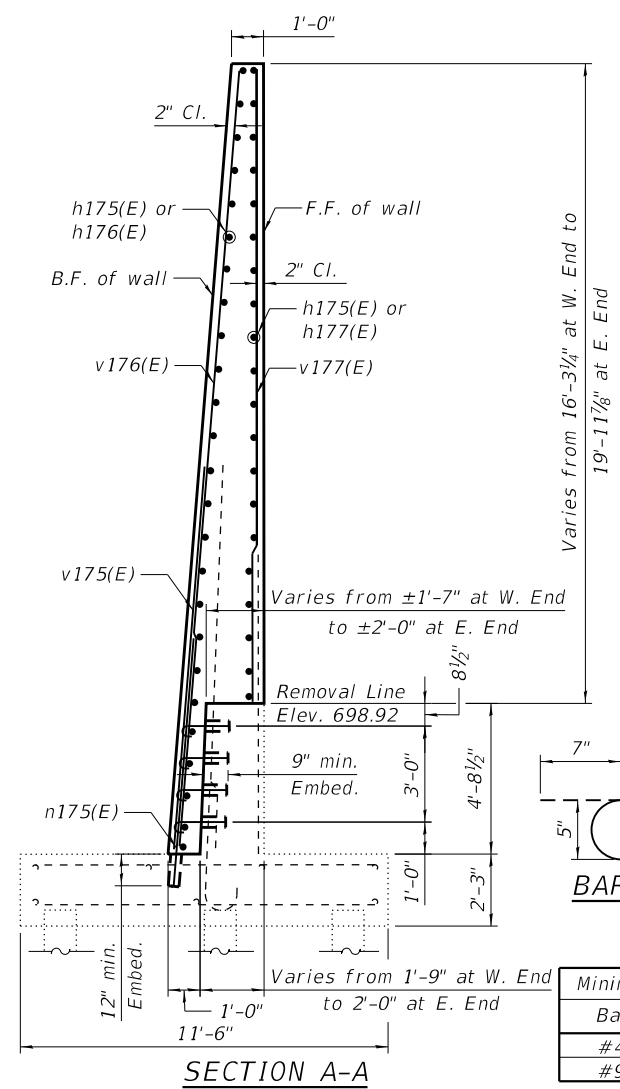


**PLAN**

(Exist. footing reinforcement and untreated timber piles not shown for clarity)

**BILL OF MATERIAL**

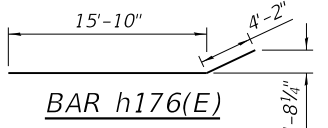
| Bar                              | No. | Size | Length  | Shape |
|----------------------------------|-----|------|---------|-------|
| d175(E)                          | 78  | #5   | 2'-2"   |       |
| h175(E)                          | 54  | #4   | 20'-6"  |       |
| h176(E)                          | 27  | #4   | 20'-0"  |       |
| h177(E)                          | 21  | #4   | 19'-10" |       |
| h178(E)                          | 24  | #6   | 12'-0"  |       |
| v175(E)                          | 39  | #9   | 14'-0"  |       |
| v176(E)                          | 19  | #9   | 44'-11" |       |
| v177(E)                          | 19  | #4   | 35'-7"  |       |
| n175(E)                          | 77  | #9   | 10'-2"  |       |
| Concrete Structures              |     |      | Cu Yd   | 50.8  |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 9,860 |
| Concrete Sealer                  |     |      | Sq Ft   | 730   |



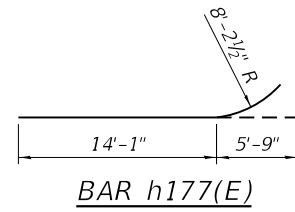
**SECTION A-A**

| Bar | Lap    |
|-----|--------|
| #4  | 2'-11" |
| #9  | 9'-2"  |

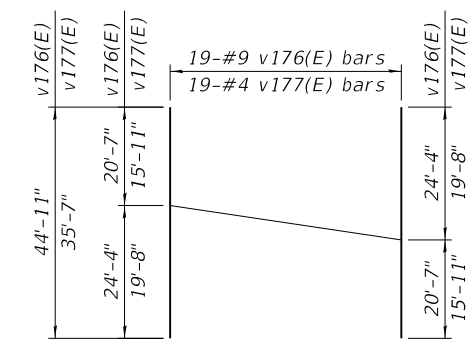
**BAR d175(E)**



**BAR h176(E)**

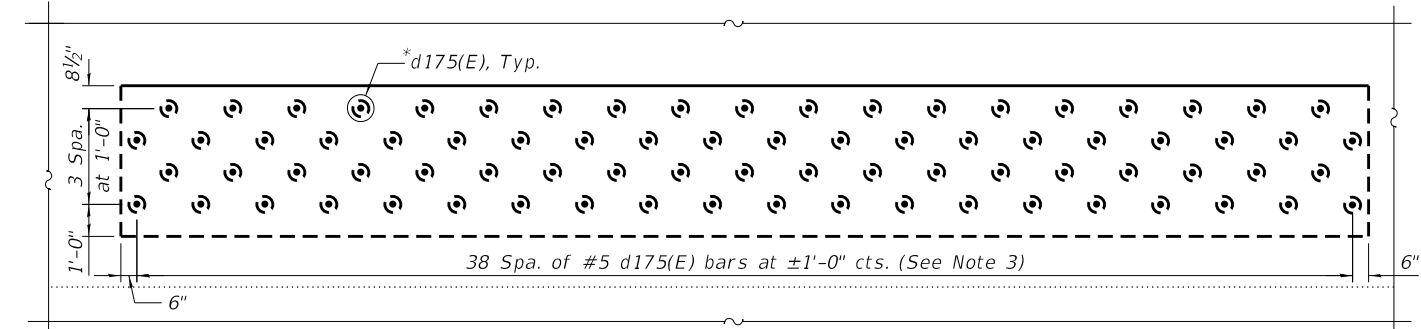


**BAR h177(E)**



**FIELD CUTTING DIAGRAM**

Order v176(E) and v177(E) bars full length. Cut as shown and use remainder of bars in opposite side



**ELEVATION - DRILL & GROUT LOCATION**

**LEGEND**

- B.F. Back Face
- F.F. Front Face
- E.F. Each Face
- Prop. Storm Sewer
- Exist. Storm Sewer

**NOTES:**

1. Bars indicated thus, 16x2 - #5 etc., indicates 16 lines of #5 bars with 2 lengths per line.
2. For proposed Temporary Soil Retention System Nos. 9 and 10, see Sheet SB-59.
3. Epoxy grout d175(E) and n175(E) bars according to Section 584 of the Standard Specifications. Drill to miss existing reinforcement.



|              |                   |           |
|--------------|-------------------|-----------|
| USER NAME =  | DESIGNED - AGJ    | REVISED - |
| PLOT SCALE = | CHECKED - MI, JJS | REVISED - |
| PLOT DATE =  | DRAWN - AGJ       | REVISED - |
|              | CHECKED - MI, JJS | REVISED - |

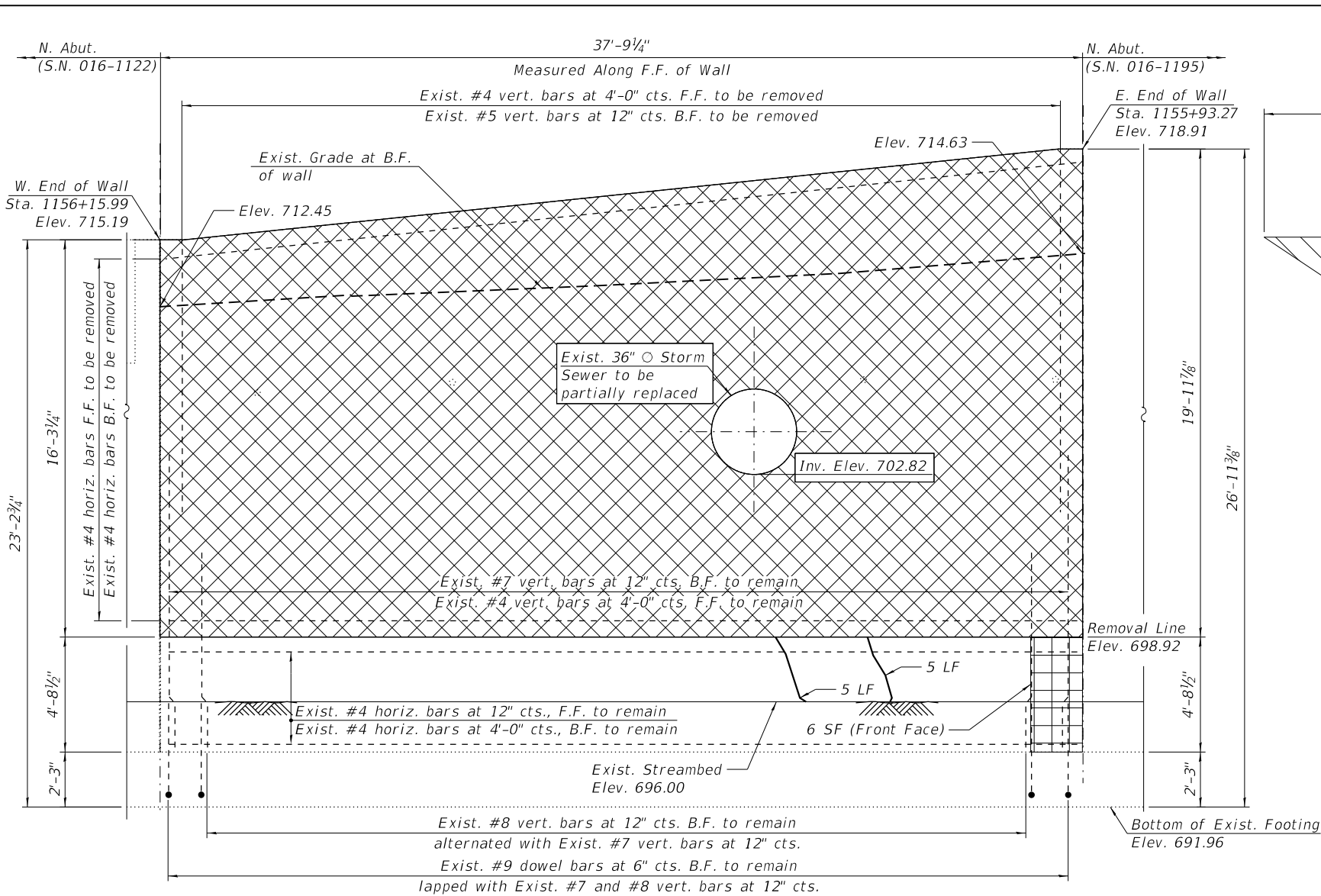
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**NORTHWEST WALL - REINFORCEMENT, SECTIONS AND DETAILS  
STRUCTURE NO. 016-1195**

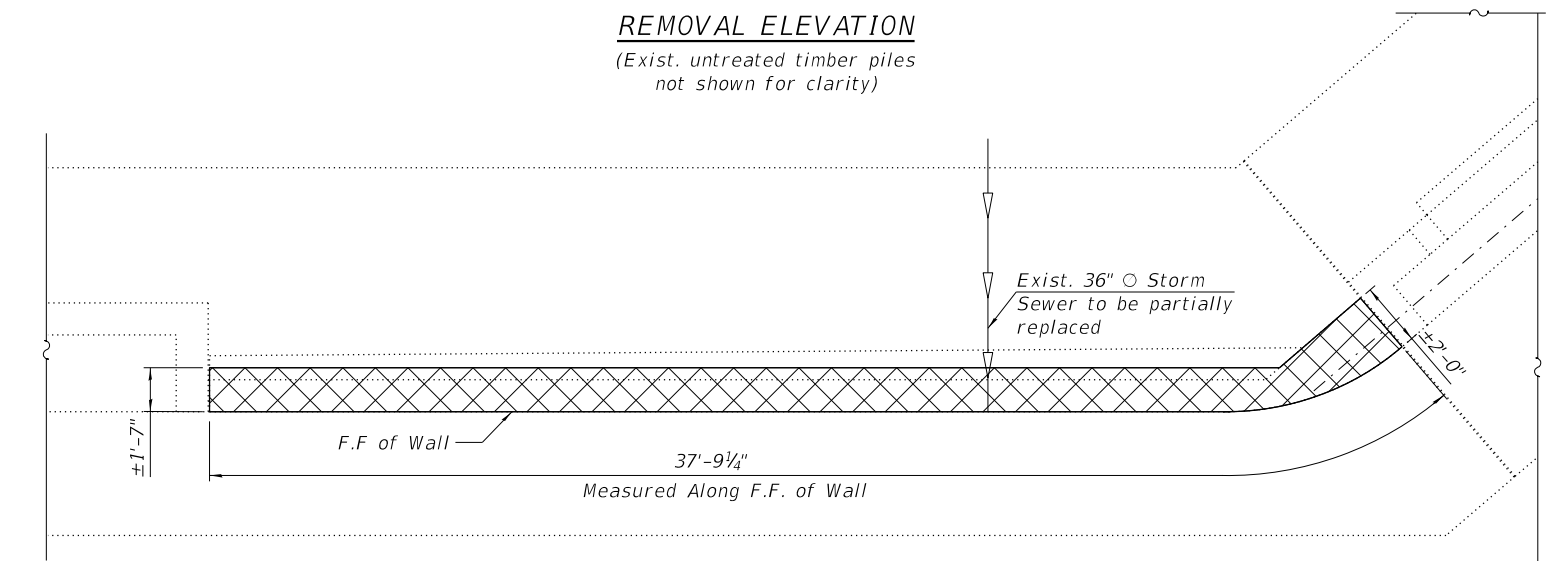
SHEET SB-57 OF SB-75 SHEETS

|                    |             |                  |              |           |
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| F.A.P. RTE.        | SECTION     | COUNTY           | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK             | 1351         | 910       |
| CONTRACT NO. 62N91 |             |                  |              |           |
| ILLINOIS           |             | FED. AID PROJECT |              |           |

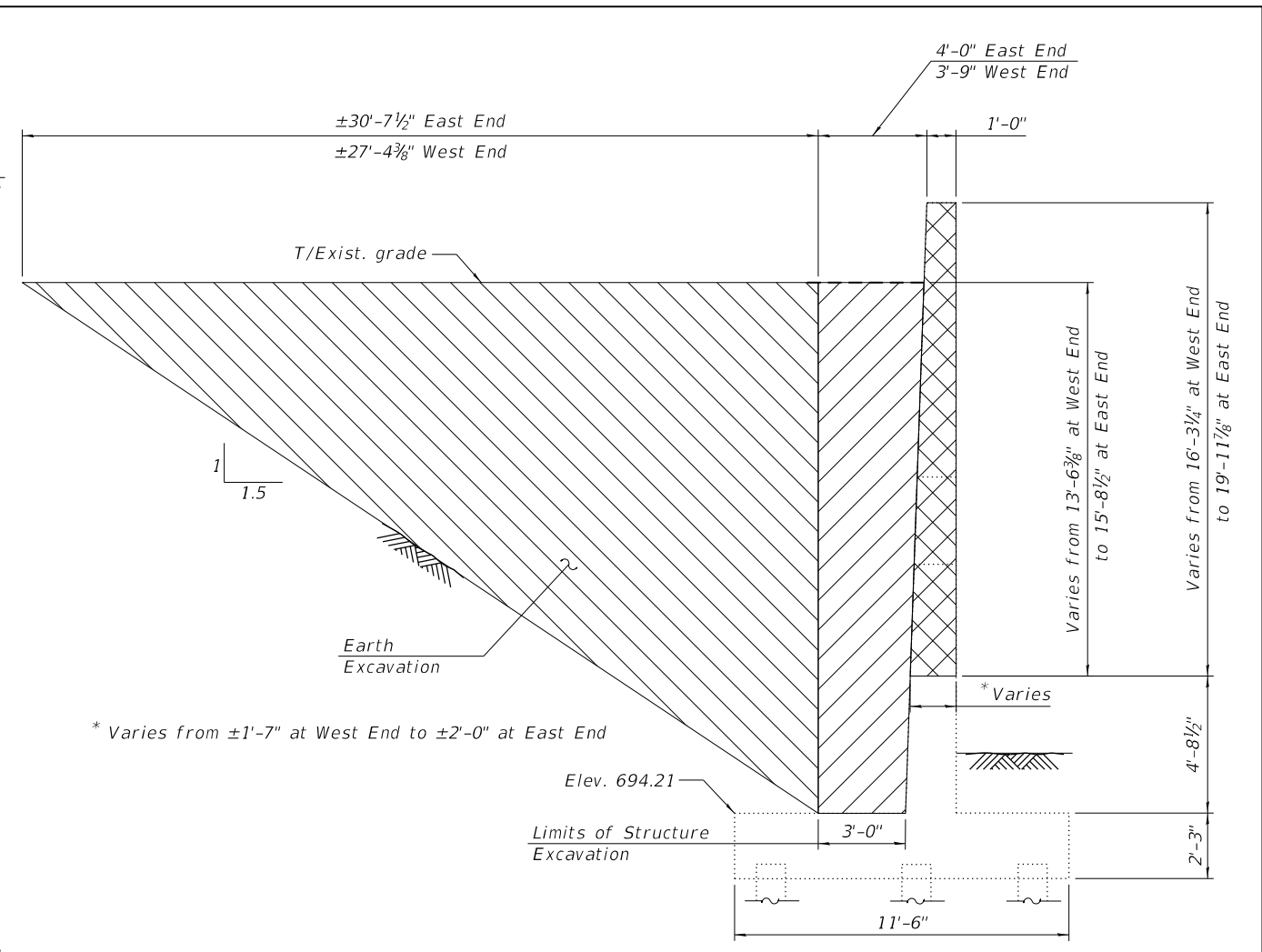
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**REMOVAL ELEVATION**  
 (Exist. untreated timber piles not shown for clarity)



**REMOVAL PLAN**  
 (Exist. footing reinforcement and untreated timber piles not shown for clarity)



**STRUCTURE EXCAVATION**

**LEGEND**

|      |  |
|------|--|
|      | Structural Repair of Concrete (Depth Equal To Or Less Than 5 Inches) |
|      | Concrete Removal   |
|      | Structure Excavation   |
|      | Earth Excavation   |
|      | Epoxy Crack Injection  |
|      | Exist. Storm Sewer   |
| B.F. | Back Face  |
| F.F. | Front Face   |
| LF   | Linear Feet  |
| SF   | Square Feet  |

**BILL OF MATERIAL**

| ITEM   | UNIT  | QUANTITY |
|--|-------|----------|
| Concrete Removal   | Cu Yd | 31.6     |
| Structure Excavation   | Cu Yd | 116      |
| Epoxy Crack Injection  | Foot  | 10       |
| Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches) | Sq Yd | 6        |

**NOTES:**

- Existing Reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.
- Any reinforcement bars that are damaged during concrete removal shall be replaced using an approved bar splicer or anchorage system. Cost incidental to Concrete Removal.



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| USER NAME =  | DESIGNED - AGJ    | REVISED - |
| PLOT SCALE = | CHECKED - MI, JJS | REVISED - |
| PLOT DATE =  | DRAWN - AGJ       | REVISED - |
|              | CHECKED - MI, JJS | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

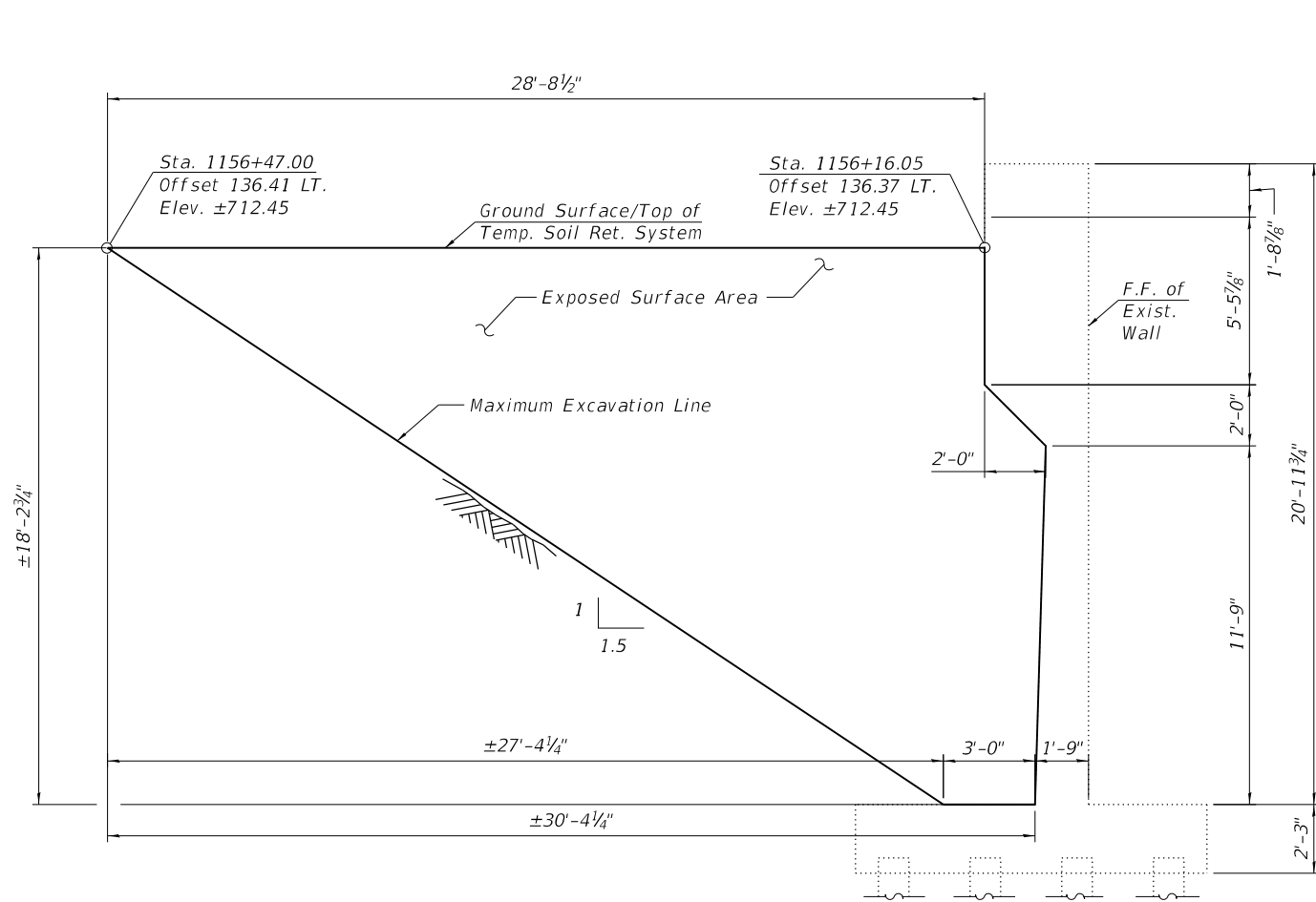
NORTHWEST WALL - PARTIAL REMOVAL & STR. EXCAV. DETAILS  
 STRUCTURE NO. 016-1195

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| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 911       |
| CONTRACT NO. 62N91 |             |        |              |           |

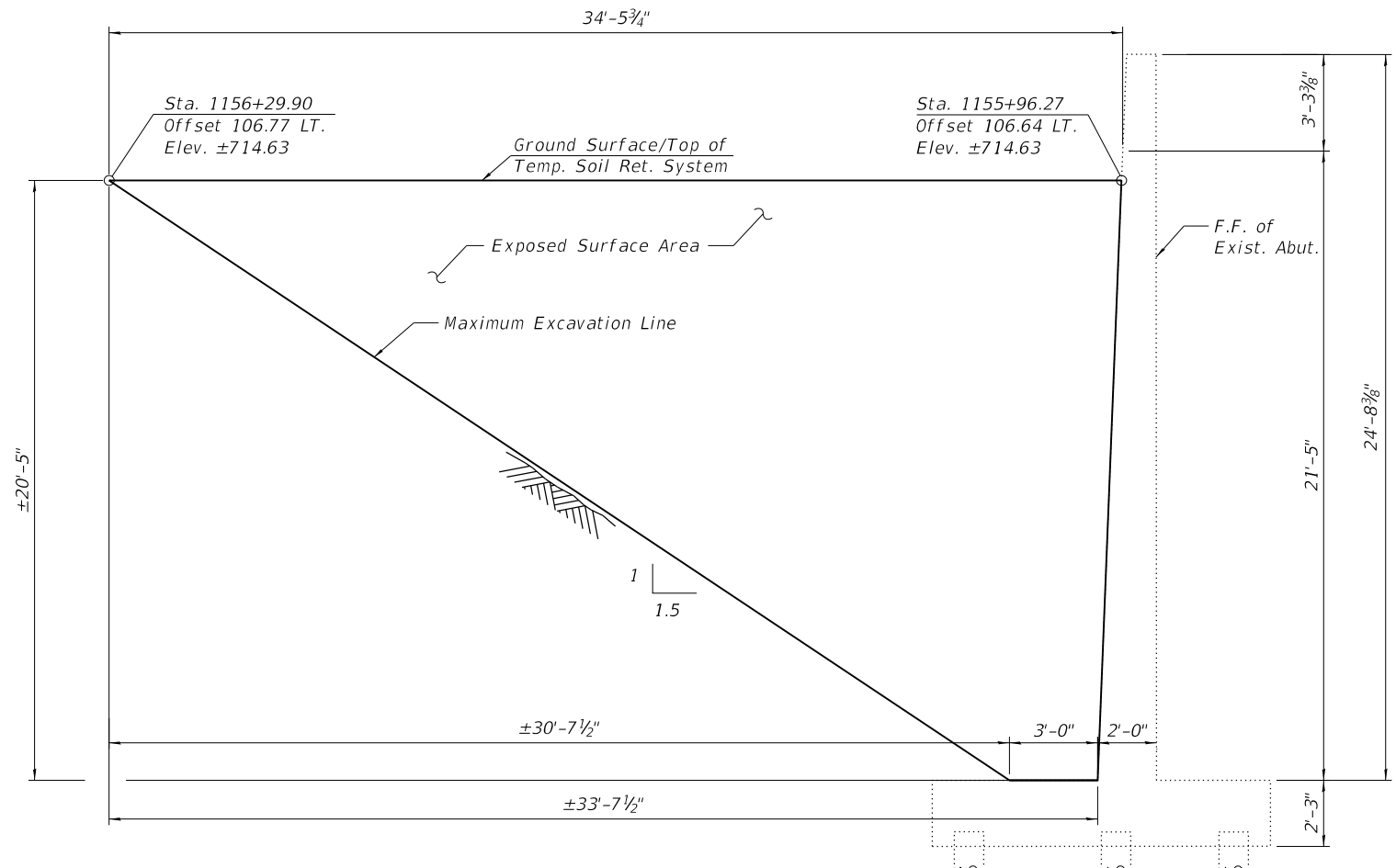
SHEET SB-58 OF SB-75 SHEETS

ILLINOIS FED. AID PROJECT

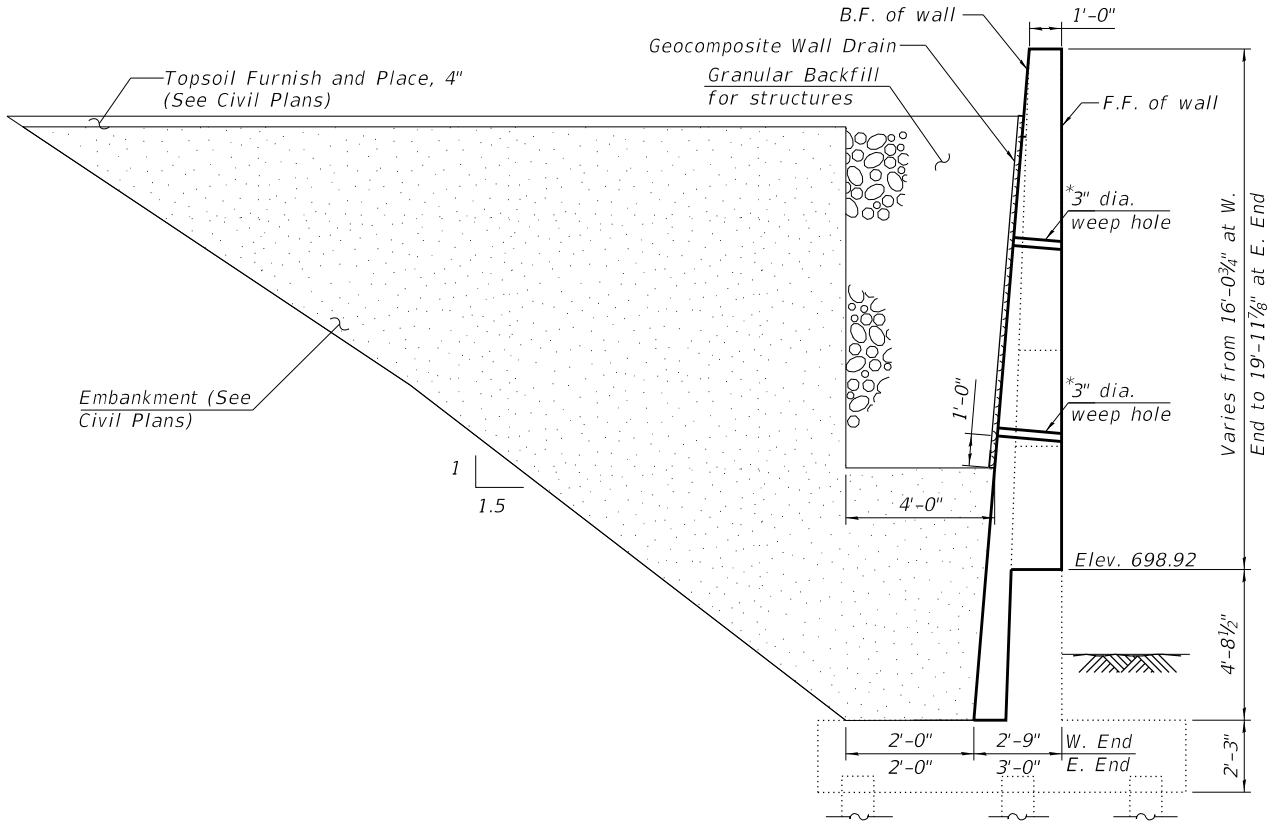
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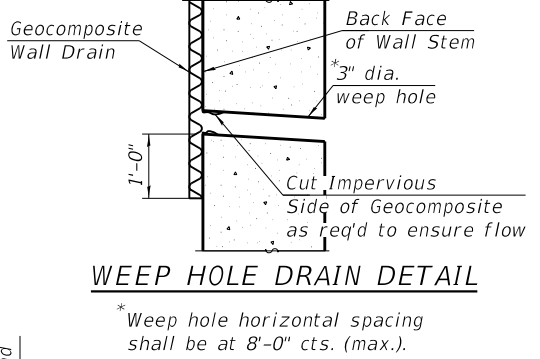
TEMPORARY SOIL RETENTION SYSTEM NO. 10



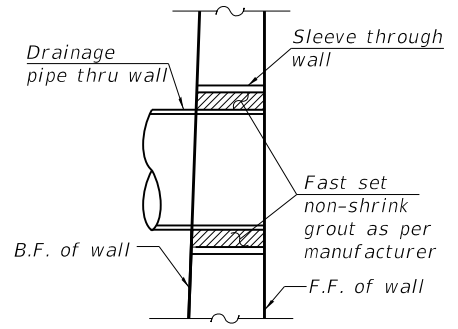
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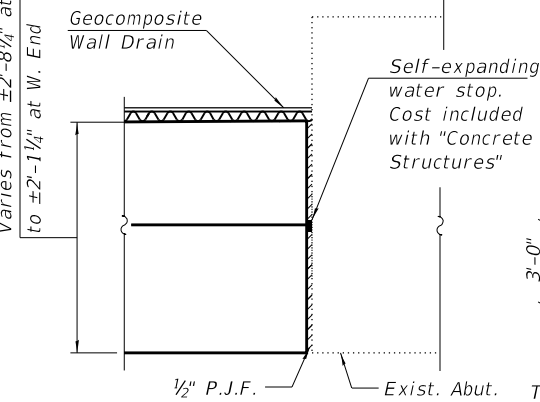
GRANULAR BACKFILL



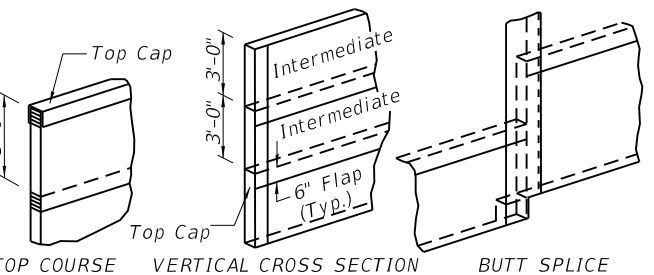
WEEP HOLE DRAIN DETAIL



SLEEVE THRU WALL DETAIL



EXPANSION JOINT DETAIL



GEOCOMPOSITE WALL DRAIN DETAILS

BILL OF MATERIAL

| ITEM                             | UNIT  | QUANTITY |
|----------------------------------|-------|----------|
| Temporary Soil Retention System  | Sq Ft | 745      |
| Granular Backfill For Structures | Cu Yd | 120      |
| Geocomposite Wall Drain          | Sq Yd | 77       |

**NOTE:**  
 1. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

LEGEND

- Embankment
- Granular Backfill for structures
- B.F. Back Face
- F.F. Front Face



|              |                   |           |
|--------------|-------------------|-----------|
| USER NAME =  | DESIGNED - AGJ    | REVISED - |
| PLOT SCALE = | CHECKED - MI, JJS | REVISED - |
| PLOT DATE =  | DRAWN - AGJ       | REVISED - |
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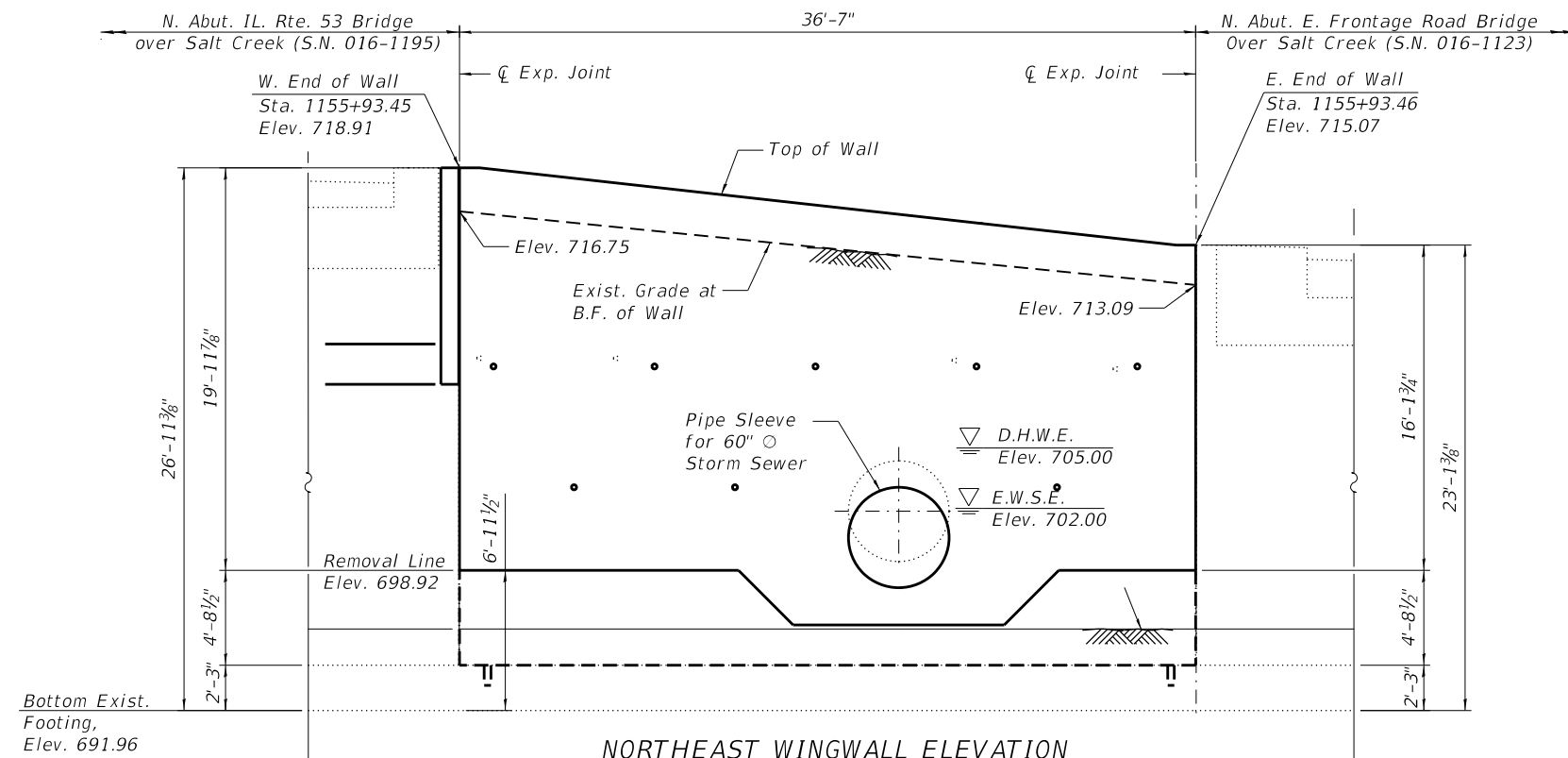
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTHWEST WALL - TSRs, BACKFILL SECTION, AND DETAILS  
 STRUCTURE NO. 016-1195

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 912       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

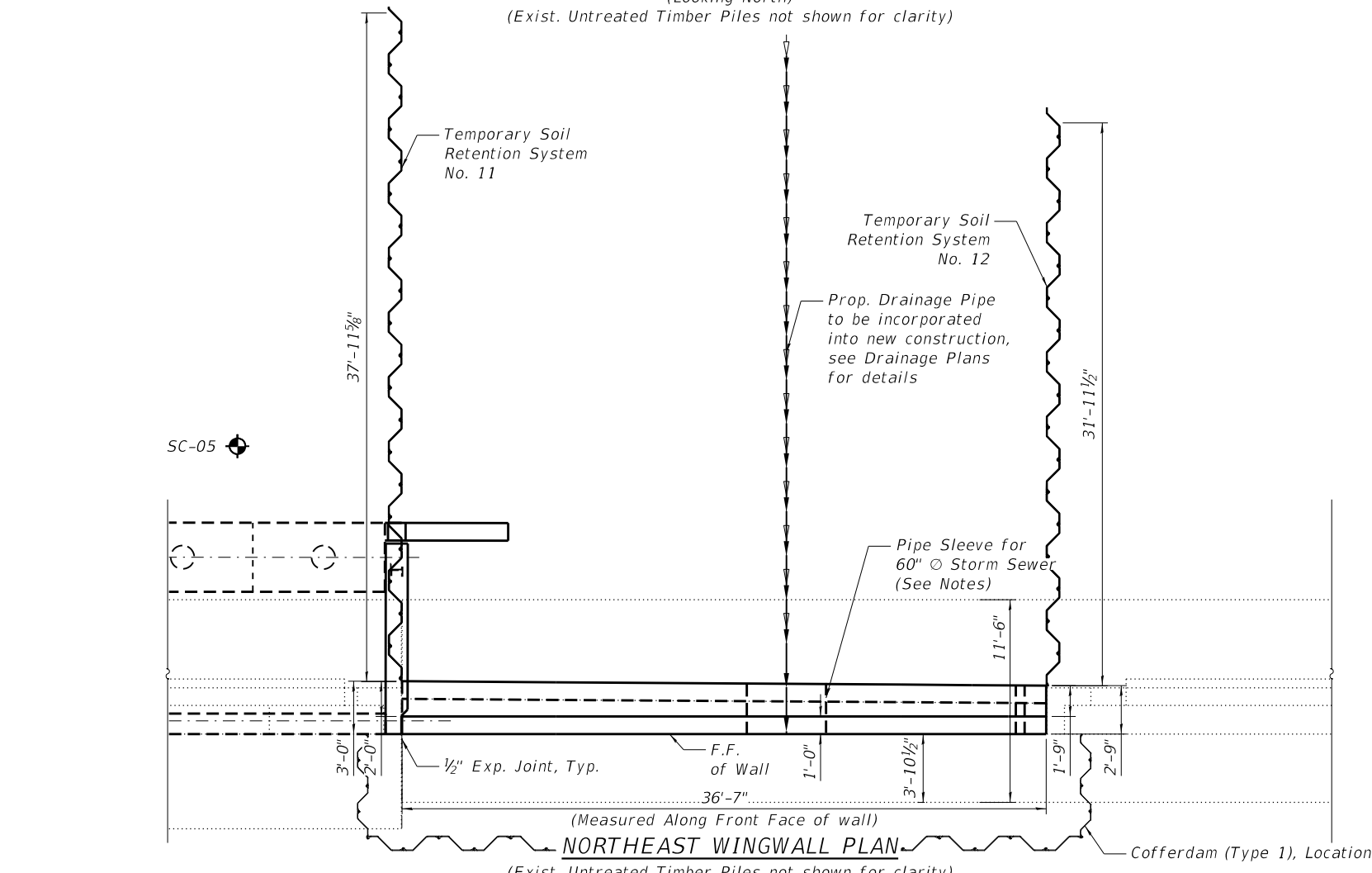
SHEET SB-59 OF SB-75 SHEETS

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**NORTHEAST WINGWALL ELEVATION**

(Looking North)  
 (Exist. Untreated Timber Piles not shown for clarity)



**NORTHEAST WINGWALL PLAN**

(Measured Along Front Face of wall)  
 (Exist. Untreated Timber Piles not shown for clarity)

**NOTES:**

1. The Contractor shall take all necessary precautions to protect the existing 60" Ø storm sewer, existing conduits and adjacent structures during removal/reconstruction of the wingwall. Any damage to these, or other, elements caused by the Contractor during the performance of the work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
2. Existing Storm Sewer to be supported during removal and construction operations. Method of support to be approved by the Engineer. Cost of supporting existing storm sewer shall not be paid separately and shall be included with Structure Excavation.
3. Existing elevations have been taken from historical plans and shall be verified prior to construction.
4. The required steel sleeve diameter and steel sleeve wall thickness shall be determined by the Contractor prior to reconstructing the wall.
5. For Structure Excavation and Removal details, see Sheet SB-62.
6. For Temporary Soil Retention Systems and Backfill Details, see Sheet SB-63.
7. The Contractor shall exercise extreme caution during removal and construction operations to make certain that all related activities, live load surcharge, structure excavation, installation of Temporary Soil Retention Systems and other loads applied will not have detrimental effects on the adjacent abutments and roadway. Any damage to the adjacent abutments or roadway during removal and construction operations shall be repaired by the Contractor, to the satisfaction of the Engineer at no cost to the Department.

**SCOPE OF WORK**

1. Install Temporary Soil Retention Systems and Cofferdam (Type 1).
2. Excavate behind the existing Retaining wall to the top of existing footing elevation; provide temporary support for Exist. 60" Ø Storm Sewer as required.
3. Remove Existing Concrete Retaining wall to the elevation indicated on the plans.
4. Remove and Replace Drainage Pipe, see Drainage Plans for details
5. Perform Epoxy Crack Injection for existing crack on F.F. of retaining wall portion to remain.
6. Drill and Grout dowel bars and reconstruct proposed Concrete Retaining wall.
7. Backfill at B.F. of retaining wall to the elevations indicated on the plans and apply Protective Coat to all exposed faces of new concrete.

**LEGEND**

- Exist. Storm Sewer
- Soil Boring Log
- Prop. Temporary Soil Retention System
- Cofferdam (Type 1), Location 3
- Prop. Storm Sewer
- F.F. Front Face
- B.F. Back Face



|              |                    |             |
|--------------|--------------------|-------------|
| USER NAME =  | DESIGNED - LR, AGJ | REVISIONS - |
|              | CHECKED - MI, JJS  | REVISIONS - |
| PLOT SCALE = | DRAWN - LR, AGJ    | REVISIONS - |
| PLOT DATE =  | CHECKED - MI, JJS  | REVISIONS - |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

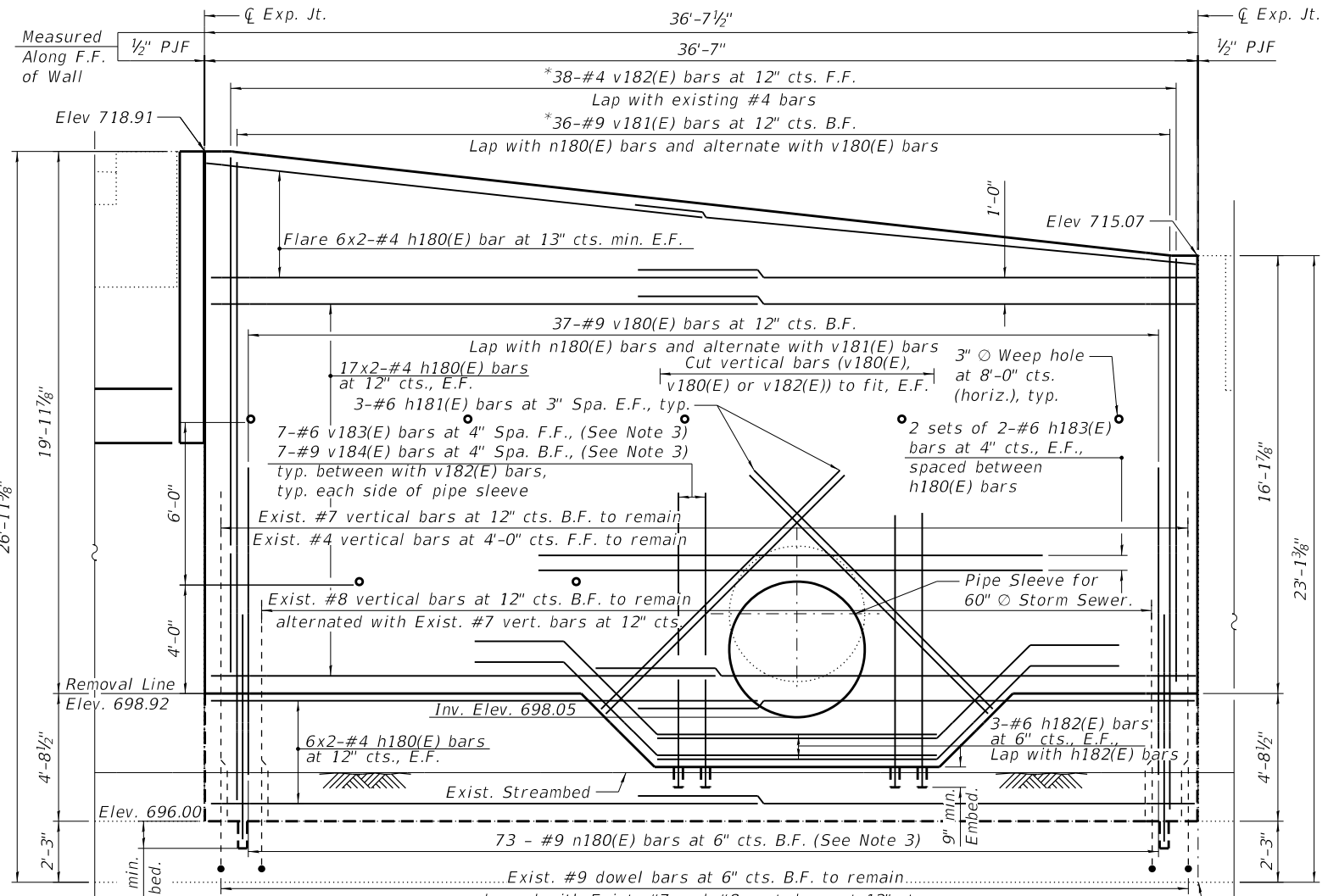
**NORTHEAST WALL - PLAN AND ELEVATION  
 STRUCTURE NO. 016-1195**

SHEET SB-60 OF SB-75 SHEETS

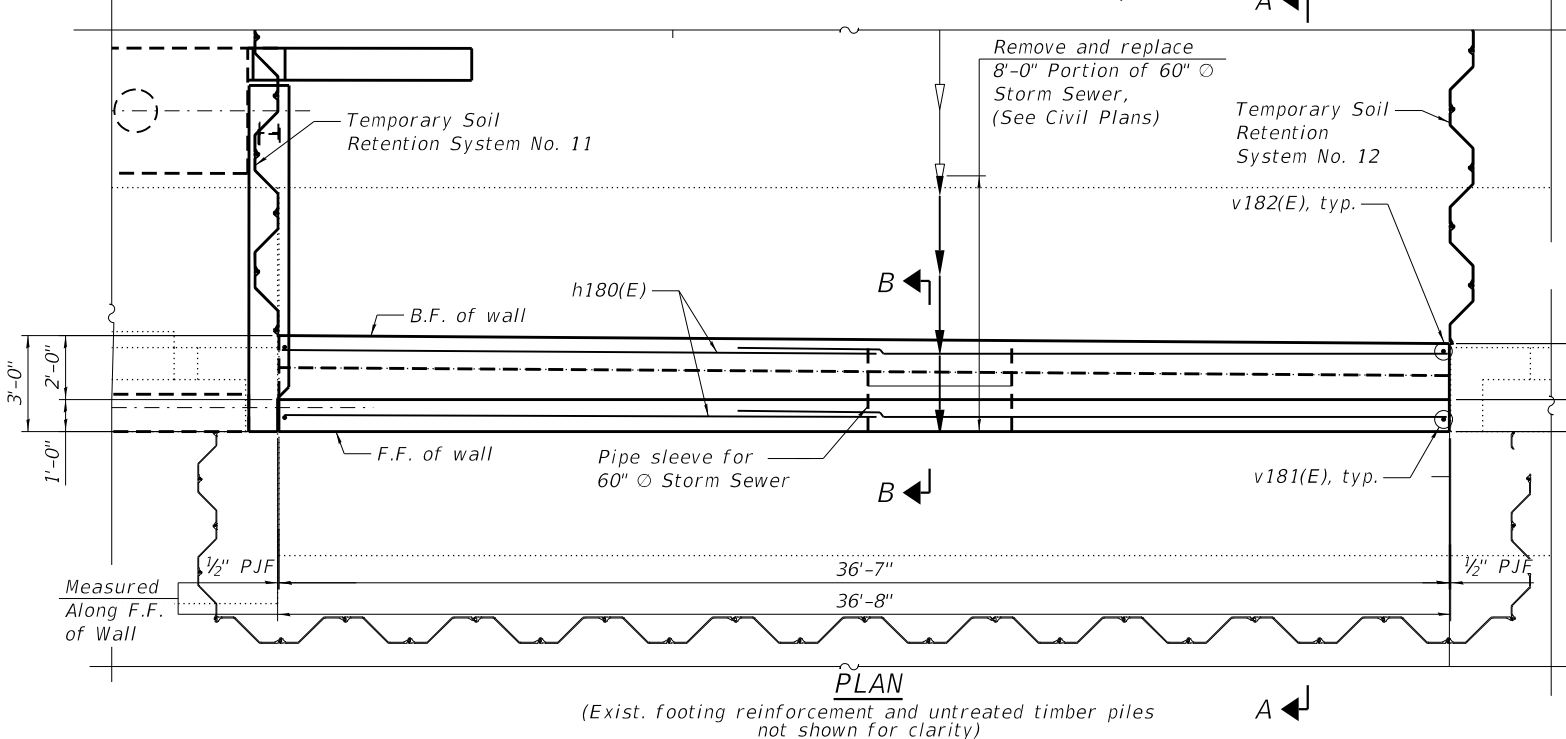
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| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 913       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT

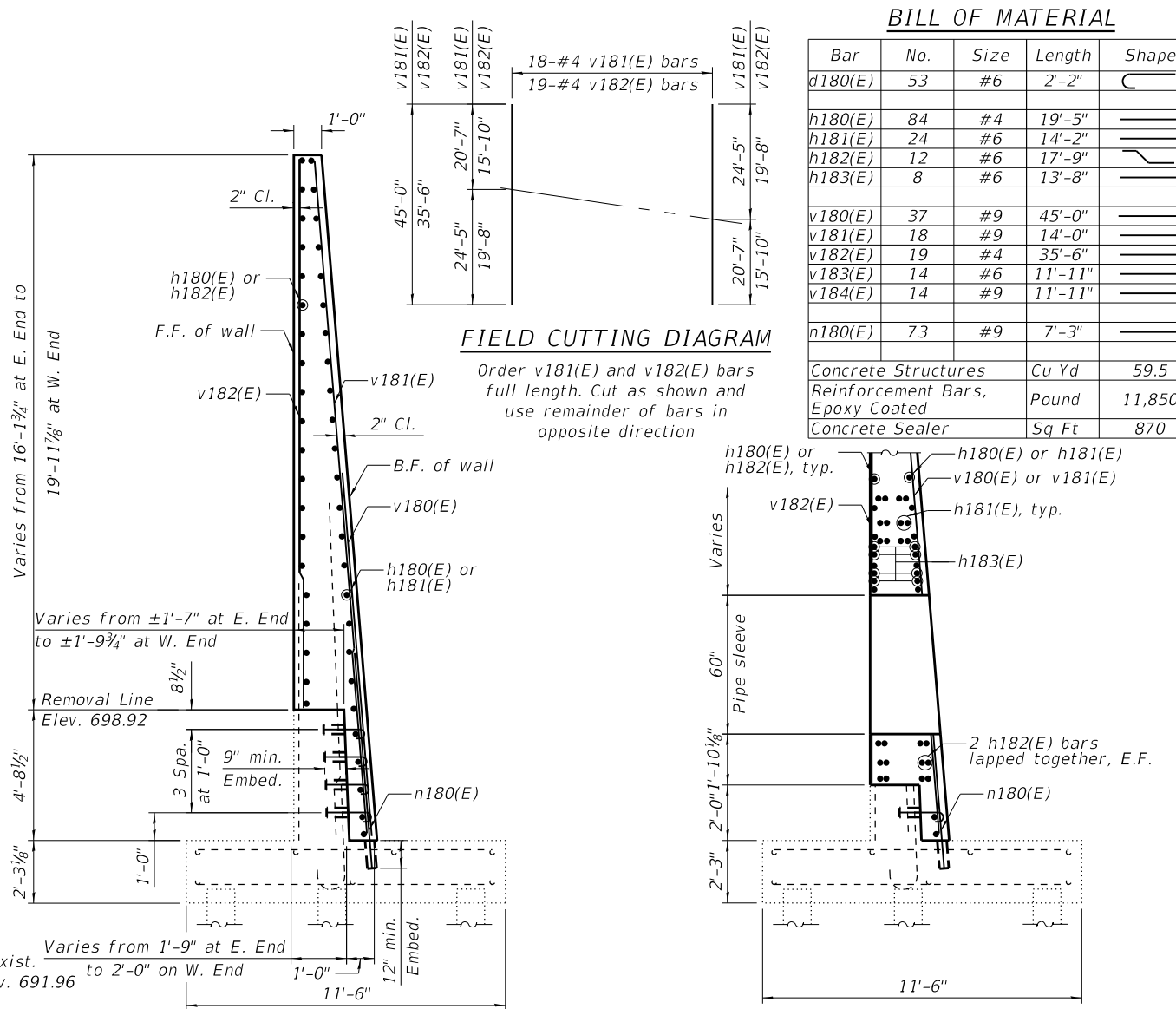
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**ELEVATION**  
 (Looking North)  
 (Exist. Untreated Timber Piles not shown for clarity)



**PLAN**  
 (Exist. footing reinforcement and untreated timber piles not shown for clarity)

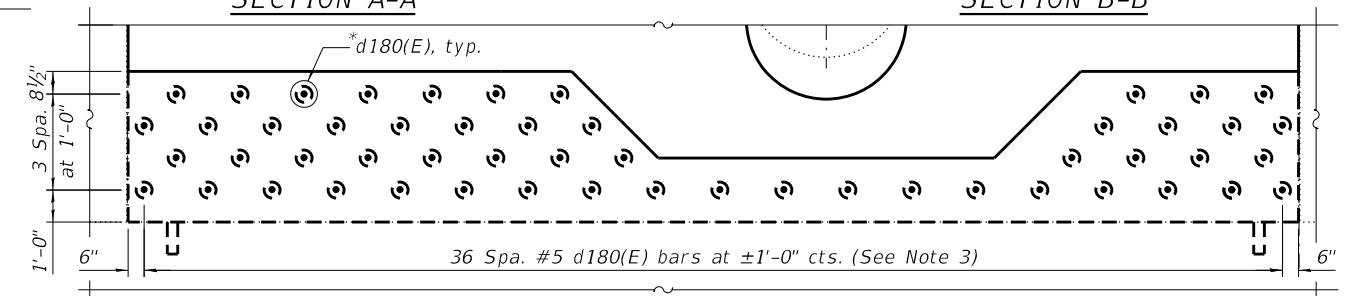


**FIELD CUTTING DIAGRAM**

Order v181(E) and v182(E) bars full length. Cut as shown and use remainder of bars in opposite direction

**SECTION A-A**

**SECTION B-B**



**ELEVATION - DRILL & GROUT LOCATION**

| Minimum Bar Lap |        |
|-----------------|--------|
| Bar             | Lap    |
| #4              | 2'-11" |
| #9              | 9'-2"  |

**LEGEND**

- E.F. Each Face
- B.F. Back Face
- F.F. Front Face
- Prop. Storm Sewer
- Exist. Storm Sewer

**NOTES:**

1. Bars indicated thus, 16x2 - #5 etc., indicates 16 lines of #5 bars with 2 lengths per line.
2. For proposed Temporary Soil Retention System Nos. 11 and 12, see Sheet SB-63.
3. Epoxy grout d180(E), n180(E), v183(E) and v184(E) bars according to Section 584 of the Standard Specifications. Drill to miss existing reinforcement.

**BILL OF MATERIAL**

| Bar                              | No.   | Size | Length  | Shape |
|----------------------------------|-------|------|---------|-------|
| d180(E)                          | 53    | #6   | 2'-2"   |       |
| h180(E)                          | 84    | #4   | 19'-5"  |       |
| h181(E)                          | 24    | #6   | 14'-2"  |       |
| h182(E)                          | 12    | #6   | 17'-9"  |       |
| h183(E)                          | 8     | #6   | 13'-8"  |       |
| v180(E)                          | 37    | #9   | 45'-0"  |       |
| v181(E)                          | 18    | #9   | 14'-0"  |       |
| v182(E)                          | 19    | #4   | 35'-6"  |       |
| v183(E)                          | 14    | #6   | 11'-11" |       |
| v184(E)                          | 14    | #9   | 11'-11" |       |
| n180(E)                          | 73    | #9   | 7'-3"   |       |
| Concrete Structures              | Cu Yd |      | 59.5    |       |
| Reinforcement Bars, Epoxy Coated | Pound |      | 11,850  |       |
| Concrete Sealer                  | Sq Ft |      | 870     |       |



|              |                    |           |
|--------------|--------------------|-----------|
| USER NAME =  | DESIGNED - LR, AGJ | REVISED - |
| PLOT SCALE = | CHECKED - MI, JJS  | REVISED - |
| PLOT DATE =  | DRAWN - LR, AGJ    | REVISED - |
|              | CHECKED - MI, JJS  | REVISED - |

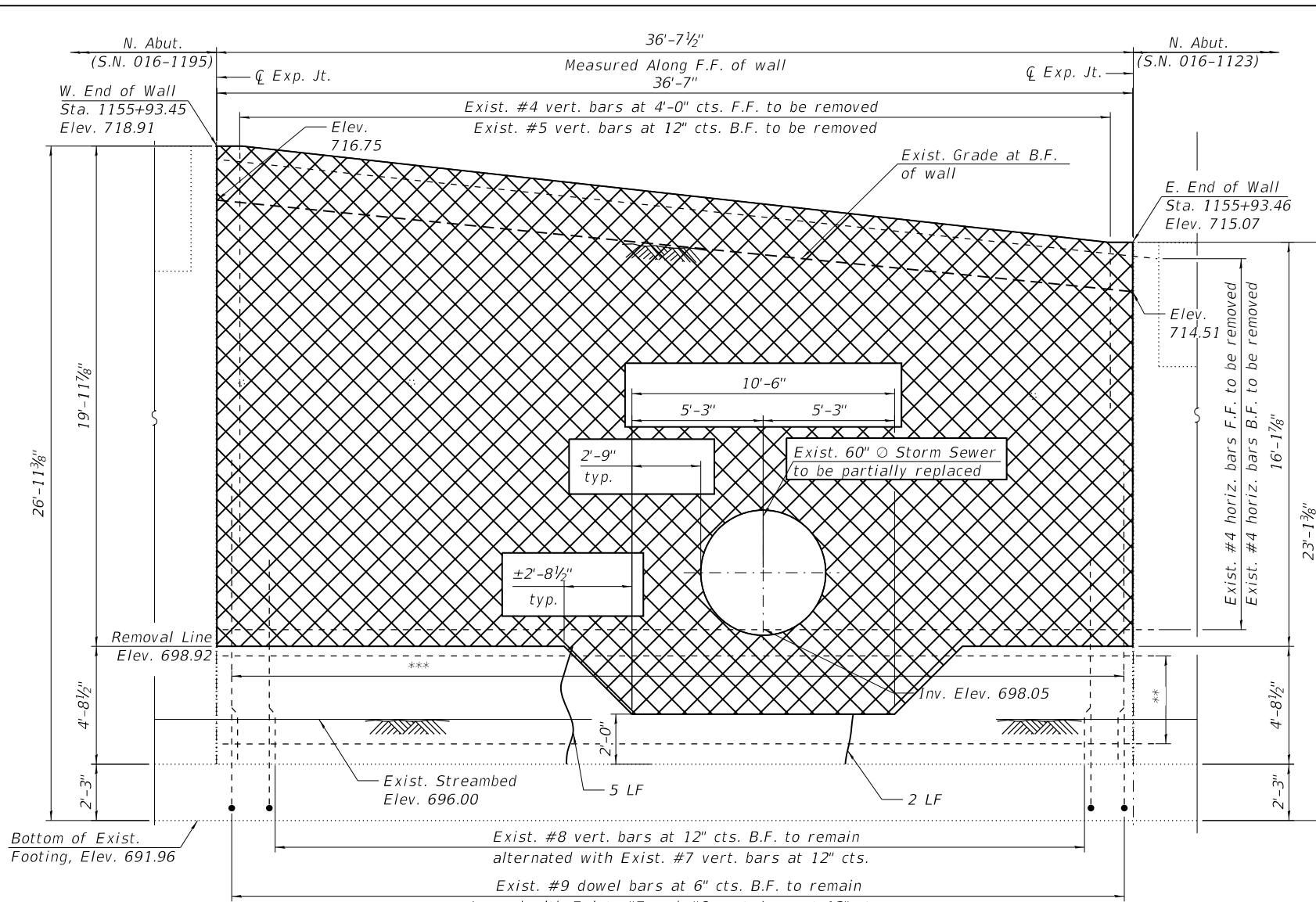
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**NORTHEAST WALL- REINFORCEMENT, SECTIONS AND DETAILS  
 STRUCTURE NO. 016-1195**

SHEET SB-61 OF SB-75 SHEETS

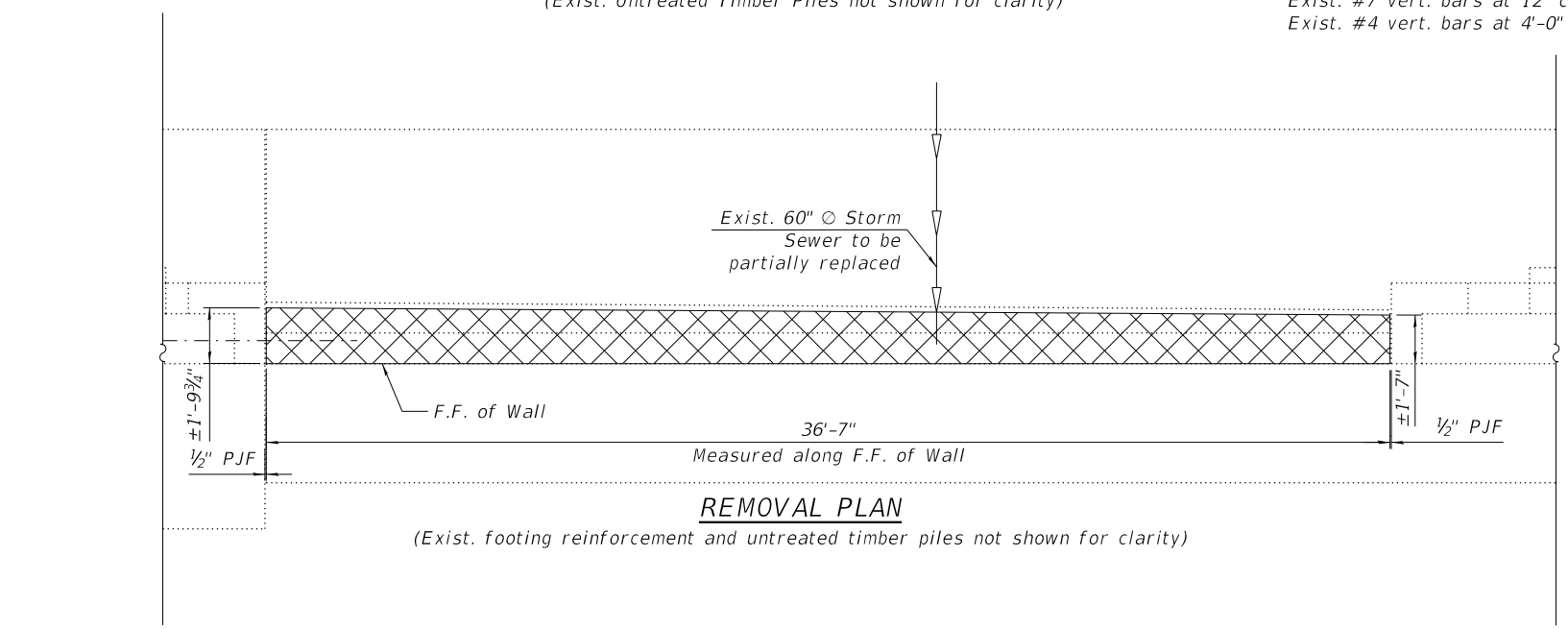
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| 342                       | 2018-100-BR | COOK   | 1351         | 914       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

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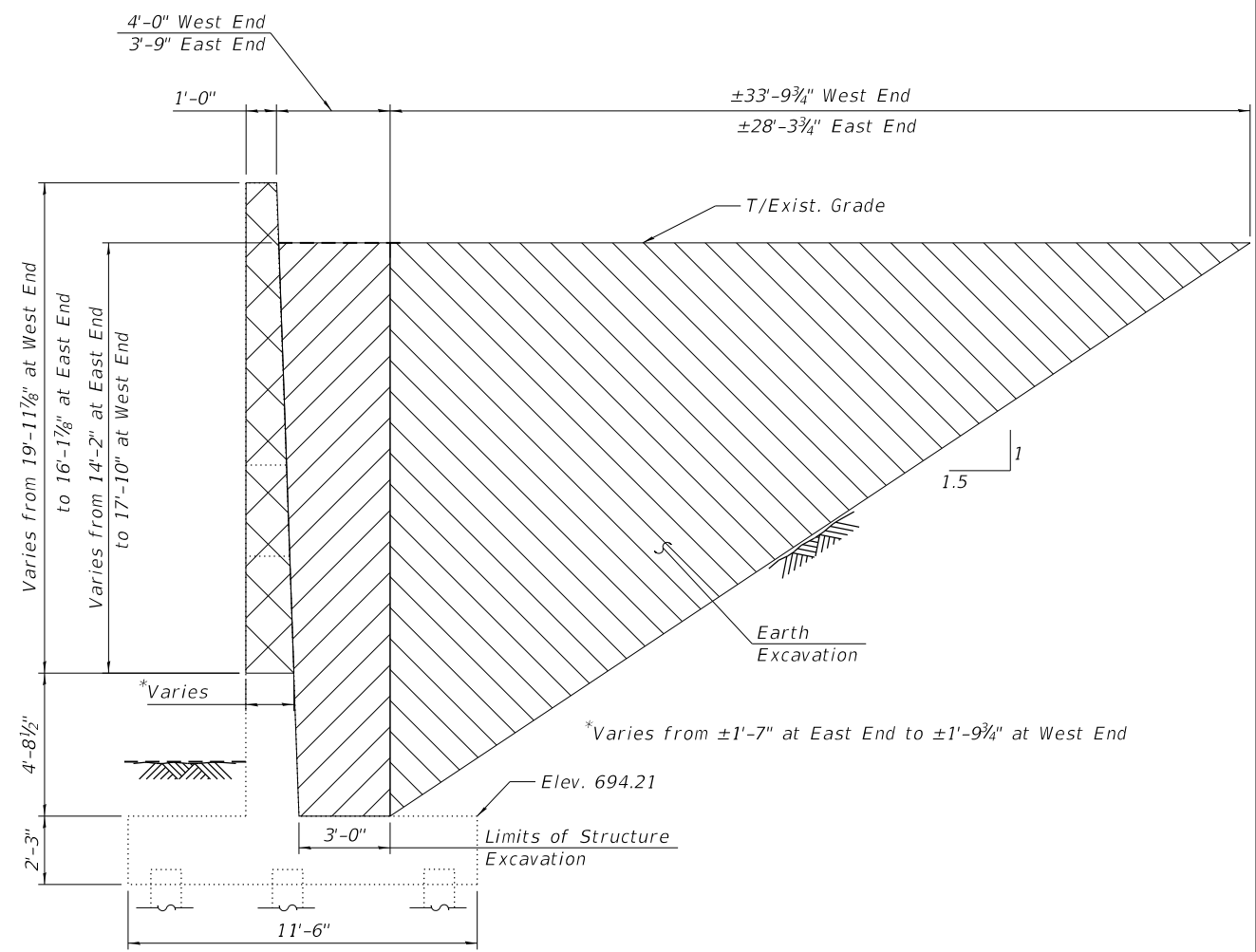


**REMOVAL ELEVATION**  
 (Exist. Untreated Timber Piles not shown for clarity)

\*\* Exist. #4 horiz. bars at 12" cts. F.F. to remain  
 Exist. #4 horiz. bars at 4'-0" cts. B.F. to remain  
 \*\*\* Exist. #7 vert. bars at 12" cts. B.F. to remain  
 Exist. #4 vert. bars at 4'-0" cts. F.F. to remain



**REMOVAL PLAN**  
 (Exist. footing reinforcement and untreated timber piles not shown for clarity)



**STRUCTURE EXCAVATION**

**LEGEND**

- Concrete Removal
- Structure Excavation
- Earth Excavation
- B.F. Back Face
- F.F. Front Face
- L.F. Linear Feet
- Exist. Storm Sewer
- Epoxy Crack injection

**BILL OF MATERIAL**

| ITEM                  | UNIT  | QUANTITY |
|-----------------------|-------|----------|
| Concrete Removal      | Cu Yd | 42.3     |
| Structure Excavation  | Cu Yd | 107      |
| Epoxy Crack Injection | Foot  | 7        |

**NOTES:**

1. Existing Reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.
2. Any reinforcement bars that are damaged during concrete removal shall be replaced using an approved bar splicer or anchorage system. Cost incidental to Concrete Removal.



|              |                    |           |
|--------------|--------------------|-----------|
| USER NAME =  | DESIGNED - LR, AGJ | REVISED - |
|              | CHECKED - MI, JJS  | REVISED - |
| PLOT SCALE = | DRAWN - LR, AGJ    | REVISED - |
| PLOT DATE =  | CHECKED - MI, JJS  | REVISED - |

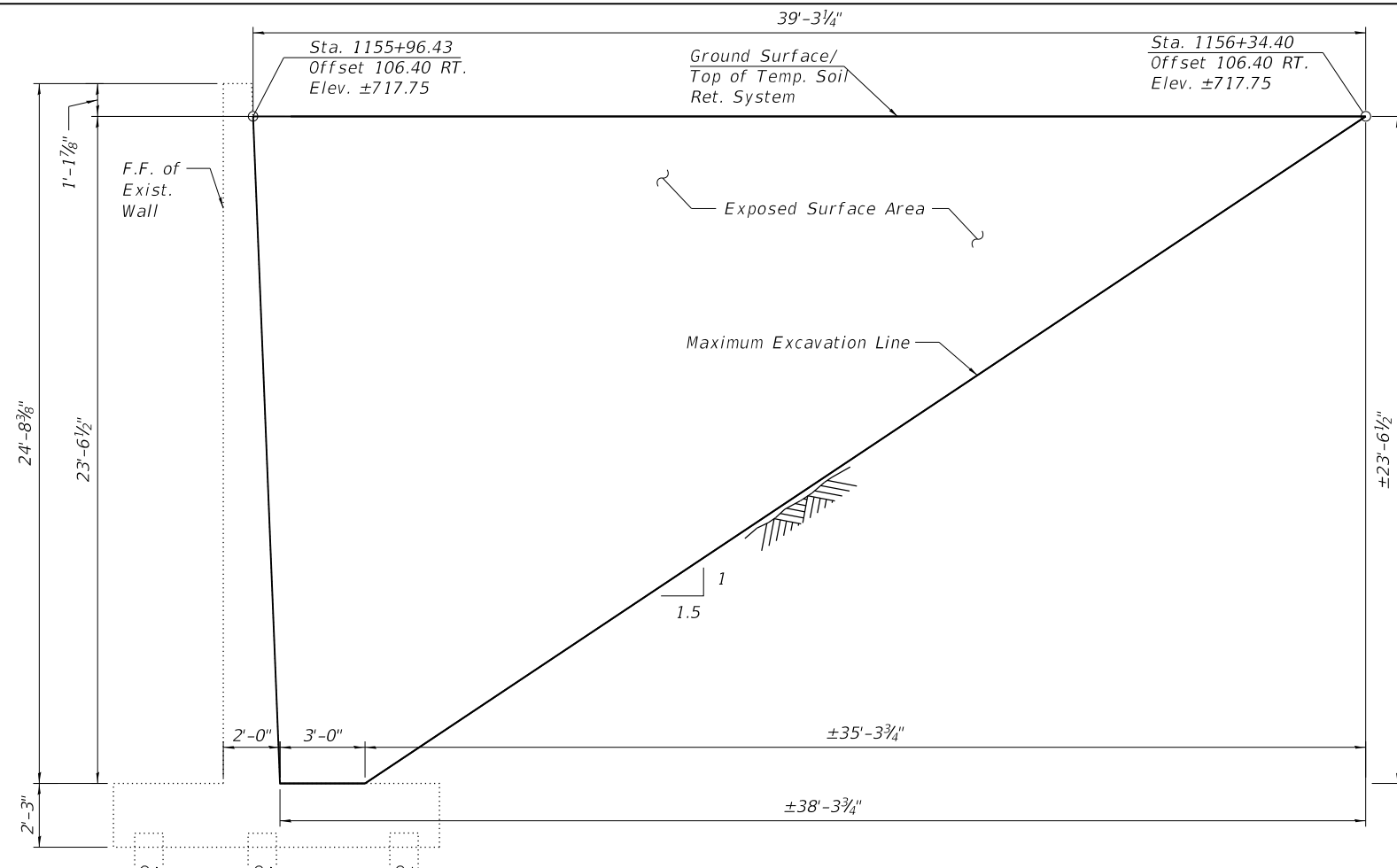
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTHEAST WALL- PARTIAL REMOVAL & STR. EXCAV. DETAILS  
 STRUCTURE NO. 016-1195

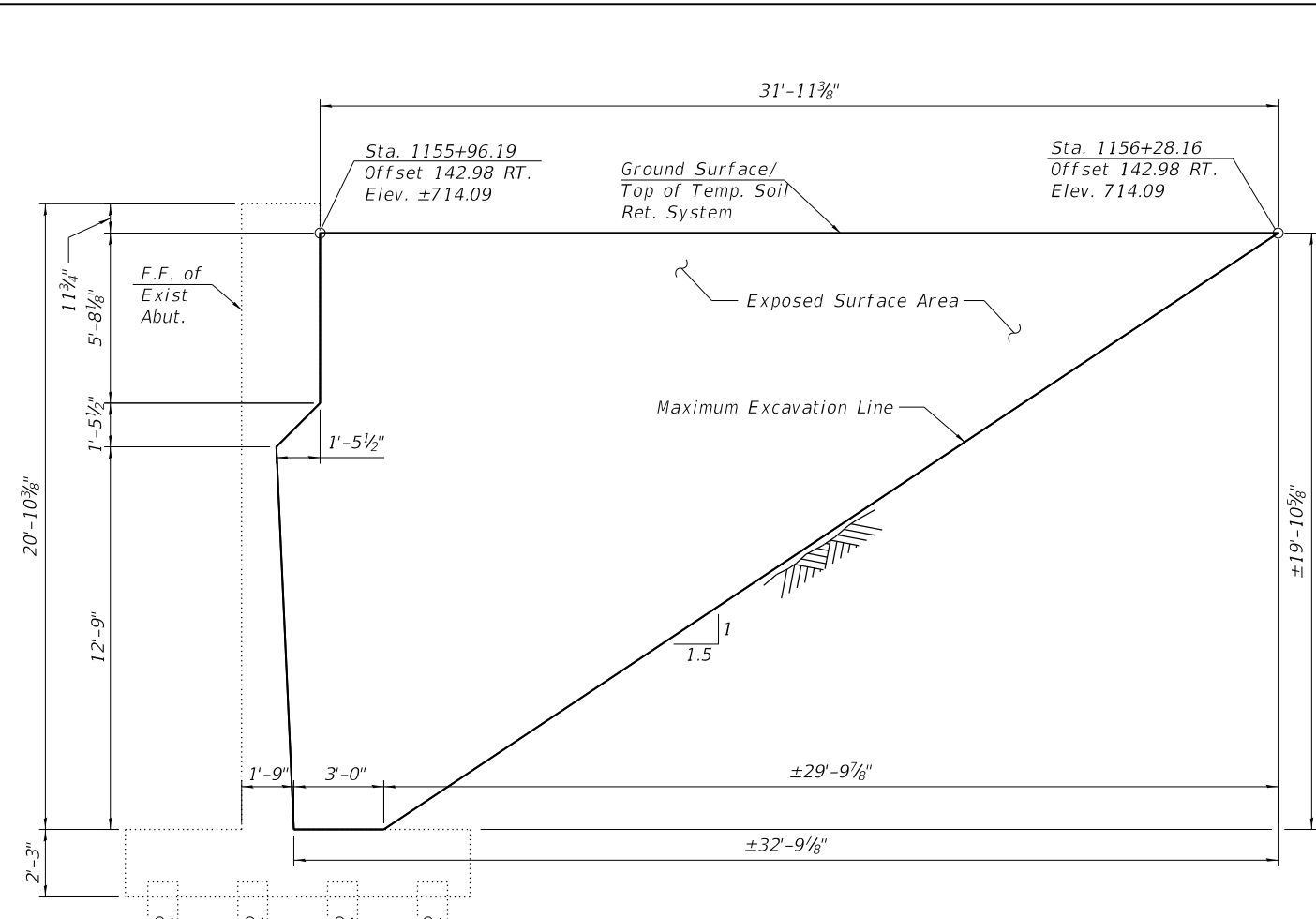
SHEET SB-62 OF SB-75 SHEETS

|                           |             |        |              |           |
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| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 915       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

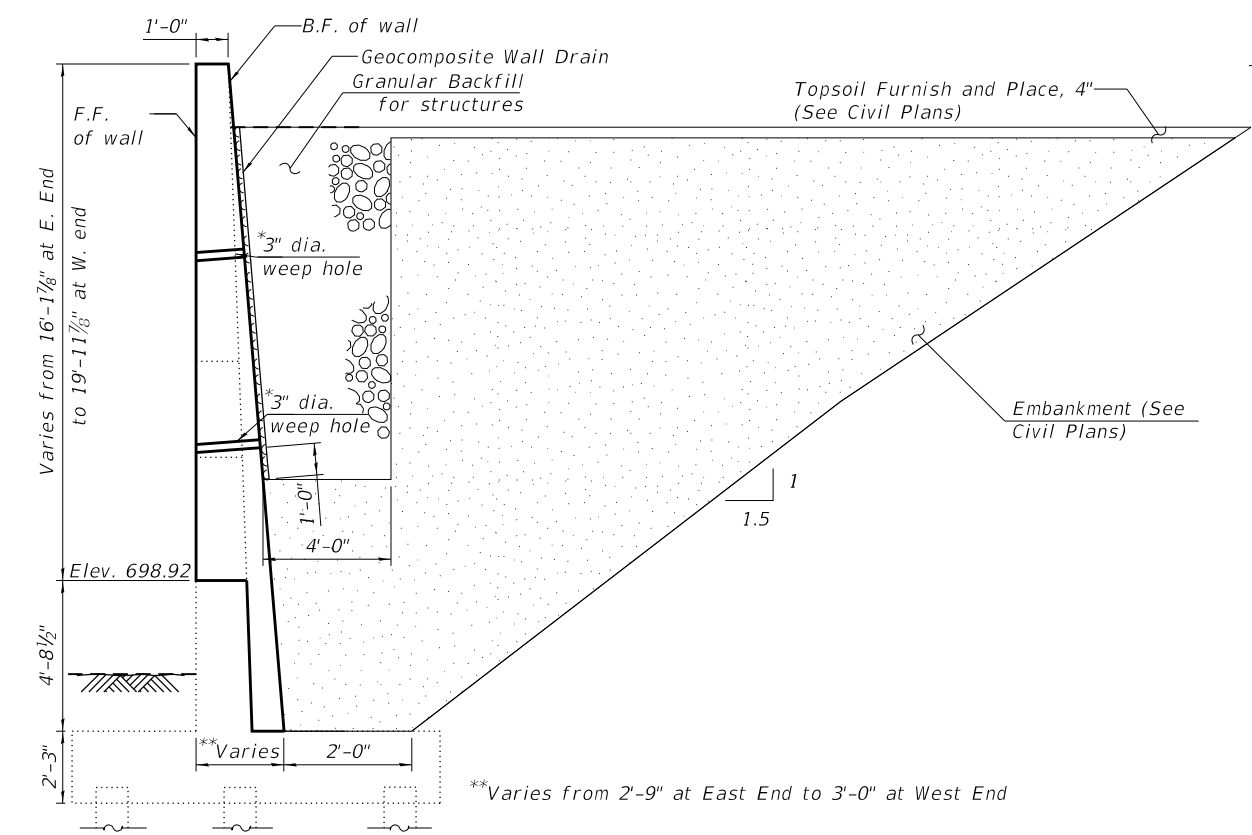




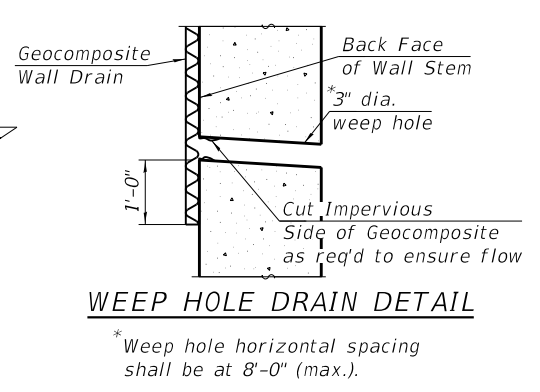
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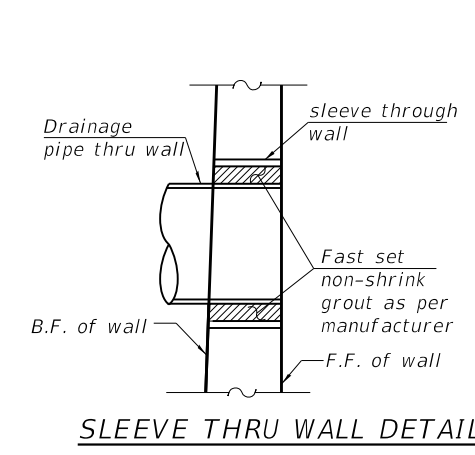
TEMPORARY SOIL RETENTION SYSTEM NO. 12



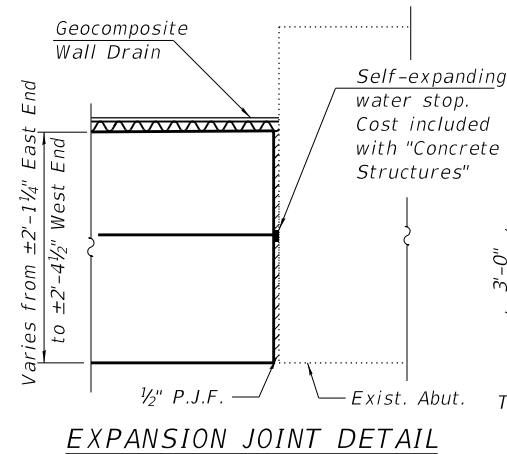
GRANULAR BACKFILL



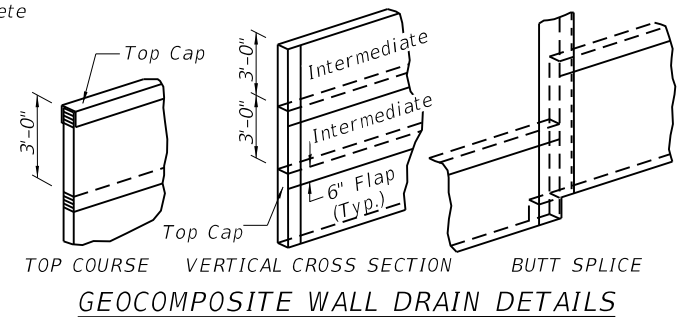
WEEP HOLE DRAIN DETAIL



SLEEVE THRU WALL DETAIL



EXPANSION JOINT DETAIL



GEOCOMPOSITE WALL DRAIN DETAILS

**BILL OF MATERIAL**

| ITEM                             | UNIT  | QUANTITY |
|----------------------------------|-------|----------|
| Temporary Soil Retention System  | Sq Ft | 853      |
| Granular Backfill For Structures | Cu Yd | 124      |
| Geocomposite Wall Drain          | Sq Yd | 93       |

**NOTES:**  
 1. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a soil temporary retention system design including plan details and calculations for review and acceptance by the Engineer.

**LEGEND**

|      |                                  |
|------|----------------------------------|
|      | Embankment                       |
|      | Granular Backfill for structures |
| B.F. | Back Face                        |
| F.F. | Front Face                       |

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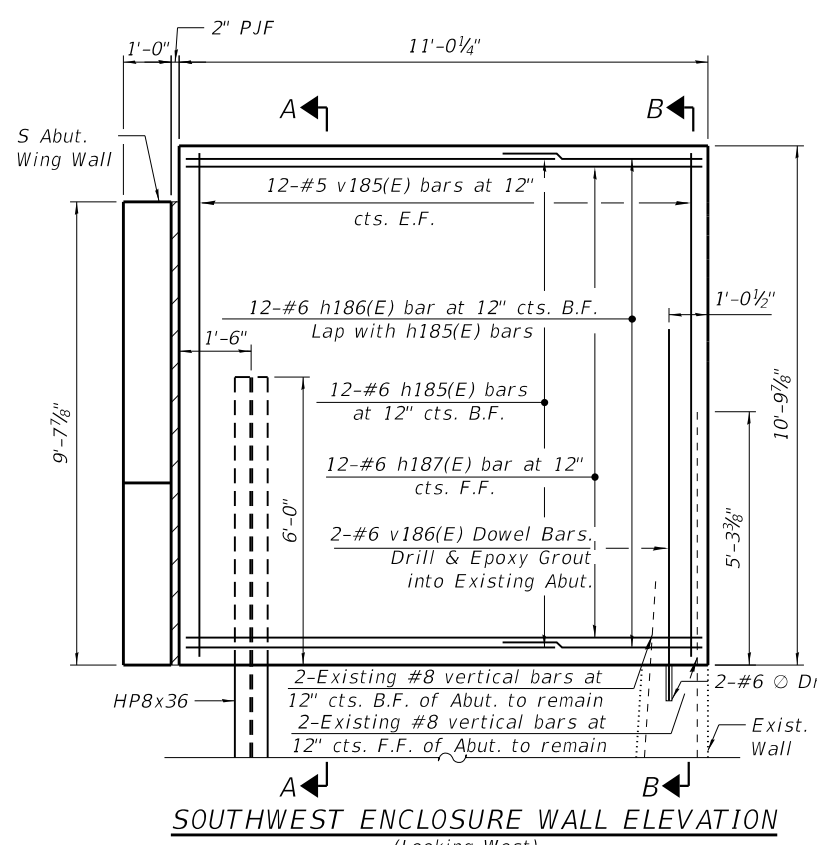
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|--------------|--------------------|-----------|
| USER NAME =  | DESIGNED - LR, AGJ | REVISED - |
|              | CHECKED - MI, JJS  | REVISED - |
| PLOT SCALE = | DRAWN - LR, AGJ    | REVISED - |
| PLOT DATE =  | CHECKED - MI, JJS  | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

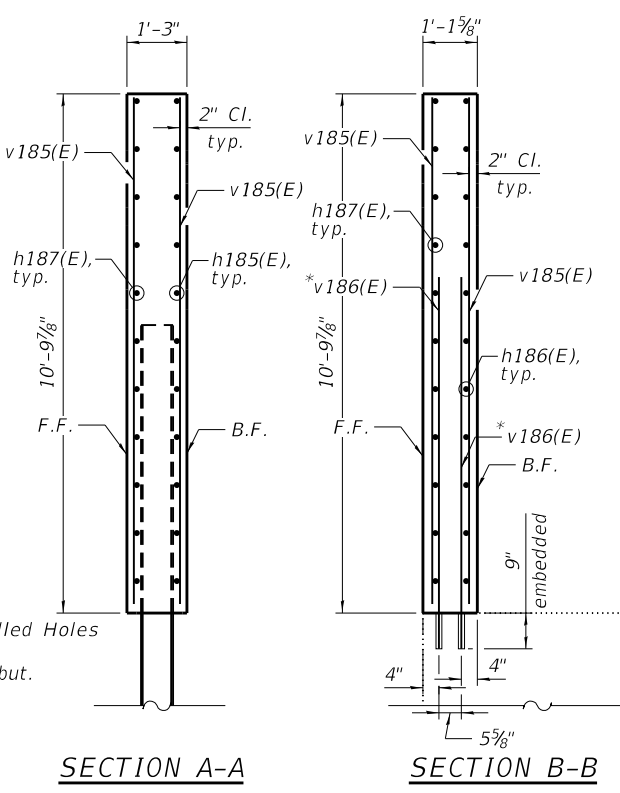
NORTHEAST WALL- TSRS, BACKFILL SECTION, AND DETAILS  
 STRUCTURE NO. 016-1195

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 916       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

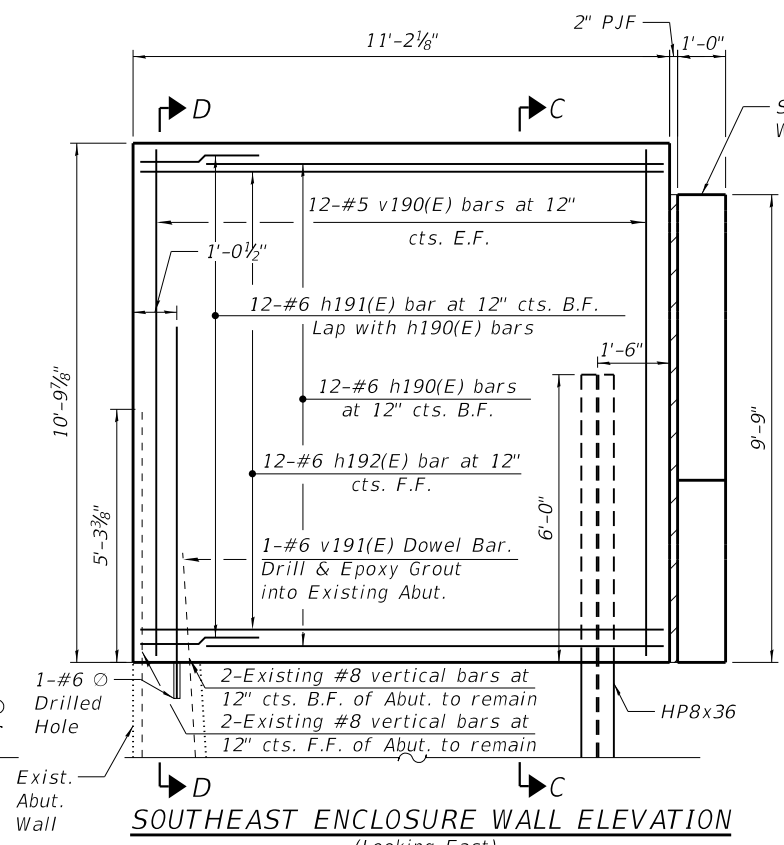
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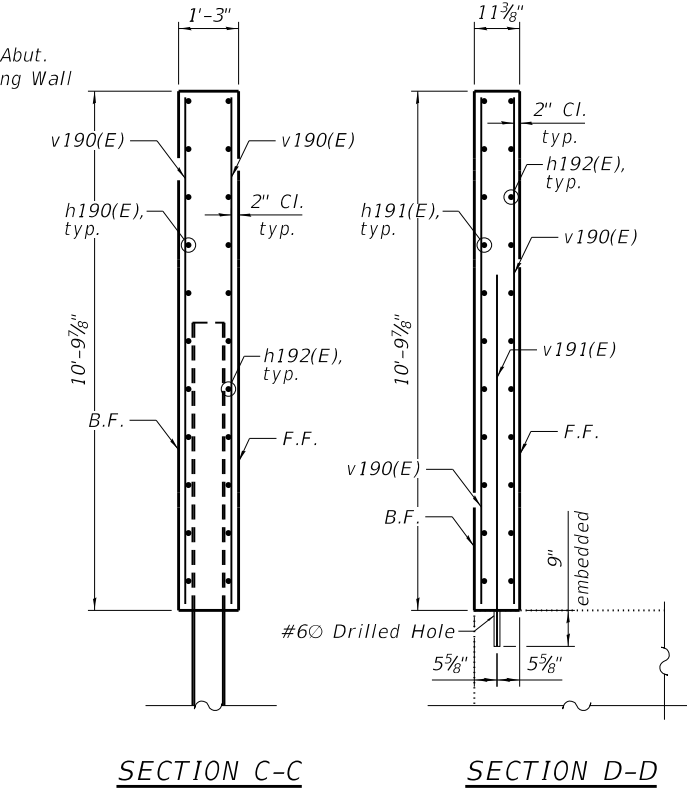
**SOUTHWEST ENCLOSURE WALL ELEVATION**  
 (Looking West)



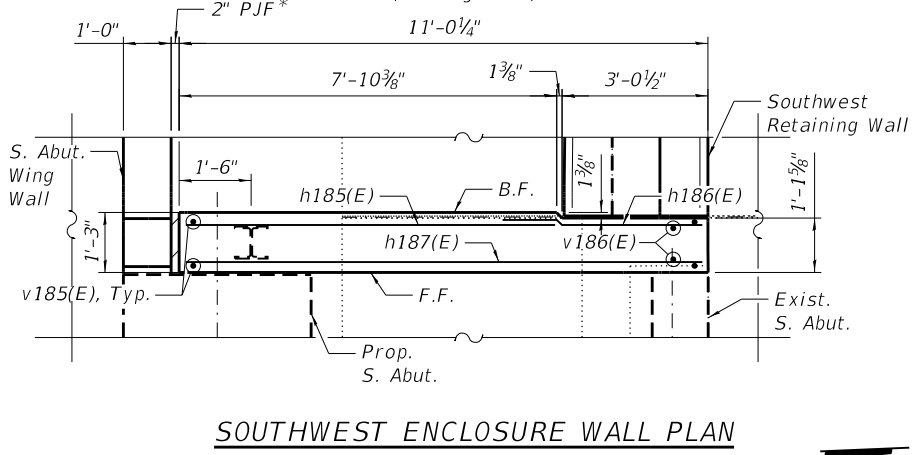
**SECTION A-A**      **SECTION B-B**



**SOUTHEAST ENCLOSURE WALL ELEVATION**  
 (Looking East)

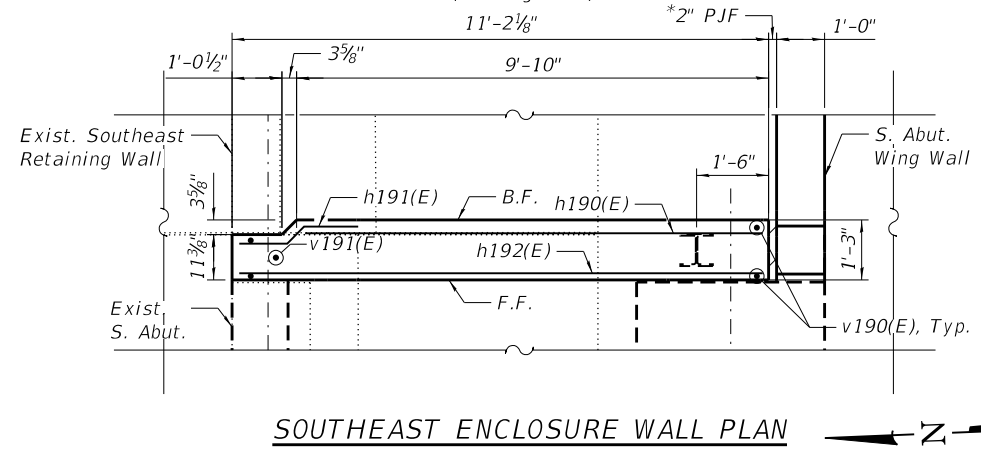


**SECTION C-C**      **SECTION D-D**



**SOUTHWEST ENCLOSURE WALL PLAN**

\*Epoxy grout v186(E) bars according to Section 584 of the Standard Specifications. Cost included in Concrete Structures.



