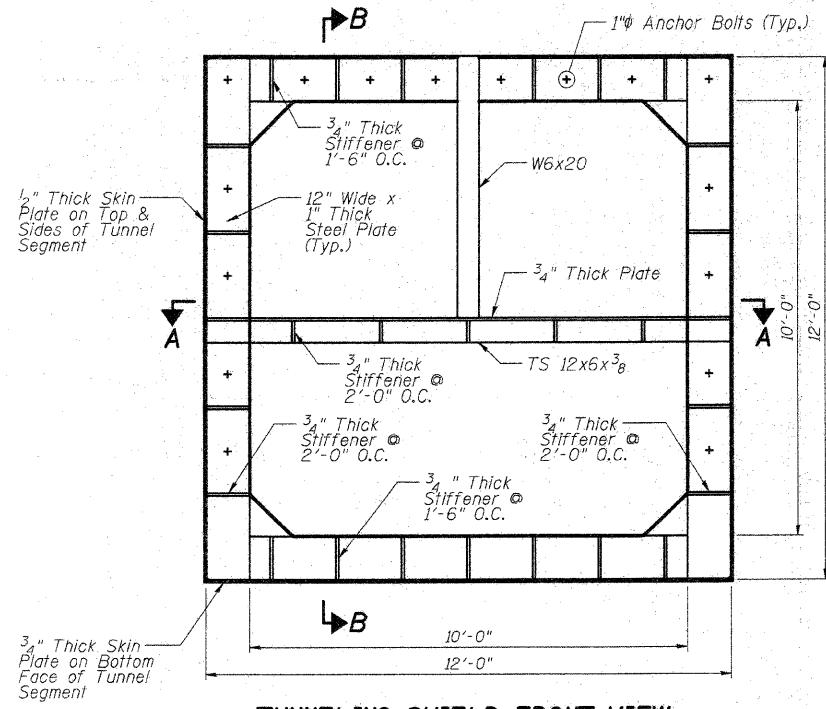
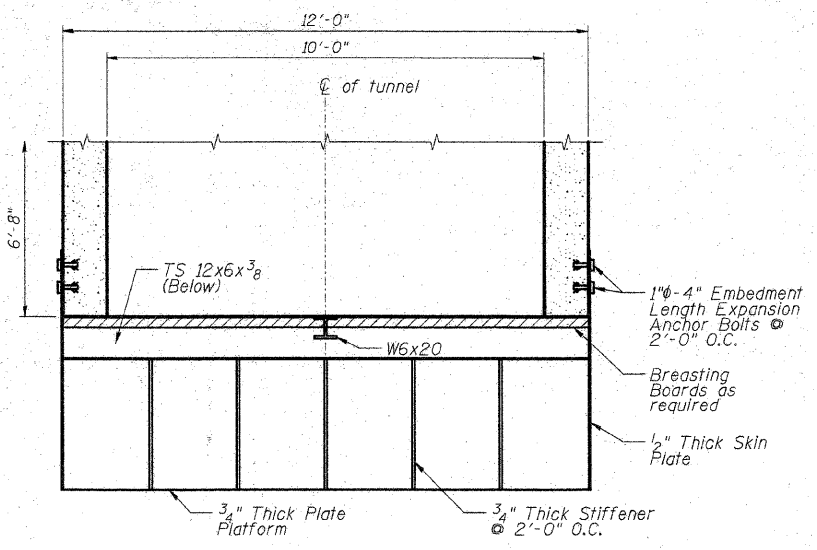


