

**MATERIALS**

BODY, DOOR, ELBOW & PLATE: CAST ALUMINUM ALLOY. TERMINAL MTG. BRACKET: ALUMINUM ALLOY. SCREWS, HINGE PINS, BANDING BRACKET: STAINLESS STEEL. CORK GASKET 1/8" THICK, TO BE FURNISHED BETWEEN FLAT PLATE AND BODY. SPONGE NEOPRENE GASKET 14 5/64" x 7 5/64" x 7/16", TO BE FURNISHED BETWEEN DOOR AND BODY

SUPERSEDES DWG. # 832 DATED 5-1-85

**JUNCTION BOX FOR TRAFFIC SIGNAL & FIRE ALARM**

**CITY OF CHICAGO**  
 DEPT. OF STREETS AND SANITATION  
 DIVISION OF ELECTRICITY  
 DIVISION OF ELECTRICAL ENGINEERING

DRAFTSMAN: O. LETAMENDI  
 SUPERVISING ENGINEER: ELEC. DESIGN ENGR.

ENGINEER: O. LETAMENDI  
 R.C.  
 ENGINEER OF PROFESSION  
 GEN'L SUPT. OF ELECTRICITY

DWG. NO. **954**

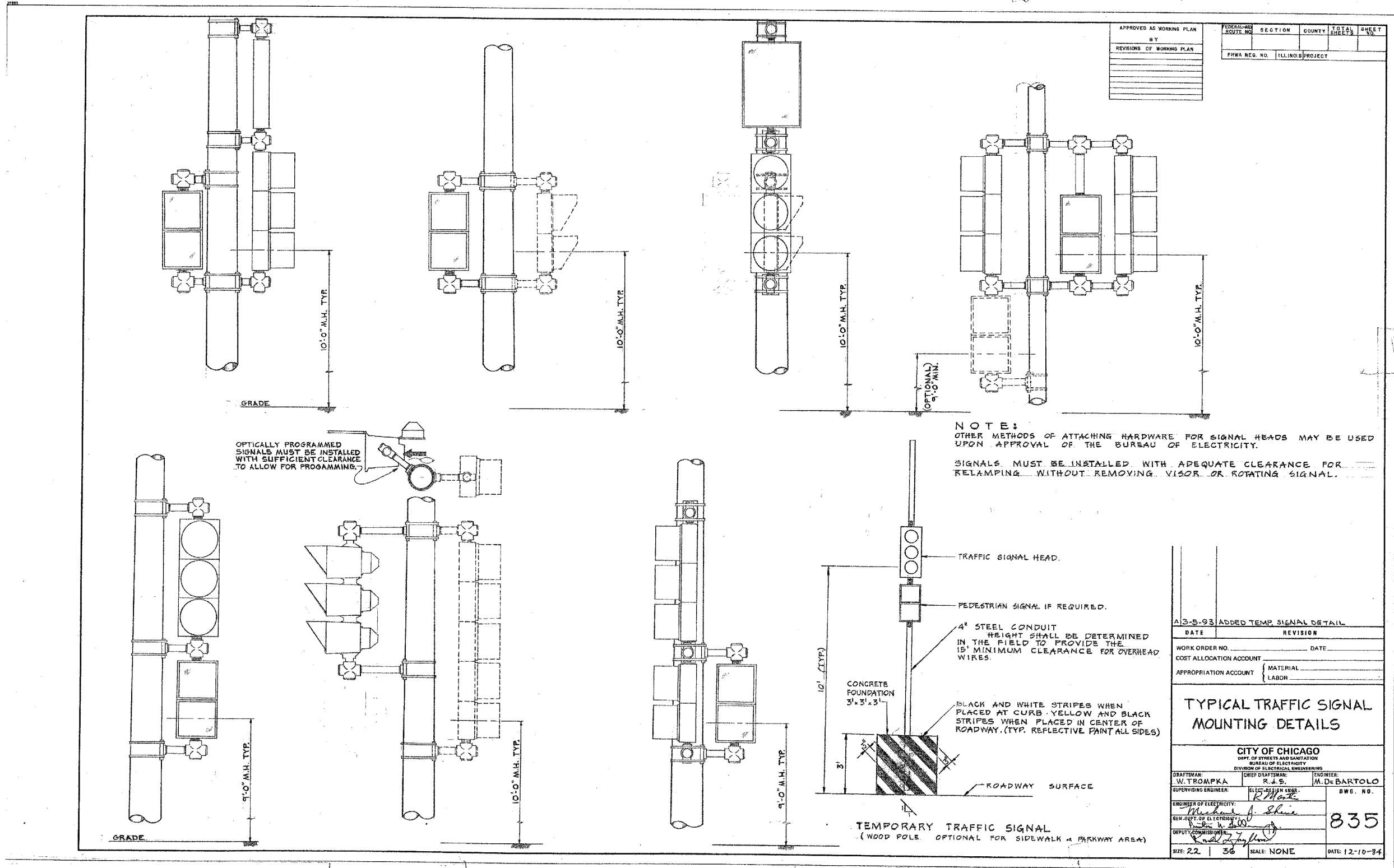
DATE: 04-15-05

| REVISIONS |          | ILLINOIS DEPARTMENT OF TRANSPORTATION<br>F.A.I. 94 (DAN RYAN EXPRESSWAY)<br>CITY OF CHICAGO<br>BUREAU OF ELECTRICITY STANDARDS |
|-----------|----------|--|
| NAME      | DATE     |  |
|           |          | SCALE: DATE: MARCH 25, 2005  |
|           |          |  |
|           |          |  |
|           |          |  |
|           |          |  |
| REVISED   | 04/15/05 | DRAWN BY: REW<br>CHECKED BY: WHI   |

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|                           |                       |                  |        |              |           |
|---------------------------|-----------------------|------------------|--------|--------------|-----------|
| APPROVED AS WORKING PLAN  | FEDERAL AID ROUTE NO. | SECTION          | COUNTY | TOTAL SHEETS | SHEET NO. |
| BY _____                  |                       |                  |        |              |           |
| REVISIONS OF WORKING PLAN | FRWA REG. NO.         | ILLINOIS PROJECT |        |              |           |
|                           |                       |                  |        |              |           |
|                           |                       |                  |        |              |           |

**NOTE:**  
OTHER METHODS OF ATTACHING HARDWARE FOR SIGNAL HEADS MAY BE USED UPON APPROVAL OF THE BUREAU OF ELECTRICITY.

SIGNALS MUST BE INSTALLED WITH ADEQUATE CLEARANCE FOR RELAMPING WITHOUT REMOVING VISOR OR ROTATING SIGNAL.

A13-5-93 ADDED TEMP SIGNAL DETAIL

| DATE | REVISION |
|------|----------|
|      |          |

WORK ORDER NO. \_\_\_\_\_ DATE \_\_\_\_\_  
 COST ALLOCATION ACCOUNT \_\_\_\_\_  
 APPROPRIATION ACCOUNT MATERIAL \_\_\_\_\_ LABOR \_\_\_\_\_

### TYPICAL TRAFFIC SIGNAL MOUNTING DETAILS

**CITY OF CHICAGO**  
 DEPT. OF STREETS AND SANITATION  
 BUREAU OF ELECTRICITY  
 DIVISION OF ELECTRICAL ENGINEERING

|  |                          |                           |
|--|--------------------------|---------------------------|
| DRAFTSMAN<br>W. TROMPKA                | CHIEF DRAFTSMAN<br>R. S. | ENGINEER<br>M. DE BARTOLO |
| SUPERVISING ENGINEER                   | ELECT. DESIGN ANGR.      | DWE. NO.                  |
| ENGINEER OF ELECTRICITY<br><i>Mark</i> | 835                      |                           |
| DEPUTY COMMISSIONER<br><i>Mark</i>     |                          |                           |