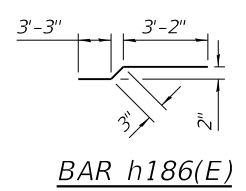
**SOUTHEAST ENCLOSURE WALL PLAN**

**SW ENCLOSURE WALL  
 BILL OF MATERIAL**

| Bar                              | No. | Size | Length | Shape |
|----------------------------------|-----|------|--------|-------|
| h185(E)                          | 12  | #6   | 7'-9"  | —     |
| h186(E)                          | 12  | #6   | 6'-8"  | —     |
| h187(E)                          | 12  | #6   | 10'-8" | —     |
| v185(E)                          | 24  | #5   | 10'-5" | —     |
| v186(E)                          | 2   | #6   | 7'-0"  | —     |
| Concrete Structures              |     |      | Cu Yd  | 5.4   |
| Concrete Sealer                  |     |      | Sq Ft  | 171   |
| Reinforcement Bars, Epoxy Coated |     |      | Pound  | 740   |
| Furnishing Steel Piles HP8X36    |     |      | Foot   | 74    |
| Driving Piles                    |     |      | Foot   | 74    |

**SE ENCLOSURE WALL  
 BILL OF MATERIAL**

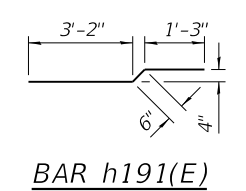
| Bar                              | No. | Size | Length  | Shape |
|----------------------------------|-----|------|---------|-------|
| h190(E)                          | 12  | #6   | 9'-8"   | —     |
| h191(E)                          | 12  | #6   | 4'-11"  | —     |
| h192(E)                          | 12  | #6   | 10'-10" | —     |
| v190(E)                          | 24  | #5   | 10'-5"  | —     |
| v191(E)                          | 1   | #6   | 7'-0"   | —     |
| Concrete Structures              |     |      | Cu Yd   | 5.5   |
| Concrete Sealer                  |     |      | Sq Ft   | 173   |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 730   |
| Furnishing Steel Piles HP8X36    |     |      | Foot    | 74    |
| Driving Piles                    |     |      | Foot    | 74    |



**BAR h186(E)**

**PILE DATA**

Type: HP8x36  
 Nominal Required Bearing: 158 kips  
 Factored Resistance Available: 87 kips  
 Est. Length: 74'-0"  
 No. Production Piles: 1



**BAR h191(E)**

**PILE DATA**

Type: HP8x36  
 Nominal Required Bearing: 158 kips  
 Factored Resistance Available: 87 kips  
 Est. Length: 74'-0"  
 No. Production Piles: 1

| Minimum Bar Lap |       |
|-----------------|-------|
| Bar             | Lap   |
| #6              | 3'-7" |

**NOTE:**

1. Epoxy grout v186(E) and v191(E) bars according to Section 584 of the Standard Specifications. Drill to miss existing reinforcement.

\*Cost included with Concrete Structures



| USER NAME  | DESIGNED | REVISIONS |
|------------|----------|-----------|
| =          | AGI, LR  | -         |
| =          | MI, LAB  | -         |
| PLOT SCALE | DRAWN    | REVISIONS |
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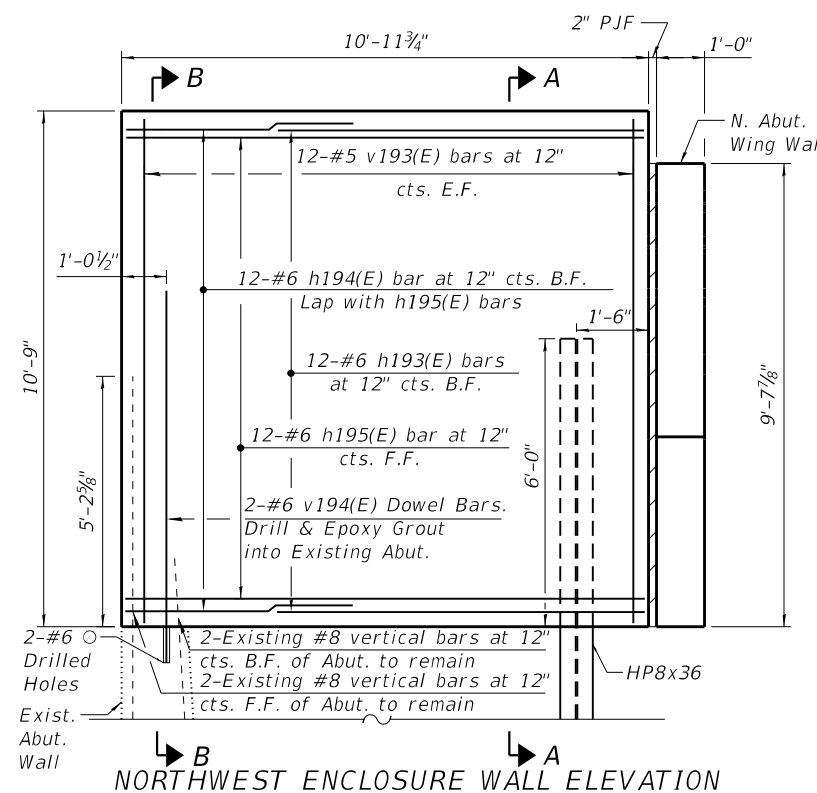
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ENCLOSURE WALL - SOUTH ABUTMENT - SW AND SE  
 STRUCTURE NO. 016-1195**

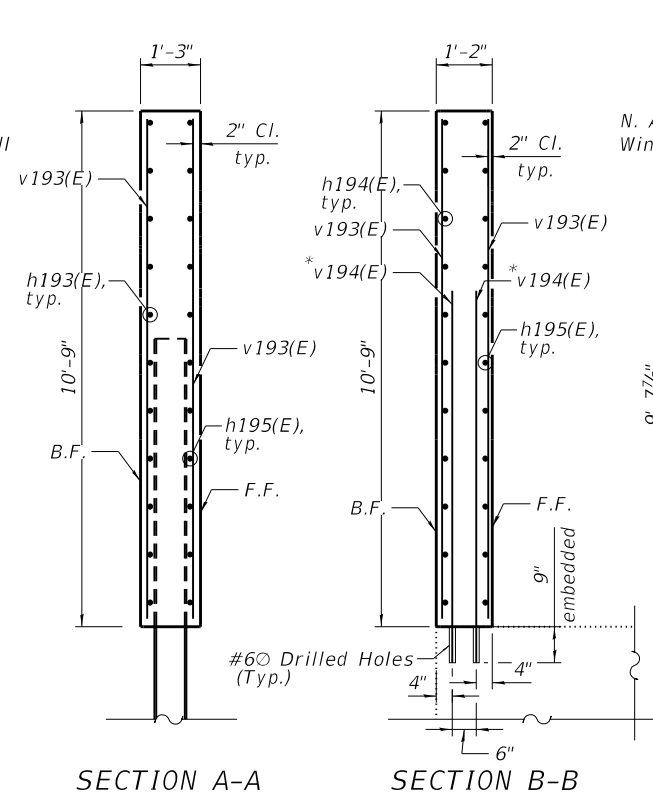
SHEET SB-64 OF SB-75 SHEETS

| F.A.P. RTE.        | SECTION     | COUNTY           | TOTAL SHEETS | SHEET NO. |
|--------------------|-------------|------------------|--------------|-----------|
| 342                | 2018-100-BR | COOK             | 1351         | 917       |
| CONTRACT NO. 62N91 |             |                  |              |           |
| ILLINOIS           |             | FED. AID PROJECT |              |           |

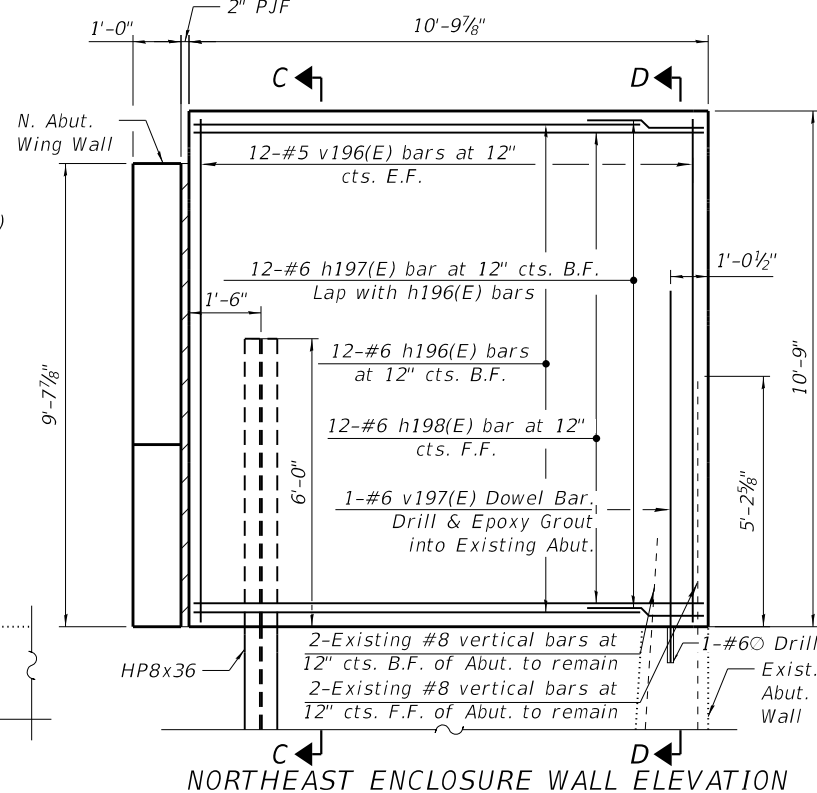
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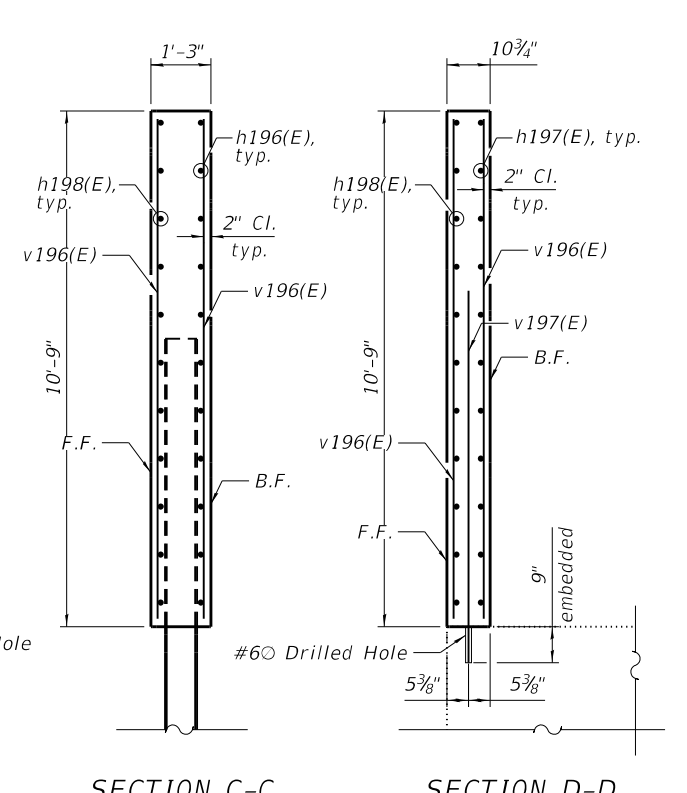
**NORTHWEST ENCLOSURE WALL ELEVATION**  
(Looking West)



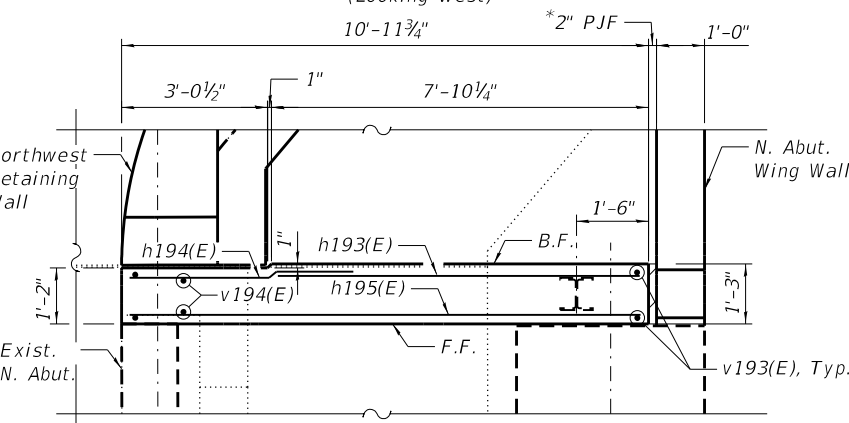
**SECTION A-A**      **SECTION B-B**



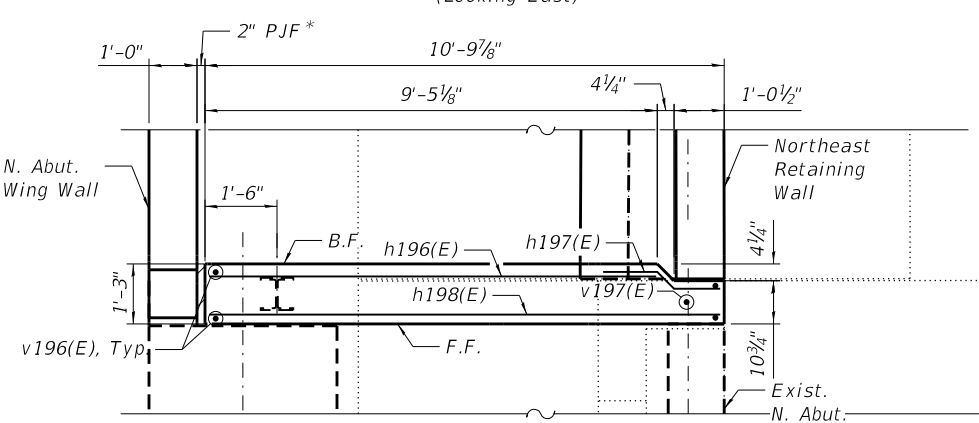
**NORTHEAST ENCLOSURE WALL ELEVATION**  
(Looking East)



**SECTION C-C**      **SECTION D-D**



**NORTHWEST ENCLOSURE WALL PLAN**

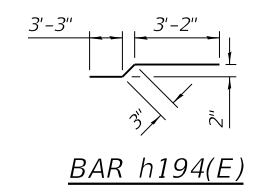


**NORTHEAST ENCLOSURE WALL PLAN**

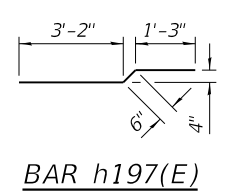
\*Epoxy grout v194(E) bars according to Section 584 of the Standard Specifications. Cost included in Concrete Structures.

**NW ENCLOSURE WALL BILL OF MATERIAL**

| Bar                              | No. | Size | Length | Shape |
|----------------------------------|-----|------|--------|-------|
| h193(E)                          | 12  | #6   | 7'-8"  | —     |
| h194(E)                          | 12  | #6   | 6'-8"  | —     |
| h195(E)                          | 12  | #6   | 10'-7" | —     |
| v193(E)                          | 24  | #5   | 10'-5" | —     |
| v194(E)                          | 2   | #6   | 7'-0"  | —     |
| Concrete Structures              |     |      | Cu Yd  | 5.4   |
| Concrete Sealer                  |     |      | Sq Ft  | 169   |
| Reinforcement Bars, Epoxy Coated |     |      | Pound  | 740   |
| Furnishing Steel Piles HP8X36    |     |      | Foot   | 74    |
| Driving Piles                    |     |      | Foot   | 74    |



**PILE DATA**  
 Type: HP8x36  
 Nominal Required Bearing: 209 kips  
 Factored Resistance Available: 115 kips  
 Est. Length: 74'-0"  
 No. Production Piles: 1



**PILE DATA**  
 Type: HP8x36  
 Nominal Required Bearing: 209 kips  
 Factored Resistance Available: 115 kips  
 Est. Length: 74'-0"  
 No. Production Piles: 1

| Minimum Bar Lap |       |
|-----------------|-------|
| Bar             | Lap   |
| #6              | 3'-7" |

**NE ENCLOSURE WALL BILL OF MATERIAL**

| Bar                              | No. | Size | Length | Shape |
|----------------------------------|-----|------|--------|-------|
| h196(E)                          | 12  | #6   | 9'-3"  | —     |
| h197(E)                          | 12  | #6   | 4'-11" | —     |
| h198(E)                          | 12  | #6   | 10'-5" | —     |
| v196(E)                          | 24  | #5   | 10'-5" | —     |
| v197(E)                          | 1   | #6   | 7'-0"  | —     |
| Concrete Structures              |     |      | Cu Yd  | 5.3   |
| Concrete Sealer                  |     |      | Sq Ft  | 167   |
| Reinforcement Bars, Epoxy Coated |     |      | Pound  | 720   |
| Furnishing Steel Piles HP8X36    |     |      | Foot   | 74    |
| Driving Piles                    |     |      | Foot   | 74    |

**NOTE:**  
 1. Epoxy grout v194(E) and v197(E) bars according to Section 584 of the Standard Specifications. Drill to miss existing reinforcement.

\*Cost included with Concrete Structures



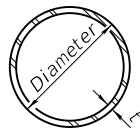
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| USER NAME =  | DESIGNED - AGI, LR | REVISED - |
| PLOT SCALE = | CHECKED - MI, LAB  | REVISED - |
| PLOT DATE =  | DRAWN - AGI, LR    | REVISED - |
|              | CHECKED - MI, LAB  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ENCLOSURE WALL - NORTH ABUTMENT- NW AND NE  
STRUCTURE NO. 016-1195**

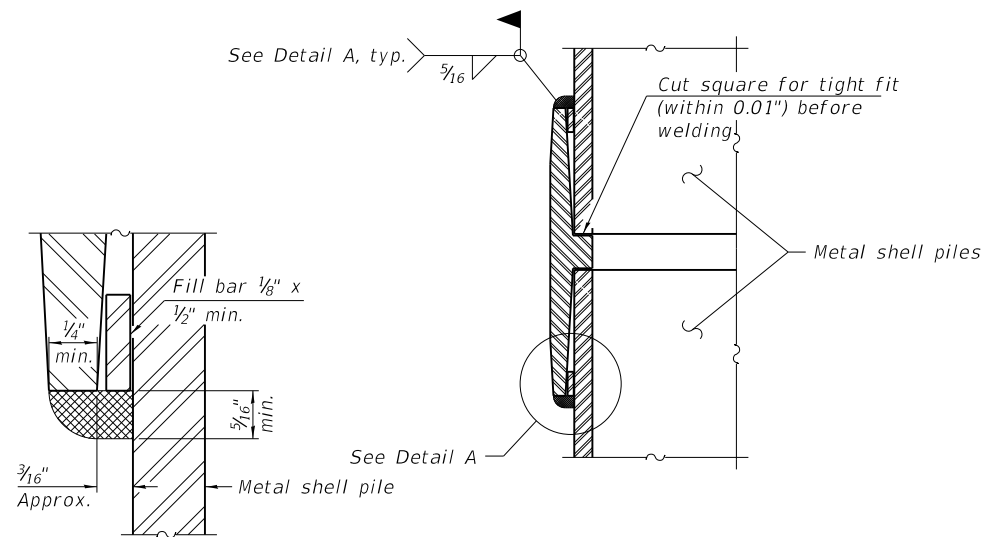
SHEET SB-65 OF SB-75 SHEETS

|                           |                     |             |                   |               |
|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.P. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1351 | SHEET NO. 918 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |

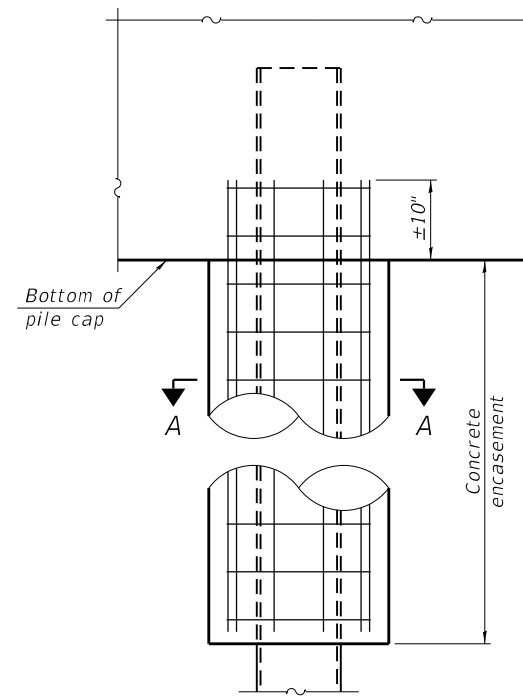


**METAL SHELL PILE TABLE**

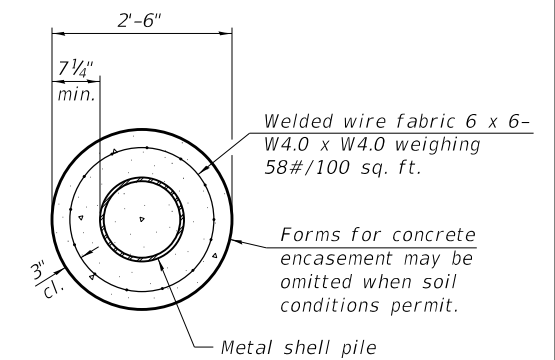
| Designation and outside diameter | Wall thickness t | Weight per foot (Lbs./ft.) | Inside volume (yd. <sup>3</sup> /ft.) |
|----------------------------------|------------------|----------------------------|---------------------------------------|
| PP12                             | 0.250"           | 31.40                      | 0.0267                                |
| PP14                             | 0.250"           | 36.75                      | 0.0368                                |
| PP14                             | 0.312"           | 45.65                      | 0.0361                                |
| PP16                             | 0.312"           | 52.32                      | 0.0478                                |
| PP16                             | 0.375"           | 62.64                      | 0.0470                                |



**DETAIL A**

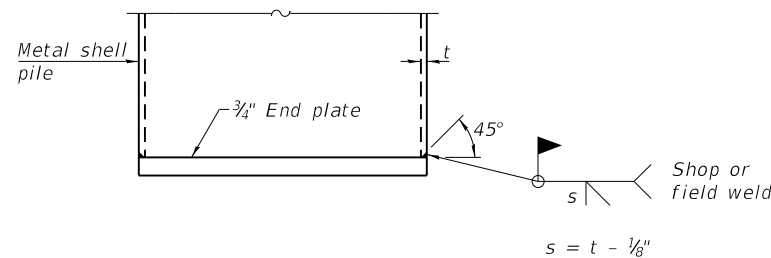


**ELEVATION**



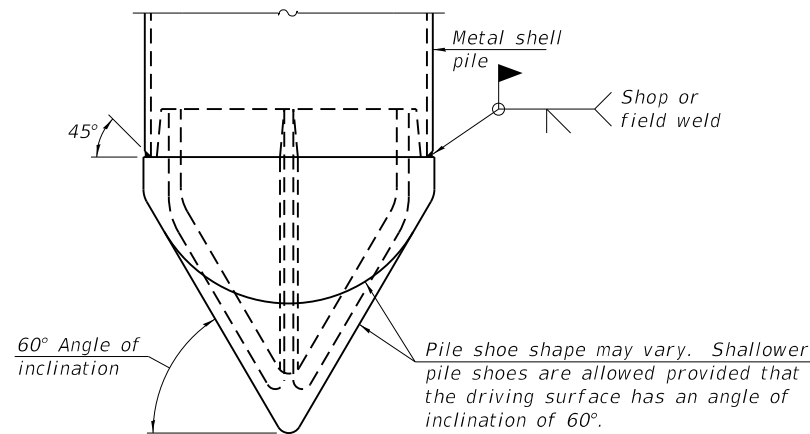
**SECTION A-A**

**INDIVIDUAL PILE CONCRETE ENCASUREMENT**  
(When specified)



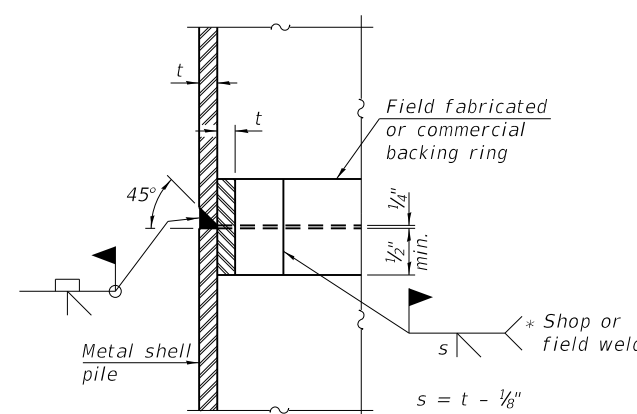
**END PLATE ATTACHMENT**

**WELDED COMMERCIAL SPLICE**  
Notes:  
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.  
Pile segments shall be driven to solid contact with splicer before welding.

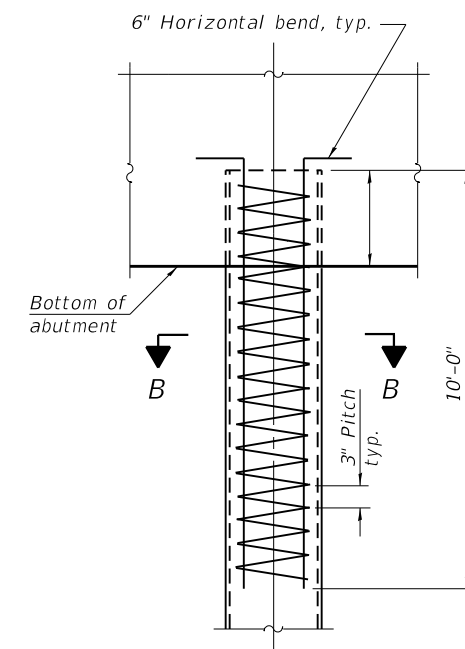


**PILE SHOE ATTACHMENT**

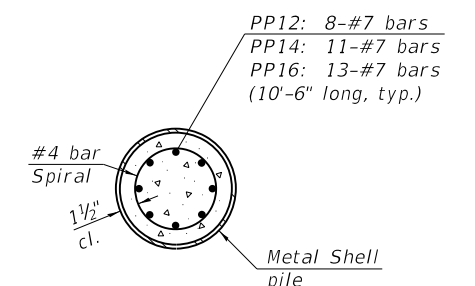
(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).



**COMPLETE PENETRATION WELD SPLICE**  
\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



**ELEVATION**



**SECTION B-B**

**REINFORCEMENT AT ABUTMENTS**  
(Omit when concrete encasement is specified)

Note:  
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

F-MS

5-15-2023



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

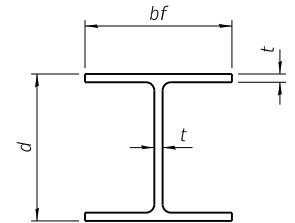
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**METAL SHELL PILE DETAILS  
STRUCTURE NO. 016-1195**

SHEET SB-66 OF SB-75 SHEETS

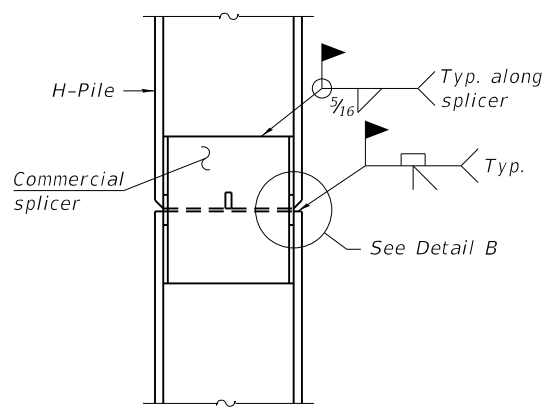
|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 919       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT

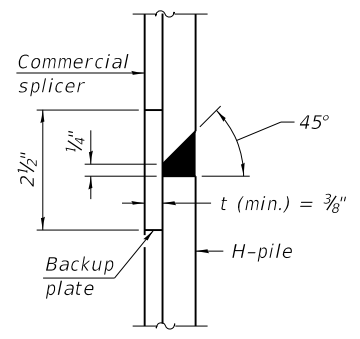


**STEEL PILE TABLE**

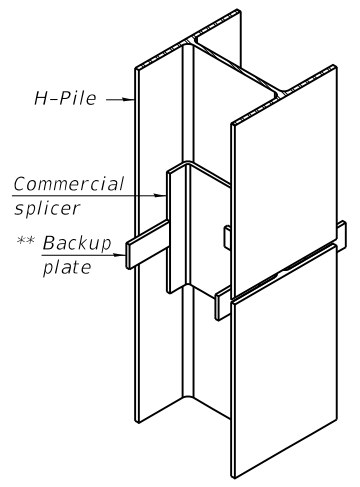
| Designation | Depth d | Flange width bf | Web and Flange thickness t | Encasement diameter A |
|-------------|---------|-----------------|----------------------------|-----------------------|
| HP 18x181   | 18      | 18              | 1                          | 36"                   |
| x157        | 17 3/4" | 17 7/8"         | 7/8"                       | 36"                   |
| x135        | 17 1/2" | 17 3/4"         | 3/4"                       | 36"                   |
| HP 16x183   | 16 1/2" | 16 1/2"         | 1 1/8"                     | 36"                   |
| x162        | 16 1/4" | 16 1/8"         | 1"                         | 36"                   |
| x141        | 16      | 16              | 7/8"                       | 36"                   |
| x121        | 15 3/4" | 15 7/8"         | 3/4"                       | 36"                   |
| HP 14x117   | 14 1/4" | 14 7/8"         | 1 3/16"                    | 30"                   |
| x102        | 14"     | 14 3/4"         | 1 1/16"                    | 30"                   |
| x89         | 13 7/8" | 14 3/4"         | 5/8"                       | 30"                   |
| x73         | 13 5/8" | 14 3/8"         | 1/2"                       | 30"                   |
| HP 12x84    | 12 1/4" | 12 1/4"         | 1 1/16"                    | 24"                   |
| x74         | 12 1/8" | 12 1/4"         | 5/8"                       | 24"                   |
| x63         | 12"     | 12 1/8"         | 1/2"                       | 24"                   |
| x53         | 11 3/4" | 12"             | 7/16"                      | 24"                   |
| HP 10x57    | 10"     | 10 1/4"         | 9/16"                      | 24"                   |
| x42         | 9 3/4"  | 10 1/8"         | 7/16"                      | 24"                   |
| HP 8x36     | 8"      | 8 1/8"          | 7/16"                      | 18"                   |



**ELEVATION**

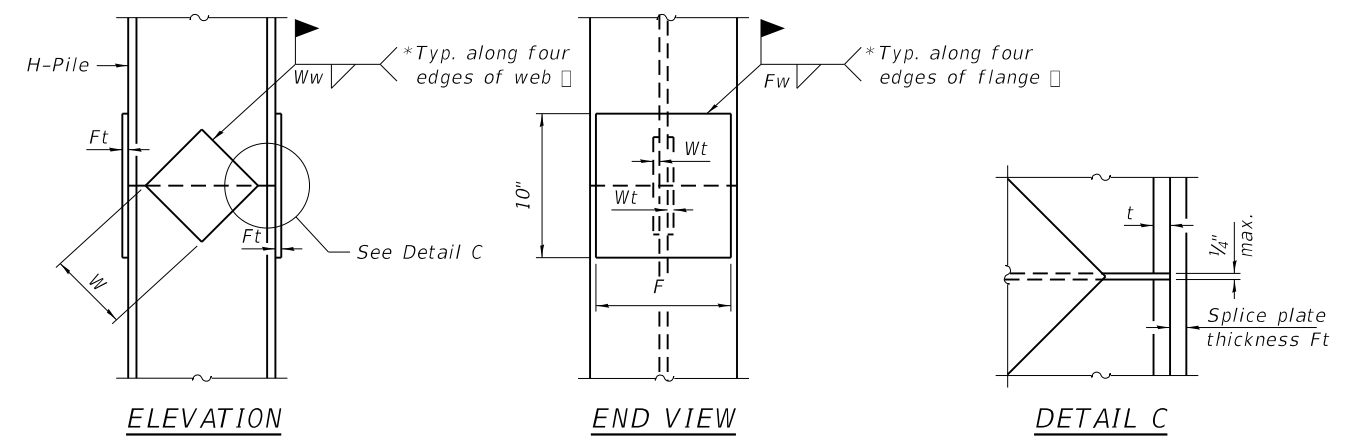


**DETAIL B**



**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE**



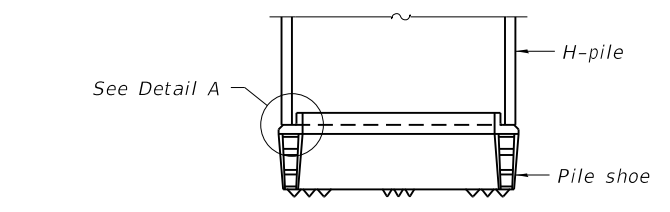
**ELEVATION**

**END VIEW**

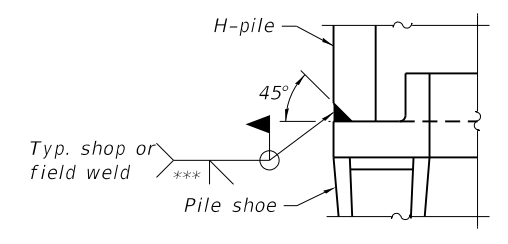
**DETAIL C**

| Designation | F       | Ft     | Fw      | W      | Wt   | Ww   |
|-------------|---------|--------|---------|--------|------|------|
| HP 18x181   | 15 1/2" | 1 1/2" | 1"      | 9 1/2" | 7/8" | 3/4" |
| x157        | 15 1/4" | 1 1/4" | 1"      | 9 1/2" | 7/8" | 3/4" |
| x135        | 15 1/4" | 1 1/4" | 1"      | 9 1/2" | 7/8" | 3/4" |
| HP 16x183   | 13 3/4" | 1 1/2" | 1"      | 8 1/4" | 7/8" | 3/4" |
| x162        | 13 1/2" | 1 1/2" | 1"      | 8 1/4" | 3/4" | 5/8" |
| x141        | 13 1/2" | 1 1/4" | 7/8"    | 8 1/4" | 3/4" | 5/8" |
| x121        | 13 1/2" | 1 1/4" | 7/8"    | 8 1/4" | 3/4" | 5/8" |
| HP 14x117   | 12 1/2" | 1 1/4" | 7/8"    | 7 3/4" | 5/8" | 1/2" |
| x102        | 12 1/2" | 1"     | 3/4"    | 7 3/4" | 5/8" | 1/2" |
| x89         | 12 1/2" | 7/8"   | 1 1/16" | 7 3/4" | 5/8" | 1/2" |
| x73         | 12 1/2" | 3/4"   | 9/16"   | 7 3/4" | 5/8" | 1/2" |
| HP 12x84    | 10"     | 1"     | 1 1/16" | 6 1/2" | 5/8" | 1/2" |
| x74         | 10"     | 7/8"   | 1 1/16" | 6 1/2" | 5/8" | 1/2" |
| x63         | 10"     | 3/4"   | 1/2"    | 6 1/2" | 1/2" | 3/8" |
| x53         | 10"     | 3/4"   | 1/2"    | 6 1/2" | 1/2" | 3/8" |
| HP 10x57    | 8"      | 7/8"   | 9/16"   | 5 1/4" | 1/2" | 3/8" |
| x42         | 8"      | 3/4"   | 9/16"   | 5 1/4" | 1/2" | 3/8" |
| HP 8x36     | 6 3/4"  | 5/8"   | 7/16"   | 4"     | 1/2" | 3/8" |

**WELDED PLATE FIELD SPLICE**

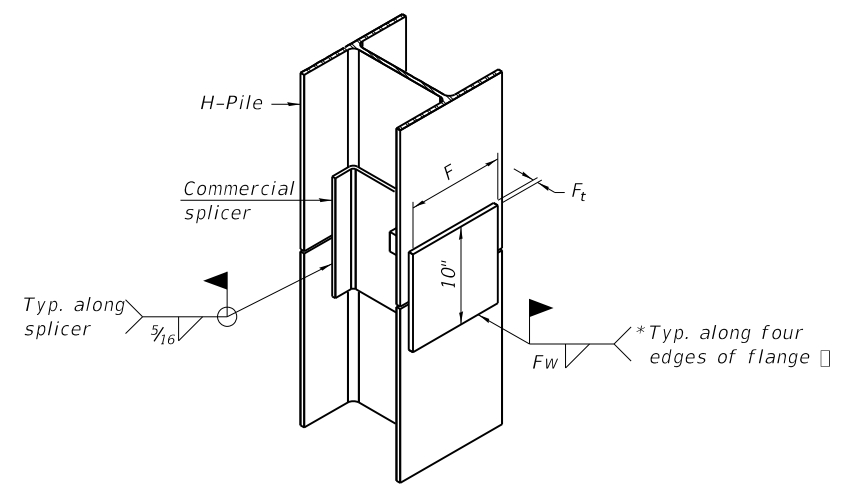


**ELEVATION**



**DETAIL A**

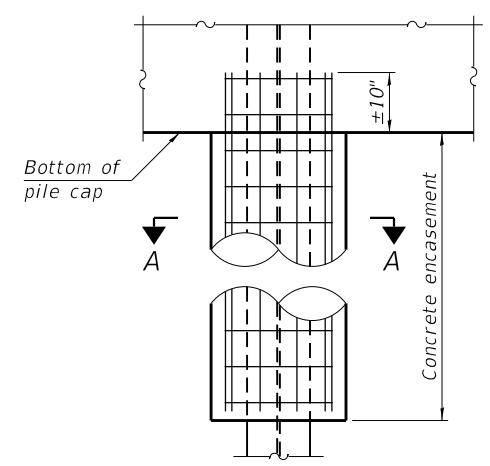
**SHOE ATTACHMENT**



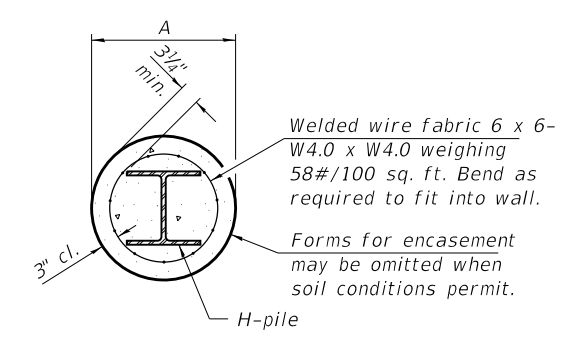
**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE ALTERNATE**

- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).



**ELEVATION**



**SECTION A-A**

**INDIVIDUAL PILE CONCRETE ENCASEMENT (when specified)**

Note:  
The steel H-piles shall be according to AASHTO M270 Grade 50.

MODEL: Default  
FILE NAME: C:\Users\prakashgurumule\Strand Associates\Drawings\CAD\By\_Subconsultants\CAD\_Sheets-by-others\C2-D162N91-SNO16-1195\_SB-67\_HP\_Pile\_Details-HBM.dgn



|      |            |              |               |           |
|------|------------|--------------|---------------|-----------|
| F-HP | 10-27-2023 | USER NAME =  | DESIGNED - EN | REVISED - |
|      |            | PLOT SCALE = | CHECKED - MI  | REVISED - |
|      |            | PLOT DATE =  | DRAWN - EN    | REVISED - |
|      |            |              | CHECKED - MI  | REVISED - |

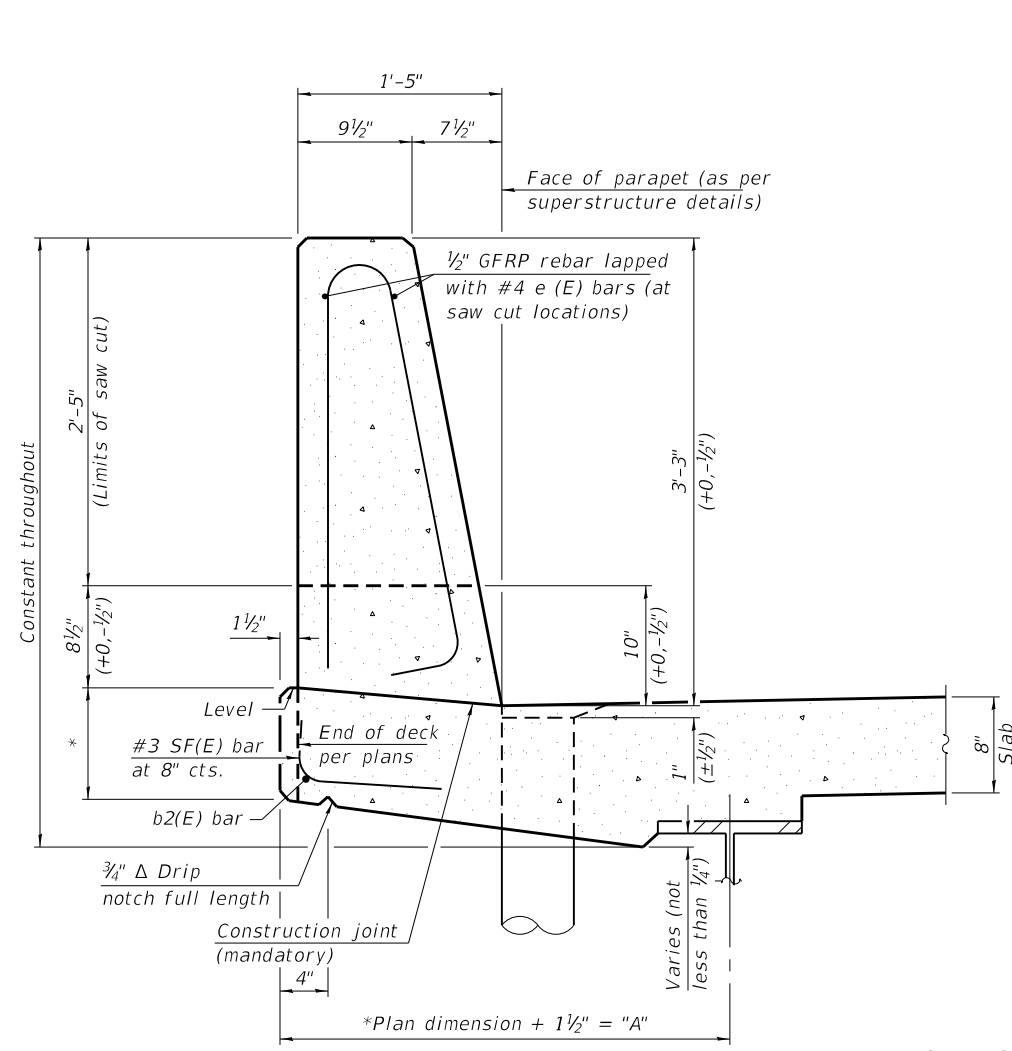
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS  
STRUCTURE NO. 016-1195**

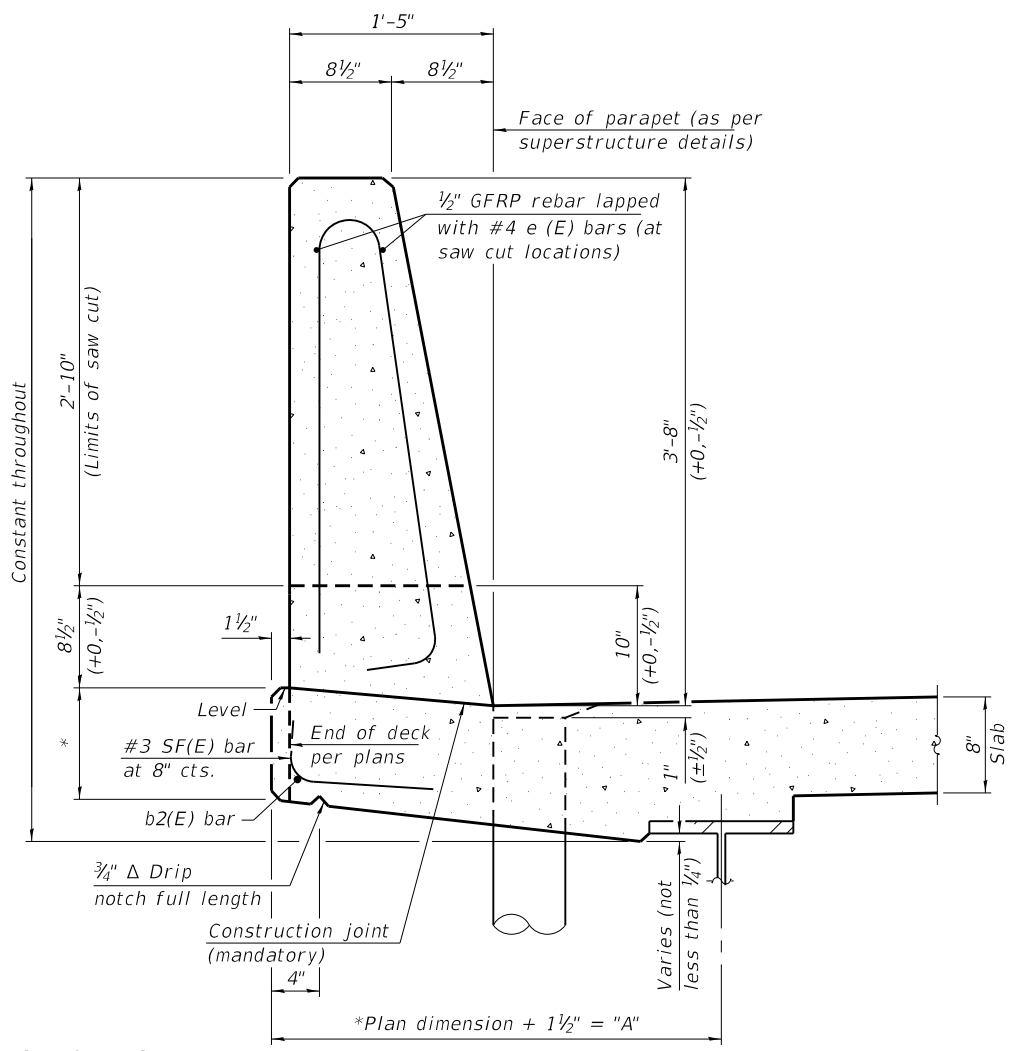
SHEET SB-67 OF SB-75 SHEETS

|                 |                     |                           |                    |               |
|-----------------|---------------------|---------------------------|--------------------|---------------|
| F.A.P. RTE. 342 | SECTION 2018-100-BR | COUNTY COOK               | TOTAL SHEETS 1351  | SHEET NO. 920 |
|                 |                     |                           | CONTRACT NO. 62N91 |               |
|                 |                     | ILLINOIS FED. AID PROJECT |                    |               |

MODEL: Default  
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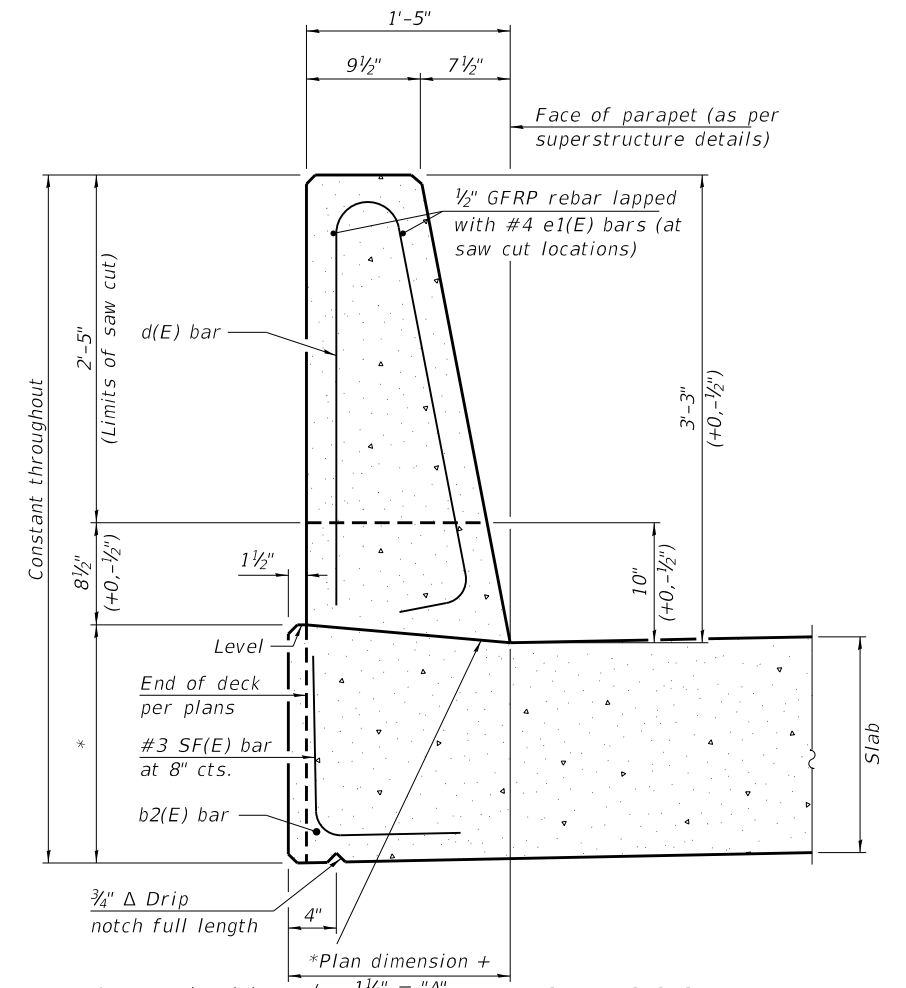
**39" CONSTANT-SLOPE  
 PARAPET SECTION**  
 (Showing dimensions, d(E), and 1/2" Ø GFRP rebar)



**STEEL SUPERSTRUCTURES**

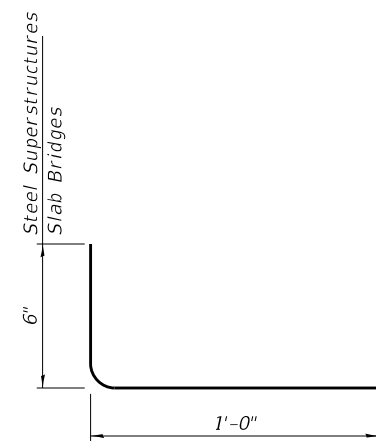
\*See Superstructure Details.

**44" CONSTANT-SLOPE  
 PARAPET SECTION**  
 (Showing dimensions, d(E), and 1/2" Ø GFRP rebar)

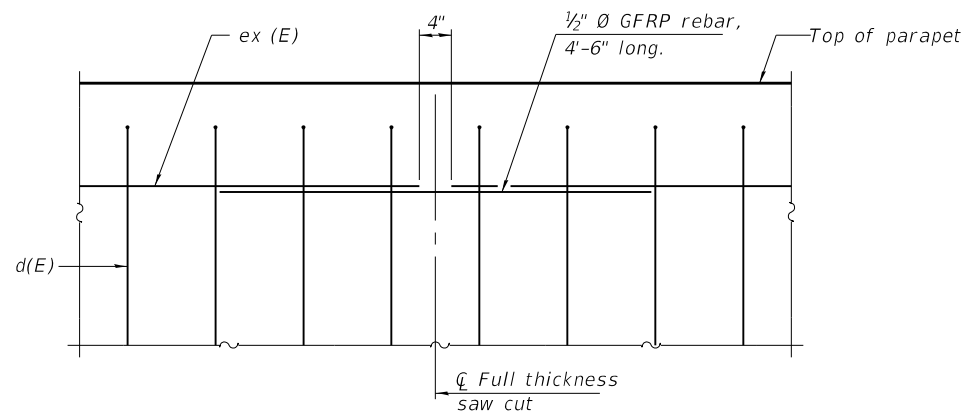


**SLAB BRIDGES**

**39" CONSTANT-SLOPE  
 PARAPET SECTION**  
 (Showing dimensions, d(E), and 1/2" Ø GFRP rebar)



**SF(E) BAR**



**DETAIL - GFRP REBAR STIFFENING ELEVATION**

(Place as shown in parapet section at each parapet joint location.)

**Notes:**

All dimensions shall remain the same as shown on superstructure details, except dimension "A" which is to be revised as shown.  
 Additional concrete needed to revise dimension "A" (39" and 44" parapets):  
 Steel Superstructures: 0.00348 cu. yds./ft.  
 Slab Bridge Superstructures: cu. yds./ft.  
 Place full depth aluminum sheets as shown on superstructure details.  
 Replace all cork joint filler locations with a full thickness saw cut.  
 Steel and slab superstructures shown. Other superstructure types similar.

SFP 39-44

10/27/2023



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

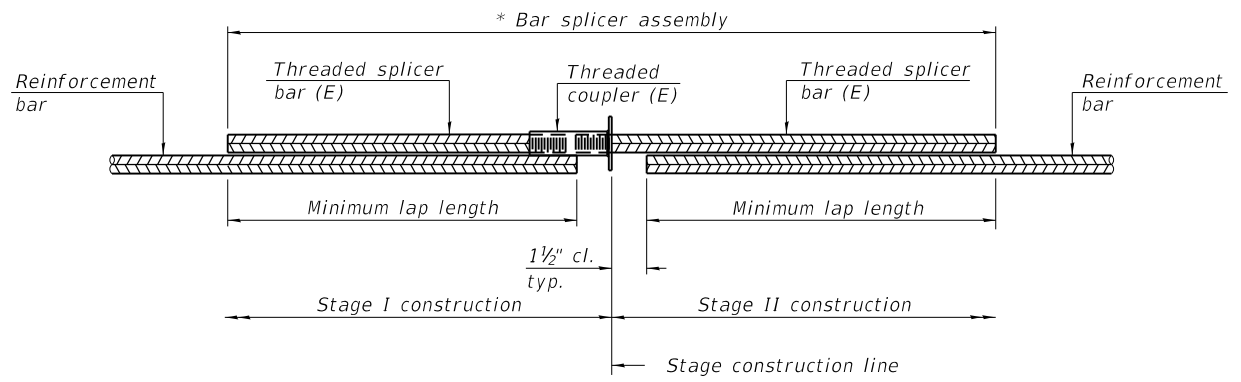
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CONCRETE PARAPET SLIP FORMING OPTION  
 STRUCTURE NO. 016-1195**

SHEET SB-68 OF SB-75 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 921       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

MODEL: Default  
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12/13/2024 11:25:27 AM

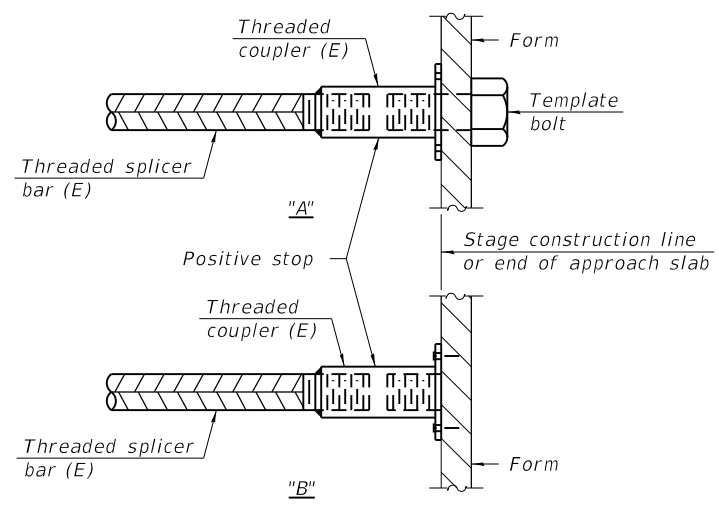


**STANDARD BAR SPLICER ASSEMBLY PLAN**

Only bar splicer assemblies as presented on the approved QPL list may be used.

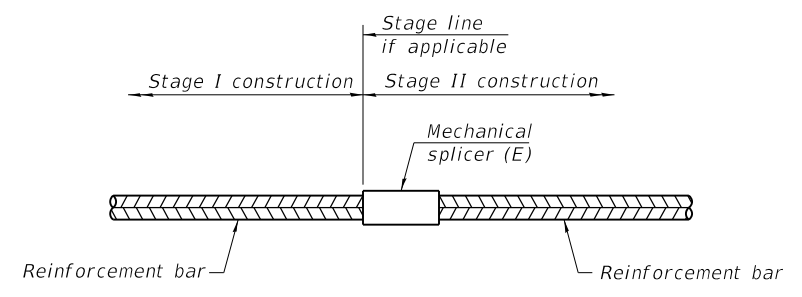
Threaded splicer bar length = min. lap length + 1 1/2" + thread length

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



**INSTALLATION AND SETTING METHODS**

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



**STANDARD MECHANICAL SPLICER**

| Location        | Bar Size | No. assemblies required |
|-----------------|----------|-------------------------|
| NB N. Diaphragm | #6       | 8                       |
| NB S. Diaphragm | #6       | 8                       |
| SB N. Diaphragm | #6       | 8                       |
| SB S. Diaphragm | #6       | 8                       |

**NB**

| Location                  | Bar Size | No. assemblies required | Minimum lap length |
|---------------------------|----------|-------------------------|--------------------|
| NB Deck Plan              | #5       | 804                     | 3'-6"              |
| NB N. Diaphragm           | #6       | 12                      | 3'-7"              |
| NB S. Diaphragm           | #6       | 12                      | 3'-7"              |
| NB N. Approach            | #5       | 258                     | 3'-6"              |
| NB N. Approach            | #8       | 180                     | 4'-9"              |
| NB S. Approach            | #5       | 258                     | 3'-6"              |
| NB S. Approach            | #8       | 180                     | 4'-9"              |
| NB N. Abutment            | #5       | 16                      | 3'-2"              |
| NB N. Abutment            | #7       | 30                      | 4'-5"              |
| NB S. Abutment            | #5       | 16                      | 3'-2"              |
| NB S. Abutment            | #7       | 30                      | 4'-5"              |
| NB N. Abut. Modifications | #4       | 18                      | 2'-5"              |
| NB S. Abut. Modifications | #4       | 18                      | 2'-5"              |

**SB**

| Location                  | Bar Size | No. assemblies required | Minimum lap length |
|---------------------------|----------|-------------------------|--------------------|
| SB Deck Plan              | #5       | 804                     | 3'-6"              |
| SB N. Diaphragm           | #6       | 21                      | 3'-7"              |
| SB S. Diaphragm           | #6       | 21                      | 3'-7"              |
| SB N. Approach            | #5       | 258                     | 3'-6"              |
| SB N. Approach            | #8       | 180                     | 4'-9"              |
| SB S. Approach            | #5       | 258                     | 3'-6"              |
| SB S. Approach            | #8       | 180                     | 4'-9"              |
| SB N. Abutment            | #5       | 16                      | 3'-2"              |
| SB N. Abutment            | #7       | 30                      | 4'-5"              |
| SB S. Abutment            | #5       | 16                      | 3'-2"              |
| SB S. Abutment            | #7       | 30                      | 4'-5"              |
| SB N. Abut. Modifications | #4       | 18                      | 2'-5"              |
| SB S. Abut. Modifications | #4       | 18                      | 2'-5"              |

**NOTES:**

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



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

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 016-1195

SHEET SB-69 OF SB-75 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 922       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



# SOIL BORING LOG

Date 07/30/23

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM.

Latitude 42.0689359, Longitude -88.0280945

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

| STRUCT. NO.                      | Station                       | DEPTH (ft) | BLOW (6") | UCS (tsf) | MOIST (%) | Surface Water Elev. ft                       | Stream Bed Elev. ft | DEPTH (ft) | BLOW (6") | UCS (tsf) | MOIST (%) |
|----------------------------------|-------------------------------|------------|-----------|-----------|-----------|--|---------------------|------------|-----------|-----------|-----------|
| 016-0377 (Ex)                    |                               |            |           |           |           |  |                     |            |           |           |           |
| BORING NO. SC-01                 | Station 3156+26               |            |           |           |           |  |                     |            |           |           |           |
|                                  | Offset 58.7 ft LT             |            |           |           |           |  |                     |            |           |           |           |
|                                  | Ground Surface Elev. 717.7 ft |            |           |           |           |  |                     |            |           |           |           |
| Asphalt - 10"                    |                               | 716.9      |           |           |           | Stiff, Brown, Moist to Wet, CLAY (continued) |                     |            |           |           |           |
| Stiff, Brown, Dry, CLAY LOAM     |                               |            | 6         |           |           |  |                     |            | 0         |           |           |
|                                  |                               |            | 6         | 2.0       | 14        |  |                     |            | 2         | 0.7       | 40        |
|                                  |                               |            | 4         | P         |           |  |                     |            | 3         | B         |           |
|                                  |                               | 714.7      |           |           |           |  |                     |            |           |           |           |
| Stiff, Brown, Moist to Wet, CLAY |                               |            | 3         |           |           |  |                     |            | 4         |           |           |
|                                  |                               |            | 4         | 2.4       | 16        |  |                     |            | 5         | 1.3       | 20        |
|                                  |                               |            | 5         | S         |           |  |                     |            | 8         | B         |           |
|                                  |                               |            | 3         |           |           |  |                     |            | 4         |           |           |
|                                  |                               |            | 3         | 1.0       | 23        |  |                     |            | 5         | 1.4       | 19        |
|                                  |                               |            | 6         | S         |           |  |                     |            | 8         | B         |           |
|                                  |                               |            | 3         |           |           |  |                     |            | 4         |           |           |
|                                  |                               |            | 4         | 1.9       | 15        |  |                     |            | 4         | 1.1       | 16        |
|                                  |                               |            | 5         | B         |           |  |                     |            | 8         | B         |           |
|                                  |                               |            | 4         |           |           |  |                     |            | 6         |           |           |
|                                  |                               |            | 5         | 2.5       | 18        |  |                     |            | 6         |           |           |
|                                  |                               |            | 6         | B         |           |  |                     |            | 7         |           |           |
|                                  |                               |            | 3         |           |           |  |                     |            | 6         |           |           |
|                                  |                               |            | 4         | 2.3       | 18        |  |                     |            | 6         |           | 16        |
|                                  |                               |            | 4         | B         |           |  |                     |            | 7         |           |           |
|                                  |                               |            | 3         |           |           |  |                     |            | 4         |           |           |
|                                  |                               |            | 4         | 1.2       | 28        |  |                     |            | 7         | 3.3       | 16        |
|                                  |                               |            | 4         | B         |           |  |                     |            | 11        | B         |           |
|                                  |                               |            | 4         | 1.6       | 22        |  |                     |            |           |           |           |
|                                  |                               |            | 4         | B         |           |  |                     |            |           |           |           |

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

BBS, form 137 (Rev. 8-99)



# SOIL BORING LOG

Date 07/30/23

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM.

Latitude 42.0689359, Longitude -88.0280945

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

| STRUCT. NO.   | Station                       | DEPTH (ft) | BLOW (6") | UCS (tsf) | MOIST (%) | Surface Water Elev. ft                                  | Stream Bed Elev. ft | DEPTH (ft) | BLOW (6") | UCS (tsf) | MOIST (%) |
|---|-------------------------------|------------|-----------|-----------|-----------|---|---------------------|------------|-----------|-----------|-----------|
| 016-0377 (Ex)   |                               |            |           |           |           |   |                     |            |           |           |           |
| BORING NO. SC-01  | Station 3156+26               |            |           |           |           |   |                     |            |           |           |           |
|   | Offset 58.7 ft LT             |            |           |           |           |   |                     |            |           |           |           |
|   | Ground Surface Elev. 717.7 ft |            |           |           |           |   |                     |            |           |           |           |
| Stiff to Very Stiff, Brown, Wet, SILTY CLAY (continued) |                               |            |           |           |           | Stiff to Very Stiff, Brown, Wet, SILTY CLAY (continued) |                     |            |           |           |           |
|   |                               |            | 6         |           |           |   |                     |            |           |           |           |
|   |                               |            | 7         | 1.7       | 25        |   |                     |            | 6         |           |           |
|   |                               |            | 8         | B         |           |   |                     |            | 12        | 0.5       | 17        |
|   |                               |            | 8         | B         |           |   |                     |            | 15        | B         |           |
|   |                               |            | 6         |           |           |   |                     |            | 5         |           |           |
|   |                               |            | 10        | 1.2       | 16        |   |                     |            | 9         | 1.2       | 18        |
|   |                               |            | 13        | B         |           |   |                     |            | 10        | B         |           |
|   |                               |            | 4         |           |           |   |                     |            | 9         |           |           |
|   |                               |            | 6         | 1.8       | 21        |   |                     |            | 14        | 0.5       | 14        |
|   |                               |            | 10        | B         |           |   |                     |            | 8         | B         |           |
|   |                               |            | 4         |           |           |   |                     |            | 9         |           |           |
|   |                               |            | 5         | 0.3       | 15        |   |                     |            | 18        | 4.5       | 15        |
|   |                               |            | 7         | B         |           |   |                     |            | 18        | B         |           |

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

BBS, form 137 (Rev. 8-99)

MODEL: Default FILE NAME: C:\Users\prakashg\Documents\Drawings\CAD\By\_Subconsultants\CAD\_Sheets-by-others\C2-D162N91-SN016-1195\_SB-70\_Boring\_Logs (Sheet 1 of 6).dgn



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| PLOT DATE =  | CHECKED - MI | REVISED - |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 1 OF 6) STRUCTURE NO. 016-1195

SHEET SB-70 OF SB-75 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 923       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |





# SOIL BORING LOG

Date 07/31/23

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM, Latitude 42.0686273, Longitude -88.028125

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

| STRUCT. NO.                                    | Station                       | DEPTH (ft) | BLOW (6") | UCS (tsf) | MOIST (%) | Surface Water Elev. ft                                     | Stream Bed Elev. ft | DEPTH (ft) | BLOW (6") | UCS (tsf) | MOIST (%) |
|--|-------------------------------|------------|-----------|-----------|-----------|--|---------------------|------------|-----------|-----------|-----------|
| 016-0377 (Ex)                                  |                               |            |           |           |           |  |                     |            |           |           |           |
| BORING NO. SC-02                               | Station 3155+13               |            |           |           |           |  |                     |            |           |           |           |
|  | Offset 62.0 ft LT             |            |           |           |           |  |                     |            |           |           |           |
|  | Ground Surface Elev. 717.5 ft |            |           |           |           |  |                     |            |           |           |           |
| Asphalt - 10"                                  |                               | 716.7      |           |           |           | Medium Stiff to Stiff, Dark Brown, Moist, LOAM (continued) |                     |            |           |           |           |
| Stiff, Brown, Dry, CLAY LOAM, Some Gravel      |                               |            | 12        |           |           |  |                     | 0          |           |           |           |
|  |                               |            | 5         | 2.0       | 12        |  |                     | 3          | 0.9       | 25        |           |
|  |                               |            | 5         | P         |           |  |                     | 6          | B         |           |           |
| Stiff, Brown, Dry, CLAY                        |                               | 714.5      |           |           |           | Medium Stiff to Stiff, Brown, Moist to Wet, CLAY LOAM      |                     |            |           |           |           |
|  |                               |            | 3         |           |           |  |                     | 5          |           |           |           |
|  |                               |            | 4         | 3.2       | 15        |  |                     | 7          | 2.3       | 18        |           |
|  |                               |            | 7         | B         |           |  |                     | 7          | B         |           |           |
|  |                               |            | 4         |           |           |  |                     | 4          |           |           |           |
|  |                               |            | 4         | 1.4       | 15        |  |                     | 5          | 0.9       | 18        |           |
|  |                               |            | 5         | B         |           |  |                     | 6          | B         |           |           |
| Silt Seam                                      |                               |            | 2         |           |           |  |                     | 3          |           |           |           |
|  |                               |            | 6         | 2.4       | 14        |  |                     | 3          | 0.9       | 20        |           |
|  |                               |            | 7         | B         |           |  |                     | 6          | B         |           |           |
|  |                               |            | 4         |           |           |  |                     | 4          |           |           |           |
|  |                               |            | 5         | 2.6       | 13        |  |                     | 8          | 2.9       | 18        |           |
|  |                               |            | 6         | B         |           |  |                     | 11         | B         |           |           |
| Medium Stiff to Stiff, Dark Brown, Moist, LOAM |                               | 702.0      |           |           |           | Medium Stiff to Stiff, Dark Brown, Moist, LOAM (continued) |                     |            |           |           |           |
|  |                               |            | 4         |           |           |  |                     | 4          |           |           |           |
|  |                               |            | 6         | 1.6       | 21        |  |                     | 5          | 2.1       | 22        |           |
|  |                               |            | 7         | B         |           |  |                     | 7          | B         |           |           |
|  |                               |            | 0         |           |           |  |                     | 4          |           |           |           |
|  |                               |            | 3         | 0.9       | 20        |  |                     | 5          | 2.1       | 22        |           |
|  |                               |            | 3         | B         |           |  |                     | 7          | B         |           |           |

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

BBS, form 137 (Rev. 8-99)



# SOIL BORING LOG

Date 07/31/23

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM, Latitude 42.0686273, Longitude -88.028125

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

| STRUCT. NO.  | Station                       | DEPTH (ft) | BLOW (6") | UCS (tsf) | MOIST (%) | Surface Water Elev. ft  | Stream Bed Elev. ft | DEPTH (ft) | BLOW (6") | UCS (tsf) | MOIST (%) |
|--|-------------------------------|------------|-----------|-----------|-----------|---|---------------------|------------|-----------|-----------|-----------|
| 016-0377 (Ex)  |                               |            |           |           |           |   |                     |            |           |           |           |
| BORING NO. SC-02   | Station 3155+13               |            |           |           |           |   |                     |            |           |           |           |
|  | Offset 62.0 ft LT             |            |           |           |           |   |                     |            |           |           |           |
|  | Ground Surface Elev. 717.5 ft |            |           |           |           |   |                     |            |           |           |           |
| Medium Stiff to Stiff, Brown, Moist to Wet, CLAY LOAM (continued)                                      |                               |            |           |           |           | Stiff to Very Stiff, Dark Brown, Wet, SILTY CLAY, Some Gravel |                     |            |           |           |           |
|  |                               |            | 4         |           |           |   |                     | 4          |           |           |           |
|  |                               |            | 6         | 2.0       | 23        |   |                     | 6          | 0.3       | 13        |           |
|  |                               |            | 8         | B         |           |   |                     | 6          | B         |           |           |
| Stiff, Brown, Wet, SILTY CLAY, A-4(7)<br>LL=26, PL=16, PI=10<br>3% Gravel, 8% Sand, 59% Silt, 30% Clay |                               | 671.5      |           |           |           | Stiff to Very Stiff, Dark Brown, Wet, SILTY CLAY, Some Gravel |                     |            |           |           |           |
|  |                               |            | 4         |           |           |   |                     | 4          |           |           |           |
|  |                               |            | 4         | 1.1       | 21        |   |                     | 15         | 3.4       | 14        |           |
|  |                               |            | 7         | B         |           |   |                     | 18         | B         |           |           |
| Very Stiff, Brown, Wet, CLAY   |                               | 645.5      |           |           |           | Very Stiff, Brown, Wet, CLAY                                  |                     |            |           |           |           |
|  |                               |            | 3         |           |           |   |                     | 4          |           |           |           |
|  |                               |            | 4         | 2.1       | 18        |   |                     | 6          | 1.7       | 21        |           |
|  |                               |            | 5         | B         |           |   |                     | 16         | B         |           |           |
|  |                               |            | 5         |           |           |   |                     | 6          |           |           |           |
|  |                               |            | 8         | 1.4       | 13        |   |                     | 11         | 2.6       | 16        |           |
|  |                               |            | 10        | B         |           |   |                     | 16         | B         |           |           |

Boring terminated at 80 feet.

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

BBS, form 137 (Rev. 8-99)

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 2 OF 6)  
STRUCTURE NO. 016-1195

SHEET SB-71 OF SB-75 SHEETS

|                           |                     |             |                   |               |
|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.P. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1351 | SHEET NO. 924 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM, Latitude 42.0689268, Longitude -88.0277776

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

| STRUCT. NO.   | BORING NO. | Station    | Offset     | Ground Surface Elev. | DEPTH (ft) | BLOW (6") | UCS (tsf) | MOIST (%) | Surface Water Elev. | Stream Bed Elev. | Groundwater Elev.: | First Encounter | Upon Completion | After Hrs. | Filled |
|---------------|------------|------------|------------|----------------------|------------|-----------|-----------|-----------|---------------------|------------------|--------------------|-----------------|-----------------|------------|--------|
| 016-0377 (Ex) | SC-03      | 3156+26.37 | 27.4 ft RT | 717.0                |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      | 716.0      |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 3         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 3         | 2.4       | 13        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 4         | B         |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 9         | 3.7       | 13        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 7         | B         |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 4         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 4         | 1.7       | 14        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         | B         |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 4         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         |           | 13        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 7         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 6         | 2.9       | 16        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 8         | S         |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 3         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 4         | 3.3       | 15        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 4         | B         |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 6         | 3.4       | 16        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 7         | B         |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 8         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         | 4.5       | 15        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         | B         |           |                     |                  |                    |                 |                 |            |        |

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

BBS, form 137 (Rev. 8-99)



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM, Latitude 42.0689268, Longitude -88.0277776

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

| STRUCT. NO.   | BORING NO. | Station    | Offset     | Ground Surface Elev. | DEPTH (ft) | BLOW (6") | UCS (tsf) | MOIST (%) | Surface Water Elev. | Stream Bed Elev. | Groundwater Elev.: | First Encounter | Upon Completion | After Hrs. | Filled |
|---------------|------------|------------|------------|----------------------|------------|-----------|-----------|-----------|---------------------|------------------|--------------------|-----------------|-----------------|------------|--------|
| 016-0377 (Ex) | SC-03      | 3156+26.37 | 27.4 ft RT | 717.0                |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 3         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 3         | 1.2       | 30        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 8         | B         |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 8         | 3.8       | 19        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 11        | B         |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 4         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         | 2.2       | 22        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 8         | B         |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            |           |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 5         |           |           |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 7         | 1.6       | 17        |                     |                  |                    |                 |                 |            |        |
|               |            |            |            |                      |            | 9         | B         |           |                     |                  |                    |                 |                 |            |        |

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

BBS, form 137 (Rev. 8-99)

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| PLOT DATE =  |              |           |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 3 OF 6) STRUCTURE NO. 016-1195

SHEET SB-72 OF SB-75 SHEETS

| F.A.P. RTE. | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO.          |
|-------------|-------------|--------|--------------|--------------------|
| 342         | 2018-100-BR | COOK   | 1351         | 925                |
|             |             |        |              | CONTRACT NO. 62N91 |

ILLINOIS FED. AID PROJECT



SOIL BORING LOG

Date 08/06/23

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3rd PM, Latitude 42.0686048, Longitude -88.0277841

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

Table with columns for Depth (ft), Blows (B), SPT (S), UCS (Qu), Moisture (M), and Soil Description. Includes data for concrete, loam, silt seam, and clay layers.

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



SOIL BORING LOG

Date 08/06/23

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3rd PM, Latitude 42.0686048, Longitude -88.0277841

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

Table with columns for Depth (ft), Blows (B), SPT (S), UCS (Qu), Moisture (M), and Soil Description. Includes data for stiff to very stiff clay and silty clay loam layers.

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

MODEL: Default FILE NAME: C:\Users\prakashg\Documents\Drawings\CAD\By\_Subconsultants\CAD\_Sheets-by-others\C2-D162N91-SN016-1195\_SB-73\_Boring\_Logs (Sheet 4 of 6).dgn



Table with columns for USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, REVISED, and DRAWN.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 4 OF 6) STRUCTURE NO. 016-1195 SHEET SB-73 OF SB-75 SHEETS

Table with columns for F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., and CONTRACT NO.



# SOIL BORING LOG

Date 08/02/23

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)  
 SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.068881, Longitude -88.027374  
 COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

| STRUCT. NO.<br>Station   | DEPTH<br>ft | BLOW<br>S | UCS<br>Qu | MOIST<br>T | Surface Water Elev.   |    | DEPTH<br>ft | BLOW<br>S | UCS<br>Qu | MOIST<br>T |
|--|-------------|-----------|-----------|------------|---|----|-------------|-----------|-----------|------------|
|  |             |           |           |            | ft  | ft |             |           |           |            |
| 016-0377 (Ex)<br>714.8   | 7           |           |           |            | Medium Stiff to Stiff, Brown, Dry to Moist, CLAY (continued)  |    | 2           |           |           |            |
|  | 5           |           | 9         |            |   |    | 2           | 0.7       | 30        |            |
| BORING NO. SC-05<br>Station 2156+14.56<br>Offset 61.6 ft RT<br>Ground Surface Elev. 717.8 ft | 4           |           |           |            | Medium Stiff, Brown, Moist, LOAM A-4(2)<br>LL=23, PL=16, PI=7<br>16% Gravel, 17% Sand, 47% Silt, 20% Clay |    | 3           |           |           |            |
|  | 4           |           | 12        |            |   |    | 3           | 0.5       | 22        |            |
|  | 4           |           |           |            | Medium Stiff to Stiff, Brown, Moist to Wet, SILTY CLAY LOAM   |    | 2           |           |           |            |
|  | 6           | 3.4       | 16        |            |   |    | 3           | 1.2       | 19        |            |
|  | 4           |           |           |            |   |    | 6           |           |           |            |
|  | 4           | 3.5       | 14        |            |   |    | 3           | 2.0       | 26        |            |
|  | 4           |           |           |            |   |    | 6           |           |           |            |
|  | 3           |           |           |            |   |    | 2           |           |           |            |
|  | 6           | 3.8       | 16        |            |   |    | 4           | 1.2       | 21        |            |
|  | 7           |           |           |            |   |    | 5           |           |           |            |
|  | 2           |           |           |            |   |    | 4           |           |           |            |
|  | 3           | 2.2       | 23        |            |   |    | 5           |           |           |            |
|  | 4           |           |           |            |   |    | 6           |           |           |            |
|  | 6           | 1.0       | 29        |            |   |    | 3           |           |           |            |
|  | 8           |           |           |            |   |    | 6           | 3.0       | 20        |            |
|  | 4           |           |           |            |   |    | 9           |           |           |            |
|  | 4           | 2.1       | 18        |            |   |    |             |           |           |            |
|  | 5           |           |           |            |   |    |             |           |           |            |

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



# SOIL BORING LOG

Date 08/02/23

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)  
 SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.068881, Longitude -88.027374  
 COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

| STRUCT. NO.<br>Station | DEPTH<br>ft | BLOW<br>S | UCS<br>Qu | MOIST<br>T | Surface Water Elev.   |    | DEPTH<br>ft | BLOW<br>S | UCS<br>Qu | MOIST<br>T |
|------------------------|-------------|-----------|-----------|------------|---|----|-------------|-----------|-----------|------------|
|                        |             |           |           |            | ft  | ft |             |           |           |            |
| 016-0377 (Ex)<br>637.8 | 3           |           |           |            | Medium Stiff to Stiff, Brown, Moist to Wet, SILTY CLAY LOAM (continued) |    | 5           |           |           |            |
|                        | 3           | 1.9       | 23        |            |   |    | 9           | 3.0       | 14        |            |
|                        | 5           |           |           |            |   |    | 10          |           |           |            |
|                        | 6           |           |           |            |   |    | 8           |           |           |            |
|                        | 4           | 1.4       | 23        |            |   |    | 14          | 4.9       | 16        |            |
|                        | 6           |           |           |            |   |    | 16          |           |           |            |
|                        | 3           |           |           |            |   |    | 6           |           |           |            |
|                        | 4           | 1.2       | 16        |            |   |    | 10          | 3.5       | 16        |            |
|                        | 10          |           |           |            |   |    | 17          |           |           |            |
|                        | 11          |           |           |            |   |    | 4           |           |           |            |
|                        | 4           |           |           |            |   |    | 5           | 2.0       | 26        |            |
|                        | 4           | 1.6       | 21        |            |   |    | 7           |           |           |            |
|                        | 7           |           |           |            |   |    |             |           |           |            |

Boring terminated at 80 feet.  
 The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
 BBS, form 137 (Rev. 8-99)

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|              |              |           |
|--------------|--------------|-----------|
| USER NAME =  | DESIGNED -   | REVISED - |
| CHECKED -    | REVISOR -    |           |
| PLOT SCALE = | DRAWN - EN   | REVISED - |
| PLOT DATE =  | CHECKED - MI | REVISED - |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BORING LOGS (SHEET 5 OF 6)  
 STRUCTURE NO. 016-1195**

SHEET SB-74 OF SB-75 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 927       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



# SOIL BORING LOG

Date 08/03/23

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM, Latitude 42.0689268, Longitude -88.0277776

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

| STRUCT. NO.                        | Station                    | DEPTH (ft) | BLOW (ft/6") | UCS (tsf) | MOIST (%) | Surface Water Elev. ft                         | Stream Bed Elev. ft | GROUNDWATER Elev.: First Encounter ft | Upon Completion ft | After Hrs. Filled ft |  |
|------------------------------------|----------------------------|------------|--------------|-----------|-----------|--|---------------------|---------------------------------------|--------------------|----------------------|--|
| 016-0377 (Ex)                      |                            |            |              |           |           |  |                     | 678.5                                 | 697.0              |                      |  |
| BORING NO. SC-03                   | Station 3156+26.37         |            |              |           |           |  |                     |                                       |                    |                      |  |
|                                    | Offset 27.4 ft RT          |            |              |           |           |  |                     |                                       |                    |                      |  |
|                                    | Ground Surface Elev. 717.0 |            |              |           |           |  |                     |                                       |                    |                      |  |
| Stiff, Dark Brown, Wet, SILTY CLAY |                            |            |              |           |           | Stiff, Dark Brown, Wet, SILTY CLAY (continued) |                     |                                       |                    |                      |  |
|                                    |                            | 3          |              | 1.2       | 30        |  |                     |                                       |                    |                      |  |
|                                    |                            | 8          | B            |           |           |  |                     |                                       |                    |                      |  |
|                                    |                            | 5          |              | 3.8       | 19        |  |                     |                                       |                    |                      |  |
|                                    |                            | 11         | B            |           |           |  |                     |                                       |                    |                      |  |
|                                    |                            | 4          |              | 2.2       | 22        |  |                     |                                       |                    |                      |  |
|                                    |                            | 8          | B            |           |           |  |                     |                                       |                    |                      |  |
|                                    |                            | 5          |              | 1.6       | 17        |  |                     |                                       |                    |                      |  |
|                                    |                            | 9          | B            |           |           |  |                     |                                       |                    |                      |  |

Boring terminated at 80 feet.

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

BBS, form 137 (Rev. 8-99)



# SOIL BORING LOG

Date 08/06/23

ROUTE FAP 342 DESCRIPTION IL 53 over Salt Creek LOGGED BY Gonzalez (AL)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 35, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM, Latitude 42.0686048, Longitude -88.0277841

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

| STRUCT. NO.  | Station                    | DEPTH (ft) | BLOW (ft/6") | UCS (tsf) | MOIST (%) | Surface Water Elev. ft                             | Stream Bed Elev. ft | GROUNDWATER Elev.: First Encounter ft | Upon Completion ft | After Hrs. Filled ft |  |
|--|----------------------------|------------|--------------|-----------|-----------|--|---------------------|---------------------------------------|--------------------|----------------------|--|
| 016-0377 (Ex)  |                            |            |              |           |           |  |                     | 664.4                                 | 689.9              |                      |  |
| BORING NO. SC-04   | Station 3155+09.05         |            |              |           |           |  |                     |                                       |                    |                      |  |
|  | Offset 30.9 ft RT          |            |              |           |           |  |                     |                                       |                    |                      |  |
|  | Ground Surface Elev. 717.9 |            |              |           |           |  |                     |                                       |                    |                      |  |
| Concrete - 12"   |                            |            |              |           |           | Medium Stiff, Dark Brown, Moist, LOAM (continued)  |                     |                                       |                    |                      |  |
|  |                            | 716.9      | 4            | 3.0       | 23        |  |                     |                                       |                    |                      |  |
| Medium Stiff to Stiff, Brown, Dry, CLAY LOAM                           |                            |            |              |           |           | Silt Seam  |                     |                                       |                    |                      |  |
|  |                            | 3          | 3            | B         |           |  |                     |                                       |                    |                      |  |
|  |                            | 4          |              |           |           |  |                     |                                       |                    |                      |  |
|  |                            | 3          | 4            | P         | 13        |  |                     |                                       |                    |                      |  |
|  |                            | 4          |              |           |           |  |                     |                                       |                    |                      |  |
|  |                            | 5          | 5            | B         | 14        |  |                     |                                       |                    |                      |  |
|  |                            | 7          |              |           |           |  |                     |                                       |                    |                      |  |
| A-6(9)<br>LL=31, PL=17, PI=14<br>4%Gravel, 19%Sand<br>49%Silt, 28%Clay |                            |            |              |           |           | Stiff to Very Stiff, Dark Brown, Moist, SILTY CLAY |                     |                                       |                    |                      |  |
|  |                            | 708.4      | 2            | 3.5       | 12        |  |                     | 689.9                                 |                    |                      |  |
| Stiff, Dark Brown, Dry, CLAY   |                            |            |              |           |           |  |                     |                                       |                    |                      |  |
|  |                            | 6          | 6            | P         |           |  |                     |                                       |                    |                      |  |
|  |                            | 5          |              |           |           |  |                     |                                       |                    |                      |  |
|  |                            | 8          | 7            | P         | 16        |  |                     |                                       |                    |                      |  |
|  |                            | 5          |              |           |           |  |                     |                                       |                    |                      |  |
|  |                            | 6          | 6            | B         | 19        |  |                     |                                       |                    |                      |  |
|  |                            | 6          | 6            | B         | 24        |  |                     |                                       |                    |                      |  |
|  |                            | 4          |              |           |           |  |                     |                                       |                    |                      |  |
|  |                            | 5          |              |           |           |  |                     |                                       |                    |                      |  |
|  |                            | 7          |              |           | 25        |  |                     |                                       |                    |                      |  |
| 699.9  |                            |            |              |           |           |  |                     |                                       |                    |                      |  |
| Medium Stiff, Dark Brown, Moist, LOAM                                  |                            |            |              |           |           |  |                     |                                       |                    |                      |  |
|  |                            | 2          |              |           |           |  |                     |                                       |                    |                      |  |
|  |                            | 3          | 3            | B         | 21        |  |                     |                                       |                    |                      |  |
|  |                            | 4          | 4            | B         |           |  |                     |                                       |                    |                      |  |

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

BBS, form 137 (Rev. 8-99)

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

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 6 OF 6)  
STRUCTURE NO. 016-1195

SHEET SB-75 OF SB-75 SHEETS

| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-------------|--------|--------------|-----------|
| 342                       | 2018-100-BR | COOK   | 1351         | 928       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

**STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS  
DIVISION OF HIGHWAYS  
PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY**

INDEX OF SHEETS ON SHEET NO. 2

|  |         |        |              |           |
|--|---------|--------|--------------|-----------|
| FEDERAL AID ROUTE NO.                          | SEC.    | COUNTY | TOTAL SHEETS | SHEET NO. |
| F.A. 61  | 53H-B-7 | COOK   | 26           | 1         |
| I. P. R. REG. NO. 4 ILLINOIS PROJECT U-184(26) |         |        |              |           |

**DISTRICT 10  
RELOCATED S.B.I. ROUTE 53 (F.A. ROUTE 61) SECTION 53I-I-B-7  
STRUCTURES OVER SALT CREEK  
PROJECT U-184(26)  
COOK COUNTY**

PROJECT LENGTH 143.25 FT. (0.027 MILES)



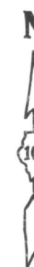
LOCATION OF SECTION INDICATED THUS:—

PROJECT U-184(26)  
SECTION 53I-I-B-7 INCLUDES THE CONSTRUCTION OF THREE I-SPAN PRESTRESSED PRECAST CONCRETE BEAM STRUCTURES (TO CARRY RELOCATED ROUTE 53 OVER SALT CREEK), WITH SPANS AS FOLLOWS: (a) STRUCTURE FOR THRU LANES AND COLLECTOR - DISTRIBUTOR ROADS - 63'-3"; (b) STRUCTURE FOR WEST FRONTAGE ROAD - 83'-8"; (c) STRUCTURE FOR EAST FRONTAGE ROAD - 63'-3 1/2"; EACH STRUCTURE HAVING CLOSED R.C. ABUTMENTS CONNECTED BY R.C. RETAINING WALLS, AT STATION 142+20.00 IN THE CITY OF ROLLING MEADOWS AND PALATINE TOWNSHIP.



PROJECT U-184(26)  
ENDS STA. 142+91.62

PROJECT U-184(26)  
BEGINS STA. 141+48.37



FOR INFORMATION ONLY

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

SUBMITTED September 26, 1962  
*Marshall Bulwag*  
EXAMINED September 28, 1962  
*William Madell*  
PASSED September 28, 1962  
*Thurley*  
APPROVED September 28, 1962  
*W. Marshall Bulwag*  
APPROVED September 28, 1962  
*W. Marshall Bulwag*

DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
DIVISION ENGINEER

JOB NO. 22690

COOK COUNTY SECTION 53I-I-B-7 F. A. ROUTE 61

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING DRAWINGS (SHEET 1 OF 8)  
STRUCTURE NO. 016-1195

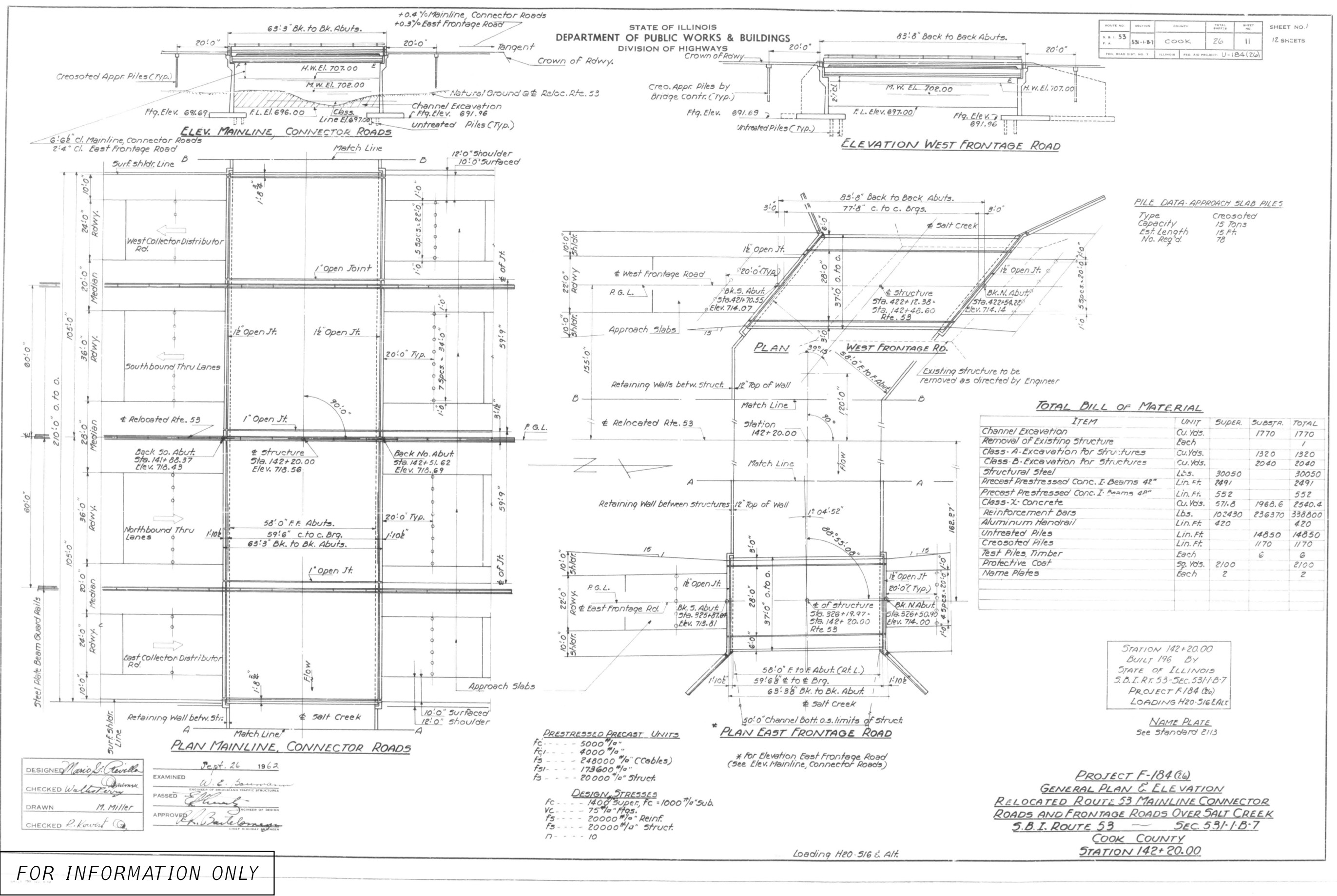
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| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 929       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT



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

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**FOR INFORMATION ONLY**

DESIGNED: *Manoli Revilla*  
 CHECKED: *Walter...*  
 DRAWN: *M. Miller*  
 CHECKED: *R. Kowal*

EXAMINED: *W. E....*  
 PASSED: *E....*  
 APPROVED: *R. B....*

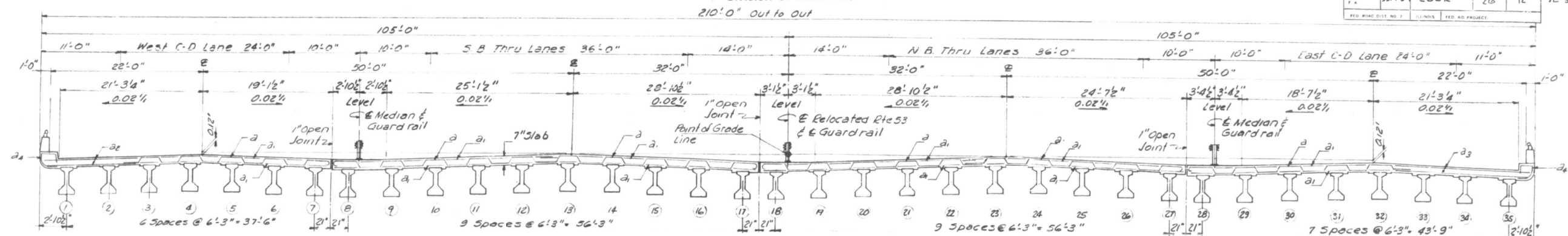
Sept. 26 1962

**PROJECT F-184 (26)  
 GENERAL PLAN & ELEVATION  
 RELOCATED ROUTE 53 MAINLINE CONNECTOR  
 ROADS AND FRONTAGE ROADS OVER SALT CREEK  
 S.B.I. ROUTE 53 - SEC. 531-1-B-7  
 COOK COUNTY  
 STATION 142+20.00**

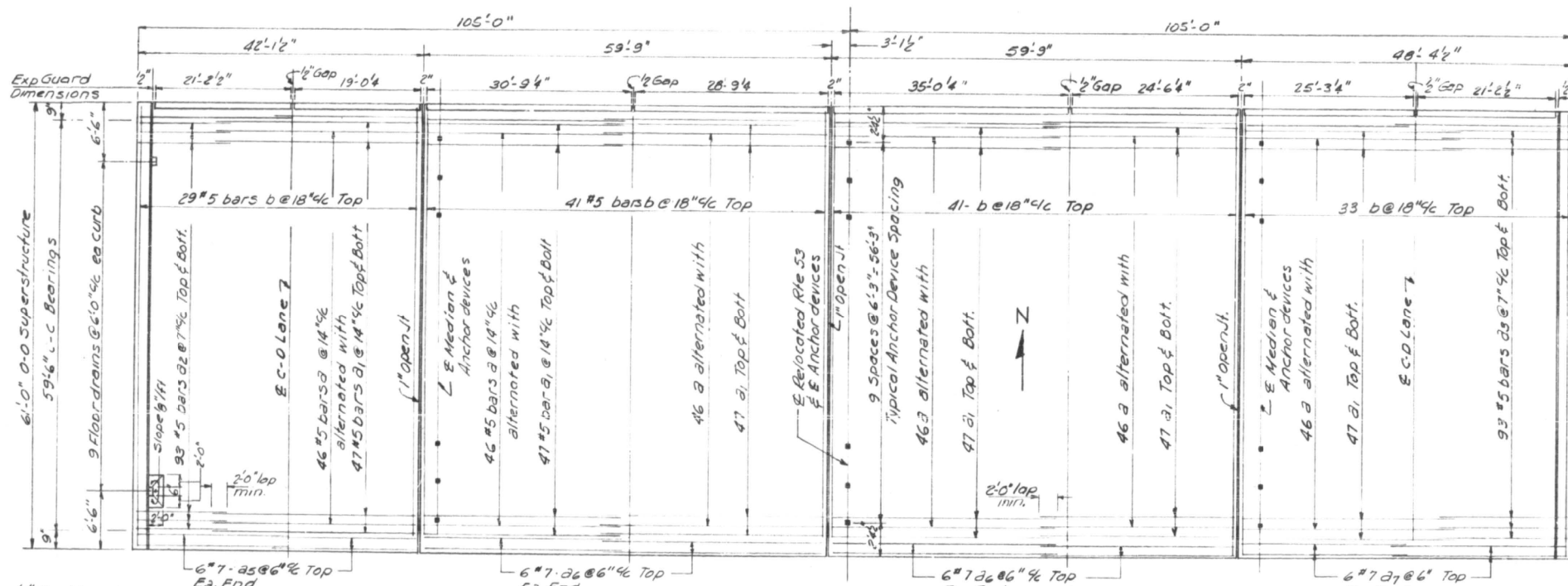
NAME PLATE  
 See standard 2113

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

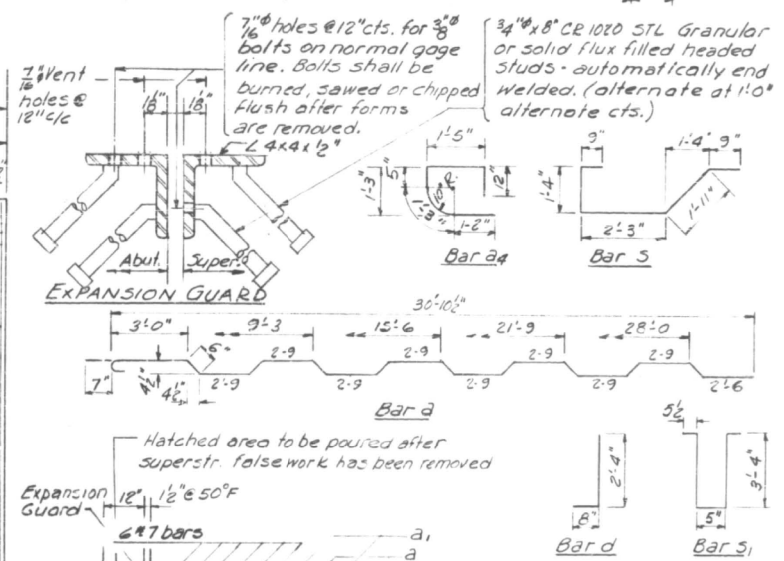
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|--------------------------|-----------|--------|--------------|-----------|
| ROUTE NO.                | SECTION   | COUNTY | TOTAL SHEETS | SHEET NO. |
| 53                       | 531-1-B-7 | COOK   | 26           | 12        |
| SHEET NO. 3<br>12 SHEETS |           |        |              |           |



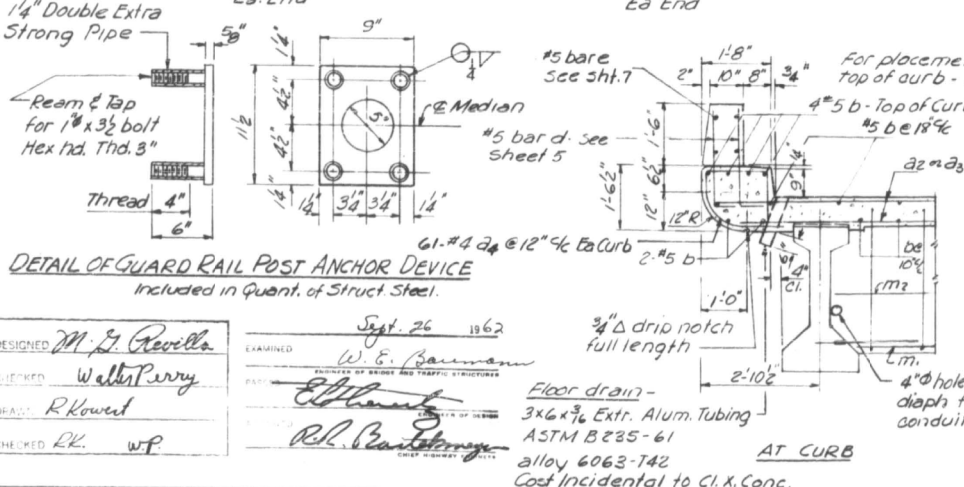
CROSS SECTION  
All Beams 3'6" Precast Prestress I Section



PLAN

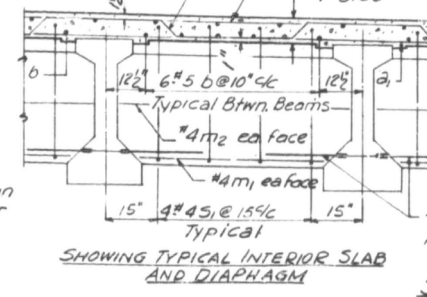


SECTION THRU END BEAM

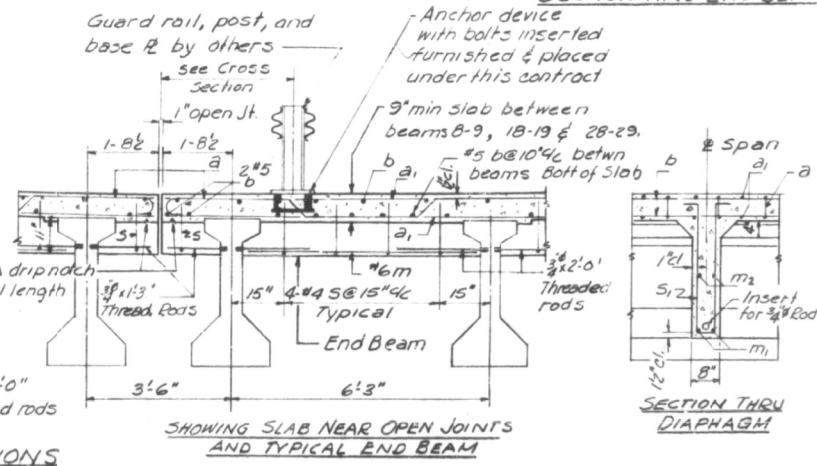


DETAIL OF GUARD RAIL POST ANCHOR DEVICE  
Included in Quant. of Struct. Steel.