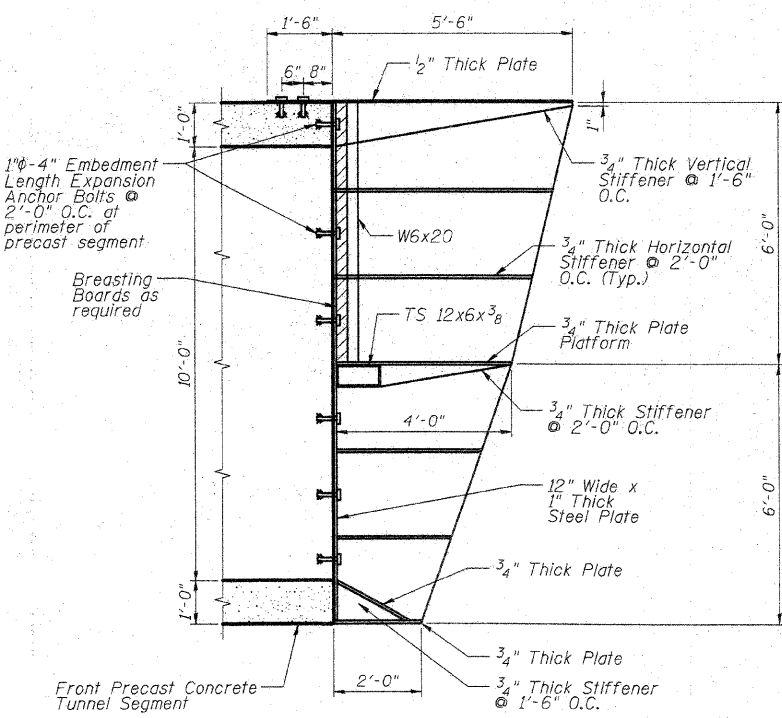
STATE OF ILLINOIS  
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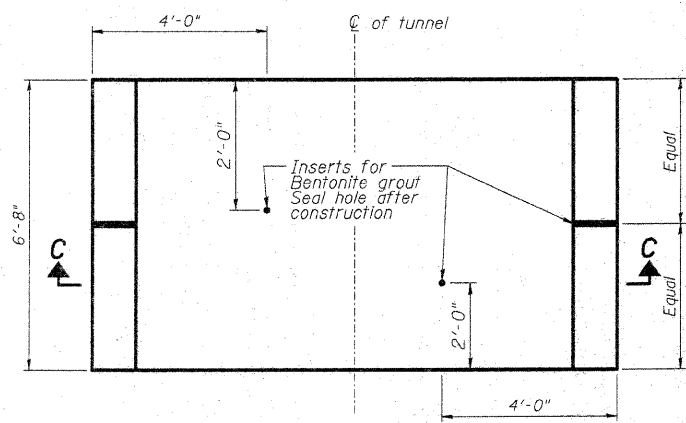
**TUNNELING SHIELD FRONT VIEW**  
Scale: 1/2" = 1'-0"



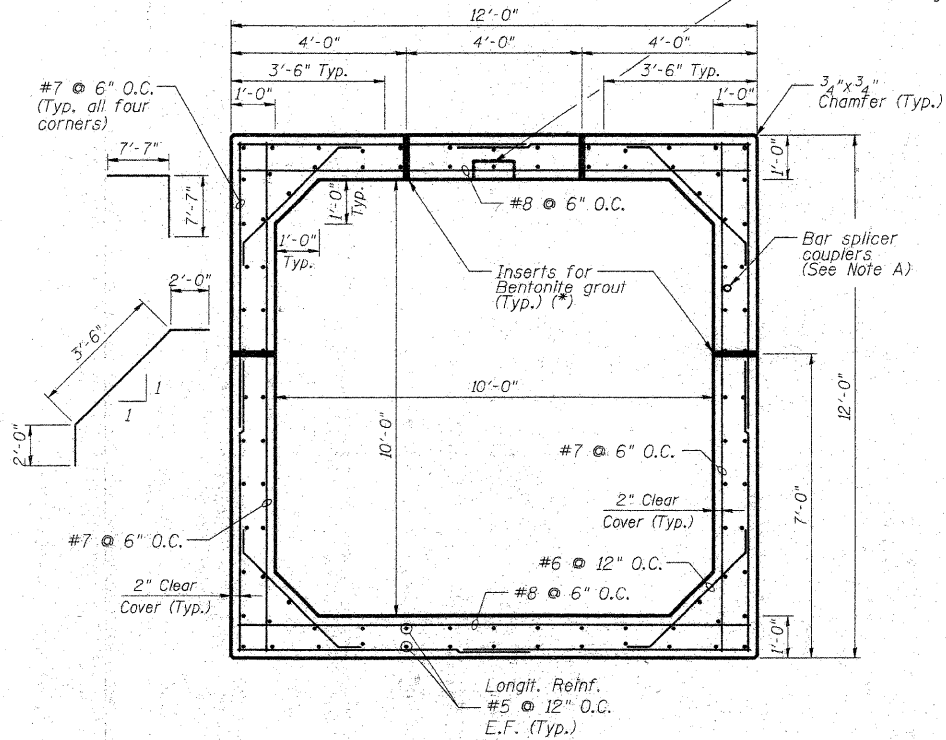
**TUNNELING SHIELD SECTION A-A**  
Scale: 1/2" = 1'-0"