DATE 12-10-84

| REVISIONS |          |
|-----------|----------|
| NAME      | DATE     |
|           |          |
|           |          |
|           |          |
| REVISED   | 04/15/05 |

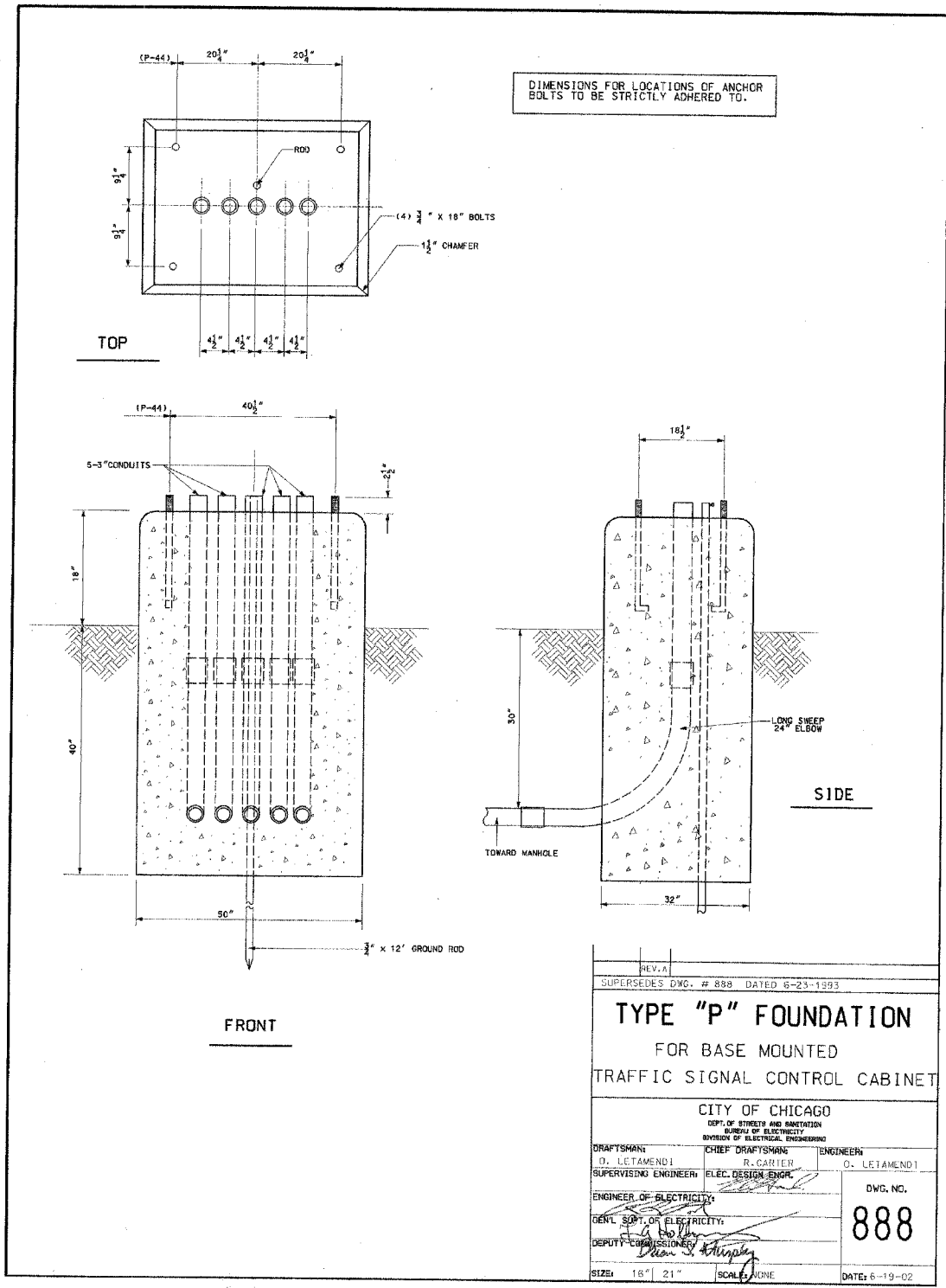
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 CITY OF CHICAGO  
 BUREAU OF ELECTRICITY STANDARDS

SCALE: \_\_\_\_\_ DATE: MARCH 25, 2005  
 DRAWN BY: REW  
 CHECKED BY: WHI

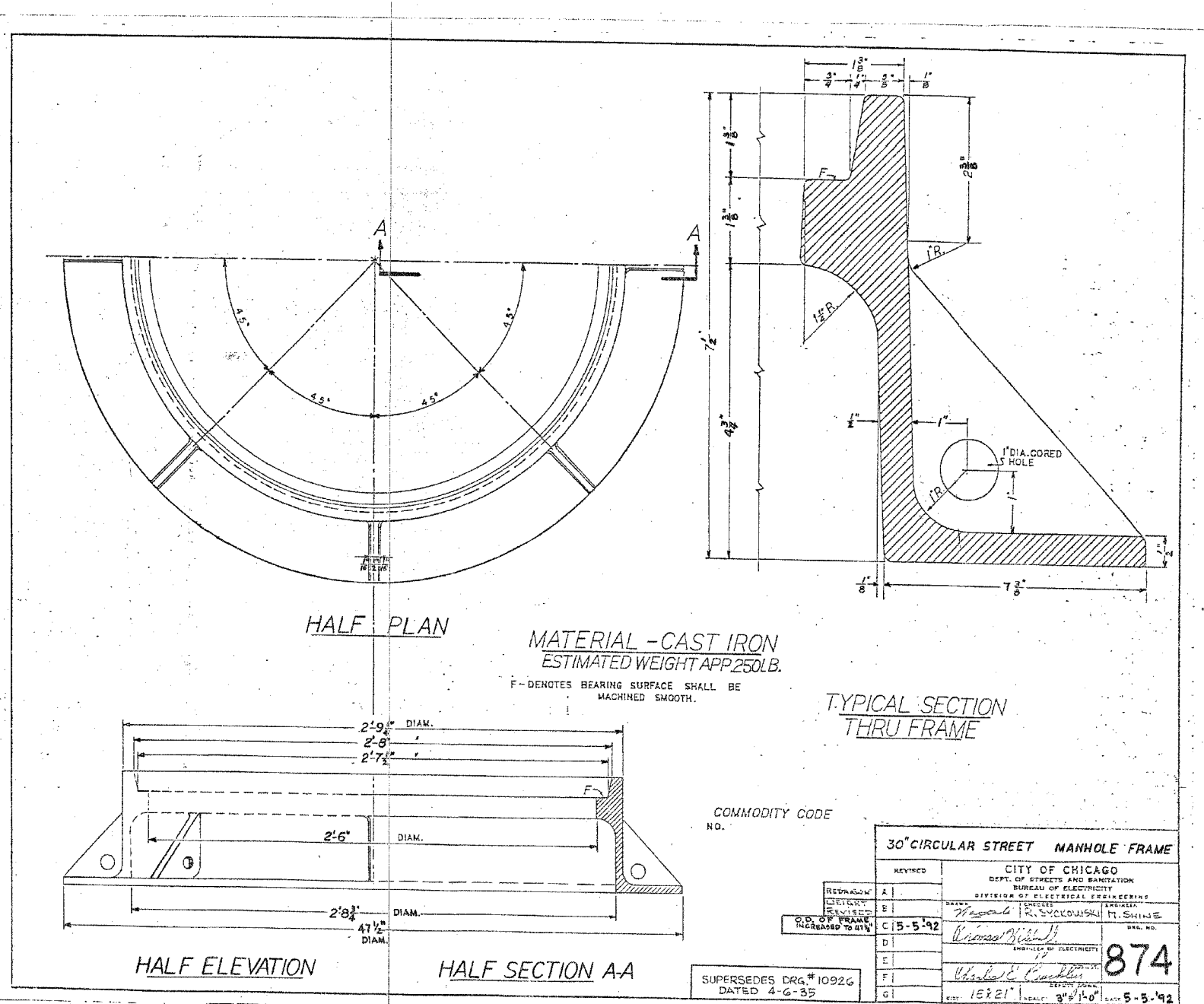
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|                            |         |                           |              |           |
|----------------------------|---------|---------------------------|--------------|-----------|
| F.A.I. RTE.                | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 94                         | *       | COOK                      | 907          | 404       |
| STA.                       |         | TO STA.                   |              |           |
| FED. ROAD DIST. NO.        |         | ILLINOIS FED. AID PROJECT |              |           |
| *(1516.1, 1717 & 1818) R-9 |         | 62695                     |              |           |