For placement of b bars bottom of slab and top of curb - see sections below



SHOWING TYPICAL INTERIOR SLAB AND DIAPHRAGM



SECTIONS

SHOWING SLAB NEAR OPEN JOINTS AND TYPICAL END BEAM

SECTION THRU DIAPHRAGM

BILL OF MATERIAL

| Bars | No. | Size | Length | Shape |
|------|-----|------|--------|-------|
| a    | 276 | #5   | 32'7"  | mm    |
| a1   | 564 | #5   | 31'0"  |       |
| a2   | 186 | #5   | 13'0"  |       |
| a3   | 186 | #5   | 19'3"  |       |
| a4   | 122 | #4   | 5'3"   |       |
| a5   | 24  | #7   | 22'0"  |       |
| a6   | 48  | #7   | 31'0"  |       |
| a7   | 24  | #7   | 25'3"  |       |
| b    | 708 | #5   | 31'0"  |       |
| c    | 24  | #5   | 20'8"  |       |
| m    | 310 | #6   | 5'8"   |       |
| m1   | 62  | #4   | 4'4"   |       |
| m2   | 62  | #4   | 5'8"   |       |
| s    | 260 | #4   | 7'0"   |       |
| s1   | 124 | #4   | 8'0"   |       |
| d    | 296 | #5   | 3'0"   | L     |

Class X Concrete Curb 365.7  
Reinforcement Bars Lbs 68,920  
Structural Steel Lbs 22,660  
Precast Prestress Concrete I Beams 42 L.F. 2126

MAIN SUPERSTRUCTURE  
SBI RTE 53 SECTION 531-1-B-7  
COOK COUNTY  
STATION 142+20.00

FOR INFORMATION ONLY

|          |               |          |      |         |   |
|----------|---------------|----------|------|---------|---|
| DESIGNED | M. L. Revella | DESIGNED | -    | REVISED | - |
| CHECKED  | Walter Perry  | CHECKED  | -    | REVISED | - |
| DRAWN    | R. Kowal      | DRAWN    | - EN | REVISED | - |
| CHECKED  | RK. wf.       | CHECKED  | - MI | REVISED | - |

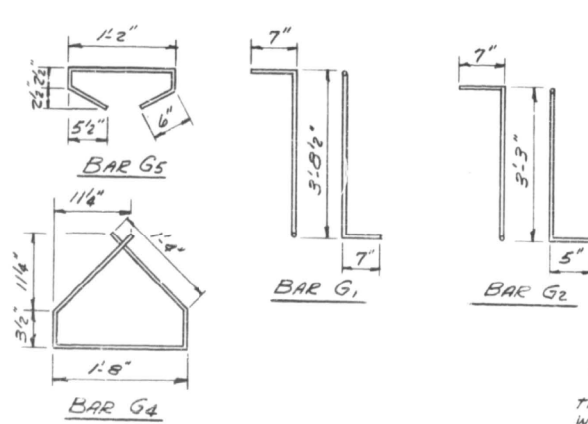
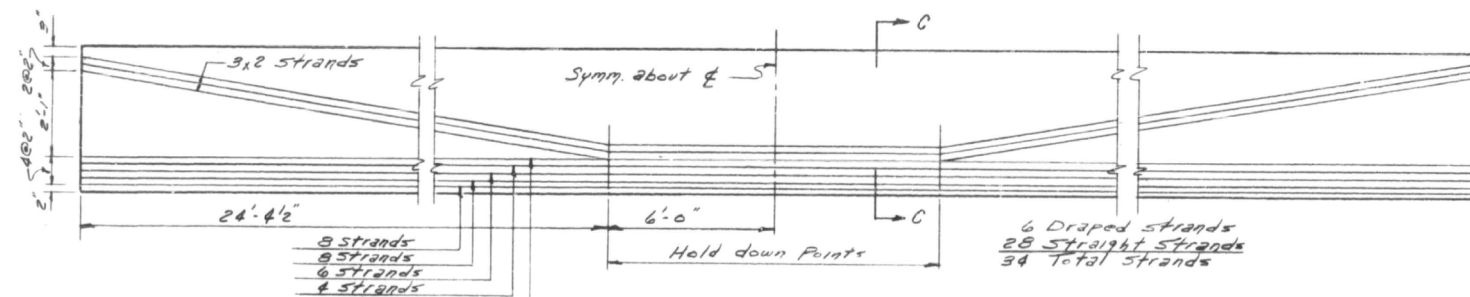
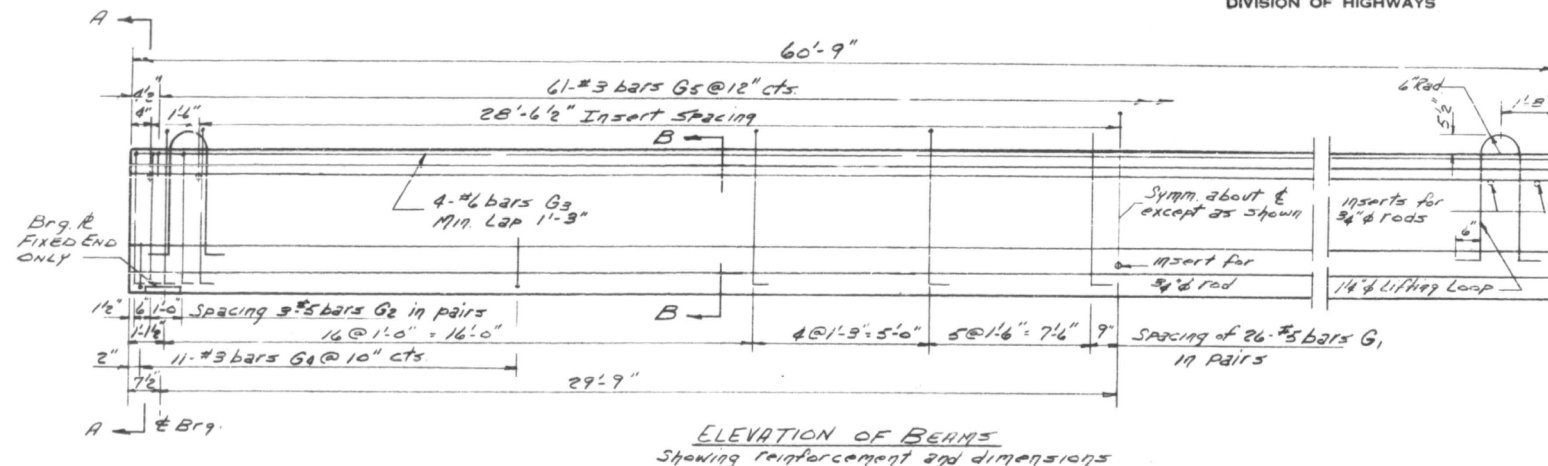
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING DRAWINGS (SHEET 3 OF 8)  
STRUCTURE NO. 016-1195

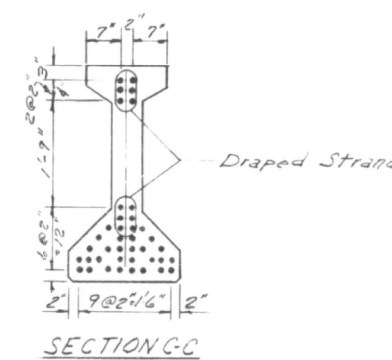
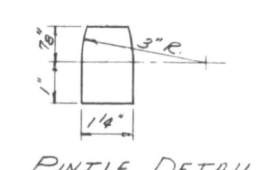
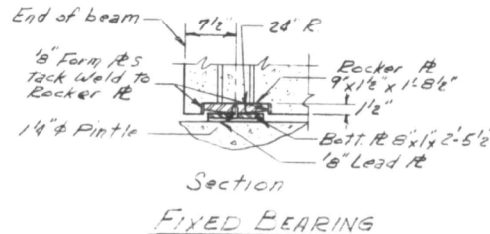
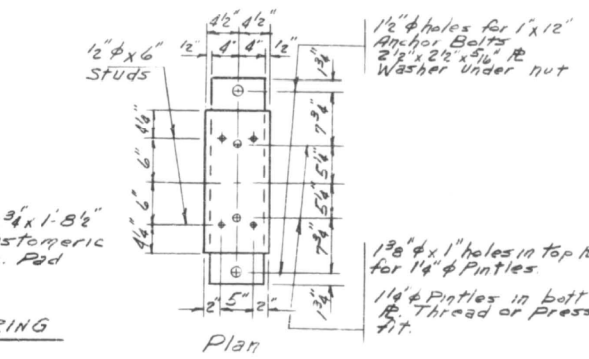
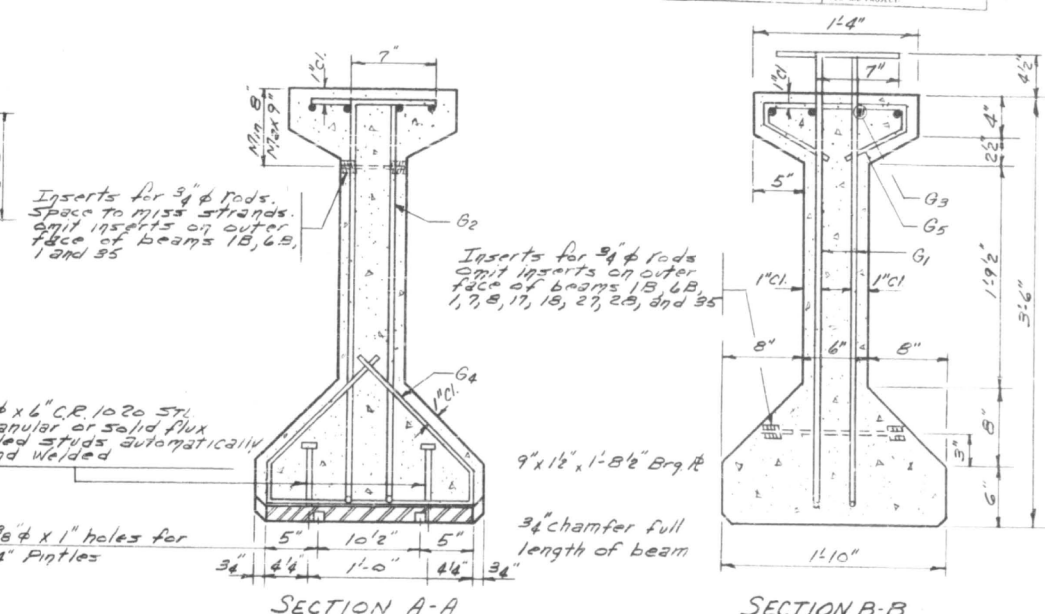
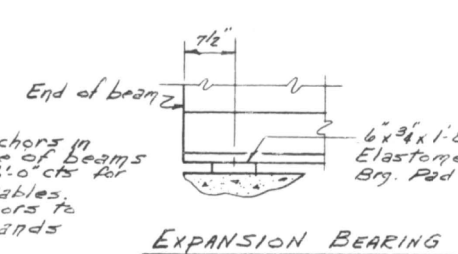
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|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 931       |
| CONTRACT NO. 62N91 |             |        |              |           |

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**EXPANSION BEARING**



**BAR SCHEDULE**

| Bar No | Size    | Length     | Shape |
|--------|---------|------------|-------|
| G1     | 4264 #5 | 4'-10 1/2" | 7L    |
| G2     | 492 #5  | 4'-9"      | 7L    |
| G3     | 328 #6  | 3'-10"     | —     |
| G4     | 902 #8  | 4'-11"     | △     |
| G5     | 2501 #3 | 2'-7"      | □     |

**NOTES:**  
All reinforcement and prestressing steel, steel rocker R, inserts and threaded rods for inserts, anchors for lighting cables, and other items which are cast into the precast concrete I-Beams shall be included in the contract unit price per linear foot of "Furnishing And Erecting Precast Prestressed Concrete I-Beams."  
All bottom plates, pintles, anchor bolts, plate washers and lead plates are included as structural steel.  
Prestressing steel shall have a nominal diameter of 3/16 inches. Inserts for 3/4" threaded rods are to be two strut coil type and flared loop type.  
Alternate steel banding .035x3/4" meeting the approval of the Engineer may be substituted for the G4 bars.  
Steel for lifting hooks shall be non-deformed bars of structural or intermediate grade billet steel.

**FOR INFORMATION ONLY**

|          |              |               |               |
|----------|--------------|---------------|---------------|
| DESIGNED | F.K. Jackson | EXAMINED      | Sept. 76 1967 |
| CHECKED  | PKK          | PA. SED       | W. E. Bauman  |
| DRAWN    | F.K.S.       | APPROVED      | [Signature]   |
| CHECKED  | RK           | DATE OF ISSUE | [Signature]   |

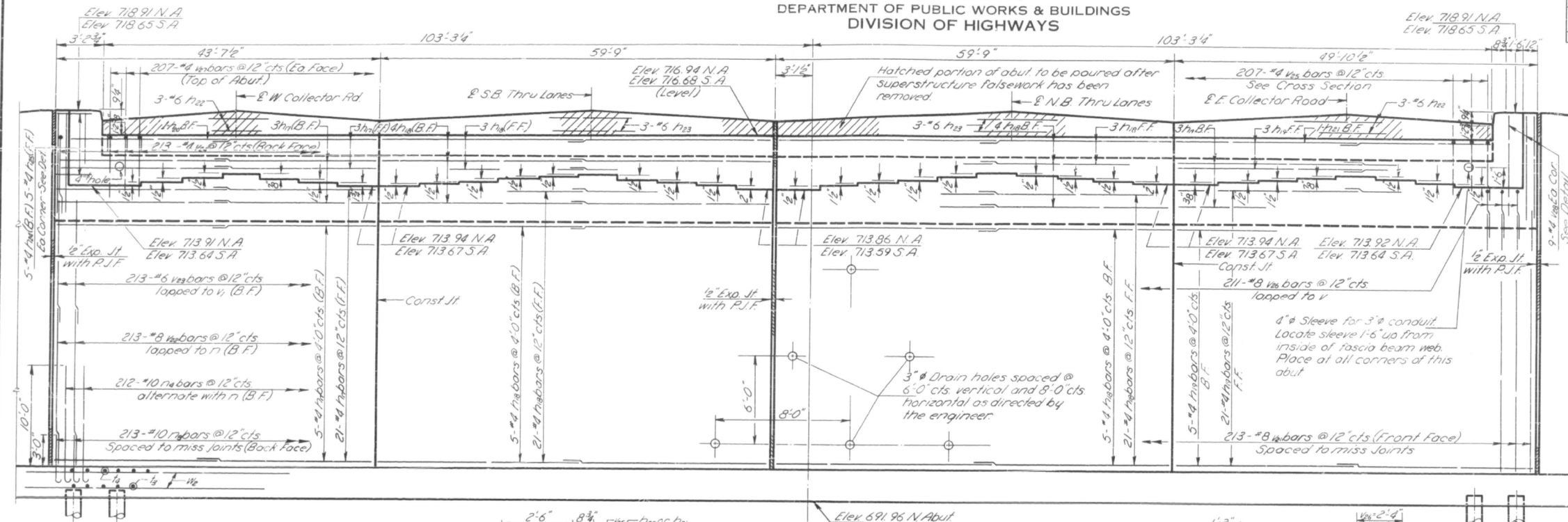
42" BEAM DETAILS  
MAIN STRUCTURE & EAST  
FRONTAGE ROAD STRUCTURE  
S.B.I. RTE. 53 SEC 531-1-B-7  
COOK COUNTY  
STATION 142+20.00

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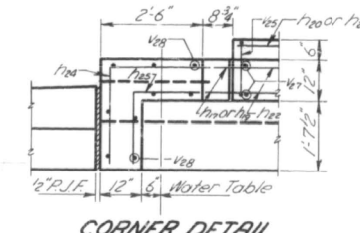
STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
 DIVISION OF HIGHWAYS

|           |           |        |              |           |
|-----------|-----------|--------|--------------|-----------|
| ROUTE NO. | SECTION   | COUNTY | TOTAL SHEETS | SHEET NO. |
| 53        | 531-1-B-7 | COOK   | 26           | 18        |
| F.A.      |           |        |              |           |
| 11-8-7    |           |        |              |           |

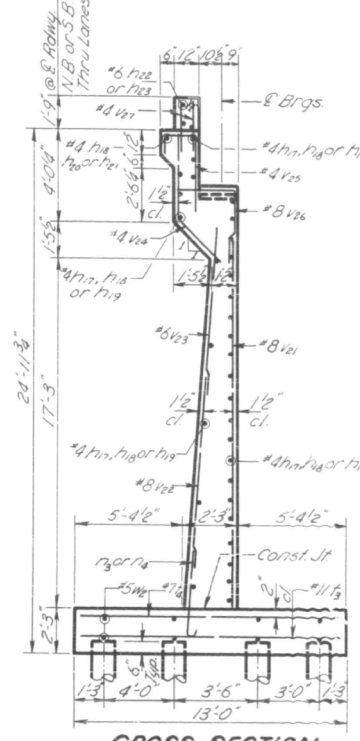
SHEET NO. 9  
12 SHEETS



**PILE DATA**  
 Type --- Untreated  
 Capacity --- 20 Tons  
 Est. Length --- 25 Ft  
 No. Piles --- 213  
 (Includes 2 test piles)



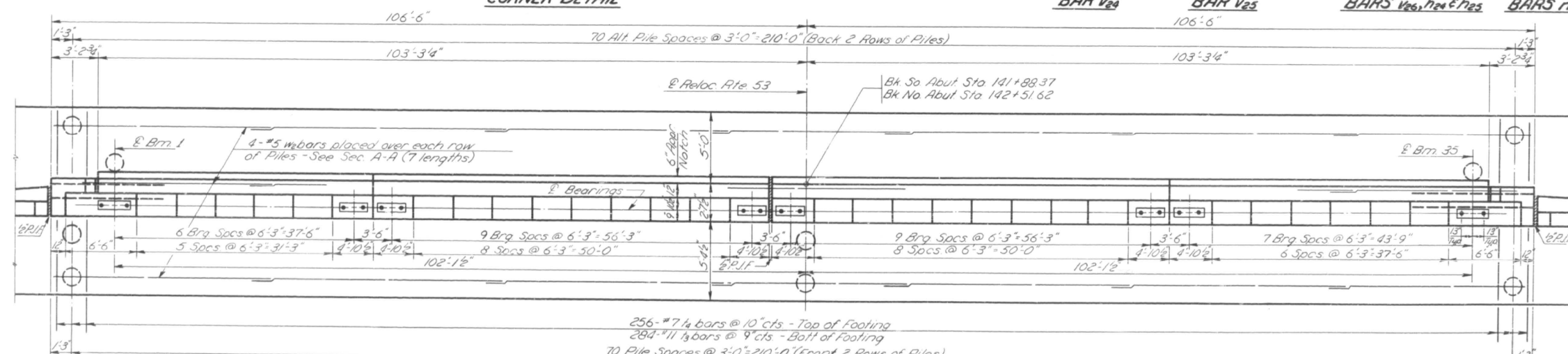
**FRONT ELEVATION - N. ABUT.  
 S. ABUT. OPPOSITE HAND**



**BILL OF MATERIAL  
 2 ABUTS. - MAIN BRIDGE**

| Bar                 | No. | Size | Length | Shape  |         |
|---------------------|-----|------|--------|--------|---------|
| n3                  | 426 | #10  | 6'-0"  | ~      |         |
| n4                  | 424 | #10  | 13'-0" | ~      |         |
| n7                  | 128 | #4   | 22'-3" | ~      |         |
| n8                  | 264 | #4   | 30'-3" | ~      |         |
| n9                  | 128 | #4   | 25'-3" | ~      |         |
| n20                 | 4   | #4   | 20'-6" | ~      |         |
| n21                 | 4   | #4   | 24'-0" | ~      |         |
| n22                 | 24  | #6   | 24'-0" | ~      |         |
| n23                 | 24  | #6   | 30'-3" | ~      |         |
| n24                 | 20  | #4   | 4'-6"  | ~      |         |
| n25                 | 20  | #4   | 3'-0"  | ~      |         |
| v21                 | 426 | #8   | 19'-0" | ~      |         |
| v22                 | 426 | #8   | 14'-0" | ~      |         |
| v23                 | 426 | #6   | 7'-0"  | ~      |         |
| v24                 | 426 | #4   | 6'-9"  | ~      |         |
| v25                 | 414 | #4   | 6'-0"  | ~      |         |
| v26                 | 422 | #8   | 7'-0"  | ~      |         |
| v27                 | 829 | #4   | 2'-6"  | ~      |         |
| v28                 | 36  | #4   | 6'-0"  | ~      |         |
| f3                  | 508 | #11  | 12'-9" | ~      |         |
| f4                  | 512 | #7   | 12'-9" | ~      |         |
| w2                  | 56  | #5   | 31'-9" | ~      |         |
| Class X Concrete    |     |      |        | Cu Yds | 1073.6  |
| Reinforcement Bars  |     |      |        | Lbs    | 154,970 |
| Untreated Piles     |     |      |        | Lin Ft | 5275    |
| Test Piles (Timber) |     |      |        | Each   | 2       |

**MAIN BRIDGE ABUTMENTS  
 S.B.I. RT. 53 - SEC. 531-1-B7  
 COOK COUNTY  
 STA. 142 + 20.00**



DESIGNED *M. S. Revilla*  
 CHECKED *Walter Perry*  
 DRAWN *M. L. Worless*  
 CHECKED *WP*

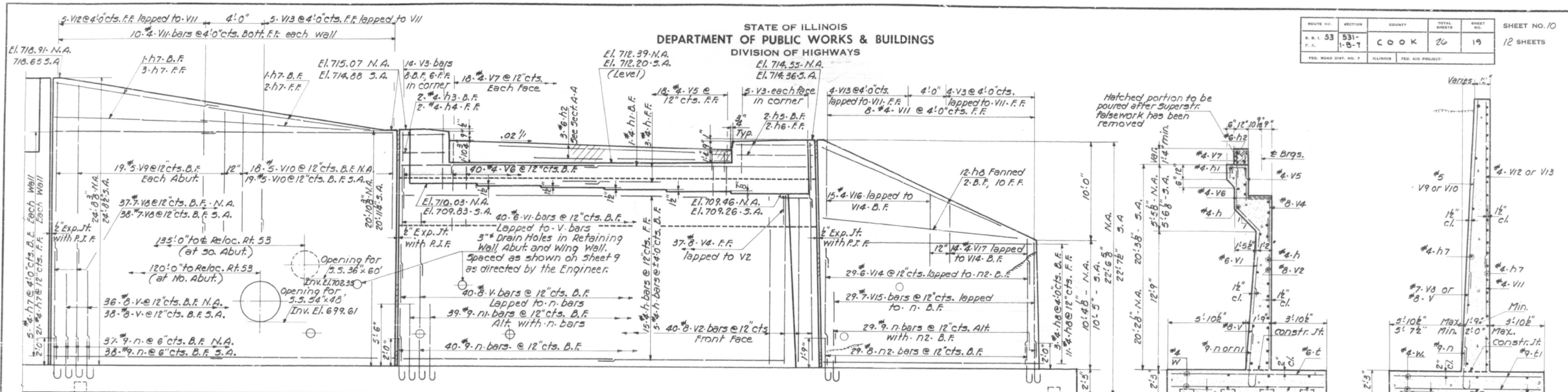
EXAMINED *W. E. Baumann*  
 PASSED *[Signature]*  
 APPROVED *[Signature]*

FOR INFORMATION ONLY

|              |              |           |   |  |                           |             |        |              |           |  |
|--------------|--------------|-----------|---|--|---------------------------|-------------|--------|--------------|-----------|--|
| USER NAME =  | DESIGNED -   | REVISED - | STATE OF ILLINOIS<br>DEPARTMENT OF TRANSPORTATION | EXISTING DRAWINGS (SHEET 5 OF 8)<br>STRUCTURE NO. 016-1195 | F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |  |
| PLOT SCALE = | CHECKED -    | REVISED - |   |  | 342                       | 2018-100-BR | COOK   | 1351         | 933       |  |
| PLOT DATE =  | DRAWN - EN   | REVISED - |   |  | CONTRACT NO. 62N91        |             |        |              |           |  |
|              | CHECKED - MI | REVISED - |   |  | ILLINOIS FED. AID PROJECT |             |        |              |           |  |



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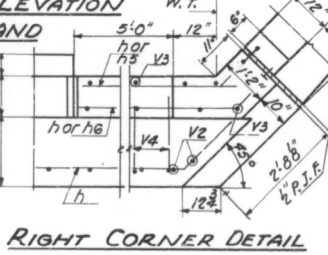
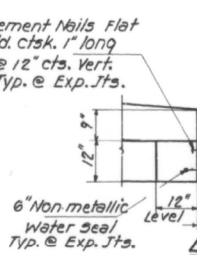


| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | SHEET NO. / 10 |
|-----------|---------|--------|--------------|-----------|----------------|
| 53        | 531-B-7 | COOK   | 26           | 19        | 12 SHEETS      |

**PILE DATA**

|                         |           |
|-------------------------|-----------|
| Type                    | Untreated |
| Capacity                | 20 Tons   |
| Est. Length             | 25 Ft.    |
| No. req'd.              | 182       |
| (Includes 2 test piles) |           |

**NO. ABUTMENT ELEVATION  
 50. ABUT. OPP. HAND**

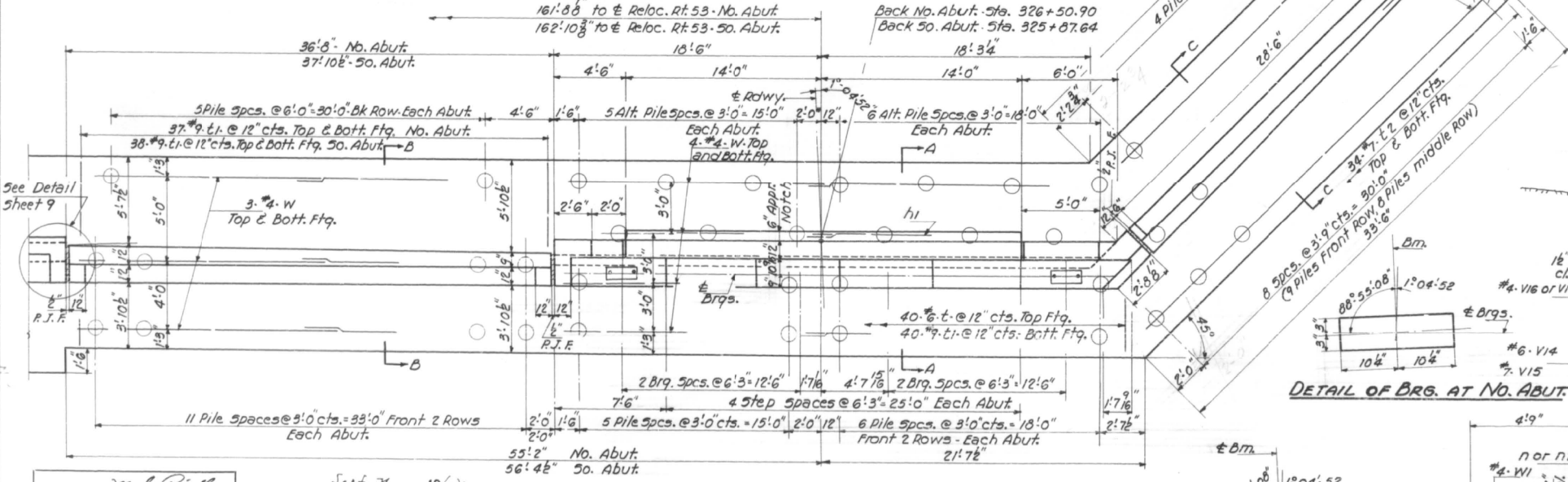


**SECTION A-A**

**SECTION B-B**

**BILL OF MATERIAL**  
 Two Abuts. and two Retaining Walls

| Bar | No  | Size | Length | Shape |
|-----|-----|------|--------|-------|
| n   | 213 | #9   | 5'0"   | U     |
| n1  | 76  | #9   | 8'6"   | U     |
| n2  | 58  | #8   | 4'6"   | U     |
| h   | 92  | #4   | 20'0"  | —     |
| h1  | 2   | #4   | 27'6"  | —     |
| h2  | 6   | #6   | 27'6"  | —     |
| h3  | 4   | #4   | 6'6"   | —     |
| h4  | 4   | #4   | 4'9"   | —     |
| h5  | 4   | #4   | 5'6"   | —     |
| h6  | 4   | #4   | 5'9"   | —     |
| h7  | 118 | #4   | 19'3"  | —     |
| h8  | 52  | #4   | 28'9"  | —     |
| v   | 154 | #8   | 8'0"   | —     |
| v1  | 80  | #6   | 8'0"   | —     |
| v2  | 80  | #8   | 14'6"  | —     |
| v3  | 56  | #4   | 5'9"   | —     |
| v4  | 74  | #8   | 7'0"   | —     |
| v5  | 36  | #4   | 6'0"   | —     |
| v6  | 80  | #4   | 6'3"   | —     |
| v7  | 72  | #4   | 6'9"   | —     |
| v8  | 75  | #7   | 12'0"  | —     |
| v9  | 38  | #5   | 14'3"  | —     |
| v10 | 37  | #5   | 11'6"  | —     |
| v11 | 36  | #4   | 9'6"   | —     |
| v12 | 10  | #4   | 15'6"  | —     |
| v13 | 18  | #4   | 13'6"  | —     |
| v14 | 58  | #6   | 8'0"   | —     |
| v15 | 58  | #7   | 6'0"   | —     |
| v16 | 30  | #4   | 15'9"  | —     |
| v17 | 28  | #4   | 10'9"  | —     |
| t   | 80  | #8   | 11'3"  | —     |
| t1  | 230 | #9   | 11'3"  | —     |
| t2  | 60  | #7   | 16'3"  | —     |
| w   | 58  | #4   | 19'0"  | —     |
| w1  | 24  | #4   | 17'0"  | —     |



**BAR V5 BARS V4-h3-h4**

**BARS V6-h5-h6**

**BARS n-n1-n2**

\* For W. Frontage  
 Rel. Abut. only

**DETAIL OF BRG. AT NO. ABUT.**

**DETAIL OF BRG. PL. AT 50. ABUT.**

**SECTION C-C**

**EAST FRONTAGE ROAD ABUTS. AND  
 RETAINING WALLS  
 S.B.I. RT. 53-SEC. 531-B-7  
 COOK COUNTY  
 STATION 142+20.00**

|          |                |          |              |
|----------|----------------|----------|--------------|
| DESIGNED | M. S. Revilla  | EXAMINED | W. E. Gorman |
| CHECKED  | R. Kuntz       | PASSED   | [Signature]  |
| DRAWN    | WFR. M. Miller | APPROVED | [Signature]  |
| CHECKED  | [Signature]    |          |              |

**FOR INFORMATION ONLY**



|            |          |          |
|------------|----------|----------|
| USER NAME  | DESIGNED | REVISOR  |
| PLOT SCALE | CHECKED  | REVISION |
| PLOT DATE  | DRAWN    | REVISION |
|            | CHECKED  | REVISION |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

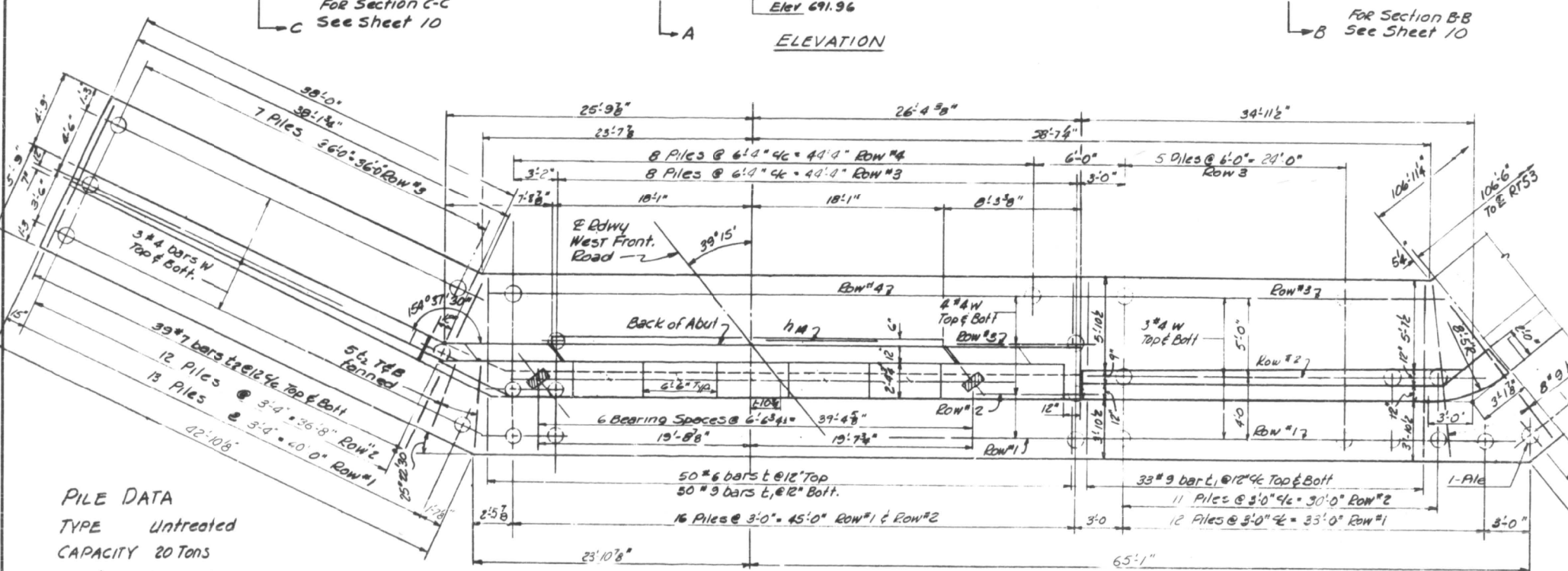
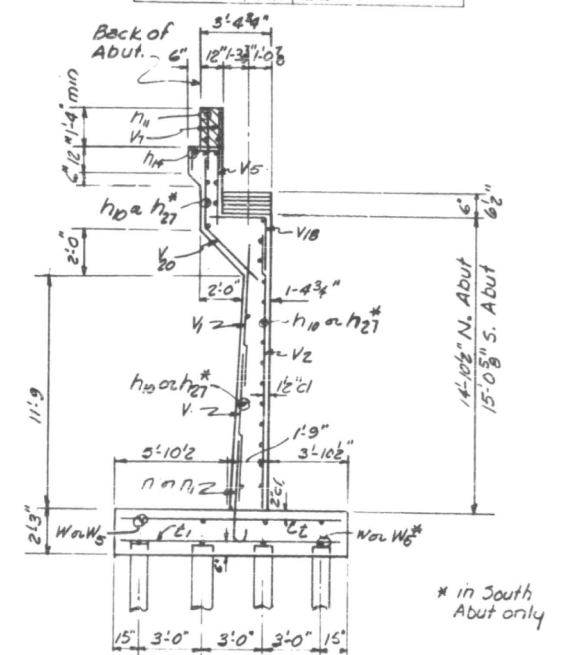
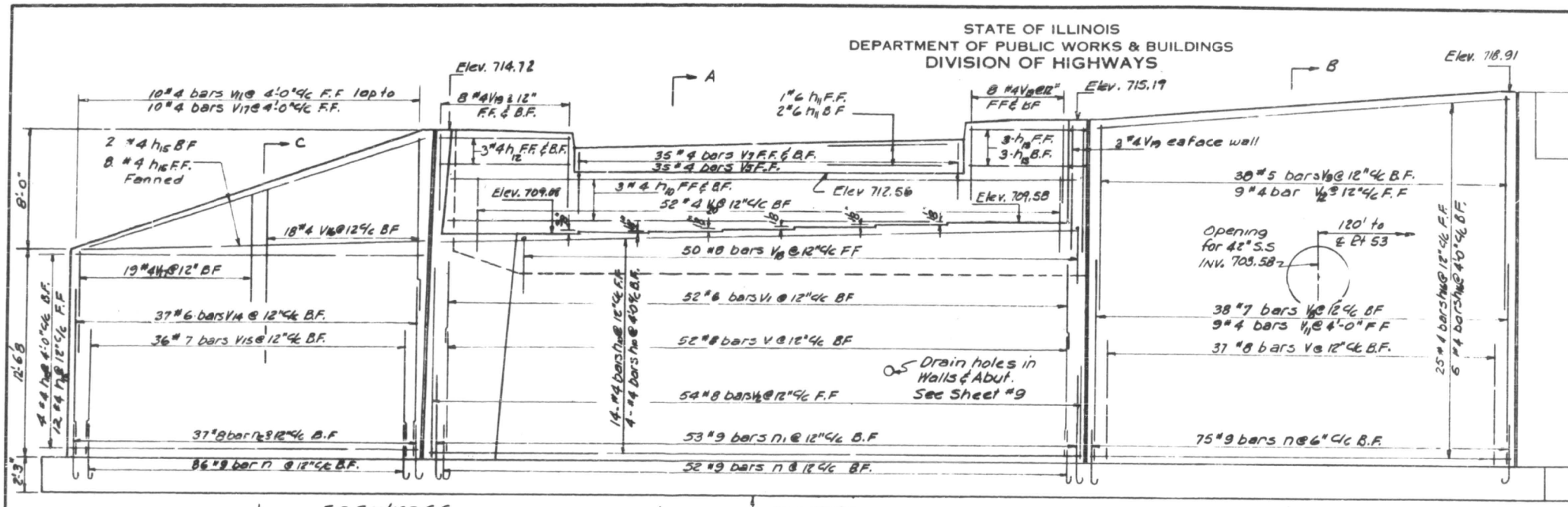
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 STRUCTURE NO. 016-1195

| F.A.P. RTE. | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|-------------|--------|--------------|-----------|
| 342         | 2018-100-BR | COOK   | 1351         | 934       |

CONTRACT NO. 62N91  
 ILLINOIS FED. AID PROJECT

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

|             |         |        |              |           |
|-------------|---------|--------|--------------|-----------|
| PROJECT NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 53-1-B-7    | COOK    | 26     | 20           | 11-A      |
| 12 SHEETS   |         |        |              |           |



**PILE DATA**  
TYPE Untreated  
CAPACITY 20 Tons  
EST LENGTH 25 FT  
NO. REQ'D 109 (includes 1 test pile)

DESIGNED *M. S. Ruzicka*  
CHECKED *Walter Perry*  
DRAWN *R. Kowert*  
CHECKED *R. Kowert*

EXAMINED *W. E. Bauman*  
PASSED *[Signature]*  
APPROVED *[Signature]*

**SECTION A-A**

**BILL OF MATERIAL**

| BAR                 | No  | SIZE | LENGTH | SHAPE |
|---------------------|-----|------|--------|-------|
| n                   | 163 | #9   | 5'-0"  | —     |
| n1                  | 53  | #9   | 8'-6"  | —     |
| n2                  | 37  | #8   | 4'-6"  | —     |
| n10                 | 48  | #4   | 26'-6" | —     |
| n11                 | 6   | #6   | 18'-6" | —     |
| n12                 | 6   | #2   | 8'-0"  | —     |
| n13                 | 6   | #4   | 8'-9"  | —     |
| n14                 | 2   | #4   | 18'-6" | —     |
| n15                 | 52  | #4   | 19'-0" | —     |
| n16                 | 62  | #4   | 18'-0" | —     |
| w                   | 48  | #4   | 19'-0" | —     |
| v                   | 89  | #8   | 8'-0"  | —     |
| v1                  | 52  | #6   | 8'-0"  | —     |
| v2                  | 54  | #8   | 14'-6" | —     |
| v5                  | 35  | #4   | 6'-0"  | —     |
| v7                  | 70  | #4   | 2'-9"  | —     |
| v8                  | 38  | #7   | 12'-0" | —     |
| v9                  | 38  | #6   | 14'-9" | —     |
| v11                 | 19  | #4   | 12'-0" | —     |
| v12                 | 9   | #4   | 13'-6" | —     |
| v14                 | 37  | #6   | 8'-0"  | —     |
| v15                 | 36  | #7   | 6'-0"  | —     |
| v16                 | 18  | #4   | 15'-9" | —     |
| v17                 | 29  | #4   | 10'-9" | —     |
| v18                 | 50  | #8   | 6'-3"  | —     |
| v19                 | 38  | #4   | 6'-3"  | —     |
| v20                 | 52  | #4   | 7'-6"  | —     |
| e                   | 50  | #6   | 11'-3" | —     |
| e1                  | 116 | #9   | 11'-3" | —     |
| e2                  | 78  | #7   | 10'-3" | —     |
| C 1053 X Concrete   |     |      | 2979   |       |
| Reinforcement Bars  |     |      | 23740  |       |
| Untreated Piles     |     |      | 2700   |       |
| Test Piles (Timber) |     |      | 1      |       |

FOR INFORMATION ONLY

(REVISED)  
NORTH ABUTMENT & RETAIN. WALL  
WEST FRONTAGE ROAD  
581 RT 53 SEC. 53-1-B-7  
COOK COUNTY

Revised 9-26-63 Pile Spacing & Fig Lengths RAK

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|              |              |          |
|--------------|--------------|----------|
| USER NAME =  | DESIGNED -   | REVISD - |
| PLOT SCALE = | CHECKED -    | REVISD - |
| PLOT DATE =  | DRAWN - EN   | REVISD - |
|              | CHECKED - MI | REVISD - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

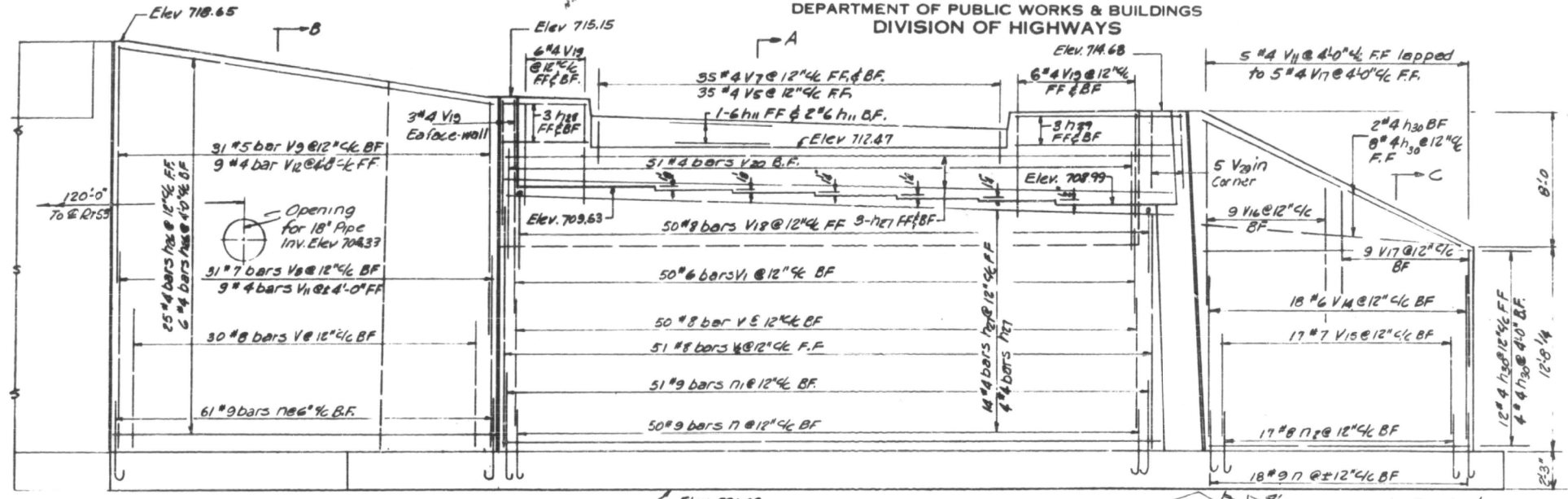
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STRUCTURE NO. 016-1195

| F.A.P. RTE.        | SECTION     | COUNTY           | TOTAL SHEETS | SHEET NO. |
|--------------------|-------------|------------------|--------------|-----------|
| 342                | 2018-100-BR | COOK             | 1351         | 935       |
| CONTRACT NO. 62N91 |             |                  |              |           |
| ILLINOIS           |             | FED. AID PROJECT |              |           |

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

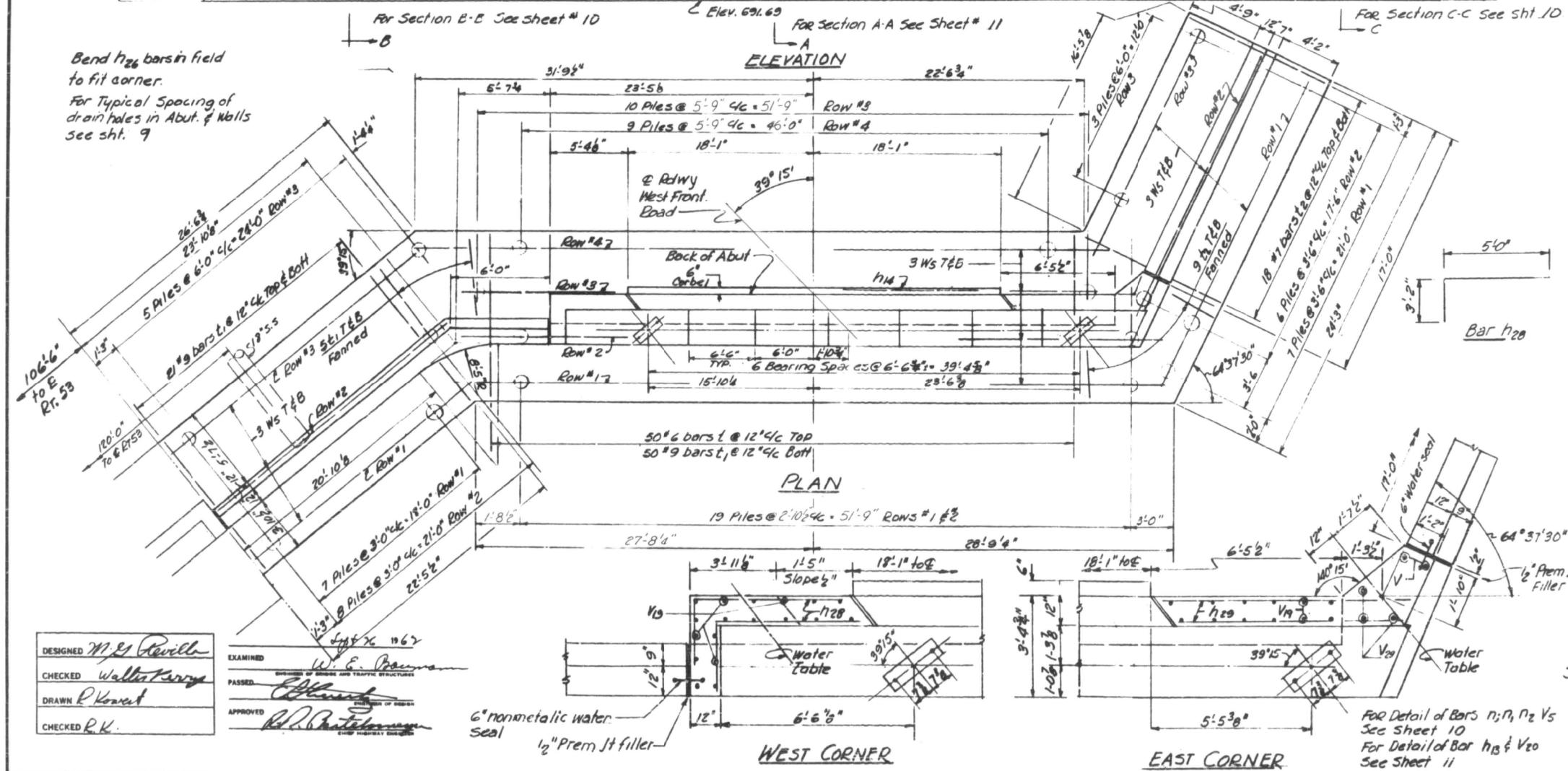
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|----------------|-----------|--------|--------------|-----------|
| ROUTE NO.      | SECTION   | COUNTY | TOTAL SHEETS | SHEET NO. |
| 53             | 531-1-B-7 | COOK   | 26           | 21        |
| SHEET NO. 12-A |           |        |              |           |
| 1/2 SHEETS     |           |        |              |           |



PILE DATA

TYPE - Untreated  
 CAPACITY - 20 Tons  
 EST. LENGTH - 25 FT  
 No. REQD - 93 (includes 1 test pile)

Bend  $\frac{1}{16}$  bars in field to fit corner.  
 For Typical Spacing of drain holes in Abut. & Walls see sht. 9



BILL OF MATERIAL

| BAR                 | NO  | SIZE | LENGTH | SHAPE   |       |
|---------------------|-----|------|--------|---------|-------|
| n                   | 123 | #9   | 51'0"  | —       |       |
| n1                  | 51  | #9   | 8'6"   | —       |       |
| n2                  | 17  | #8   | 4'6"   | —       |       |
| n11                 | 6   | #6   | 18'6"  | —       |       |
| n26                 | 31  | #4   | 29'0"  | —       |       |
| n27                 | 48  | #4   | 15'6"  | —       |       |
| n28                 | 6   | #4   | 8'2"   | —       |       |
| n29                 | 6   | #4   | 7'3"   | —       |       |
| n30                 | 26  | #4   | 16'9"  | —       |       |
| n14                 | 2   | #4   | 18'6"  | —       |       |
| v                   | 80  | #8   | 8'0"   | —       |       |
| v1                  | 50  | #6   | 8'0"   | —       |       |
| v2                  | 51  | #8   | 14'6"  | —       |       |
| v5                  | 35  | #4   | 6'0"   | —       |       |
| v7                  | 35  | #4   | 2'9"   | —       |       |
| v8                  | 31  | #7   | 12'0"  | —       |       |
| v9                  | 31  | #1   | 14'3"  | —       |       |
| v11                 | 14  | #1   | 12'0"  | —       |       |
| v12                 | 9   | #3   | 13'6"  | —       |       |
| v14                 | 18  | #6   | 8'0"   | —       |       |
| v15                 | 17  | #7   | 6'0"   | —       |       |
| v16                 | 9   | #4   | 15'9"  | —       |       |
| v17                 | 14  | #4   | 10'9"  | —       |       |
| v18                 | 50  | #8   | 6'3"   | —       |       |
| v19                 | 30  | #4   | 6'3"   | —       |       |
| v20                 | 51  | #4   | 7'6"   | —       |       |
| v22                 | 5   | #5   | 20'6"  | —       |       |
| w5                  | 36  | #4   | 29'0"  | —       |       |
| z                   | 50  | #6   | 11'3"  | —       |       |
| z1                  | 102 | #9   | 11'3"  | —       |       |
| z2                  | 54  | #7   | 10'3"  | —       |       |
| Class X Concrete    |     |      |        | Cu Yds  | 2088  |
| Reinforcement Bars  |     |      |        | Lbs     | 19620 |
| Untreated Piles     |     |      |        | Lin Ft. | 2300  |
| Test Piles (Timber) |     |      |        | Ea.     | 1     |

DESIGNED: M. S. Revilla  
 CHECKED: Walter Perry  
 DRAWN: R. Kovat  
 CHECKED: R.K.  
 EXAMINED: W. E. Brauman  
 PASSED: [Signature]  
 APPROVED: [Signature]

Revised 9-26-63 Abut Pile Spacing & Fig Length - RAK

FOR INFORMATION ONLY

(REVISED)  
 SOUTH ABUTMENT & RETAINING WALL  
 WEST FRONTAGE ROAD  
 581 RT 53 SEC. 531-1-B-7  
 COOK COUNTY  
 STATION 142+20



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

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING DRAWINGS (SHEET 8 OF 8)  
 STRUCTURE NO. 016-1195

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 936       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

Benchmark: TBM 21 - Cut cross on the southwest side of sign concrete foundation (IL 53 - IL 68 Dundee Road Exit 1/4 west leg of sign.

Existing Structure: Structure 016-0973 & Structure 016-0371 were originally built in 1965 as S.B.I. Route 53 (F.A. Route 61), Section 531-3HB-2, contract number 23932. The structures consist of four-span PPC I-Beams with concrete deck slab on pile bent abutments and multi-column piers. The structures are 228'-3" back-to-back of abutments and 58'-4" out-to-out width of deck along with a skew of 46°05'30" ahead left.

Traffic to be maintained using stage construction.

No salvage

Traffic Barrier Terminal Type 6 (Std. 631031), entrance ends of both bridges and NW end of NB bridge except SE end of SB bridge.

Existing Timber piles to be abandoned (typ. at Approaches)

Multi-Use Path  
44" Constant Slope Parapet  
2:1 (H:V) @ rt. Ls, typ.  
Remove and reconstruct slopewall  
Proposed retaining wall (SN 016-W2503)

\*\*\* Limits of Protective Shield

\*\*SN 016-0371 = 14'-1"  
SN 016-0973 = 13'-6"

Traffic Barrier Terminal Type 5  
Prop. lighting, typ.  
Shoulder Inlet with Curb (Std. 610001), typ. ea. corner  
Prop. elect.

ELEVATION  
(Horizontal dimensions are rt. L to C US 12)

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)

f'c = 4,000 psi (Superstructure)  
f'c = 3,500 psi (Substructure)  
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS (NEW CONSTRUCTION)

f'c = 8,500 psi  
f'ci = 6,500 psi  
fpu = 270,000 psi (0.6" O low lax. strands)  
fpbt = 202,300 psi (0.6" O low lax. strands)

FIELD UNITS (EXISTING CONSTRUCTION)

fc = 1,400 psi  
fs = 20,000 psi (Reinforcement)

SEISMIC DATA

Seismic Retrofit Category (SRC) = A  
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.081g  
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.140g  
Soil Site Class = D  
Performance Level - PL1

LOADING HL-93

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

DESIGN SPECIFICATIONS

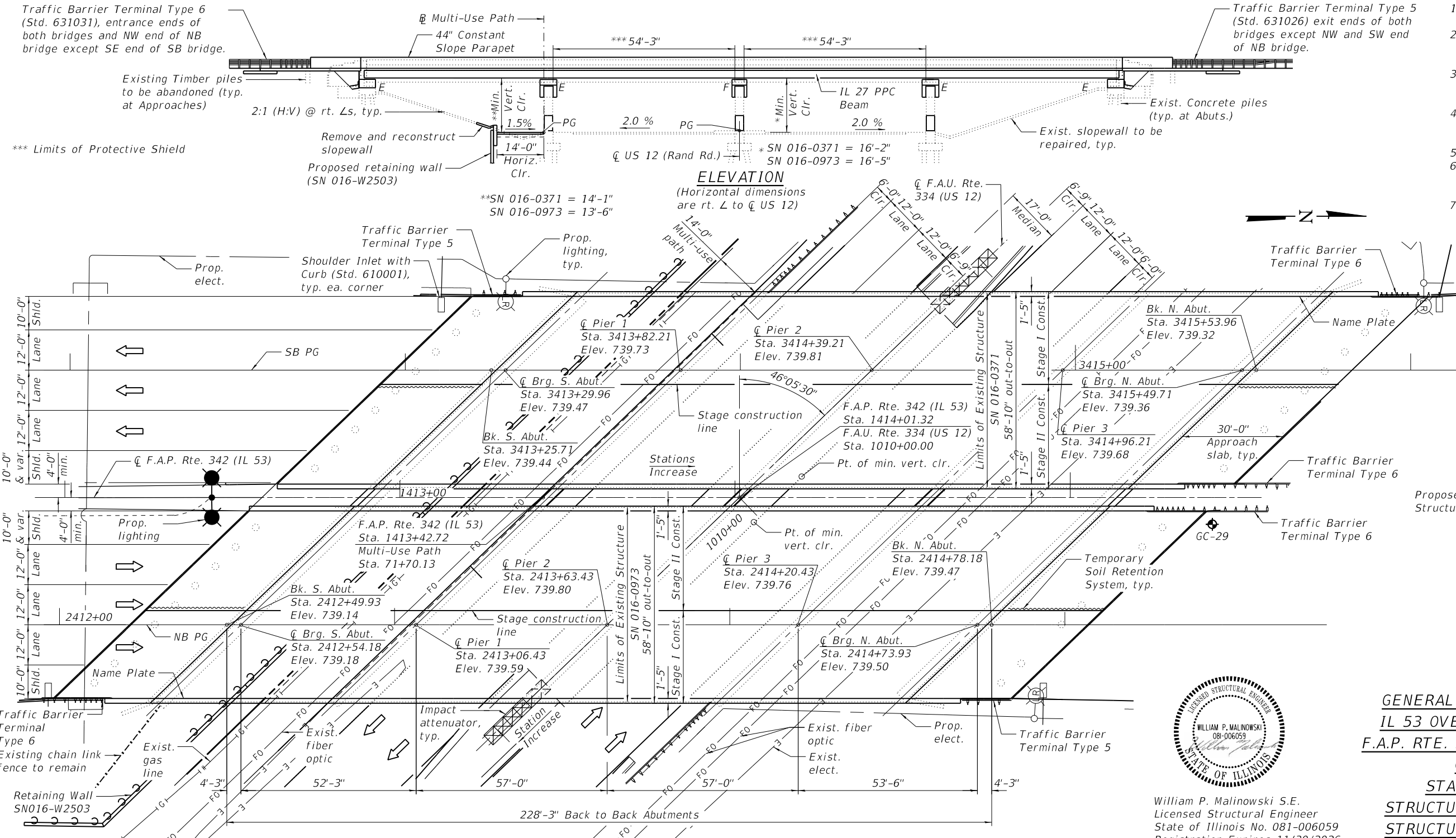
2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition (Existing Construction)

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition (New Construction)

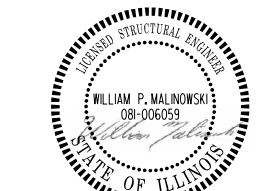
2006 Seismic Retrofitting Manual for Highway Structures: Part 1 - Bridges (FHWA-HRT-06-032)

SCOPE OF WORK

1. Remove existing superstructure, bearings and approach slabs.
2. Modify existing abutments to semi-integral configurations and reconstruct wingwalls.
3. Reconstruct bearing seats at piers and extend crashwalls 5'-0" above adjacent grade line.
4. Construct new bearings and superstructure consisting of PPC I-Beam and concrete deck slab.
5. Construct new approach slabs.
6. Repair abutments and piers with formed concrete repairs and epoxy crack sealing.
7. Repair existing slopewalls using Slope Wall Repairs and Slope Wall Crack Sealing.



PLAN



William P. Malinowski S.E.  
Licensed Structural Engineer  
State of Illinois No. 081-006059  
Registration Expires 11/30/2026

GENERAL PLAN AND ELEVATION  
IL 53 OVER US 12 (RAND ROAD)  
F.A.P. RTE. 342 - SEC. 2018-100-BR  
COOK COUNTY  
STATION 1414+01.32  
STRUCTURE NO. 016-0371 (SB)  
STRUCTURE NO. 016-0973 (NB)

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project 62N91-IL 53 Bridge\Structures\Sheets\C2-D162N91-0160973-01



|                                 |                |             |
|---------------------------------|----------------|-------------|
| USER NAME = USGM717780          | DESIGNED - BJD | REVISIONS - |
| PLOT SCALE = 32:0.0000" = 1 in. | CHECKED - MGH  | REVISIONS - |
| PLOT DATE = 2/11/2025           | DRAWN - BJD    | REVISIONS - |
|                                 | CHECKED - MGH  | REVISIONS - |

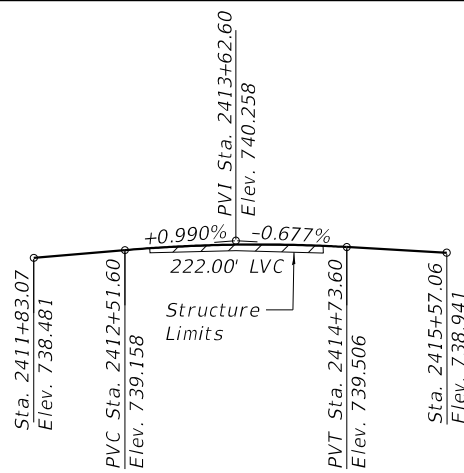
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 55 SHEETS

| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|-------------|--------|--------------|-----------|
| 342                | 2018-100-BR | COOK   | 1351         | 937       |
| CONTRACT NO. 62N91 |             |        |              |           |

**GENERAL NOTES**

- Reinforcement bars designated (E) shall be epoxy coated.
- The finishing machine rails shall be placed on the top of the top flange of the exterior beams within the deck. Beam blocks shall be placed between beams at all tie locations in each bay for the full width of the deck pour.
- The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finished shall be set parallel to the skew for striking off and screeding the concrete.
- Concrete Sealer shall be applied to all surfaces of only new substructure concrete and shall be applied before bearing and beam erection. A penetrating sealer from the Department's qualified product list shall be used for all vertical surfaces.
- Plan dimensions and details relative to the existing structure have been taken from existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Pinning of the Temporary Concrete Barrier in the top of the new bridge deck and approach slabs is not allowed.
- See lighting plans for underpass lighting details related to the bridge.
- Up to 1/4 inch to be ground off the bridge deck and the bridge approach slabs. The Profile Grade shows the final grade after grinding.
- Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

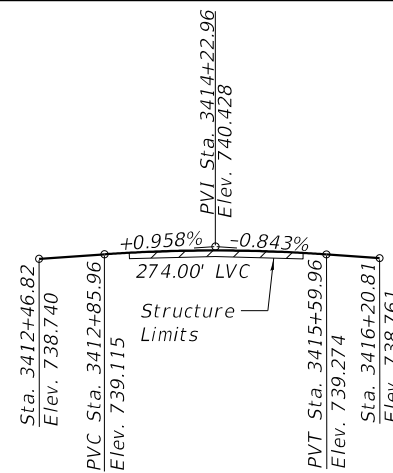


**PROFILE GRADE**  
(Along NB PG IL 53)

The Profile Grade shows the final grade after grinding.

STA. 3414+39.21  
REBUILT 202X BY  
STATE OF ILLINOIS  
F.A.P. RTE. 342 (IL-53) SEC. 2018-100-BR  
LOADING HL-93  
STRUCTURE NO. 016-0371

**NAME PLATE**  
See Std. 515001 and Note 9

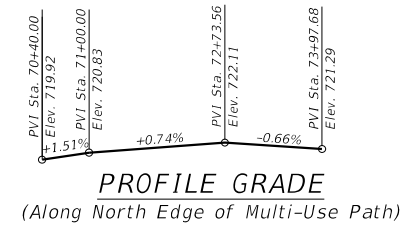


**PROFILE GRADE**  
(Along SB PG IL 53)

The Profile Grade shows the final grade after grinding.

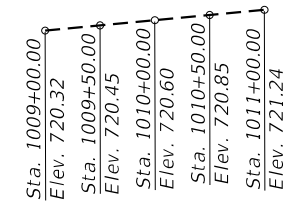
STATION 2413+63.43  
REBUILT 202X BY  
STATE OF ILLINOIS  
F.A.P. RTE. 342 (IL-53) SEC. 2018-100-BR  
LOADING HL-93  
STRUCTURE NO. 016-0973

**NAME PLATE**  
See Std. 515001 and Note 9



**PROFILE GRADE**

(Along North Edge of Multi-Use Path)



**PROFILE GRADE**

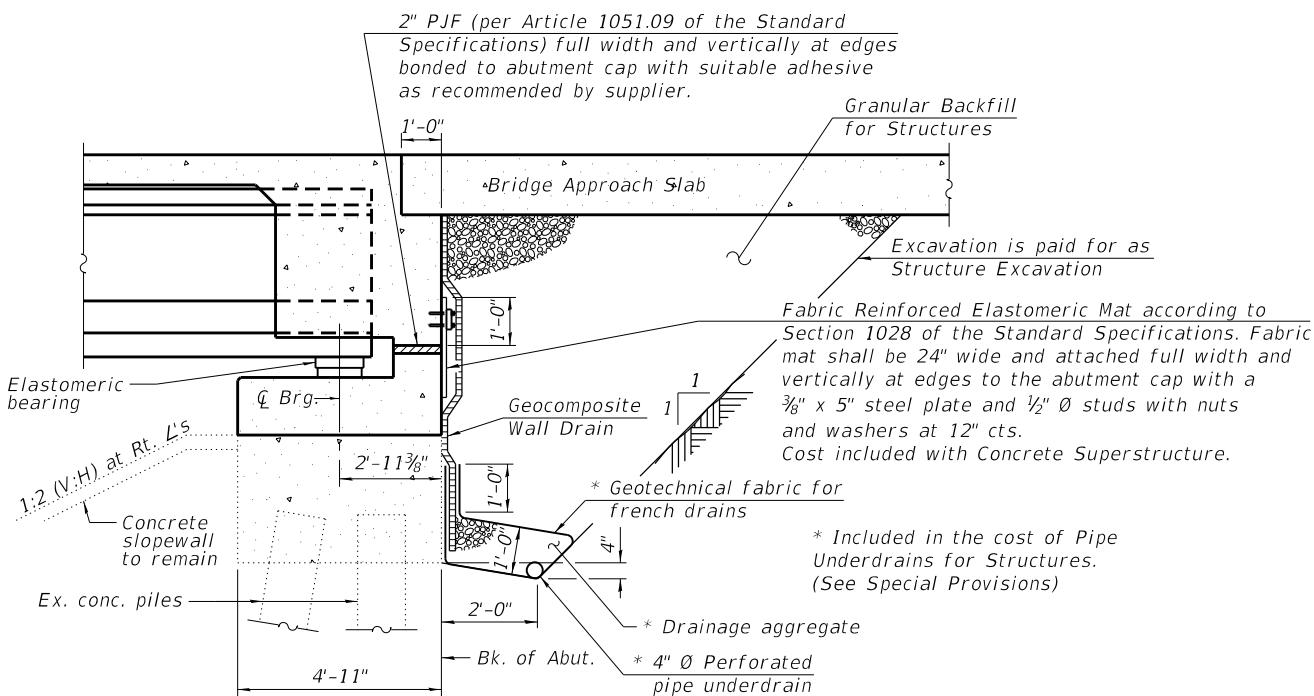
(Top of median along US 12)

**INDEX OF SHEETS**

- General Plan and Elevation
- General Data
- Stage Construction Details - 1
- Stage Construction Details - 2
- Temporary Concrete Barrier
- Top of Deck Slab Elevation Layout (NB)
- Top of Deck Slab Elevation Layout (SB)
- Top of Deck Slab Elevations (NB) - 1
- Top of Deck Slab Elevations (NB) - 2
- Top of Deck Slab Elevations (SB) - 1
- Top of Deck Slab Elevations (SB) - 2
- Top of Approach Slab Elevations (NB)
- Top of Approach Slab Elevations (SB)
- Deck Plan (NB)
- Deck Plan (SB)
- Parapet Elevations
- Superstructure Details
- Abutment Diaphragm Details
- Pier 1 & 3 Diaphragm Details
- Pier 2 Diaphragm Details
- Bridge Approach Slab Details - 1
- Bridge Approach Slab Details - 2
- Bridge Approach Slab Details - 3
- Framing Plan
- IL27N Beam - Span 1
- IL27N Beam - Span 2 & 3
- IL27N Beam - Span 4
- IL27N Beam Details - 1
- IL27N Beam Details - 2
- Bearing Details
- NB South Abutment Removal and Repairs
- NB North Abutment Removal and Repairs
- SB South Abutment Removal and Repairs
- SB North Abutment Removal and Repairs
- NB Pier 1 Removal and Repairs
- NB Pier 2 Removal and Repairs
- NB Pier 3 Removal and Repairs
- SB Pier 1 Removal and Repairs
- SB Pier 2 Removal and Repairs
- SB Pier 3 Removal and Repairs
- NB Slope Wall Repairs
- SB Slope Wall Repairs
- NB South Abutment Modifications
- NB North Abutment Modifications
- SB South Abutment Modifications
- SB North Abutment Modifications
- NB Pier 1 Modifications
- NB Pier 2 Modifications
- NB Pier 3 Modifications
- SB Pier 1 Modifications
- SB Pier 2 Modifications
- SB Pier 3 Modifications
- Concrete Parapet Slipforming Option
- Bar Splicer and Mechanical Splicer Details
- 54A. Median Sliding Plate
- Boring Logs

**TOTAL BILL OF MATERIAL**

| ITEM   | UNIT    | SUPER-STRUCTURE | SUB-STRUCTURE | TOTAL   |
|--|---------|-----------------|---------------|---------|
| Removal of Existing Superstructure No. 4                             | Each    | 1               | -             | 1       |
| Removal of Existing Superstructure No. 5                             | Each    | 1               | -             | 1       |
| Concrete Removal   | Cu. Yd. | -               | 92.8          | 92.8    |
| Protective Shield  | Sq. Yd. | 1,375           | -             | 1,375   |
| Structure Excavation   | Cu. Yd. | -               | 594           | 594     |
| Concrete Structures  | Cu. Yd. | -               | 604.0         | 604.0   |
| Concrete Superstructure  | Cu. Yd. | 1,106.8         | -             | 1,106.8 |
| Protective Coat  | Sq. Yd. | 3,810           | -             | 3,810   |
| Concrete Superstructure (Approach Slab)                              | Sq. Yd. | 332.4           | -             | 332.4   |
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL 27N   | Foot    | 3,491.0         | -             | 3,491.0 |
| Reinforcement Bars, Epoxy Coated                                     | Pound   | 410,660         | 45,520        | 456,180 |
| Bar Splicers   | Each    | 2,244           | 100           | 2,344   |
| Name Plates  | Each    | 2               | -             | 2       |
| Elastomeric Bearing Assembly Type I                                  | Each    | 96              | -             | 96      |
| Anchor Bolts, 1"   | Each    | 192             | -             | 192     |
| Temporary Soil Retention System                                      | Sq. Ft. | -               | 337           | 337     |
| Granular Backfill for Structures                                     | Cu. Yd. | -               | 562           | 562     |
| Concrete Sealer  | Sq. Ft. | -               | 2,056         | 2,056   |
| Epoxy Crack Injection  | Foot    | -               | 253           | 253     |
| Geocomposite Wall Drain  | Sq. Yd. | -               | 330           | 330     |
| Pipe Underdrains for Structures 4"                                   | Foot    | -               | 398           | 398     |
| Bridge Deck Grooving (Longitudinal)                                  | Sq. Yd. | 2,284           | -             | 2,284   |
| Bar Terminators  | Each    | 112             | -             | 112     |
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq. Yd. | -               | 25            | 25      |
| Diamond Grinding (Bridge Section)                                    | Sq. Yd. | 2,606           | -             | 2,606   |
| Preformed Joint Filler   | Foot    | -               | 23            | 23      |



**SECTION THRU SEMI-INTEGRAL ABUTMENT**  
(Horiz. dim. at Rt. L's)

Note:  
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

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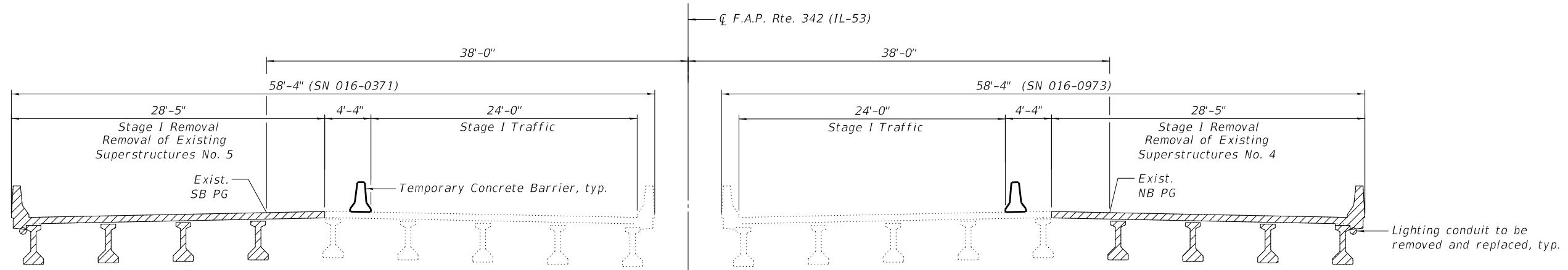
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| USER NAME = USGM717780        | DESIGNED - BJD | REVISIONS - |
| PLOT SCALE = 0:2.0000 " / in. | CHECKED - MGH  | REVISIONS - |
| PLOT DATE = 2/11/2025         | DRAWN - BJD    | REVISIONS - |
|                               | CHECKED - MGH  | REVISIONS - |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

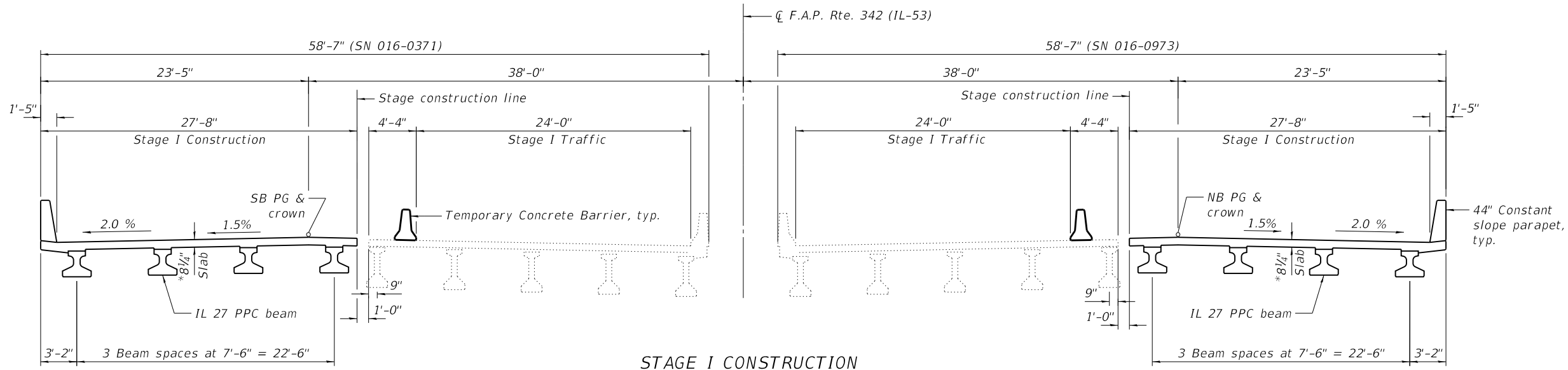
**GENERAL DATA**  
**STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)**

SHEET 2 OF 55 SHEETS

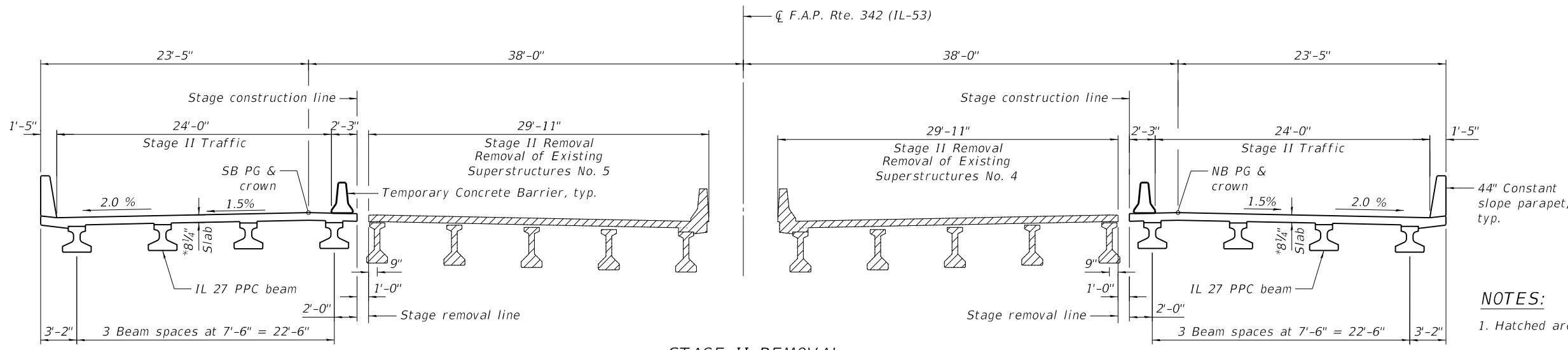
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| F.A.P. RTE.        | SECTION     | COUNTY           | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK             | 1351         | 938       |
| CONTRACT NO. 62N91 |             |                  |              |           |
| ILLINOIS           |             | FED. AID PROJECT |              |           |



**STAGE I REMOVAL**  
(Looking North)



**STAGE I CONSTRUCTION**  
(Looking North)  
\* Prior to diamond grinding



**STAGE II REMOVAL**  
(Looking North)  
\* Prior to diamond grinding

- NOTES:**
1. Hatched areas indicate removal of existing structures.
  2. For Temporary Concrete Barrier details, see Sheet 5 of 55.
  3. For Temporary Concrete Barrier quantity, see Roadway Plans.

MODEL: Default  
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|              |                          |            |     |           |  |
|--------------|--------------------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780               | DESIGNED - | BJD | REVISED - |  |
|              |                          | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 10:8.0000' = 1/4" = 1/8" | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025                | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

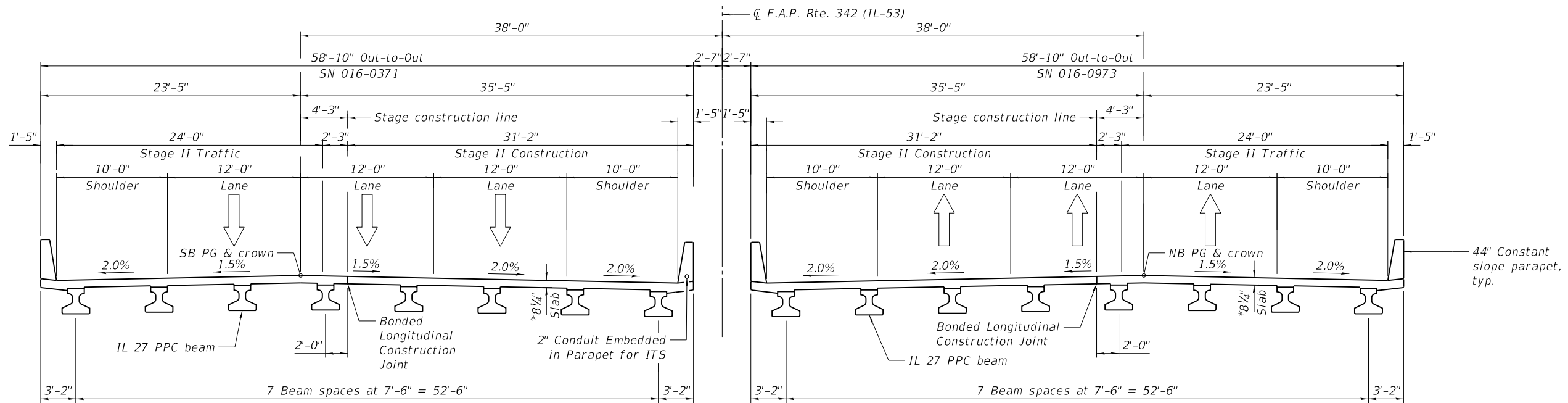
**STAGE CONSTRUCTION DETAILS - 1**  
**STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)**

SHEET 3 OF 55 SHEETS

|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 939       |
| CONTRACT NO. 62N91 |             |        |              |           |

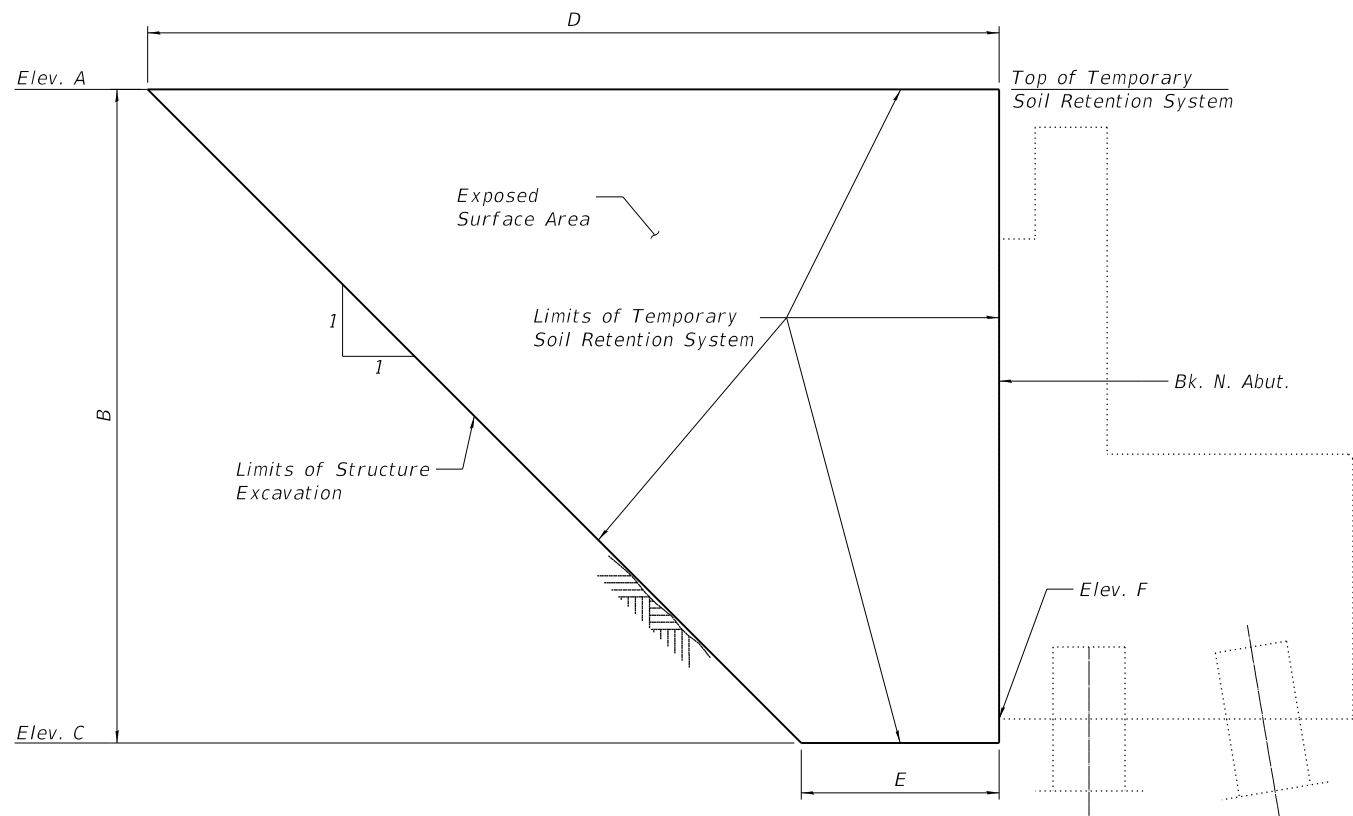
ILLINOIS FED. AID PROJECT





**STAGE II CONSTRUCTION AND FINAL CROSS SECTION**

(Looking North)  
\* Prior to diamond grinding



**TEMPORARY SOIL RETENTION SYSTEM**  
(Measured along the skew)

**TEMPORARY SOIL RETENTION SYSTEM  
DIMENSIONS AND ELEVATIONS**

| Point | SN 016-0973 TSRS |        | SN 016-0371 TSRS |            |
|-------|------------------|--------|------------------|------------|
|       | South            | North  | South            | North      |
| A     | 739.12           | 739.38 | 739.35           | 739.29     |
| B     | 8'-11"           | 9'-1"  | 8'-11 1/4"       | 8'-11 1/8" |
| C     | 730.20           | 730.30 | 730.41           | 730.31     |
| D     | 15'-8"           | 17'-1" | 15'-8"           | 15'-9"     |
| E     | 2'-9"            | 2'-9"  | 2'-9"            | 2'-9"      |
| F     | 730.54           | 730.64 | 730.74           | 730.64     |

**BILL OF MATERIAL - FOUR TSRS**

| ITEM                            | UNIT    | QUANTITY |
|---------------------------------|---------|----------|
| Temporary Soil Retention System | Sq. Ft. | 337      |

**NOTES:**

- See Sheet 3 of 55 for notes.
- The elevations shown above were calculated from the survey information provided by the district.
- A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a Temporary Soil Retention System design including plan details and calculations for review and acceptance by the Engineer

MODEL: Default  
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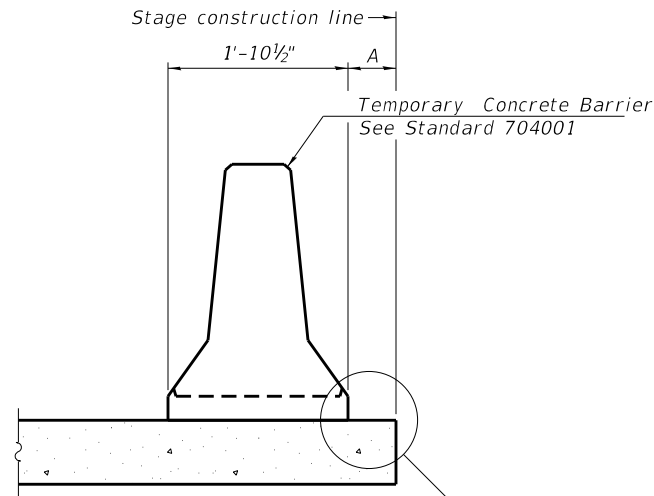
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| USER NAME = USGM717780                | DESIGNED - BJD | REVISED - |
|                                       | CHECKED - MGH  | REVISED - |
| PLOT SCALE = 10:8.0000' = 1/4" = 1/8" | DRAWN - BJD    | REVISED - |
| PLOT DATE = 2/11/2025                 | CHECKED - MGH  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS - 2  
STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)**

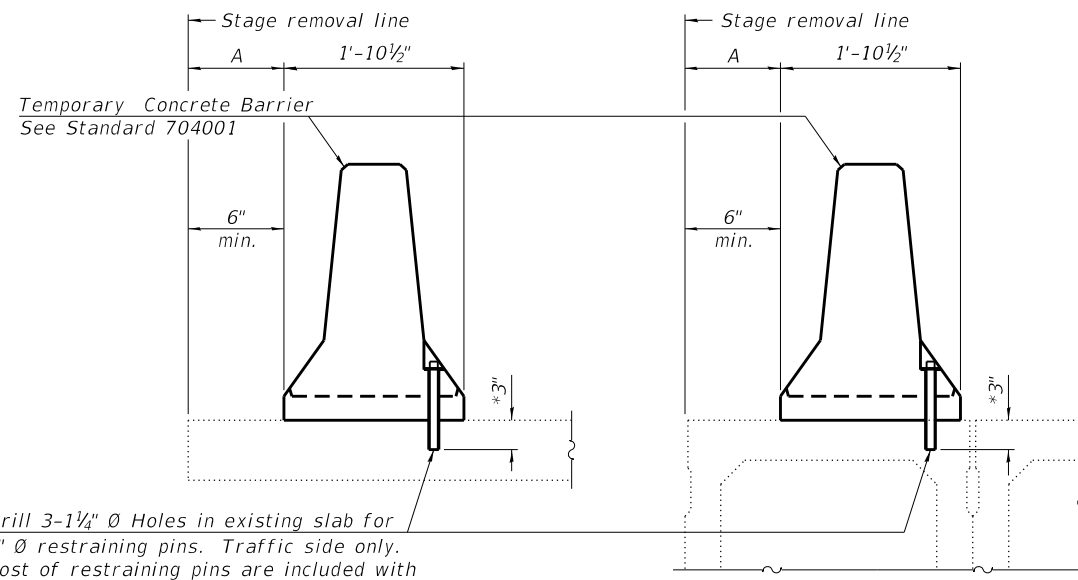
SHEET 4 OF 55 SHEETS

|                           |                     |             |                   |               |
|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.P. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1351 | SHEET NO. 940 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

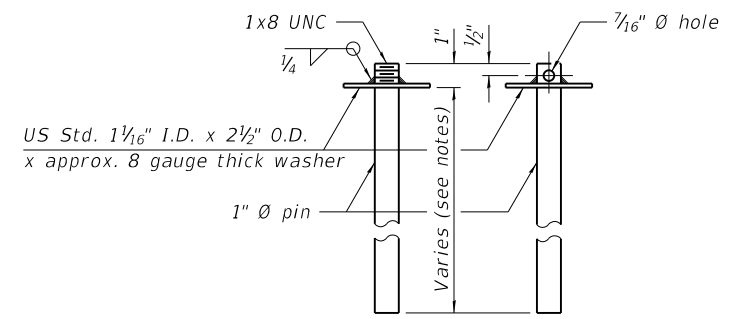


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

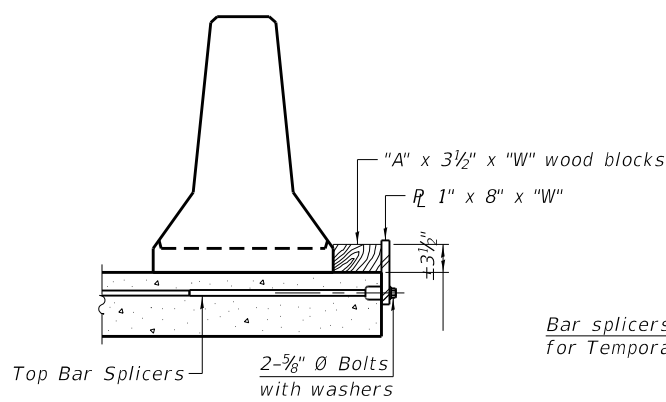
\*When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

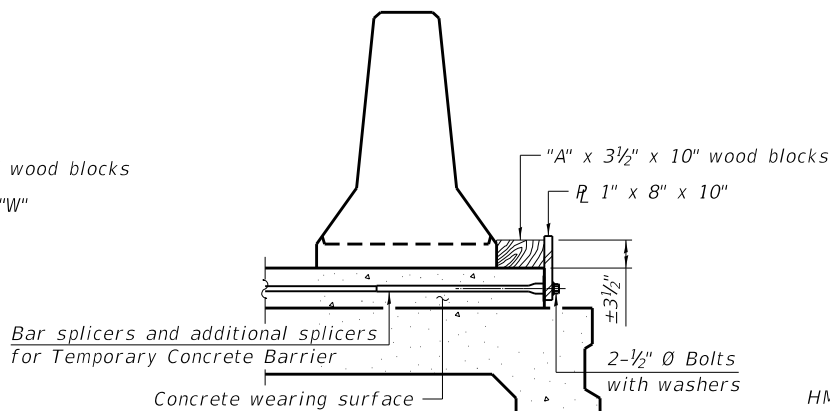


RESTRAINING PIN

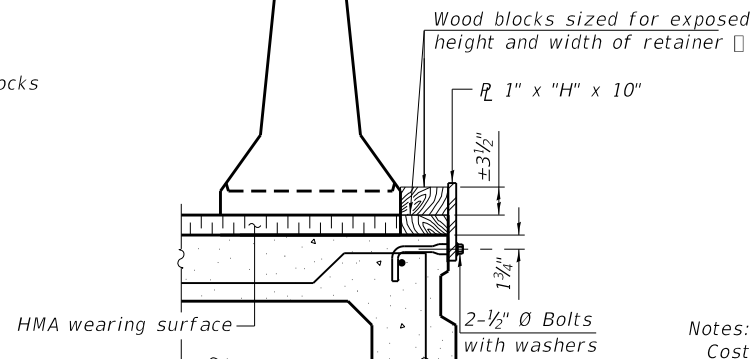
SECTIONS THRU SLAB OR DECK BEAM



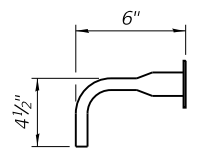
DETAIL I



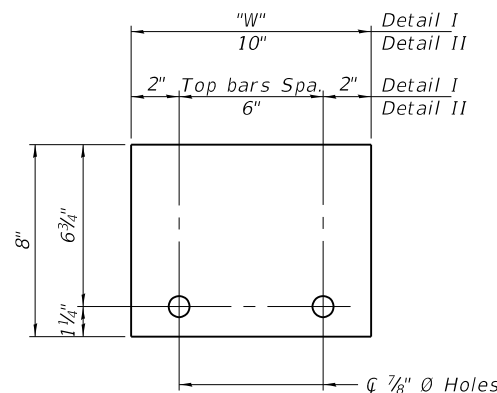
DETAIL II



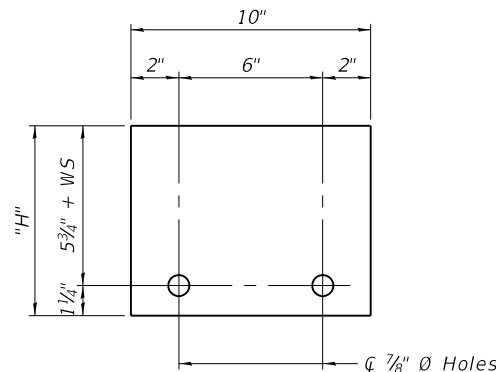
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W" (Detail I and II)



STEEL RETAINER R 1" x "H" x 10" (Detail III)

Notes:  
 Cost of retainer assembly is included with Temporary Concrete Barrier.  
 A retainer assembly shall be located at the approximate □ of each temporary concrete barrier.  
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.  
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate.  
 For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.  
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.  
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

|                      |     |
|----------------------|-----|
| NCHRP 350 Test Level | 3   |
| Railing Weight (plf) | 440 |

R-27 5-15-2023

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

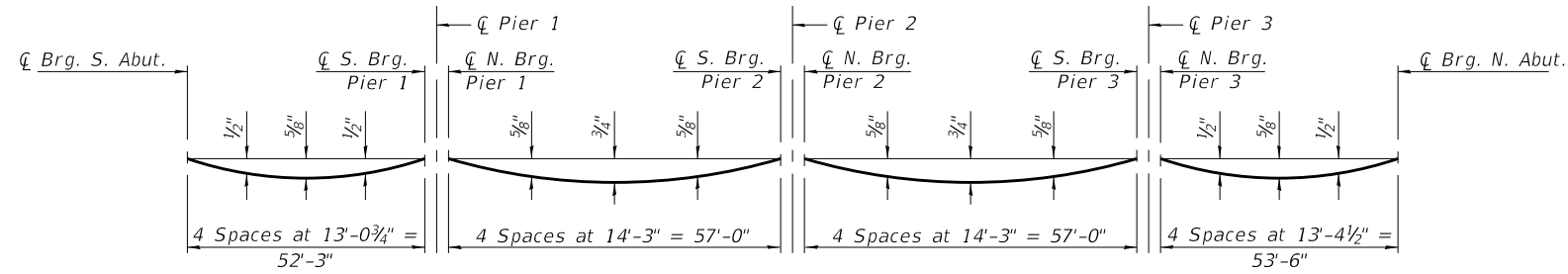
TEMPORARY CONCRETE BARRIER  
STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)

|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 941       |
| CONTRACT NO. 62N91 |             |        |              |           |

SHEET 5 OF 55 SHEETS

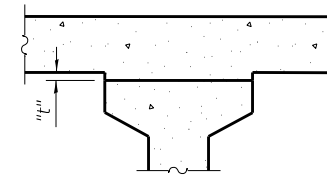
ILLINOIS FED. AID PROJECT

MODEL: Default  
 FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-05



**DEAD LOAD DEFLECTION DIAGRAM**  
(Includes weight of concrete, excluding beams).

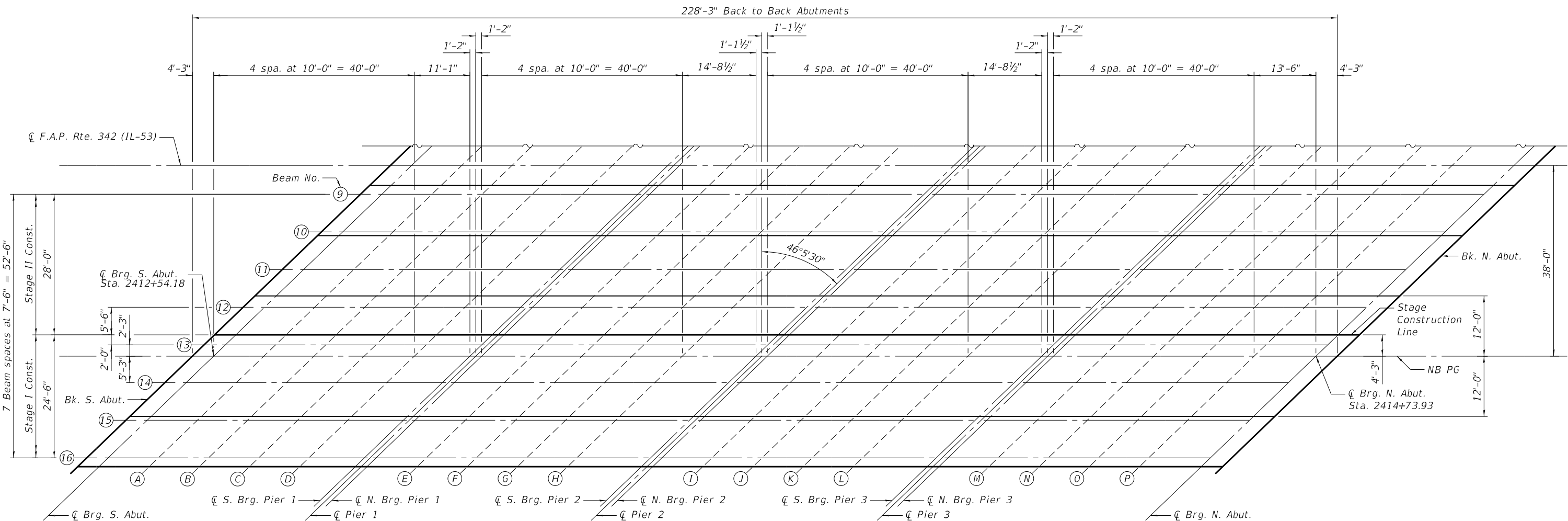
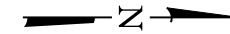
Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on Sheets 8 and 9 of 55.