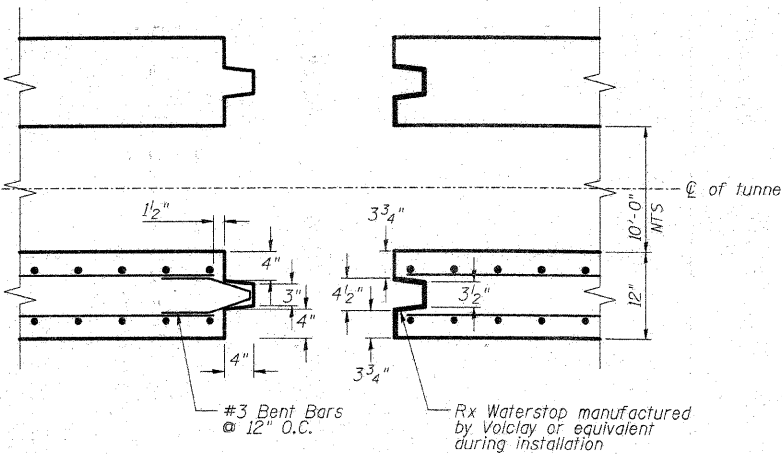
**TUNNELING SHIELD SECTION B-B**  
Scale: 1/2" = 1'-0"



**TYPICAL PRECAST CONCRETE TUNNEL SEGMENT PLAN**  
Scale: 1/2" = 1'-0"



**PRECAST CONCRETE TUNNEL SECTION C-C**  
Scale: 1/2" = 1'-0"



**WALL JOINT DETAIL BETWEEN TWO TUNNEL SEGMENTS AROUND THE PERIMETER**  
Not to Scale

**Notes:**

Temporary Tunneling Shield shown is schematic only.  
It is the responsibility of the Contractor to design the tunneling shield system and submit his calculations and drawings to the Engineer for approval. The calculations and drawings should be sealed by a licensed Illinois Structural Engineer.  
All Fillet Welds are 1/4" U.O.N.

|          |     |
|----------|-----|
| DESIGNED | KJH |
| CHECKED  | BB  |
| DRAWN    | CJM |
| CHECKED  | AWW |

\* Contractor should monitor the Bentonite flow so that the Bentonite does not come up to track level.  
Note A: Provide bar splicer couplers for #5 bars at 12" cts in the top slab, sidewalls & bottom slab, in the outside face of east & west end sections only. (See Sheet S-9).