|   |                           |
|---|---------------------------|
| REV. A  |                           |
| SUPERSEDES DWG. # 888   | DATED 6-23-1993           |
| <b>TYPE "P" FOUNDATION</b>  |                           |
| FOR BASE MOUNTED  |                           |
| TRAFFIC SIGNAL CONTROL CABINET  |                           |
| CITY OF CHICAGO<br>DEPT. OF STREETS AND SANITATION<br>BUREAU OF ELECTRICITY<br>DIVISION OF ELECTRICAL ENGINEERING |                           |
| DRAFTSMAN:<br>O. LETAMENDI  | ENGINEER:<br>O. LETAMENDI |
| CHIEF DRAFTSMAN:<br>R. CARTER   |                           |
| SUPERVISING ENGINEER:<br>ELEC. DESIGN ENGR.   |                           |
| ENGINEER OF ELECTRICITY:  | DWG. NO.<br><b>888</b>    |
| DEPUTY COMMISSIONER:<br>Dion S. Murphy  | DATE: 6-19-02             |
| SIZE: 18" x 21"   | SCALE: NONE               |



COMMODITY CODE NO.

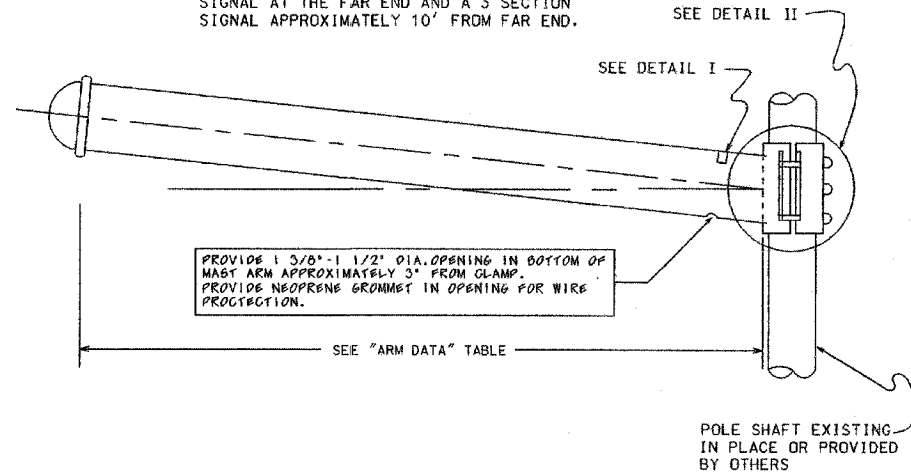
|                                   |   |                                    |             |
|-----------------------------------|---|------------------------------------|-------------|
| 30" CIRCULAR STREET MANHOLE FRAME |   |                                    |             |
| REVISED                           |   | CITY OF CHICAGO                    |             |
|                                   |   | DEPT. OF STREETS AND SANITATION    |             |
|                                   |   | BUREAU OF ELECTRICITY              |             |
|                                   |   | DIVISION OF ELECTRICAL ENGINEERING |             |
| REVISION                          | A | DATE                               | ENGINEER    |
|                                   | B | 10/21/92                           | R. SYKOWSKI |
|                                   | C | 5-5-92                             | H. SHINE    |
|                                   | D |                                    |             |
|                                   | E |                                    |             |
|                                   | F |                                    |             |
|                                   | G |                                    |             |
| SUPERSEDES DRG. # 10926           |   | DWG. NO. <b>874</b>                |             |
| DATED 4-6-35                      |   | DATE: 5-5-92                       |             |

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| REVISIONS |      | ILLINOIS DEPARTMENT OF TRANSPORTATION |                 |
|-----------|------|---------------------------------------|-----------------|
| NAME      | DATE | F.A.I. 94 (DAN RYAN EXPRESSWAY)       |                 |
|           |      | CITY OF CHICAGO                       |                 |
|           |      | BUREAU OF ELECTRICITY STANDARDS       |                 |
|           |      | SCALE:                                | DRAWN BY: REW   |
|           |      | DATE: MARCH 25, 2005                  | CHECKED BY: WHI |

PROVIDE SUFFICIENT MAST ARM RISE (3' MIN.) SO THAT MAST ARM REMAINS SLIGHTLY ABOVE HORIZONTAL WHEN LOADED WITH A 5 SECTION SIGNAL AT THE FAR END AND A 3 SECTION SIGNAL APPROXIMATELY 10' FROM FAR END.



PROVIDE 1 3/8" x 1/2" DIA. OPENING IN BOTTOM OF MAST ARM APPROXIMATELY 3" FROM CLAMP. PROVIDE NEOPRENE GROMMET IN OPENING FOR WIRE PROTECTION.

SEE "ARM DATA" TABLE

POLE SHAFT EXISTING IN PLACE OR PROVIDED BY OTHERS

ARM DATA

| CLAMP RANGE (INCHES) | POLE END (INCHES) | SIGNAL END (INCHES) | LENGTH (FEET) | GAUGE | WEIGHT (POUNDS) | TEST LOAD (POUNDS) | MAX. DEFLECTION (INCHES) |
|----------------------|-------------------|---------------------|---------------|-------|-----------------|--------------------|--------------------------|
| 7.45-7.95            | 7.0               | 4.76                | 16            | 7     | 241             | 1700               | 6.5                      |
| 7.45-7.95            | 7.0               | 4.20                | 20            | 7     | 274             | 1300               | 12.0                     |
| 7.45-7.95            | 7.0               | 3.36                | 26            | 7     | 315             | 1000               | 24.0                     |
| 8.45-8.95            | 8.0               | 3.80                | 30            | 7     | 409             | 1100               | 29.0                     |
| 9.95-10.45           | 9.0               | 4.10                | 35            | 7     | 529             | 1200               | 36.0                     |
| 9.95-10.45           | 9.0               | 3.40                | 40            | 7     | 559             | 1000               | 52.0                     |
| 9.95-10.45           | 10.0              | 3.84                | 44            | 7     |                 | 1200               | 57.0                     |

NOTES:

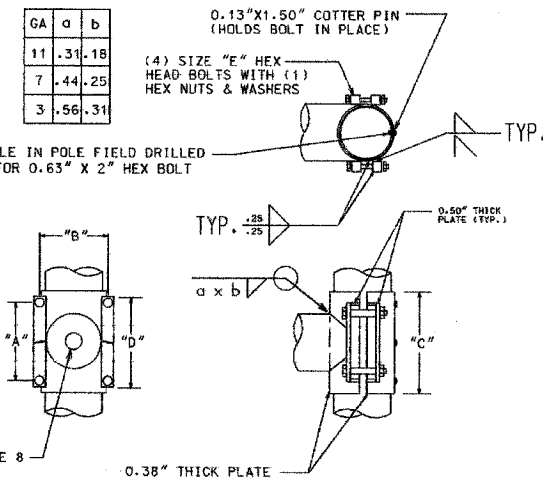
- TRAFFIC SIGNAL ARM SHAFT ASTM DESIGNATION: A595 GRADE C, 60,000 PSI MINIMUM YIELD STRENGTH WITH A LINEAR TAPER -0.14"/FT.
- TRAFFIC SIGNAL ARM END CAP SECURED IN PLACE WITH 3 SET SCREWS AND 1 THRU ARM END BOLT. (PLATED HARDWARE)
- ALL THREADED FASTENERS TO BE GALVANIZED TO ASTM DESIGNATION: A153
- ALL VEHICULAR AND/OR PEDESTRIAN SIGNAL LIGHTS AND NECESSARY HARDWARE FOR ATTACHMENT TO BE FIELD LOCATED AND FURNISHED BY OTHERS.
- ALL ARM END CAPS AND ARM CLAMPS TO BE FULLY ASSEMBLED AND ATTACHED TO THE ARM PRIOR TO SHIPPING.
- ARM ASSEMBLY TO BE DEGREASED; CLEANED; CHEMICALLY PRETREATED; GIVEN AN EXTERIOR THERMOSETTING POLYESTER POWDER COAT; AND AN INTERIOR THERMOPLASTIC HYDROCARBON RESIN POWDER COAT. ALL PAINTING TO BE IN ACCORDANCE WITH SPECIFICATION 1454, SECTION 8. "PAINTING".
- MAST ARM SHALL BE TESTED IN ACCORDANCE WITH SPECIFICATION 1454, SECTION 9 WITH TEST VALUES AS SHOWN ON THE "ARM DATA" TABLE.
- HOLE IN CLAMP TO BE 4.0" (MIN.). HOLE TO BE GROUND SMOOTH AND DEBURRED TO PROVIDE A SMOOTH WIRE ENTRY FROM POLE TO MAST ARM.

TOP  
0.00 - 0.00 INDICATES MAX. AND MIN. I. D. RANGE FOR ARM CLAMP

I. D. TAG TO BE MOUNTED ON THE TOP OF THE POLE AS INDICATED, USING 2 "GRIP-NAIL" FASTENERS.

DETAIL I  
I. D. TAG

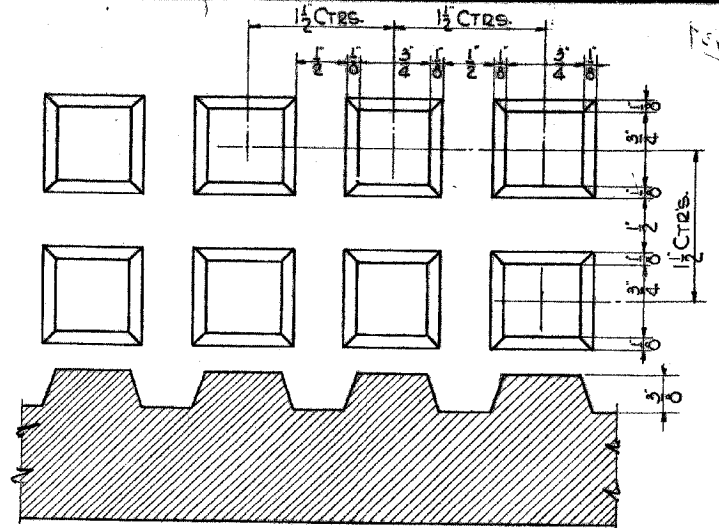
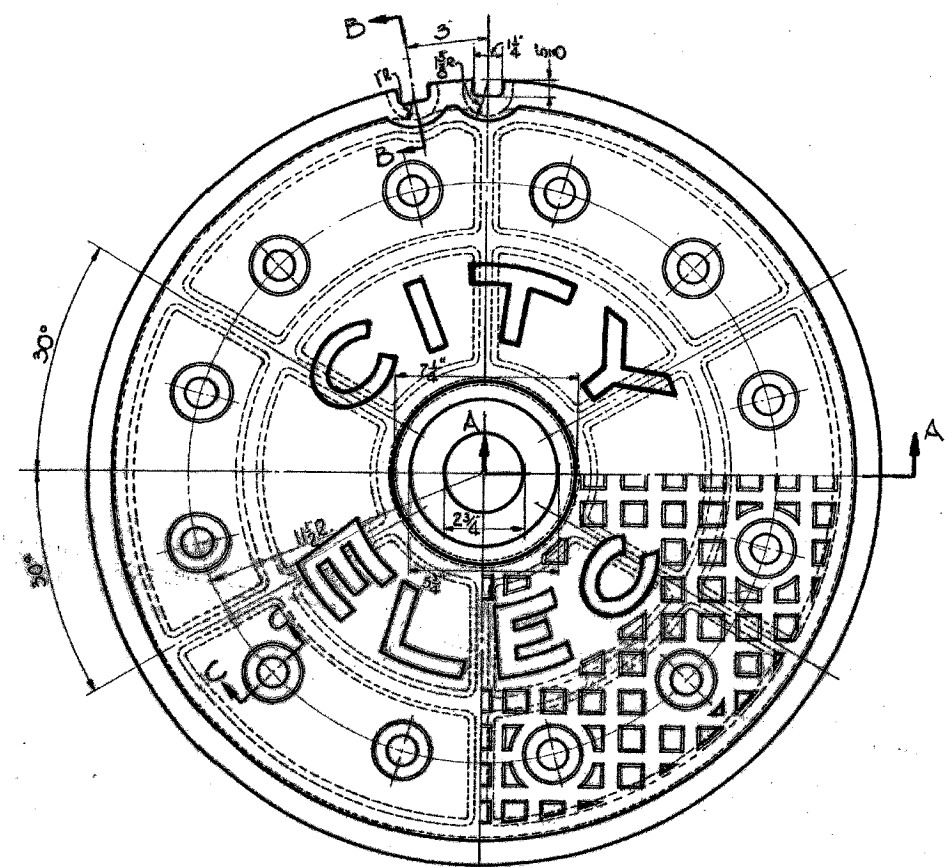
| CLAMP RANGE    | "A"    | "B"    | "C"    | "D"    | "E"           |
|----------------|--------|--------|--------|--------|---------------|
| 7.45" - 7.95"  | 7.25"  | 9.92"  | 10.80" | 10.32" | 1.00" X 7.50" |
| 8.45" - 8.95"  | 9.00"  | 10.66" | 13.06" | 12.50" | 1.00" X 8.00" |
| 9.95" - 10.45" | 10.25" | 12.66" | 15.30" | 13.50" | 1.25" X 8.50" |



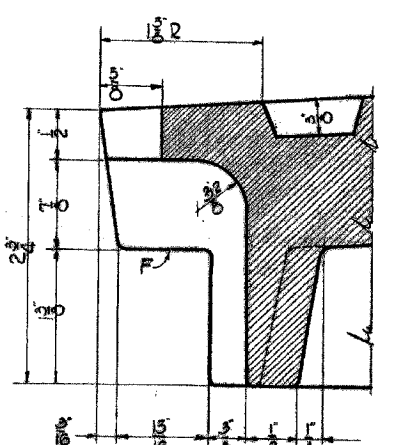
DETAIL II  
ARM ATTACHMENT

|   |                                   |                          |
|---|-----------------------------------|--------------------------|
| B   | 10-29-02                          | REFERENCES SPEC. 1454    |
| A   | 8-6-93                            | WIRE OPENING ON MAST ARM |
| DATE  | REVISION                          |                          |
| SUPERSEDES DWG. DATED DEC. 1991   |                                   |                          |
| STEEL TRAFFIC SIGNAL<br>MAST ARM-MONOTUBE   |                                   |                          |
| CITY OF CHICAGO<br>DEPT. OF STREETS AND SANITATION<br>BUREAU OF ELECTRICITY<br>DIVISION OF ELECTRICAL ENGINEERING |                                   |                          |
| DRAFTSMAN:<br>R. IVY  | CHIEF DRAFTSMAN:<br>ROBERT CARTER | ENGINEERS:<br>RON POOL   |
| SUPERVISING ENGINEER  | ELECTRICAL ENGINEER               |                          |
| ENGINEER OF ELECTRICITY<br>SEN. S. HILL   |                                   | 870                      |
| DEPUTY COMMISSIONER<br>Brian S. Murphy  |                                   |                          |
| SIZE: 1/8" x 22"  | SCALE: 1/2"                       | DATE: DEC. 1991          |