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown on Sheets 8 and 9 of 55. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections and Grinding" shown below, minus slab thickness prior to grinding, equals the fillet heights "t" above top flanges of beams.

The slab is to be ground after curing to achieve smoothness but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on sheets 8 and 9 of 55. For grinding the deck, see Special Provisions.

**FILLET HEIGHTS**



**NORTHBOUND PLAN**

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project 62N91-IL 53 Bridge\Structures\Sheets\C2-D162N91-0160973-06



|                         |                |           |
|-------------------------|----------------|-----------|
| USER NAME = USGM717780  | DESIGNED - BJD | REVISED - |
|                         | CHECKED - MGH  | REVISED - |
| PLOT SCALE = 0:2" / in. | DRAWN - BJD    | REVISED - |
| PLOT DATE = 2/11/2025   | CHECKED - MGH  | REVISED - |

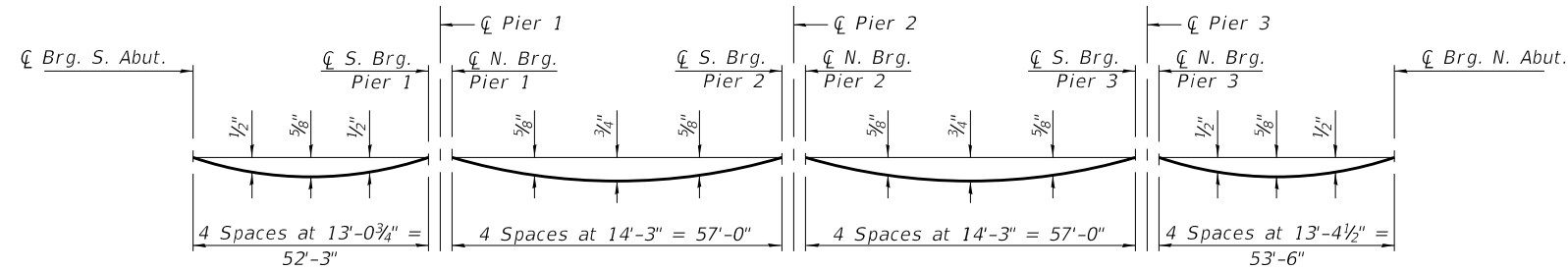
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF DECK SLAB ELEVATION LAYOUT (NB)  
STRUCTURE NO. 016 - 0973 (NB)

SHEET 6 OF 55 SHEETS

|                    |                     |             |                   |               |
|--------------------|---------------------|-------------|-------------------|---------------|
| F.A.P. RTE. 342    | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1351 | SHEET NO. 942 |
| CONTRACT NO. 62N91 |                     |             |                   |               |

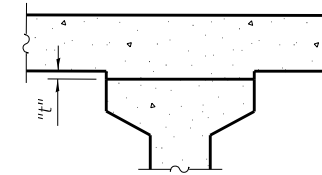
ILLINOIS FED. AID PROJECT



**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete, excluding beams).

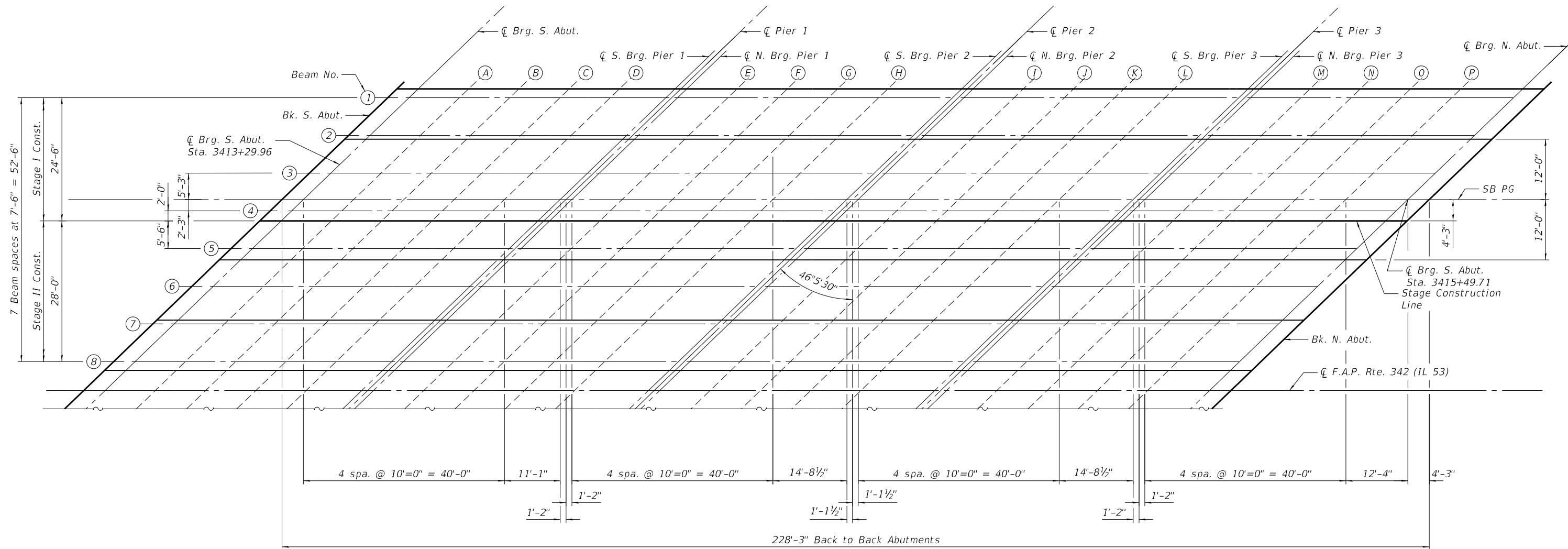
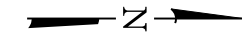
Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on Sheets 10 and 11 of 55.



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown on Sheets 10 and 11 of 55. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections and Grinding" shown below, minus slab thickness prior to grinding, equals the fillet heights "t" above top flanges of beams.

The slab is to be ground after curing to achieve smoothness but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on sheets 10 and 11 of 55. For grinding the deck, see Special Provisions.

**FILLET HEIGHTS**



**SOUTHBOUND PLAN**

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project 62N91-IL 53 Bridge\Structures\Sheets\C2-D162N91-0160973-07



|                            |                |           |
|----------------------------|----------------|-----------|
| USER NAME = USGM717780     | DESIGNED - BJD | REVISED - |
|                            | CHECKED - MGH  | REVISED - |
| PLOT SCALE = 0.1667' / in. | DRAWN - BJD    | REVISED - |
| PLOT DATE = 2/11/2025      | CHECKED - MGH  | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF DECK SLAB ELEVATION LAYOUT (SB)  
STRUCTURE NO. 016-0371 (SB)

SHEET 7 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 943       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

BEAM 9

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. S. Abut., CL Brg. S. Abut. (A-P), CL S. Brg. Pier 1 (A-I), CL N. Brg. Pier 1 (E-H), CL S. Brg. Pier 2 (A-I), CL N. Brg. Pier 2 (I-L), CL S. Brg. Pier 3 (A-I), CL N. Brg. Pier 3 (M-P), and CL Brg. N. Abut. Bk. N. Abut.

BEAM 10

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. S. Abut., CL Brg. S. Abut. (A-H), CL S. Brg. Pier 1 (A-I), CL N. Brg. Pier 1 (E-H), CL S. Brg. Pier 2 (A-I), CL N. Brg. Pier 2 (I-L), CL S. Brg. Pier 3 (A-I), CL N. Brg. Pier 3 (M-P), and CL Brg. N. Abut. Bk. N. Abut.

BEAM 11

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. S. Abut., CL Brg. S. Abut. (A-H), CL S. Brg. Pier 1 (A-I), CL N. Brg. Pier 1 (E-H), CL S. Brg. Pier 2 (A-I), CL N. Brg. Pier 2 (I-L), CL S. Brg. Pier 3 (A-I), CL N. Brg. Pier 3 (M-P), and CL Brg. N. Abut. Bk. N. Abut.

BEAM 12

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. S. Abut., CL Brg. S. Abut. (A-D), CL S. Brg. Pier 1 (A-I), CL N. Brg. Pier 1 (E-H), CL S. Brg. Pier 2 (A-I), CL N. Brg. Pier 2 (I-L), CL S. Brg. Pier 3 (A-I), CL N. Brg. Pier 3 (M-P), and CL Brg. N. Abut. Bk. N. Abut.

STAGE CONSTRUCTION LINE

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. S. Abut., CL Brg. S. Abut. (A-D), CL S. Brg. Pier 1 (A-I), CL N. Brg. Pier 1 (E-H), CL S. Brg. Pier 2 (A-I), CL N. Brg. Pier 2 (I-L), CL S. Brg. Pier 3 (A-I), CL N. Brg. Pier 3 (M-P), and CL Brg. N. Abut. Bk. N. Abut.

BEAM 13

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. S. Abut., CL Brg. S. Abut. (A-D), CL S. Brg. Pier 1 (A-I), CL N. Brg. Pier 1 (E-H), CL S. Brg. Pier 2 (A-I), CL N. Brg. Pier 2 (I-L), CL S. Brg. Pier 3 (A-I), CL N. Brg. Pier 3 (M-P), and CL Brg. N. Abut. Bk. N. Abut.

Notes:
1. All Elevations and Offsets are in feet.
2. Offsets are measured with respect to the NB PG.
Negative offsets are left and positive are right of the PG.

MODEL: Default
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-lu\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-08



Table with design and revision info: USER NAME = USGM717780, DESIGNED - BJD, CHECKED - MGH, PLOT SCALE = 0.1667' / in., DRAWN - BJD, PLOT DATE = 2/11/2025, CHECKED - MGH, REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (NB) - 1
STRUCTURE NO. 016 - 0973 (NB)

SHEET 8 OF 55 SHEETS

Table with project details: F.A.P. RTE., SECTION 2018-100-BR, COUNTY COOK, TOTAL SHEETS 1351, SHEET NO. 944, CONTRACT NO. 62N91, ILLINOIS FED. AID PROJECT

NB PG

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. S. Abut., CL Brg. S. Abut., CL S. Brg. Pier 1, CL N. Brg. Pier 1, CL S. Brg. Pier 2, CL N. Brg. Pier 2, CL S. Brg. Pier 3, CL N. Brg. Pier 3, CL Brg. N. Abut., Bk. N. Abut.

BEAM 14

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. S. Abut., CL Brg. S. Abut., CL S. Brg. Pier 1, CL N. Brg. Pier 1, CL S. Brg. Pier 2, CL N. Brg. Pier 2, CL S. Brg. Pier 3, CL N. Brg. Pier 3, CL Brg. N. Abut., Bk. N. Abut.

BEAM 15

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. S. Abut., CL Brg. S. Abut., CL S. Brg. Pier 1, CL N. Brg. Pier 1, CL S. Brg. Pier 2, CL N. Brg. Pier 2, CL S. Brg. Pier 3, CL N. Brg. Pier 3, CL Brg. N. Abut., Bk. N. Abut.

BEAM 16

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. S. Abut., CL Brg. S. Abut., CL S. Brg. Pier 1, CL N. Brg. Pier 1, CL S. Brg. Pier 2, CL N. Brg. Pier 2, CL S. Brg. Pier 3, CL N. Brg. Pier 3, CL Brg. N. Abut., Bk. N. Abut.

Notes:
1. All Elevations and Offsets are in feet.
2. Offsets are measured with respect to the NB PG.
Negative offsets are left and positive are right of the PG.

MODEL: Default
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project 62N91-IL 53 Bridge\Structures\Sheets\C2-D162N91-0160973-09



Table with 4 columns: USER NAME = USGM717780, DESIGNED - BJD, CHECKED - MGH, PLOT SCALE = 0.1667' / in., DRAWN - BJD, PLOT DATE = 2/11/2025, CHECKED - MGH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (NB) - 2
STRUCTURE NO. 016 - 0973 (NB)

SHEET 9 OF 55 SHEETS

Table with 4 columns: F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS. Values: 342, 2018-100-BR, COOK, 1351, 945. Also includes CONTRACT NO. 62N91 and ILLINOIS FED. AID PROJECT.

BEAM 1

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Includes rows for Bk. S. Abut., CL Brg. S. Abut. A-P, and CL S. Brg. Pier 1-3.

BEAM 2

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Includes rows for Bk. S. Abut., CL Brg. S. Abut. A-P, and CL S. Brg. Pier 1-3.

BEAM 3

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Includes rows for Bk. S. Abut., CL Brg. S. Abut. A-P, and CL S. Brg. Pier 1-3.

SB PG

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Includes rows for Bk. S. Abut., CL Brg. S. Abut. A-P, and CL S. Brg. Pier 1-3.

BEAM 4

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Includes rows for Bk. S. Abut., CL Brg. S. Abut. A-P, and CL S. Brg. Pier 1-3.

STAGE CONSTRUCTION LINE

Table with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Includes rows for Bk. S. Abut., CL Brg. S. Abut. A-P, and CL S. Brg. Pier 1-3.

- Notes:
1. All Elevations and Offsets are in feet.
2. Offsets are measured with respect to the NB PG.
Negative offsets are left and positive are right of the PG.

MODEL: Default
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53 Bridge\Structures\Sheets\C2-D162N91-0160973-10



Table with fields: USER NAME = USGM717780, DESIGNED - BJD, CHECKED - MGH, PLOT SCALE = 0.1667' / in., DRAWN - BJD, PLOT DATE = 2/11/2025, CHECKED - MGH, REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SB) - 1
STRUCTURE NO. 016 - 0371 (SB)

Table with columns: F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO. 62N91. Includes values: 342, 2018-100-BR, COOK, 1351, 946, ILLINOIS, FED. AID PROJECT

**BEAM 5**

| Location          | Station      | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding |
|-------------------|--------------|--------|------------------------------|---|
| Bk. S. Abut.      | 3413 + 15.58 | 9.75   | 739.22                       | 739.25  |
| CL Brg. S. Abut.  | 3413 + 19.83 | 9.75   | 739.26                       | 739.28  |
| A                 | 3413 + 29.83 | 9.75   | 739.33                       | 739.38  |
| B                 | 3413 + 39.83 | 9.75   | 739.39                       | 739.46  |
| C                 | 3413 + 49.83 | 9.75   | 739.45                       | 739.52  |
| D                 | 3413 + 59.83 | 9.75   | 739.50                       | 739.56  |
| CL S. Brg. Pier 1 | 3413 + 70.91 | 9.75   | 739.55                       | 739.57  |
| CL Pier 1         | 3413 + 72.08 | 9.75   | 739.55                       | 739.57  |
| CL N. Brg. Pier 1 | 3413 + 73.25 | 9.75   | 739.56                       | 739.58  |
| E                 | 3413 + 83.25 | 9.75   | 739.59                       | 739.65  |
| F                 | 3413 + 93.25 | 9.75   | 739.62                       | 739.70  |
| G                 | 3414 + 03.25 | 9.75   | 739.64                       | 739.72  |
| H                 | 3414 + 13.25 | 9.75   | 739.66                       | 739.73  |
| CL S. Brg. Pier 2 | 3414 + 27.91 | 9.75   | 739.67                       | 739.69  |
| CL Pier 2         | 3414 + 29.08 | 9.75   | 739.67                       | 739.69  |
| CL N. Brg. Pier 2 | 3414 + 30.25 | 9.75   | 739.67                       | 739.69  |
| I                 | 3414 + 40.25 | 9.75   | 739.67                       | 739.72  |
| J                 | 3414 + 50.25 | 9.75   | 739.66                       | 739.73  |
| K                 | 3414 + 60.25 | 9.75   | 739.64                       | 739.72  |
| L                 | 3414 + 70.25 | 9.75   | 739.62                       | 739.69  |
| CL S. Brg. Pier 3 | 3414 + 84.91 | 9.75   | 739.57                       | 739.60  |
| CL Pier 3         | 3414 + 86.08 | 9.75   | 739.57                       | 739.59  |
| CL N. Brg. Pier 3 | 3414 + 87.25 | 9.75   | 739.57                       | 739.59  |
| M                 | 3414 + 97.25 | 9.75   | 739.53                       | 739.58  |
| N                 | 3415 + 07.25 | 9.75   | 739.48                       | 739.55  |
| O                 | 3415 + 17.25 | 9.75   | 739.43                       | 739.50  |
| P                 | 3415 + 27.25 | 9.75   | 739.37                       | 739.43  |
| CL Brg. N. Abut.  | 3415 + 39.58 | 9.75   | 739.28                       | 739.31  |
| Bk. N. Abut.      | 3415 + 43.83 | 9.75   | 739.25                       | 739.28  |

**BEAM 6**

| Location          | Station      | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding |
|-------------------|--------------|--------|------------------------------|---|
| Bk. S. Abut.      | 3413 + 07.79 | 17.25  | 739.02                       | 739.04  |
| CL Brg. S. Abut.  | 3413 + 12.04 | 17.25  | 739.06                       | 739.08  |
| A                 | 3413 + 22.04 | 17.25  | 739.13                       | 739.19  |
| B                 | 3413 + 32.04 | 17.25  | 739.20                       | 739.27  |
| C                 | 3413 + 42.04 | 17.25  | 739.26                       | 739.33  |
| D                 | 3413 + 52.04 | 17.25  | 739.32                       | 739.38  |
| CL S. Brg. Pier 1 | 3413 + 63.12 | 17.25  | 739.37                       | 739.39  |
| CL Pier 1         | 3413 + 64.29 | 17.25  | 739.38                       | 739.40  |
| CL N. Brg. Pier 1 | 3413 + 65.46 | 17.25  | 739.38                       | 739.41  |
| E                 | 3413 + 75.46 | 17.25  | 739.42                       | 739.48  |
| F                 | 3413 + 85.46 | 17.25  | 739.46                       | 739.54  |
| G                 | 3413 + 95.46 | 17.25  | 739.49                       | 739.57  |
| H                 | 3414 + 05.46 | 17.25  | 739.51                       | 739.58  |
| CL S. Brg. Pier 2 | 3414 + 20.12 | 17.25  | 739.52                       | 739.55  |
| CL Pier 2         | 3414 + 21.29 | 17.25  | 739.53                       | 739.55  |
| CL N. Brg. Pier 2 | 3414 + 22.46 | 17.25  | 739.53                       | 739.55  |
| I                 | 3414 + 32.46 | 17.25  | 739.53                       | 739.59  |
| J                 | 3414 + 42.46 | 17.25  | 739.52                       | 739.60  |
| K                 | 3414 + 52.46 | 17.25  | 739.51                       | 739.60  |
| L                 | 3414 + 62.46 | 17.25  | 739.50                       | 739.57  |
| CL S. Brg. Pier 3 | 3414 + 77.12 | 17.25  | 739.46                       | 739.48  |
| CL Pier 3         | 3414 + 78.29 | 17.25  | 739.46                       | 739.48  |
| CL N. Brg. Pier 3 | 3414 + 79.46 | 17.25  | 739.45                       | 739.47  |
| M                 | 3414 + 89.46 | 17.25  | 739.42                       | 739.47  |
| N                 | 3414 + 99.46 | 17.25  | 739.38                       | 739.45  |
| O                 | 3415 + 09.46 | 17.25  | 739.33                       | 739.40  |
| P                 | 3415 + 19.46 | 17.25  | 739.28                       | 739.34  |
| CL Brg. N. Abut.  | 3415 + 31.79 | 17.25  | 739.20                       | 739.22  |
| Bk. N. Abut.      | 3415 + 36.04 | 17.25  | 739.17                       | 739.19  |

**BEAM 7**

| Location          | Station      | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding |
|-------------------|--------------|--------|------------------------------|---|
| Bk. S. Abut.      | 3413 + 00.00 | 24.75  | 738.81                       | 738.83  |
| CL Brg. S. Abut.  | 3413 + 04.25 | 24.75  | 738.84                       | 738.87  |
| A                 | 3413 + 14.25 | 24.75  | 738.93                       | 738.98  |
| B                 | 3413 + 24.25 | 24.75  | 739.00                       | 739.07  |
| C                 | 3413 + 34.25 | 24.75  | 739.07                       | 739.14  |
| D                 | 3413 + 44.25 | 24.75  | 739.13                       | 739.19  |
| CL S. Brg. Pier 1 | 3413 + 55.33 | 24.75  | 739.19                       | 739.21  |
| CL Pier 1         | 3413 + 56.50 | 24.75  | 739.19                       | 739.21  |
| CL N. Brg. Pier 1 | 3413 + 57.67 | 24.75  | 739.20                       | 739.22  |
| E                 | 3413 + 67.67 | 24.75  | 739.24                       | 739.30  |
| F                 | 3413 + 77.67 | 24.75  | 739.28                       | 739.36  |
| G                 | 3413 + 87.67 | 24.75  | 739.31                       | 739.40  |
| H                 | 3413 + 97.67 | 24.75  | 739.34                       | 739.41  |
| CL S. Brg. Pier 2 | 3414 + 12.33 | 24.75  | 739.37                       | 739.39  |
| CL Pier 2         | 3414 + 13.50 | 24.75  | 739.37                       | 739.39  |
| CL N. Brg. Pier 2 | 3414 + 14.67 | 24.75  | 739.37                       | 739.39  |
| I                 | 3414 + 24.67 | 24.75  | 739.38                       | 739.44  |
| J                 | 3414 + 34.67 | 24.75  | 739.38                       | 739.46  |
| K                 | 3414 + 44.67 | 24.75  | 739.37                       | 739.45  |
| L                 | 3414 + 54.67 | 24.75  | 739.36                       | 739.44  |
| CL S. Brg. Pier 3 | 3414 + 69.33 | 24.75  | 739.33                       | 739.35  |
| CL Pier 3         | 3414 + 70.50 | 24.75  | 739.33                       | 739.35  |
| CL N. Brg. Pier 3 | 3414 + 71.67 | 24.75  | 739.33                       | 739.35  |
| M                 | 3414 + 81.67 | 24.75  | 739.30                       | 739.35  |
| N                 | 3414 + 91.67 | 24.75  | 739.26                       | 739.33  |
| O                 | 3415 + 01.67 | 24.75  | 739.22                       | 739.29  |
| P                 | 3415 + 11.67 | 24.75  | 739.17                       | 739.23  |
| CL Brg. N. Abut.  | 3415 + 24.00 | 24.75  | 739.10                       | 739.12  |
| Bk. N. Abut.      | 3415 + 28.25 | 24.75  | 739.07                       | 739.09  |

**BEAM 8**

| Location          | Station      | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding |
|-------------------|--------------|--------|------------------------------|---|
| Bk. S. Abut.      | 3412 + 92.21 | 32.25  | 738.59                       | 738.61  |
| CL Brg. S. Abut.  | 3412 + 96.46 | 32.25  | 738.63                       | 738.65  |
| A                 | 3413 + 06.46 | 32.25  | 738.71                       | 738.77  |
| B                 | 3413 + 16.46 | 32.25  | 738.79                       | 738.86  |
| C                 | 3413 + 26.46 | 32.25  | 738.86                       | 738.97  |
| D                 | 3413 + 36.46 | 32.25  | 738.93                       | 738.99  |
| CL S. Brg. Pier 1 | 3413 + 47.54 | 32.25  | 739.00                       | 739.02  |
| CL Pier 1         | 3413 + 48.71 | 32.25  | 739.00                       | 739.02  |
| CL N. Brg. Pier 1 | 3413 + 49.87 | 32.25  | 739.01                       | 739.03  |
| E                 | 3413 + 59.87 | 32.25  | 739.06                       | 739.12  |
| F                 | 3413 + 69.87 | 32.25  | 739.10                       | 739.18  |
| G                 | 3413 + 79.87 | 32.25  | 739.14                       | 739.22  |
| H                 | 3413 + 89.87 | 32.25  | 739.17                       | 739.24  |
| CL S. Brg. Pier 2 | 3414 + 04.54 | 32.25  | 739.20                       | 739.23  |
| CL Pier 2         | 3414 + 05.71 | 32.25  | 739.21                       | 739.23  |
| CL N. Brg. Pier 2 | 3414 + 06.87 | 32.25  | 739.21                       | 739.23  |
| I                 | 3414 + 16.87 | 32.25  | 739.22                       | 739.28  |
| J                 | 3414 + 26.87 | 32.25  | 739.23                       | 739.31  |
| K                 | 3414 + 36.87 | 32.25  | 739.23                       | 739.31  |
| L                 | 3414 + 46.87 | 32.25  | 739.22                       | 739.29  |
| CL S. Brg. Pier 3 | 3414 + 61.54 | 32.25  | 739.20                       | 739.22  |
| CL Pier 3         | 3414 + 62.71 | 32.25  | 739.20                       | 739.22  |
| CL N. Brg. Pier 3 | 3414 + 63.87 | 32.25  | 739.19                       | 739.22  |
| M                 | 3414 + 73.87 | 32.25  | 739.17                       | 739.22  |
| N                 | 3414 + 83.87 | 32.25  | 739.14                       | 739.21  |
| O                 | 3414 + 93.87 | 32.25  | 739.10                       | 739.17  |
| P                 | 3415 + 03.87 | 32.25  | 739.06                       | 739.12  |
| CL Brg. N. Abut.  | 3415 + 16.21 | 32.25  | 738.99                       | 739.01  |
| Bk. N. Abut.      | 3415 + 20.46 | 32.25  | 738.97                       | 738.99  |

Notes:  
 1. All Elevations and Offsets are in feet.  
 2. Offsets are measured with respect to the NB PG.  
 Negative offsets are left and positive are right of the PG.

MODEL: Default  
 FILE NAME: pw:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-L\_53\_BridgeStructures\Sheets\C2-D162N91-0160973-11



|              |               |            |     |           |  |
|--------------|---------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780    | DESIGNED - | BJD | REVISED - |  |
|              |               | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0.1667' / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025     | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS (SB) - 2  
 STRUCTURE NO. 016 - 0371 (SB)**

|                       |             |                           |              |           |
|-----------------------|-------------|---------------------------|--------------|-----------|
| F.A.P. RTE.           | SECTION     | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 342                   | 2018-100-BR | COOK                      | 1351         | 947       |
| CONTRACT NO. 62N91    |             |                           |              |           |
| SHEET 11 OF 55 SHEETS |             | ILLINOIS FED. AID PROJECT |              |           |



**WEST EDGE OF SHOULDER**

| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 2412 + 56.69          | 34.00        | 738.59                       | 738.61   |
|                       | A1<br>2412 + 66.69    | 34.00        | 738.68                       | 738.70   |
|                       | A2<br>2412 + 76.69    | 34.00        | 738.76                       | 738.78   |
| N. End of S. Approach | 2412 + 86.69          | 34.00        | 738.84                       | 738.86   |
| S. End of N. Approach | 2415 + 12.06          | 34.00        | 738.63                       | 738.65   |
|                       | A3<br>2415 + 22.06    | 34.00        | 738.56                       | 738.58   |
|                       | A4<br>2415 + 32.06    | 34.00        | 738.49                       | 738.51   |
|                       | N. End of N. Approach | 2415 + 42.06 | 34.00                        | 738.42   |

**WEST EDGE OF ROADWAY**

| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 2412 + 46.30          | 24.00        | 738.69                       | 738.71   |
|                       | A1<br>2412 + 56.30    | 24.00        | 738.78                       | 738.81   |
|                       | A2<br>2412 + 66.30    | 24.00        | 738.88                       | 738.90   |
| N. End of S. Approach | 2412 + 76.30          | 24.00        | 738.96                       | 738.98   |
| S. End of N. Approach | 2415 + 01.67          | 24.00        | 738.90                       | 738.92   |
|                       | A3<br>2415 + 11.67    | 24.00        | 738.83                       | 738.85   |
|                       | A4<br>2415 + 21.67    | 24.00        | 738.76                       | 738.78   |
|                       | N. End of N. Approach | 2415 + 31.67 | 24.00                        | 738.69   |

**STAGE CONSTRUCTION LINE**

| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 2412 + 25.79          | 4.25         | 738.84                       | 738.86   |
|                       | A1<br>2412 + 35.79    | 4.25         | 738.94                       | 738.96   |
|                       | A2<br>2412 + 45.79    | 4.25         | 739.04                       | 739.06   |
| N. End of S. Approach | 2412 + 55.79          | 4.25         | 739.14                       | 739.16   |
| S. End of N. Approach | 2414 + 81.15          | 4.25         | 739.39                       | 739.41   |
|                       | A3<br>2414 + 91.15    | 4.25         | 739.32                       | 739.34   |
|                       | A4<br>2415 + 01.15    | 4.25         | 739.26                       | 739.28   |
|                       | N. End of N. Approach | 2415 + 11.15 | 4.25                         | 739.19   |

**NB PG**

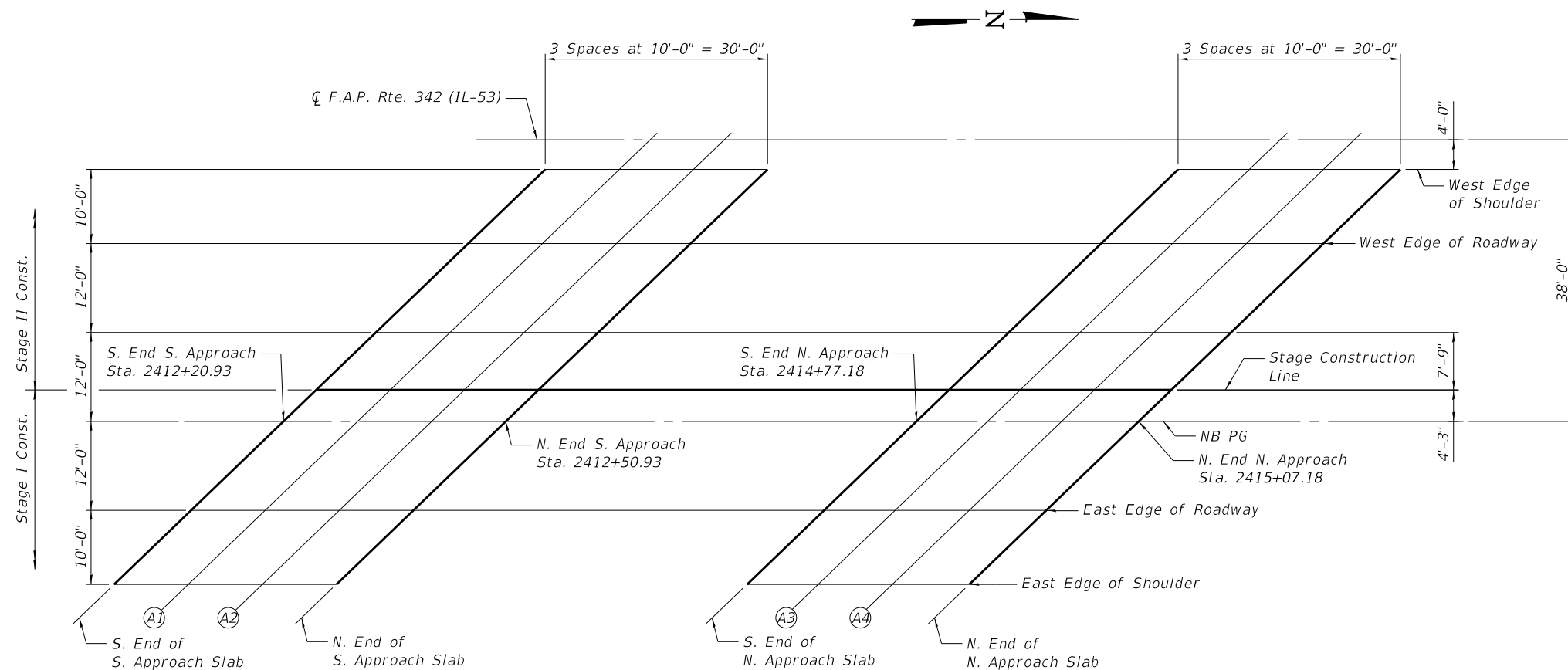
| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 2412 + 21.37          | 0.00         | 738.86                       | 738.88   |
|                       | A1<br>2412 + 31.37    | 0.00         | 738.96                       | 738.98   |
|                       | A2<br>2412 + 41.37    | 0.00         | 739.06                       | 739.08   |
| N. End of S. Approach | 2412 + 51.37          | 0.00         | 739.16                       | 739.18   |
| S. End of N. Approach | 2414 + 76.74          | 0.00         | 739.49                       | 739.51   |
|                       | A3<br>2414 + 86.74    | 0.00         | 739.42                       | 739.44   |
|                       | A4<br>2414 + 96.74    | 0.00         | 739.35                       | 739.37   |
|                       | N. End of N. Approach | 2415 + 06.74 | 0.00                         | 739.28   |

**EAST EDGE OF ROADWAY**

| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 2412 + 08.91          | 12.00        | 738.56                       | 738.58   |
|                       | A1<br>2412 + 18.91    | 12.00        | 738.66                       | 738.68   |
|                       | A2<br>2412 + 28.91    | 12.00        | 738.75                       | 738.78   |
| N. End of S. Approach | 2412 + 38.91          | 12.00        | 738.85                       | 738.87   |
| S. End of N. Approach | 2414 + 64.27          | 12.00        | 739.39                       | 739.41   |
|                       | A3<br>2414 + 74.27    | 12.00        | 739.32                       | 739.34   |
|                       | A4<br>2414 + 84.27    | 12.00        | 739.25                       | 739.28   |
|                       | N. End of N. Approach | 2414 + 94.27 | 12.00                        | 739.19   |

**EAST EDGE OF SHOULDER**

| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 2411 + 98.52          | 22.00        | 738.25                       | 738.27   |
|                       | A1<br>2412 + 08.52    | 22.00        | 738.35                       | 738.37   |
|                       | A2<br>2412 + 18.52    | 22.00        | 738.45                       | 738.47   |
| N. End of S. Approach | 2412 + 28.52          | 22.00        | 738.55                       | 738.57   |
| S. End of N. Approach | 2414 + 53.88          | 22.00        | 739.25                       | 739.27   |
|                       | A3<br>2414 + 63.88    | 22.00        | 739.19                       | 739.21   |
|                       | A4<br>2414 + 73.88    | 22.00        | 739.12                       | 739.15   |
|                       | N. End of N. Approach | 2414 + 83.88 | 22.00                        | 739.06   |



**NORTHBOUND PLAN**

**NOTES:**

1. All Elevations and Offsets are in feet.
2. Offsets are measured with respect to the NB PG. Negative offsets are left and positive are right of the PG.

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-lu\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-12



|                         |                |           |
|-------------------------|----------------|-----------|
| USER NAME = USGM717780  | DESIGNED - BJD | REVISED - |
|                         | CHECKED - MGH  | REVISED - |
| PLOT SCALE = 0:2" / in. | DRAWN - BJD    | REVISED - |
| PLOT DATE = 2/11/2025   | CHECKED - MGH  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF APPROACH SLAB ELEVATIONS (NB)  
STRUCTURE NO. 016 - 0973 (NB)**

SHEET 12 OF 55 SHEETS

|                    |             |                  |              |           |
|--------------------|-------------|------------------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY           | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK             | 1351         | 948       |
| CONTRACT NO. 62N91 |             |                  |              |           |
| ILLINOIS           |             | FED. AID PROJECT |              |           |

**WEST EDGE OF SHOULDER**

| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 3413 + 20.01          | 22.00        | 739.02                       | 739.04   |
|                       | A1                    | 3413 + 30.01 | 739.09                       | 739.11   |
|                       | A2                    | 3413 + 40.01 | 739.16                       | 739.18   |
| N. End of S. Approach | 3413 + 50.01          | 22.00        | 739.21                       | 739.24   |
| S. End of N. Approach | A3                    | 3415 + 75.37 | 738.76                       | 738.78   |
|                       | A4                    | 3415 + 85.37 | 738.68                       | 738.70   |
|                       |                       | 3415 + 95.37 | 738.59                       | 738.62   |
|                       | N. End of N. Approach | 3416 + 05.37 | 738.51                       | 738.53   |

**WEST EDGE OF ROADWAY**

| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 3413 + 09.62          | 12.00        | 739.14                       | 739.16   |
|                       | A1                    | 3413 + 19.62 | 739.22                       | 739.24   |
|                       | A2                    | 3413 + 29.62 | 739.29                       | 739.31   |
| N. End of S. Approach | 3413 + 39.62          | 12.00        | 739.35                       | 739.38   |
| S. End of N. Approach | A3                    | 3415 + 64.98 | 739.05                       | 739.07   |
|                       | A4                    | 3415 + 74.98 | 738.97                       | 738.99   |
|                       |                       | 3415 + 84.98 | 738.88                       | 738.90   |
|                       | N. End of N. Approach | 3415 + 94.98 | 738.80                       | 738.82   |

**SB PG**

| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 3412 + 97.15          | 0.00         | 739.22                       | 739.24   |
|                       | A1                    | 3413 + 07.15 | 739.32                       | 739.34   |
|                       | A2                    | 3413 + 17.15 | 739.41                       | 739.44   |
| N. End of S. Approach | 3413 + 27.15          | 0.00         | 739.51                       | 739.53   |
| S. End of N. Approach | A3                    | 3415 + 52.52 | 739.34                       | 739.36   |
|                       | A4                    | 3415 + 62.52 | 739.25                       | 739.27   |
|                       |                       | 3415 + 72.52 | 739.17                       | 739.19   |
|                       | N. End of N. Approach | 3415 + 82.52 | 739.08                       | 739.10   |

**STAGE CONSTRUCTION LINE**

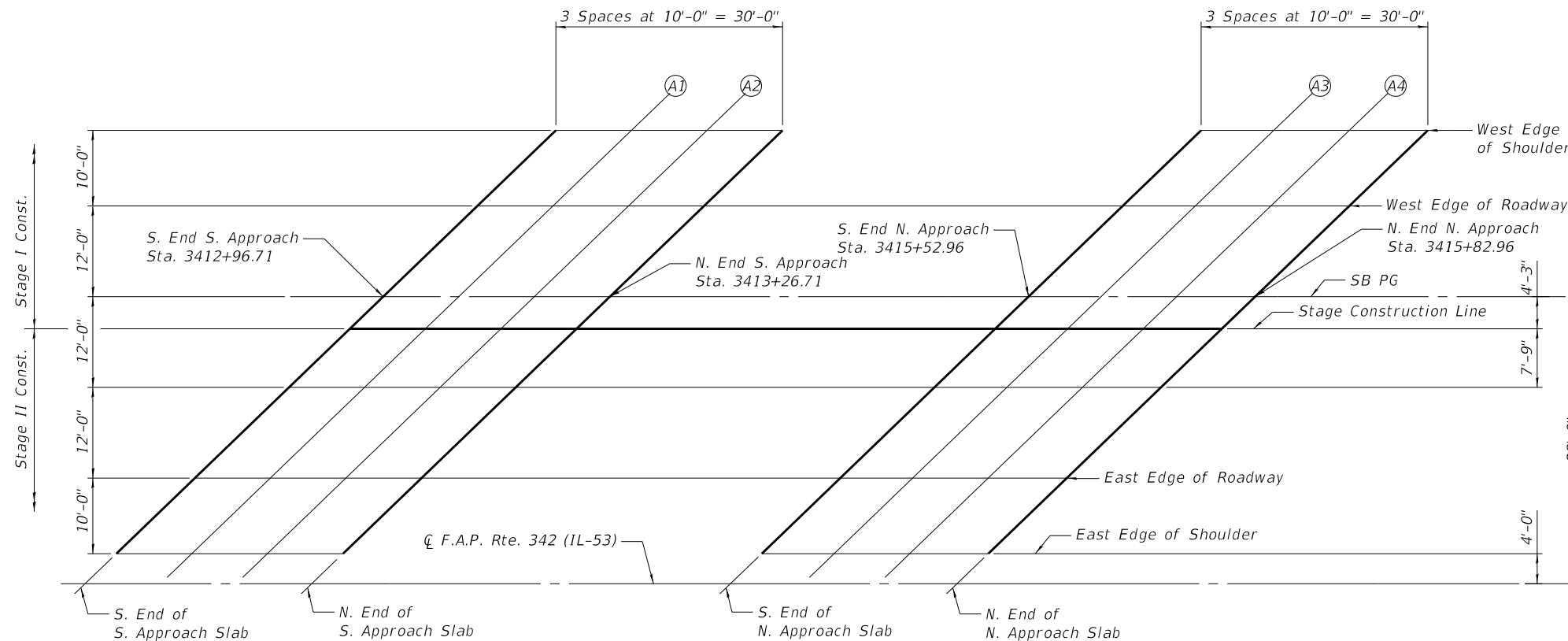
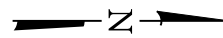
| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 3412 + 92.74          | 4.25         | 739.12                       | 739.14   |
|                       | A1                    | 3413 + 02.74 | 739.20                       | 739.22   |
|                       | A2                    | 3413 + 12.74 | 739.28                       | 739.31   |
| N. End of S. Approach | 3413 + 22.74          | 4.25         | 739.36                       | 739.38   |
| S. End of N. Approach | A3                    | 3415 + 48.10 | 739.30                       | 739.33   |
|                       | A4                    | 3415 + 58.10 | 739.22                       | 739.25   |
|                       |                       | 3415 + 68.10 | 739.14                       | 739.16   |
|                       | N. End of N. Approach | 3415 + 78.10 | 739.06                       | 739.08   |

**EAST EDGE OF ROADWAY**

| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 3412 + 72.22          | 24.00        | 738.56                       | 738.58   |
|                       | A1                    | 3412 + 82.22 | 738.66                       | 738.68   |
|                       | A2                    | 3412 + 92.22 | 738.75                       | 738.78   |
| N. End of S. Approach | 3413 + 02.22          | 24.00        | 738.84                       | 738.86   |
| S. End of N. Approach | A3                    | 3415 + 27.59 | 739.09                       | 739.11   |
|                       | A4                    | 3415 + 37.59 | 739.03                       | 739.05   |
|                       |                       | 3415 + 47.59 | 738.95                       | 738.97   |
|                       | N. End of N. Approach | 3415 + 57.59 | 738.87                       | 738.89   |

**EAST EDGE OF SHOULDER**

| Location              | Station               | Offset       | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Grinding |
|-----------------------|-----------------------|--------------|------------------------------|--|
| S. End of S. Approach | 3412 + 61.83          | 34.00        | 738.26                       | 738.29   |
|                       | A1                    | 3412 + 71.83 | 738.36                       | 738.38   |
|                       | A2                    | 3412 + 81.83 | 738.46                       | 738.48   |
| N. End of S. Approach | 3412 + 91.83          | 34.00        | 738.55                       | 738.57   |
| S. End of N. Approach | A3                    | 3415 + 17.20 | 738.95                       | 738.97   |
|                       | A4                    | 3415 + 27.20 | 738.89                       | 738.91   |
|                       |                       | 3415 + 37.20 | 738.83                       | 738.85   |
|                       | N. End of N. Approach | 3415 + 47.20 | 738.76                       | 738.78   |



**SOUTHBOUND PLAN**

**NOTES:**

1. All Elevations and Offsets are in feet.
2. Offsets are measured with respect to the NB PG. Negative offsets are left and positive are right of the PG.

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-13



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|--------------|------------|------------|-----|-----------|--|
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|              |            | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2" / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025  | CHECKED -  | MGH | REVISED - |  |

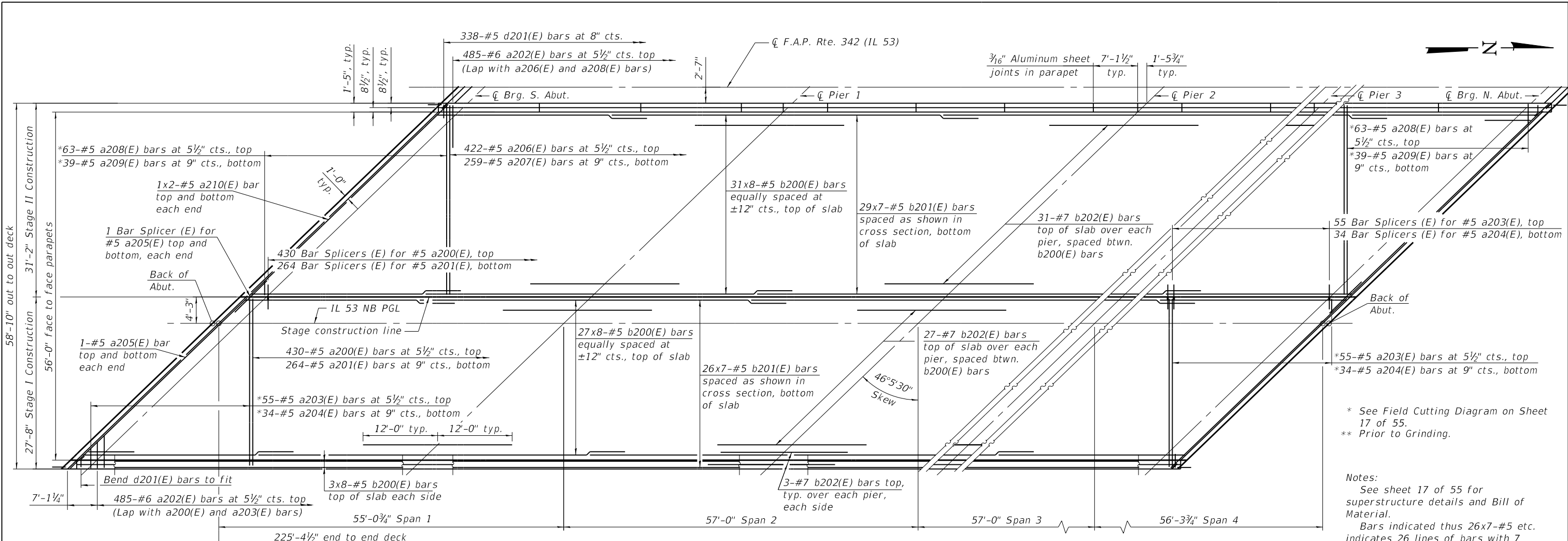
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF APPROACH SLAB ELEVATIONS (SB)  
STRUCTURE NO. 016-0371 (SB)**

SHEET 13 OF 55 SHEETS

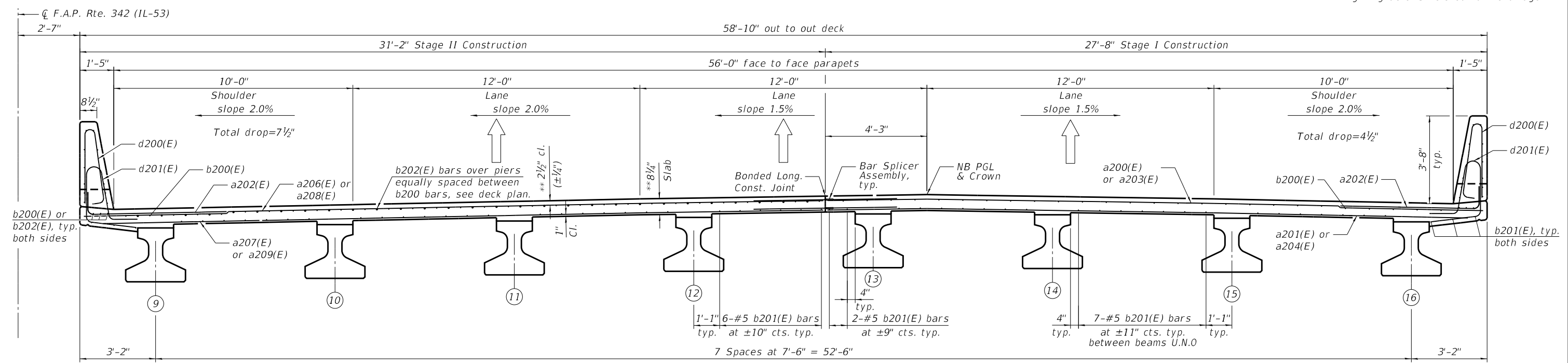
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| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 949       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT



**MINIMUM BAR LAP**  
#5 bar = 3'-6"

**NORTHBOUND PLAN**



**NORTHBOUND CROSS SECTION**  
(Looking North)

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL-53\_Bridges\Structures\Sheets\C2-D162N91-0160973-14



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|--------------|------------------|------------|-----|-----------|--|
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| CHECKED -    | MGH              | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 " / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025        | CHECKED -  | MGH | REVISED - |  |

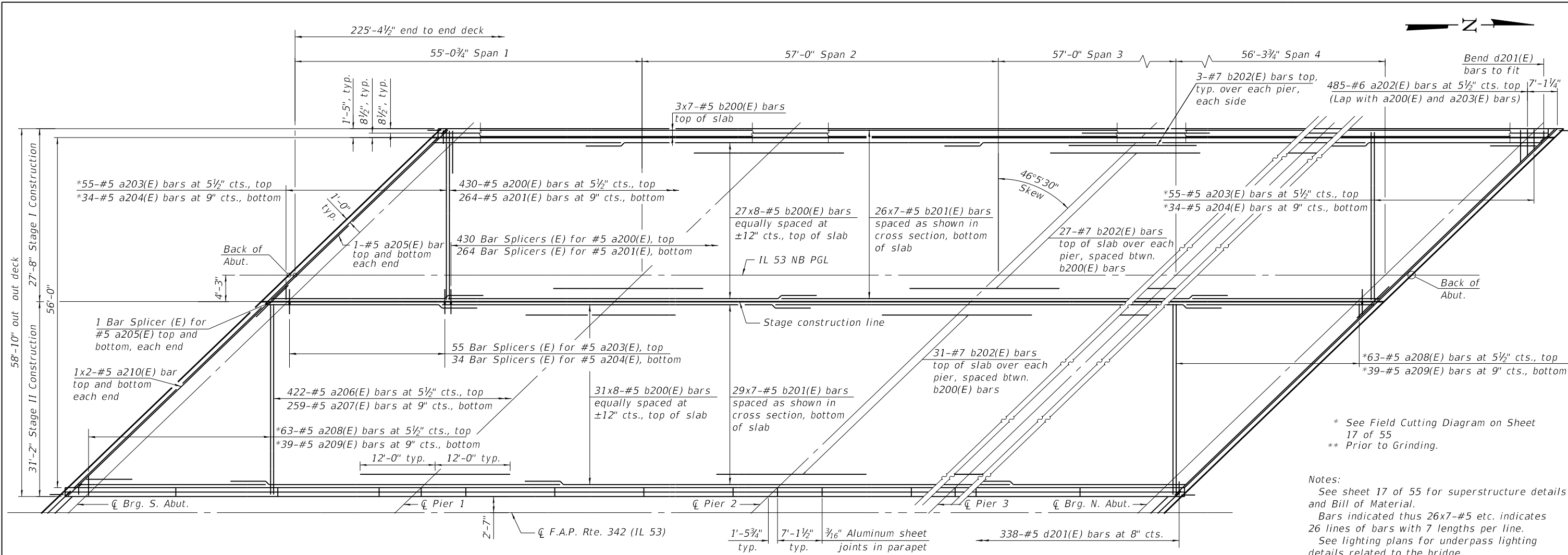
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DECK PLAN (NB)**  
**STRUCTURE NO. 016-0973 (NB)**

SHEET 14 OF 55 SHEETS

|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 950       |
| CONTRACT NO. 62N91 |             |        |              |           |

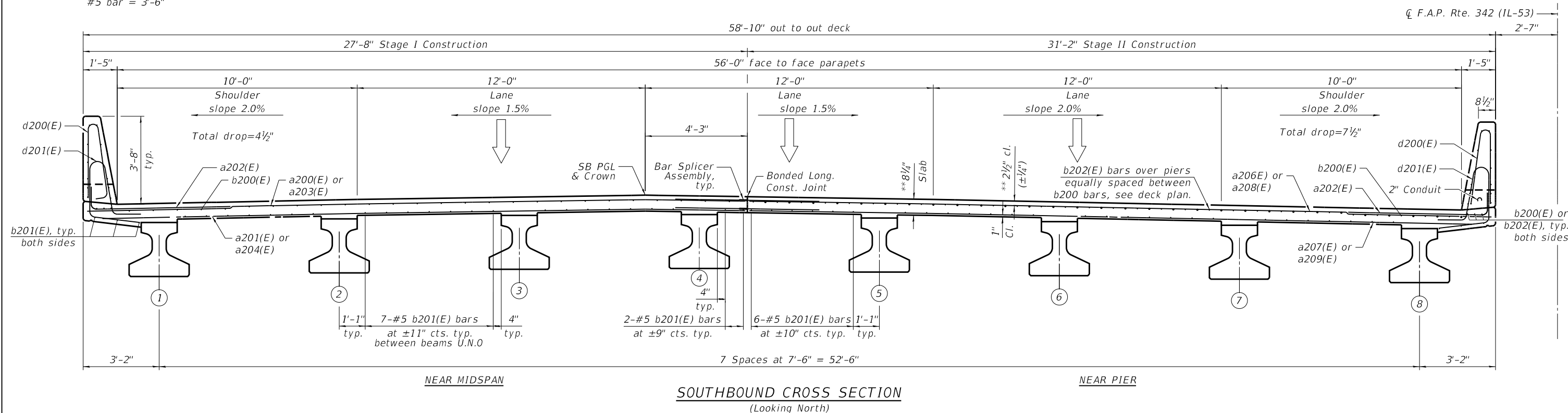
ILLINOIS FED. AID PROJECT



**SOUTHBOUND PLAN**

Notes:  
 See sheet 17 of 55 for superstructure details and Bill of Material.  
 Bars indicated thus 26x7-#5 etc. indicates 26 lines of bars with 7 lengths per line.  
 See lighting plans for underpass lighting details related to the bridge.

**MINIMUM BAR LAP**  
 #5 bar = 3'-6"



**SOUTHBOUND CROSS SECTION**  
 (Looking North)

MODEL: Default  
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|                           |                |           |
|---------------------------|----------------|-----------|
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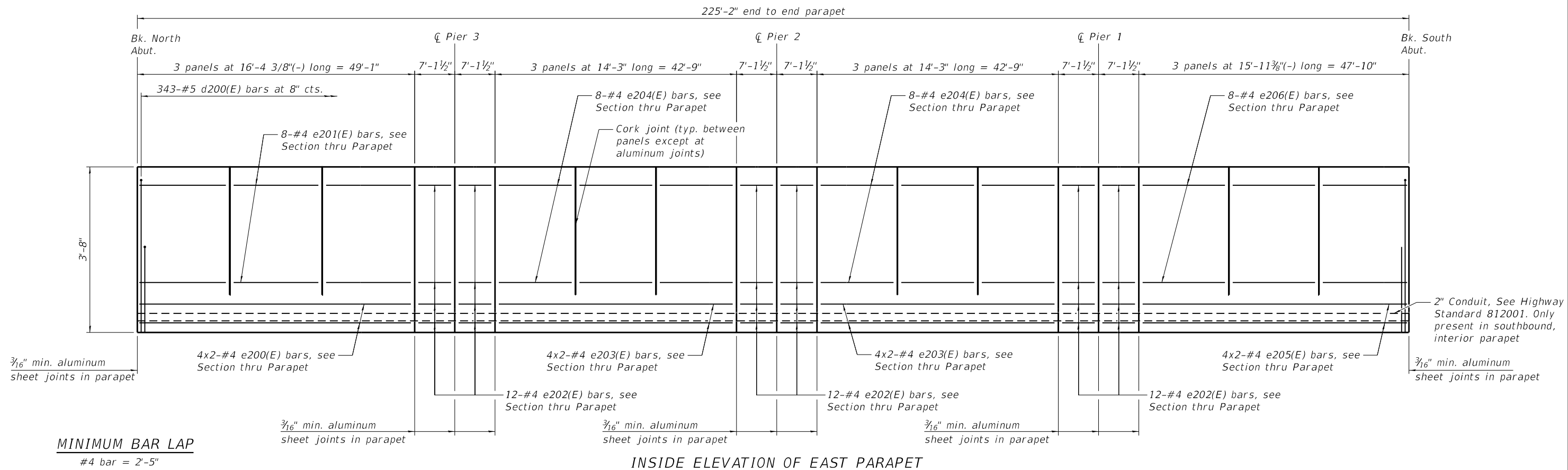
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DECK PLAN (SB)**  
**STRUCTURE NO. 016-0371 (SB)**

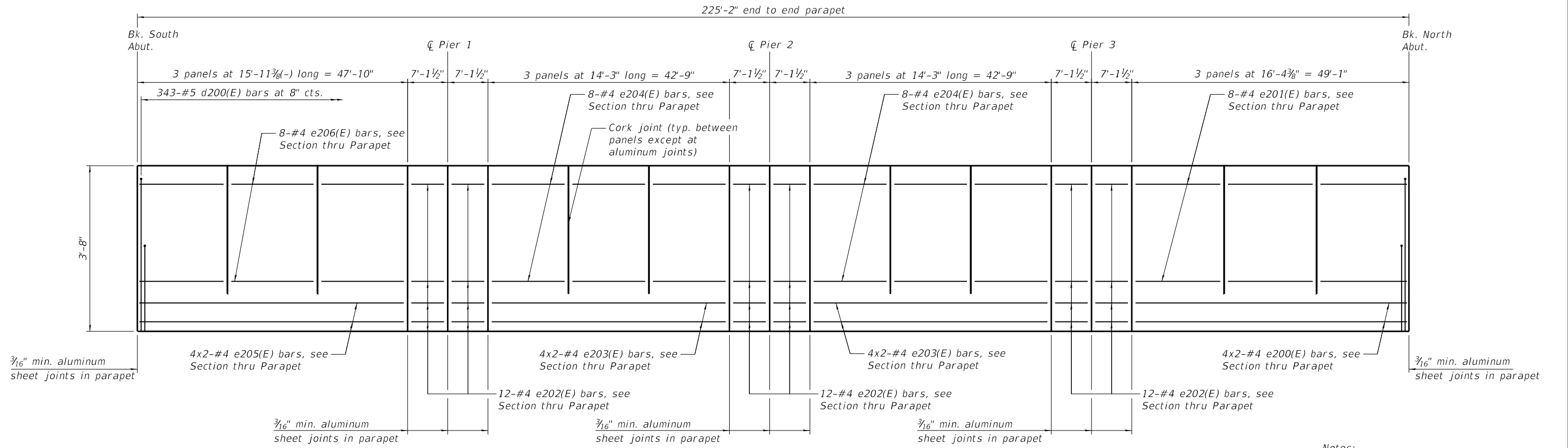
SHEET 15 OF 55 SHEETS

|                           |                     |             |                   |               |
|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.P. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1351 | SHEET NO. 951 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |

MODEL: Default  
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INSIDE ELEVATION OF EAST PARAPET



INSIDE ELEVATION OF WEST PARAPET

Notes:  
 See sheet 17 of 55 for superstructure details and Bill of Material.  
 Bars indicated thus 4x2-#4 etc. indicates 4 lines of bars with 2 lengths per line.



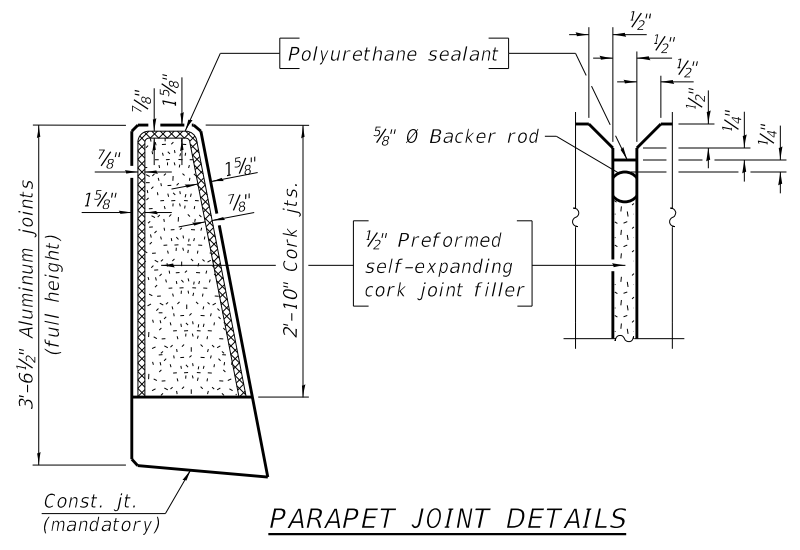
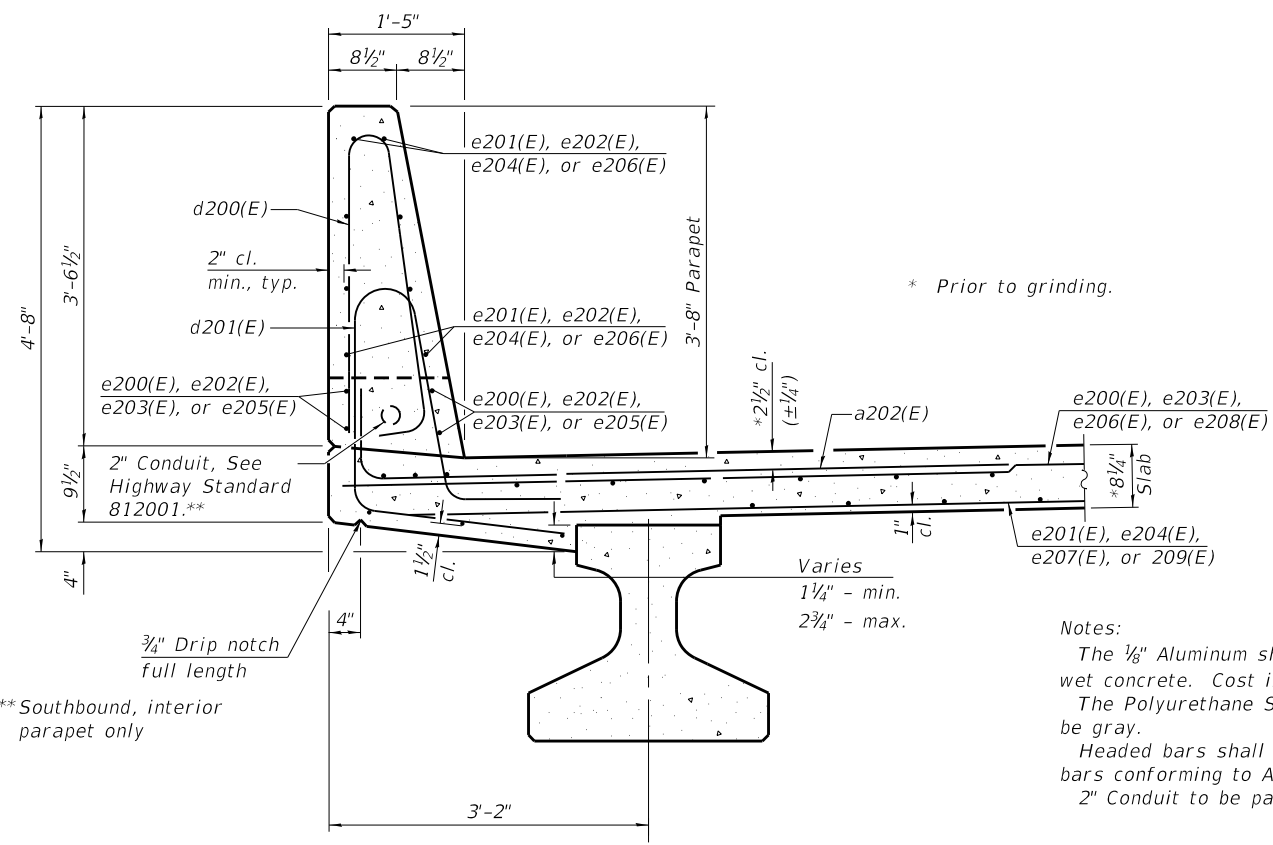
|              |                |            |     |           |  |
|--------------|----------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780     | DESIGNED - | BJD | REVISED - |  |
|              |                | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025      | CHECKED -  | MGH | REVISED - |  |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PARAPET ELEVATION  
 STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)

SHEET 16 OF 55 SHEETS

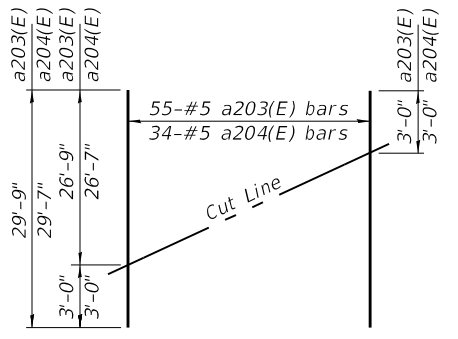
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-------------|--------|--------------|-----------|
| 342                       | 2018-100-BR | COOK   | 1351         | 952       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



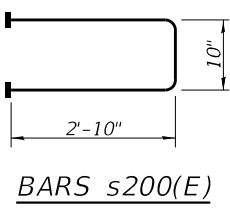
Notes:  
 The 1/8" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.  
 The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.  
 Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.  
 2" Conduit to be paid for by ITS.

SECTION THRU PARAPET

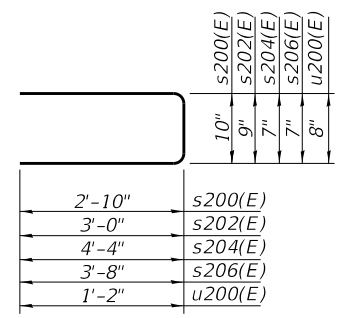
SUPERSTRUCTURE BILL OF MATERIAL



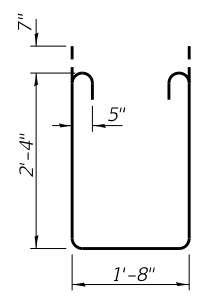
FIELD CUTTING DIAGRAM  
 Order a203(E) and a204(E) bars full length. Cut as shown and use remainder of bars in opposite end of deck.



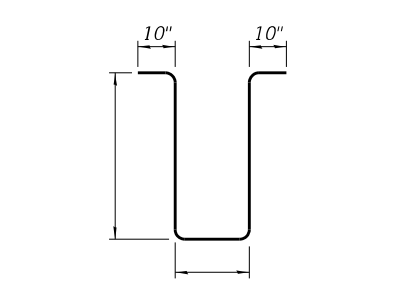
BARS s200(E)



BARS s202(E), s204(E), s206(E) & u200(E)

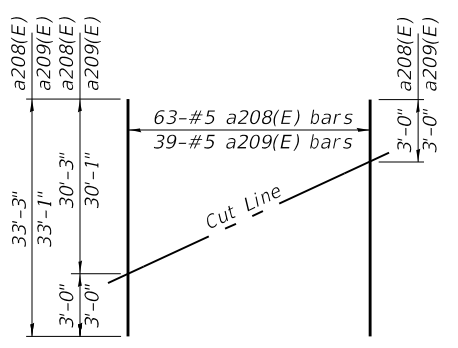


BAR s201(E)

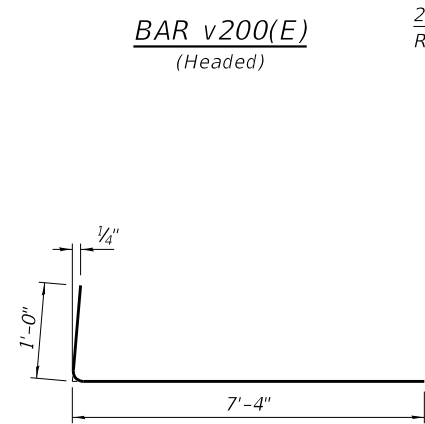


BARS s203(E) and s205(E)

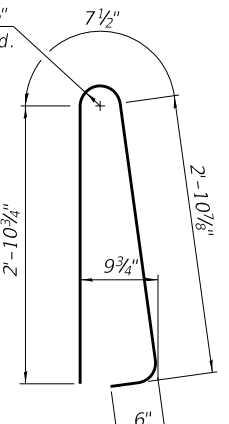
| Structure No. 016-0973 (NB)      |     |       |         |       | Structure No. 016-0371 (SB)      |     |       |         |       |
|----------------------------------|-----|-------|---------|-------|----------------------------------|-----|-------|---------|-------|
| Bar                              | No. | Size  | Length  | Shape | Bar                              | No. | Size  | Length  | Shape |
| a200(E)                          | 430 | #5    | 27'-4"  | —     | a200(E)                          | 430 | #5    | 27'-4"  | —     |
| a201(E)                          | 264 | #5    | 27'-2"  | —     | a201(E)                          | 264 | #5    | 27'-2"  | —     |
| a202(E)                          | 970 | #6    | 8'-4"   | —     | a202(E)                          | 970 | #6    | 8'-4"   | —     |
| a203(E)                          | 55  | #5    | 29'-9"  | —     | a203(E)                          | 55  | #5    | 29'-9"  | —     |
| a204(E)                          | 34  | #5    | 29'-7"  | —     | a204(E)                          | 34  | #5    | 29'-7"  | —     |
| a205(E)                          | 4   | #5    | 39'-5"  | —     | a205(E)                          | 4   | #5    | 39'-5"  | —     |
| a206(E)                          | 422 | #5    | 30'-10" | —     | a206(E)                          | 422 | #5    | 30'-10" | —     |
| a207(E)                          | 259 | #5    | 30'-8"  | —     | a207(E)                          | 259 | #5    | 30'-8"  | —     |
| a208(E)                          | 63  | #5    | 33'-3"  | —     | a208(E)                          | 63  | #5    | 33'-3"  | —     |
| a209(E)                          | 39  | #5    | 33'-1"  | —     | a209(E)                          | 39  | #5    | 33'-1"  | —     |
| a210(E)                          | 8   | #5    | 24'-0"  | —     | a210(E)                          | 8   | #5    | 24'-0"  | —     |
| b200(E)                          | 512 | #5    | 31'-5"  | —     | b200(E)                          | 512 | #5    | 31'-5"  | —     |
| b201(E)                          | 385 | #5    | 35'-5"  | —     | b201(E)                          | 385 | #5    | 35'-5"  | —     |
| b202(E)                          | 192 | #7    | 24'-0"  | —     | b202(E)                          | 192 | #7    | 24'-0"  | —     |
| d200(E)                          | 686 | #5    | 7'-0"   | —     | d200(E)                          | 686 | #5    | 7'-0"   | —     |
| d201(E)                          | 676 | #5    | 8'-5"   | —     | d201(E)                          | 676 | #5    | 8'-5"   | —     |
| e200(E)                          | 16  | #4    | 25'-8"  | —     | e200(E)                          | 16  | #4    | 25'-8"  | —     |
| e201(E)                          | 48  | #4    | 16'-0"  | —     | e201(E)                          | 48  | #4    | 16'-0"  | —     |
| e202(E)                          | 144 | #4    | 6'-10"  | —     | e202(E)                          | 144 | #4    | 6'-10"  | —     |
| e203(E)                          | 32  | #4    | 22'-6"  | —     | e203(E)                          | 32  | #4    | 22'-6"  | —     |
| e204(E)                          | 144 | #4    | 13'-9"  | —     | e204(E)                          | 144 | #4    | 13'-9"  | —     |
| e205(E)                          | 16  | #4    | 25'-0"  | —     | e205(E)                          | 16  | #4    | 25'-0"  | —     |
| e206(E)                          | 48  | #4    | 15'-7"  | —     | e206(E)                          | 48  | #4    | 15'-7"  | —     |
| Reinforcement Bars, Epoxy Coated |     | Pound | 115,830 |       | Reinforcement Bars, Epoxy Coated |     | Pound | 115,830 |       |
| Concrete Superstructure          |     | Cu Yd | 417.4   |       | Concrete Superstructure          |     | Cu Yd | 417.4   |       |



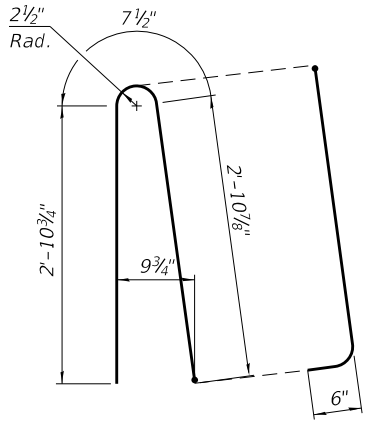
FIELD CUTTING DIAGRAM  
 Order a208(E) and a209(E) bars full length. Cut as shown and use remainder of bars in opposite end of deck.



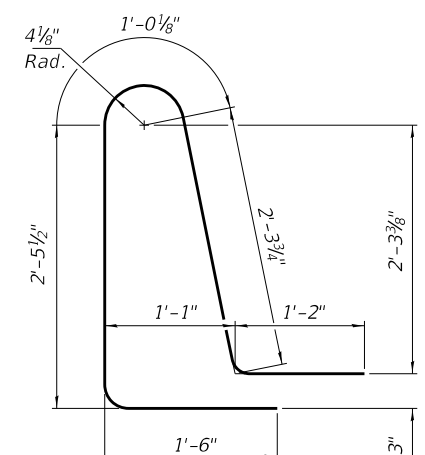
BAR a202(E)



BAR d200(E)



ALTERNATE BAR d200(E)  
 (For 44" constant slope parapet when conduit is present)



BAR d201(E)

MODEL: Default  
 FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-17



|              |                   |             |     |             |  |
|--------------|-------------------|-------------|-----|-------------|--|
| USER NAME =  | USGM717780        | DESIGNED -  | BJD | REVISED -   |  |
| CHECKED -    | MGH               | REVISIONS - |     |             |  |
| PLOT SCALE = | 0:2.0000" = 1'-0" | DRAWN -     | BJD | REVISIONS - |  |
| PLOT DATE =  | 2/11/2025         | CHECKED -   | MGH | REVISIONS - |  |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

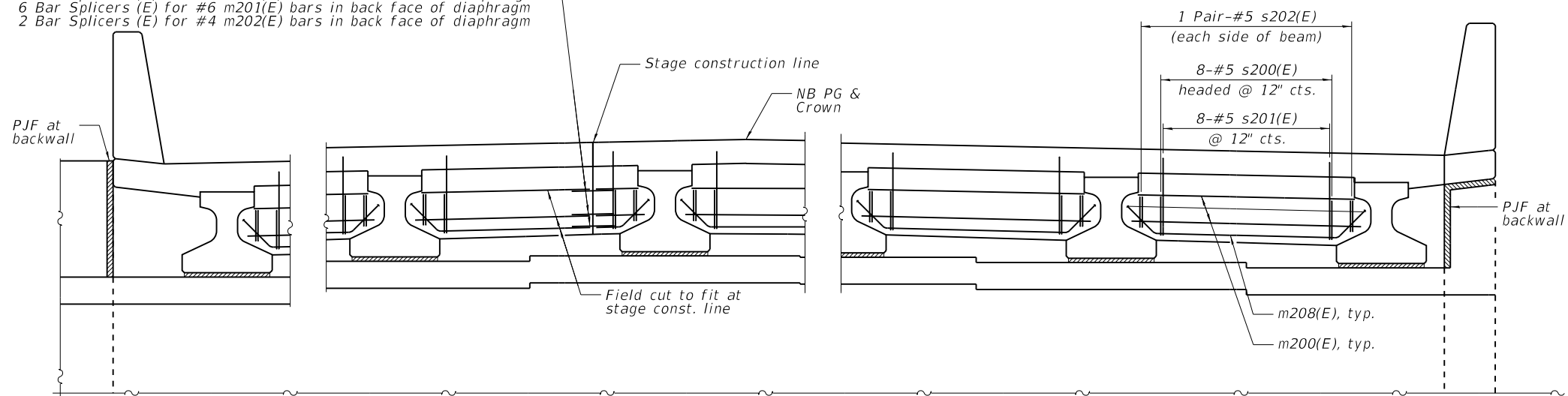
SUPERSTRUCTURE DETAILS  
 STRUCTURE NO. 016-0371 (SB) & 016-0973 (NB)

SHEET 17 OF 55 SHEETS

|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 953       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT

3 Bar Splicers (E) for #6 m200(E) bars in front face of diaphragm  
 2 Bar Splicers (E) for #6 m208(E) bars in front face of diaphragm  
 6 Bar Splicers (E) for #6 m201(E) bars in back face of diaphragm  
 2 Bar Splicers (E) for #4 m202(E) bars in back face of diaphragm



Structure No. 016-0973 (NB)

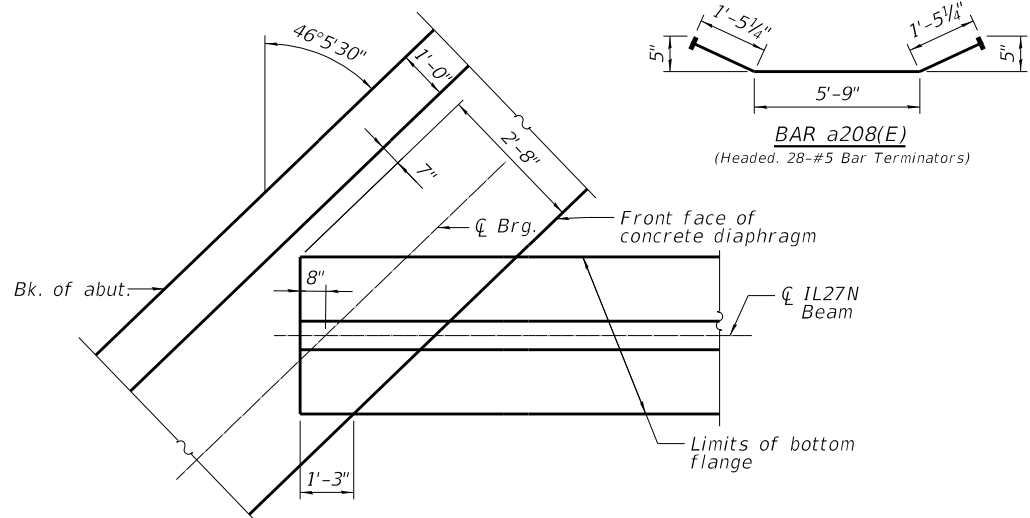
| Bar                              | No. | Size | Length | Shape |
|----------------------------------|-----|------|--------|-------|
| m200(E)                          | 42  | #6   | 9'-4"  | —     |
| m201(E)                          | 12  | #6   | 39'-7" | —     |
| m202(E)                          | 4   | #4   | 39'-7" | —     |
| m203(E)                          | 12  | #6   | 44'-7" | —     |
| m204(E)                          | 4   | #4   | 44'-7" | —     |
| m208(E)                          | 28  | #5   | 8'-7½" | —     |
| s200(E)                          | 112 | #5   | 6'-6"  | ⊏     |
| s201(E)                          | 112 | #5   | 7'-6"  | ⊏     |
| s202(E)                          | 56  | #5   | 6'-9"  | ⊏     |
| u200(E)                          | 56  | #4   | 3'-0"  | ⊏     |
| v200(E)                          | 212 | #5   | 3'-1"  | ⊏     |
| Reinforcement Bars, Epoxy Coated |     |      | Pound  | 5,660 |
| Concrete Superstructure          |     |      | Cu Yd  | 42.8  |

Structure No. 016-0371 (SB)

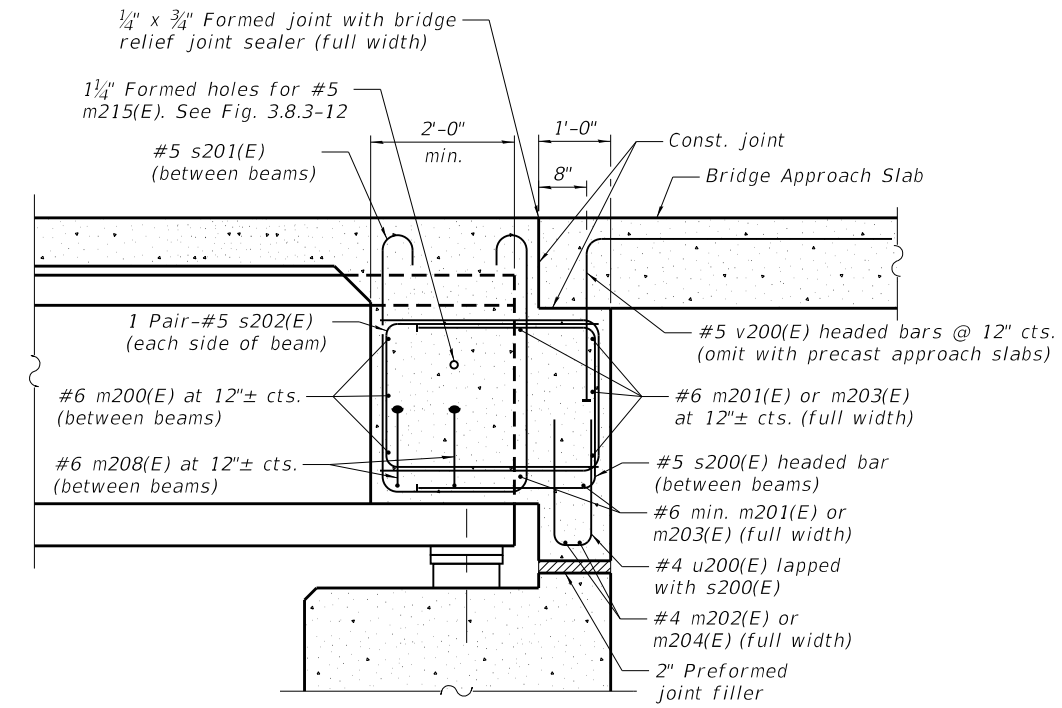
| Bar                              | No. | Size | Length | Shape |
|----------------------------------|-----|------|--------|-------|
| m200(E)                          | 42  | #6   | 9'-4"  | —     |
| m201(E)                          | 12  | #6   | 39'-7" | —     |
| m202(E)                          | 4   | #4   | 39'-7" | —     |
| m203(E)                          | 12  | #6   | 44'-7" | —     |
| m204(E)                          | 4   | #4   | 44'-7" | —     |
| m208(E)                          | 28  | #5   | 8'-7½" | —     |
| s200(E)                          | 112 | #5   | 6'-6"  | ⊏     |
| s201(E)                          | 112 | #5   | 7'-6"  | ⊏     |
| s202(E)                          | 56  | #5   | 6'-9"  | ⊏     |
| u200(E)                          | 56  | #4   | 3'-0"  | ⊏     |
| v200(E)                          | 212 | #5   | 3'-1"  | ⊏     |
| Reinforcement Bars, Epoxy Coated |     |      | Pound  | 5,660 |
| Concrete Superstructure          |     |      | Cu Yd  | 42.8  |

Notes:  
 Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.  
 The s200(E), s201(E), s202(E), u200(E), and v200(E) bars are placed parallel to beams and spaced at right angles to beams. See sheet 54 of 55 for details of bar splicers.

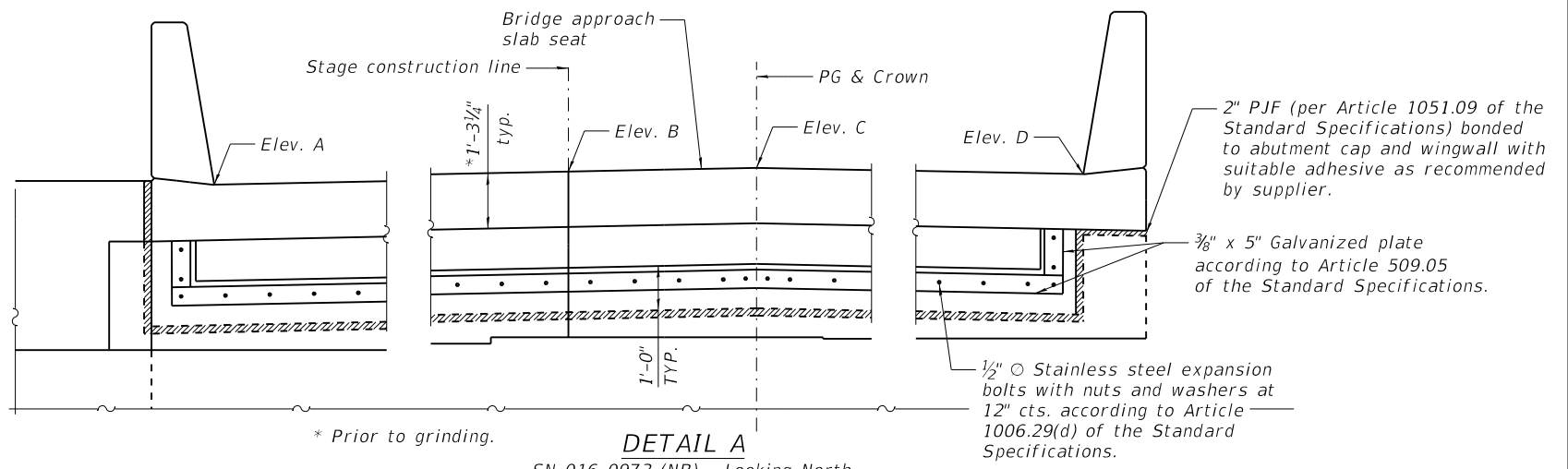
**DIAPHRAGM AT ABUTMENT**  
 (N. Abut. Looking North, S. Abut. Similar)



**PLAN AT ABUTMENT**



**SECTION THRU SEMI-INTEGRAL ABUTMENT**  
 (Horiz. dim. @ Rt. L's)



**DETAIL A**

SN 016-0973 (NB) - Looking North  
 SN 016-0371 (SB) - Looking South

**BACK OF ABUTMENT ELEVATIONS**  
 (Elevations are prior to grinding)

| Elev. | S.N. 016-0973 (NB) |          | S.N. 016-0371 (SB) |          |
|-------|--------------------|----------|--------------------|----------|
|       | S. Abut.           | N. Abut. | S. Abut.           | N. Abut. |
| A     | 738.85             | 738.64   | 738.56             | 738.97   |
| B     | 739.14             | 739.40   | 739.37             | 739.31   |
| C     | 739.16             | 739.50   | 739.47             | 739.34   |
| D     | 738.56             | 739.26   | 739.23             | 738.77   |

MODEL: Default  
 FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-18



|                               |                |           |
|-------------------------------|----------------|-----------|
| USER NAME = USGM717780        | DESIGNED - BJD | REVISED - |
| PLOT SCALE = 0:2.0000" = 1/8" | CHECKED - MGH  | REVISED - |
| PLOT DATE = 2/11/2025         | DRAWN - BJD    | REVISED - |
|                               | CHECKED - MGH  | REVISED - |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ABUTMENT DIAPHRAGM DETAILS**  
**STRUCTURE NO. 016-0371 (SB) & 016-0973 (NB)**

SHEET 18 OF 55 SHEETS

|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 954       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT

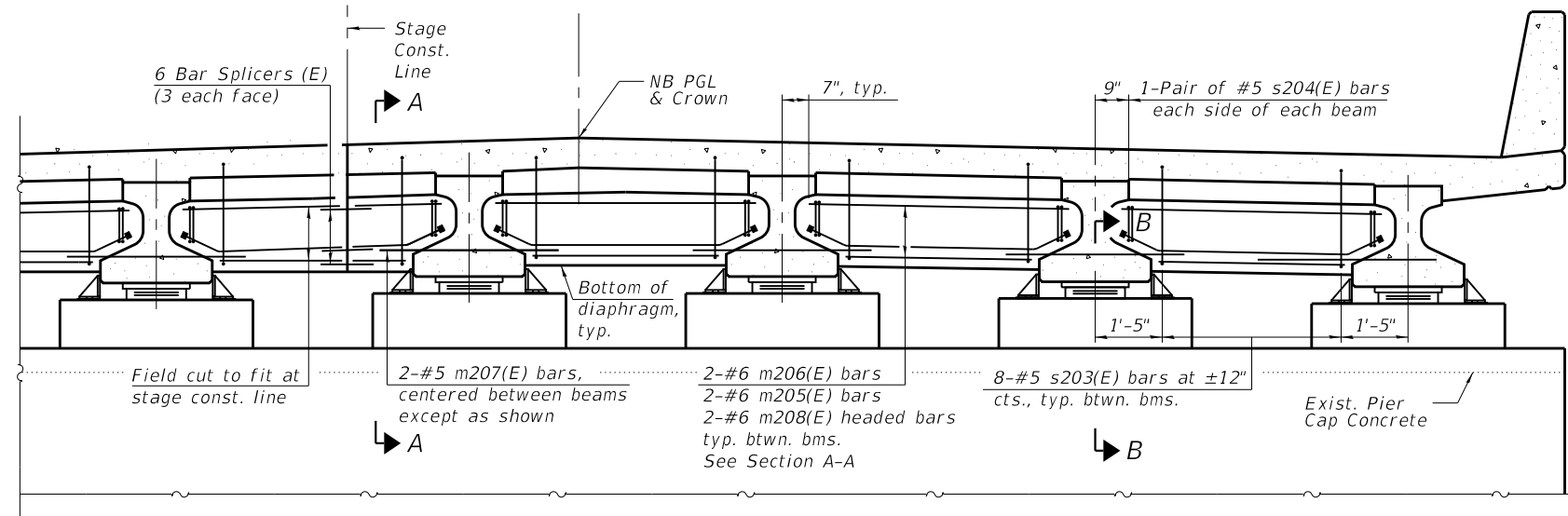
**BILL OF MATERIAL - PIER 1 DIAPHRAGM**

Structure No. 016-0973 (NB)

| Bar                              | No. | Size  | Length  | Shape |
|----------------------------------|-----|-------|---------|-------|
| m205(E)                          | 14  | #6    | 6'-9"   | —     |
| m206(E)                          | 14  | #6    | 9'-2"   | —     |
| m207(E)                          | 16  | #5    | 4'-0"   | —     |
| m208(E)                          | 14  | #6    | 9'-1"   | ⌋     |
| s203(E)                          | 56  | #5    | 10'-10" | U     |
| s204(E)                          | 28  | #5    | 9'-3"   | ⊏     |
| Reinforcement Bars, Epoxy Coated |     | Pound | 1,500   |       |
| Concrete Superstructure          |     | Cu Yd | 27.4    |       |

Structure No. 016-0371 (SB)

| Bar                              | No. | Size  | Length  | Shape |
|----------------------------------|-----|-------|---------|-------|
| m205(E)                          | 14  | #6    | 6'-9"   | —     |
| m206(E)                          | 14  | #6    | 9'-2"   | —     |
| m207(E)                          | 16  | #5    | 4'-0"   | —     |
| m208(E)                          | 14  | #6    | 9'-1"   | ⌋     |
| s203(E)                          | 56  | #5    | 10'-10" | U     |
| s204(E)                          | 28  | #5    | 9'-3"   | ⊏     |
| Reinforcement Bars, Epoxy Coated |     | Pound | 1,500   |       |
| Concrete Superstructure          |     | Cu Yd | 27.4    |       |



**DIAPHRAGM AT PIER 1 AND PIER 3**  
(NB Diaphragm Shown)

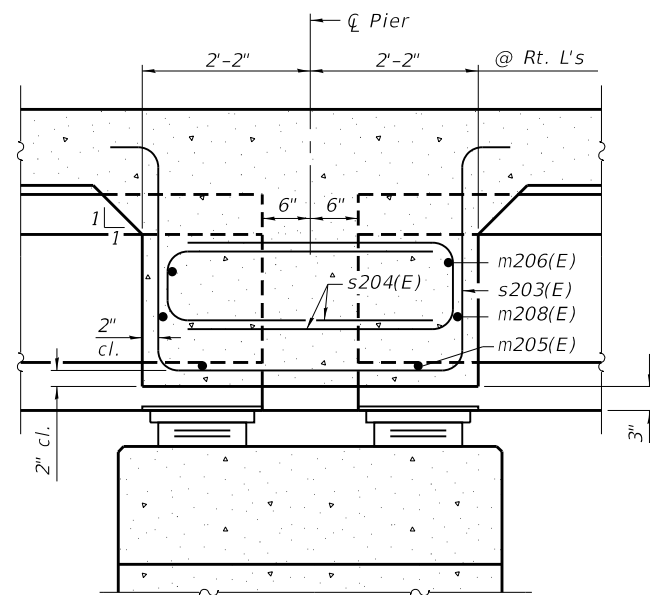
**BILL OF MATERIAL - PIER 3 DIAPHRAGM**

Structure No. 016-0973 (NB)

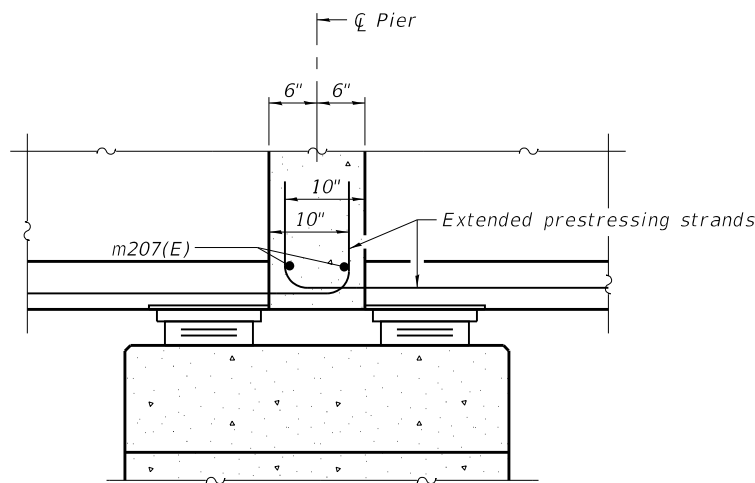
| Bar                              | No. | Size  | Length  | Shape |
|----------------------------------|-----|-------|---------|-------|
| m205(E)                          | 14  | #6    | 6'-9"   | —     |
| m206(E)                          | 14  | #6    | 9'-2"   | —     |
| m207(E)                          | 16  | #5    | 4'-0"   | —     |
| m208(E)                          | 14  | #6    | 9'-1"   | ⌋     |
| s203(E)                          | 56  | #5    | 10'-10" | U     |
| s204(E)                          | 28  | #5    | 9'-3"   | ⊏     |
| Reinforcement Bars, Epoxy Coated |     | Pound | 1,500   |       |
| Concrete Superstructure          |     | Cu Yd | 27.4    |       |

Structure No. 016-0371 (SB)

| Bar                              | No. | Size  | Length  | Shape |
|----------------------------------|-----|-------|---------|-------|
| m205(E)                          | 14  | #6    | 6'-9"   | —     |
| m206(E)                          | 14  | #6    | 9'-2"   | —     |
| m207(E)                          | 16  | #5    | 4'-0"   | —     |
| m208(E)                          | 14  | #6    | 9'-1"   | ⌋     |
| s203(E)                          | 56  | #5    | 10'-10" | U     |
| s204(E)                          | 28  | #5    | 9'-3"   | ⊏     |
| Reinforcement Bars, Epoxy Coated |     | Pound | 1,500   |       |
| Concrete Superstructure          |     | Cu Yd | 27.4    |       |



**SECTION A-A**



**SECTION B-B**

Notes:  
See sheet 17 of 55 for superstructure details and bar bending diagrams.  
The s203(E) and s204(E) bars shall be placed parallel to the beams.  
Spacing for these bars shall be at right angles to the beams.  
Horizontal dimensions for Section A-A and Section B-B are along  $\bar{C}$  of beam unless otherwise noted.  
See sheet 54 of 55 for details of bar splicers.