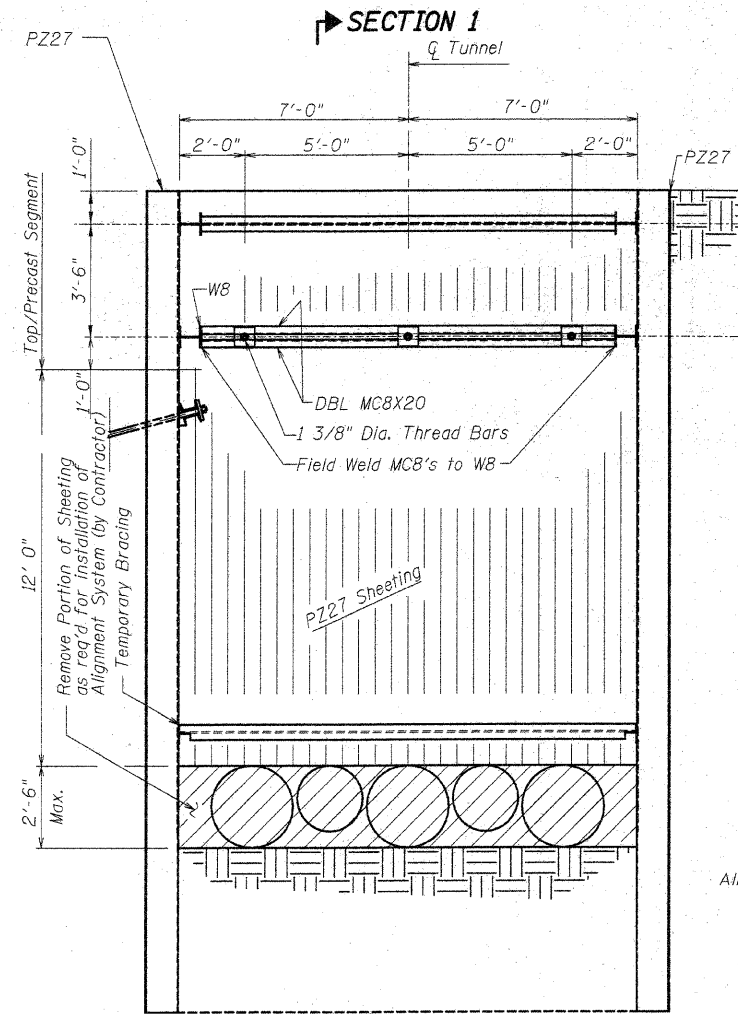
Replaced 7-16-10

**JACK TUNNEL DETAILS  
STRUCTURE NO. 049-6159**

|   |                     |                           |                    |                    |                 |
|---|---------------------|---------------------------|--------------------|--------------------|-----------------|
| SHEET NO.<br>S-8<br>SHEETS<br>S-25              | F.A.U. RTE.<br>1257 | SECTION<br>08-00083-00-BT | COUNTY<br>LAKE     | TOTAL SHEETS<br>51 | SHEET NO.<br>28 |
|   | SN 049-6159         |                           | CONTRACT NO. 63450 |                    |                 |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                     |                           |                    |                    |                 |

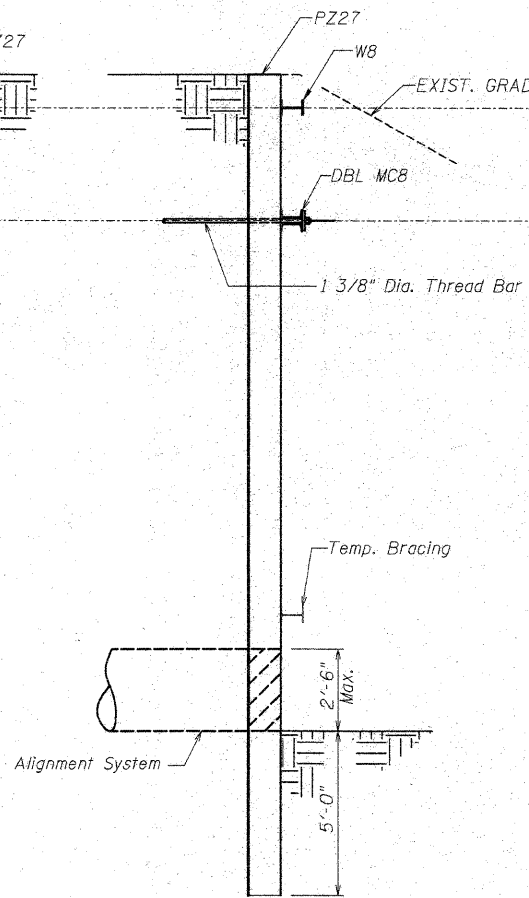
**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