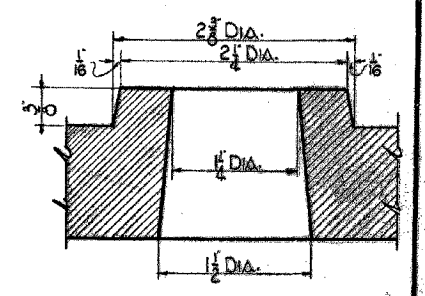
| REVISIONS |      | ILLINOIS DEPARTMENT OF TRANSPORTATION<br>F.A.I. 94 (DAN RYAN EXPRESSWAY)<br><br>CITY OF CHICAGO<br>BUREAU OF ELECTRICITY STANDARDS |
|-----------|------|--|
| NAME      | DATE |  |
|           |      | SCALE: DATE: MARCH 25, 2005<br>DRAWN BY: REW<br>CHECKED BY: WHI  |
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|           |      |  |



DETAIL OF CORRUGATIONS

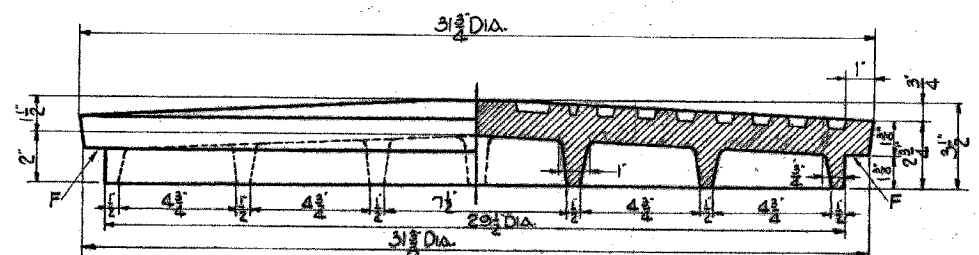


SECTION B-B



SECTION C-C

MATERIAL - CAST IRON  
 ESTIMATED WEIGHT 315 LB. F-DENOTES BEARING SURFACE SHALL BE MACHINED SMOOTH.



HALF ELEVATION HALF SECTION A-A

SUPERSEDES DRG. 7223-DATED 6-29-10  
 COMMODITY CODE  
 02-4374-5630

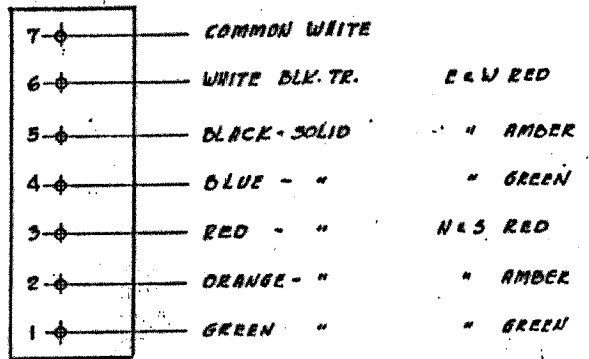
|  |   |
|--|---|
| C  | WEIGHT REVISED                          |
| B  | WEIGHT REVISED                          |
| A  | IDENTIFICATION LETTERS ON COVER CHANGED |
| <b>30" CIRCULAR STREET MANHOLE COVER</b> |   |
| REVISED                                  | CITY OF CHICAGO                         |
| A 12-7-53                                | DEPT. OF STREETS AND SANITATION         |
| B 9-7-79                                 | DIVISION OF ELECTRICAL ENGINEERING      |
| C 8-9-85                                 | <i>N. Zoleski</i>                       |
| D  | <i>[Signature]</i>                      |
| E  | <i>[Signature]</i>                      |
| F  | <i>[Signature]</i>                      |
| G  | <i>[Signature]</i>                      |
| H  | <i>[Signature]</i>                      |
| I  | 16x21                                   |
| J  | 10927                                   |
| K  | 4-5-14                                  |

| REVISIONS |          | ILLINOIS DEPARTMENT OF TRANSPORTATION |                 |
|-----------|----------|---------------------------------------|-----------------|
| NAME      | DATE     | F.A.I. 94 (DAN RYAN EXPRESSWAY)       |                 |
|           |          | CITY OF CHICAGO                       |                 |
|           |          | BUREAU OF ELECTRICITY STANDARDS       |                 |
|           |          | SCALE:                                | DRAWN BY: REW   |
|           |          | DATE: MARCH 25, 2005                  | CHECKED BY: WHI |
| REVISION  | 04/15/05 |                                       |                 |

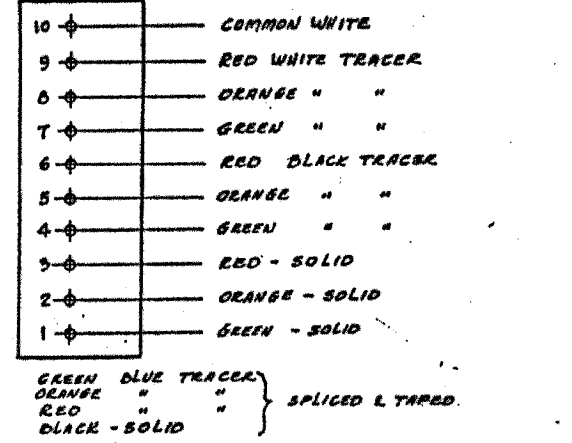
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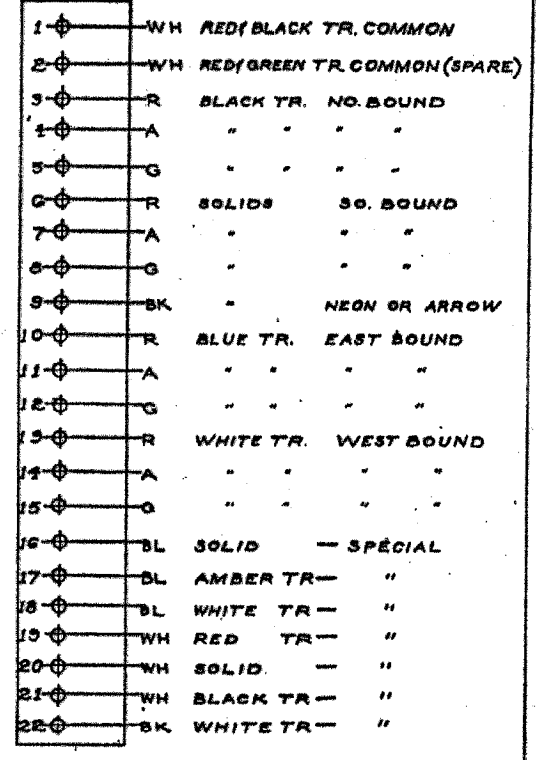
**• 7 CONDUCTOR - 7 POINT STRIP •**