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-19



|              |   |            |     |           |  |
|--------------|---|------------|-----|-----------|--|
| USER NAME =  | USGM717780  | DESIGNED - | BJD | REVISED - |  |
|              |   | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/td> <td>DRAWN -</td> <td>BJD</td> <td>REVISED -</td> <td></td> | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025   | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PIER 1 & 3 DIAPHRAGM DETAILS**  
**STRUCTURE NO. 016-0371 (SB) & 016-0973 (NB)**

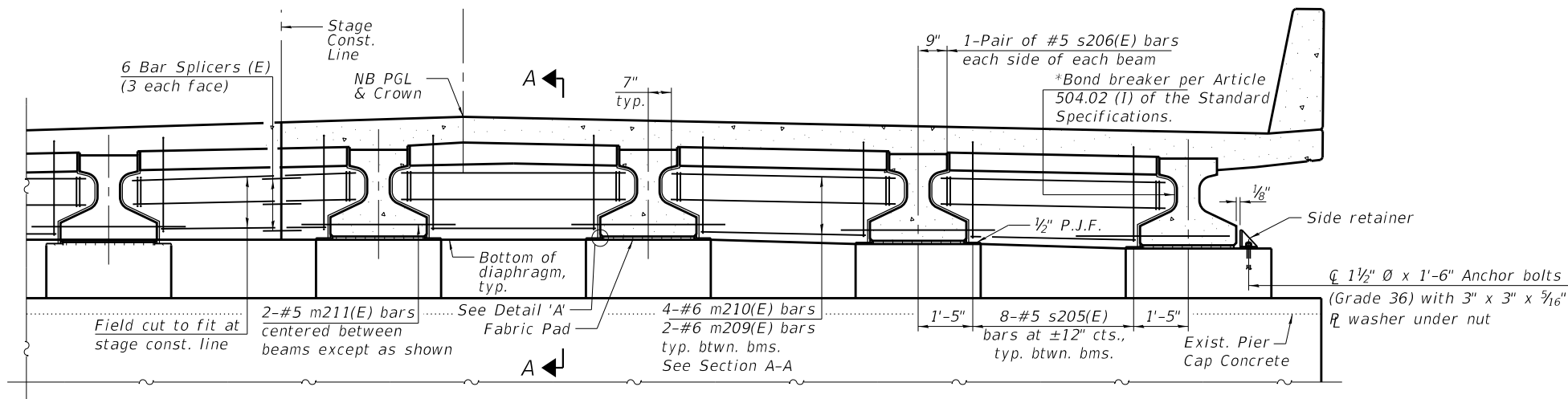
SHEET 19 OF 55 SHEETS

| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-------------|--------|--------------|-----------|
| 342                       | 2018-100-BR | COOK   | 1351         | 955       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



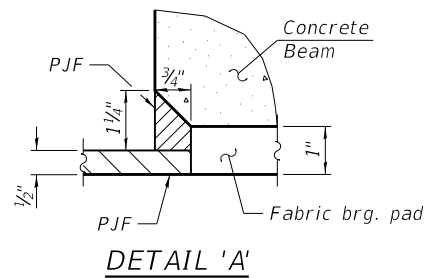
**BILL OF MATERIAL - PIER 2 DIAPHRAGM**

| Structure No. 016-0973 (NB)      |     |      |        |       | Structure No. 016-0371 (SB) |                                  |      |        |       |       |       |
|----------------------------------|-----|------|--------|-------|-----------------------------|----------------------------------|------|--------|-------|-------|-------|
| Bar                              | No. | Size | Length | Shape | Bar                         | No.                              | Size | Length | Shape |       |       |
| m209(E)                          | 14  | #6   | 6'-9"  | —     | m209(E)                     | 14                               | #6   | 6'-9"  | —     |       |       |
| m210(E)                          | 28  | #6   | 9'-2"  | —     | m210(E)                     | 28                               | #6   | 9'-2"  | —     |       |       |
| m211(E)                          | 16  | #5   | 4'-0"  | —     | m211(E)                     | 16                               | #5   | 4'-0"  | —     |       |       |
| s205(E)                          | 56  | #5   | 10'-2" | U     | s205(E)                     | 56                               | #5   | 10'-2" | U     |       |       |
| s206(E)                          | 28  | #5   | 7'-11" | □     | s206(E)                     | 28                               | #5   | 7'-11" | □     |       |       |
| v220(E)                          | 32  | #8   | 4'-1"  | —     | v220(E)                     | 32                               | #8   | 4'-1"  | —     |       |       |
| Reinforcement Bars, Epoxy Coated |     |      |        | Pound | 1,770                       | Reinforcement Bars, Epoxy Coated |      |        |       | Pound | 1,770 |
| Concrete Superstructure          |     |      |        | Cu Yd | 27.8                        | Concrete Superstructure          |      |        |       | Cu Yd | 27.8  |

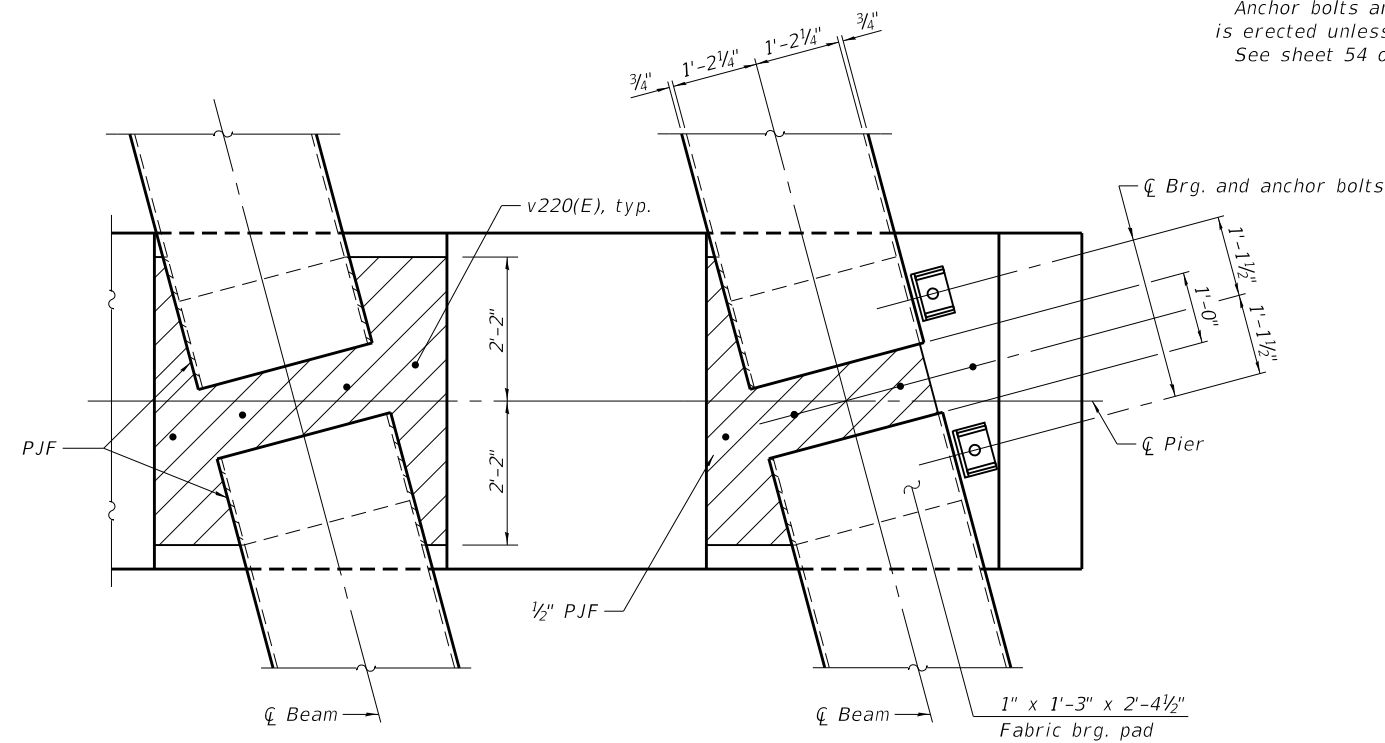
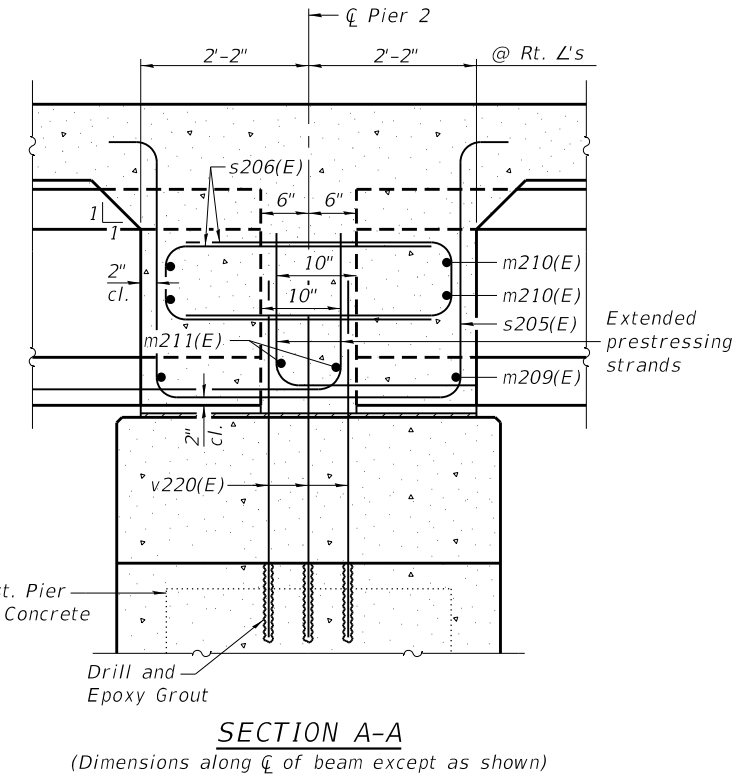


**DIAPHRAGM AT PIER 2**

\*Bonded to sides of beams embedded into diaphragm. (NB Diaphragm Shown)

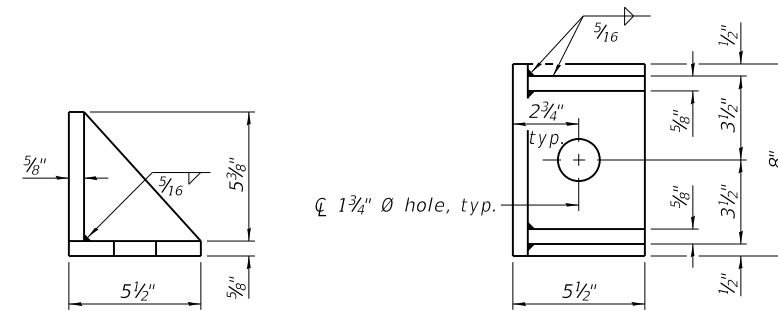


**Notes:**  
 See sheet 17 of 55 for superstructure details and bar bending diagrams.  
 Cost of 30 Lb. roofing felt is included with Concrete Superstructure.  
 Cost of side retainer and anchor bolts shall be included with Concrete Structures.  
 The s205(E) and s206(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.  
 Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used. See sheet 54 of 55 for details of bar splicers.



**PLAN AT PIER**

(Showing bearing pads and P.J.F. details)



**SIDE RETAINER**

(2 required each side of pier).  
 Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

MODEL: Default  
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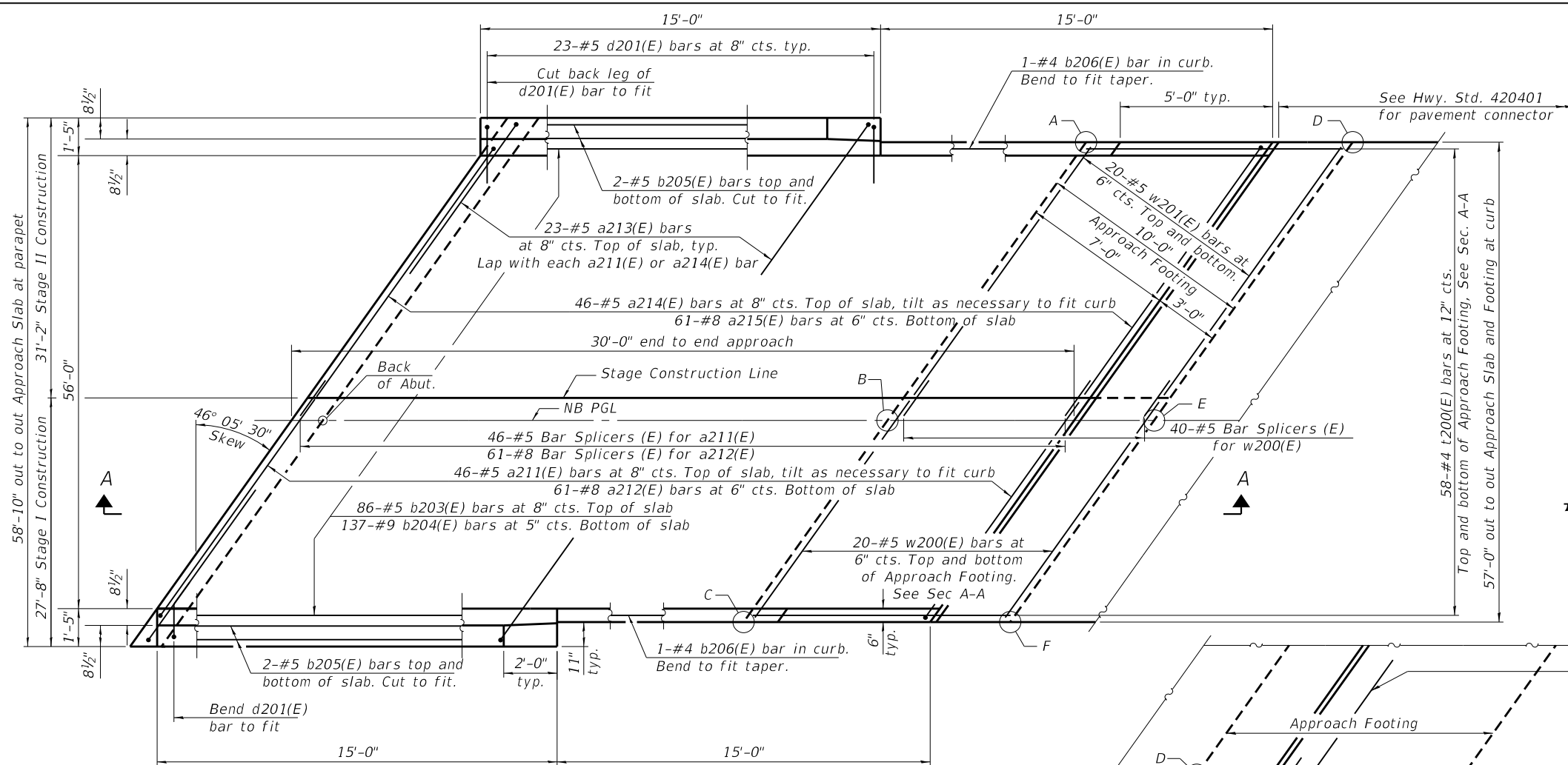
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| PLOT DATE =  | 2/11/2025   | CHECKED -  | MGH | REVISED - |  |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PIER 2 DIAPHRAGM DETAILS  
 STRUCTURE NO. 016- 0371 (SB) & 016- 0973 (NB)

SHEET 20 OF 55 SHEETS

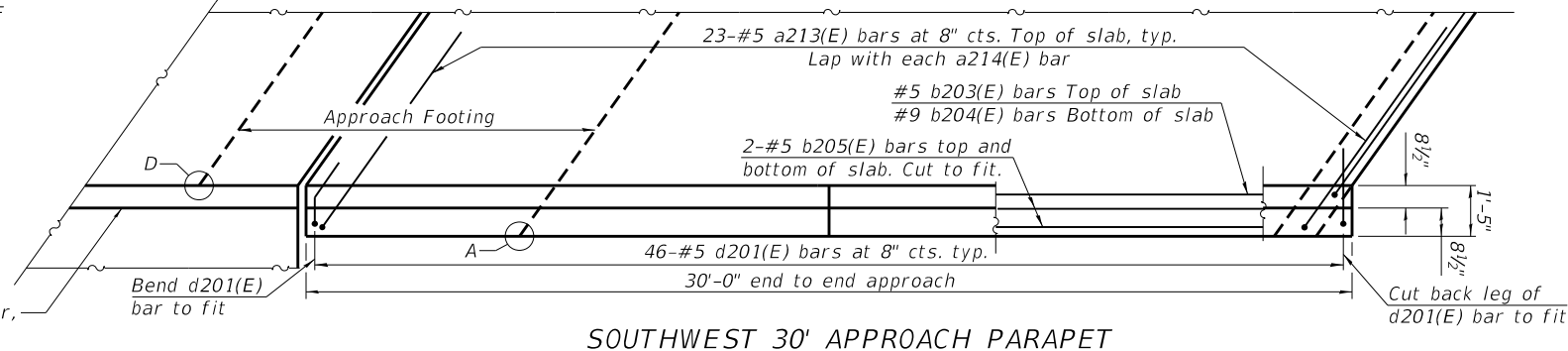
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| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
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| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



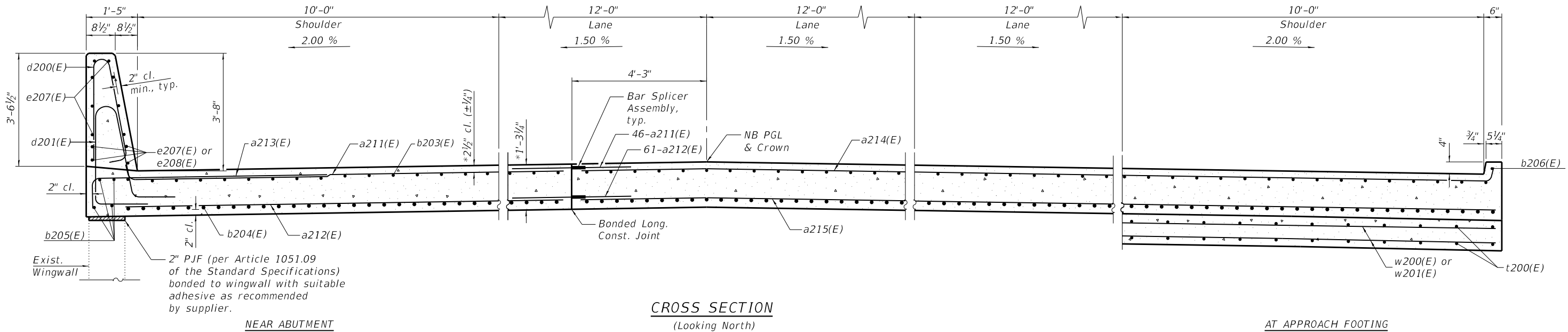
**PLAN NORTHEAST APPROACH SLAB**  
 (NE Approach Slab shown; SW approach slab similar by 180° rotation, except as shown)

**TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING**

| SN 016-0973 Approach |        |        | SN 016-0371 Approach |        |        |
|----------------------|--------|--------|----------------------|--------|--------|
| Point                | Top    | Bottom | Point                | Top    | Bottom |
| A-NE                 | 737.19 | 736.36 | A-SW                 | 737.06 | 736.23 |
| B-NE                 | 738.08 | 737.25 | B-SW                 | 738.03 | 737.20 |
| C-NE                 | 737.83 | 736.99 | C-SW                 | 737.80 | 736.96 |
| D-NE                 | 737.09 | 736.26 | D-SW                 | 736.92 | 736.09 |
| E-NE                 | 737.98 | 737.15 | E-SW                 | 737.91 | 737.08 |
| F-NE                 | 737.73 | 736.90 | F-SW                 | 737.69 | 736.86 |



**SOUTHWEST 30' APPROACH PARAPET**



**CROSS SECTION**  
 (Looking North)

**AT APPROACH FOOTING**

MODEL: Default  
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|--------------|----------------|------------|-----|-----------|--|
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| CHECKED -    | MGH            | CHECKED -  | MGH | REVISED - |  |
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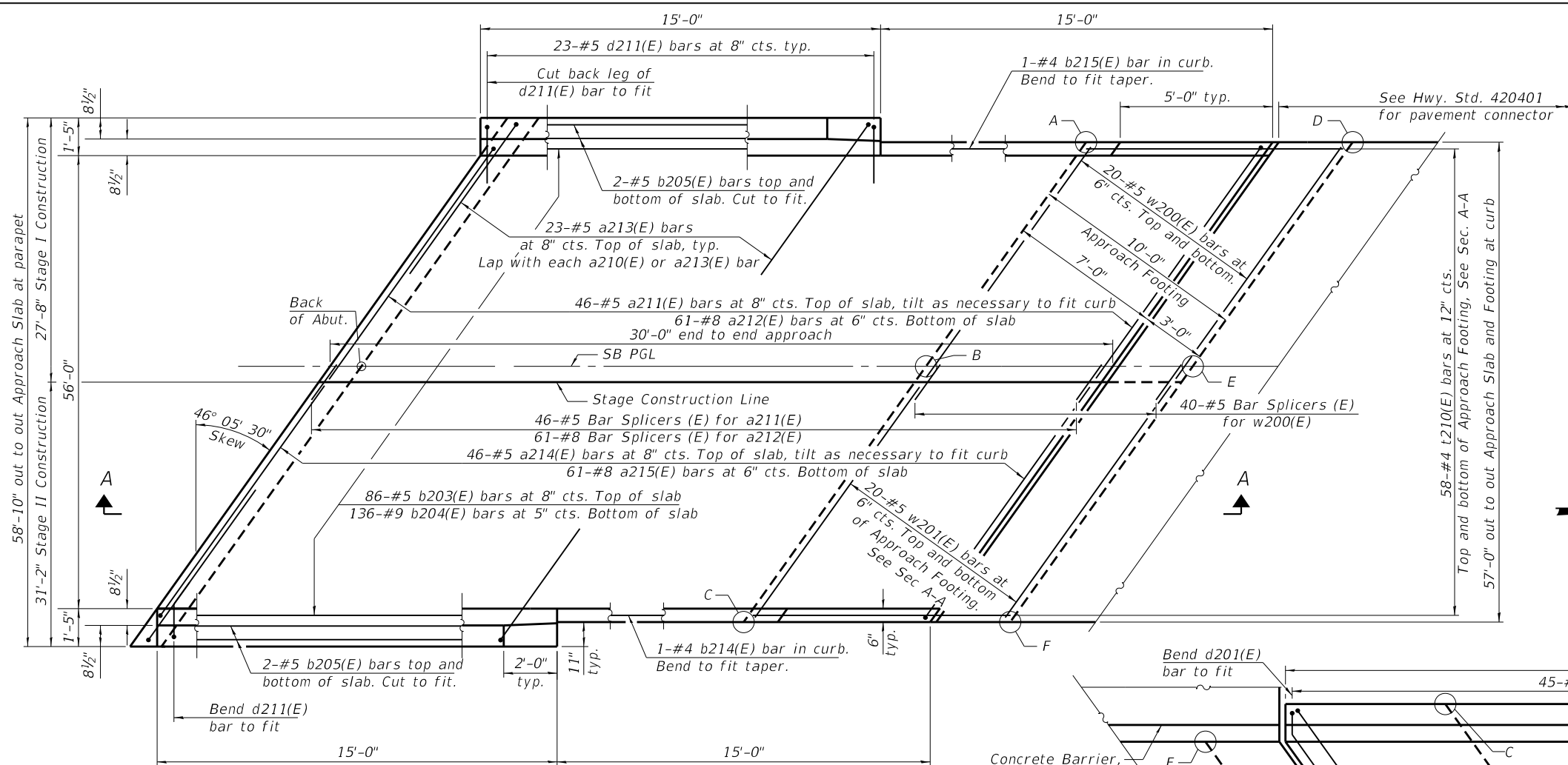
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS - 1**  
**STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)**

|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 957       |
| CONTRACT NO. 62N91 |             |        |              |           |

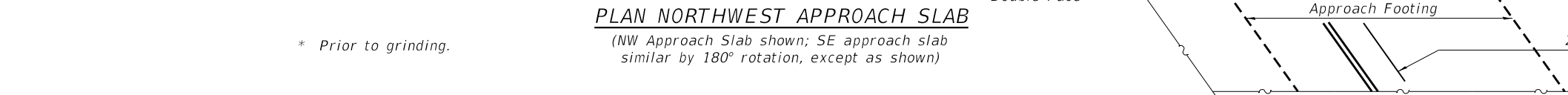
SHEET 21 OF 55 SHEETS

ILLINOIS FED. AID PROJECT



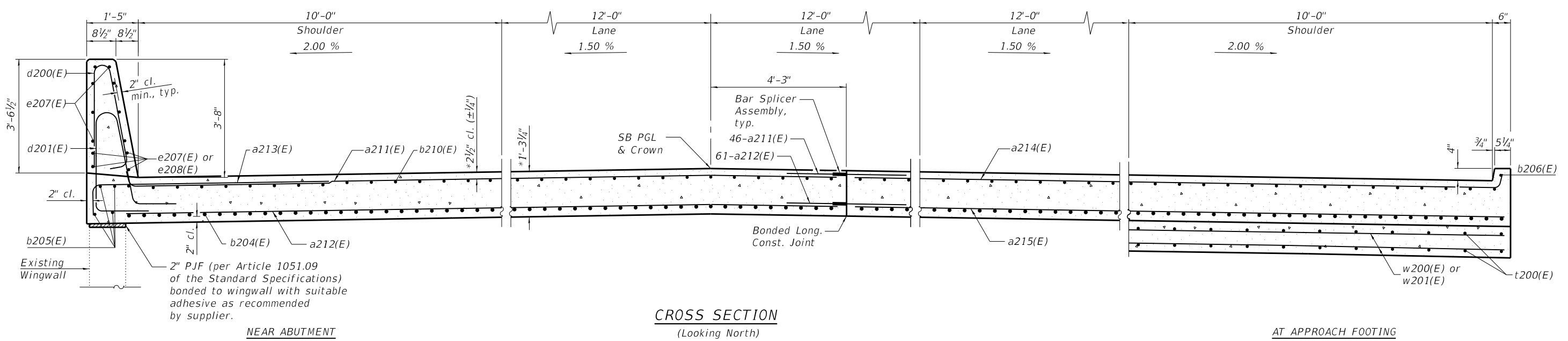
TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

| SN 016-0973 Approach |        |        | SN 016-0371 Approach |        |        |
|----------------------|--------|--------|----------------------|--------|--------|
| Point                | Top    | Bottom | Point                | Top    | Bottom |
| A-SE                 | 736.81 | 735.98 | A-NW                 | 737.06 | 736.22 |
| B-SE                 | 737.69 | 736.86 | B-NW                 | 737.90 | 737.06 |
| C-SE                 | 737.62 | 736.79 | C-NW                 | 737.77 | 736.94 |
| D-SE                 | 736.67 | 735.84 | D-NW                 | 736.93 | 736.10 |
| E-SE                 | 737.55 | 736.71 | E-NW                 | 737.78 | 736.94 |
| F-SE                 | 737.49 | 736.65 | F-NW                 | 737.66 | 736.83 |



PLAN NORTHWEST APPROACH SLAB  
(NW Approach Slab shown; SE approach slab similar by 180° rotation, except as shown)

SOUTHEAST 30' APPROACH PARAPET



CROSS SECTION  
(Looking North)

NEAR ABUTMENT

AT APPROACH FOOTING

MODEL: Default  
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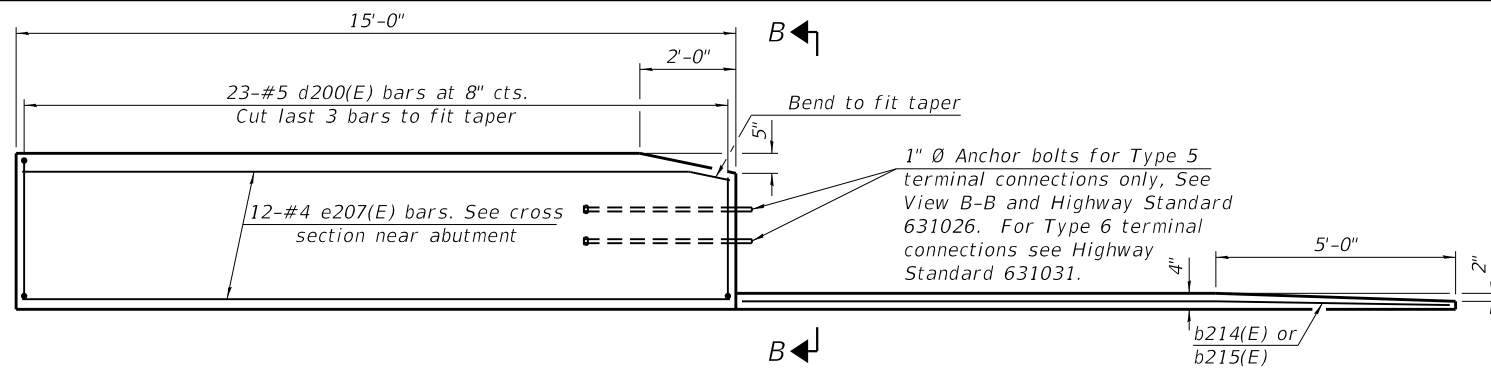
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| CHECKED -    | MGH               | REVISIONS - |     |             |  |
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| PLOT DATE =  | 2/11/2025         | CHECKED -   | MGH | REVISIONS - |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

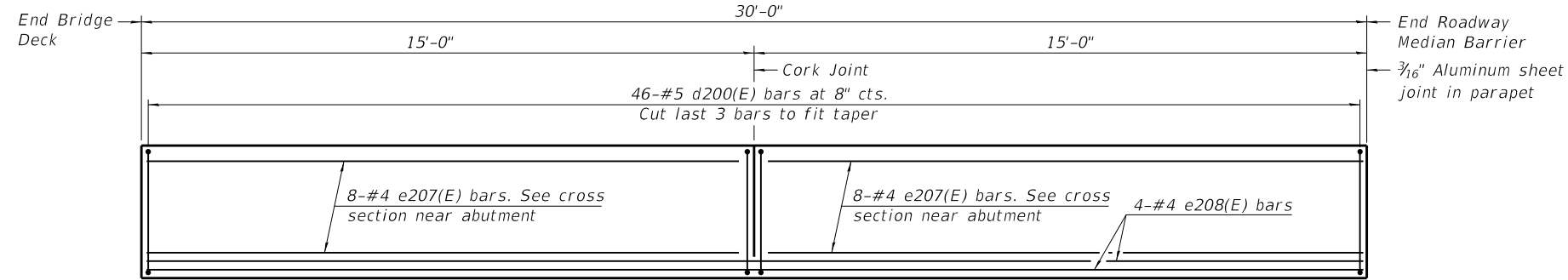
BRIDGE APPROACH SLAB DETAILS - 2  
STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)

SHEET 22 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 958       |
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| ILLINOIS FED. AID PROJECT |             |        |              |           |



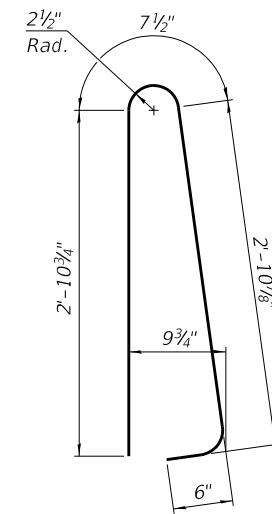
INSIDE ELEVATION OF 15'-0" PARAPET AND CURB



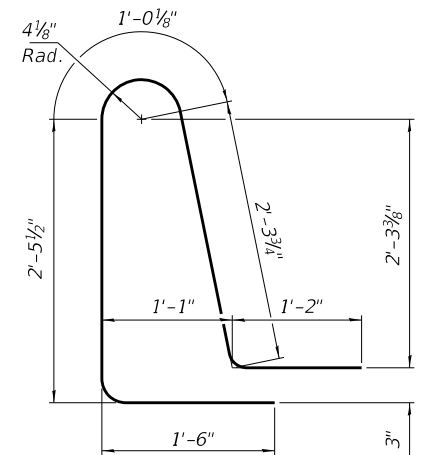
INSIDE ELEVATION OF 30'-0" PARAPET

Notes:

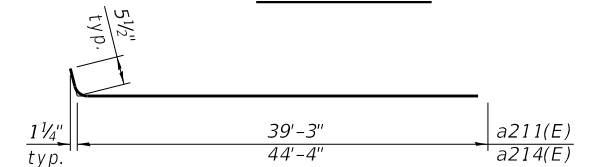
The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.  
 Parapet concrete shall be paid for as Concrete Superstructure.  
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).  
 Approach footing concrete shall be paid for as Concrete Structures.  
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 55.



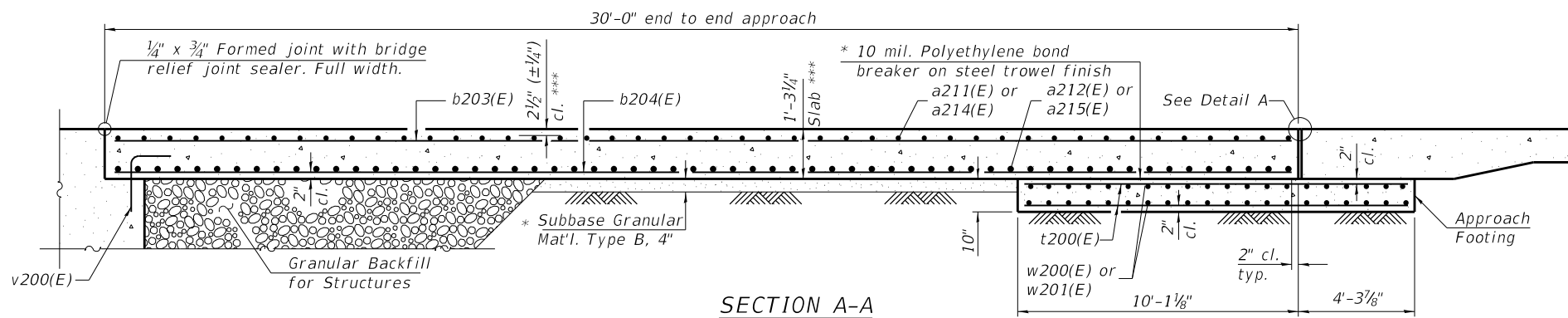
BAR d200(E)



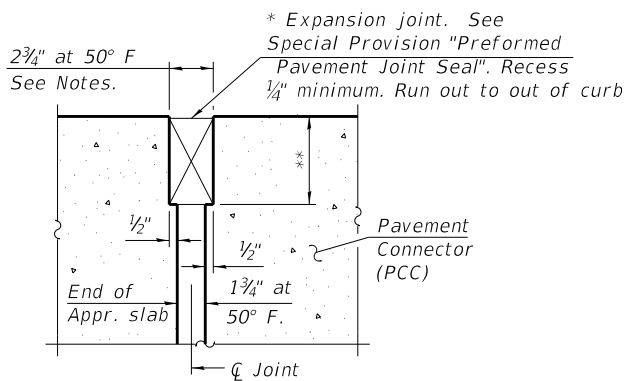
BAR d201(E)



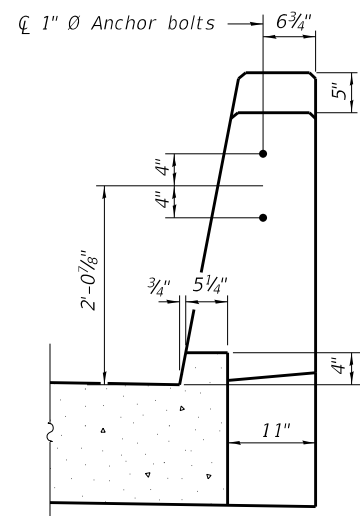
BAR a211(E) and a214(E)



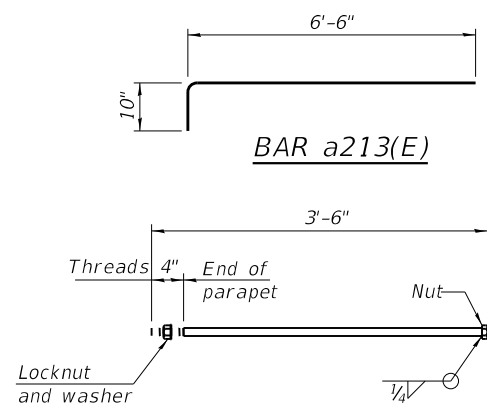
SECTION A-A



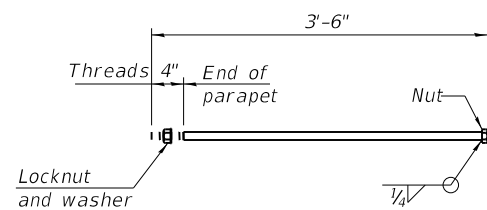
DETAIL A  
(@ Rt. L's)



VIEW B-B



BAR a213(E)



\* 1" Ø ANCHOR BOLT  
(Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications)

BILL OF MATERIAL - TWO APPROACHES

| Structure No. 016-0973 (NB)             |     |         |        |       |
|---|-----|---------|--------|-------|
| Bar                                     | No. | Size    | Length | Shape |
| a211(E)                                 | 92  | #5      | 39'-7" | —     |
| a212(E)                                 | 122 | #8      | 39'-7" | —     |
| a213(E)                                 | 92  | #5      | 7'-4"  | —     |
| a214(E)                                 | 92  | #5      | 44'-7" | —     |
| a215(E)                                 | 122 | #8      | 44'-7" | —     |
| b203(E)                                 | 172 | #5      | 29'-8" | —     |
| b204(E)                                 | 274 | #9      | 29'-8" | —     |
| b205(E)                                 | 16  | #5      | 14'-8" | —     |
| b206(E)                                 | 4   | #4      | 14'-8" | —     |
| d200(E)                                 | 92  | #5      | 7'-0"  | ⏏     |
| d201(E)                                 | 92  | #5      | 8'-6"  | ⏏     |
| e207(E)                                 | 52  | #4      | 14'-8" | —     |
| e208(E)                                 | 4   | #4      | 29'-8" | —     |
| t200(E)                                 | 116 | #4      | 9'-8"  | —     |
| w200(E)                                 | 80  | #5      | 38'-3" | —     |
| w201(E)                                 | 80  | #5      | 43'-3" | —     |
| Concrete Superstructure                 |     | Cu. Yd. | 10.6   |       |
| Concrete Superstructure (Approach Slab) |     | Cu. Yd. | 166.2  |       |
| Concrete Structures                     |     | Cu. Yd. | 76.2   |       |
| Reinforcement Bars, Epoxy Coated        |     | Pound   | 79,070 |       |

| Structure No. 016-0371 (SB)             |     |         |        |       |
|---|-----|---------|--------|-------|
| Bar                                     | No. | Size    | Length | Shape |
| a211(E)                                 | 92  | #5      | 39'-7" | —     |
| a212(E)                                 | 122 | #8      | 39'-7" | —     |
| a213(E)                                 | 92  | #5      | 7'-4"  | —     |
| a214(E)                                 | 92  | #5      | 44'-7" | —     |
| a215(E)                                 | 122 | #8      | 44'-7" | —     |
| b203(E)                                 | 172 | #5      | 29'-8" | —     |
| b204(E)                                 | 274 | #9      | 29'-8" | —     |
| b205(E)                                 | 16  | #5      | 14'-8" | —     |
| b206(E)                                 | 4   | #4      | 14'-8" | —     |
| d200(E)                                 | 92  | #5      | 7'-0"  | ⏏     |
| d201(E)                                 | 92  | #5      | 8'-6"  | ⏏     |
| e207(E)                                 | 52  | #4      | 14'-8" | —     |
| e208(E)                                 | 4   | #4      | 29'-8" | —     |
| t200(E)                                 | 116 | #4      | 9'-8"  | —     |
| w200(E)                                 | 80  | #5      | 38'-3" | —     |
| w201(E)                                 | 80  | #5      | 43'-3" | —     |
| Concrete Superstructure                 |     | Cu. Yd. | 10.6   |       |
| Concrete Superstructure (Approach Slab) |     | Cu. Yd. | 166.2  |       |
| Concrete Structures                     |     | Cu. Yd. | 76.2   |       |
| Reinforcement Bars, Epoxy Coated        |     | Pound   | 79,070 |       |

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\* Cost included with Concrete Superstructure (Approach Slab).  
 \*\* Per manufacturer recommendations  
 \*\*\* Prior to grinding.  
 \*\*\*\* After grinding.

(Sheet 3 of 3)



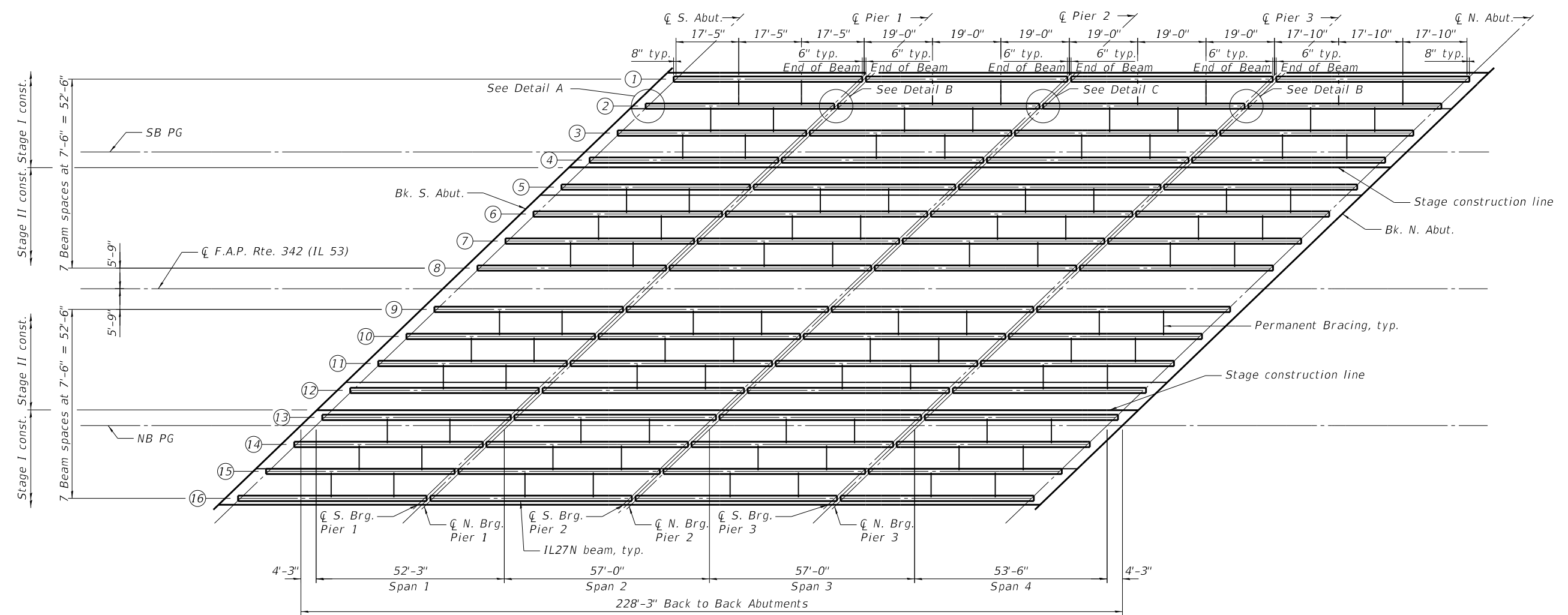
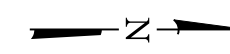
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS - 3  
STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)

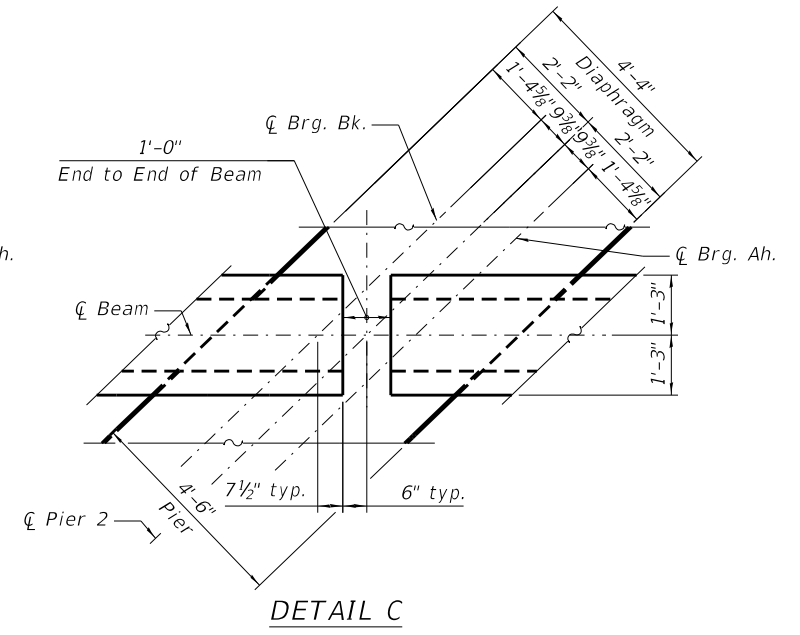
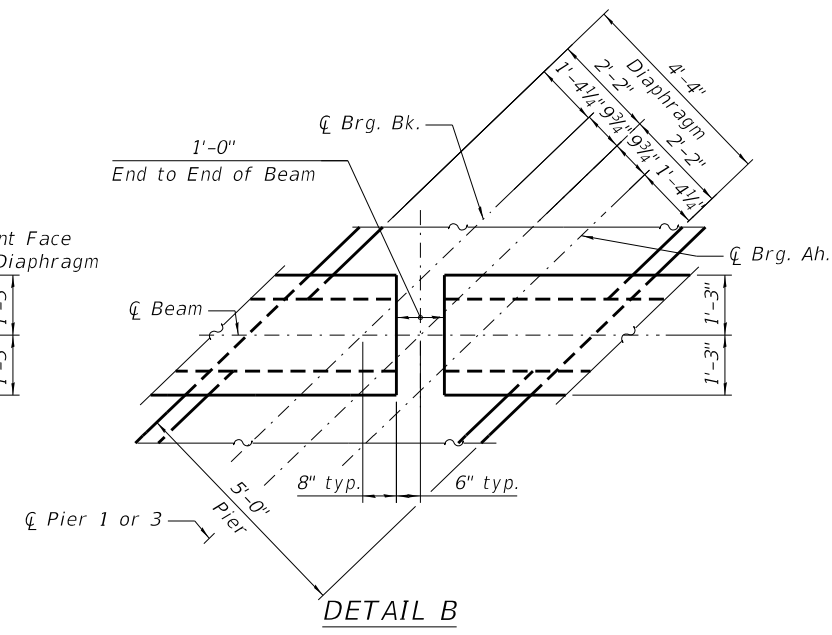
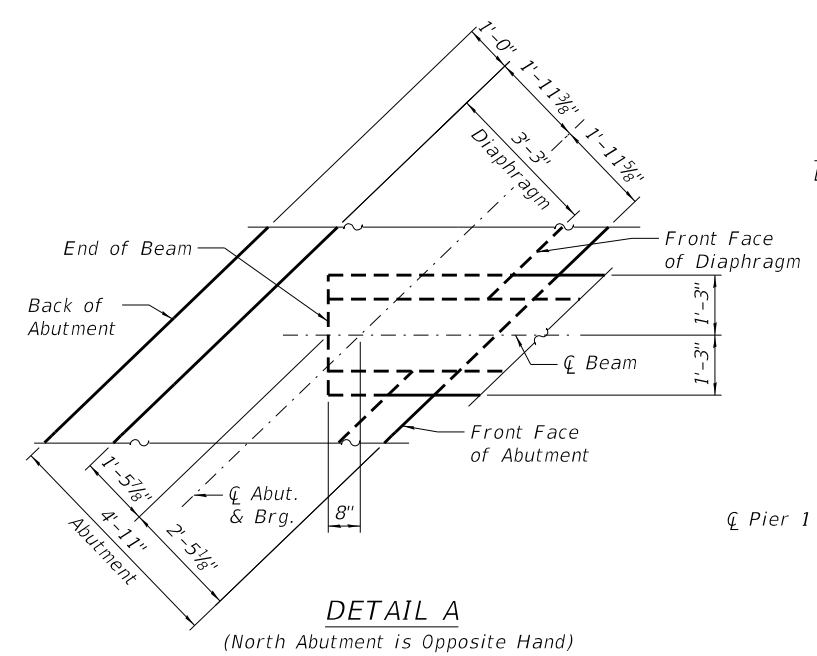
SHEET 23 OF 55 SHEETS

| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-------------|--------|--------------|-----------|
| 342                       | 2018-100-BR | COOK   | 1351         | 959       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



**FRAMING PLAN**

**Notes:**  
 For permanent bracing details and beam tables, see sheet 29 of 55.  
 The fabricator shall be responsible for adjusting the location of the holes and inserts to miss the strands within permissible tolerances.  
 The permanent bracing shall be at right angles to the beam.  
 Bracing shall be installed as beams are erected and tightened as soon as possible during erection.



MODEL: Default  
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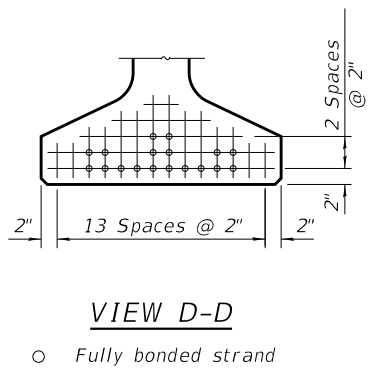
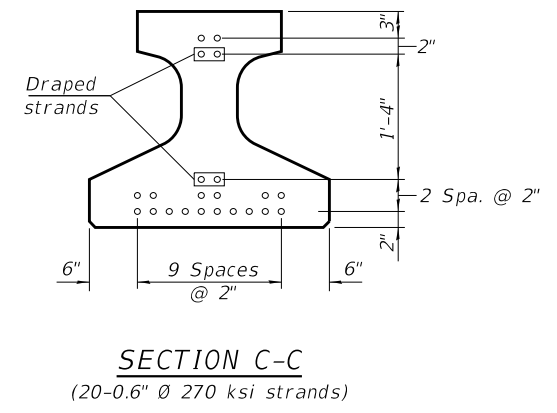
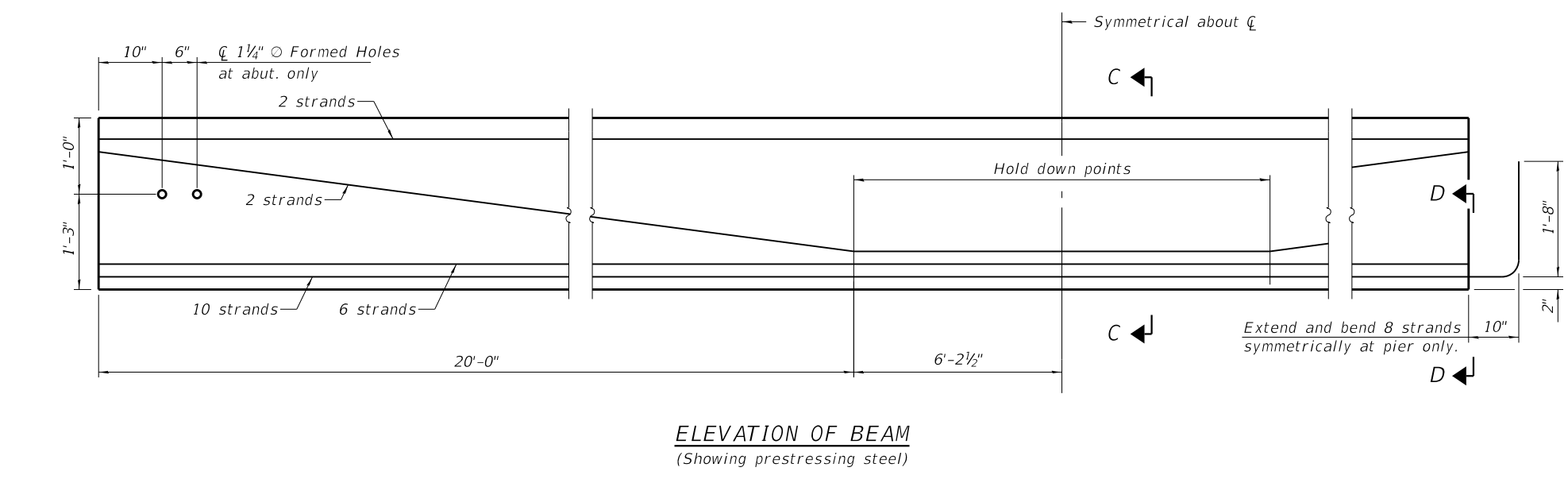
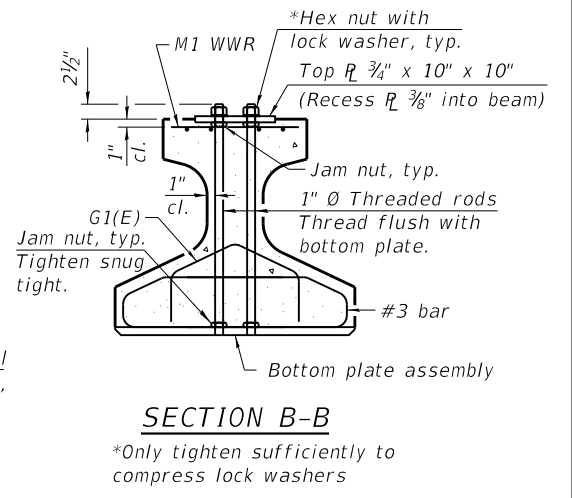
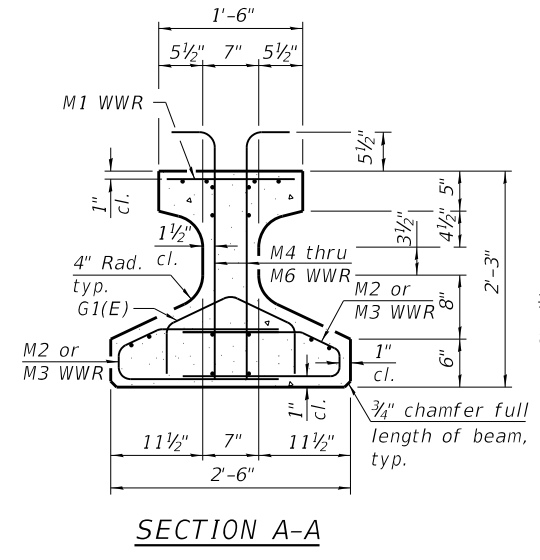
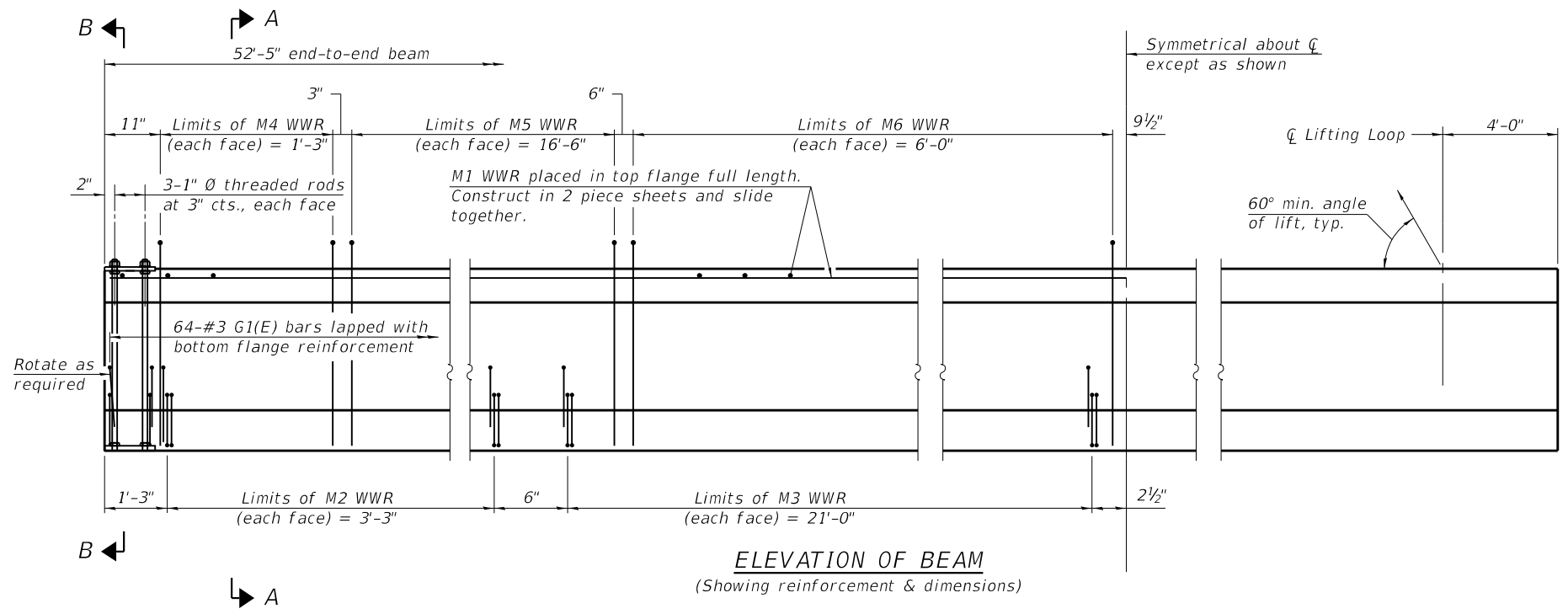
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN  
 STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)**

SHEET 24 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 960       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

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**SPAN 1**  
 IL 27-1830 Beam  
 Strand Pattern = 18B-2T-0db-2d

Note:  
 See sheet 28 of 55 for additional details and Bill of Material.  
 The beams shall have a final concrete compressive strength,  $f'_c$  of 8,500 psi and a release concrete compressive strength,  $f'_ci$  of 6,500 psi.



|              |                |            |     |           |  |
|--------------|----------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780     | DESIGNED - | BJD | REVISED - |  |
|              |                | CHECKED -  | MGH | REVISED - |  |
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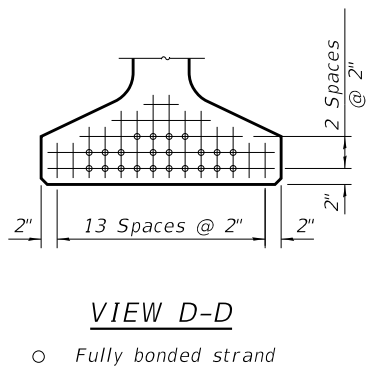
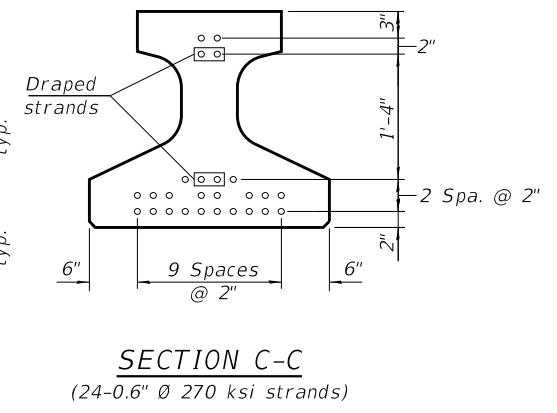
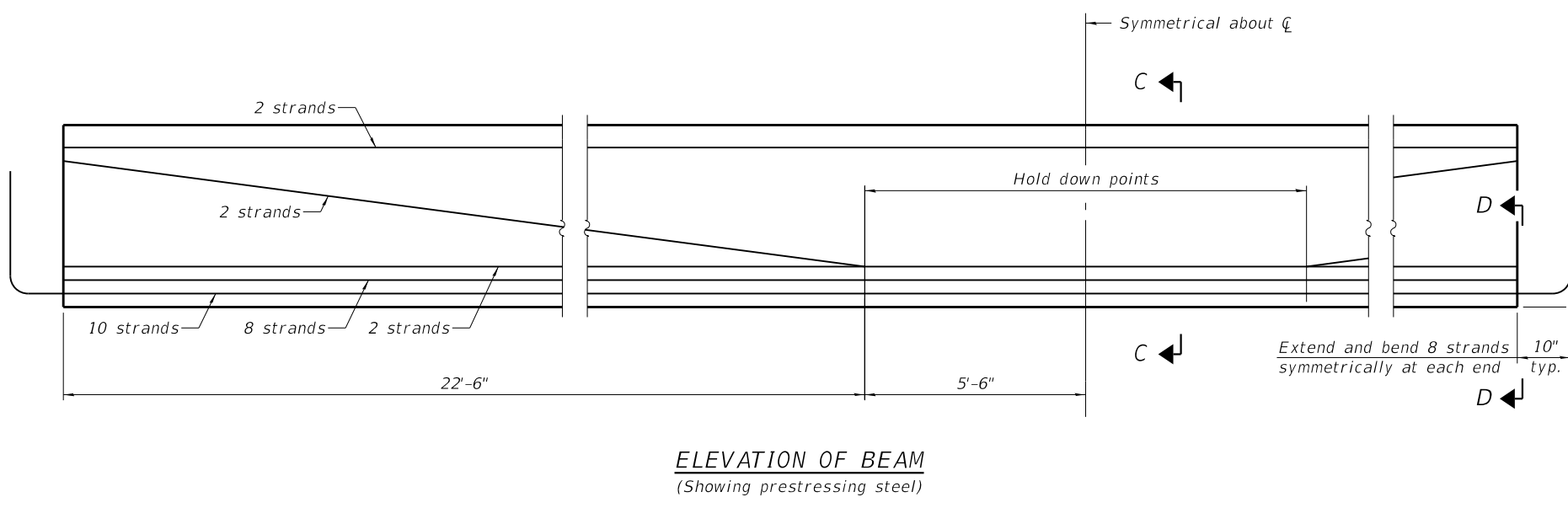
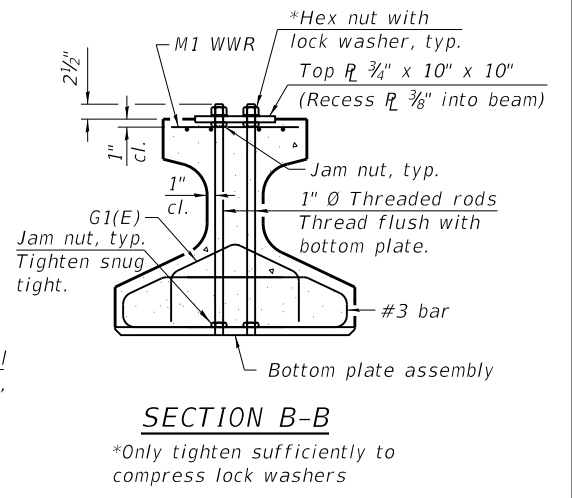
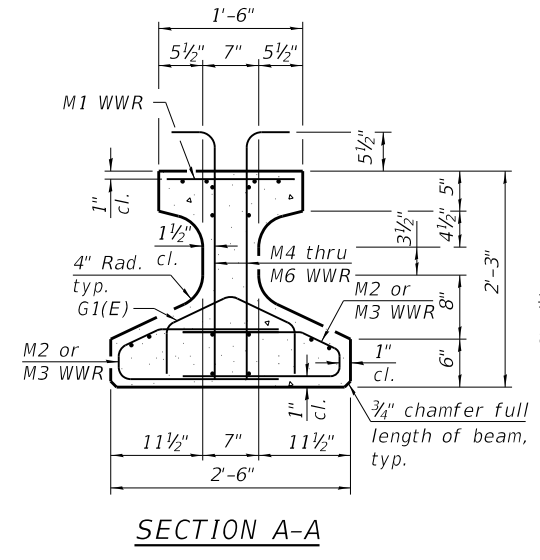
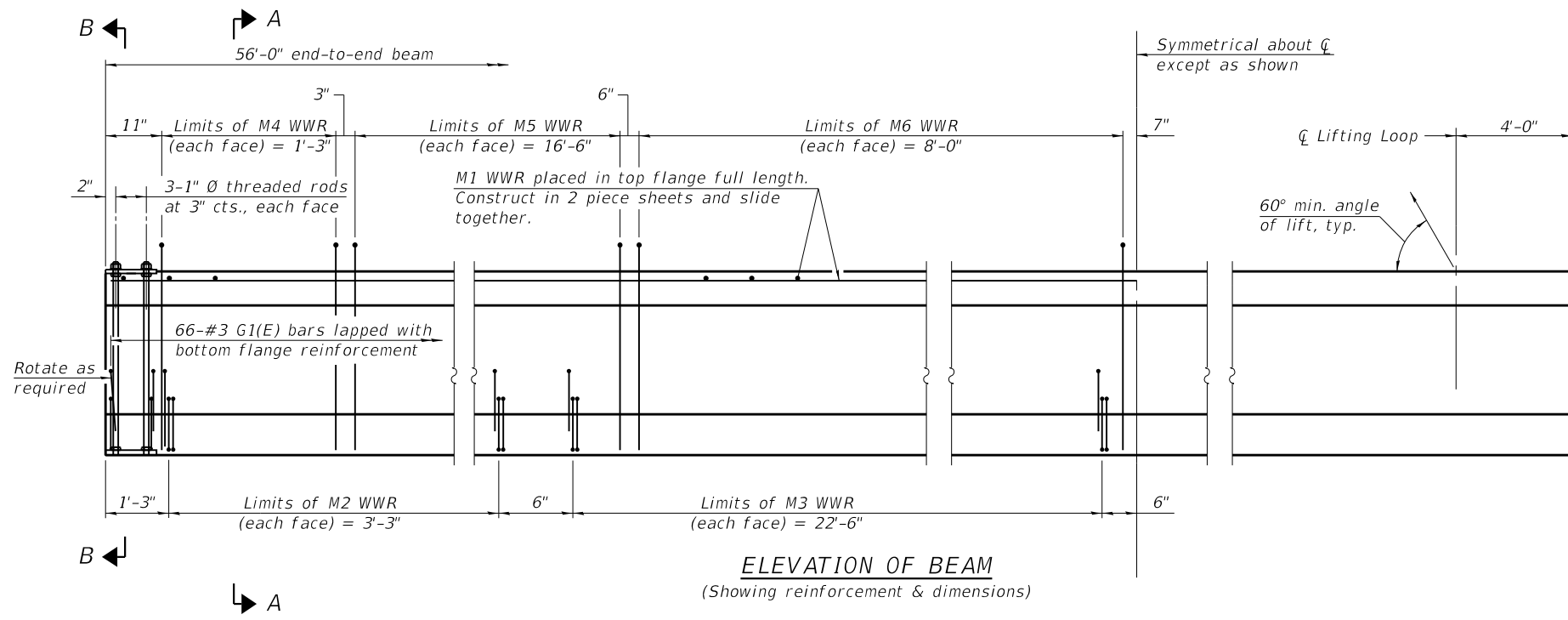
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**IL27N BEAM - SPAN 1**  
**STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)**

SHEET 25 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|                           | 2018-100-BR | COOK   | 4351         | 961       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

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**SPANS 2 & 3**  
 IL 27-1830 Beam  
 Strand Pattern = 22B-2T-0db-2d

Note:  
 See sheet 28 of 55 for additional details and Bill of Material.  
 The beams shall have a final concrete compressive strength,  $f'_c$ , of 8,500 psi and a release concrete compressive strength,  $f'_{ci}$ , of 6,500 psi.



|                             |                |           |
|-----------------------------|----------------|-----------|
| USER NAME = USGM717780      | DESIGNED - BJD | REVISED - |
| PLOT SCALE = 0:2.0000 "/in. | CHECKED - MGH  | REVISED - |
| PLOT DATE = 2/11/2025       | DRAWN - BJD    | REVISED - |
|                             | CHECKED - MGH  | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

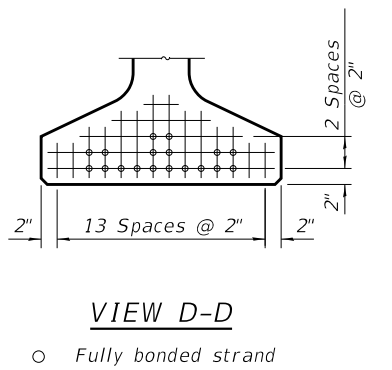
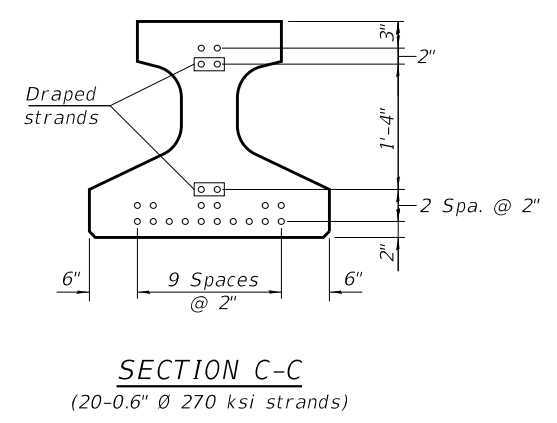
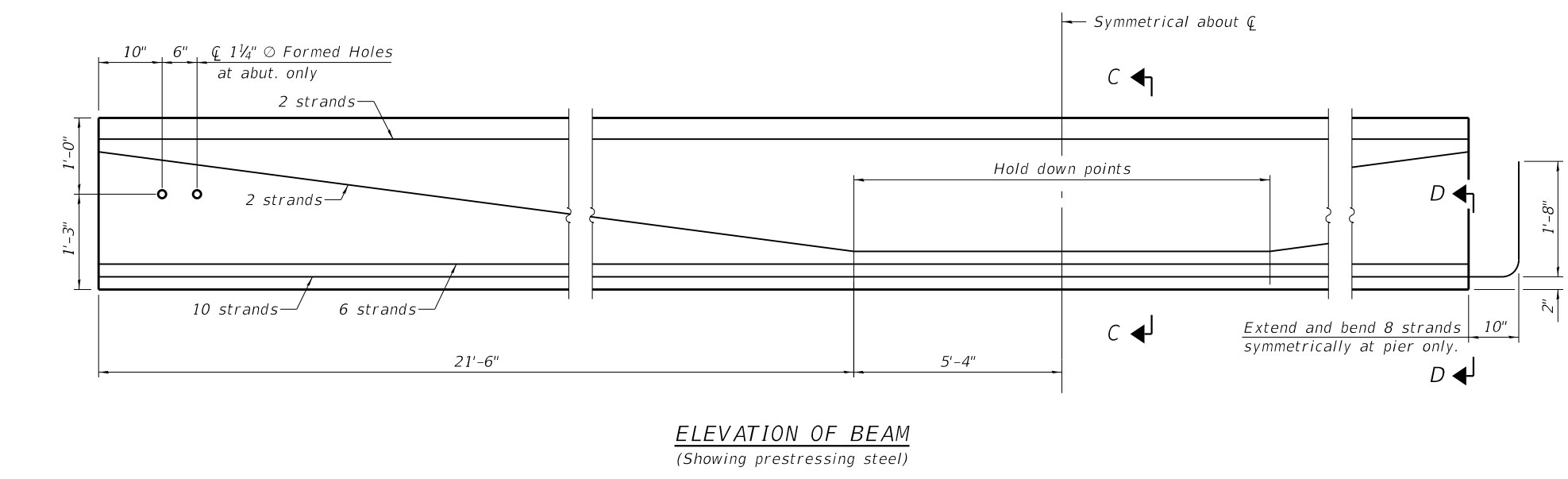
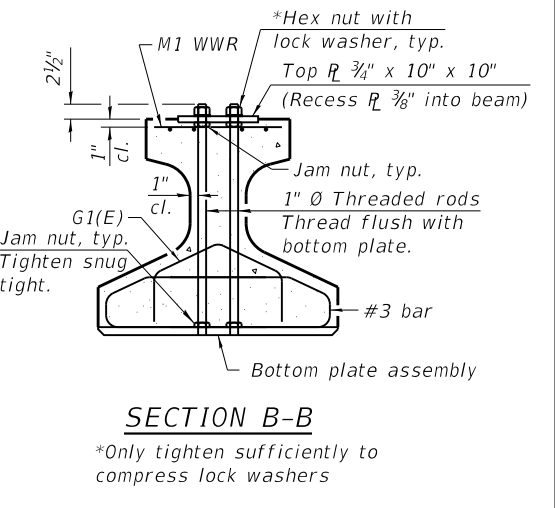
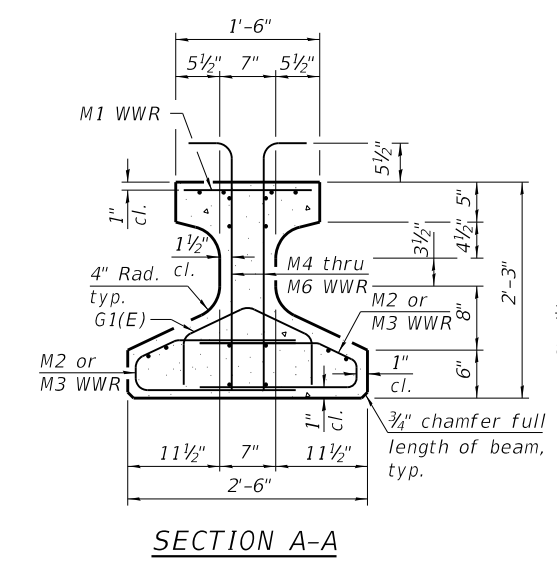
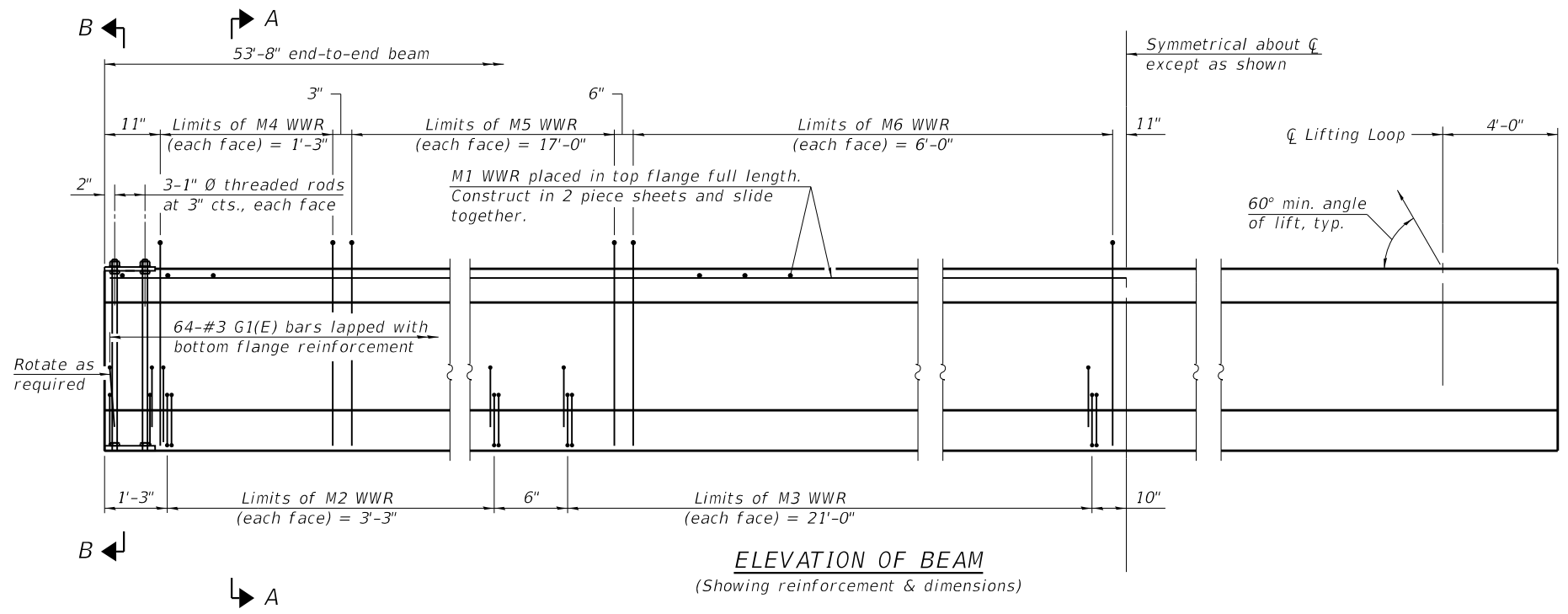
IL27N BEAM - SPANS 2 & 3  
 STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)

SHEET 26 OF 55 SHEETS

|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 962       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT

MODEL: Default  
 FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_Bridge\Structures\Sheets\C2-D162N91-0160973-27



**SPAN 4**  
 1L 27-1830 Beam  
 Strand Pattern = 18B-2T-0db-2d

Note:  
 See sheet 28 of 55 for additional details and Bill of Material.  
 The beams shall have a final concrete compressive strength,  $f'_c$ , of 8,500 psi and a release concrete compressive strength,  $f'_{ci}$ , of 6,500 psi.



|                               |                |           |
|-------------------------------|----------------|-----------|
| USER NAME = USGM717780        | DESIGNED - BJD | REVISED - |
| PLOT SCALE = 0:2.0000 " / in. | CHECKED - MGH  | REVISED - |
| PLOT DATE = 2/11/2025         | DRAWN - BJD    | REVISED - |
|                               | CHECKED - MGH  | REVISED - |

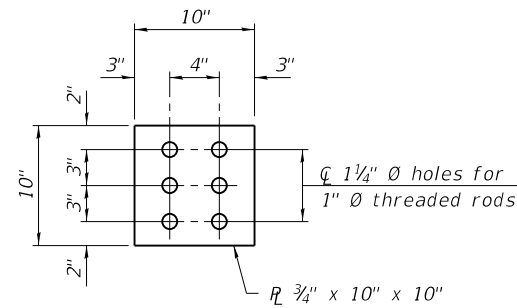
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

IL27N BEAM - SPAN 4  
 STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)

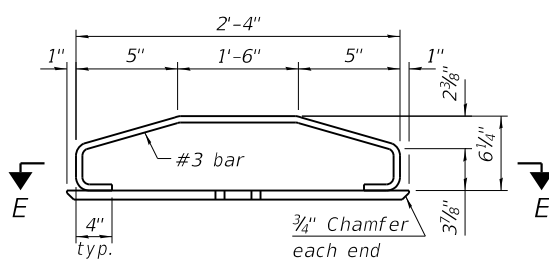
SHEET 27 OF 55 SHEETS

|             |             |        |                           |           |
|-------------|-------------|--------|---------------------------|-----------|
| F.A.P. RTE. | SECTION     | COUNTY | TOTAL SHEETS              | SHEET NO. |
| 342         | 2018-100-BR | COOK   | 4351                      | 963       |
|             |             |        | CONTRACT NO. 62N91        |           |
|             |             |        | ILLINOIS FED. AID PROJECT |           |

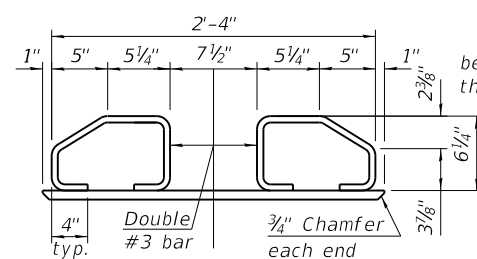




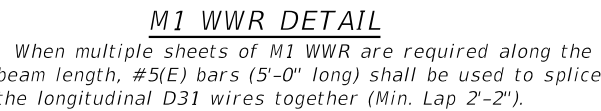
PLAN - TOP PLATE



ELEVATION - BOTTOM PLATE ASSEMBLY

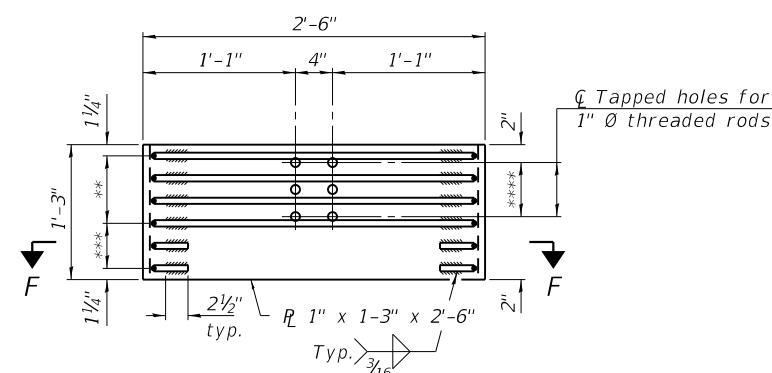


SECTION F-F



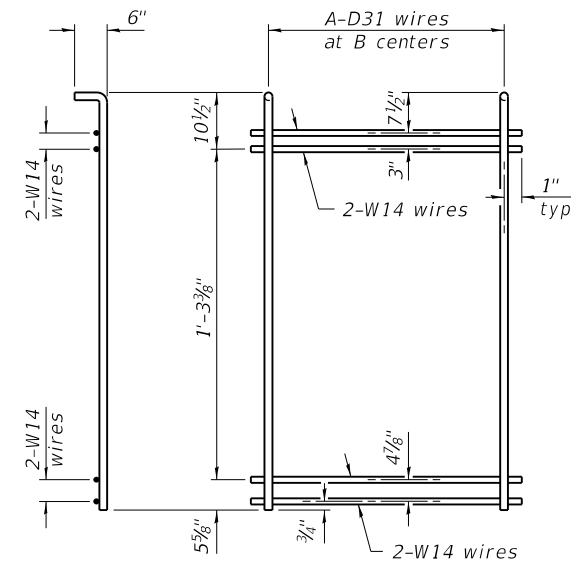
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



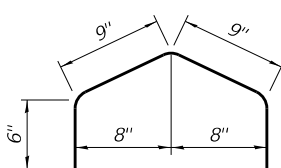
SECTION E-E

- \*\* 3 Spaces at 2 1/2" = 7 1/2"
- \*\*\* 2 Spaces at 2.5" = 5"
- \*\*\*\* 2 Spaces at 3" = 6"

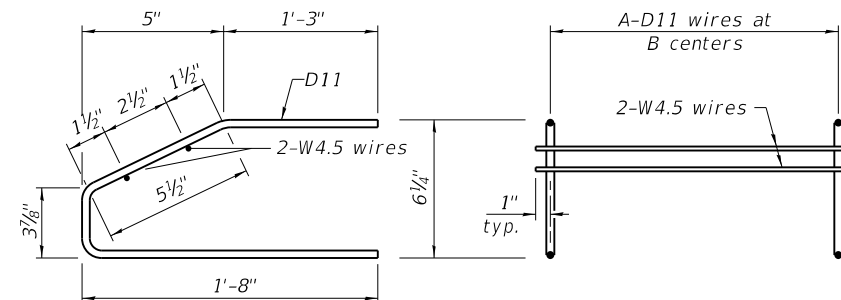


M4 THRU M6 WWR DETAIL

(See Table of Dimensions)



BAR G1(E)



M2 AND M3 WWR DETAIL

(See Table of Dimensions)

NOTES

Inserts for 3/4" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 6500 psi. A minimum 2 1/2" Ø lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1 1/2" clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating or ASTM A1060, Table 3 galvanized coating.

TABLE OF DIMENSIONS

(WWR tables are based on Grade 60. If necessary, this permits the fabricator to directly substitute grade 60 rebar as detailed in the Manual for Fabrication of Precast Prestressed Concrete Products.)

SPAN 1

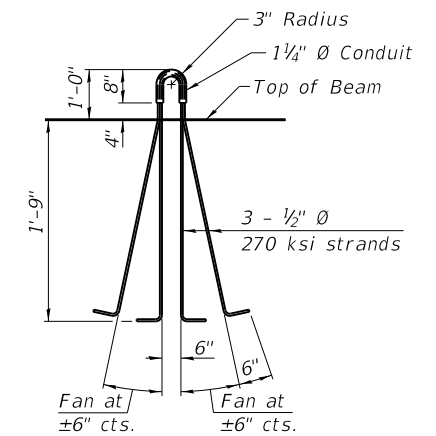
| WWR | A  | B     |
|-----|----|-------|
| M2  | 13 | 3"    |
| M3  | 15 | 1'-6" |
| M4  | 6  | 3"    |
| M5  | 34 | 6"    |
| M6  | 7  | 1'-0" |

SPANS 2 & 3

| WWR | A  | B     |
|-----|----|-------|
| M2  | 13 | 3"    |
| M3  | 16 | 1'-6" |
| M4  | 6  | 3"    |
| M5  | 34 | 6"    |
| M6  | 9  | 1'-0" |

SPAN 4

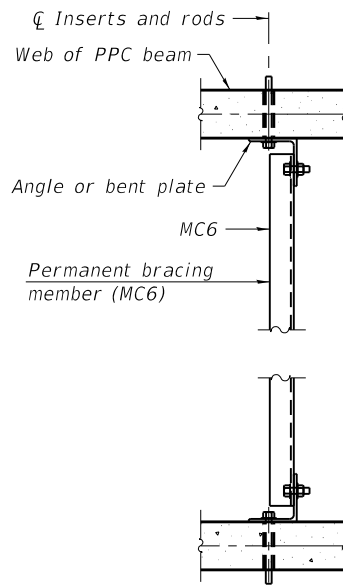
| WWR | A  | B     |
|-----|----|-------|
| M2  | 13 | 3"    |
| M3  | 15 | 1'-6" |
| M4  | 6  | 3"    |
| M5  | 35 | 6"    |
| M6  | 7  | 1'-0" |



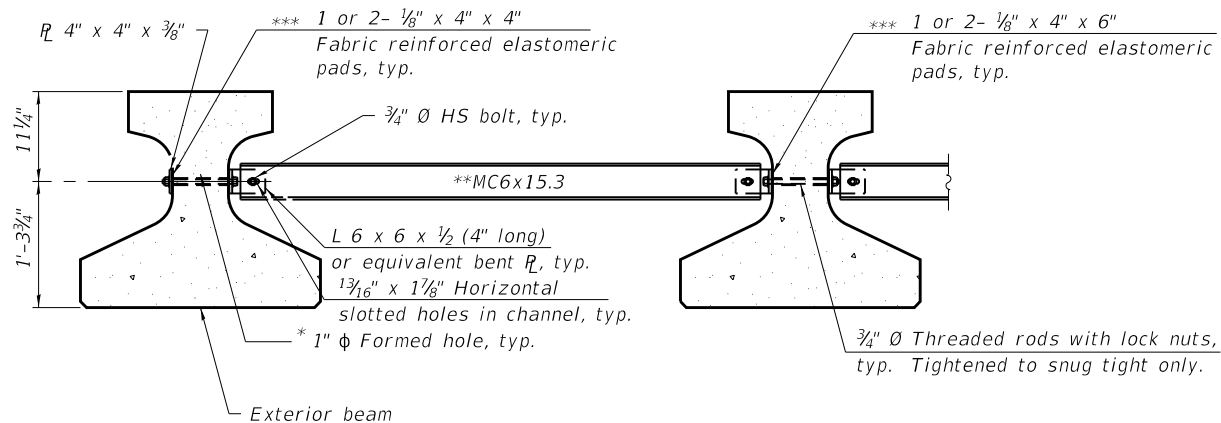
LIFTING LOOP DETAIL

BILL OF MATERIAL

| Item  | Unit | Total   |
|---|------|---------|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL27N | Foot | 3,491.0 |



PLAN



Notes:

All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.

Two hardened washers are required for each set of oversized holes.

All holes shall be  $1\frac{1}{16}$ "  $\emptyset$  unless otherwise noted.

$\frac{3}{16}$ " x 3" x 3" plate washers are required over all slotted holes.

All bolts, threaded rods, and hardware shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Bracing shall be installed as beams are erected and tightened as soon as possible during erection.

Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete Beams.

\* Fabricator shall locate to miss strands within permissible tolerances.

\*\* Alternate MC6x18 channels are permitted to facilitate material acquisition.

\*\*\* Place pads as necessary to provide a flat mounting surface between the steel and concrete.

|                 | 0.4 Sp. 1<br>0.6 Sp. 4     | Pier 1 or 3 | 0.5 Sp. 2<br>0.5 Sp. 3 | Pier 2  |
|-----------------|----------------------------|-------------|------------------------|---------|
| $I$             | (in <sup>4</sup> ) 33,879  | 33,879      | 33,879                 | 33,879  |
| $I'$            | (in <sup>4</sup> ) 158,818 | 158,818     | 158,818                | 158,818 |
| $S_b$           | (in <sup>3</sup> ) 3,060   | 3,060       | 3,060                  | 3,060   |
| $S_b'$          | (in <sup>3</sup> ) 6,822   | 6,822       | 6,822                  | 6,822   |
| $S_t$           | (in <sup>3</sup> ) 2,127   | 2,127       | 2,127                  | 2,127   |
| $S_t'$          | (in <sup>3</sup> ) 42,693  | 42,693      | 42,693                 | 42,693  |
| DC1             | (k/ft.) 1.27               | 1.27        | 1.27                   | 1.27    |
| $M_{DC1}$       | (k) 399.0                  | 0           | 462.9                  | 0       |
| DC2             | (k/ft.) 0.14               | 0.14        | 0.14                   | 0.14    |
| $M_{DC2}$       | (k) 30.8                   | -39.8       | 17.9                   | -30.8   |
| DW              | (k/ft.) 0.35               | 0.35        | 0.35                   | 0.35    |
| $M_{DW}$        | (k) 75.6                   | -97.8       | 44.0                   | -75.6   |
| LLDF            | (k) 0.66                   | 0.66        | 0.65                   | 0.65    |
| $M_{\ell} + IM$ | (k) 599.0                  | -435.8      | 508.9                  | -418.6  |

|                                     | S. Abut.  | N. Abut. | Pier 1 Span 1<br>Pier 3 Span 4 | Pier 1 Span 2<br>Pier 3 Span 3 | Pier 2 Span 2<br>Pier 2 Span 3 |
|-------------------------------------|-----------|----------|--------------------------------|--------------------------------|--------------------------------|
| LLDF                                | 0.95      | 0.95     | 0.96                           | 0.96                           | 0.96                           |
| OCF                                 | 1.21      | 1.21     | -                              | -                              | -                              |
| $R_{DC1}$                           | (k) 74.1  | 74.7     | 42.9                           | 44.7                           | 44.7                           |
| $R_{DC2}$                           | (k) 2.9   | 3.0      | 8.9                            | 8.8                            | 7.8                            |
| $R_{DW}$                            | (k) 15.2  | 15.4     | 21.9                           | 21.6                           | 19.1                           |
| $R_{\ell} + IM$                     | (k) 85.7  | 86.1     | 132.0                          | 131.5                          | 166.9                          |
| $R_{Total}$ (Strength I)(Impact)    | (k) 300.2 | 302.2    | 328.5                          | 329.5                          | 386.3                          |
| $R_{Total}$ (Strength I)(No Impact) | (k) 262.9 | 264.7    | 289.1                          | 290.2                          | 331.2                          |

\*\*\* At continuous piers, reactions from composite loads are assumed to be equally distributed to each bearing line.

- $I$ : Non-composite moment of inertia of beam section (in<sup>4</sup>).
- $I'$ : Composite moment of inertia of beam section (in<sup>4</sup>).
- $S_b$ : Non-composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).
- $S_b'$ : Composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).
- $S_t$ : Non-composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).
- $S_t'$ : Composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).
- DC1: Un-factored non-composite dead load (kips/ft.).
- $M_{DC1}$ : Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- $M_{DC2}$ : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- $M_{DW}$ : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.
- $M_{\ell} + IM$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- OCF: Obtuse Correction Factor computed according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.
- $R_{DC1}$ : Un-factored reaction due to non-composite dead load (kip).
- $R_{DC2}$ : Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).
- $R_{DW}$ : Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).
- $R_{\ell}$ : Un-factored live load reaction (kip).
- $R_{IM}$ : Un-factored dynamic load allowance (impact) (kip).
- $R_{Total}$  (Strength I)(Impact): Total factored reaction including dynamic load allowance (impact) (kip).
- $R_{Total}$  (Strength I)(No Impact): Total factored reaction not including dynamic load allowance (impact) (kip).