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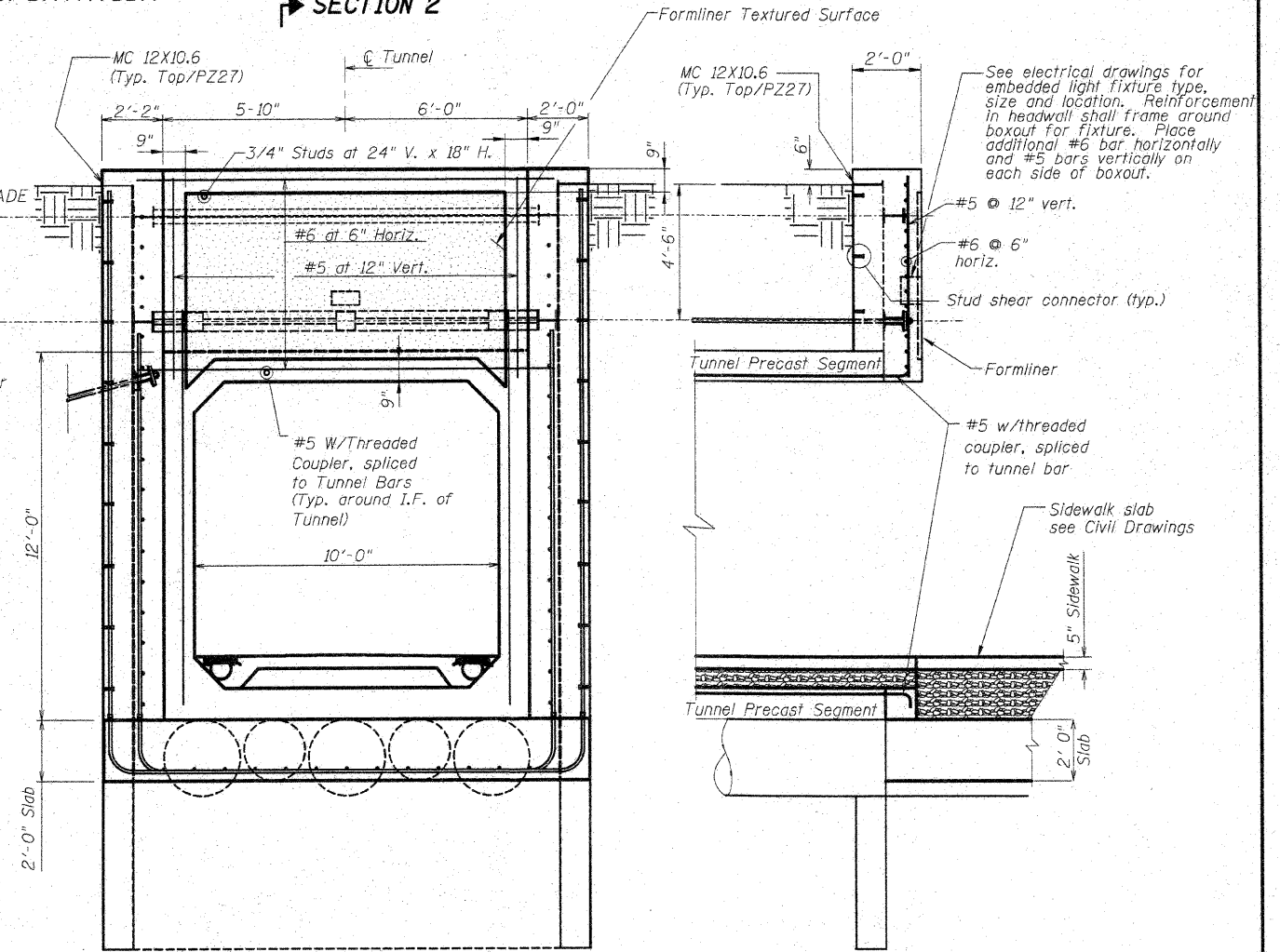
SECTION 1

SHOWN PRIOR TO POURING CONCRETE



SECTION 1

SECTION 2



SECTION 2

FINAL CONSTRUCTION

(A) SECTION - EAST TUNNEL HEADWALL

|          |     |
|----------|-----|
| DESIGNED | KJH |
| CHECKED  | BB  |
| DRAWN    | KJH |
| CHECKED  | AWW |

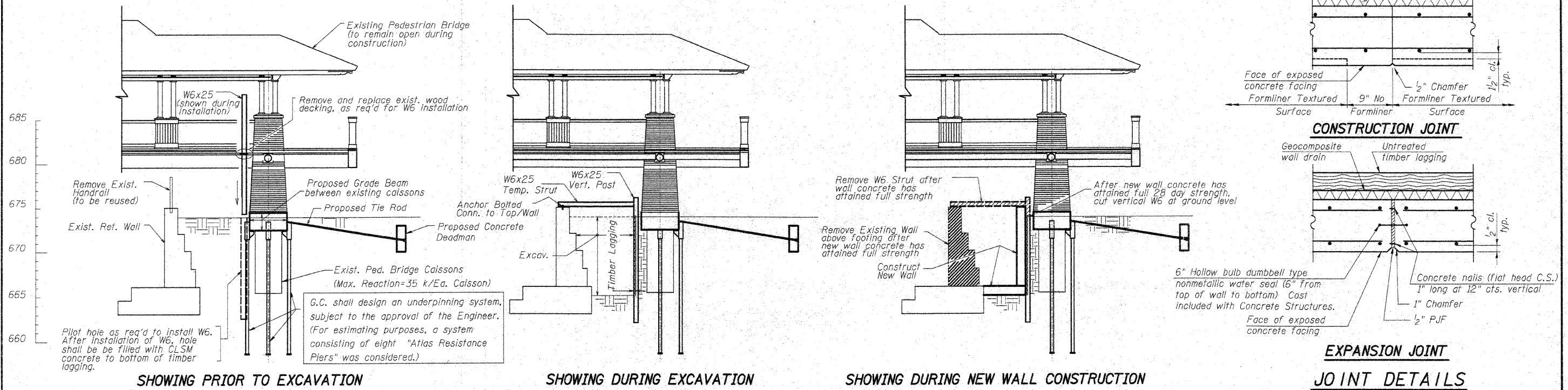
**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