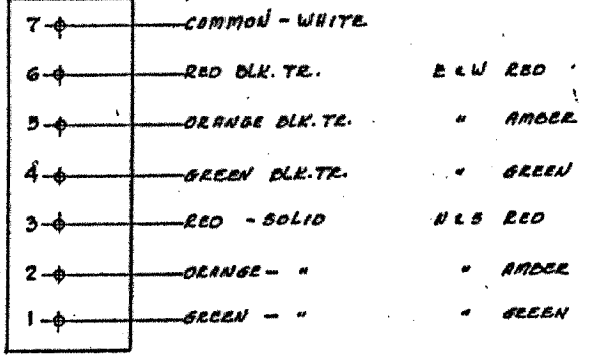
**• 14 CONDUCTOR - 10 POINT STRIP •**



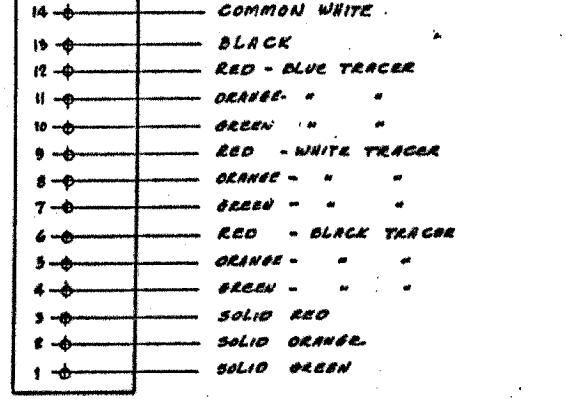
**• 22 CONDUCTOR - CODE •**  
• 19 1/2 CODE - OMIT "19" "21" "22" •



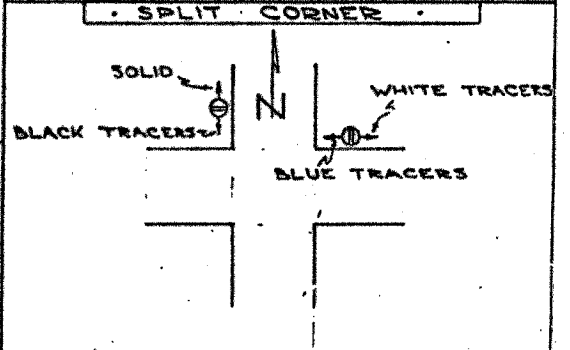
**• 10 CONDUCTOR - 7 POINT STRIP •**



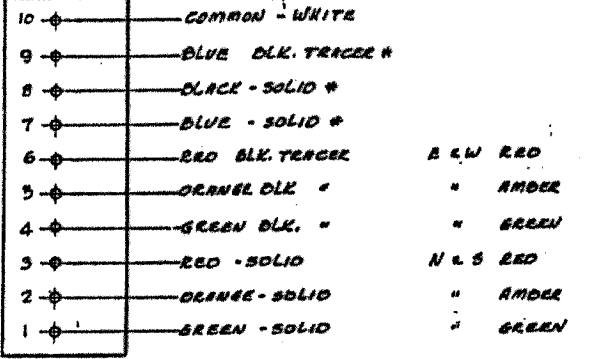
**• 14 CONDUCTOR - 14 POINT STRIP •**



SOLID BLUE }  
SOLID BLACK } SPliced & TAPED  
BLUE BLK. TR }

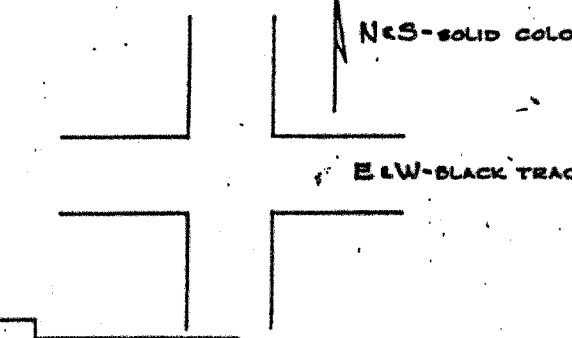


**• 10 CONDUCTOR - 10 POINT STRIP •**



\* - SOLID BLUE - GREEN LIGHT }  
\* - SOLID BLACK - AMBER " } IF USED  
\* - BLUE BLACK TR. RED " }

**• STRAIGHT CORNER •**



NOTE:  
CONDUCTORS FOR  
WALK SIGNALS &  
VARIOUS MESSAGE  
SIGNS AT DISCRETION  
OF INSTALLER

**TRAFFIC CONTROL SIGNALS  
STRIP WIRING LAYOUT**

|            |  |                  |             |
|------------|--|------------------|-------------|
| REVISED    | CITY OF CHICAGO<br>DEPT. OF STREETS AND SANITATION<br>DIVISION OF ELECTRICAL OPERATION |                  |             |
| A 5-4-61   | DRAWN  | CHECKED          | ENGINEER    |
| B 11-10-64 | H.R.A.   | R.P. [Signature] | [Signature] |
| C          |  |                  |             |
| D          |  |                  |             |
| E          |  |                  |             |
| F          |  |                  |             |
| G          | 16"x21"  | DATE 11-8-56     | 12268-A     |

| REVISIONS |      | ILLINOIS DEPARTMENT OF TRANSPORTATION<br>F.A.I. 94 (DAN RYAN EXPRESSWAY)<br><br>CITY OF CHICAGO<br>BUREAU OF ELECTRICITY STANDARDS |
|-----------|------|--|
| NAME      | DATE |  |
|           |      | SCALE:                      DRAWN BY: REW<br>DATE: MARCH 25, 2005      CHECKED BY: WHI   |
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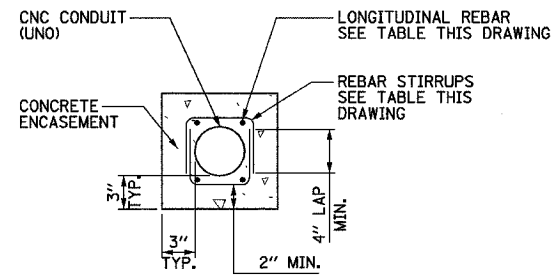




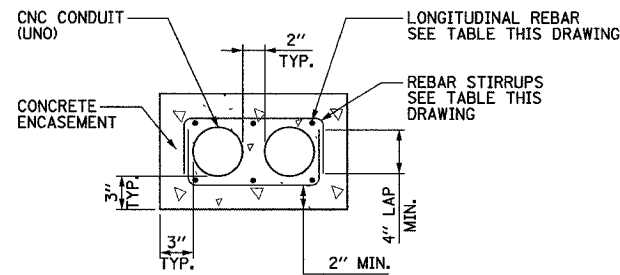




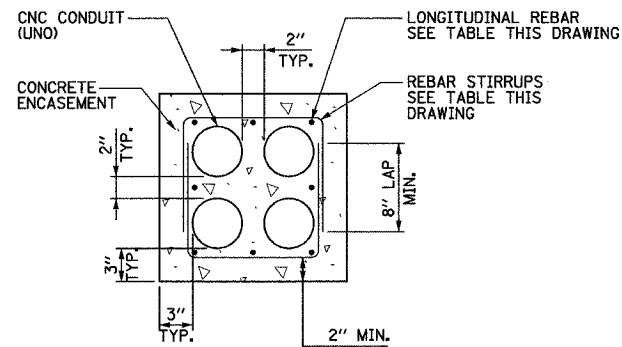




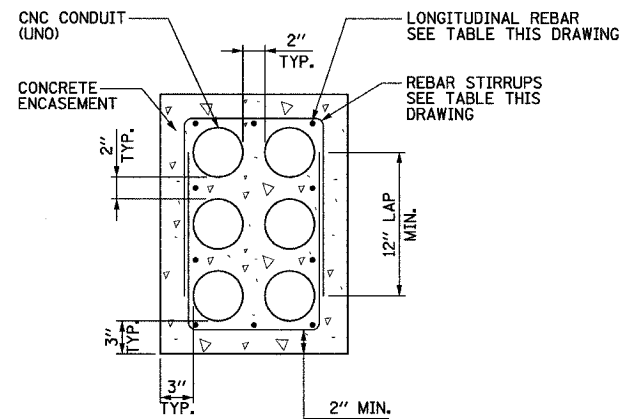
**1x1 DUCTBANK DETAIL-  
IN REINFORCED CONCRETE**  
NOT TO SCALE