PERMANENT BRACING DETAILS FOR IL27 BEAMS

MODEL: Default  
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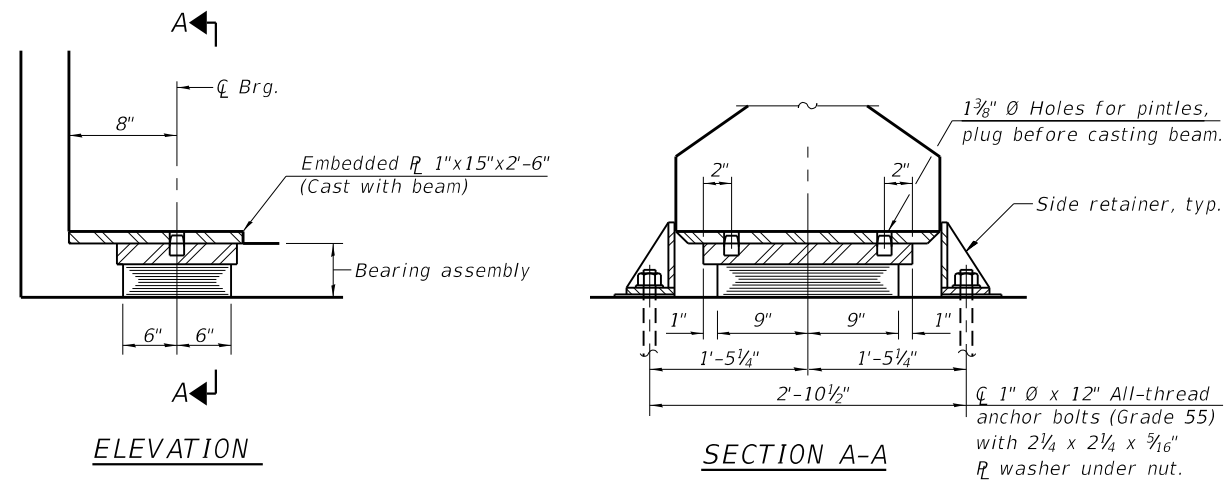
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|              |                | CHECKED -  | MGH | REVISED - |  |
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| PLOT DATE =  | 2/11/2025      | CHECKED -  | MGH | REVISED - |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

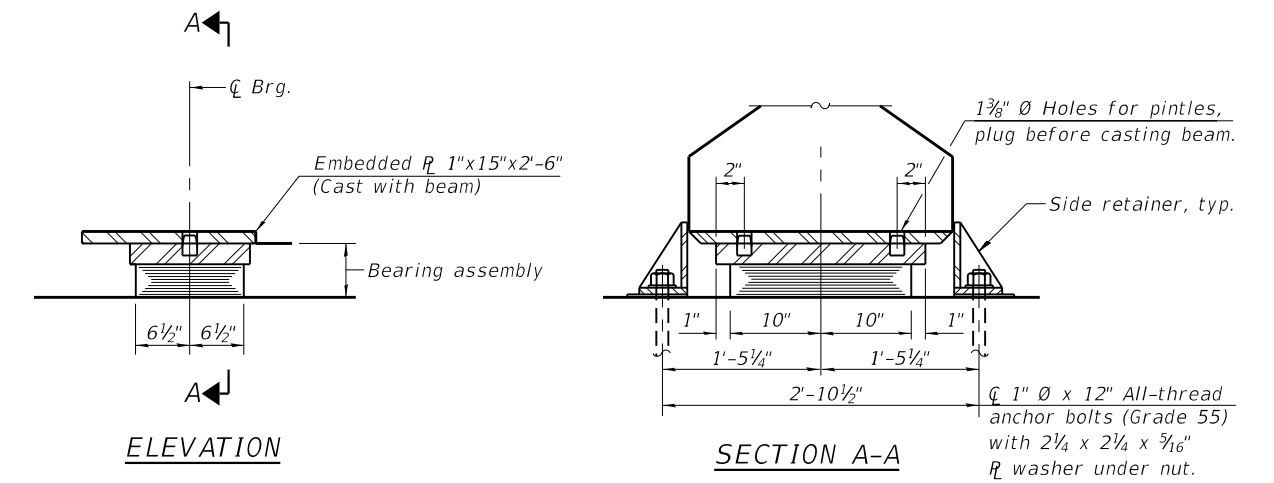
IL27N BEAM DETAILS - 2  
STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)

SHEET 29 OF 55 SHEETS

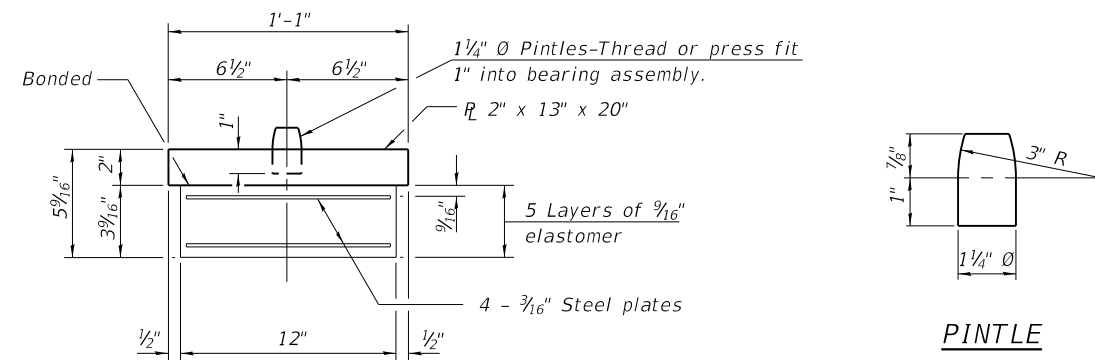
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| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 965       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



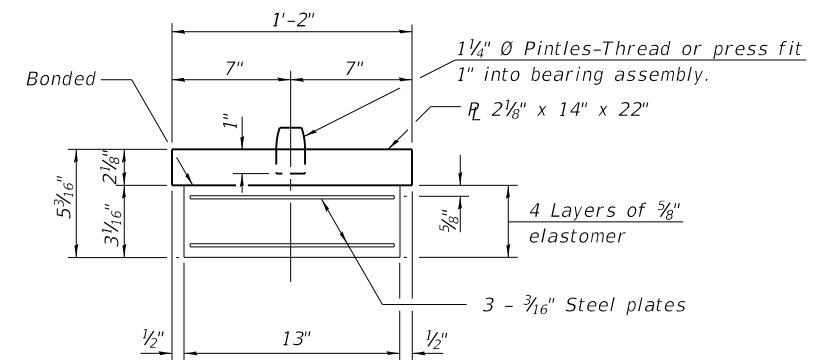
**TYPE I ELASTOMERIC EXP. BRG. ASSEMBLY I AT ABUTMENTS**



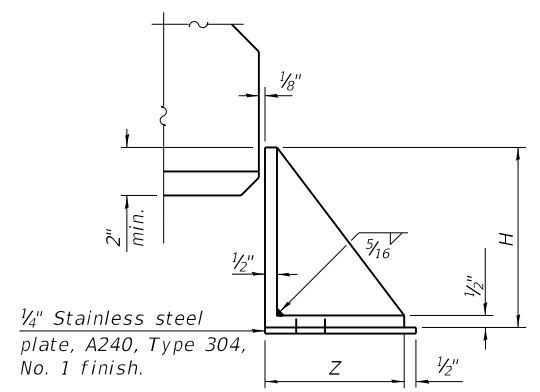
**TYPE I ELASTOMERIC EXP. BRG. ASSEMBLY II AT PIER 1 AND PIER 3**



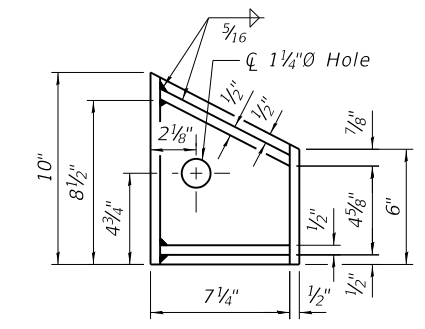
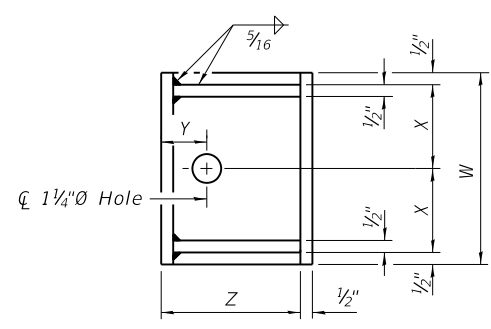
**BEARING ASSEMBLY I**



**BEARING ASSEMBLY II**



**SIDE RETAINER**  
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



**SIDE RETAINER**  
To be located on side of abutment backwalls

**SIDE RETAINER DIMENSIONS**

| Item        | Z      | W   | H       | Y      | X      |
|-------------|--------|-----|---------|--------|--------|
| Assembly I  | 7 1/4" | 10" | 7 9/16" | 2 1/8" | 4 1/2" |
| Assembly II | 7 7/8" | 12" | 7 3/16" | 2 1/8" | 5 1/2" |

**Notes:**  
Side retainers and stainless steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.  
See sheet 28 of 55 for additional details of embedded plate.  
Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.  
All exposed bearing plates and side retainers shall be hot dip galvanized according to AASHTO M111.  
Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.  
The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.

**BILL OF MATERIAL**

| Item                                 | Unit | Total |
|--------------------------------------|------|-------|
| Elastomeric Bearing Assembly, Type I | Each | 96    |
| Anchor Bolts, 1"                     | Each | 192   |

MODEL: Default  
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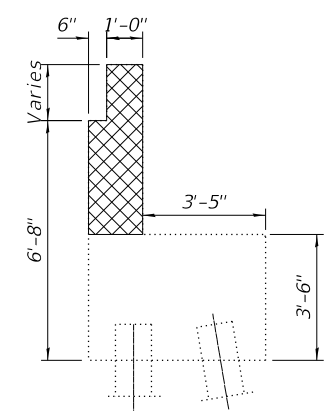
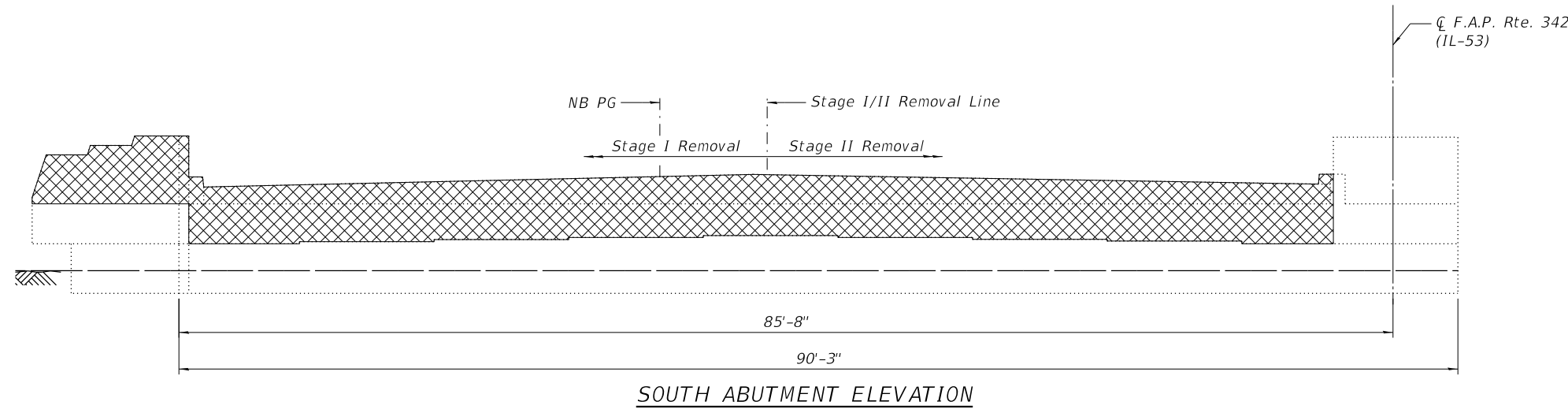
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| PLOT DATE = 2/11/2025       | DRAWN - BJD    | REVISED - |
|                             | CHECKED - MGH  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

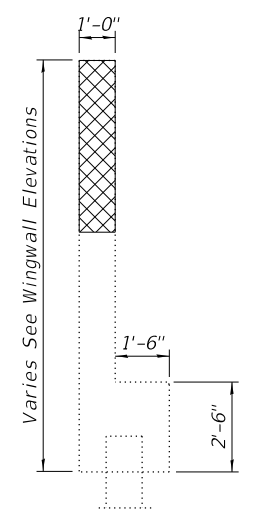
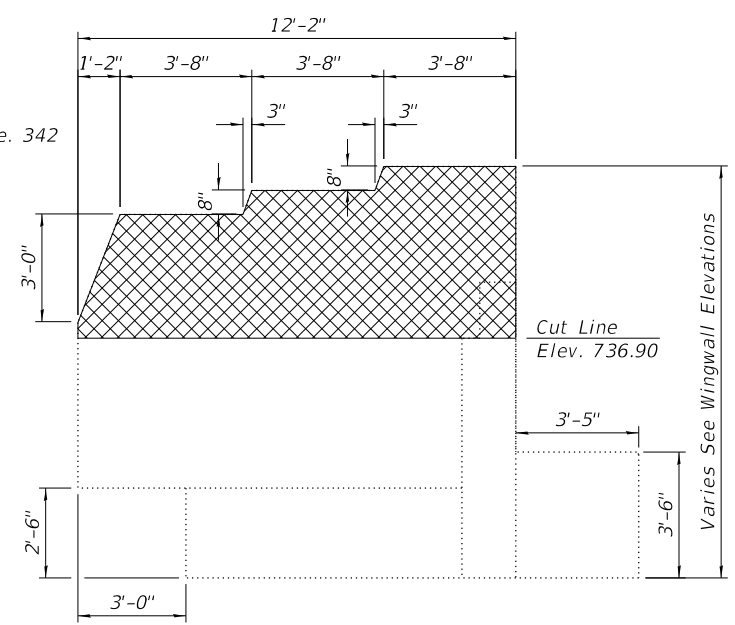
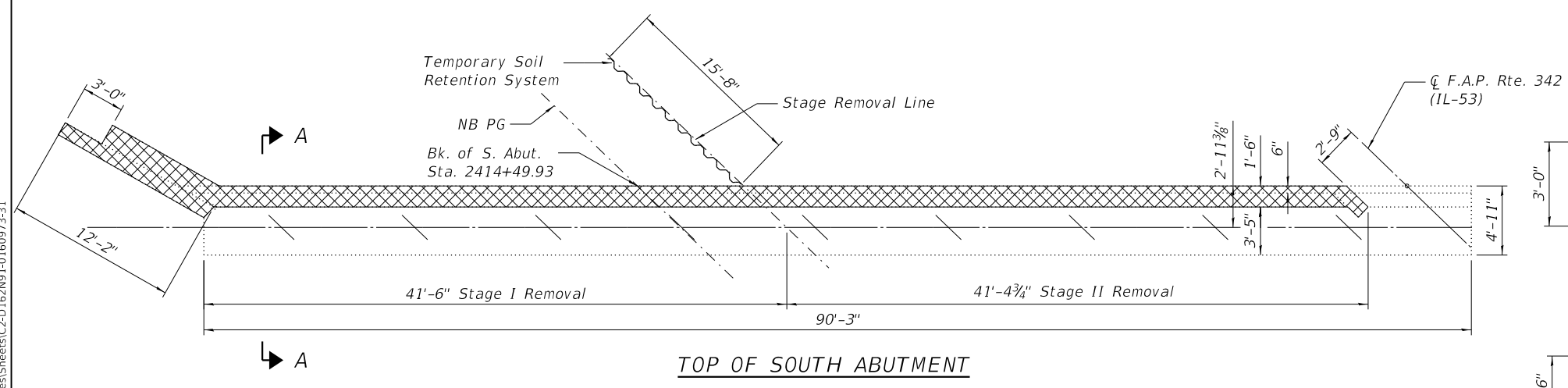
**BEARING DETAILS  
STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)**

SHEET 30 OF 55 SHEETS

|             |             |        |                    |           |
|-------------|-------------|--------|--------------------|-----------|
| F.A.P. RTE. | SECTION     | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 342         | 2018-100-BR | COOK   | 1351               | 966       |
|             |             |        | CONTRACT NO. 62N91 |           |
| ILLINOIS    |             |        | FED. AID PROJECT   |           |



**LEGEND**  
 Concrete Removal



- Notes:
- Hatched areas indicate the limits of Concrete Removal.
  - Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
  - Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2" layer of cement grout. Cost included with Concrete Removal.
  - The elevations shown above were calculated from the survey information provided by the district.

**BILL OF MATERIAL**

| ITEM             | UNIT    | QUANTITY |
|------------------|---------|----------|
| Concrete Removal | Cu. Yd. | 20.7     |

MODEL: Default  
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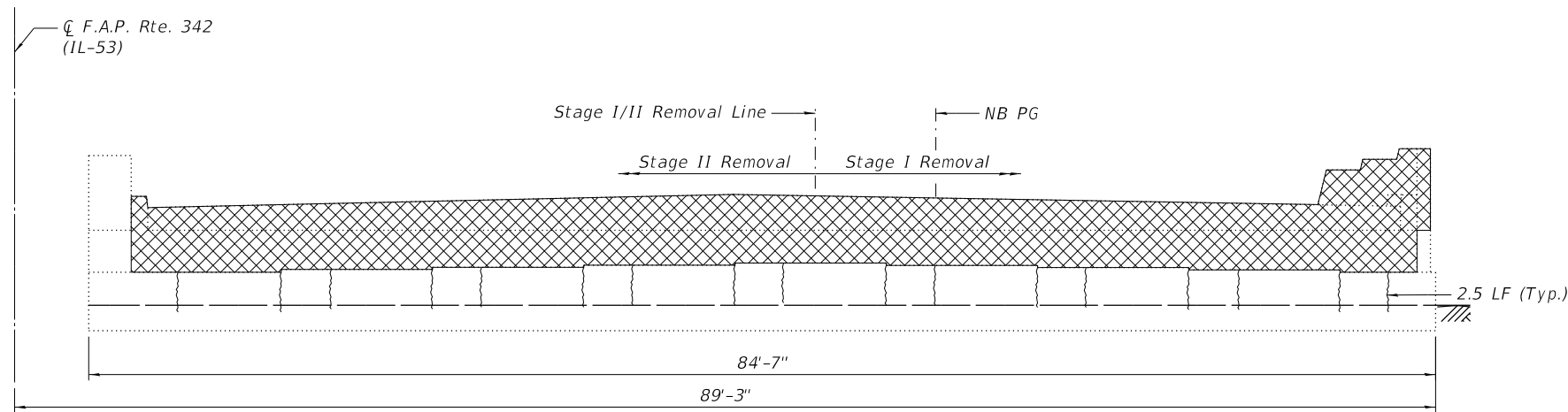
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| PLOT DATE = 2/11/2025      | DRAWN - BJD    | REVISED - |
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

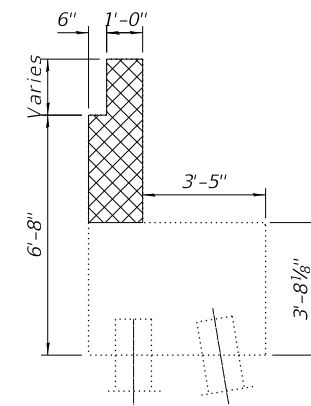
**NB SOUTH ABUTMENT REMOVAL AND REPAIRS  
 STRUCTURE NO. 016 - 0973 (NB)**

SHEET 31 OF 55 SHEETS

|                           |                     |             |                   |               |
|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.S. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1290 | SHEET NO. 967 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |



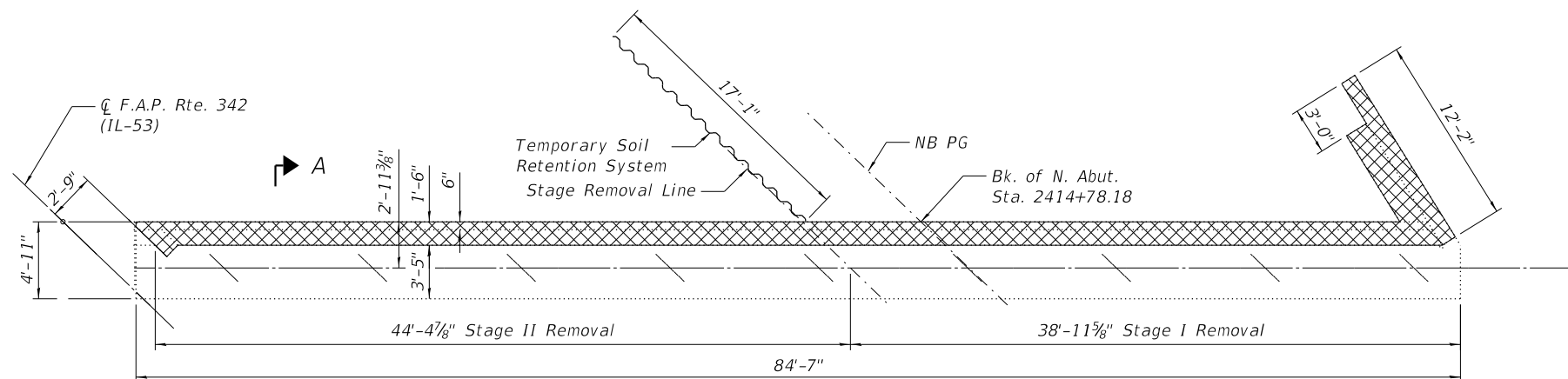
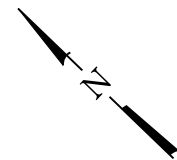
**NORTH ABUTMENT ELEVATION**



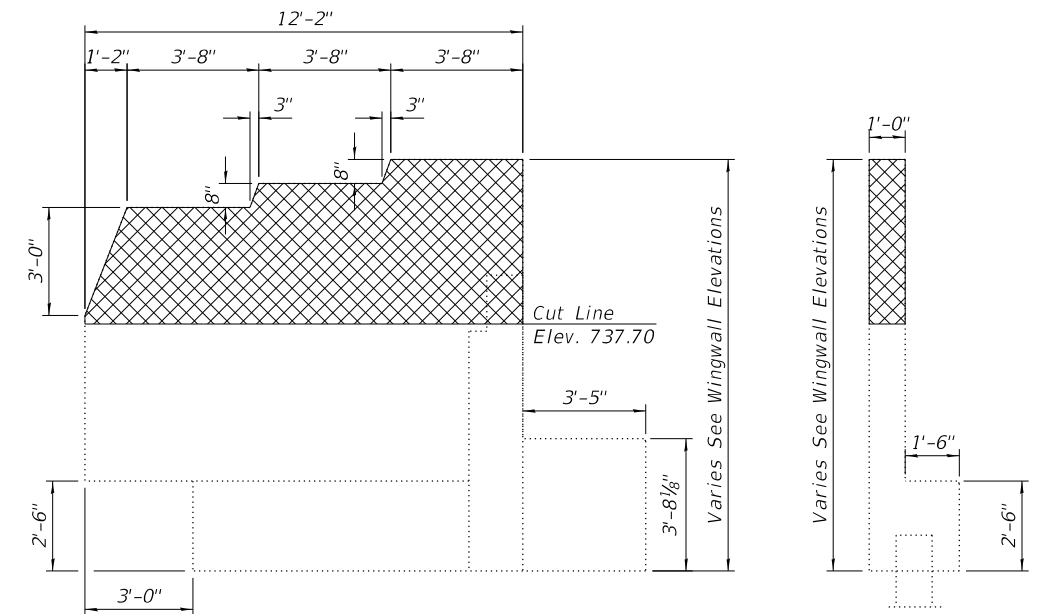
**SECTION A-A**

**LEGEND**

- Concrete Removal
- 8 LF Epoxy Crack Injection



**TOP OF NORTH ABUTMENT**



**NORTHEAST WINGWALL ELEVATION**

**SECTION THRU WINGWALL**

- Notes:
1. Hatched areas indicate the limits of Concrete Removal.
  2. Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
  3. Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2" layer of cement grout. Cost included with Concrete Removal.
  4. The elevations shown above were calculated from the survey information provided by the district.

**BILL OF MATERIAL**

| ITEM                  | UNIT    | QUANTITY |
|-----------------------|---------|----------|
| Concrete Removal      | Cu. Yd. | 19.3     |
| Epoxy Crack Injection | Foot    | 43       |

MODEL: Default  
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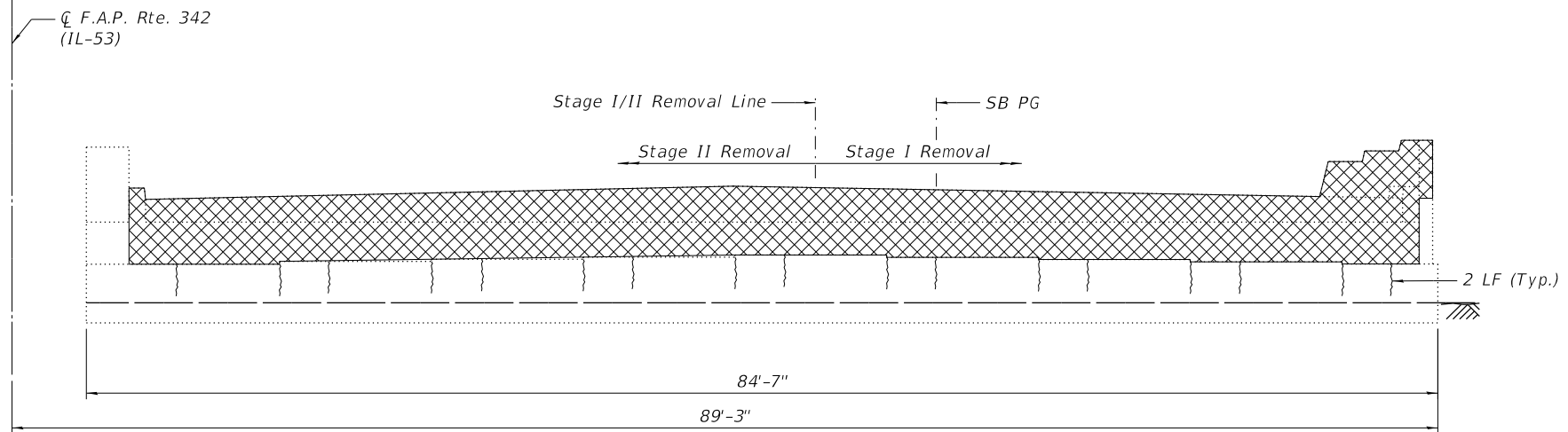
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| USER NAME =  | USGM717780    | DESIGNED - | BJD | REVISED - |  |
|              |               | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0.1667' / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025     | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

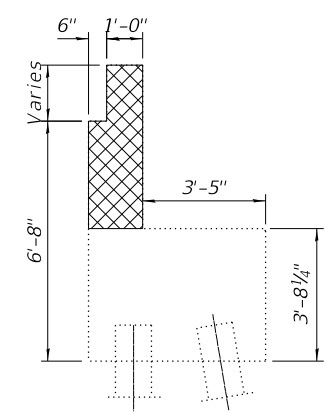
**NB NORTH ABUTMENT REMOVAL AND REPAIRS  
STRUCTURE NO. 016 - 0973 (NB)**

SHEET 32 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.S. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1290         | 968       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



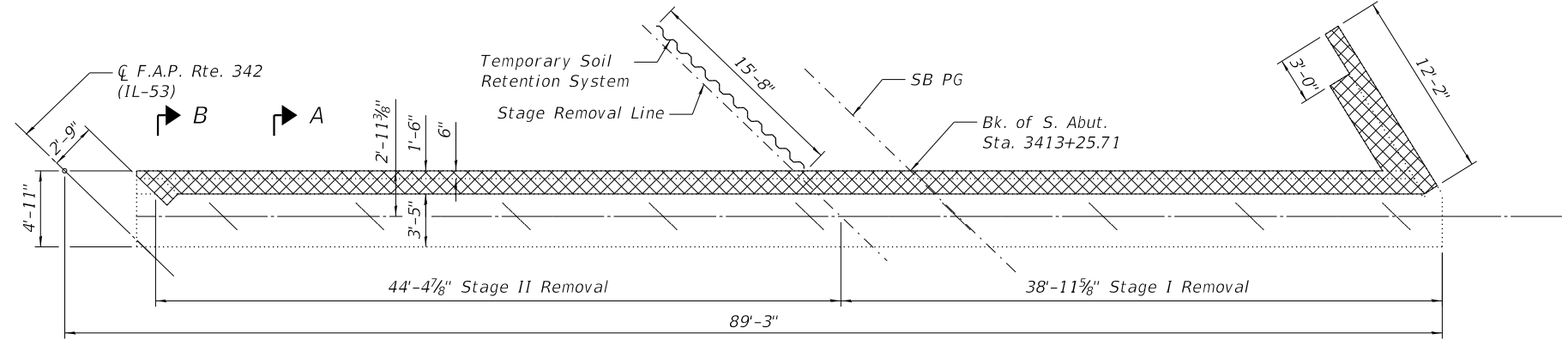
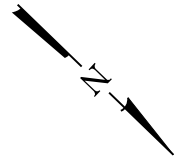
**SOUTH ABUTMENT ELEVATION**



**SECTION A-A**

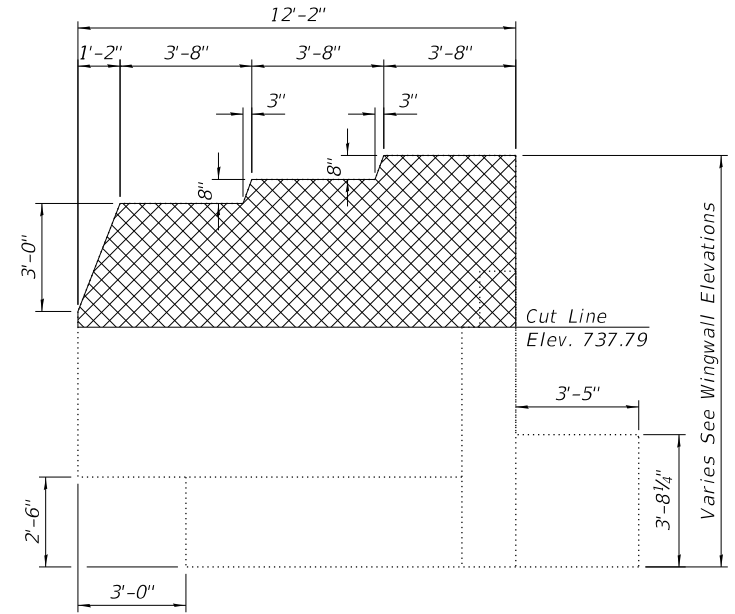
**LEGEND**

- Concrete Removal
- Epoxy Crack Injection

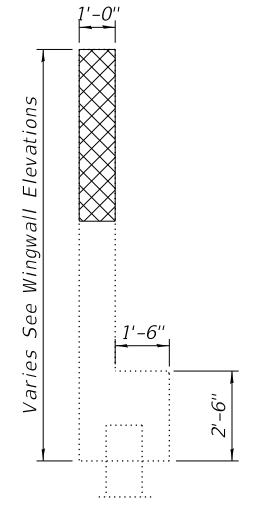


**TOP OF SOUTH ABUTMENT**

Elev. 739.35



**SOUTHWEST WINGWALL ELEVATION**



**SECTION THU WINGWALL**

- Notes:
1. Hatched areas indicate the limits of Concrete Removal.
  2. Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
  3. Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2" layer of cement grout. Cost included with Concrete Removal.
  4. The elevations shown above were calculated from the survey information provided by the district.

**BILL OF MATERIAL**

| ITEM                  | UNIT    | QUANTITY |
|-----------------------|---------|----------|
| Concrete Removal      | Cu. Yd. | 19.3     |
| Epoxy Crack Injection | Foot    | 34       |

MODEL: Default  
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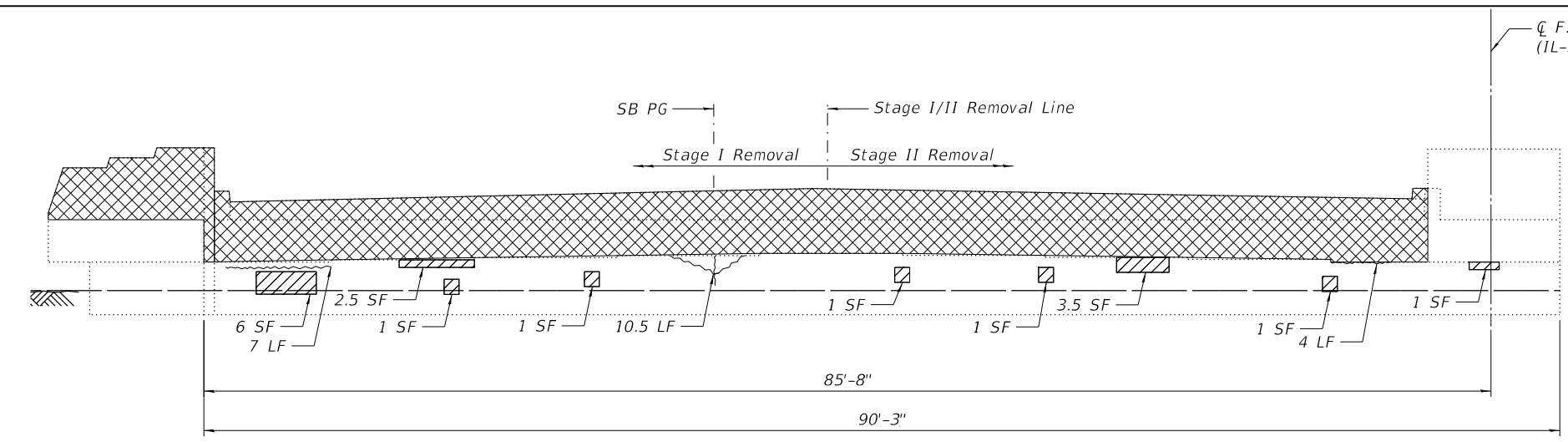
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|--------------|---------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780    | DESIGNED - | BJD | REVISED - |  |
|              |               | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0.1667' / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025     | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SB SOUTH ABUTMENT REMOVAL AND REPAIRS  
STRUCTURE NO. 016 - 0371 (SB)**

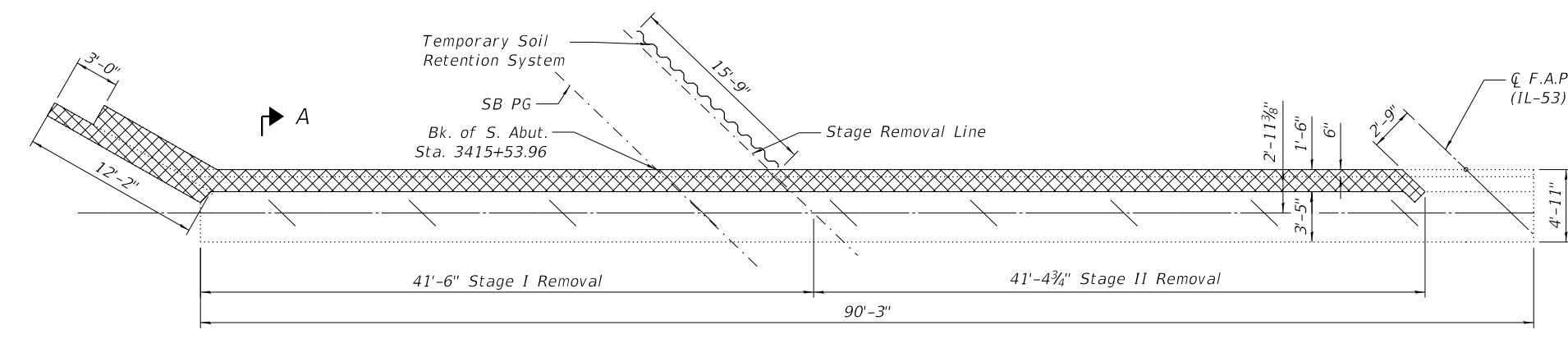
SHEET 33 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.S. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1290         | 969       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

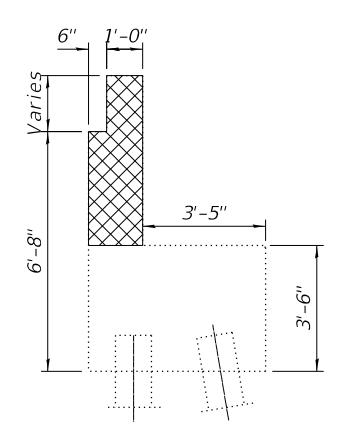


- LEGEND**
- Concrete Removal
  - 8 LF Epoxy Crack Injection
  - Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)

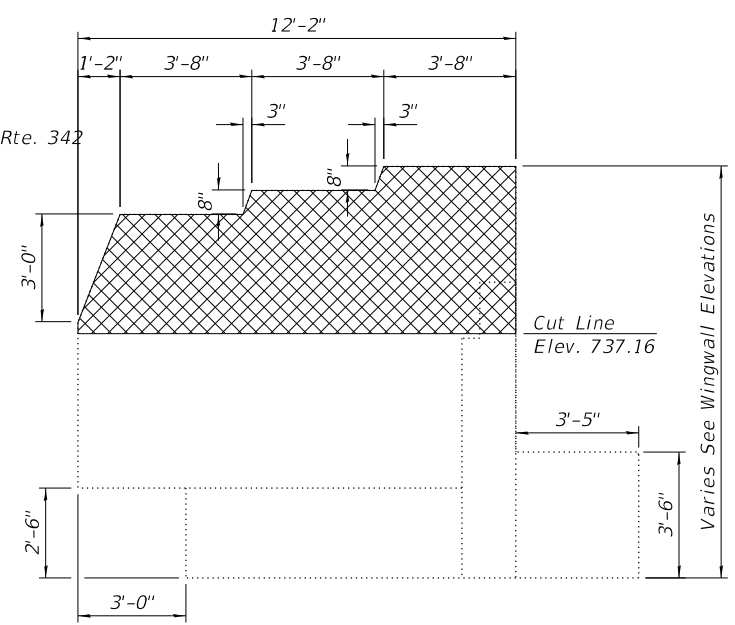
**NORTH ABUTMENT ELEVATION**



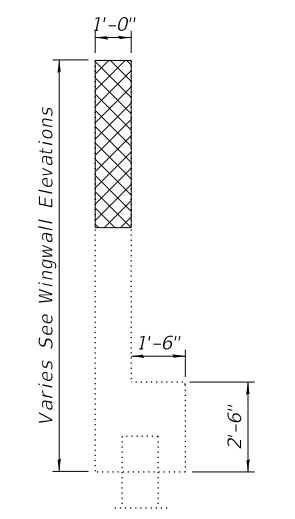
**TOP OF NORTH ABUTMENT**



**SECTION A-A**



**NORTHWEST WINGWALL ELEVATION**



**SECTION THU WINGWALL**

- Notes:**
1. Hatched areas indicate the limits of Concrete Removal.
  2. Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
  3. Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2" layer of cement grout. Cost included with Concrete Removal.
  4. The elevations shown above were calculated from the survey information provided by the district.

**BILL OF MATERIAL**

| ITEM   | UNIT    | QUANTITY |
|--|---------|----------|
| Concrete Removal   | Cu. Yd. | 20.7     |
| Epoxy Crack Injection  | Foot    | 22       |
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq. Ft. | 18       |

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project 62N91-IL 53 Bridge\Structures\Sheets\C2-D162N91-0160973-34



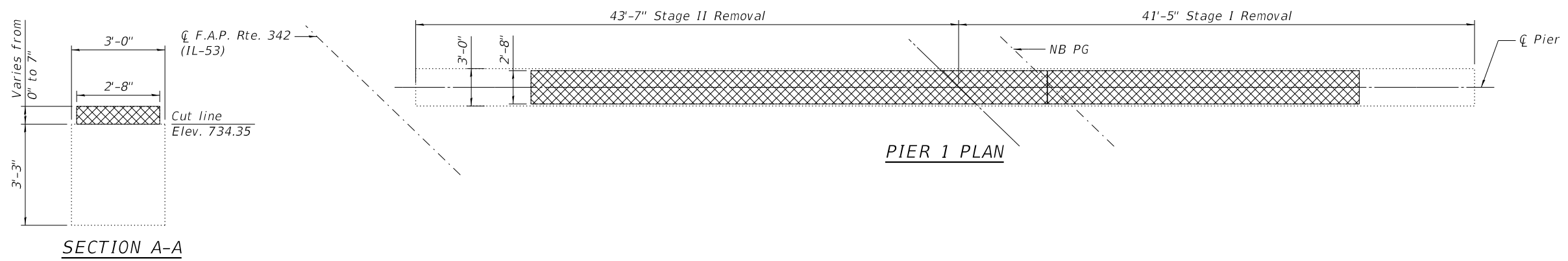
|                            |                |           |
|----------------------------|----------------|-----------|
| USER NAME = USGM717780     | DESIGNED - BJD | REVISED - |
| PLOT SCALE = 0.1667' / in. | CHECKED - MGH  | REVISED - |
| PLOT DATE = 2/11/2025      | DRAWN - BJD    | REVISED - |
|                            | CHECKED - MGH  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

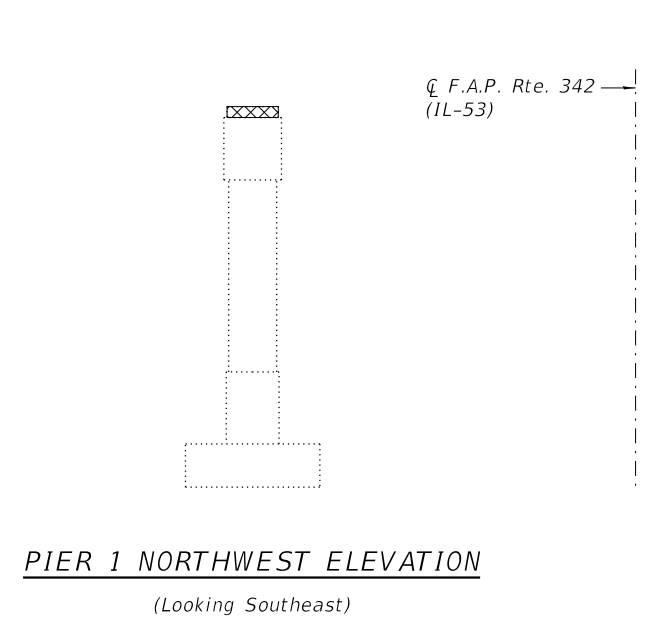
**SB NORTH ABUTMENT REMOVAL AND REPAIRS  
STRUCTURE NO. 016 - 0371 (SB)**

SHEET 34 OF 55 SHEETS

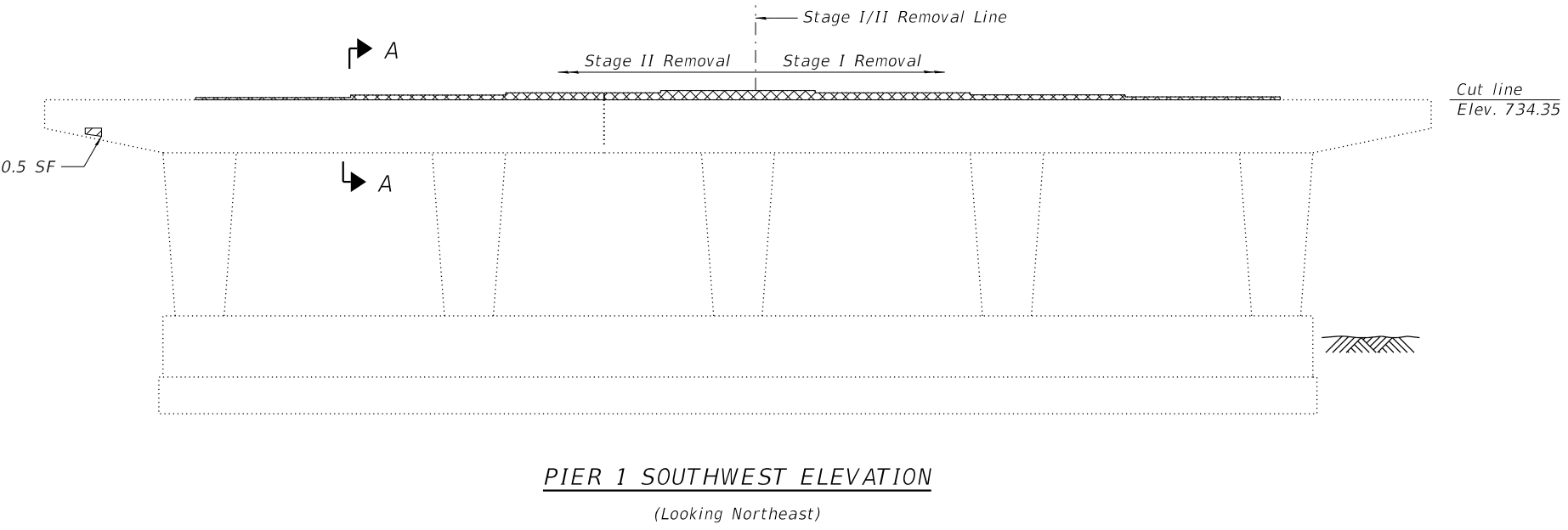
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|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.S. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1290 | SHEET NO. 970 |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |



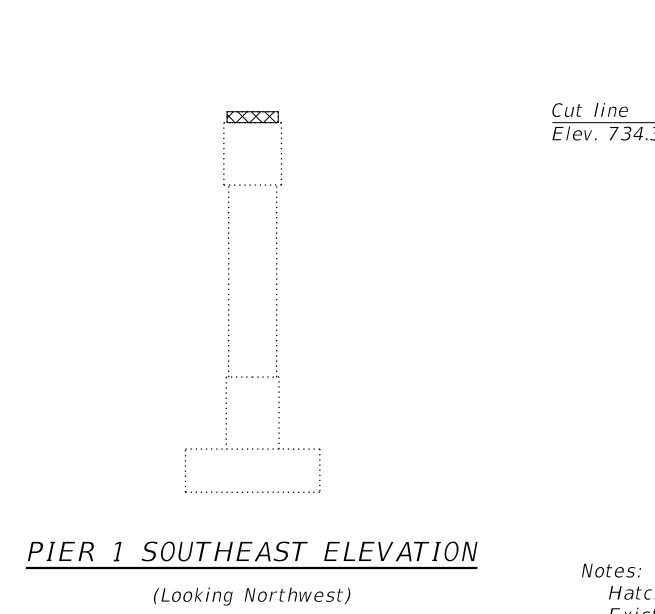
SECTION A-A



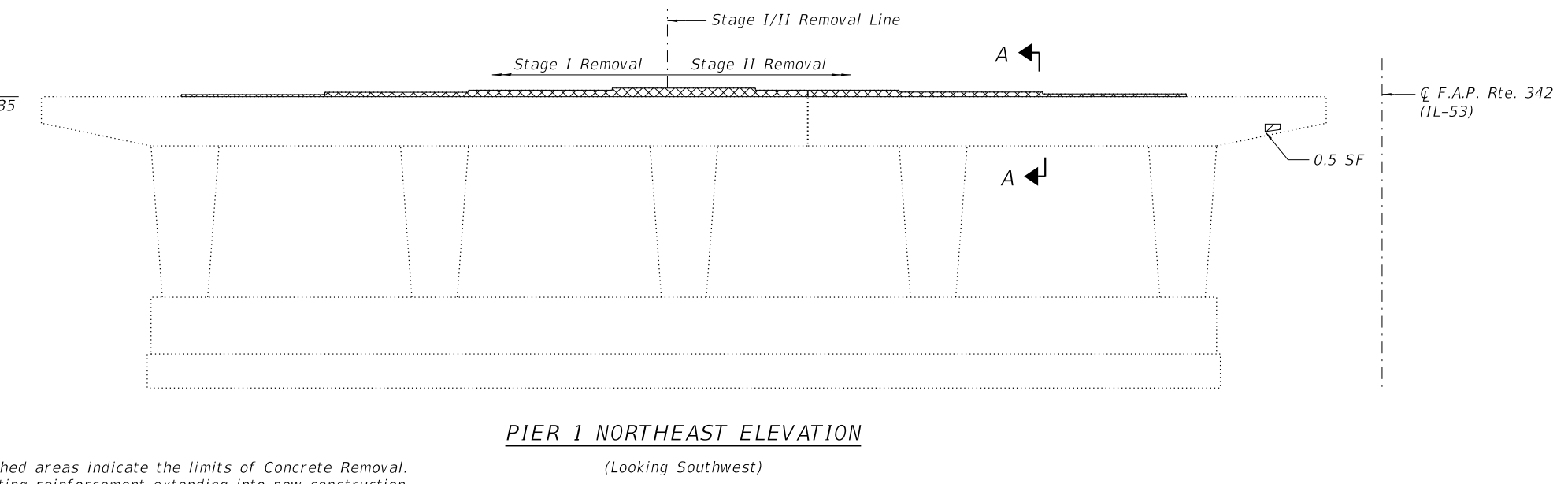
PIER 1 NORTHWEST ELEVATION  
(Looking Southeast)



PIER 1 SOUTHWEST ELEVATION  
(Looking Northeast)



PIER 1 SOUTHEAST ELEVATION  
(Looking Northwest)



PIER 1 NORTHEAST ELEVATION  
(Looking Southwest)

Notes:  
 Hatched areas indicate the limits of Concrete Removal.  
 Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.  
 Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2" layer of cement grout. Cost included with Concrete Removal.  
 The elevations shown above were calculated from the survey information provided by the district.

LEGEND

- Concrete Removal
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)

BILL OF MATERIAL

| ITEM   | UNIT    | QUANTITY |
|--|---------|----------|
| Concrete Removal   | Cu. Yd. | 2.2      |
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq. Ft. | 1        |

MODEL: Default  
 FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project 62N91-IL 53 Bridge\Structures\Sheets\C2-D162N91-0160973-35



|              |                  |            |     |           |  |
|--------------|------------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780       | DESIGNED - | BJD | REVISED - |  |
|              |                  | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 " / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025        | CHECKED -  | MGH | REVISED - |  |

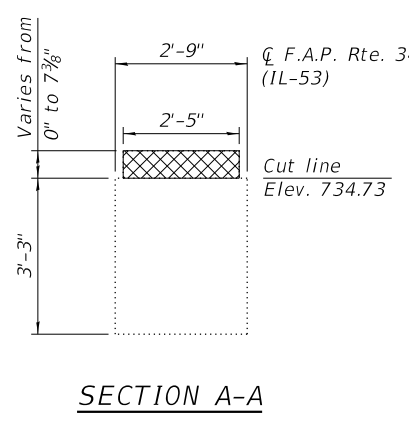
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NB PIER 1 REMOVAL AND REPAIRS  
 STRUCTURE NO. 016 - 0973 (NB)

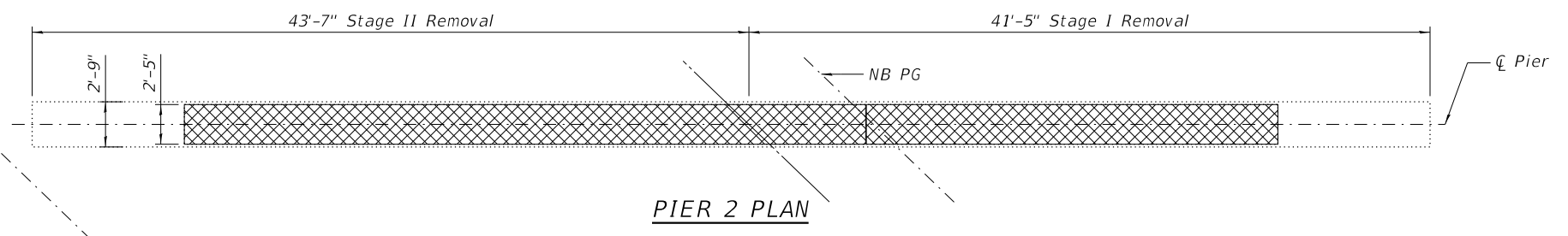
SHEET 35 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.S. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1290         | 971       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

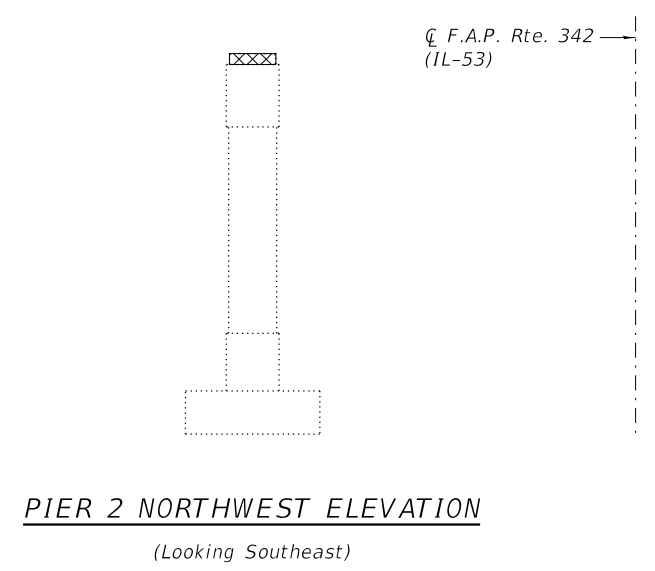




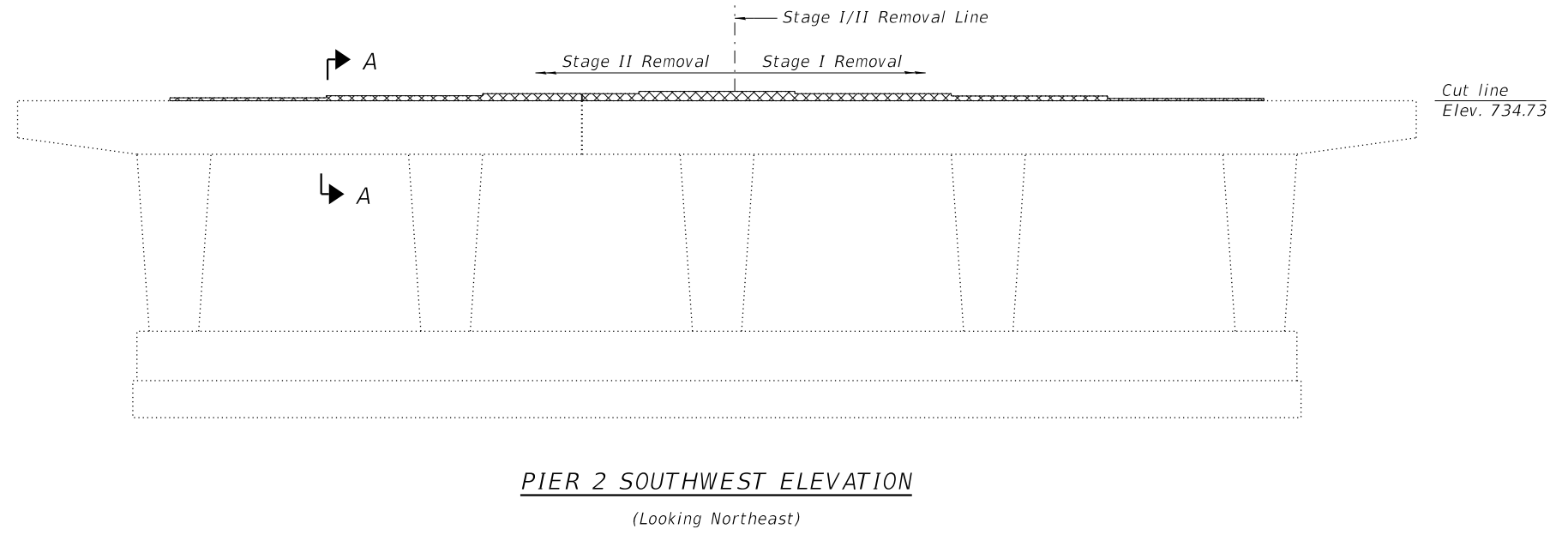
**SECTION A-A**



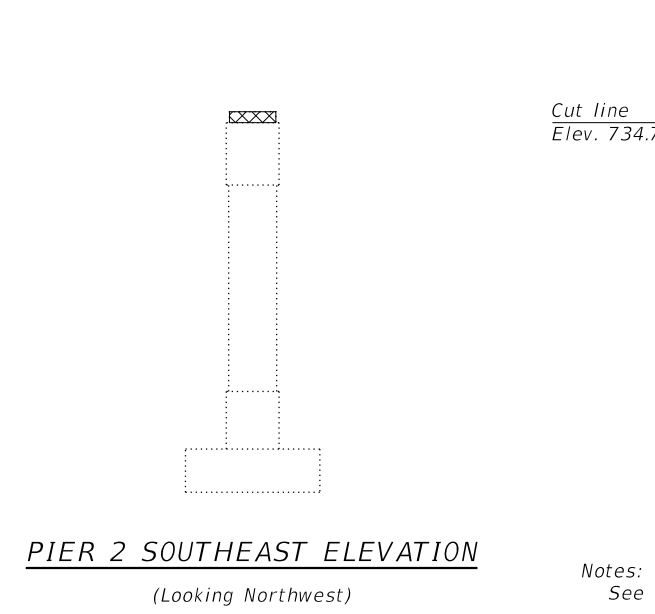
**PIER 2 PLAN**



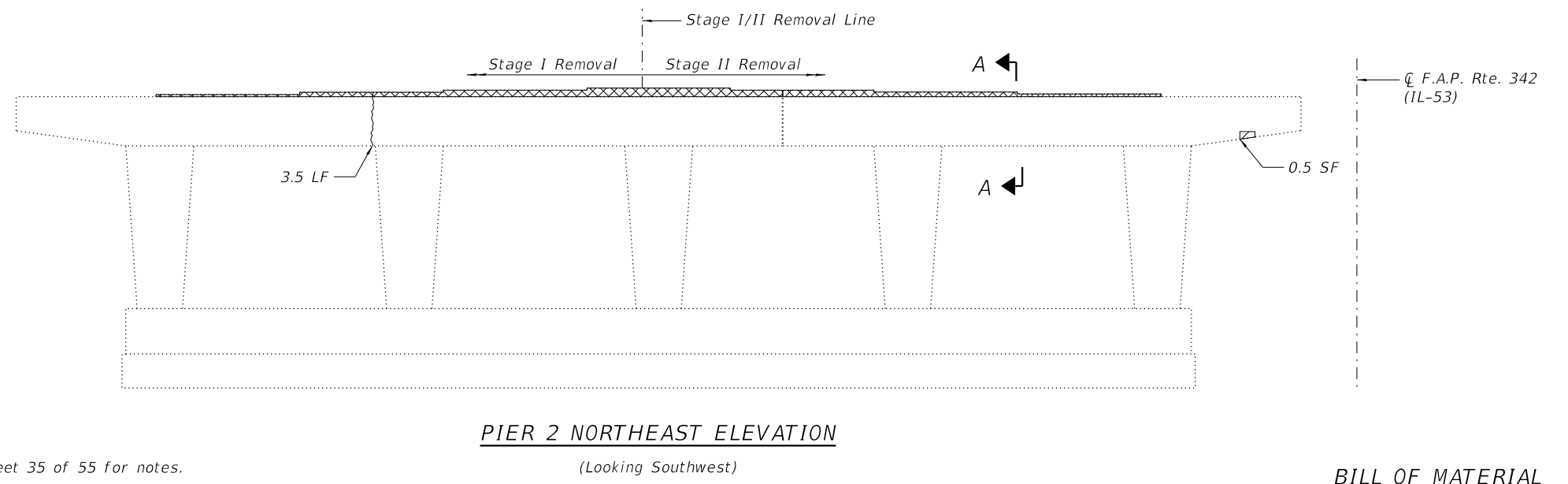
**PIER 2 NORTHWEST ELEVATION**  
(Looking Southeast)



**PIER 2 SOUTHWEST ELEVATION**  
(Looking Northeast)



**PIER 2 SOUTHEAST ELEVATION**  
(Looking Northwest)



**PIER 2 NORTHEAST ELEVATION**  
(Looking Southwest)

Notes:  
See Sheet 35 of 55 for notes.

**LEGEND**

- Concrete Removal
- Epoxy Crack Injection (Width > 0.06")
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)

**BILL OF MATERIAL**

| ITEM   | UNIT    | QUANTITY |
|--|---------|----------|
| Concrete Removal   | Cu. Yd. | 2.0      |
| Epoxy Crack Injection  | Foot    | 4        |
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq. Ft. | 1        |

MODEL: Default  
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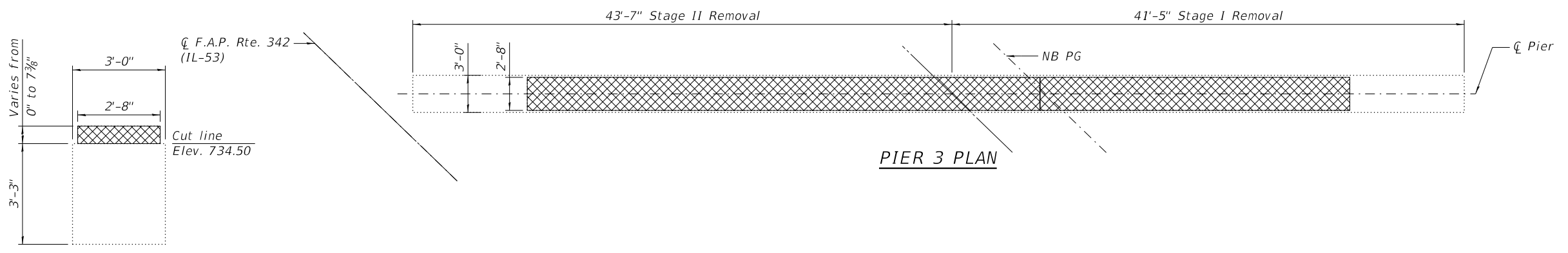
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|--------------|--------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780   | DESIGNED - | BJD | REVISED - |  |
|              |              | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/> |            |     |           |  |
| PLOT DATE =  | 2/11/2025    | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

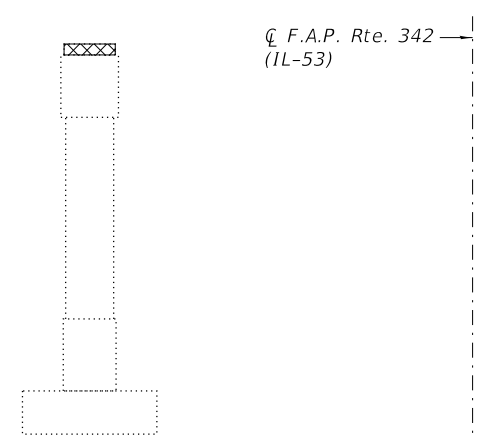
**NB PIER 2 REMOVAL AND REPAIRS**  
**STRUCTURE NO. 016 - 0973 (NB)**

SHEET 36 OF 55 SHEETS

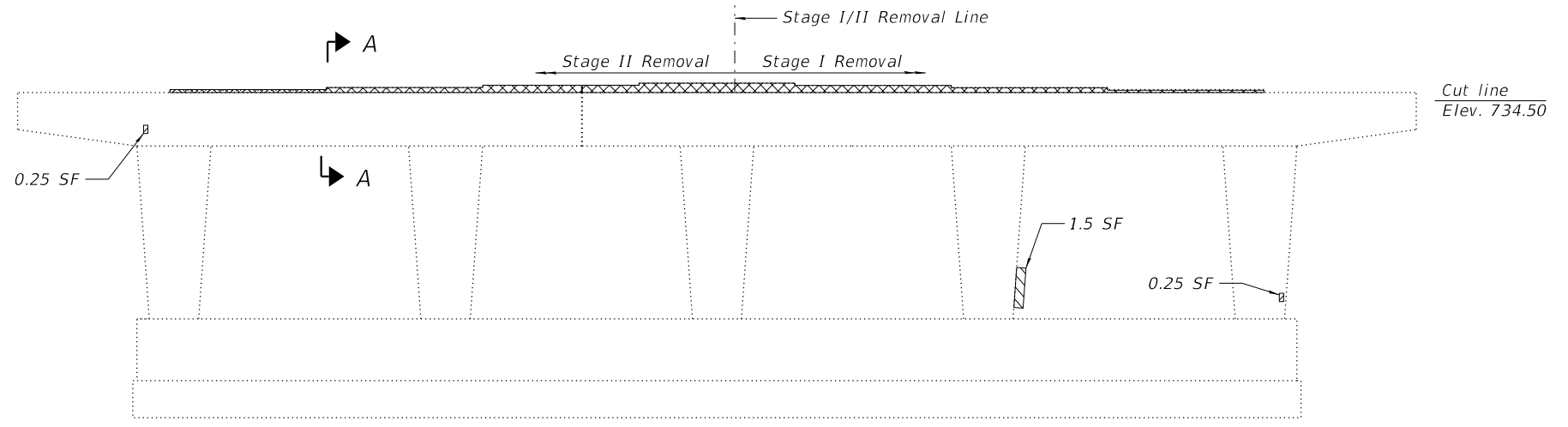
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|-------------|-------------|----------|--------------------|-----------|
| F.A.S. RTE. | SECTION     | COUNTY   | TOTAL SHEETS       | SHEET NO. |
| 342         | 2018-100-BR | COOK     | 1290               | 972       |
|             |             |          | CONTRACT NO. 62N91 |           |
|             |             | ILLINOIS | FED. AID PROJECT   |           |



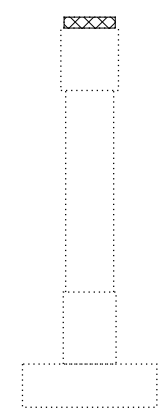
**SECTION A-A**



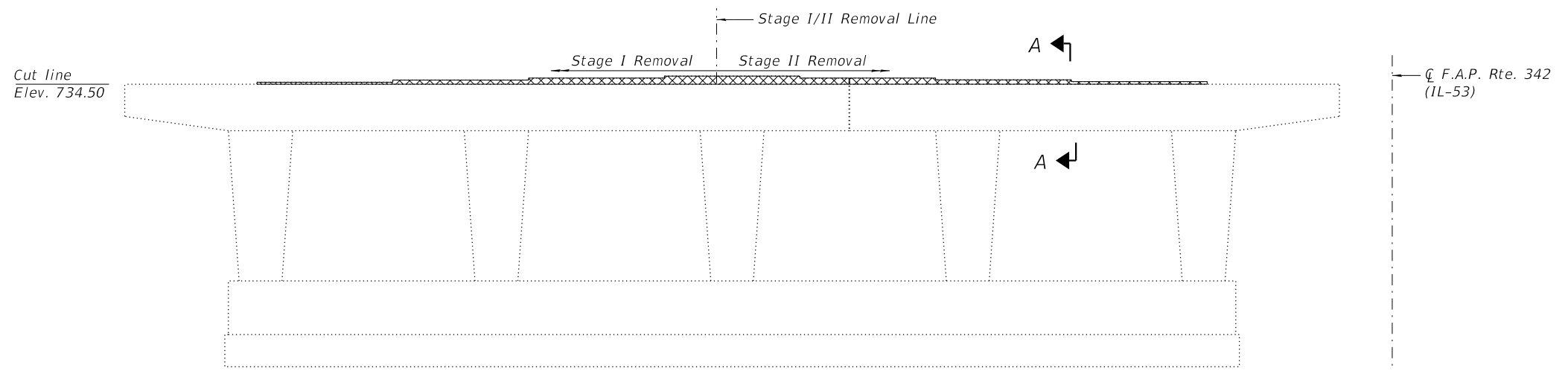
**PIER 3 NORTHWEST ELEVATION**  
(Looking Southeast)



**PIER 3 SOUTHWEST ELEVATION**  
(Looking Northeast)



**PIER 3 SOUTHEAST ELEVATION**  
(Looking Northwest)



**PIER 3 NORTHEAST ELEVATION**  
(Looking Southwest)

Notes:  
See Sheet 35 of 55 for notes.

**LEGEND**

- Concrete Removal
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)

**BILL OF MATERIAL**

| ITEM   | UNIT    | QUANTITY |
|--|---------|----------|
| Concrete Removal   | Cu. Yd. | 2.2      |
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq. Ft. | 2        |

MODEL: Default  
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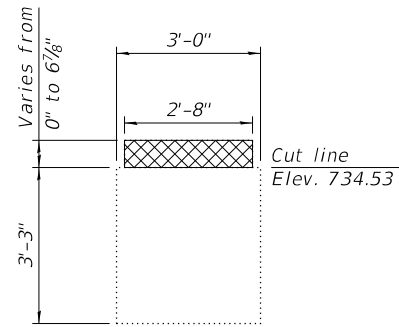
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| USER NAME =  | USGM717780     | DESIGNED - | BJD | REVISED - |  |
|              |                | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025      | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

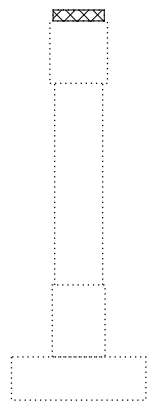
**NB PIER 3 REMOVAL AND REPAIRS  
STRUCTURE NO. 016 - 0973 (NB)**

SHEET 37 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.S. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1290         | 973       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

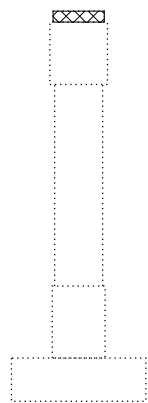


**SECTION A-A**



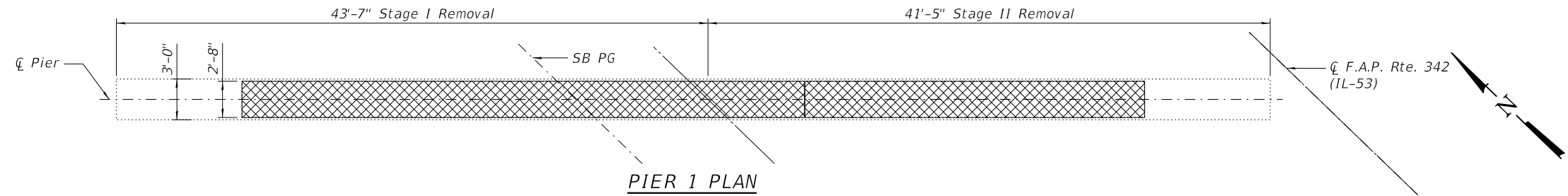
**PIER 1 NORTHWEST ELEVATION**

(Looking Southeast)

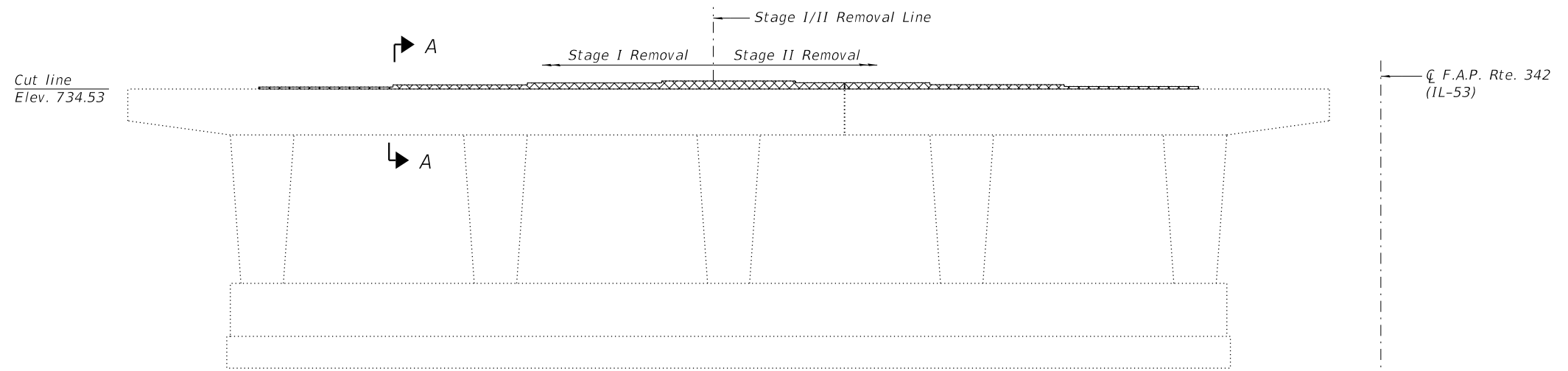


**PIER 1 SOUTHEAST ELEVATION**

(Looking Northwest)

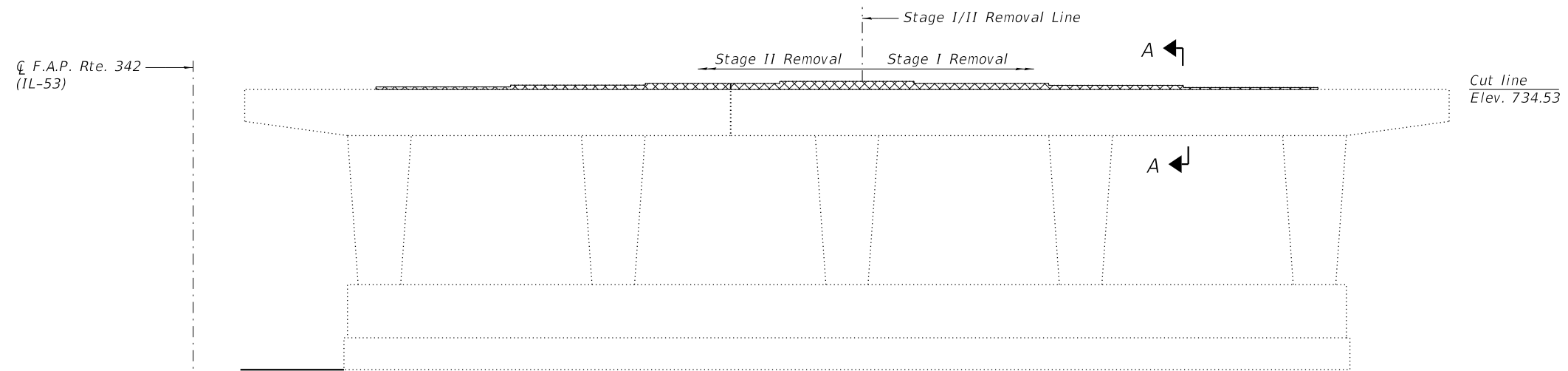


**PIER 1 PLAN**



**PIER 1 SOUTHWEST ELEVATION**

(Looking Northeast)



**PIER 1 NORTHEAST ELEVATION**

(Looking Southwest)

Notes:  
See Sheet 35 of 55 for notes.

**LEGEND**

Concrete Removal

**BILL OF MATERIAL**

| ITEM             | UNIT    | QUANTITY |
|------------------|---------|----------|
| Concrete Removal | Cu. Yd. | 2.2      |

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project 62N91-IL 53 Bridge\Structures\Sheets\C2-D.162N91-0160973-38



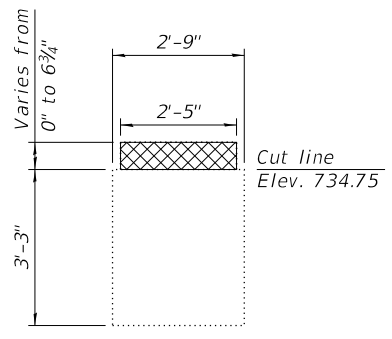
|              |                |            |     |           |  |
|--------------|----------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780     | DESIGNED - | BJD | REVISED - |  |
|              |                | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025      | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

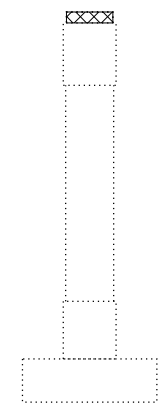
**SB PIER 1 REMOVAL AND REPAIRS  
STRUCTURE NO. 016 - 0371 (SB)**

SHEET 38 OF 55 SHEETS

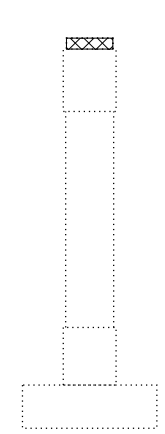
|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.S. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1290         | 974       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



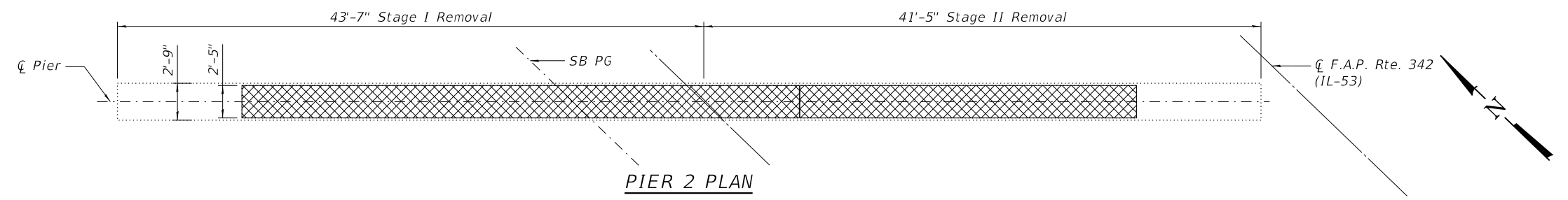
**SECTION A-A**



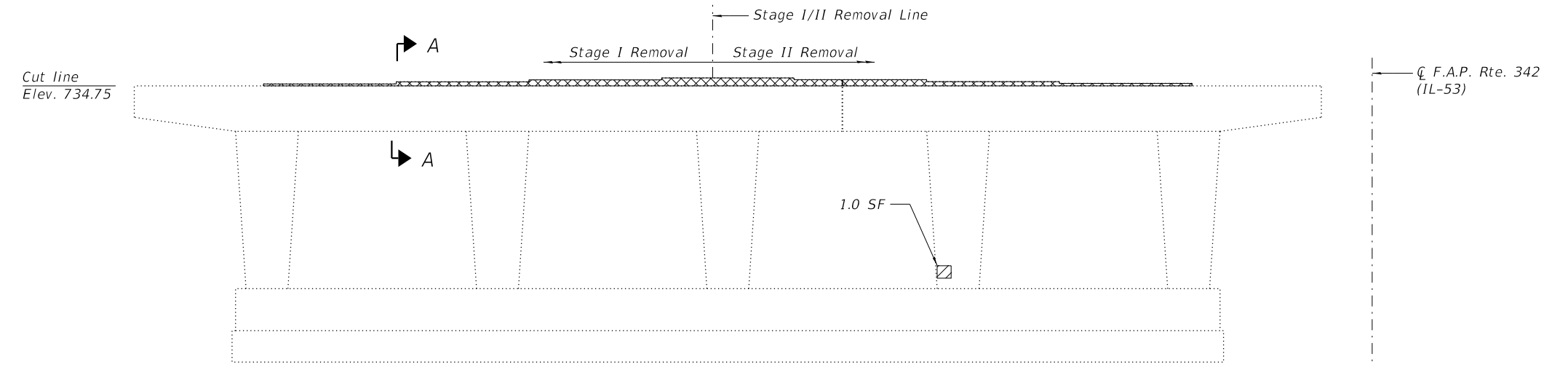
**PIER 1 NORTHWEST ELEVATION**  
(Looking Southeast)



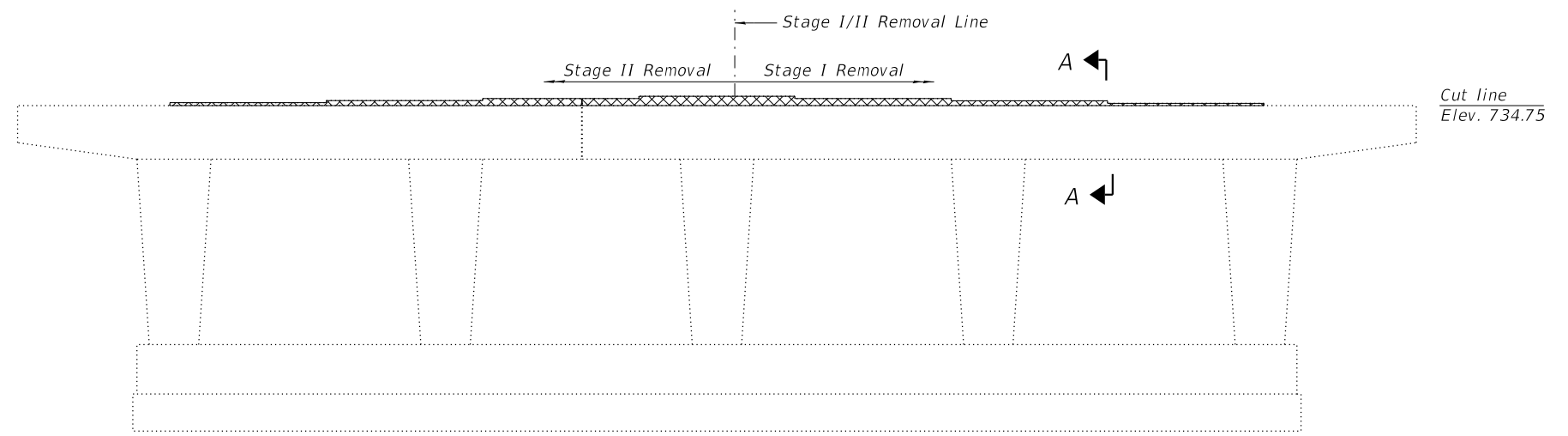
**PIER 1 SOUTHEAST ELEVATION**  
(Looking Northwest)



**PIER 2 PLAN**



**PIER 2 SOUTHWEST ELEVATION**  
(Looking Northeast)



**PIER 2 NORTHEAST ELEVATION**  
(Looking Southwest)

**LEGEND**

- Concrete Removal
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)

Notes:  
See Sheet 35 of 55 for notes.

**BILL OF MATERIAL**

| ITEM   | UNIT    | QUANTITY |
|--|---------|----------|
| Concrete Removal   | Cu. Yd. | 2        |
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq. Ft. | 1        |

MODEL: Default  
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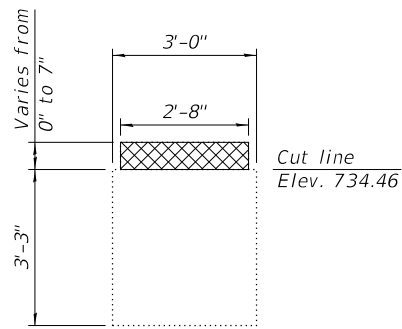
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|--------------|----------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780     | DESIGNED - | BJD | REVISED - |  |
|              |                | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025      | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

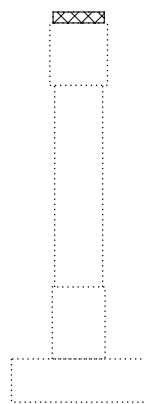
**SB PIER 2 REMOVAL AND REPAIRS  
STRUCTURE NO. 016 - 0371 (SB)**

SHEET 39 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.S. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1290         | 975       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

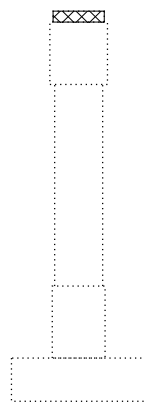


**SECTION A-A**



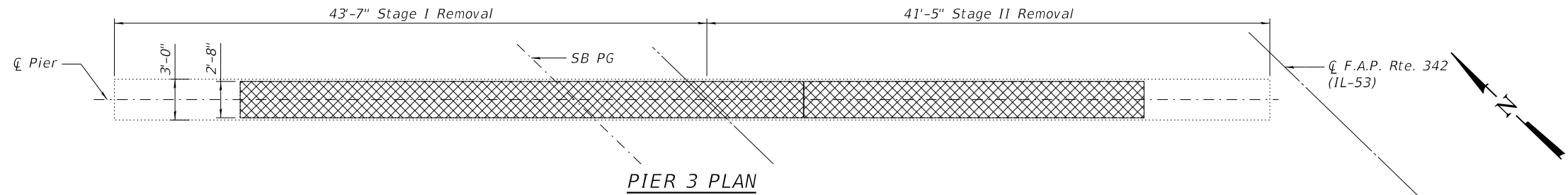
**PIER 3 NORTHWEST ELEVATION**

(Looking Southeast)

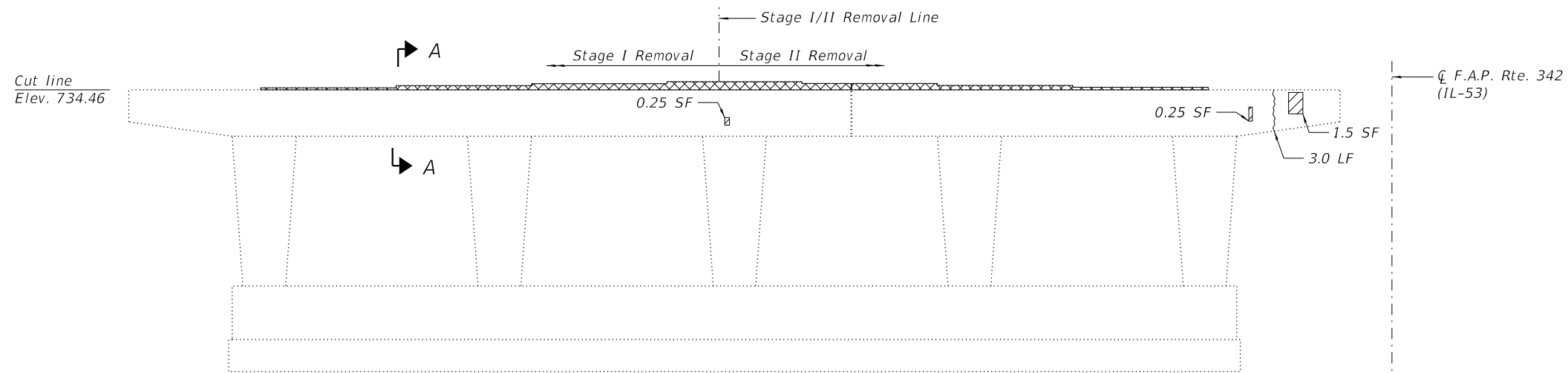


**PIER 3 SOUTHWEST ELEVATION**

(Looking Northwest)

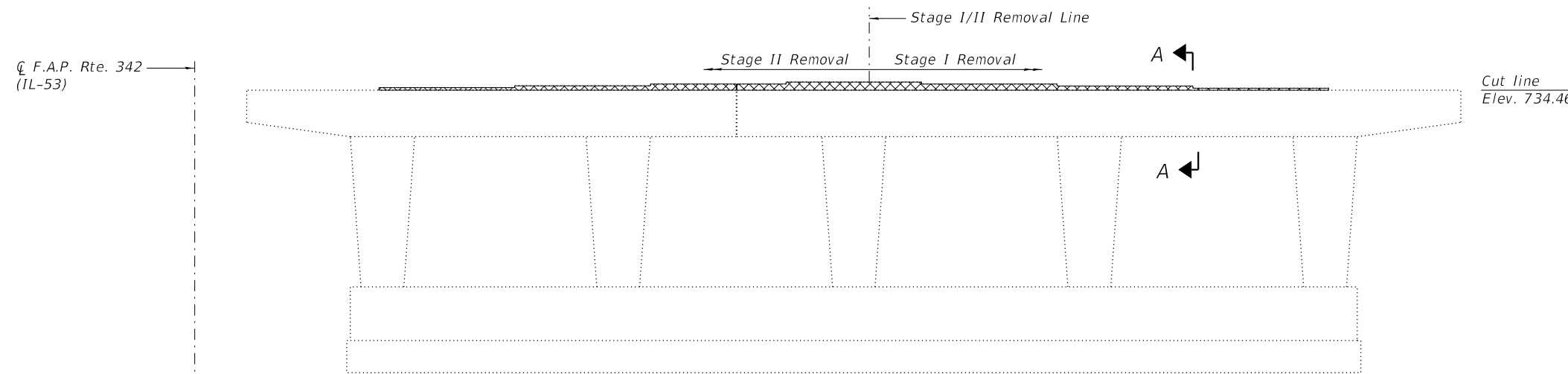


**PIER 3 PLAN**



**PIER 3 SOUTHWEST ELEVATION**

(Looking Northeast)



**PIER 3 NORTHEAST ELEVATION**

(Looking Southwest)

**LEGEND**

- Concrete Removal
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
- Epoxy Crack Injection (Width > 0.06")

Notes:  
See Sheet 35 of 55 for notes.

**BILL OF MATERIAL**

| ITEM   | UNIT    | QUANTITY |
|--|---------|----------|
| Concrete Removal   | Cu. Yd. | 2.2      |
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq. Ft. | 2        |
| Epoxy Crack Injection  | Foot    | 3        |

MODEL: Default  
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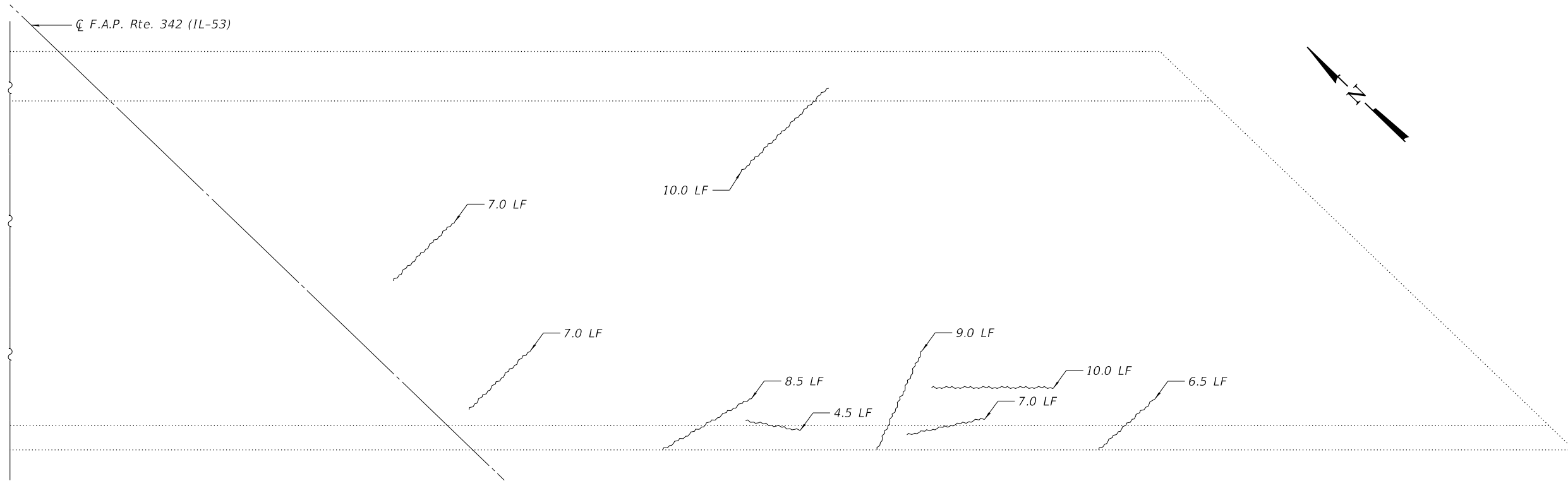
|              |                  |            |     |           |  |
|--------------|------------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780       | DESIGNED - | BJD | REVISED - |  |
|              |                  | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 " / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025        | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

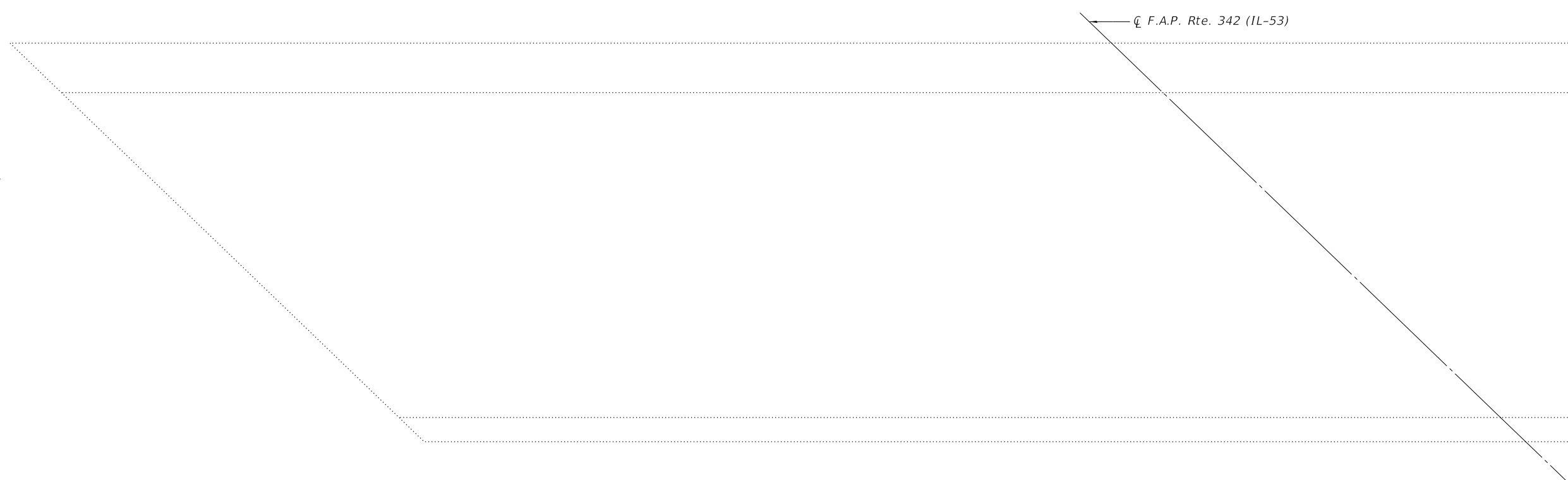
**SB PIER 3 REMOVAL AND REPAIRS  
STRUCTURE NO. 016 - 0371 (SB)**

SHEET 40 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.S. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1290         | 976       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



NORTH SLOPEWALL PLAN



SOUTH SLOPEWALL PLAN

BILL OF MATERIAL

| ITEM                  | UNIT | QUANTITY |
|-----------------------|------|----------|
| Epoxy Crack Injection | Foot | 70       |

LEGEND

{ Epoxy Crack Injection  
(Width > 0.06")

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project 62N91-IL 53 Bridge\Structures\Sheets\C2-D162N91-0160973-41



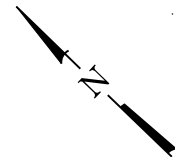
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|--------------|----------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780     | DESIGNED - | BJD | REVISED - |  |
|              |                | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025      | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**NB SLOPE WALL REPAIRS  
STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)**

SHEET 41 OF 55 SHEETS

|             |             |          |                    |           |
|-------------|-------------|----------|--------------------|-----------|
| F.A.P. RTE. | SECTION     | COUNTY   | TOTAL SHEETS       | SHEET NO. |
| 342         | 2018-100-BR | COOK     | 1351               | 977       |
|             |             |          | CONTRACT NO. 62N91 |           |
|             |             | ILLINOIS | FED. AID PROJECT   |           |

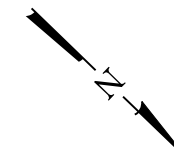


← C F.A.P. Rte. 342 (IL-53)

7.0 LF (Typ.)

NORTH SLOPEWALL PLAN

← C F.A.P. Rte. 342 (IL-53)



SOUTH SLOPEWALL PLAN

LEGEND

{ Epoxy Crack Injection  
(Width > 0.06")

BILL OF MATERIAL

| ITEM                  | UNIT | QUANTITY |
|-----------------------|------|----------|
| Epoxy Crack Injection | Foot | 77       |

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-IL\Documents\Project\_62N91-IL\_53\_Bridge\Structures\Sheets\C2-D162N91-0160973-42



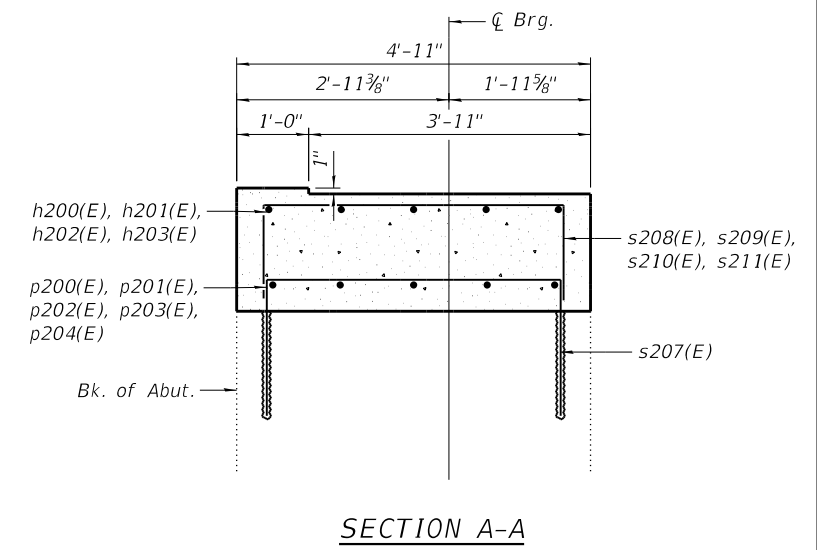
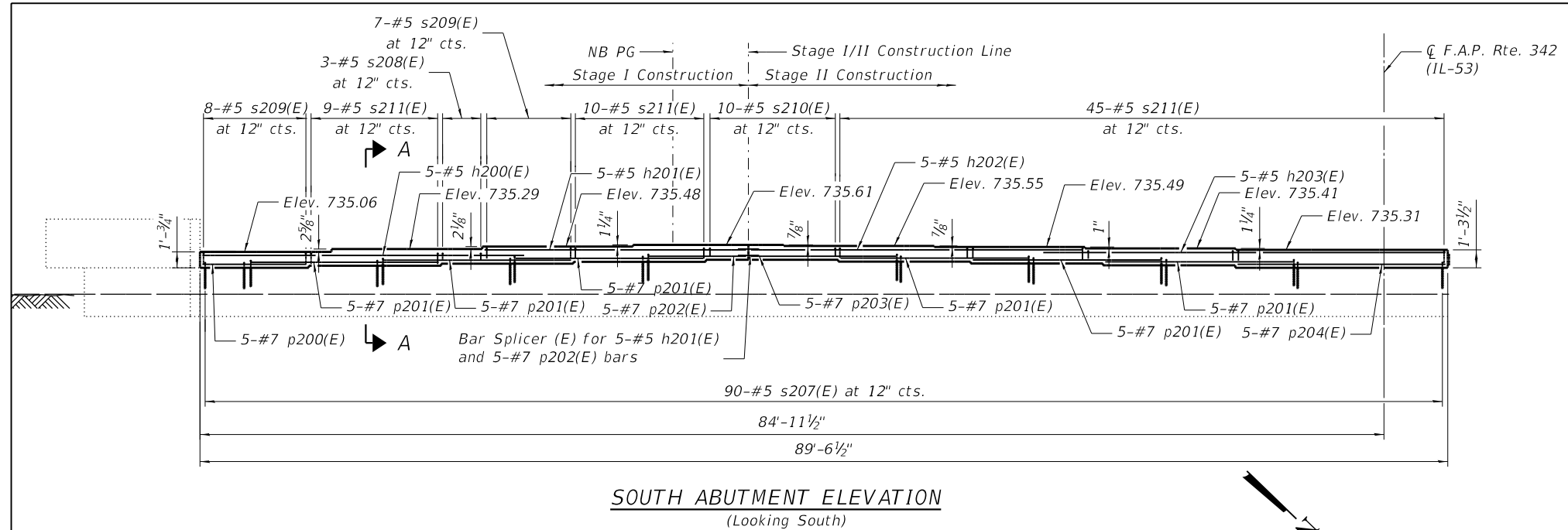
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|--------------|------------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780       | DESIGNED - | BJD | REVISED - |  |
|              |                  | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 " / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025        | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SB SLOPE WALL REPAIRS  
STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)**

SHEET 42 OF 55 SHEETS

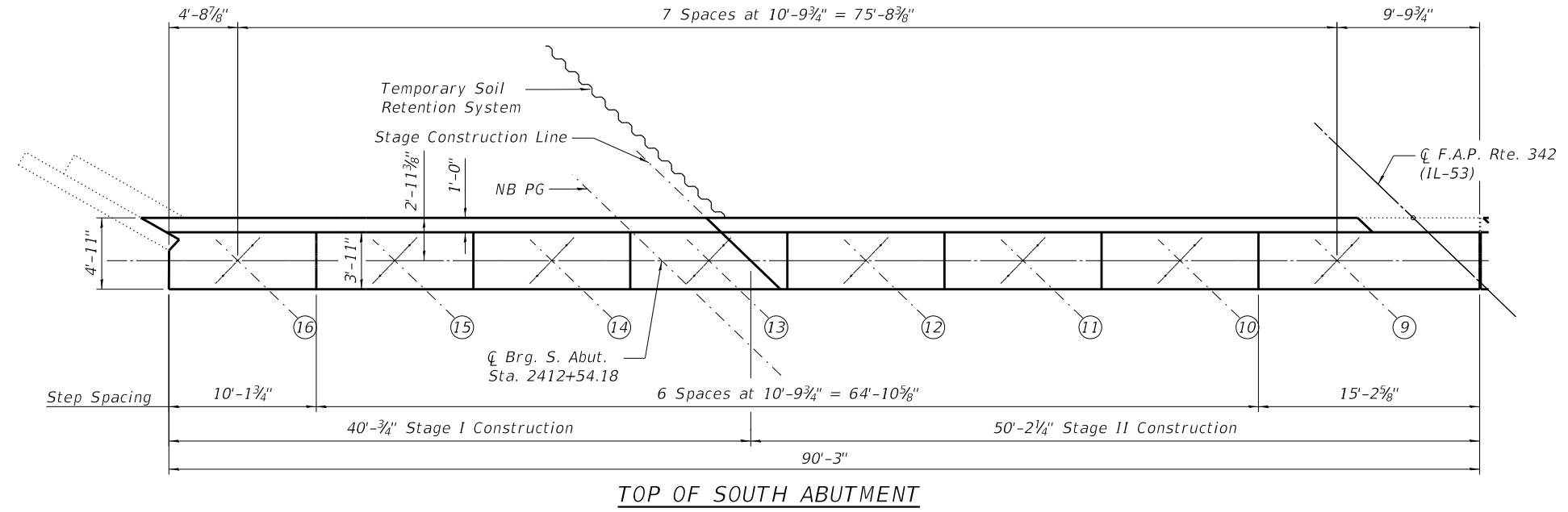
|             |             |                  |                    |           |
|-------------|-------------|------------------|--------------------|-----------|
| F.A.P. RTE. | SECTION     | COUNTY           | TOTAL SHEETS       | SHEET NO. |
| 342         | 2018-100-BR | COOK             | 1351               | 978       |
|             |             |                  | CONTRACT NO. 62N91 |           |
| ILLINOIS    |             | FED. AID PROJECT |                    |           |



**SOUTH ABUTMENT ELEVATION**  
(Looking South)

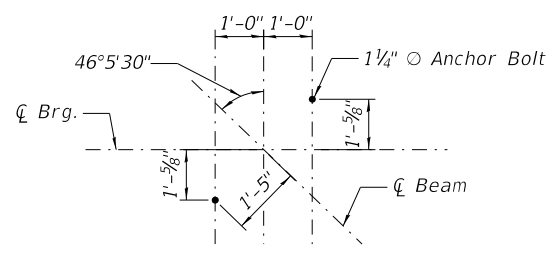
**SOUTH ABUTMENT BILL OF MATERIAL**

| Structure No. 016-0973 (NB)      |     |      |         |       |
|----------------------------------|-----|------|---------|-------|
| Bar                              | No. | Size | Length  | Shape |
| h200(E)                          | 5   | #5   | 23'-1"  | —     |
| h201(E)                          | 5   | #5   | 18'-9"  | —     |
| h202(E)                          | 5   | #5   | 23'-9"  | —     |
| h203(E)                          | 5   | #5   | 28'-10" | —     |
| p200(E)                          | 5   | #7   | 7'-6"   | —     |
| p201(E)                          | 30  | #7   | 13'-6"  | —     |
| p202(E)                          | 5   | #7   | 7'-0"   | —     |
| p203(E)                          | 5   | #7   | 10'-5"  | —     |
| p204(E)                          | 5   | #7   | 14'-11" | —     |
| s207(E)                          | 90  | #5   | 6'-11"  | □     |
| s208(E)                          | 3   | #5   | 5'-9"   | □     |
| s209(E)                          | 15  | #5   | 5'-11"  | □     |
| s210(E)                          | 10  | #5   | 6'-1"   | □     |
| s211(E)                          | 64  | #5   | 6'-3"   | □     |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 2,970 |
| Concrete Structures              |     |      | Cu Yd   | 19.1  |

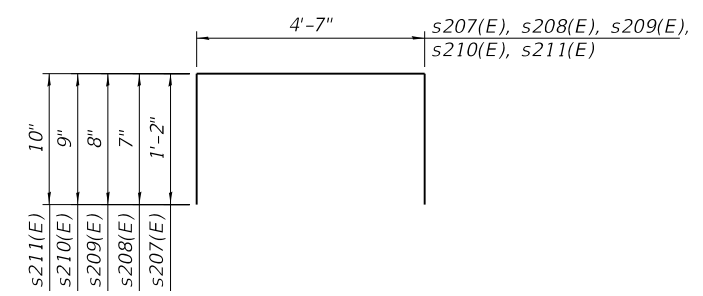


**TOP OF SOUTH ABUTMENT**

- Notes:
- Cost of drilling and grouting reinforcing bars included in cost of Concrete Structures.
  - Bars shall be drilled and set according to Article 584 of the Standard Specifications. Bars shall have a 9" minimum embedment depth.
  - Bars indicated thus 2x3-#5 etc. indicates 2 lines of bars with 3 lengths per line.
  - All construction joints between new and existing concrete shall be Bonded Construction Joints.
  - Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
  - Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2" layer of cement grout. Cost included with Concrete Removal.
  - The elevations shown above were calculated from the survey information provided by the district.
  - A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a Temporary Soil Retention System design including plan details and calculations for review and acceptance by the Engineer.