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TUNNEL HEADWALL DETAILS  
STRUCTURE NO. 049-6159

| SHEET NO.   | F.A.U. RTE. | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
|---|-------------|----------------|--------------------|--------------|-----------|
| S-9   | 1257        | 08-00083-00-BT | LAKE               | 51           | 29        |
| SHEETS S-25                                       | SN 049-6159 |                | CONTRACT NO. 63450 |              |           |
| FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT |             |                |                    |              |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SHOWING PRIOR TO EXCAVATION

SHOWING DURING EXCAVATION

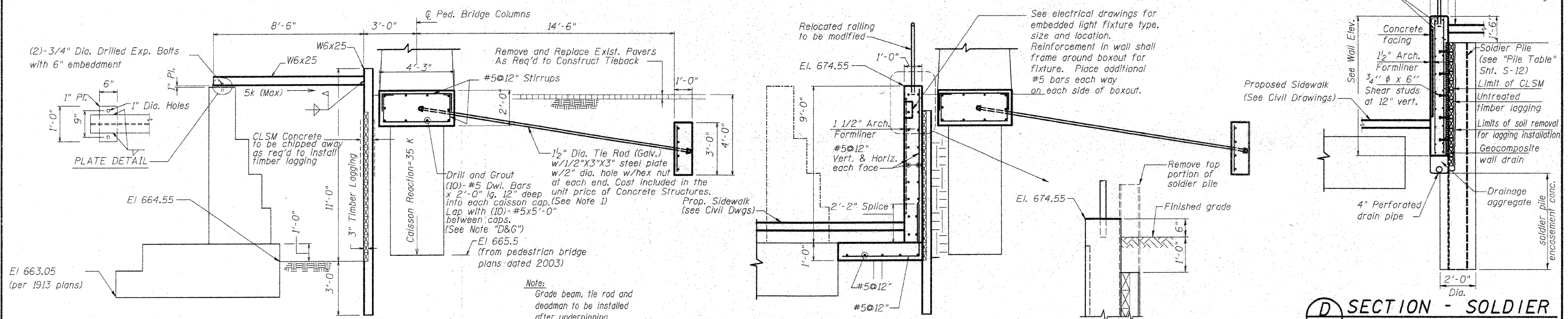
SHOWING DURING NEW WALL CONSTRUCTION

CONSTRUCTION JOINT

EXPANSION JOINT

JOINT DETAILS

(B) SECTION - SHOWING PORTION OF WALL UNDER PEDESTRIAN BRIDGE



(1) DETAIL - SHOWING EXCAVATION

(2) DETAIL - SHOWING WALL CONSTRUCTION

(D) SECTION - SOLDIER PILE WALL

WALL DETAILS

STRUCTURE NO. 049-6159

|          |     |
|----------|-----|
| DESIGNED | KJH |
| CHECKED  | BB  |
| DRAWN    | KJH |
| CHECKED  | AWW |

Note "D&G"  
Drilling and Grouting of the dowel bars shall conform to the requirements of Section 584 of the Standard Specifications. The cost of the material and dowel installation is included in the unit price of Reinforcement Bars, Epoxy Coated.

Note 1:  
Excavation and backfill for deadman and tie rods shall be included in the item "Structure Excavation".

McDonough Associates Inc.  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

Replaced 7-16-10

|   |             |                |                    |              |           |
|---|-------------|----------------|--------------------|--------------|-----------|
| SHEET NO.<br>S-15                               | F.A.U. RTE. | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
|   | 1257        | 08-00083-00-BT | LAKE               | 51           | 35        |
| SHEETS<br>S-25                                  | SN 049-6159 |                | CONTRACT NO. 63450 |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |             |                |                    |              |           |