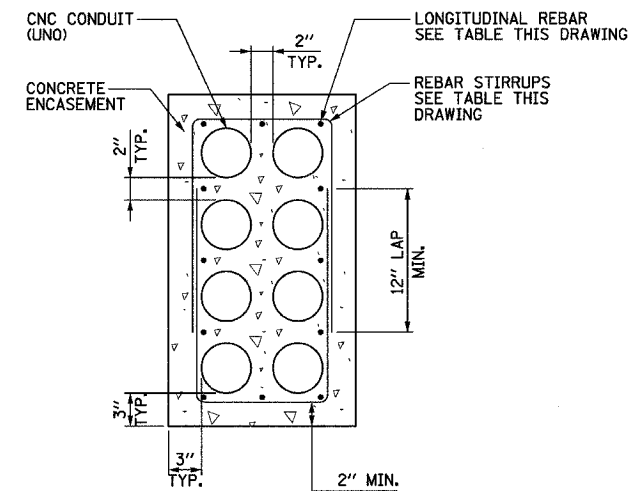
**2x1 DUCTBANK DETAIL-  
IN REINFORCED CONCRETE**  
NOT TO SCALE



**2x2 DUCTBANK DETAIL-  
IN REINFORCED CONCRETE**  
NOT TO SCALE

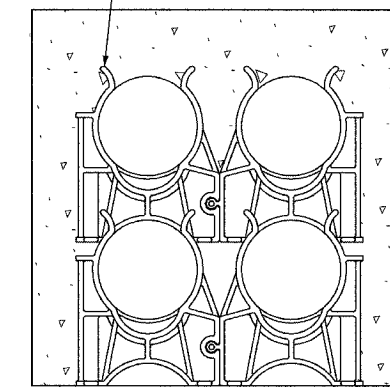


**2x3 DUCTBANK DETAIL-  
IN REINFORCED CONCRETE**  
NOT TO SCALE

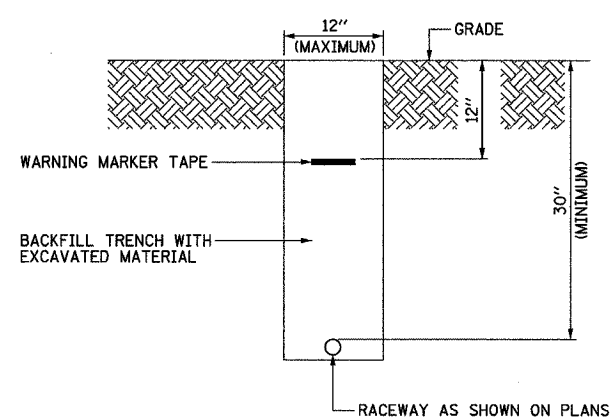


**2x4 DUCTBANK DETAIL-  
IN REINFORCED CONCRETE**  
NOT TO SCALE

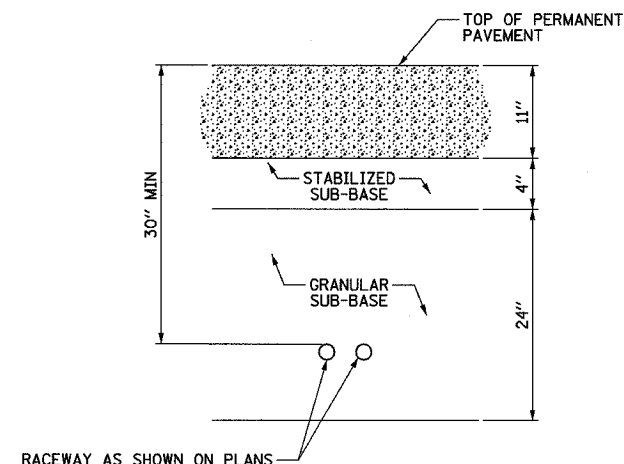
INTERLOCKING CONDUIT SPACERS MUST BE PROVIDED FOR ALL REINFORCED CONCRETE DUCTBANKS. THE INTERLOCKING SPACERS SHALL BE AS MANUFACTURED BY UNDERGROUND DEVICES, INC. OR APPROVED EQUAL. SPACERS SHALL BE INSTALLED AT 5'-0" (MAXIMUM) INTERVALS.



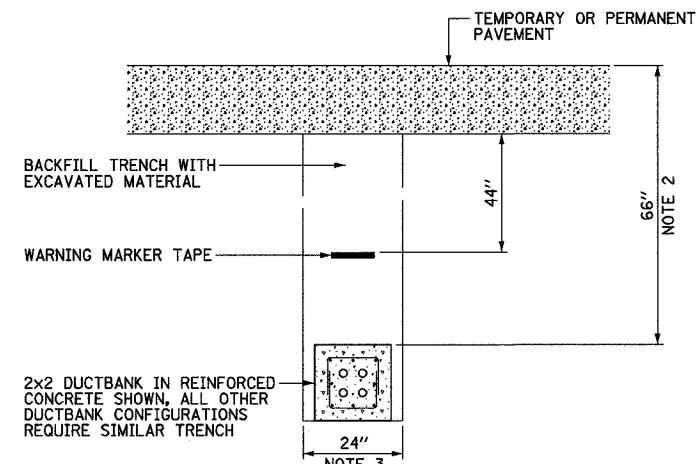
REINFORCED CONCRETE DUCTBANK REBAR NOT SHOWN ON THIS DETAIL  
**INTERLOCKING CONDUIT SPACER DETAIL**  
NOT TO SCALE



**TYPICAL ELECTRICAL  
CONDUIT IN UNPAVED AREA**  
NOT TO SCALE



**TYPICAL SURVEILLANCE  
CONDUIT UNDER PERMANENT PAVEMENT**  
NOT TO SCALE



**TYPICAL ELECTRICAL  
DUCTBANK UNDER PAVEMENT**  
NOT TO SCALE

| DUCTBANK REINFORCEMENT TABLE                      |                    |                   |
|---|--------------------|-------------------|
| DUCTBANK CONCRETE CROSS-SECTIONAL AREA SQ. INCHES | LONGITUDINAL REBAR | REBAR STIRRUPS    |
|   | BARS               |                   |
| LESS THAN 450                                     | #4                 | #3 AT 12" SPACING |
| 451 TO 650  | #5                 | #3 AT 12" SPACING |
| GREATER THAN 651                                  | #6                 | #3 AT 12" SPACING |

**SINGH**  
SINGH & ASSOCIATES, INC.  
CONSULTING ENGINEERS

300 W. ADAMS ST.  
CHICAGO, IL 60606  
TEL: (312) 629-0240  
FAX: (312) 629-8449

| REVISIONS |      |
|-----------|------|
| NAME      | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)