**ANCHOR BOLT LOCATION PLAN**  
**DETAIL A**



**BARS s207(E) - s211(E)**

MODEL: Default  
 FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53 Bridge\Structures\Sheets\C2-D162N91-0160973-43



|              |               |            |     |           |  |
|--------------|---------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780    | DESIGNED - | BJD | REVISED - |  |
|              |               | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0.1667' / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025     | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

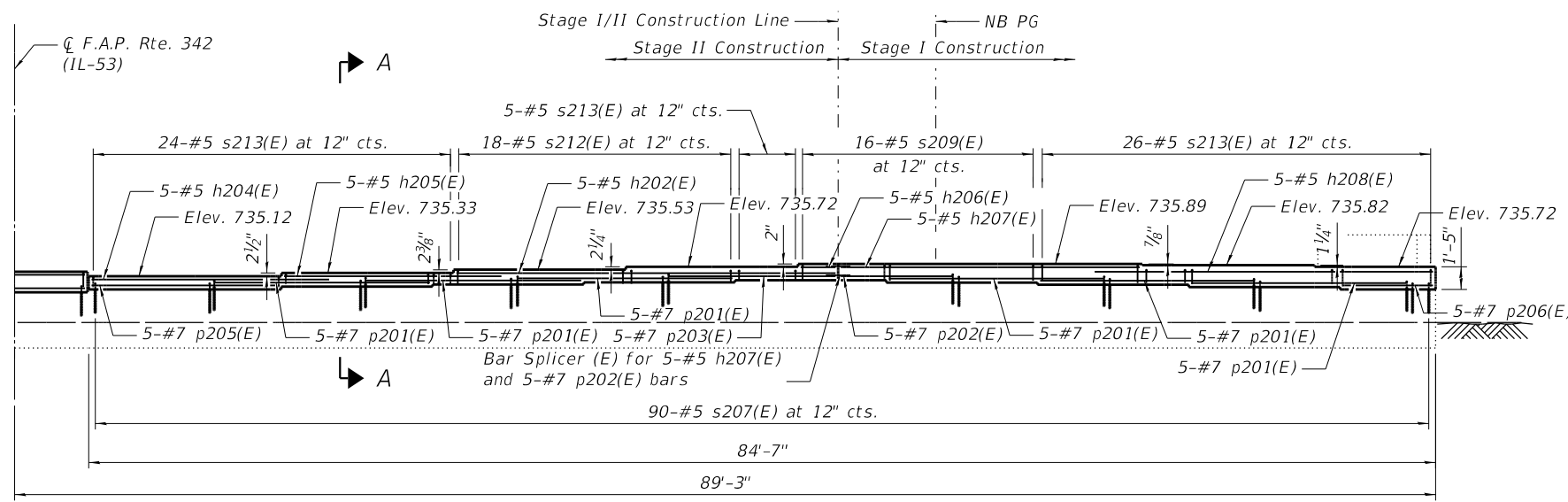
**SOUTH ABUTMENT MODIFICATIONS**  
**STRUCTURE NO. 016 - 0973 (NB)**

SHEET 43 OF 55 SHEETS

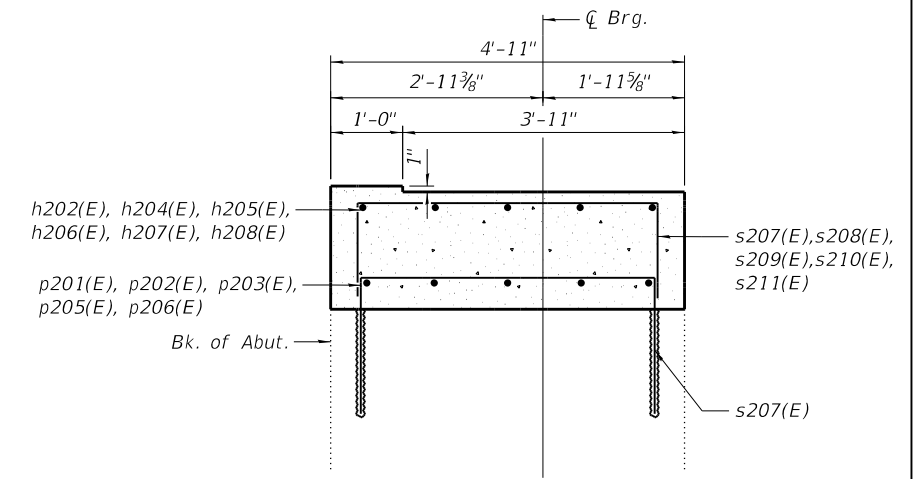
|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.S. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1290         | 979       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT

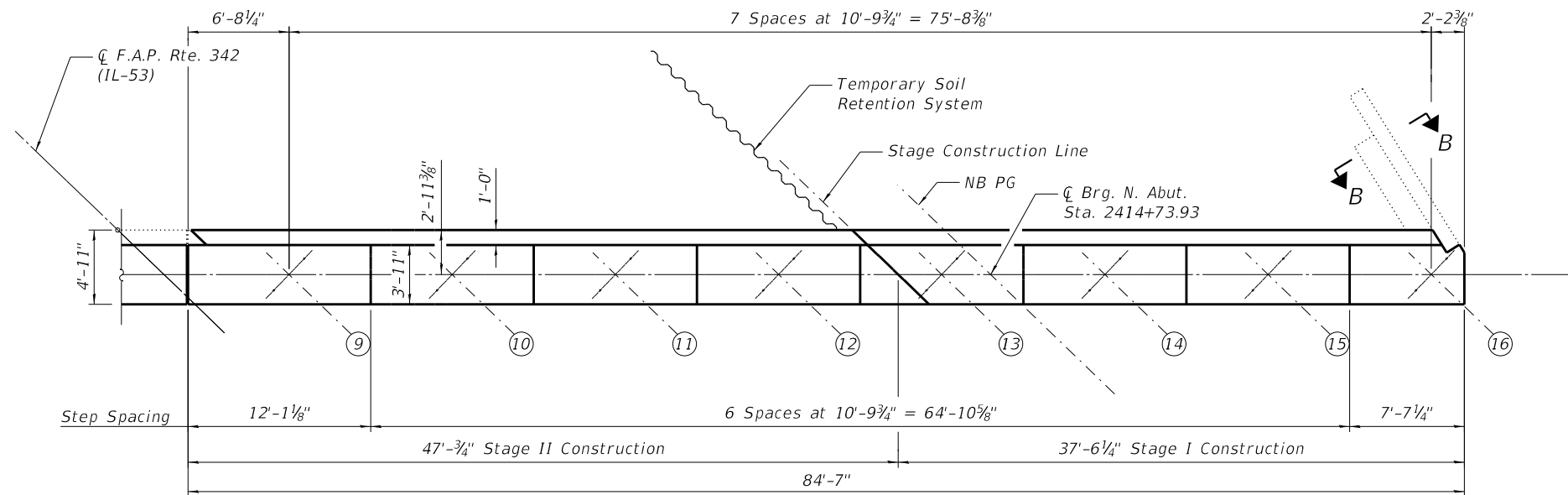




**NORTH ABUTMENT ELEVATION**  
(Looking North)



**SECTION A-A**

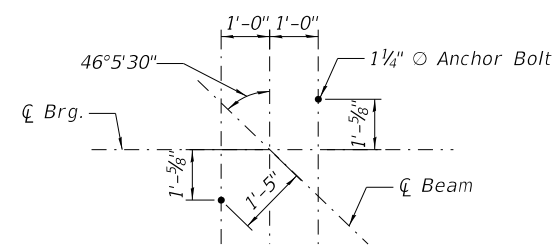


**TOP OF NORTH ABUTMENT**

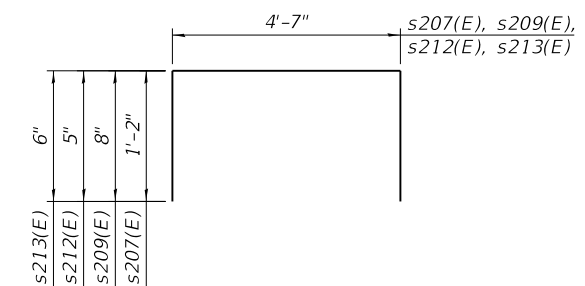
**NORTH ABUTMENT BILL OF MATERIAL**

| Structure No. 016-0973 (NB)      |     |      |         |       |
|----------------------------------|-----|------|---------|-------|
| Bar                              | No. | Size | Length  | Shape |
| h202(E)                          | 5   | #5   | 23'-9"  | —     |
| h204(E)                          | 5   | #5   | 14'-11" | —     |
| h205(E)                          | 5   | #5   | 13'-8"  | —     |
| h206(E)                          | 5   | #5   | 2'-2"   | —     |
| h207(E)                          | 5   | #5   | 18'-9"  | —     |
| h208(E)                          | 5   | #5   | 21'-3"  | —     |
| p201(E)                          | 30  | #7   | 13'-6"  | —     |
| p202(E)                          | 5   | #7   | 7'-0"   | —     |
| p203(E)                          | 5   | #7   | 10'-5"  | —     |
| p205(E)                          | 5   | #7   | 11'-9"  | —     |
| p206(E)                          | 5   | #7   | 5'-8"   | —     |
| s207(E)                          | 90  | #5   | 6'-11"  | □     |
| s209(E)                          | 16  | #5   | 5'-11"  | □     |
| s212(E)                          | 18  | #5   | 5'-5"   | □     |
| s213(E)                          | 55  | #5   | 5'-7"   | □     |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 2,850 |
| Concrete Structures              |     |      | Cu Yd   | 16.3  |

Notes:  
1. See Sheet 43 of 55 for notes.



**ANCHOR BOLT LOCATION PLAN  
DETAIL A**



**BARS s207(E), s209(E),  
s212(E), & s213(E)**

MODEL: Default  
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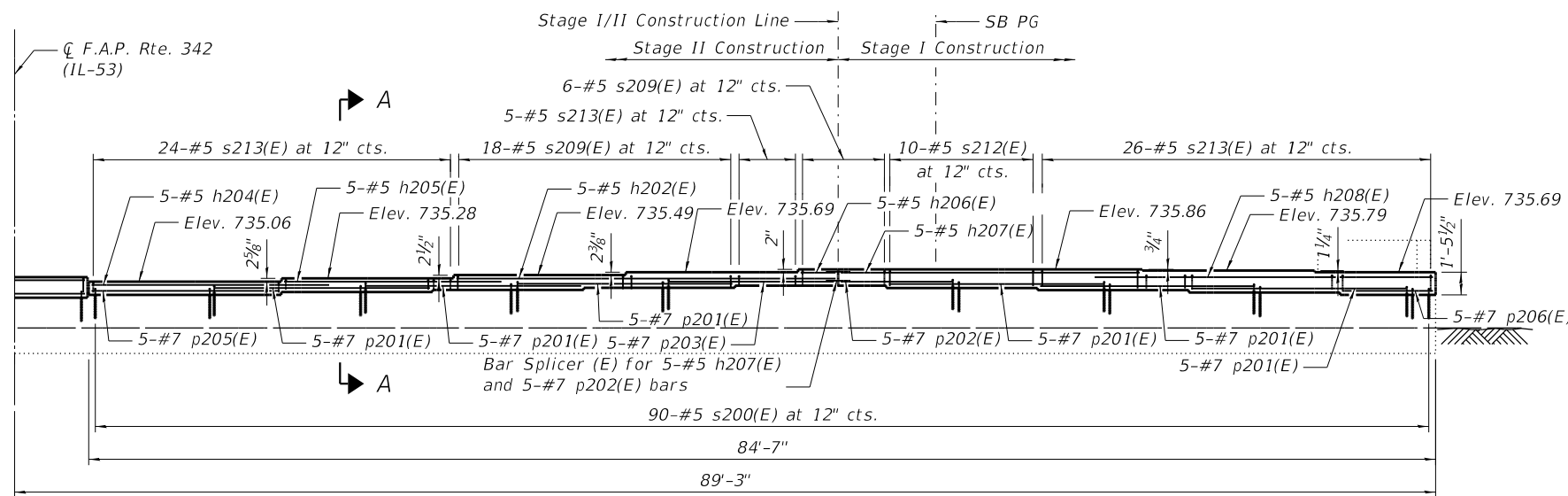
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|--------------|---------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780    | DESIGNED - | BJD | REVISED - |  |
|              |               | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0.1667' / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025     | CHECKED -  | MGH | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

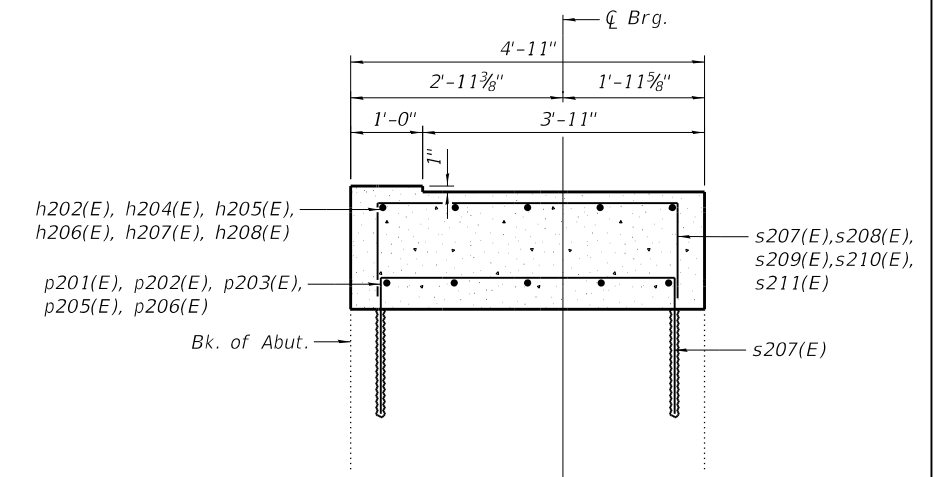
**NORTH ABUTMENT MODIFICATIONS  
STRUCTURE NO. 016 - 0973 (NB)**

SHEET 44 OF 55 SHEETS

| F.A.S. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-------------|--------|--------------|-----------|
| 342                       | 2018-100-BR | COOK   | 1290         | 980       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



**SOUTH ABUTMENT ELEVATION**

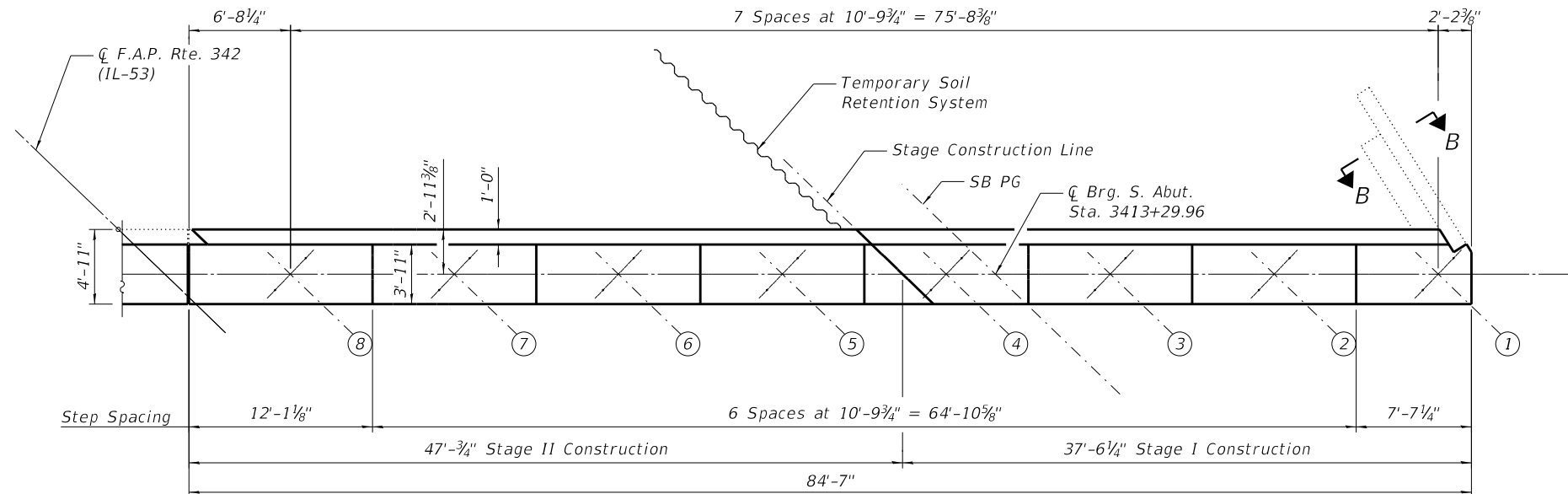


**SECTION A-A**

**SOUTH ABUTMENT BILL OF MATERIAL**

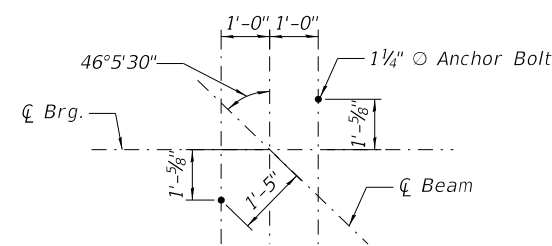
Structure No. 016-0371 (SB)

| Bar                              | No. | Size  | Length  | Shape |
|----------------------------------|-----|-------|---------|-------|
| h202(E)                          | 5   | #5    | 23'-9"  | —     |
| h204(E)                          | 5   | #5    | 14'-11" | —     |
| h205(E)                          | 5   | #5    | 13'-8"  | —     |
| h206(E)                          | 5   | #5    | 2'-2"   | —     |
| h207(E)                          | 5   | #5    | 18'-9"  | —     |
| h208(E)                          | 5   | #5    | 21'-3"  | —     |
| p201(E)                          | 30  | #7    | 13'-6"  | —     |
| p202(E)                          | 5   | #7    | 7'-0"   | —     |
| p203(E)                          | 5   | #7    | 10'-5"  | —     |
| p205(E)                          | 5   | #7    | 11'-9"  | —     |
| p206(E)                          | 5   | #7    | 5'-8"   | —     |
| s207(E)                          | 90  | #5    | 6'-11"  | □     |
| s209(E)                          | 16  | #5    | 5'-11"  | □     |
| s212(E)                          | 18  | #5    | 5'-5"   | □     |
| s213(E)                          | 55  | #5    | 5'-7"   | □     |
| Reinforcement Bars, Epoxy Coated |     | Pound | 2,850   |       |
| Concrete Structures              |     | Cu Yd | 16.3    |       |

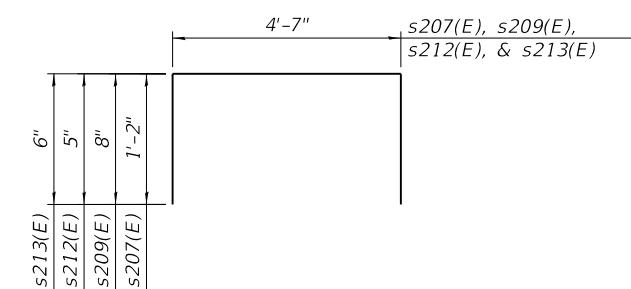


**TOP OF SOUTH ABUTMENT**

Notes:  
1. See Sheet 43 of 55 for notes.



**ANCHOR BOLT LOCATION PLAN  
DETAIL A**



**BARS s207(E), s209(E),  
s212(E) & s213(E)**

MODEL: Default  
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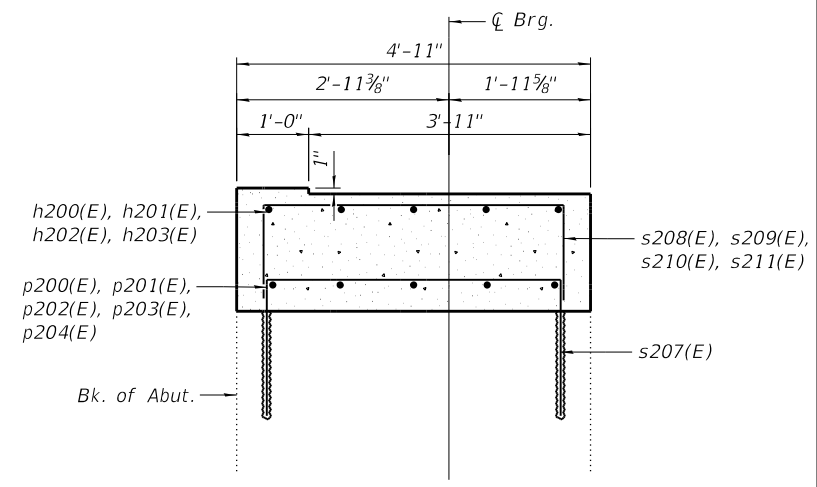
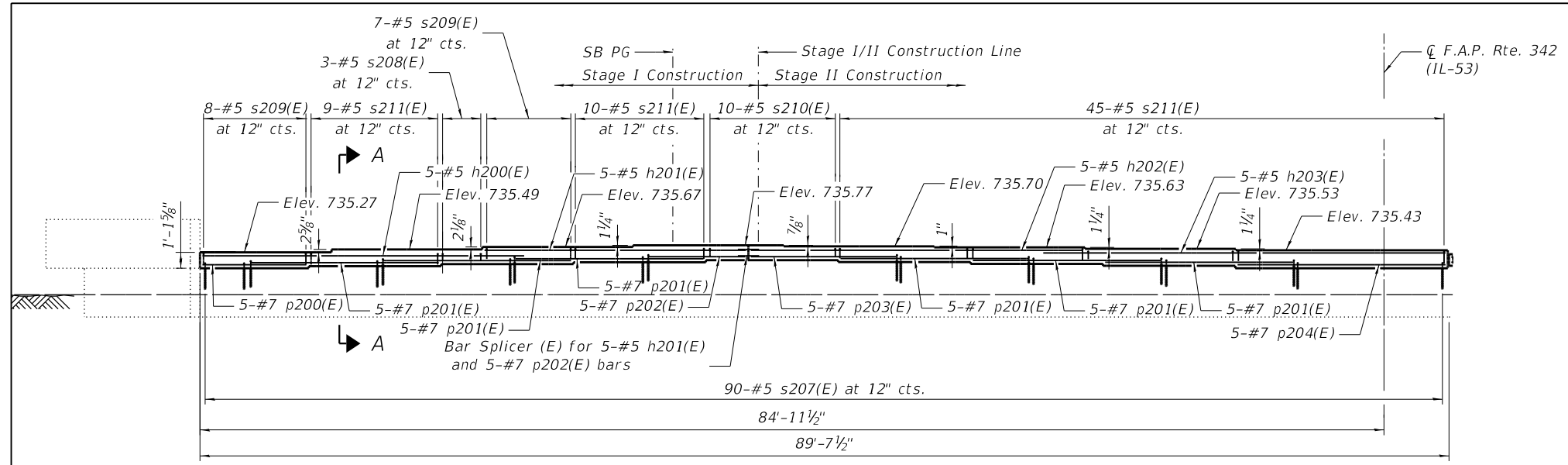
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|----------------------------|----------------|-----------|
| USER NAME = USGM717780     | DESIGNED - BJD | REVISED - |
| PLOT SCALE = 0.1667' / in. | CHECKED - MGH  | REVISED - |
| PLOT DATE = 2/11/2025      | DRAWN - BJD    | REVISED - |
|                            | CHECKED - MGH  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOUTH ABUTMENT MODIFICATIONS  
STRUCTURE NO. 016 - 0371 (SB)**

SHEET 45 OF 55 SHEETS

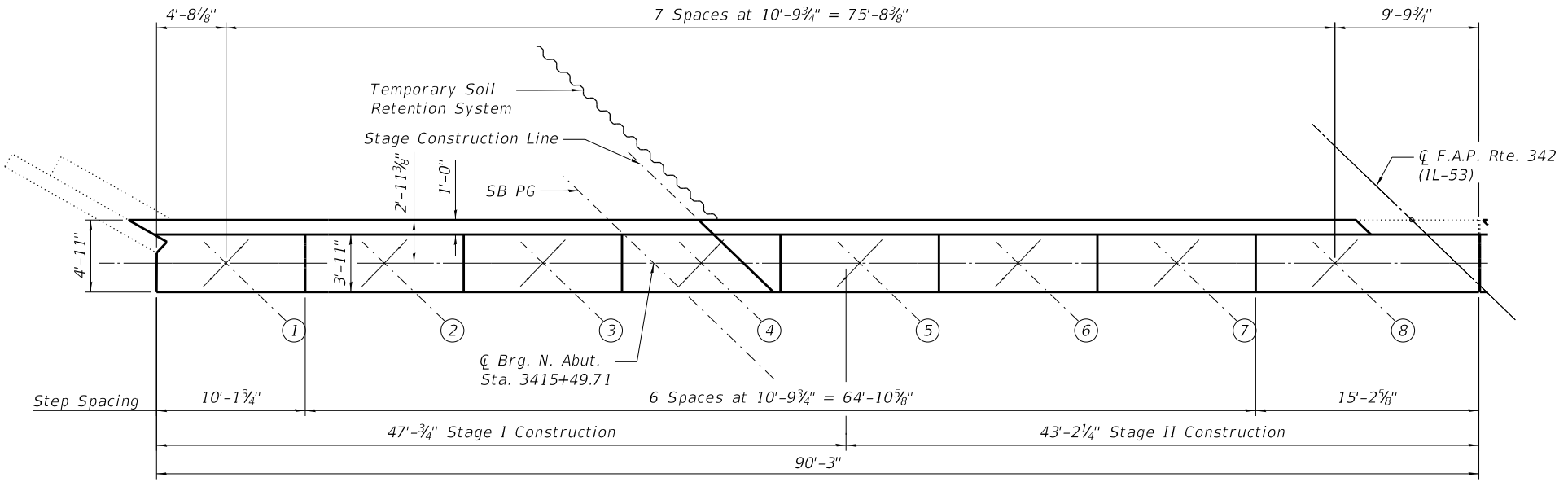
|                           |                     |             |                   |               |
|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.S. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1290 | SHEET NO. 981 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |



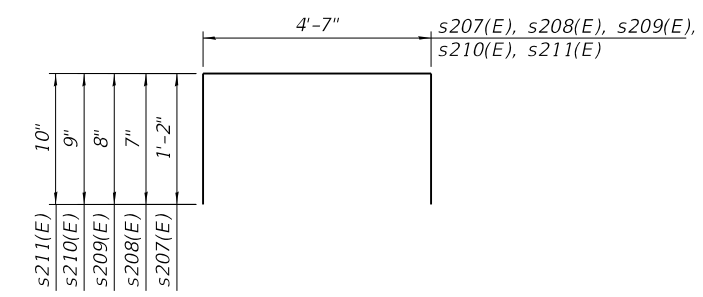
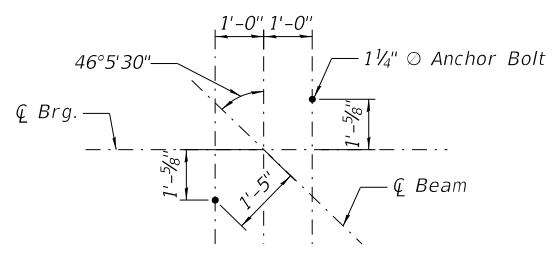
**NORTH ABUTMENT BILL OF MATERIAL**

Structure No. 016-0371 (SB)

| Bar                              | No. | Size | Length  | Shape |
|----------------------------------|-----|------|---------|-------|
| h200(E)                          | 5   | #5   | 23'-1"  | —     |
| h201(E)                          | 5   | #5   | 18'-9"  | —     |
| h202(E)                          | 5   | #5   | 23'-9"  | —     |
| h203(E)                          | 5   | #5   | 28'-10" | —     |
| p200(E)                          | 5   | #7   | 7'-6"   | —     |
| p201(E)                          | 30  | #7   | 13'-6"  | —     |
| p202(E)                          | 5   | #7   | 7'-0"   | —     |
| p203(E)                          | 5   | #7   | 10'-5"  | —     |
| p204(E)                          | 5   | #7   | 14'-11" | —     |
| s207(E)                          | 90  | #5   | 6'-11"  | □     |
| s208(E)                          | 3   | #5   | 5'-9"   | □     |
| s209(E)                          | 15  | #5   | 5'-11"  | □     |
| s210(E)                          | 10  | #5   | 6'-1"   | □     |
| s211(E)                          | 64  | #5   | 6'-3"   | □     |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 2,970 |
| Concrete Structures              |     |      | Cu Yd   | 19.1  |



Notes:  
1. See Sheet 43 of 55 for notes.



**ANCHOR BOLT LOCATION PLAN DETAIL A**

**BARS s207(E) - s211(E)**

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-46



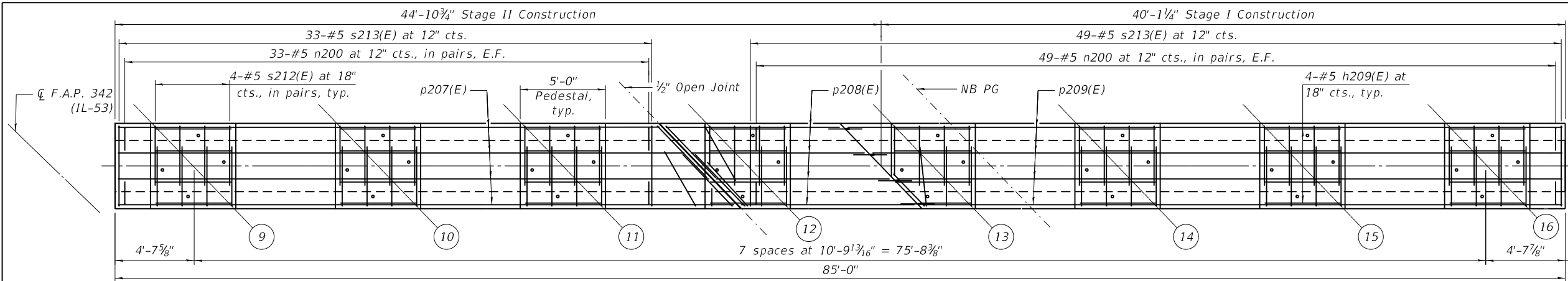
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|----------------------------|----------------|-----------|
| USER NAME = USGM717780     | DESIGNED - BJD | REVISED - |
| PLOT SCALE = 0.1667' / in. | CHECKED - MGH  | REVISED - |
| PLOT DATE = 2/11/2025      | DRAWN - BJD    | REVISED - |
|                            | CHECKED - MGH  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

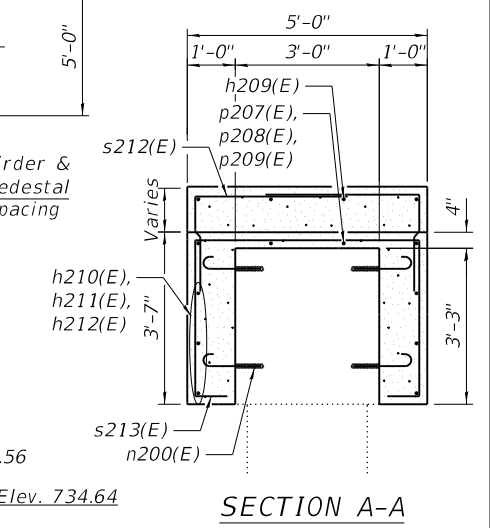
**NORTH ABUTMENT MODIFICATIONS  
STRUCTURE NO. 016 - 0371 (SB)**

SHEET 46 OF 55 SHEETS

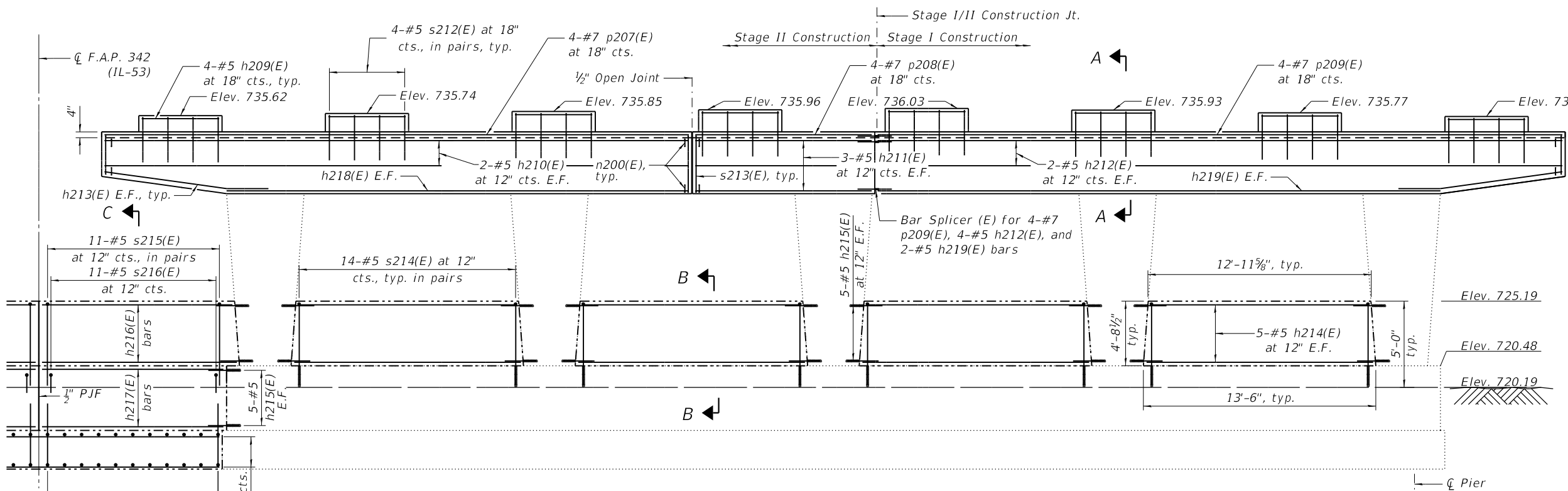
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|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.S. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1290 | SHEET NO. 982 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |



PIER 1 PLAN



SECTION A-A

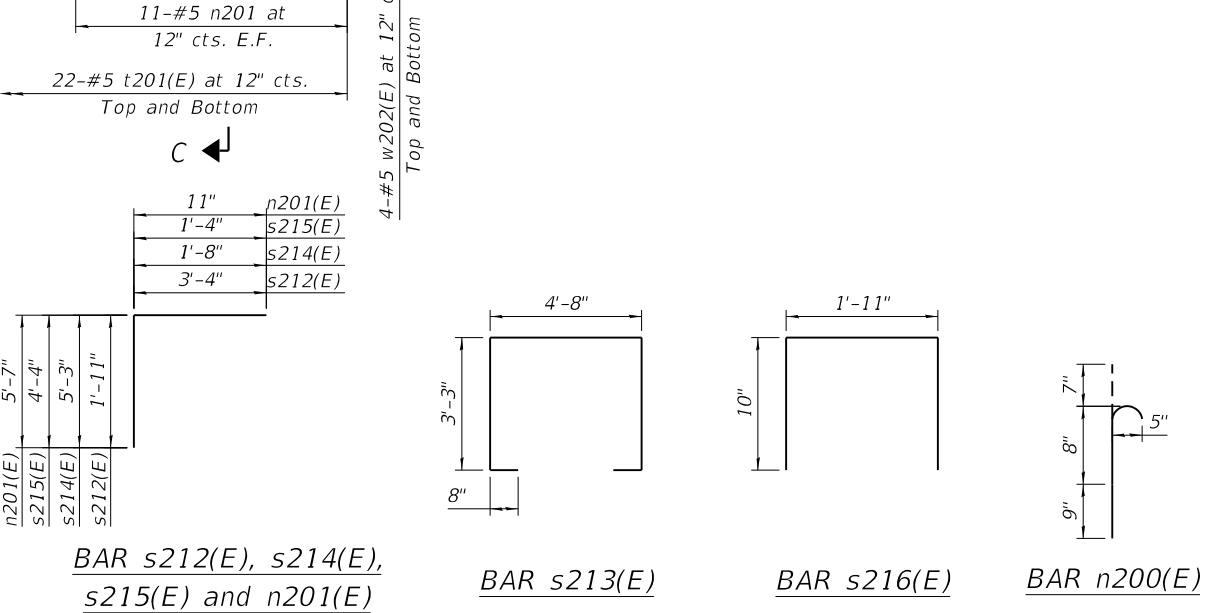


PIER 1 ELEVATION  
(Looking North)

Notes:  
1. See Sheet 43 of 55 for notes.

PIER BILL OF MATERIAL  
(SN 016-0973)

| Bar                              | No. | Size | Length  | Shape        |
|----------------------------------|-----|------|---------|--------------|
| h209(E)                          | 32  | #5   | 4'-6"   |              |
| h210(E)                          | 4   | #5   | 33'-11" |              |
| h211(E)                          | 6   | #5   | 10'-2"  |              |
| h212(E)                          | 4   | #5   | 41'-10" |              |
| h213(E)                          | 4   | #5   | 10'-2"  |              |
| h214(E)                          | 40  | #5   | 13'-2"  |              |
| h215(E)                          | 100 | #5   | 1'-10"  |              |
| h216(E)                          | 11  | #5   | 11'-0"  |              |
| h217(E)                          | 12  | #5   | 10'-6"  |              |
| h218(E)                          | 2   | #5   | 26'-10" |              |
| h219(E)                          | 2   | #5   | 43'-1"  |              |
| n200(E)                          | 164 | #5   | 2'-0"   |              |
| n201(E)                          | 22  | #5   | 6'-6"   |              |
| p207(E)                          | 4   | #5   | 36'-1"  |              |
| p208(E)                          | 4   | #5   | 10'-2"  |              |
| p209(E)                          | 4   | #5   | 41'-1"  |              |
| s212(E)                          | 64  | #5   | 5'-3"   |              |
| s213(E)                          | 82  | #5   | 12'-6"  |              |
| s214(E)                          | 112 | #5   | 6'-11"  |              |
| s215(E)                          | 22  | #5   | 5'-8"   |              |
| s216(E)                          | 11  | #5   | 3'-7"   |              |
| t201(E)                          | 44  | #5   | 3'-5"   |              |
| w202(E)                          | 8   | #5   | 20'-11" |              |
| Concrete Structures              |     |      |         | Cu. Yd. 64.6 |
| Reinforcement Bars, Epoxy Coated |     |      |         | Pound 5,660  |
| Bar Splicers                     |     |      |         | Each 10      |
| Concrete Sealer                  |     |      |         | Sq. Ft. 326  |



SECTION B-B

SECTION C-C

BAR s212(E), s214(E), s215(E) and n201(E)

BAR s213(E)

BAR s216(E)

BAR n200(E)

BAR h213(E)

MODEL: Default  
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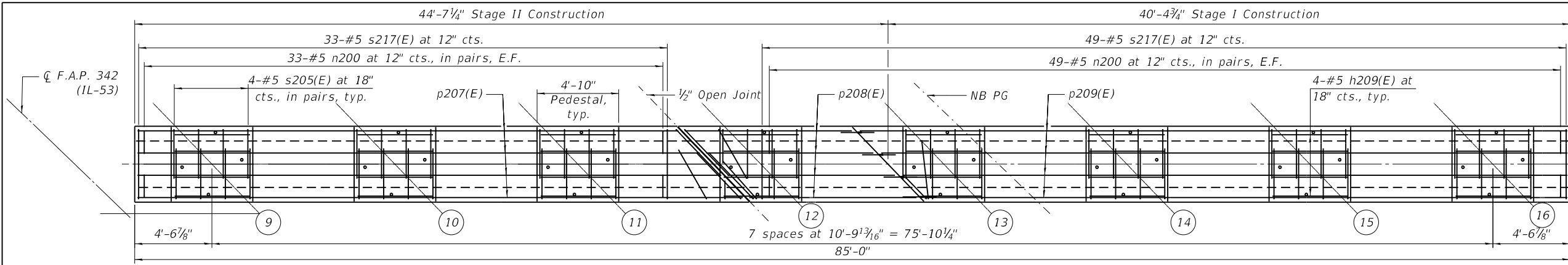
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| USER NAME =  | USGM717780     | DESIGNED - | BJD | REVISED - |  |
| CHECKED -    | MGH            | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025      | CHECKED -  | MGH | REVISED - |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

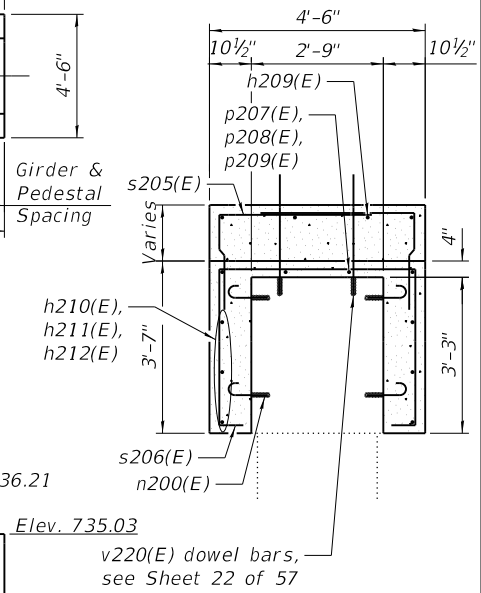
NB PIER 1 MODIFICATION DETAILS  
STRUCTURE NO. 016-0973 (NB)

SHEET 47 OF 55 SHEETS

| F.A.S. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-------------|--------|--------------|-----------|
| 342                       | 2018-100-BR | COOK   | 1290         | 983       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

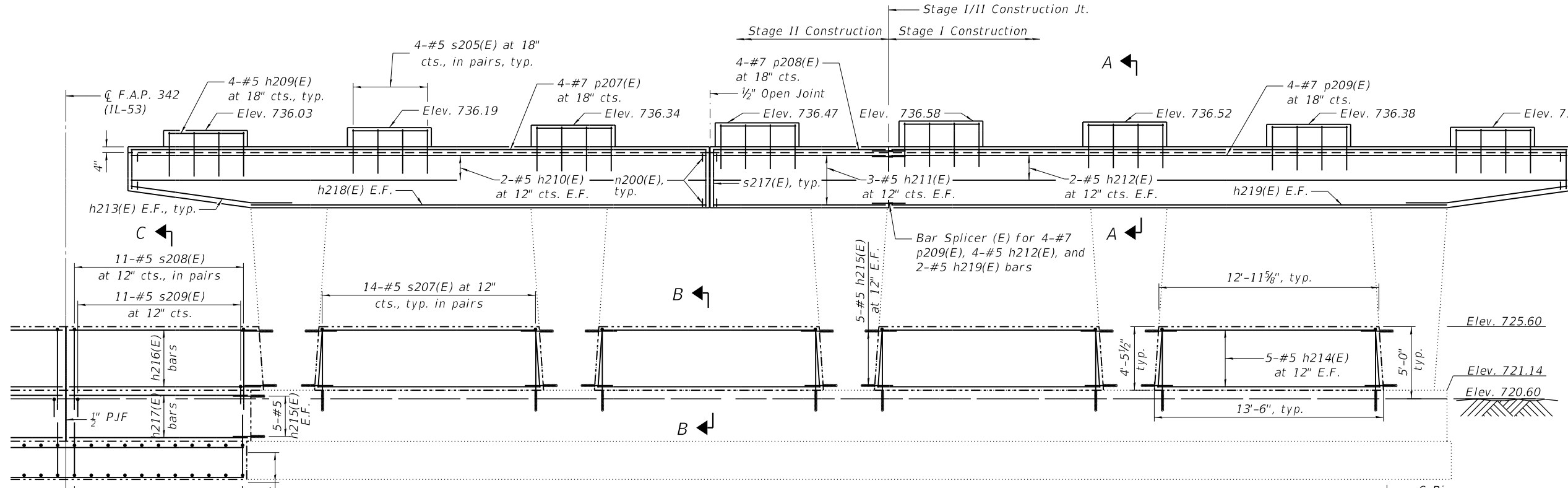


PIER 2 PLAN



SECTION A-A

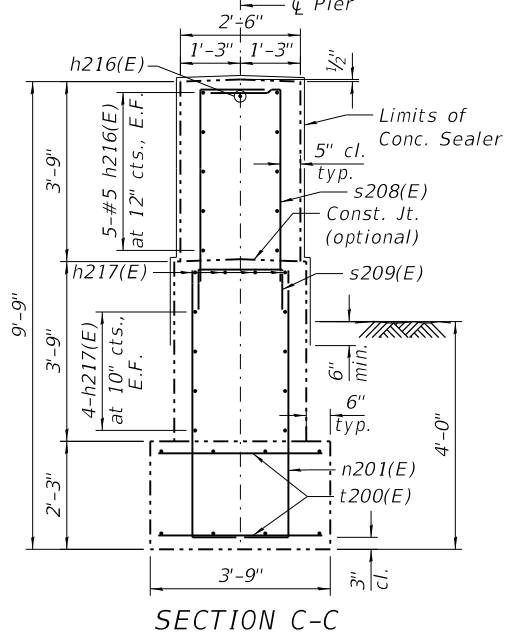
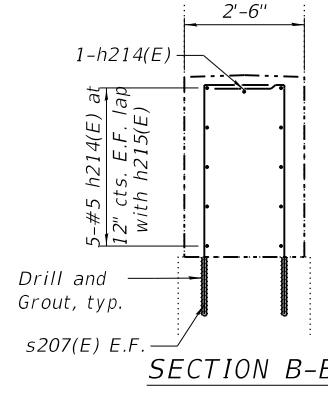
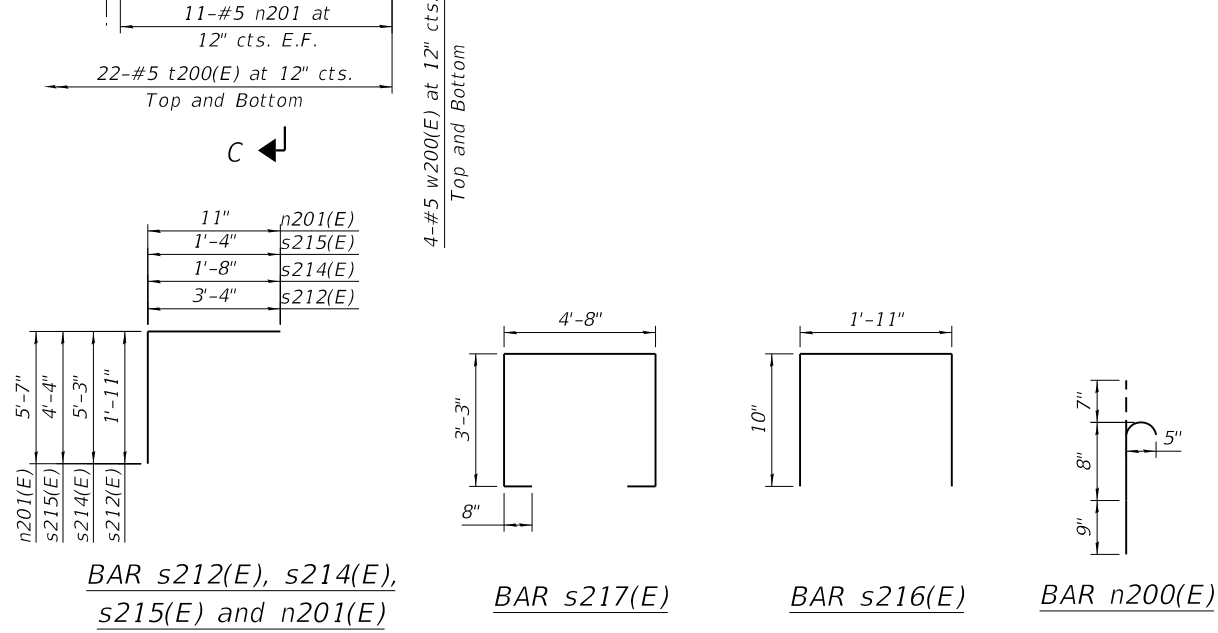
Notes:  
1. See Sheet 43 of 55 for notes.



PIER 2 ELEVATION  
(Looking North)

PIER BILL OF MATERIAL  
(SN 016-0973)

| Bar                              | No. | Size | Length  | Shape   |       |
|----------------------------------|-----|------|---------|---------|-------|
| h209(E)                          | 32  | #5   | 4'-6"   |         |       |
| h210(E)                          | 4   | #5   | 33'-11" |         |       |
| h211(E)                          | 6   | #5   | 10'-2"  |         |       |
| h212(E)                          | 4   | #5   | 41'-10" |         |       |
| h213(E)                          | 4   | #5   | 10'-2"  |         |       |
| h214(E)                          | 40  | #5   | 13'-2"  |         |       |
| h215(E)                          | 100 | #5   | 1'-10"  |         |       |
| h216(E)                          | 11  | #5   | 11'-0"  |         |       |
| h217(E)                          | 12  | #5   | 10'-6"  |         |       |
| h218(E)                          | 2   | #5   | 26'-10" |         |       |
| h219(E)                          | 2   | #5   | 43'-1"  |         |       |
| n200(E)                          | 164 | #5   | 2'-0"   |         |       |
| n201(E)                          | 22  | #5   | 6'-6"   |         |       |
| p207(E)                          | 4   | #5   | 36'-1"  |         |       |
| p208(E)                          | 4   | #5   | 10'-2"  |         |       |
| p209(E)                          | 4   | #5   | 41'-1"  |         |       |
| s212(E)                          | 64  | #5   | 5'-3"   |         |       |
| s214(E)                          | 112 | #5   | 6'-11"  |         |       |
| s215(E)                          | 22  | #5   | 5'-8"   |         |       |
| s216(E)                          | 11  | #5   | 3'-7"   |         |       |
| s217(E)                          | 82  | #5   | 12'-0"  |         |       |
| t201(E)                          | 44  | #5   | 3'-5"   |         |       |
| w202(E)                          | 8   | #5   | 20'-11" |         |       |
| Concrete Structures              |     |      |         | Cu. Yd. | 61.2  |
| Reinforcement Bars, Epoxy Coated |     |      |         | Pound   | 5,620 |
| Bar Splicers                     |     |      |         | Each    | 10    |
| Concrete Sealer                  |     |      |         | Sq. Ft. | 326   |



MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53 Bridge\Structures\Sheets\C2-D162N91-0160973-48



|              |                |            |     |           |  |
|--------------|----------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780     | DESIGNED - | BJD | REVISED - |  |
| CHECKED -    | MGH            | REVISOR -  |     | REVISOR - |  |
| PLOT SCALE = | 0:2.0000 "/in. | DRAWN -    | BJD | REVISOR - |  |
| PLOT DATE =  | 2/11/2025      | CHECKED -  | MGH | REVISOR - |  |

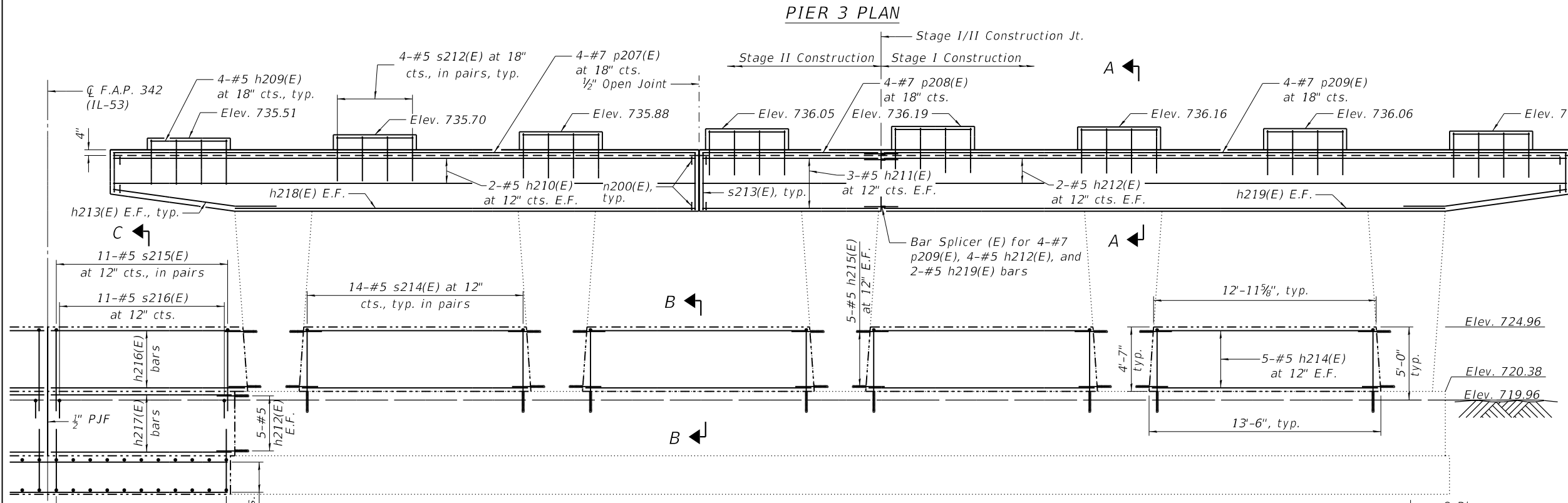
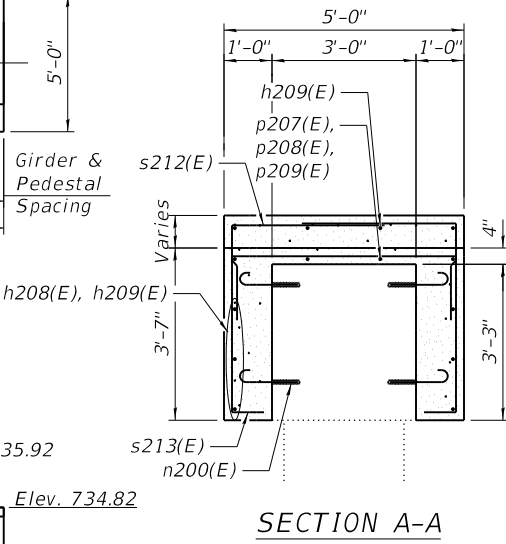
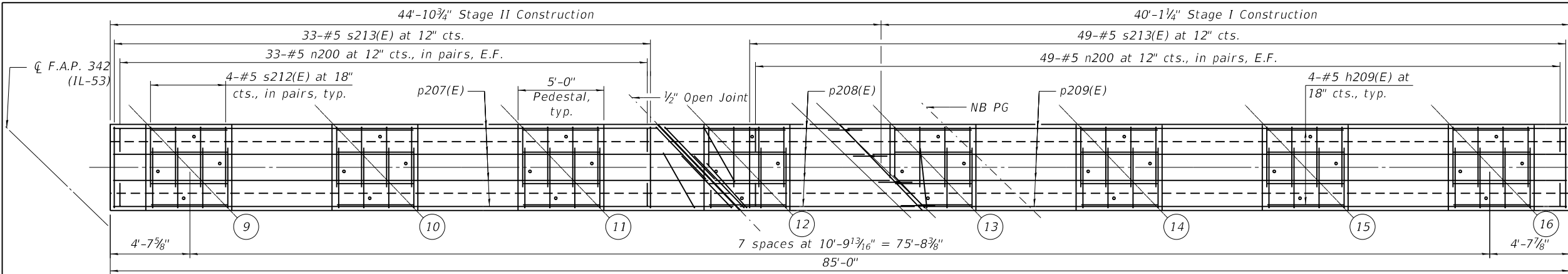
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NB PIER 2 MODIFICATION DETAILS  
STRUCTURE NO. 016-0973 (NB)

SHEET 48 OF 55 SHEETS

|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.S. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1290         | 984       |
| CONTRACT NO. 62N91 |             |        |              |           |

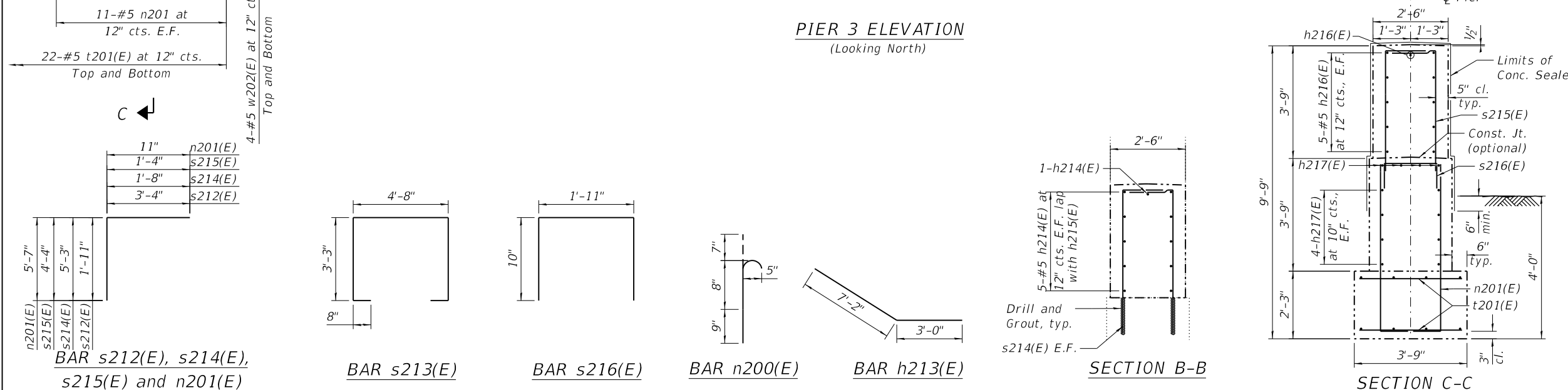
ILLINOIS FED. AID PROJECT



Notes:  
1. See Sheet 43 of 55 for notes.

**PIER BILL OF MATERIAL**  
(SN 016-0973)

| Bar                              | No. | Size | Length  | Shape        |
|----------------------------------|-----|------|---------|--------------|
| h209(E)                          | 32  | #5   | 4'-6"   |              |
| h210(E)                          | 4   | #5   | 33'-11" |              |
| h211(E)                          | 6   | #5   | 10'-2"  |              |
| h212(E)                          | 4   | #5   | 41'-10" |              |
| h213(E)                          | 4   | #5   | 10'-2"  |              |
| h214(E)                          | 40  | #5   | 13'-2"  |              |
| h215(E)                          | 100 | #5   | 1'-10"  |              |
| h216(E)                          | 11  | #5   | 11'-0"  |              |
| h217(E)                          | 12  | #5   | 10'-6"  |              |
| h218(E)                          | 2   | #5   | 26'-10" |              |
| h219(E)                          | 2   | #5   | 43'-1"  |              |
| n200(E)                          | 164 | #5   | 2'-0"   |              |
| n201(E)                          | 22  | #5   | 6'-6"   |              |
| p207(E)                          | 4   | #5   | 36'-1"  |              |
| p208(E)                          | 4   | #5   | 10'-2"  |              |
| p209(E)                          | 4   | #5   | 41'-1"  |              |
| s212(E)                          | 64  | #5   | 5'-3"   |              |
| s213(E)                          | 82  | #5   | 12'-6"  |              |
| s214(E)                          | 112 | #5   | 6'-11"  |              |
| s215(E)                          | 22  | #5   | 5'-8"   |              |
| s216(E)                          | 11  | #5   | 3'-7"   |              |
| t201(E)                          | 44  | #5   | 3'-5"   |              |
| w202(E)                          | 8   | #5   | 20'-11" |              |
| Concrete Structures              |     |      |         | Cu. Yd. 64.6 |
| Reinforcement Bars, Epoxy Coated |     |      |         | Pound 5,660  |
| Bar Splicers                     |     |      |         | Each 10      |
| Concrete Sealer                  |     |      |         | Sq. Ft. 326  |



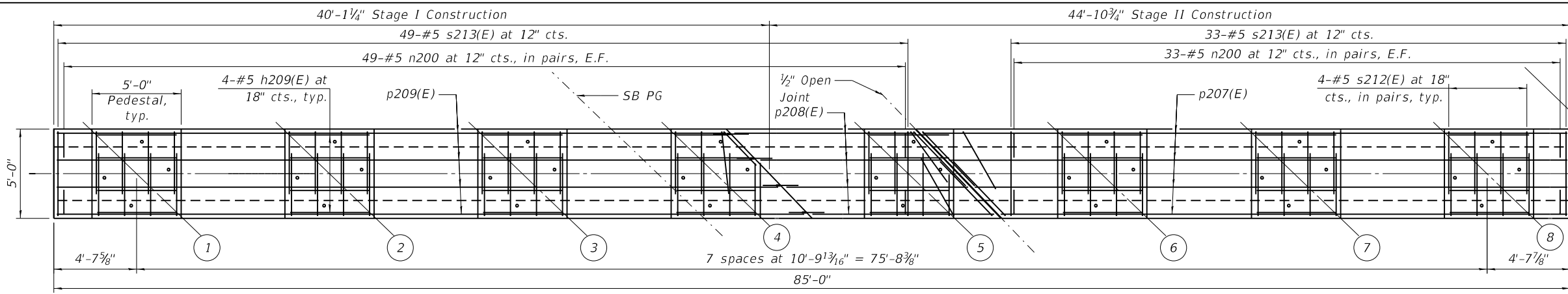
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|-----------------------------|----------------|-------------|
| USER NAME = USGM717780      | DESIGNED - BJD | REVISIONS - |
| PLOT SCALE = 0:2.0000 "/in. | CHECKED - MGH  | REVISIONS - |
| PLOT DATE = 2/11/2025       | DRAWN - BJD    | REVISIONS - |
|                             | CHECKED - MGH  | REVISIONS - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

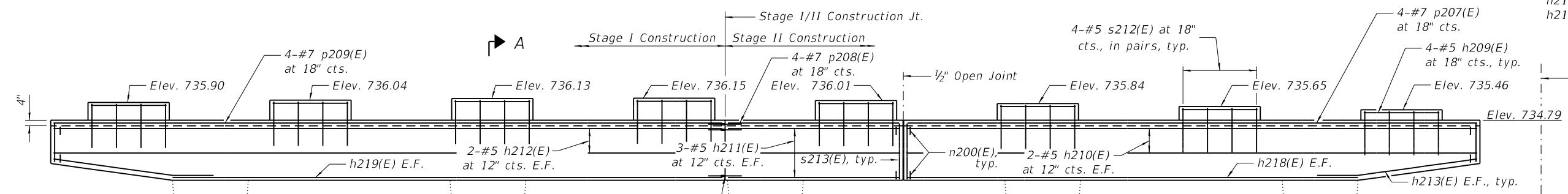
NB PIER 3 MODIFICATION DETAILS  
STRUCTURE NO. 016-0973 (NB)

|                           |                     |             |                   |               |
|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.S. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1290 | SHEET NO. 985 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |

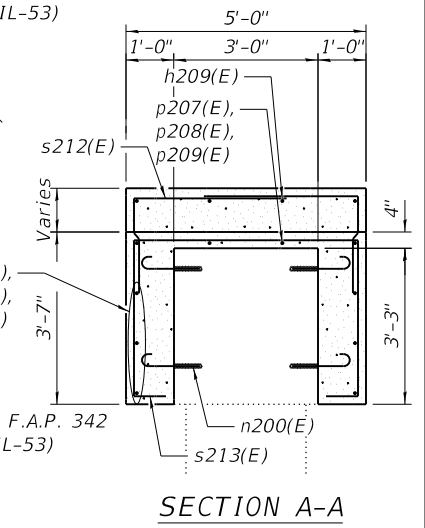
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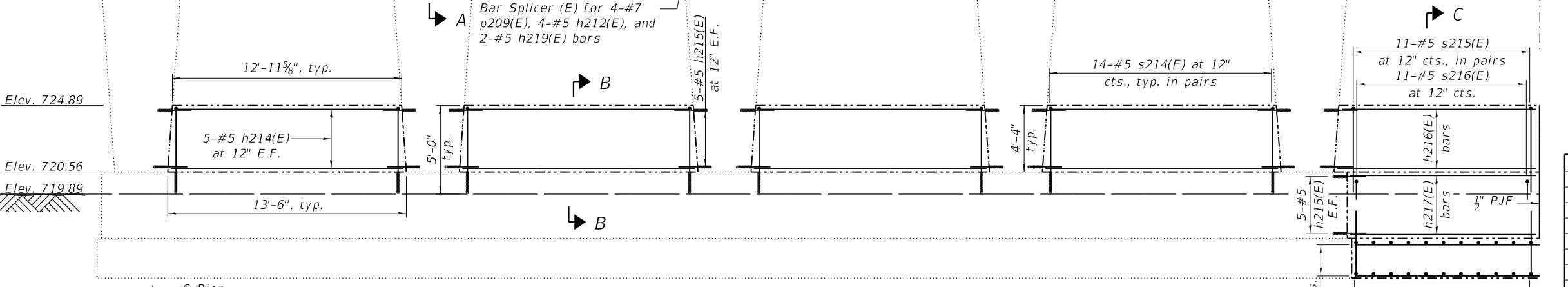
PIER 1 PLAN



PIER 1 ELEVATION  
(Looking North)



SECTION A-A



SECTION C-C

SECTION B-B

Notes:  
1. See Sheet 43 of 55 for notes.

PIER BILL OF MATERIAL  
(SN 016-0371)

| Bar                              | No. | Size    | Length  | Shape |
|----------------------------------|-----|---------|---------|-------|
| h209(E)                          | 32  | #5      | 4'-6"   |       |
| h210(E)                          | 4   | #5      | 33'-11" |       |
| h211(E)                          | 6   | #5      | 10'-2"  |       |
| h212(E)                          | 4   | #5      | 41'-10" |       |
| h213(E)                          | 4   | #5      | 10'-2"  |       |
| h214(E)                          | 40  | #5      | 13'-2"  |       |
| h215(E)                          | 100 | #5      | 1'-10"  |       |
| h216(E)                          | 11  | #5      | 11'-0"  |       |
| h217(E)                          | 12  | #5      | 10'-6"  |       |
| h218(E)                          | 2   | #5      | 26'-10" |       |
| h219(E)                          | 2   | #5      | 43'-1"  |       |
| n200(E)                          | 164 | #5      | 2'-0"   |       |
| n201(E)                          | 22  | #5      | 6'-6"   |       |
| p207(E)                          | 4   | #5      | 36'-1"  |       |
| p208(E)                          | 4   | #5      | 10'-2"  |       |
| p209(E)                          | 4   | #5      | 41'-1"  |       |
| s212(E)                          | 64  | #5      | 5'-3"   |       |
| s213(E)                          | 82  | #5      | 12'-6"  |       |
| s214(E)                          | 112 | #5      | 6'-11"  |       |
| s215(E)                          | 22  | #5      | 5'-8"   |       |
| s216(E)                          | 11  | #5      | 3'-7"   |       |
| t201(E)                          | 44  | #5      | 3'-5"   |       |
| w202(E)                          | 8   | #5      | 20'-11" |       |
| Concrete Structures              |     | Cu. Yd. | 64.6    |       |
| Reinforcement Bars, Epoxy Coated |     | Pound   | 5,660   |       |
| Bar Splicers                     |     | Each    | 10      |       |
| Concrete Sealer                  |     | Sq. Ft. | 326     |       |

BAR s212(E), s214(E), s215(E) and n201(E)

BAR s213(E)

BAR s216(E)

BAR n200(E)



|              |                |            |     |           |  |
|--------------|----------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780     | DESIGNED - | BJD | REVISED - |  |
| CHECKED -    | MGH            | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025      | CHECKED -  | MGH | REVISED - |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

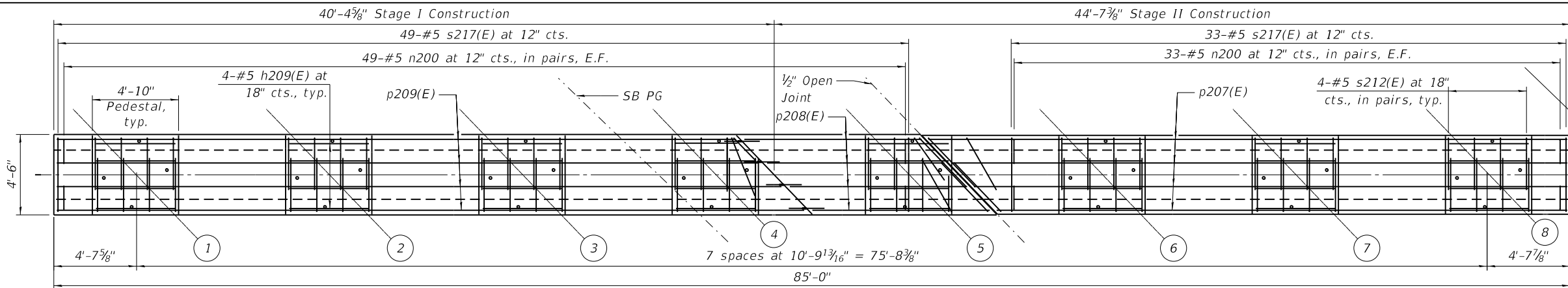
SB PIER 1 MODIFICATION DETAILS  
STRUCTURE NO. 016-0371 (SB)

SHEET 50 OF 55 SHEETS

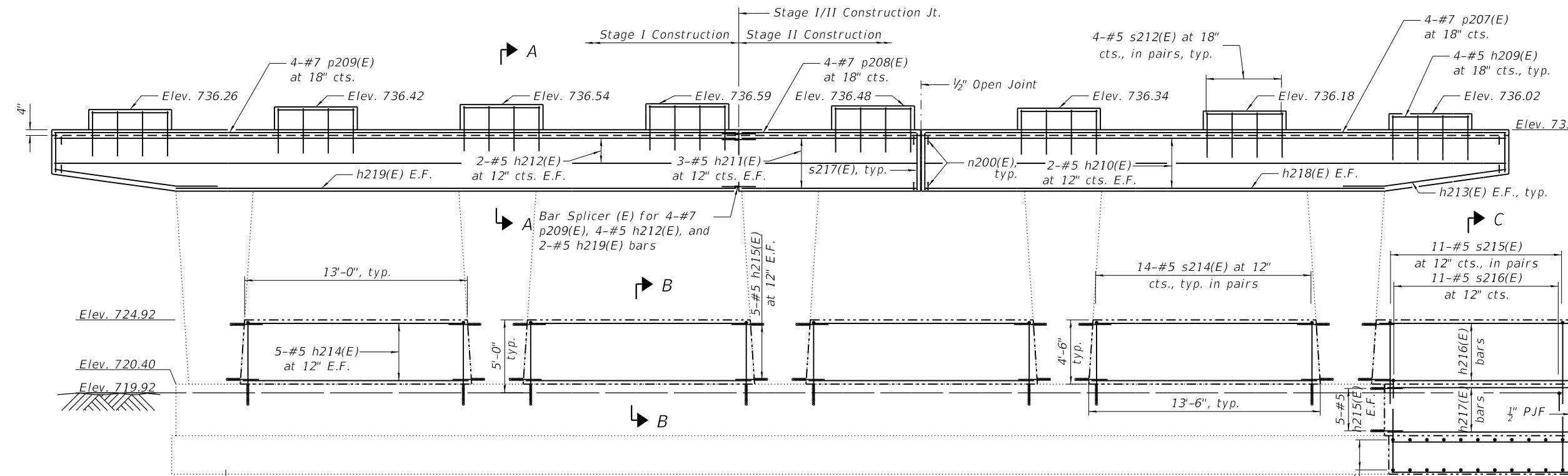
| F.A.S. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|-------------|--------|--------------|-----------|
| 342                | 2018-100-BR | COOK   | 1290         | 986       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT

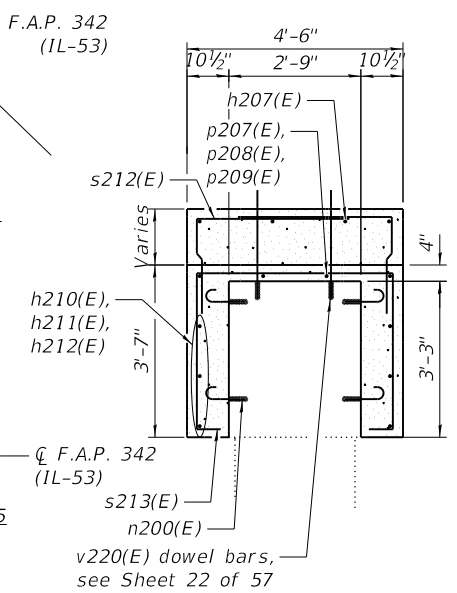
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PIER 2 PLAN



PIER 2 ELEVATION  
(Looking North)

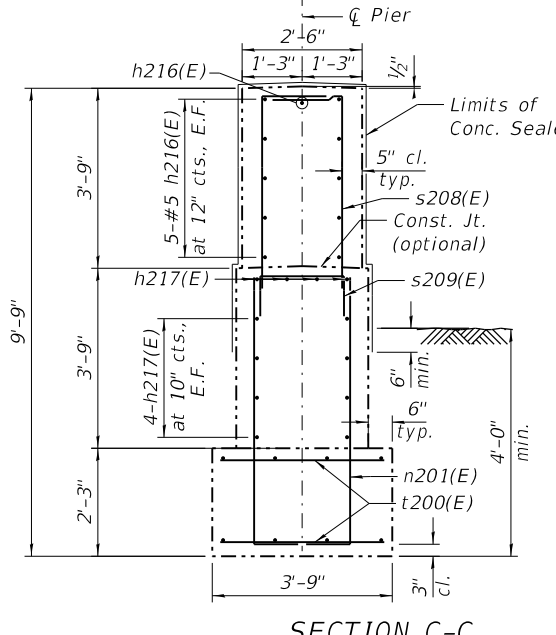


SECTION A-A

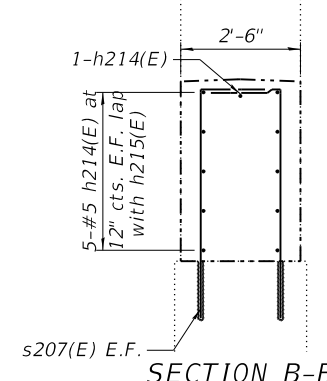
Notes:  
1. See Sheet 43 of 55 for notes.

PIER BILL OF MATERIAL  
(SN 016-0371)

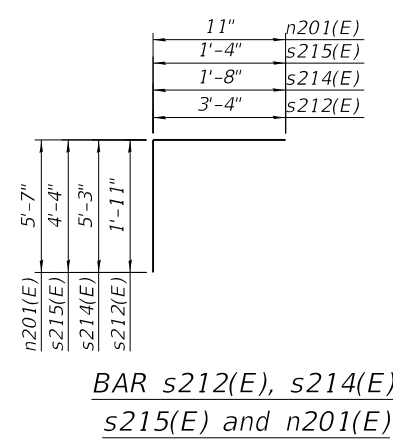
| Bar                              | No. | Size    | Length  | Shape |
|----------------------------------|-----|---------|---------|-------|
| h209(E)                          | 32  | #5      | 4'-6"   |       |
| h210(E)                          | 4   | #5      | 33'-11" |       |
| h211(E)                          | 6   | #5      | 10'-2"  |       |
| h212(E)                          | 4   | #5      | 41'-10" |       |
| h213(E)                          | 4   | #5      | 10'-2"  |       |
| h214(E)                          | 40  | #5      | 13'-2"  |       |
| h215(E)                          | 100 | #5      | 1'-10"  |       |
| h216(E)                          | 11  | #5      | 11'-0"  |       |
| h217(E)                          | 12  | #5      | 10'-6"  |       |
| h218(E)                          | 2   | #5      | 26'-10" |       |
| h219(E)                          | 2   | #5      | 43'-1"  |       |
| n200(E)                          | 164 | #5      | 2'-0"   |       |
| n201(E)                          | 22  | #5      | 6'-6"   |       |
| p207(E)                          | 4   | #5      | 36'-1"  |       |
| p208(E)                          | 4   | #5      | 10'-2"  |       |
| p209(E)                          | 4   | #5      | 41'-1"  |       |
| s212(E)                          | 64  | #5      | 5'-3"   |       |
| s214(E)                          | 112 | #5      | 6'-11"  |       |
| s215(E)                          | 22  | #5      | 5'-8"   |       |
| s216(E)                          | 11  | #5      | 3'-7"   |       |
| s217(E)                          | 82  | #5      | 12'-0"  |       |
| t201(E)                          | 44  | #5      | 3'-5"   |       |
| w202(E)                          | 8   | #5      | 20'-11" |       |
| Concrete Structures              |     | Cu. Yd. |         | 61.2  |
| Reinforcement Bars, Epoxy Coated |     | Pound   |         | 5,620 |
| Bar Splicers                     |     | Each    |         | 10    |
| Concrete Sealer                  |     | Sq. Ft. |         | 326   |



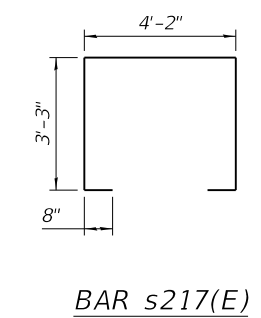
SECTION C-C



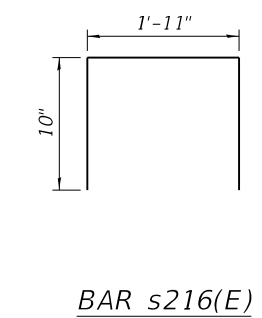
SECTION B-B



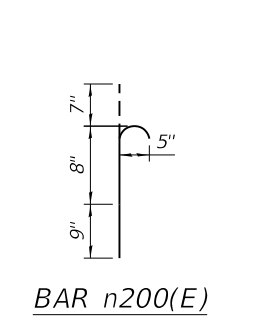
BAR s212(E), s214(E), s215(E) and n201(E)



BAR s217(E)



BAR s216(E)



BAR n200(E)

MODEL: Default  
FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_BridgeStructures\Sheets\C2-D162N91-0160973-51



|              |                |             |     |           |  |
|--------------|----------------|-------------|-----|-----------|--|
| USER NAME =  | USGM717780     | DESIGNED -  | BJD | REVISED - |  |
| CHECKED -    | MGH            | REVISIONS - |     |           |  |
| PLOT SCALE = | 0:2.0000 "/in. | DRAWN -     | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025      | CHECKED -   | MGH | REVISED - |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

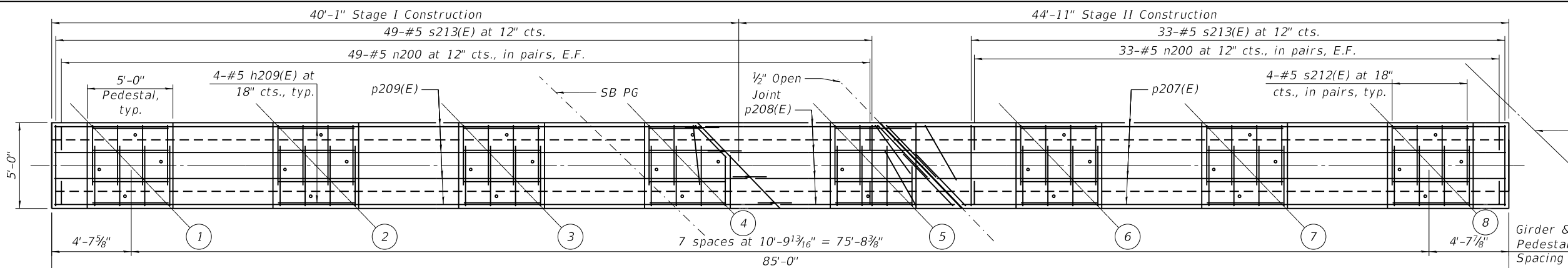
SB PIER 2 MODIFICATION DETAILS  
STRUCTURE NO. 016-0371 (SB)

SHEET 51 OF 55 SHEETS

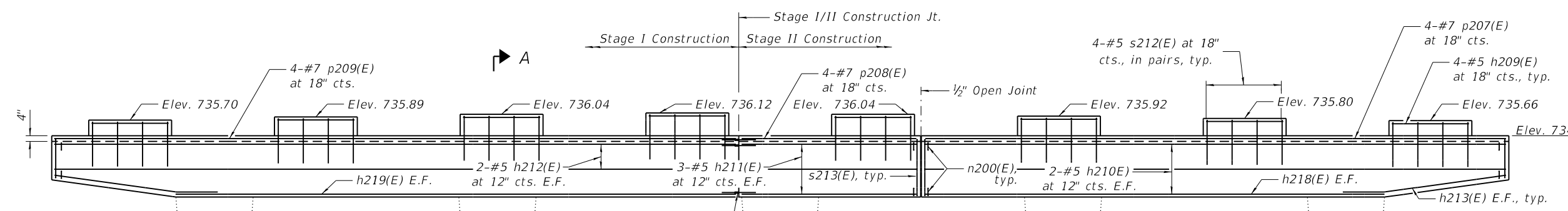
| F.A.S. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|-------------|--------|--------------|-----------|
| 342                | 2018-100-BR | COOK   | 1290         | 987       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT

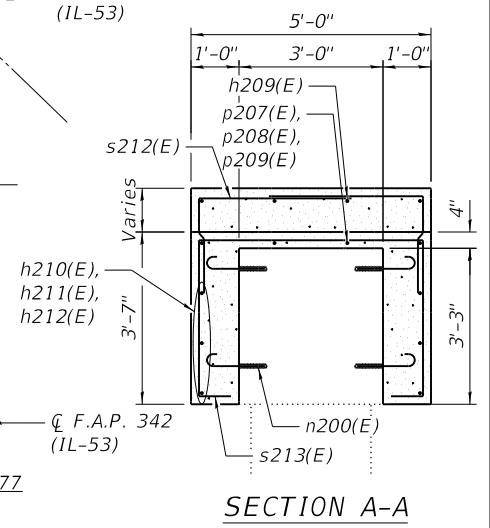




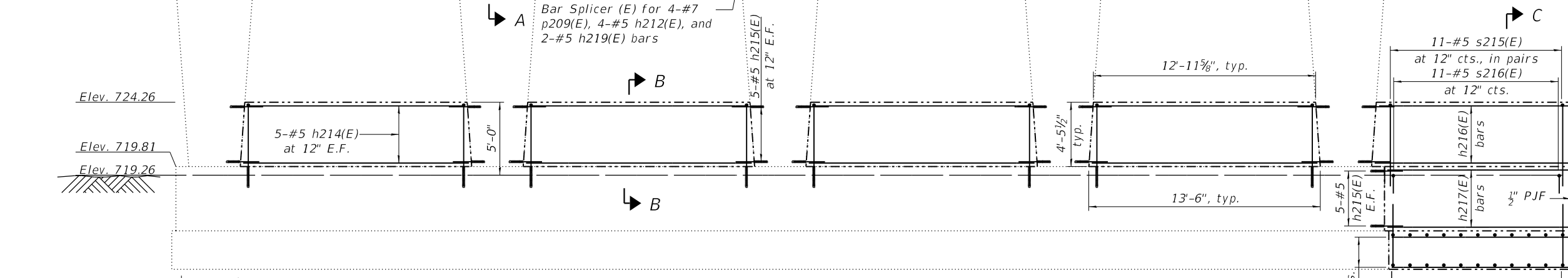
PIER 3 PLAN



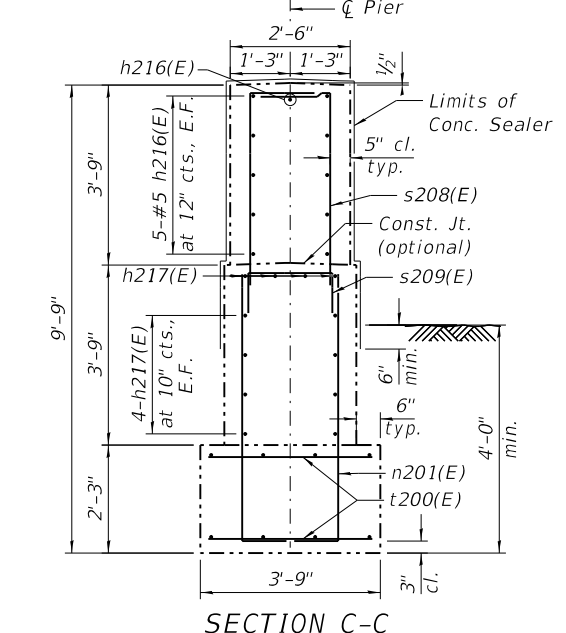
PIER 3 ELEVATION  
(Looking North)



SECTION A-A



SECTION B-B



SECTION C-C

Notes:  
1. See Sheet 43 of 55 for notes.

PIER BILL OF MATERIAL  
(SN 016-0371)

| Bar                              | No. | Size    | Length  | Shape |
|----------------------------------|-----|---------|---------|-------|
| h209(E)                          | 32  | #5      | 4'-6"   |       |
| h210(E)                          | 4   | #5      | 33'-11" |       |
| h211(E)                          | 6   | #5      | 10'-2"  |       |
| h212(E)                          | 4   | #5      | 41'-10" |       |
| h213(E)                          | 4   | #5      | 10'-2"  |       |
| h214(E)                          | 40  | #5      | 13'-2"  |       |
| h215(E)                          | 100 | #5      | 1'-10"  |       |
| h216(E)                          | 11  | #5      | 11'-0"  |       |
| h217(E)                          | 12  | #5      | 10'-6"  |       |
| h218(E)                          | 2   | #5      | 26'-10" |       |
| h219(E)                          | 2   | #5      | 43'-1"  |       |
| n200(E)                          | 164 | #5      | 2'-0"   |       |
| n201(E)                          | 22  | #5      | 6'-6"   |       |
| p207(E)                          | 4   | #5      | 36'-1"  |       |
| p208(E)                          | 4   | #5      | 10'-2"  |       |
| p209(E)                          | 4   | #5      | 41'-1"  |       |
| s212(E)                          | 64  | #5      | 5'-3"   |       |
| s213(E)                          | 82  | #5      | 12'-6"  |       |
| s214(E)                          | 112 | #5      | 6'-11"  |       |
| s215(E)                          | 22  | #5      | 5'-8"   |       |
| s216(E)                          | 11  | #5      | 3'-7"   |       |
| t201(E)                          | 44  | #5      | 3'-5"   |       |
| w202(E)                          | 8   | #5      | 20'-11" |       |
| Concrete Structures              |     | Cu. Yd. |         | 64.6  |
| Reinforcement Bars, Epoxy Coated |     | Pound   |         | 5,660 |
| Bar Splicers                     |     | Each    |         | 10    |
| Concrete Sealer                  |     | Sq. Ft. |         | 326   |

BAR s212(E), s214(E), s215(E) and n201(E)

BAR s213(E)

BAR s216(E)

BAR n200(E)

MODEL: Default  
FILE NAME: pw:\wsp-us-pw-bentley.com\wsp-us-pw-lu\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-52



|              |                |            |     |           |  |
|--------------|----------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780     | DESIGNED - | BJD | REVISED - |  |
| CHECKED -    | MGH            | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025      | CHECKED -  | MGH | REVISED - |  |

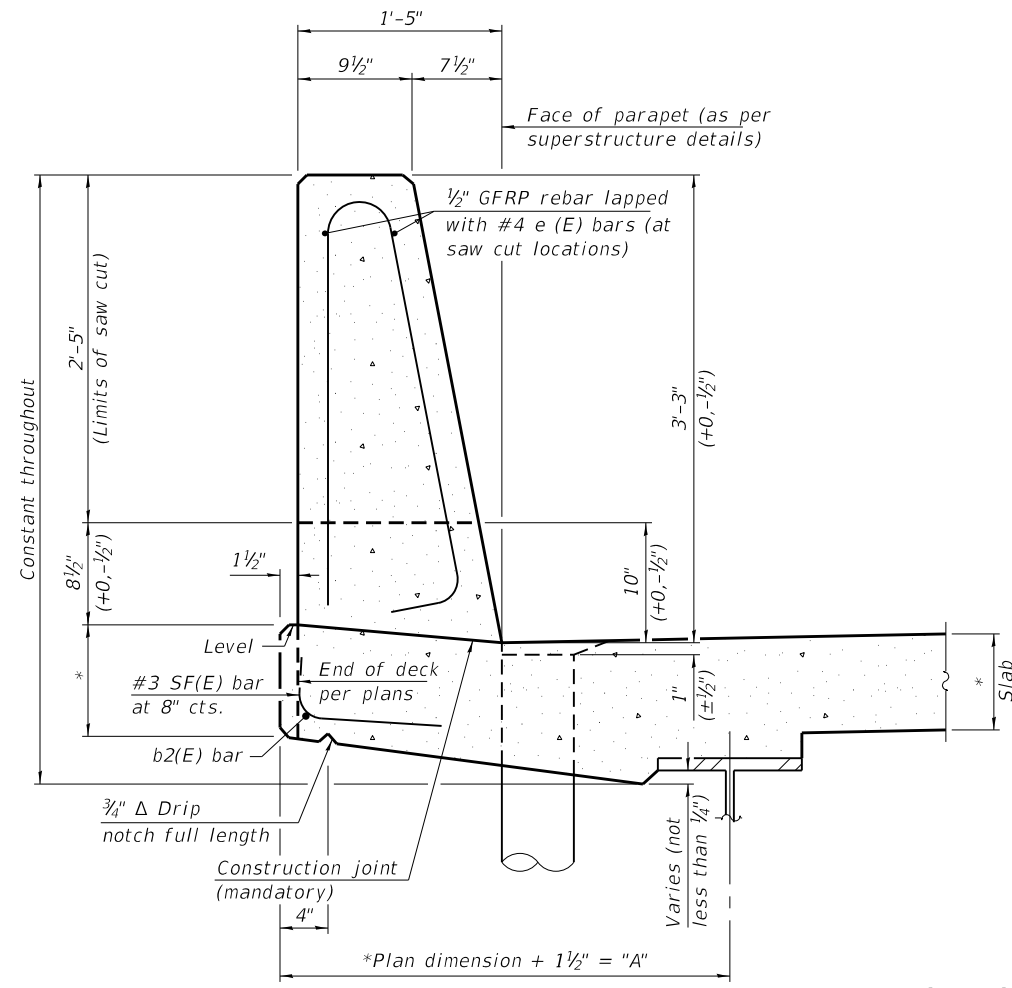
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SB PIER 3 MODIFICATION DETAILS  
STRUCTURE NO. 016-0371 (SB)

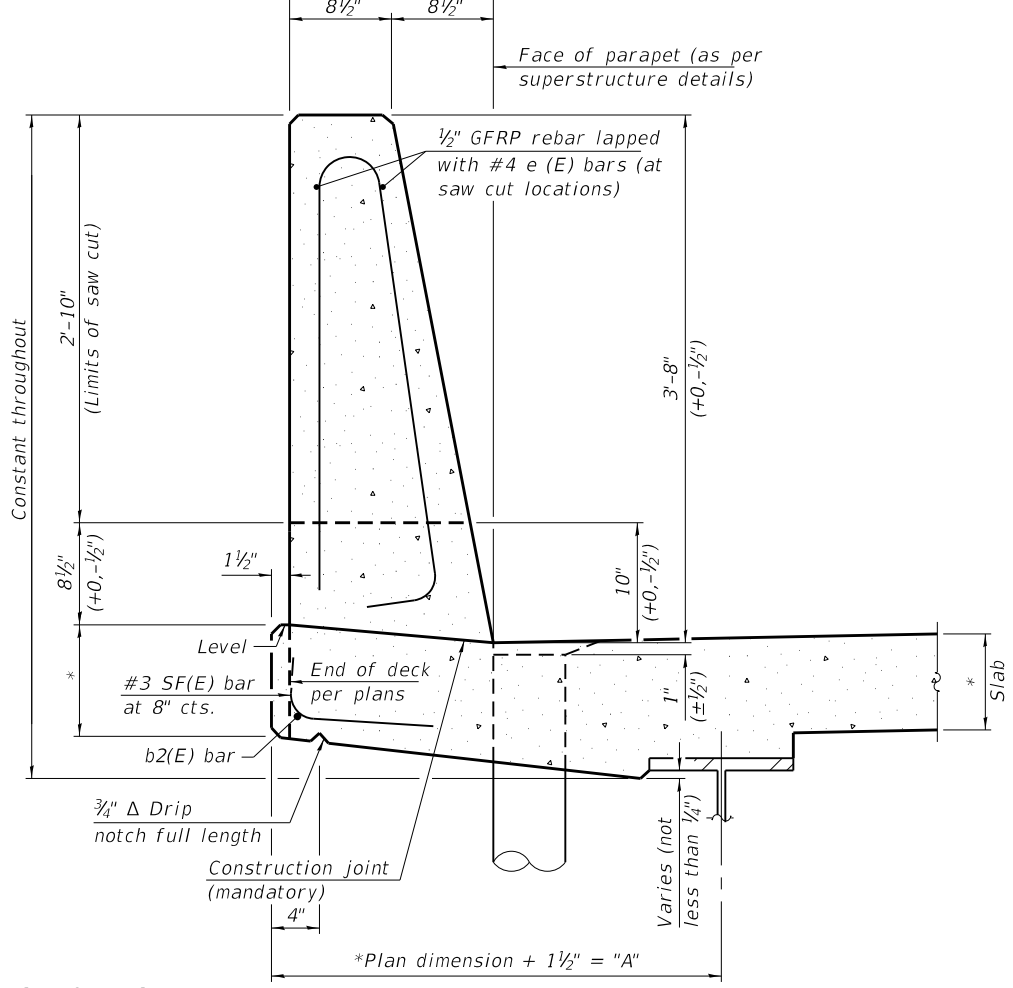
SHEET 52 OF 55 SHEETS

| F.A.S. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|-------------|--------|--------------|-----------|
| 342                | 2018-100-BR | COOK   | 1290         | 988       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT



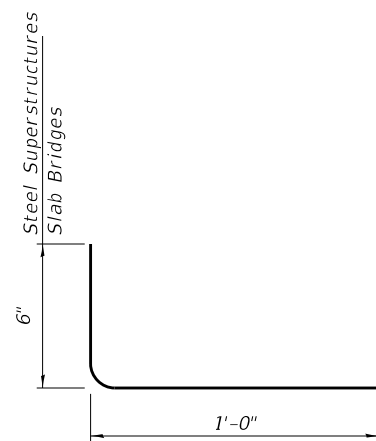
**39" CONSTANT-SLOPE  
PARAPET SECTION**  
(Showing dimensions, d(E), and 1/2" Ø GFRP rebar)



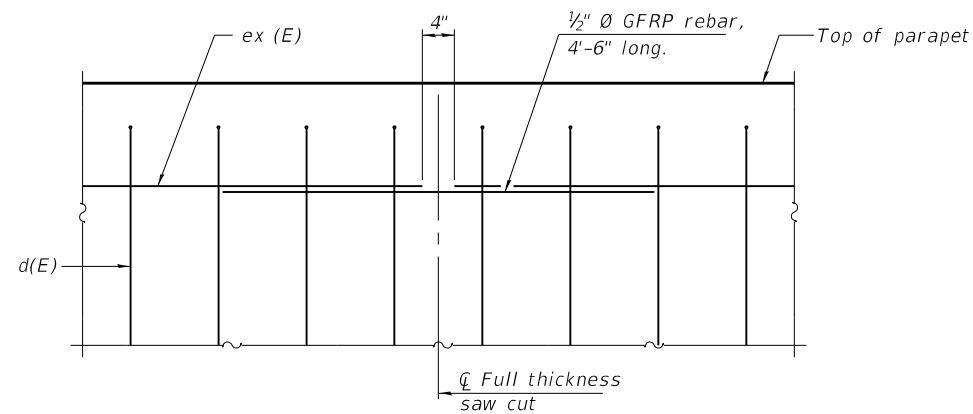
STEEL SUPERSTRUCTURES

**44" CONSTANT-SLOPE  
PARAPET SECTION**  
(Showing dimensions, d(E), and 1/2" Ø GFRP rebar)

\*See Superstructure Details.



**SF(E) BAR**



**DETAIL - GFRP REBAR STIFFENING ELEVATION**

(Place as shown in parapet section at each parapet joint location.)

Notes:  
 All dimensions shall remain the same as shown on superstructure details, except dimension "A" which is to be revised as shown.  
 Additional concrete needed to revise dimension "A" (39" and 44" parapets):  
 Steel Superstructures: 0.00348 cu. yds./ft.  
 Place full depth aluminum sheets as shown on superstructure details.  
 Replace all cork joint filler locations with a full thickness saw cut.  
 Steel and slab superstructures shown. Other superstructure types similar.

MODEL: Default  
 FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-53



|              |                  |            |     |           |  |
|--------------|------------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780       | DESIGNED - | BJD | REVISED - |  |
|              |                  | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 " / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025        | CHECKED -  | MGH | REVISED - |  |

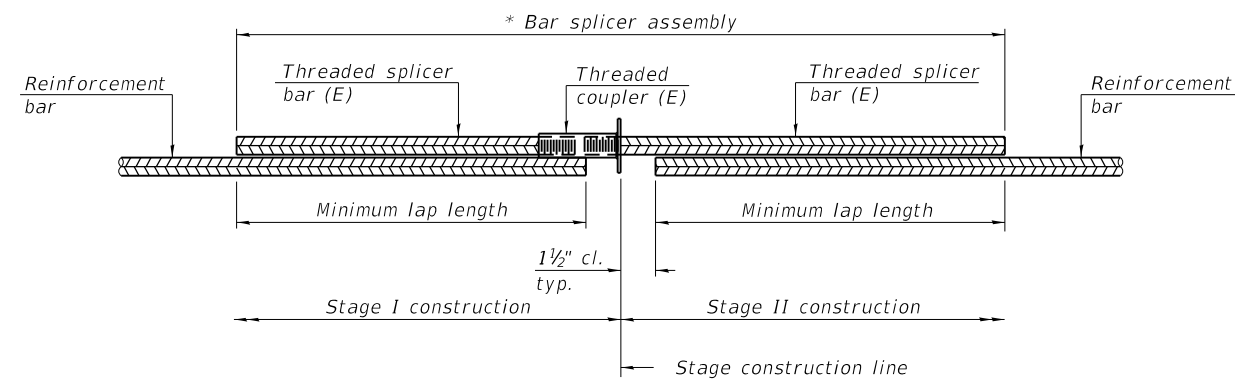
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION  
 STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)

SHEET 53 OF 55 SHEETS

|                    |             |        |              |           |
|--------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.        | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                | 2018-100-BR | COOK   | 1351         | 989       |
| CONTRACT NO. 62N91 |             |        |              |           |

ILLINOIS FED. AID PROJECT

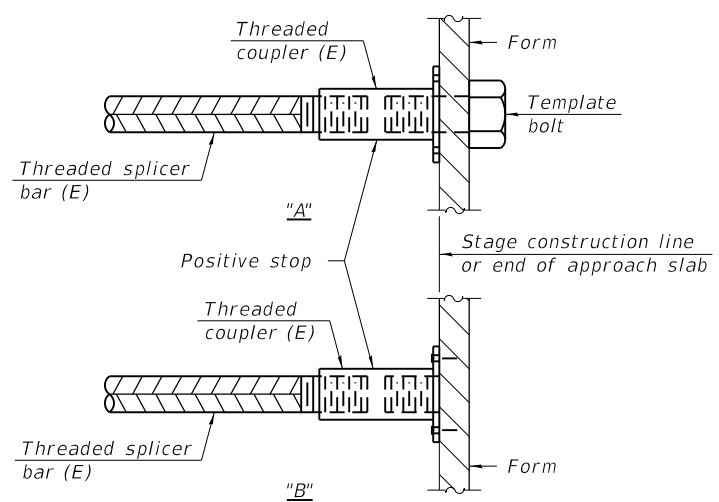


**STANDARD BAR SPLICER ASSEMBLY PLAN**  
 (All components shall be provided from one supplier)

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

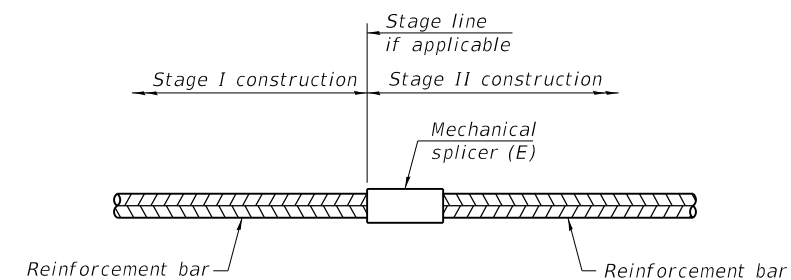
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

| Location              | Bar size | No. assemblies required | Minimum lap length |
|-----------------------|----------|-------------------------|--------------------|
| N.E. Approach         | #5       | 86                      | 3'-0"              |
| N.E. Approach         | #8       | 61                      | 4'-9"              |
| S.E. Approach         | #5       | 86                      | 3'-0"              |
| S.E. Approach         | #8       | 61                      | 4'-9"              |
| N.W. Approach         | #5       | 86                      | 3'-0"              |
| N.W. Approach         | #8       | 61                      | 4'-9"              |
| S.W. Approach         | #5       | 86                      | 3'-0"              |
| S.W. Approach         | #8       | 61                      | 4'-9"              |
| Northbound Deck       | #5       | 784                     | 3'-6"              |
| Southbound Deck       | #5       | 784                     | 3'-6"              |
| N.E. Abut.            | #5       | 5                       | 3'-4"              |
| N.E. Abut.            | #7       | 5                       | 4'-8"              |
| S.E. Abut.            | #5       | 5                       | 3'-4"              |
| S.E. Abut.            | #7       | 5                       | 4'-8"              |
| N.W. Abut.            | #5       | 5                       | 3'-4"              |
| N.W. Abut.            | #7       | 5                       | 4'-8"              |
| S.W. Abut.            | #5       | 5                       | 3'-4"              |
| S.W. Abut.            | #7       | 5                       | 4'-8"              |
| N.E. Abut. Diaph.     | #5       | 13                      | 3'-0"              |
| S.E. Abut. Diaph.     | #5       | 13                      | 3'-0"              |
| N.W. Abut. Diaph.     | #5       | 13                      | 3'-0"              |
| S.W. Abut. Diaph.     | #5       | 13                      | 3'-0"              |
| N.E. Exp. Pier        | #5       | 6                       | 3'-0"              |
| N.E. Exp. Pier        | #7       | 4                       | 3'-0"              |
| S.E. Exp. Pier        | #5       | 6                       | 3'-0"              |
| S.E. Exp. Pier        | #7       | 4                       | 3'-0"              |
| N.W. Exp. Pier        | #5       | 6                       | 3'-0"              |
| N.W. Exp. Pier        | #7       | 4                       | 3'-0"              |
| S.W. Exp. Pier        | #5       | 6                       | 3'-0"              |
| S.W. Exp. Pier        | #7       | 4                       | 3'-0"              |
| NB Fixed Pier         | #5       | 6                       | 3'-0"              |
| NB Fixed Pier         | #7       | 4                       | 3'-0"              |
| SB Fixed Pier         | #5       | 6                       | 3'-0"              |
| SB Fixed Pier         | #7       | 4                       | 3'-0"              |
| N.E. Exp. Pier Diaph. | #5       | 6                       | 3'-0"              |
| S.E. Exp. Pier Diaph. | #5       | 6                       | 3'-0"              |
| N.W. Exp. Pier Diaph. | #5       | 6                       | 3'-0"              |
| S.W. Exp. Pier Diaph. | #5       | 6                       | 3'-0"              |
| NB Fixed Pier Diaph.  | #5       | 6                       | 3'-0"              |
| SB Fixed Pier Diaph.  | #5       | 6                       | 3'-0"              |



**INSTALLATION AND SETTING METHODS**

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



**STANDARD MECHANICAL SPLICER**

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

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

MODEL: Default  
 FILE NAME: p:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-54



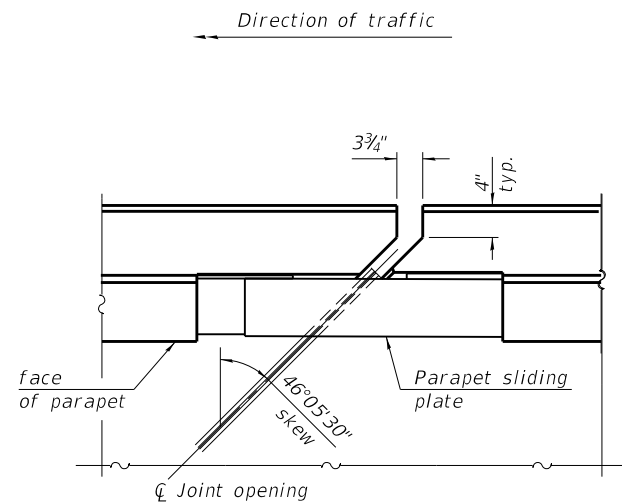
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|---------------------------------|----------------|-----------|
| USER NAME = USGM717780          | DESIGNED - BJD | REVISED - |
| PLOT SCALE = 0:2.0000 " = 1 in. | CHECKED - MGH  | REVISED - |
| PLOT DATE = 2/11/2025           | DRAWN - BJD    | REVISED - |
|                                 | CHECKED - MGH  | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)

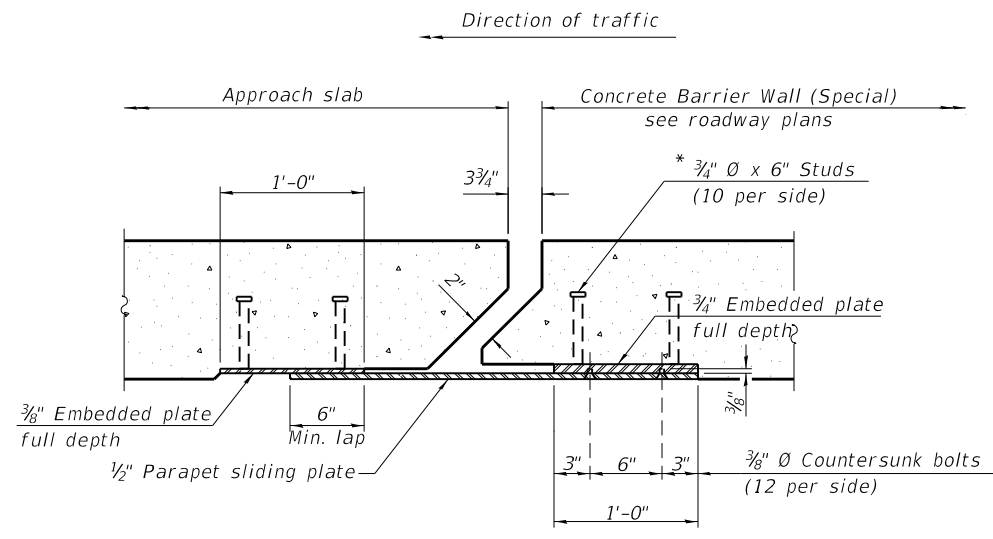
SHEET 54 OF 55 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 990       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



**PLAN AT END OF APPROACH**

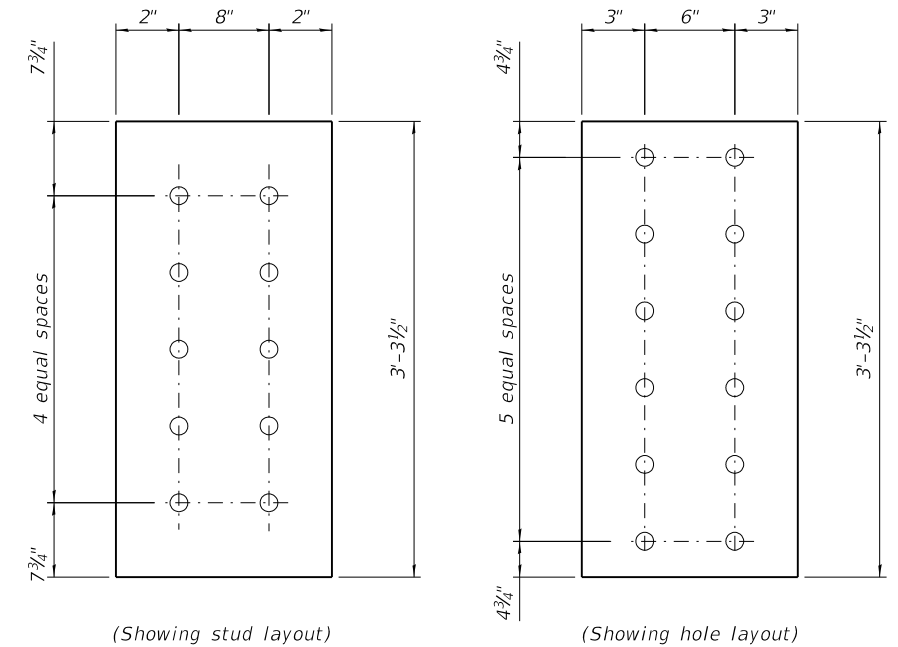
(Drawn for SB IL-53 North approach sliding plate detail, other views similar.)



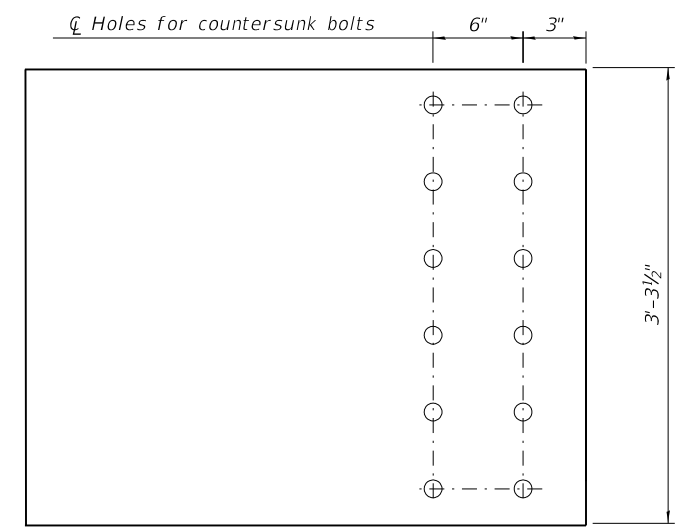
**SECTION B-B**

(Drawn for SB IL-53 North approach sliding plate detail, other views similar.)

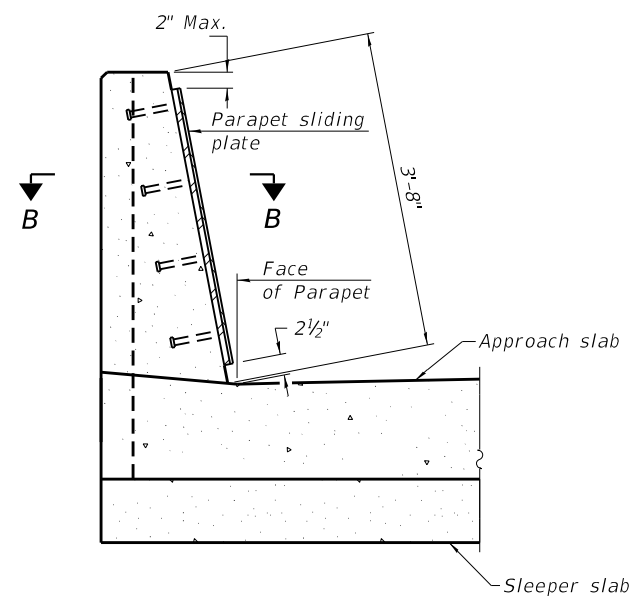
**Notes:**  
 The preformed pavement joint seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the stripseal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.  
 The manufacturer's recommended installation methods shall be followed.  
 All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.  
 Cost of parapet sliding plates, embedded plates, and anchorage studs included with Concrete Barrier Wall (Special) 39" constant slope barrier shown, 44" constant slope barrier similar as noted.



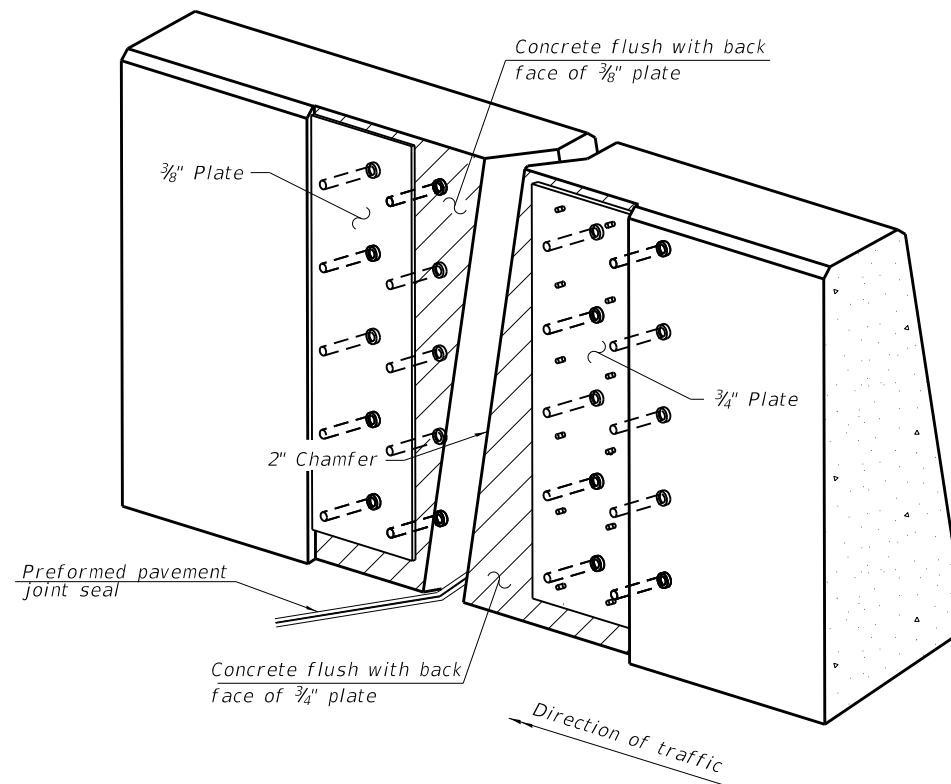
**EMBEDDED PLATE DETAIL**



**MEDIAN SLIDING PLATE**



**SECTION AT END OF APPROACH**



**TRIMETRIC VIEW**  
 (Showing embedded plates only)

**Notes:**  
 1. See bridge approach sheets 21 to 23 of 55.

MODEL: Default  
 FILE NAME: pw:\wsp-us-pw-bentley.com\wsp-us-pw-l\Documents\Project\_62N91-IL\_53\_Bridges\Structures\Sheets\C2-D162N91-0160973-54A.dgn



|              |              |            |     |           |  |
|--------------|--------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780   | DESIGNED - | BJD | REVISED - |  |
|              |              | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 "/> |            |     |           |  |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**MEDIAN SLIDING PLATE**  
**STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)**

SHEET 54A OF 55 SHEETS

|             |             |        |                    |           |
|-------------|-------------|--------|--------------------|-----------|
| F.A.P. RTE. | SECTION     | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 342         | 2018-100-BR | COOK   | 1351               | 990A      |
|             |             |        | CONTRACT NO. 62N91 |           |

ILLINOIS FED. AID PROJECT

ROUTE FAP 342 DESCRIPTION IL 53 over US 12 (Rand Rd) LOGGED BY Gonzalez (BR)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 12, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM, Latitude 42.13000191, Longitude 88.0048029

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

| STRUCT. NO. Station   | BORING NO. Station<br>Offset   | Ground Surface Elev. | DEPTH (ft) | BLOW S | UCS (tsf) | M-O-I-S-T (%) | Surface Water Elev. |    | DEPTH (ft) | BLOW S | UCS (tsf) | M-O-I-S-T (%) |
|---|--------------------------------|----------------------|------------|--------|-----------|---------------|---------------------|----|------------|--------|-----------|---------------|
|   |                                |                      |            |        |           |               | ft                  | ft |            |        |           |               |
| 016-0973  | GC-29<br>2415+44<br>30.1 ft LT | 738.5                |            |        |           |               | Surface Water Elev. |    |            |        |           |               |
| ASPHALT - 14"   |                                |                      |            |        |           |               | 737.3               |    | 4          |        |           |               |
| Medium Stiff to Stiff, Brown, Dry, CLAY, Trace Gravel                         |                                |                      |            |        |           |               |                     |    | 5          | 1.3    | 14        |               |
|   |                                |                      |            | 2      | 0.6       | 20            |                     |    | 6          | B      |           |               |
|   |                                |                      |            | 3      | B         |               |                     |    |            |        |           |               |
|   |                                |                      |            |        |           |               | 715.0               |    | 4          |        |           |               |
| Stiff, Brown, Moist to Wet, CLAY with Fine Sand, Trace Gravel                 |                                |                      |            |        |           |               |                     |    | 4          | 1.2    | 15        |               |
|   |                                |                      |            | 4      | 7.0       | 18            |                     |    | 5          | B      |           |               |
|   |                                |                      |            | 6      | B         |               |                     |    | 5          |        |           |               |
|   |                                |                      |            | -5     |           |               |                     |    | -25        |        |           |               |
|   |                                |                      |            |        |           |               |                     |    | 3          |        |           |               |
|   |                                |                      |            | 4      | 2.3       | 13            |                     |    | 4          |        |           |               |
|   |                                |                      |            | 4      | B         |               |                     |    | 4          |        |           |               |
|   |                                |                      |            |        |           |               |                     |    | 34         |        |           |               |
|   |                                |                      |            | 4      | 4.3       | 11            |                     |    | 50/4"      | 16     |           |               |
|   |                                |                      |            | 8      | B         |               |                     |    | -30        |        |           |               |
|   |                                |                      |            | -10    |           |               |                     |    |            |        |           |               |
|   |                                |                      |            |        |           |               | 726.0               |    | 3          |        |           |               |
| Medium Stiff to Stiff, Brown to Black, Dry, CLAY, Trace Gravel, Some Organics |                                |                      |            |        |           |               |                     |    | 6          | 2.4    | 15        |               |
|   |                                |                      |            | 3      | 1.7       | 18            |                     |    | 3          | 3.4    | 15        |               |
|   |                                |                      |            | 5      | B         |               |                     |    | 6          | B      |           |               |
|   |                                |                      |            | -15    |           |               |                     |    | 8          |        |           |               |
|   |                                |                      |            |        |           |               |                     |    | 4          |        |           |               |
|   |                                |                      |            | 5      | 2.9       | 24            |                     |    |            |        |           |               |
|   |                                |                      |            | 10     | B         |               |                     |    |            |        |           |               |
|   |                                |                      |            |        |           |               |                     |    | 7          |        |           |               |
|   |                                |                      |            | 3      | 2.6       | 22            |                     |    | 11         | 4.6    | 16        |               |
|   |                                |                      |            | 6      | B         |               |                     |    | 15         | B      |           |               |
|   |                                |                      |            | 8      |           |               |                     |    | -40        |        |           |               |
|   |                                |                      |            | -20    |           |               |                     |    |            |        |           |               |
|   |                                |                      |            |        |           |               | 718.5               |    | 7          |        |           |               |
| Medium Dense, Brown, Wet, Fine SAND   |                                |                      |            |        |           |               |                     |    | 11         | 4.6    | 16        |               |
|   |                                |                      |            | 6      | 2.6       | 22            |                     |    | 15         | B      |           |               |
|   |                                |                      |            | 8      |           |               |                     |    | -40        |        |           |               |
|   |                                |                      |            | -20    |           |               |                     |    |            |        |           |               |

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

ROUTE FAP 342 DESCRIPTION IL 53 over US 12 (Rand Rd) LOGGED BY Gonzalez (BR)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 12, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM, Latitude 42.13000191, Longitude 88.0048029

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

| STRUCT. NO. Station                    | BORING NO. Station<br>Offset   | Ground Surface Elev. | DEPTH (ft) | BLOW S | UCS (tsf) | M-O-I-S-T (%) | Surface Water Elev. |    | DEPTH (ft) | BLOW S | UCS (tsf) | M-O-I-S-T (%) |
|--|--------------------------------|----------------------|------------|--------|-----------|---------------|---------------------|----|------------|--------|-----------|---------------|
|  |                                |                      |            |        |           |               | ft                  | ft |            |        |           |               |
| 016-0973                               | GC-29<br>2415+44<br>30.1 ft LT | 738.5                |            |        |           |               | Surface Water Elev. |    |            |        |           |               |
| Hard, Brown, Moist, CLAY, Trace Gravel |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            | 19     |           |               |                     |    |            |        |           |               |
|  |                                |                      |            | 21     |           |               |                     |    |            |        |           |               |
|  |                                |                      |            | 23     |           |               |                     |    |            |        |           |               |
|  |                                |                      |            | 693.5  |           |               |                     |    | -45        |        |           |               |
| Boring terminated at 45 feet.          |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |
|  |                                |                      |            |        |           |               |                     |    |            |        |           |               |

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

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|              |                  |            |     |           |  |
|--------------|------------------|------------|-----|-----------|--|
| USER NAME =  | USGM717780       | DESIGNED - | BJD | REVISED - |  |
|              |                  | CHECKED -  | MGH | REVISED - |  |
| PLOT SCALE = | 0:2.0000 " / in. | DRAWN -    | BJD | REVISED - |  |
| PLOT DATE =  | 2/11/2025        | CHECKED -  | MGH | REVISED - |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS  
STRUCTURE NO. 016 - 0371 (SB) & 016 - 0973 (NB)  
SHEET 55 OF 55 SHEETS

| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-------------|--------|--------------|-----------|
| 342                       | 2018-100-BR | COOK   | 4351         | 991       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

Benchmark: TBM 21 - Cut cross on the southwest side of sign concrete foundation (IL 53 - IL 68 Dundee Road Exit), Elev. 729.131.

Existing Structure: None

Traffic Control: Shoulder closures are required along F.A.U. Rte. 334 US 12 (Rand Road) during wall construction. Drilling and setting of soldier piles will occur with concurrent superstructure replacement of Existing Bridge Structure Numbers 016-0973 and 0371 with work dependent on staged traffic control along IL-53 NB and SB for both Stages I and II of wall construction.

Salvage: None

**DESIGN SPECIFICATIONS**

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition with Interims

**DESIGN STRESSES**

**FIELD UNITS**

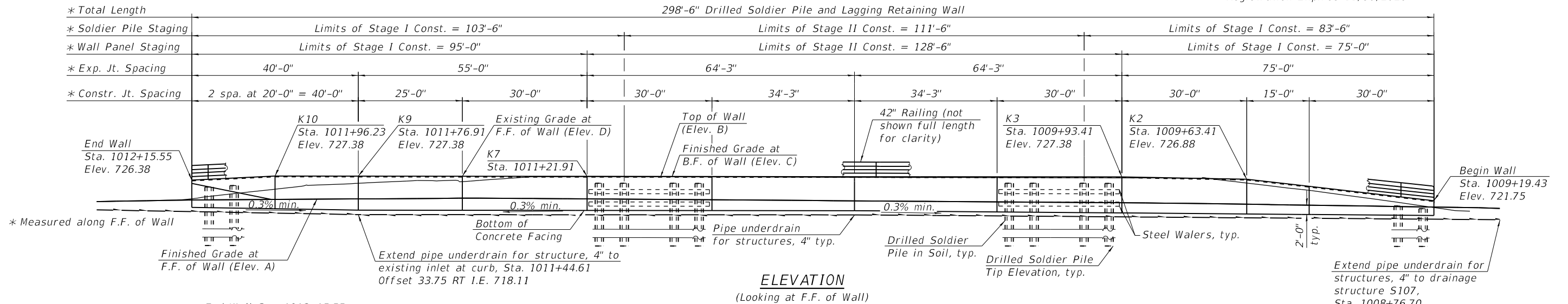
$f'_c = 3,500$  psi (Substructure)  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 50,000$  psi (M270 Grade 50)  
 Soldier Piles, Walers



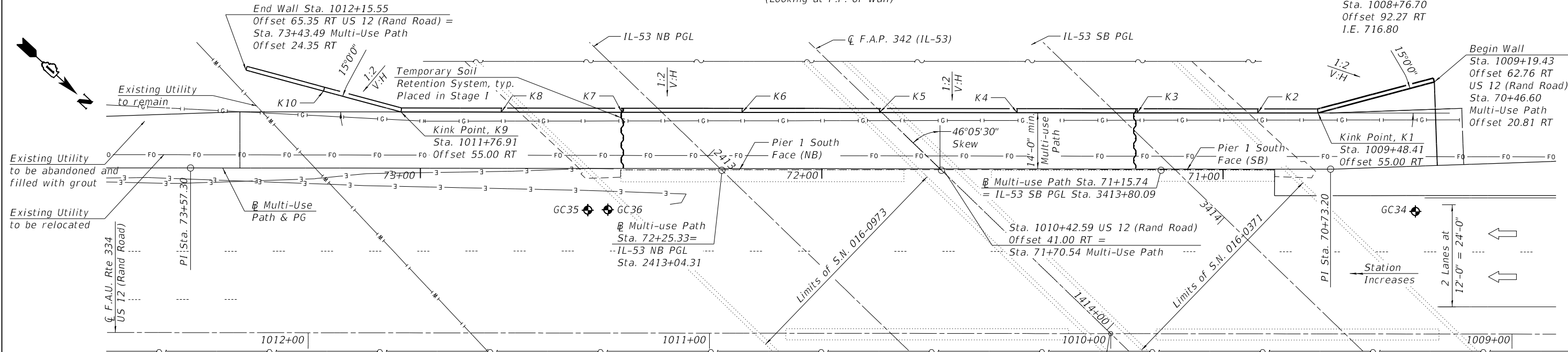
David D. Rice, S.E.  
 Licensed Structural Engineer  
 State of Illinois No. 081-005258  
 Registration Expires 11/30/2026

STA. 1009+19.43  
 BUILT 20XX BY  
 STATE OF ILLINOIS  
 F.A.P. RTE 342  
 SEC. 2018-100-BR  
 STR. NO. 016-W2503

**NAME PLATE**  
 (See Std. 515001)



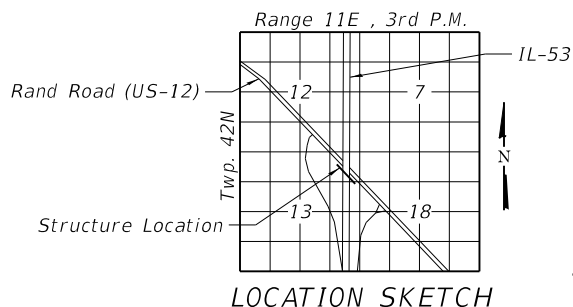
**ELEVATION**  
 (Looking at F.F. of Wall)



**PLAN**  
 (Soldier piles not shown full length for clarity)

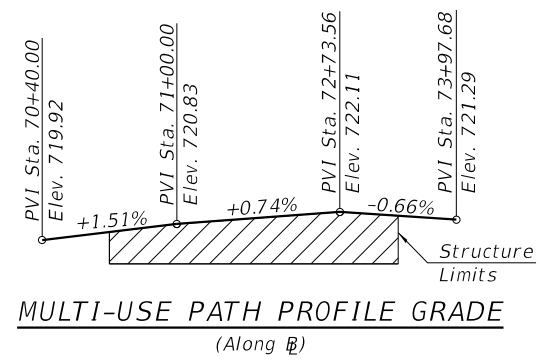
**LEGEND**

- FO Fiber Optic
- G Gas Line
- W Underground Water
- Pipe Underdrain for Structures, 4"
- Soil Boring



**GENERAL PLAN AND ELEVATION**

**RETAINING WALL ALONG  
 F.A.U. RTE. 334 US 12  
 UNDER F.A.P. 342 (IL-53)  
 SECTION 2018-100-BR  
 COOK COUNTY  
 STA. 1009+19.43 TO STA. 1012+15.55  
 STRUCTURE NO. 016-W2503**



**MULTI-USE PATH PROFILE GRADE**  
 (Along @)

- Notes:
- Offsets are measured from US 12 (Rand Road) to the Front Face of Wall.
  - Concrete Gutter, Type "B" (Special) not shown for clarity.
- F.F. = Front Face  
 B.F. = Back Face  
 I.E. = Invert Elevation

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION  
 STRUCTURE NO. 016-W2503**

SHEET 1 OF 15 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 992       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

MODEL: Sheet 1  
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**GENERAL NOTES**

1. All structural steel shall be AASHTO M270 Grade 50.
2. No field welding is permitted except as specified in the contract documents.
3. Reinforcement bars designated (E) shall be epoxy coated.
4. Plan dimensions and details relative to the existing structure have been taken from existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimension and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

**SCOPE OF WORK**

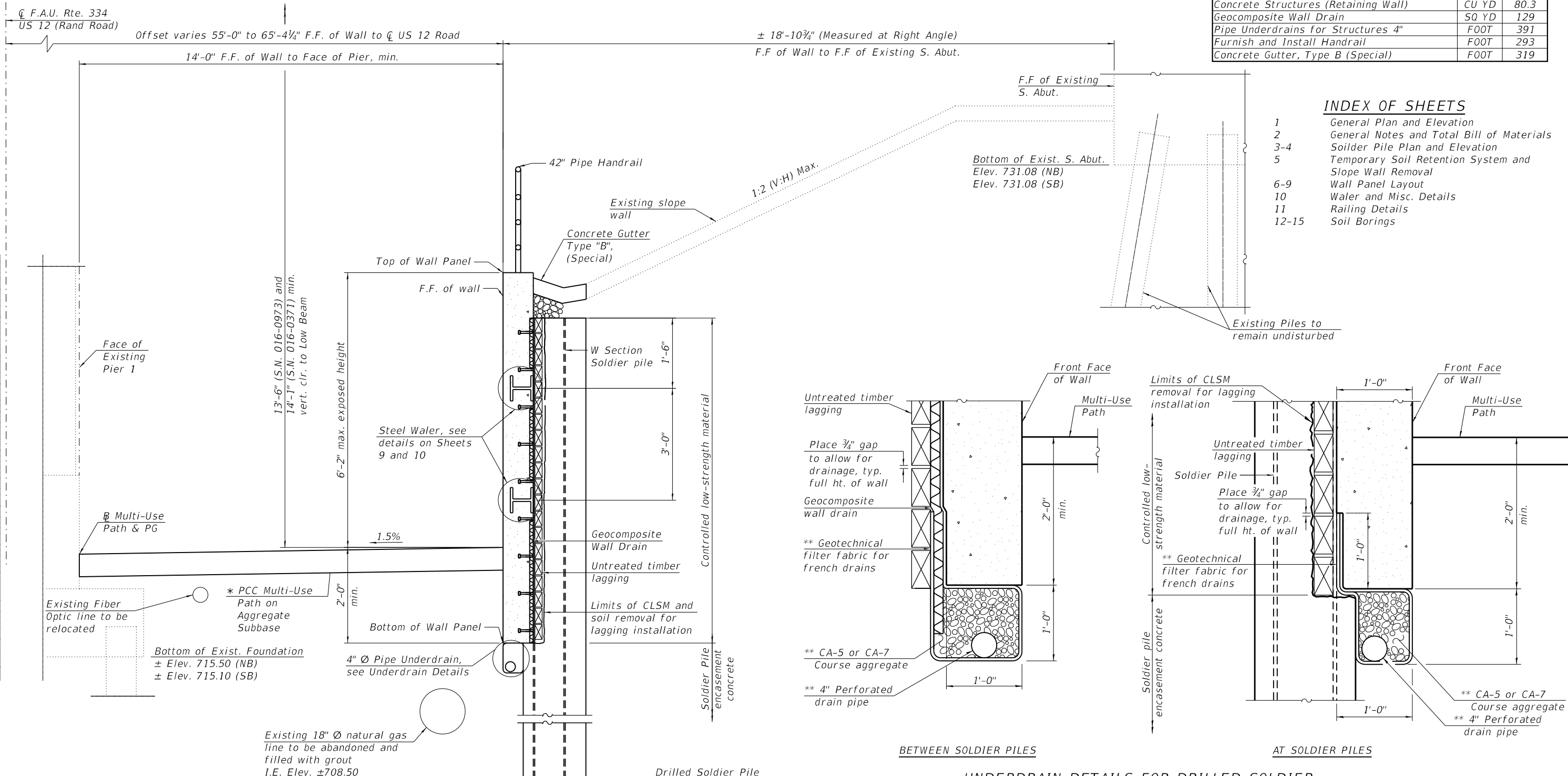
1. Relocate or abandon existing utilities prior to beginning construction.
2. Saw Cut and remove existing slope wall to limits of required excavation.
3. Set Drilled Soldier Piles during Stage I removal of bridge and before Stage I of bridge construction.
4. Place Temporary Soil Retention System to allow excavation and lagging placement from Beginning of Wall to Panel Point K3 and Panel Point K7 to End of Wall.
5. Set Drilled Soldier Piles within Stage II removal of bridge and before Stage II of bridge construction.
6. Place walers per plan and complete required excavation.
7. Cast wall panels and complete remaining wall construction.
8. Replace portion of slope wall and construct Type B gutter swale behind retaining wall.

**TOTAL BILL OF MATERIAL**

| Item   | Unit  | Total |
|--|-------|-------|
| Slope Wall Removal                           | SQ YD | 442   |
| Structure Excavation                         | CU YD | 290   |
| Protective Coat                              | SQ YD | 275   |
| Stud Shear Connectors                        | EACH  | 353   |
| Reinforcement Bars, Epoxy Coated             | POUND | 9,220 |
| Name Plates                                  | EACH  | 1     |
| Temporary Soil Retention System              | SQ FT | 242   |
| Furnishing Soldier Piles (W Section)         | FOOT  | 1,623 |
| Drilling and Setting Soldier Piles (In Soil) | CU FT | 5,349 |
| Untreated Timber Lagging                     | SQ FT | 1,546 |
| Concrete Structures (Retaining Wall)         | CU YD | 80.3  |
| Geocomposite Wall Drain                      | SQ YD | 129   |
| Pipe Underdrains for Structures 4"           | FOOT  | 391   |
| Furnish and Install Handrail                 | FOOT  | 293   |
| Concrete Gutter, Type B (Special)            | FOOT  | 319   |

**INDEX OF SHEETS**

- 1 General Plan and Elevation
- 2 General Notes and Total Bill of Materials
- 3-4 Soldier Pile Plan and Elevation
- 5 Temporary Soil Retention System and Slope Wall Removal
- 6-9 Wall Panel Layout
- 10 Waler and Misc. Details
- 11 Railing Details
- 12-15 Soil Borings



**SECTION THRU SOLDIER PILE WALL**

\* Multi-use Path Construction are to be included with concurrent bridge rehabilitation project.

**UNDERDRAIN DETAILS FOR DRILLED SOLDIER PILE WALLS**

\*\* Included in the cost of Pipe Underdrains for Structures.

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1170 SOUTH HOUBOLT ROAD  
JOLIET, ILLINOIS 60431  
(815) 744-4200  
IDFPR NO. 184-001273

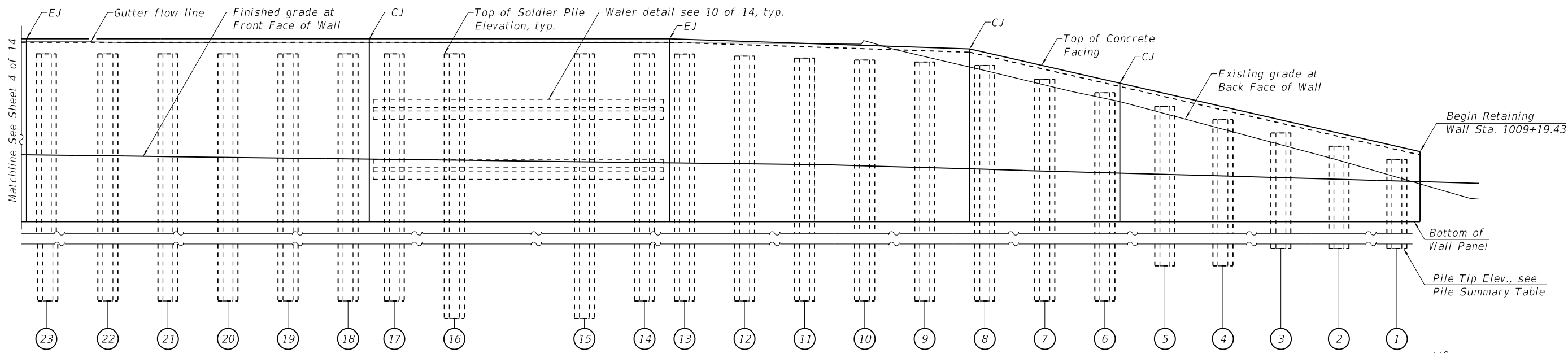
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| DDR         | DDR        | REVISIONS |
| DMH         | DMH        | REVISIONS |
| NDR         | NDR        | REVISIONS |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

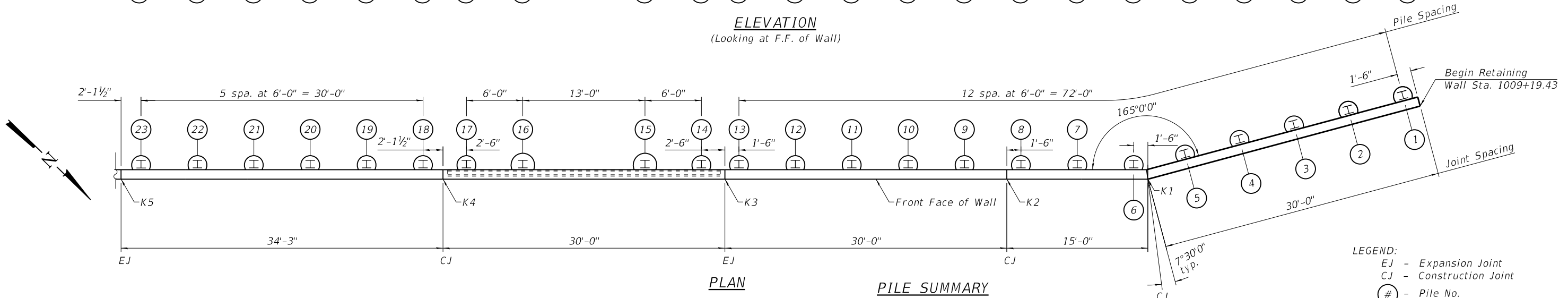
**GENERAL NOTES AND TOTAL BILL OF MATERIALS  
STRUCTURE NO. 016-W2503**

SHEET 2 OF 15 SHEETS

| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-------------|--------|--------------|-----------|
| 342                       | 2018-100-BR | COOK   | 1351         | 993       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

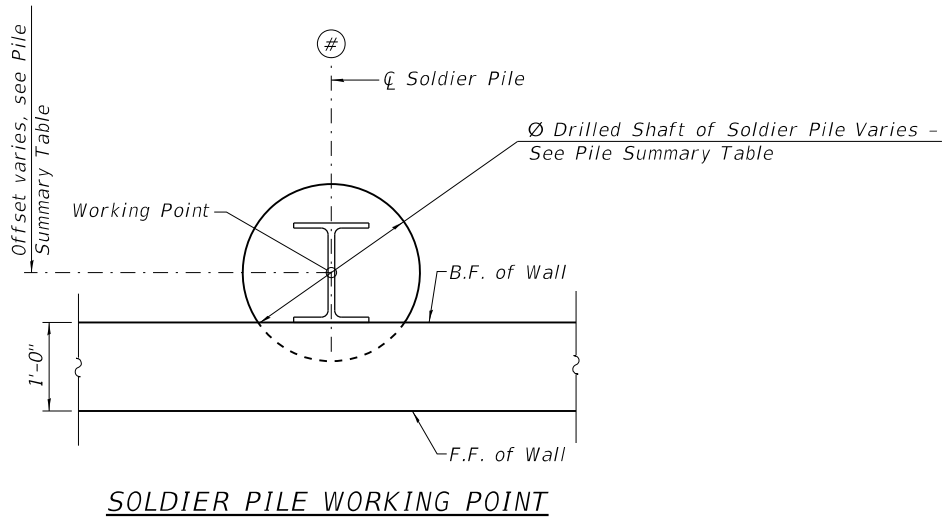


**ELEVATION**  
(Looking at F.F. of Wall)



**PLAN** **PILE SUMMARY**

**LEGEND:**  
 EJ - Expansion Joint  
 CJ - Construction Joint  
 # - Pile No.



**SOLDIER PILE WORKING POINT**

| Pile No. | Working Point Station | Offset | Top of Pile Elev. | Top of Encasement | Drilled Shaft Diameter (ft) | Pile Section | Pile Tip Elev. | Pile Length (ft) |
|----------|-----------------------|--------|-------------------|-------------------|-----------------------------|--------------|----------------|------------------|
| 23       | 1010+55.53            | 56.71  | 725.88            | 719.60            | 2'-0"                       | W16x100      | 692.10         | 33.8             |
| 22       | 1010+49.53            | 56.71  | 725.88            | 719.60            | 2'-0"                       | W16x100      | 692.10         | 33.8             |
| 21       | 1010+43.53            | 56.71  | 725.88            | 719.50            | 2'-0"                       | W16x100      | 692.00         | 33.9             |
| 20       | 1010+37.53            | 56.71  | 725.88            | 719.50            | 2'-0"                       | W16x100      | 692.00         | 33.9             |
| 19       | 1010+31.53            | 56.71  | 725.88            | 719.40            | 2'-0"                       | W16x100      | 691.90         | 34.0             |
| 18       | 1010+25.53            | 56.71  | 725.88            | 719.40            | 2'-0"                       | W16x100      | 691.90         | 34.0             |
| 17       | 1010+20.91            | 56.71  | 725.88            | 719.40            | 2'-0"                       | W16x100      | 691.90         | 34.0             |
| 16       | 1010+14.91            | 56.78  | 725.88            | 719.30            | 2'-6"                       | W18x106      | 690.00         | 35.9             |
| 15       | 1010+01.91            | 56.78  | 725.88            | 719.20            | 2'-6"                       | W18x106      | 689.90         | 36.0             |
| 14       | 1009+95.91            | 56.71  | 725.88            | 719.20            | 2'-0"                       | W16x100      | 691.70         | 34.2             |
| 13       | 1009+91.91            | 56.71  | 725.86            | 719.10            | 2'-0"                       | W16x100      | 691.60         | 34.3             |
| 12       | 1009+85.91            | 56.71  | 725.76            | 719.10            | 2'-0"                       | W16x100      | 691.60         | 34.2             |
| 11       | 1009+79.91            | 56.71  | 725.66            | 719.00            | 2'-0"                       | W16x100      | 691.50         | 34.2             |
| 10       | 1009+73.91            | 56.71  | 725.56            | 719.00            | 2'-0"                       | W16x100      | 691.50         | 34.1             |
| 9        | 1009+67.91            | 56.71  | 725.46            | 718.90            | 2'-0"                       | W16x100      | 691.40         | 34.1             |
| 8        | 1009+61.91            | 56.71  | 725.21            | 718.80            | 2'-0"                       | W16x100      | 691.30         | 34.0             |
| 7        | 1009+55.91            | 56.71  | 724.53            | 718.70            | 2'-0"                       | W16x100      | 691.20         | 33.4             |
| 6        | 1009+49.91            | 56.71  | 723.84            | 718.70            | 2'-0"                       | W16x100      | 691.20         | 32.7             |
| 5        | 1009+44.47            | 57.69  | 723.16            | 718.60            | 2'-0"                       | W14x61       | 694.60         | 28.6             |
| 4        | 1009+38.68            | 59.24  | 722.47            | 718.50            | 2'-0"                       | W14x61       | 694.50         | 28.0             |
| 3        | 1009+32.88            | 60.80  | 721.79            | 718.40            | 2'-0"                       | W14x61       | 694.40         | 27.4             |
| 2        | 1009+27.09            | 62.35  | 721.11            | 718.30            | 2'-0"                       | W14x61       | 694.30         | 26.9             |
| 1        | 1009+21.29            | 63.90  | 720.42            | 718.20            | 2'-0"                       | W14x61       | 694.20         | 26.3             |

Note:  
 1. All dimensions measured along Front Face of Wall.

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|--------------|----------------|-----------|
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| PLOT DATE =  | DRAWN - DMH    | REVISED - |
|              | CHECKED - NDR  | REVISED - |

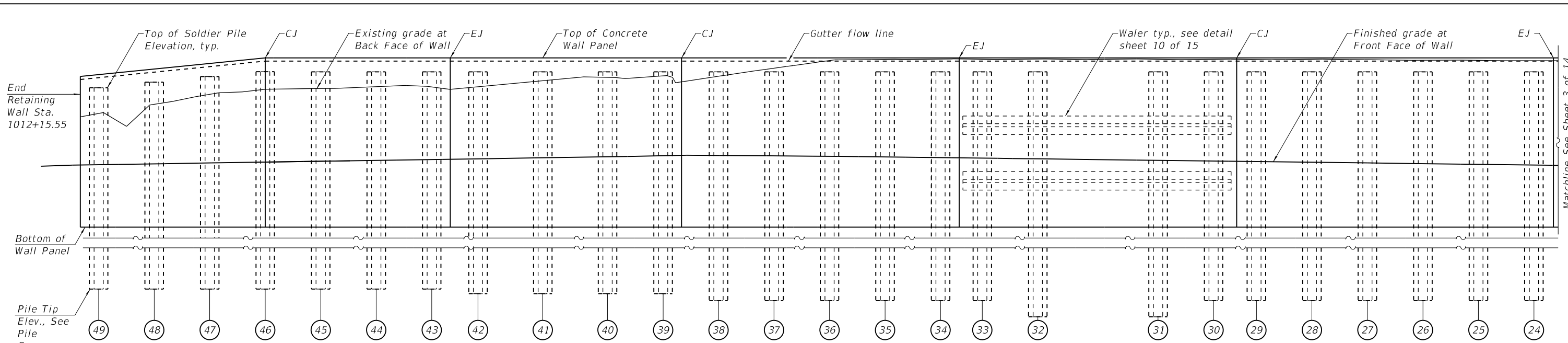
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SOLDIER PILE PLAN AND ELEVATION (1 OF 2)**  
**STRUCTURE NO. 016-W2503**

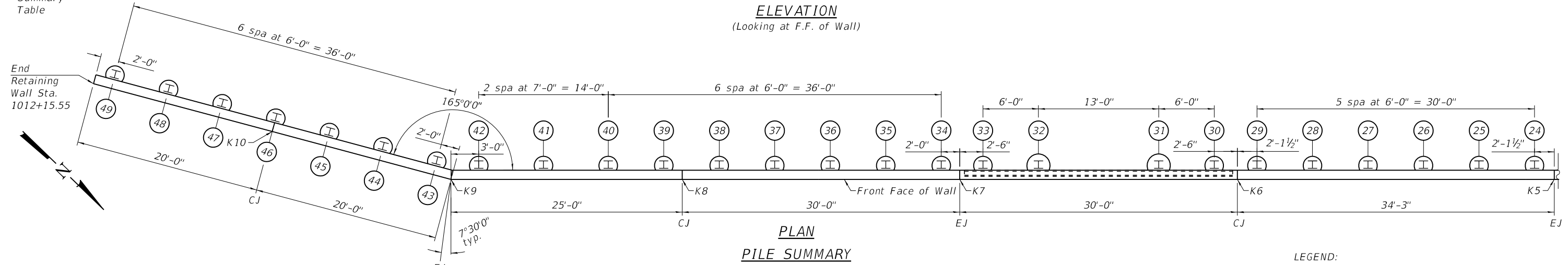
SHEET 3 OF 15 SHEETS

|                           |                     |             |                   |               |
|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.P. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1351 | SHEET NO. 994 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |





**ELEVATION**  
(Looking at F.F. of Wall)



**PLAN**  
**PILE SUMMARY**

| Pile No. | Working Point Station | Offset | Top of Pile Elev. | Top of Encasement | Drilled Shaft Diameter (ft) | Pile Section | Pile Tip Elev. | Pile Length (ft) |
|----------|-----------------------|--------|-------------------|-------------------|-----------------------------|--------------|----------------|------------------|
| 49       | 1012+13.18            | 66.49  | 724.98            | 719.80            | 2'-0"                       | W16x100      | 692.30         | 32.7             |
| 48       | 1012+07.38            | 64.93  | 725.28            | 719.90            | 2'-0"                       | W16x100      | 692.40         | 32.9             |
| 47       | 1012+01.59            | 63.38  | 725.58            | 719.90            | 2'-0"                       | W16x100      | 692.40         | 33.2             |
| 46       | 1011+95.79            | 61.83  | 725.88            | 719.90            | 2'-0"                       | W16x100      | 692.40         | 33.5             |
| 45       | 1011+89.99            | 60.27  | 725.88            | 720.00            | 2'-0"                       | W16x100      | 692.50         | 33.4             |
| 44       | 1011+84.19            | 58.72  | 725.88            | 720.00            | 2'-0"                       | W16x100      | 692.50         | 33.4             |
| 43       | 1011+78.4             | 57.17  | 725.88            | 720.00            | 2'-0"                       | W16x100      | 692.50         | 33.4             |
| 42       | 1011+73.91            | 56.71  | 725.88            | 720.10            | 2'-0"                       | W16x100      | 692.60         | 33.3             |
| 41       | 1011+66.91            | 56.71  | 725.88            | 720.10            | 2'-0"                       | W16x100      | 692.60         | 33.3             |
| 40       | 1011+59.91            | 56.71  | 725.88            | 720.20            | 2'-0"                       | W16x100      | 692.70         | 33.2             |
| 39       | 1011+53.91            | 56.71  | 725.88            | 720.20            | 2'-0"                       | W16x100      | 692.70         | 33.2             |
| 38       | 1011+47.91            | 56.71  | 725.88            | 720.20            | 2'-0"                       | W16x100      | 692.70         | 33.2             |
| 37       | 1011+41.91            | 56.71  | 725.88            | 720.20            | 2'-0"                       | W16x100      | 692.70         | 33.2             |
| 36       | 1011+35.91            | 56.71  | 725.88            | 720.20            | 2'-0"                       | W16x100      | 692.70         | 33.2             |
| 35       | 1011+29.91            | 56.71  | 725.88            | 720.10            | 2'-0"                       | W16x100      | 692.60         | 33.3             |
| 34       | 1011+23.91            | 56.71  | 725.88            | 720.10            | 2'-0"                       | W16x100      | 692.60         | 33.3             |
| 33       | 1011+19.41            | 56.71  | 725.88            | 720.10            | 2'-0"                       | W16x100      | 692.60         | 33.3             |
| 32       | 1011+13.41            | 56.78  | 725.88            | 720.00            | 2'-6"                       | W18x106      | 690.70         | 35.2             |
| 31       | 1011+00.41            | 56.78  | 725.88            | 719.90            | 2'-6"                       | W18x106      | 690.60         | 35.3             |
| 30       | 1010+94.41            | 56.71  | 725.88            | 719.90            | 2'-0"                       | W16x100      | 692.40         | 33.5             |
| 29       | 1010+89.78            | 56.71  | 725.88            | 719.90            | 2'-0"                       | W16x100      | 692.40         | 33.5             |
| 28       | 1010+83.78            | 56.71  | 725.88            | 719.80            | 2'-0"                       | W16x100      | 692.30         | 33.6             |
| 27       | 1010+77.78            | 56.71  | 725.88            | 719.80            | 2'-0"                       | W16x100      | 692.30         | 33.6             |
| 26       | 1010+71.78            | 56.71  | 725.88            | 719.70            | 2'-0"                       | W16x100      | 692.20         | 33.7             |
| 25       | 1010+65.78            | 56.71  | 725.88            | 719.70            | 2'-0"                       | W16x100      | 692.20         | 33.7             |
| 24       | 1010+59.78            | 56.71  | 725.88            | 719.60            | 2'-0"                       | W16x100      | 692.10         | 33.8             |

**LEGEND:**  
 EJ - Expansion Joint  
 CJ - Construction Joint  
 # - Pile No.

**Notes:**  
 1. For Soldier Pile Working Point detail, see Sheet 3 of 14.  
 2. All dimensions measured along Front Face of Wall.

MODEL: Default  
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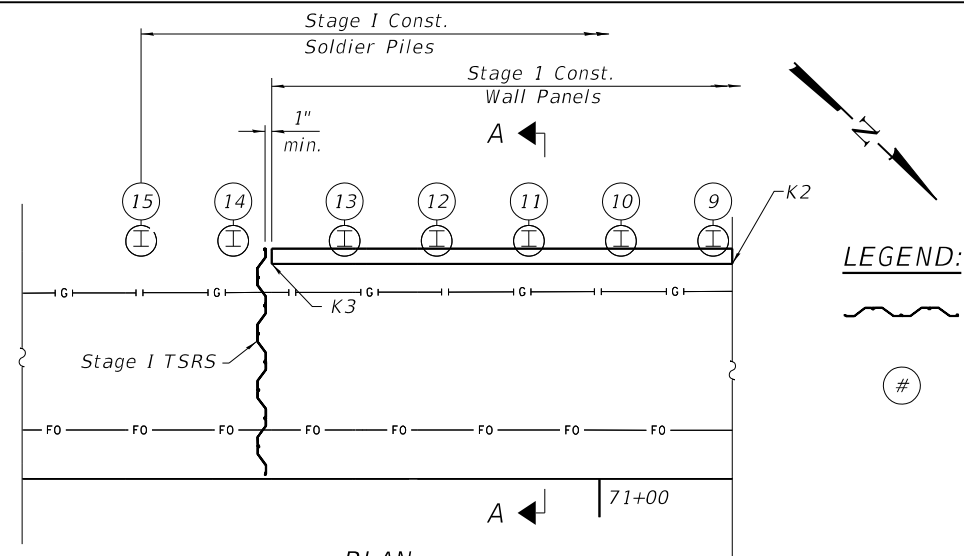
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|---|--------------|----------------|-------------|
| 1170 SOUTH HOUBOLT ROAD<br>JOLIET, ILLINOIS 60431<br>(815) 744-4200<br>IDFPR NO. 184-001273 | USER NAME =  | DESIGNED - BRL | REVISIONS - |
|   |              | CHECKED - DDR  | REVISIONS - |
|   | PLOT SCALE = | DRAWN - DMH    | REVISIONS - |
|   | PLOT DATE =  | CHECKED - NDR  | REVISIONS - |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SOLDIER PILE PLAN AND ELEVATION (2 OF 2)**  
**STRUCTURE NO. 016-W2503**

SHEET 4 OF 15 SHEETS

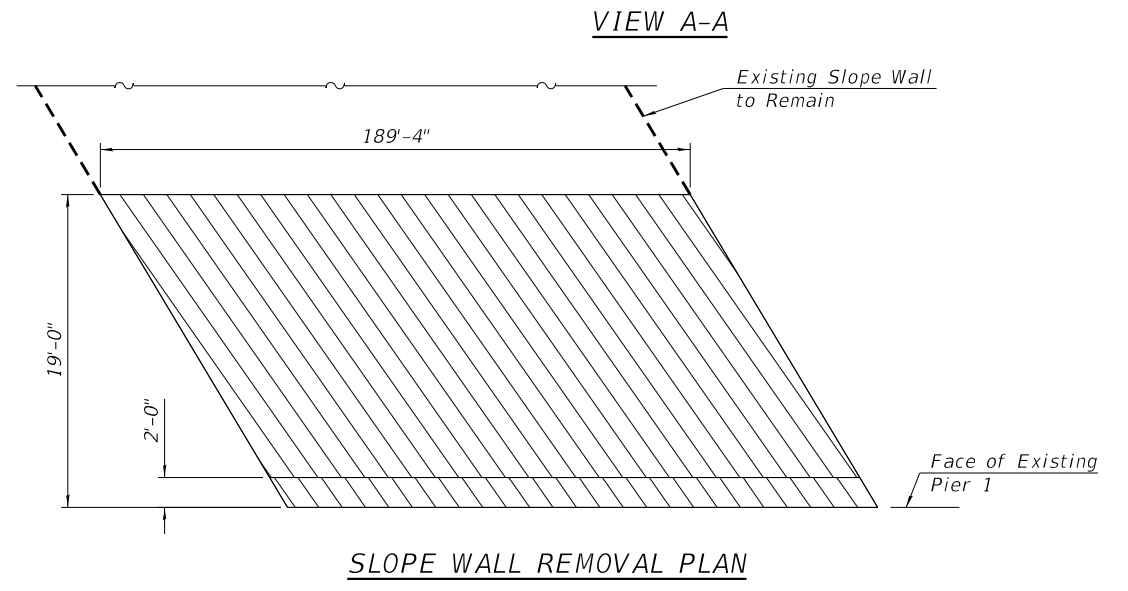
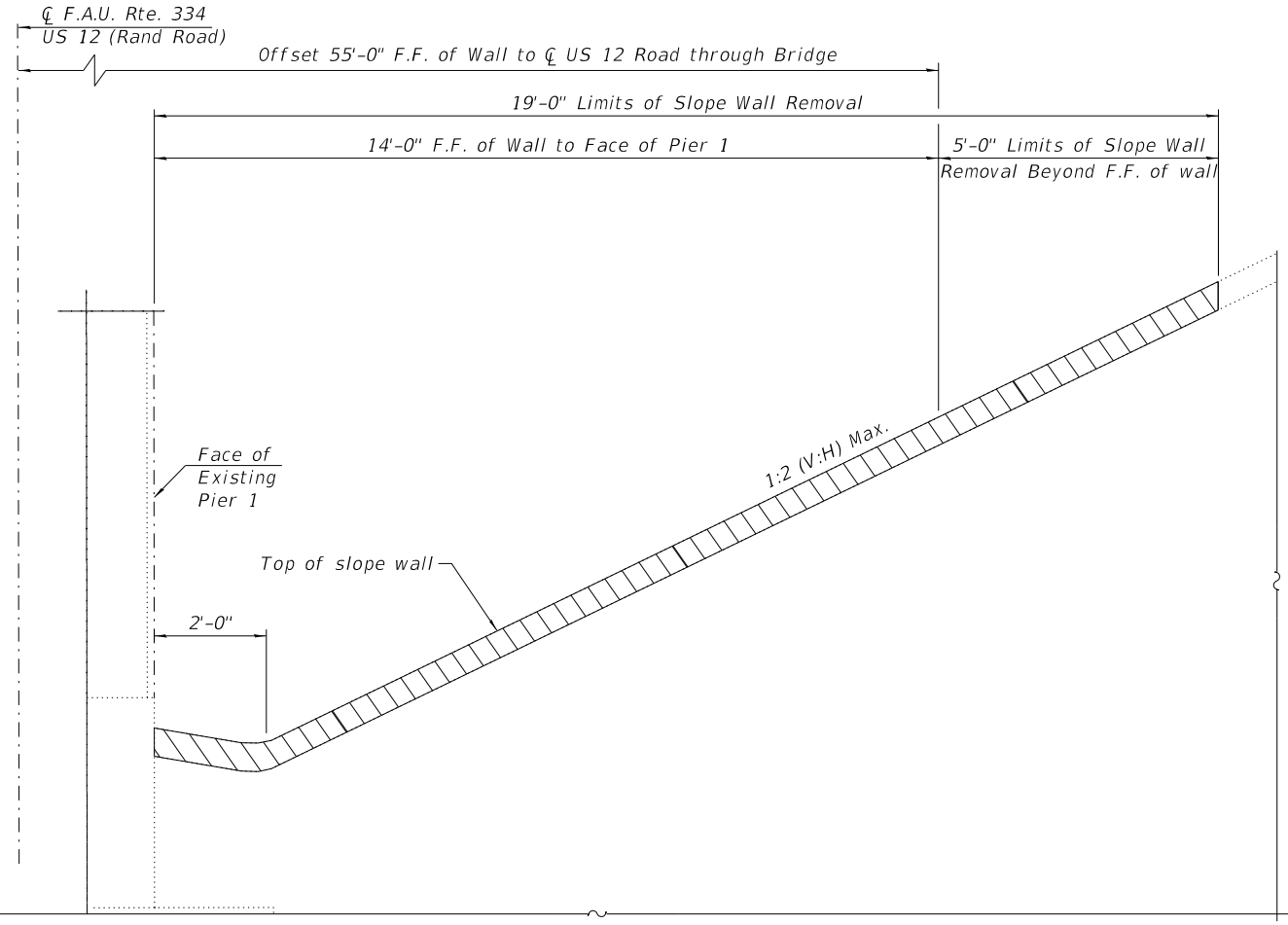
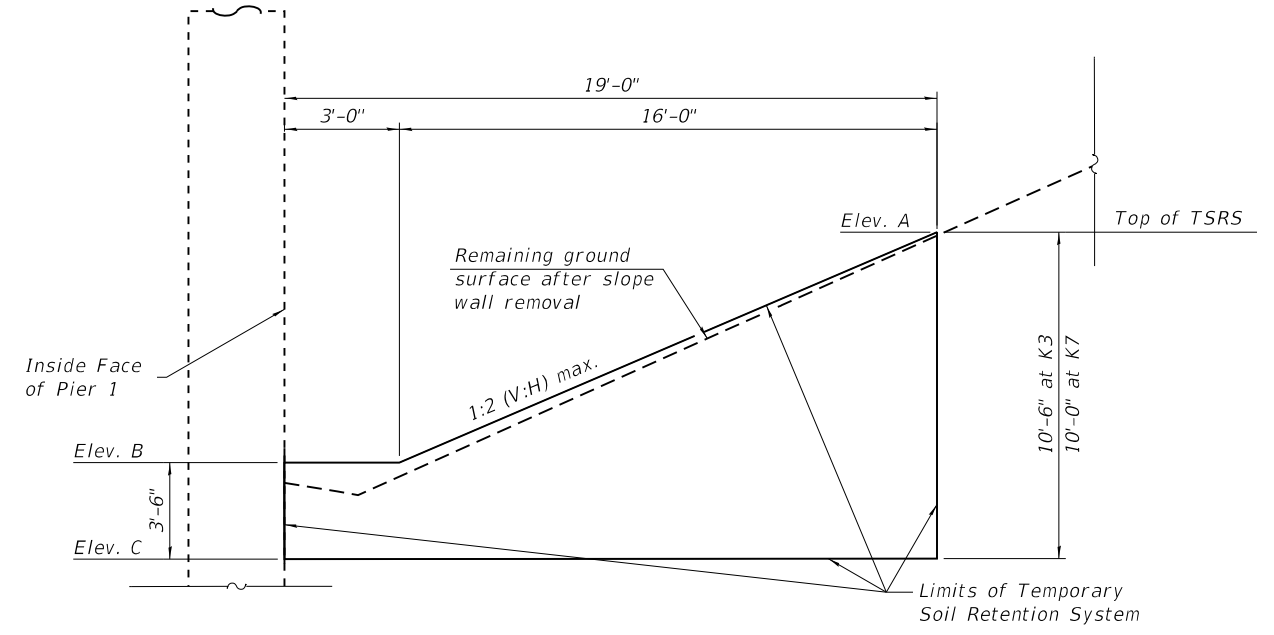
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| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 995       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |



**LEGEND:**  
 Temporary Soil Retention System (TSRS)  
 Pile No.

| Temporary Soil Retention System |         |         |         |                             |
|---------------------------------|---------|---------|---------|-----------------------------|
| Panel Point                     | Elev. A | Elev. B | Elev. C | Exposed Surface Area, SQ FT |
| K3                              | 728.50  | 721.50  | 718.00  | 123                         |
| K7                              | 729.00  | 722.50  | 719.00  | 119                         |

**PLAN**  
 (TSRS shown for Panel Point K3, Panel Point K7 similar with TSRS between piles 33 and 34)  
 Note: Utilities to be removed or abandoned prior to placement of TSRS.



**LEGEND**  
 Slope Wall Removal

**Notes:**  
 A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a Temporary Soil Retention System design including plan details and calculations for review and acceptance by the Engineer.

**BILL OF MATERIALS**

| Item                            | Unit  | Total |
|---------------------------------|-------|-------|
| Slope Wall Removal              | SQ YD | 442   |
| Temporary Soil Retention System | SQ FT | 242   |

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|---|--------------|----------------|-----------|
| 1170 SOUTH HOUBOLT ROAD<br>JOLIET, ILLINOIS 60431<br>(815) 744-4200<br>IDFPR NO. 184-001273 | USER NAME =  | DESIGNED - BRL | REVISED - |
|   |              | CHECKED - DDR  | REVISED - |
|   | PLOT SCALE = | DRAWN - DMH    | REVISED - |
|   | PLOT DATE =  | CHECKED - NDR  | REVISED - |

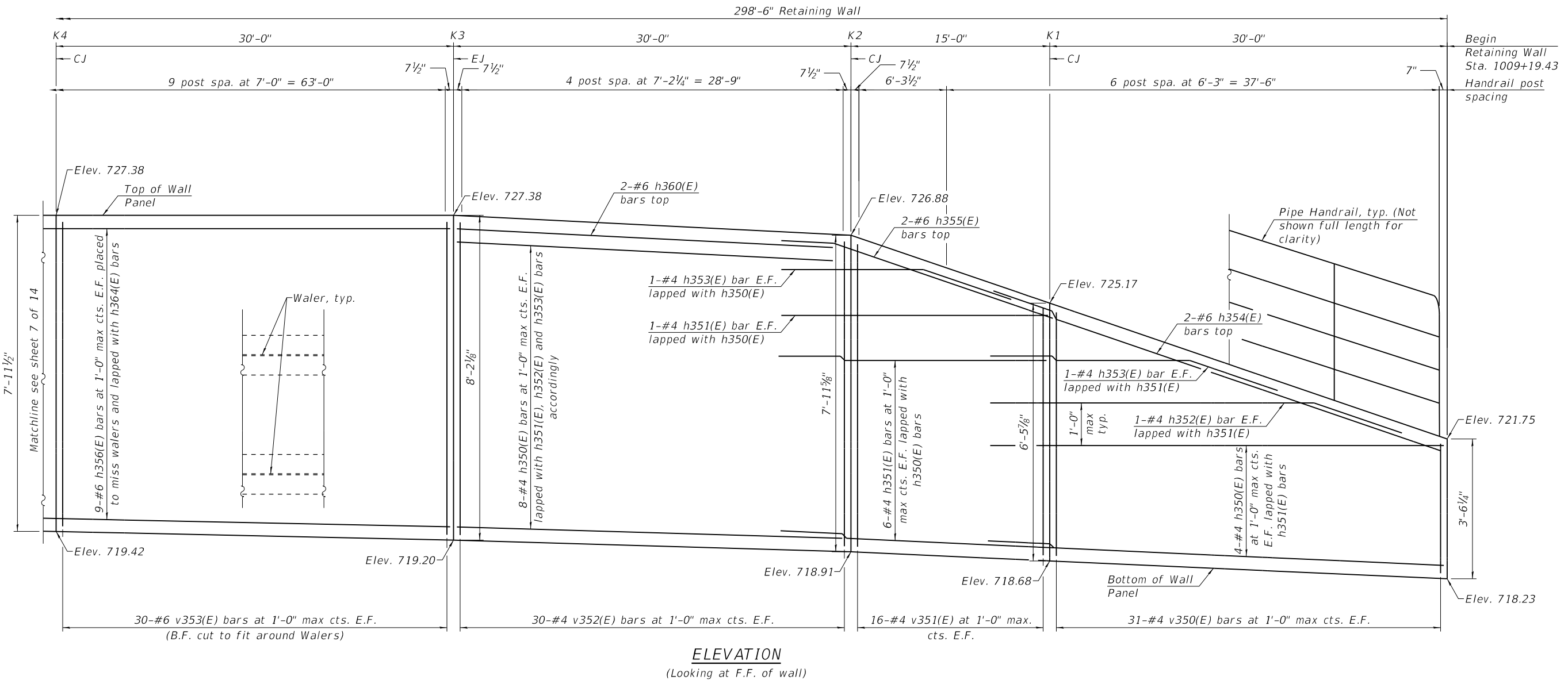
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY SOIL RETENTION SYSTEM AND SLOPE WALL REMOVAL  
 STRUCTURE NO. 016-W2503**

SHEET 5 OF 15 SHEETS

|                           |                     |             |                   |               |
|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.P. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1351 | SHEET NO. 996 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |

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**MIN. BAR LAP**

#4 bar = 2'-7"  
 #6 bar = 4'-4"

- Notes:
1. Stations and dimensions are at F.F. of wall.
  2. Space reinforcement in wall to miss shear studs and tilt vertical bars as needed to maintain minimum clearance.
  3. For Section, see Sheet 9 of 14.
  4. For Reinforcing Detail at Waler, see Sheet 9 of 14.



|              |                |           |
|--------------|----------------|-----------|
| USER NAME =  | DESIGNED - BRL | REVISED - |
|              | CHECKED - DDR  | REVISED - |
| PLOT SCALE = | DRAWN - DMH    | REVISED - |
| PLOT DATE =  | CHECKED - NDR  | REVISED - |

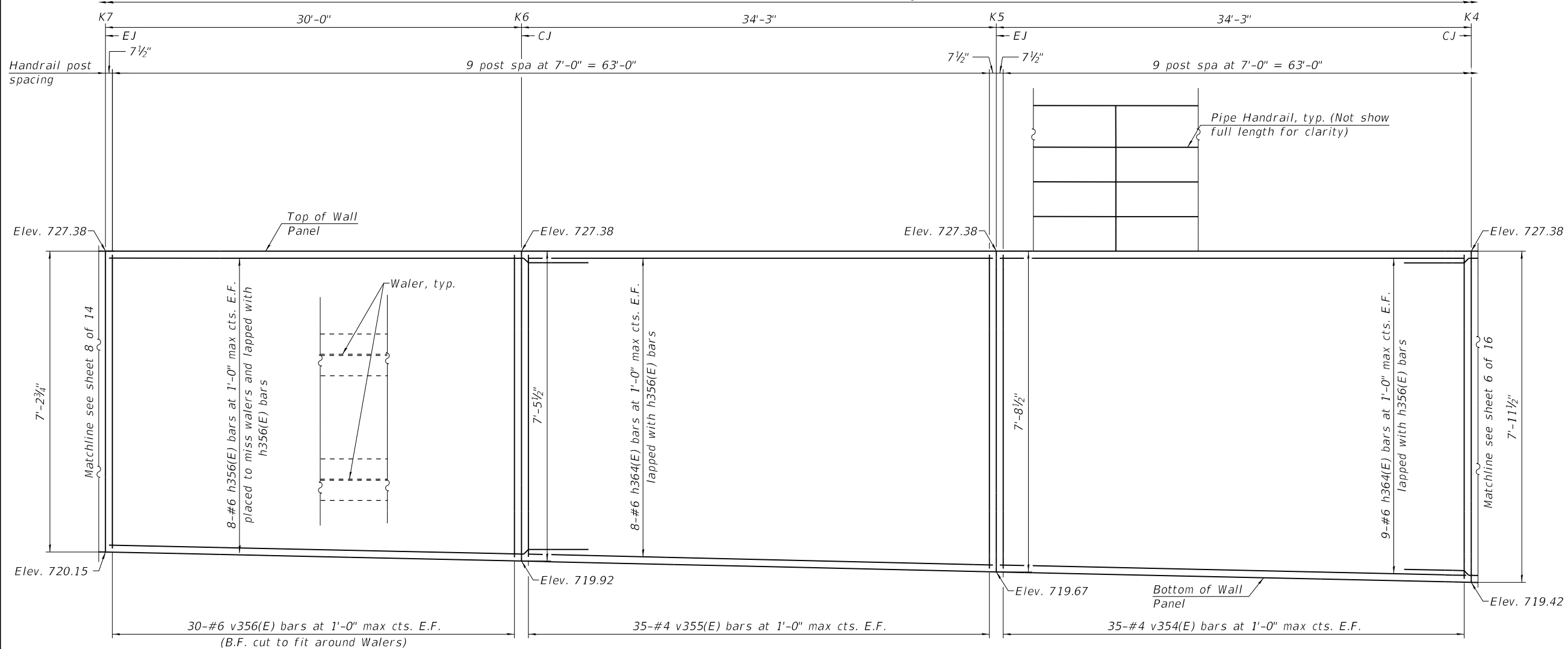
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**WALL PANEL (1 OF 4)  
 STRUCTURE NO. 016-W2503**

SHEET 6 OF 15 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 997       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

298'-6" Retaining Wall



**MIN. BAR LAP**  
#6 bar = 4'-4"

**ELEVATION**  
(Looking at F.F of wall)

- Notes:
1. Stations and dimensions are at F.F of wall.
  2. Space reinforcement in wall to miss shear studs and tilt vertical bars as needed to maintain minimum clearance.
  3. For Section, see Sheet 9 of 14.
  4. For Reinforcing Detail at Waler, see Sheet 9 of 14.

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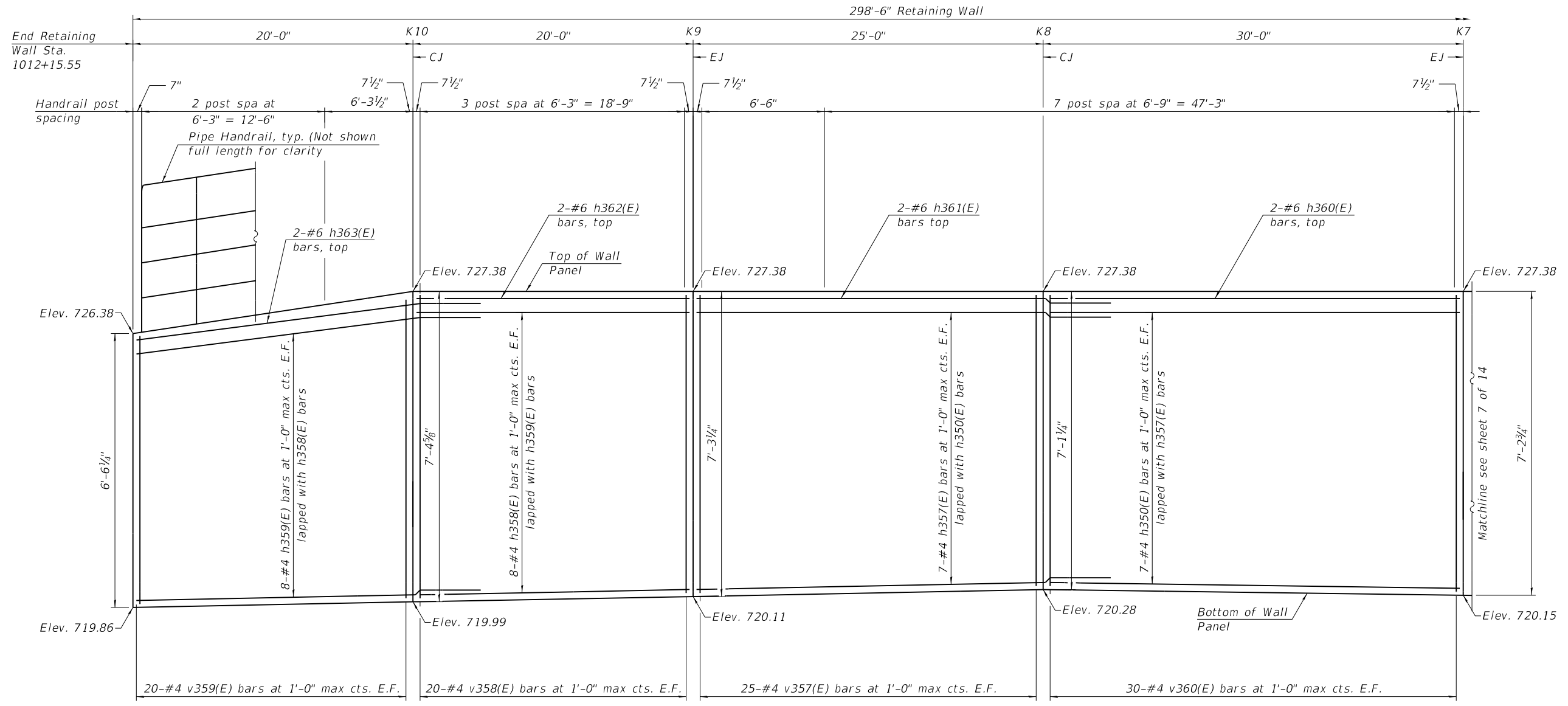


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|---|--------------|----------------|-----------|
| 1170 SOUTH HOUBOLT ROAD<br>JOLIET, ILLINOIS 60431<br>(815) 744-4200<br>IDFPR NO. 184-001273 | USER NAME =  | DESIGNED - BRL | REVISED - |
|   |              | CHECKED - DDR  | REVISED - |
|   | PLOT SCALE = | DRAWN - DMH    | REVISED - |
|   | PLOT DATE =  | CHECKED - NDR  | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WALL PANEL (2 OF 4)  
STRUCTURE NO. 016-W2503  
SHEET 7 OF 15 SHEETS

|                           |                     |             |                   |               |
|---------------------------|---------------------|-------------|-------------------|---------------|
| F.A.P. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1351 | SHEET NO. 998 |
| CONTRACT NO. 62N91        |                     |             |                   |               |
| ILLINOIS FED. AID PROJECT |                     |             |                   |               |



**MIN. BAR LAP**  
 #4 bar = 2'-7"  
 #6 bar = 4'-4"

**ELEVATION**  
 (Looking at F.F. of wall)

- Notes:
1. Stations and dimensions are at F.F of wall.
  2. Space reinforcement in wall to miss shear studs and tilt vertical bars as needed to maintain minimum clearance.
  3. For Section, see Sheet 9 of 14.

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| 1170 SOUTH HOUBOLT ROAD<br>JOLIET, ILLINOIS 60431<br>(815) 744-4200<br>IDFPR NO. 184-001273 | USER NAME =  | DESIGNED - BRL | REVISED - |
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|   | PLOT SCALE = | DRAWN - DMH    | REVISED - |
|   | PLOT DATE =  | CHECKED - NDR  | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

WALL PANEL (3 OF 4)  
 STRUCTURE NO. 016-W2503

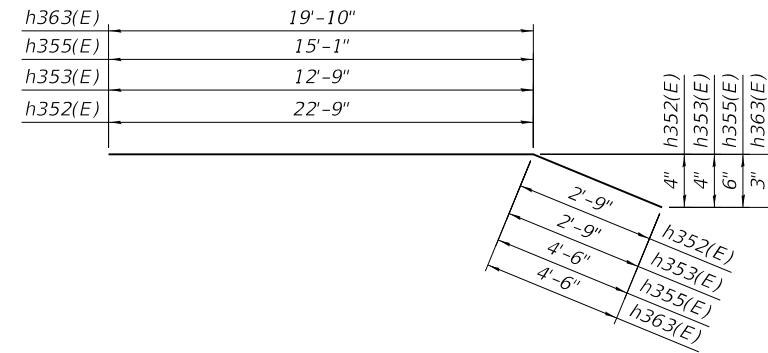
SHEET 8 OF 15 SHEETS

|                           |             |        |              |           |
|---------------------------|-------------|--------|--------------|-----------|
| F.A.P. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |
| 342                       | 2018-100-BR | COOK   | 1351         | 999       |
| CONTRACT NO. 62N91        |             |        |              |           |
| ILLINOIS FED. AID PROJECT |             |        |              |           |

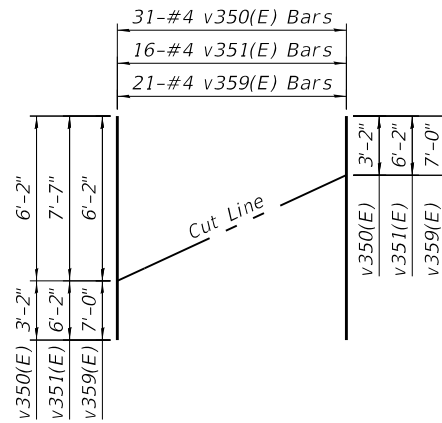
**BILL OF MATERIAL**

**REINFORCEMENT BAR LIST**

| Bar                                  | No. | Size  | Length  | Shape |
|--------------------------------------|-----|-------|---------|-------|
| h350(E)                              | 30  | 4     | 29'-8"  | ————  |
| h351(E)                              | 14  | 4     | 20'-6"  | ————  |
| h352(E)                              | 2   | 4     | 25'-6"  | ————  |
| h353(E)                              | 4   | 4     | 15'-6"  | ————  |
| h354(E)                              | 2   | 6     | 29'-10" | ————  |
| h355(E)                              | 2   | 6     | 19'-7"  | ————  |
| h356(E)                              | 34  | 6     | 34'-4"  | ————  |
| h357(E)                              | 14  | 4     | 27'-7"  | ————  |
| h358(E)                              | 16  | 4     | 19'-8"  | ————  |
| h359(E)                              | 16  | 4     | 22'-7"  | ————  |
| h360(E)                              | 2   | 6     | 29'-8"  | ————  |
| h361(E)                              | 2   | 6     | 29'-2"  | ————  |
| h362(E)                              | 2   | 6     | 19'-8"  | ————  |
| h363(E)                              | 2   | 6     | 24'-4"  | ————  |
| h364(E)                              | 34  | 6     | 33'-11" | ————  |
| v350(E)                              | 31  | 4     | 9'-4"   | ————  |
| v351(E)                              | 16  | 4     | 13'-9"  | ————  |
| v352(E)                              | 60  | 4     | 7'-9"   | ————  |
| v353(E)                              | 60  | 6     | 7'-9"   | ————  |
| v354(E)                              | 70  | 4     | 7'-6"   | ————  |
| v355(E)                              | 70  | 4     | 7'-3"   | ————  |
| v356(E)                              | 60  | 6     | 7'-0"   | ————  |
| v357(E)                              | 50  | 4     | 6'-10"  | ————  |
| v358(E)                              | 40  | 4     | 6'-11"  | ————  |
| v359(E)                              | 40  | 4     | 13'-2"  | ————  |
| v360(E)                              | 60  | 4     | 6'-9"   | ————  |
| Structure Excavation                 |     | CU YD | 290     |       |
| Protective Coat                      |     | SQ YD | 275     |       |
| Reinforcement Bars, Epoxy Coated     |     | POUND | 9,220   |       |
| Concrete Structures (Retaining Wall) |     | CU YD | 80.3    |       |

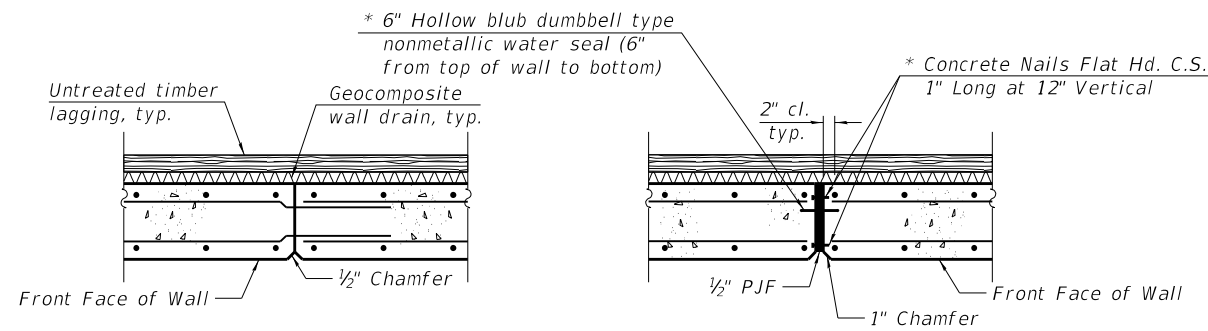


**BARS h352(E), h353(E), h355(E), AND h363(E)**



**FIELD CUTTING DIAGRAM**

Order bars full length. Cut as shown and use remainder of bars in opposite face of wall facing

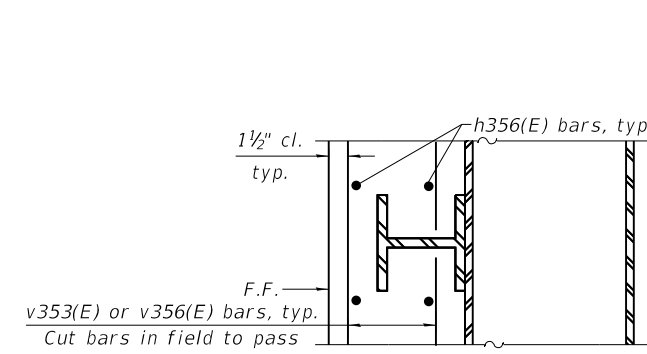


**CONSTRUCTION JOINT DETAIL**

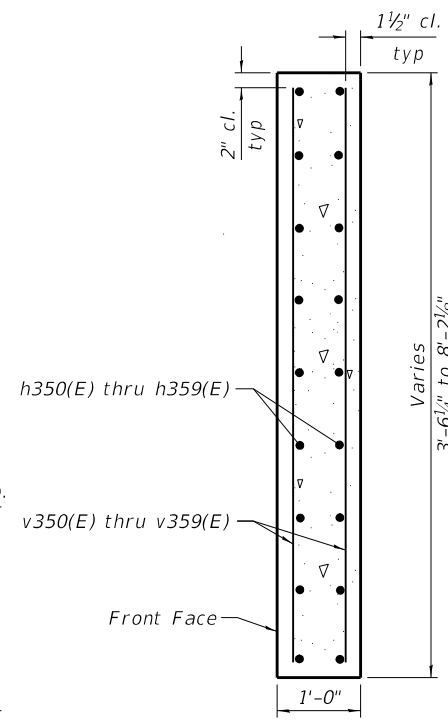
**EXPANSION JOINT DETAIL**

**RETAINING WALL JOINT DETAILS**

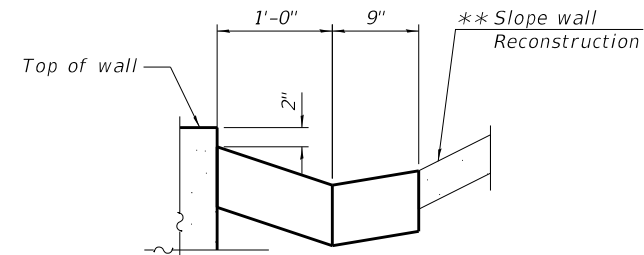
\* Cost Included With Concrete Structures (Retaining Wall)



**REINFORCING DETAIL AT WALER**

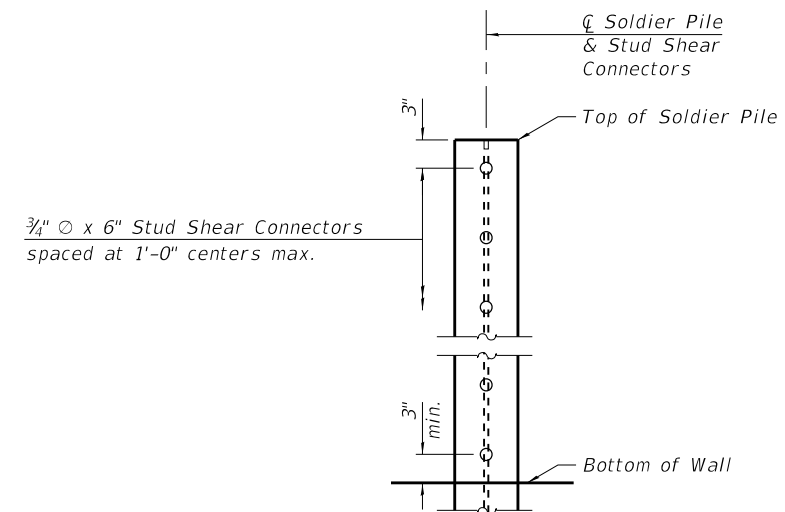


**SECTION THRU WALL PANEL**



**CONCRETE GUTTER TYPE "B" (SPECIAL)**

\*\* Slope wall reconstruction to be included with concurrent bridge rehabilitation project.



**SHEAR STUD CONNECTOR SPACING**

(353 total)

MODEL: Default  
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**SA STRAND ASSOCIATES**  
1170 SOUTH HOUBOLT ROAD  
JOLIET, ILLINOIS 60431  
(815) 744-4200  
IDFPR NO. 184-001273

|              |                |           |
|--------------|----------------|-----------|
| USER NAME =  | DESIGNED - BRL | REVISED - |
|              | CHECKED - DDR  | REVISED - |
| PLOT SCALE = | DRAWN - DMH    | REVISED - |
| PLOT DATE =  | CHECKED - NDR  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WALL PANEL (4 OF 4)  
STRUCTURE NO. 016-W2503**

SHEET 9 OF 15 SHEETS

|                           |                     |             |                   |                |
|---------------------------|---------------------|-------------|-------------------|----------------|
| F.A.P. RTE. 342           | SECTION 2018-100-BR | COUNTY COOK | TOTAL SHEETS 1351 | SHEET NO. 1000 |
| CONTRACT NO. 62N91        |                     |             |                   |                |
| ILLINOIS FED. AID PROJECT |                     |             |                   |                |