**ELECTRICAL DUCTBANK DETAILS**

SCALE: NOT TO SCALE  
DATE: FEB. 25, 2005  
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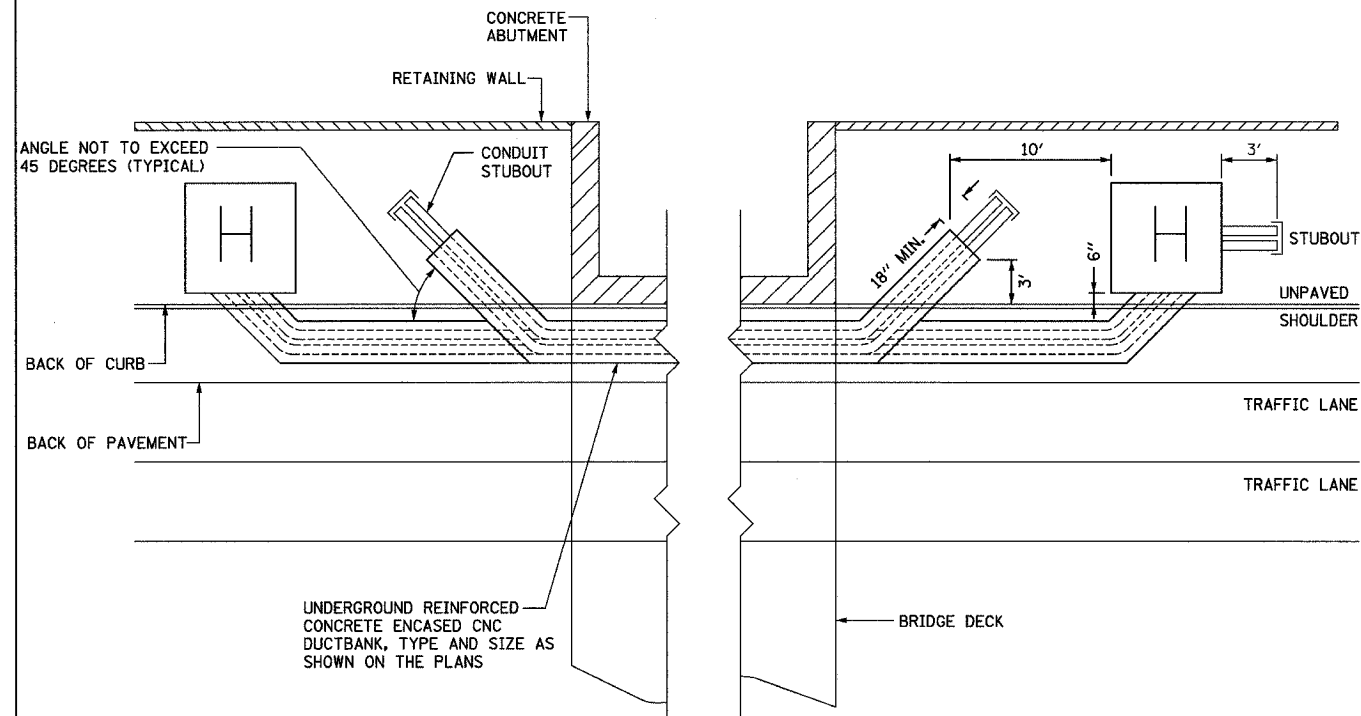
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| F.A.I. RTE.          | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
| 94                   |         | COOK  | 907          | 413       |
| STA. --- TO STA. --- |         | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |              |           |
|                      |         | • (1516, 1, 1717 & 1818) R-9                    |              |           |

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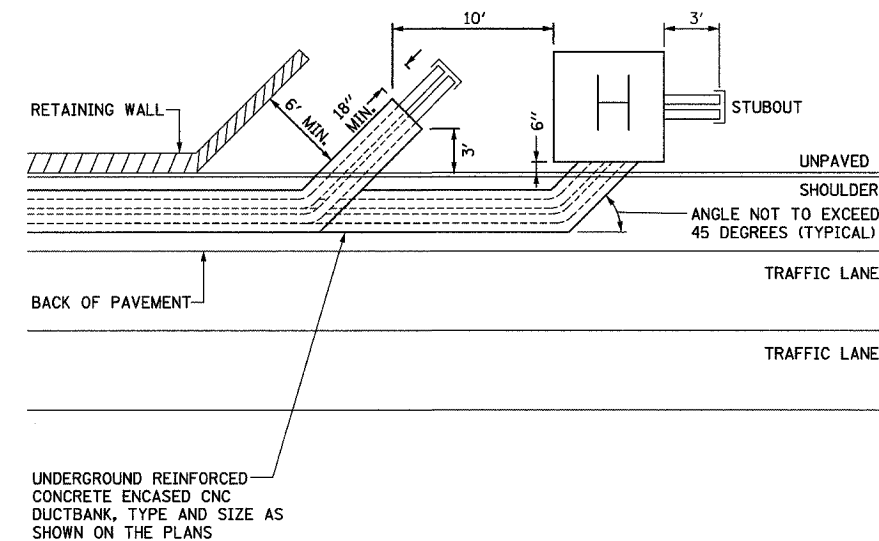
**NOTES:**

1. SEE DRAWINGS EI-100 AND EI-101 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. DIMENSIONS SHOWN ON THIS DRAWING ARE TYPICAL FOR MOST INSTALLATIONS. DIMENSIONS AND/OR STATIONS SPECIFIED ON THE PLANS OR HANDHOLE DETAIL DRAWINGS SHALL SUPERCEDE THE DIMENSIONS SHOWN ON THIS DRAWING.
3. SEE DRAWING EI-102 FOR CONDUIT DUCTBANK DETAILS.
4. STUBOUTS TO EXTEND 3' FROM HANDHOLE AND BE CAPPED. QUANTITY AND SIZE SHALL BE SHOWN ON PLANS. STUBOUTS SHALL BE INCLUDED IN HANDHOLE PAY ITEM AND SHALL NOT BE PAID SEPARATELY.



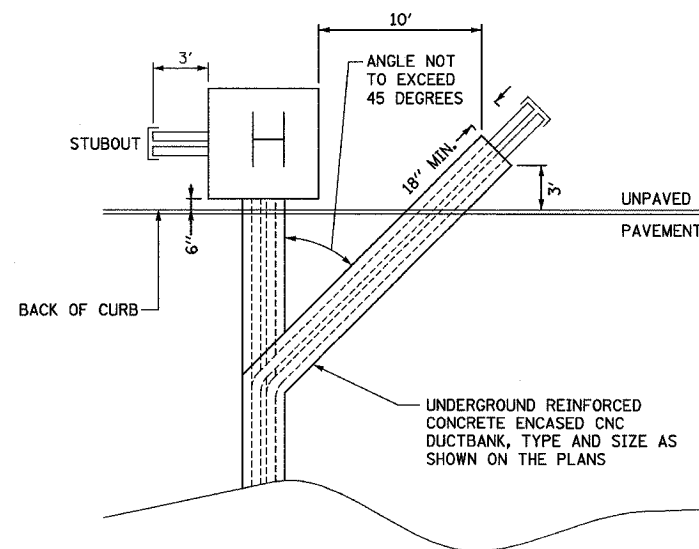
**DUCTBANK INSTALLATION DETAIL UNDER BRIDGE OVERPASS**

NOT TO SCALE



**DUCTBANK INSTALLATION DETAIL ALONG RETAINING WALL**

NOT TO SCALE



**DUCTBANK INSTALLATION DETAIL UNDER PAVEMENT**

NOT TO SCALE



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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)

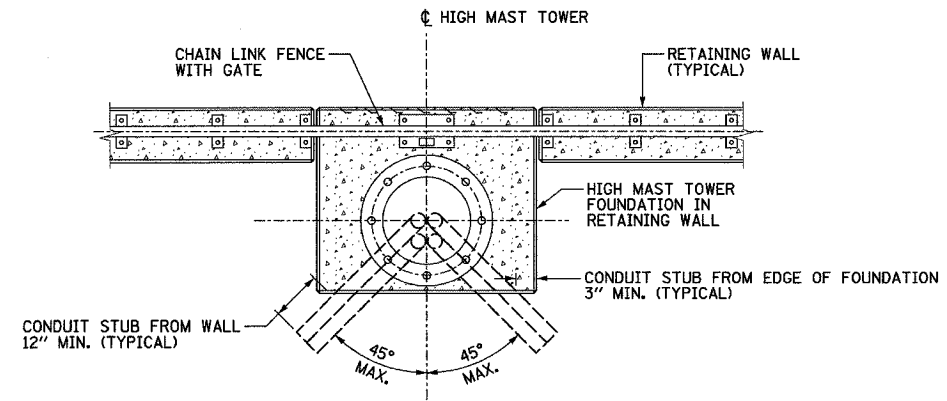
**ELECTRICAL DUCTBANK DETAILS  
IN SHOULDER AND UNDER PAVEMENT**

SCALE: NOT TO SCALE      DRAWN BY: BHP  
DATE: FEB. 25, 2005      CHECKED BY: BMW

17B/EI-103

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| F.A.I. RTE.                                     | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 94  | *       | COOK   | 907          | 414       |
| STA.  | TO STA. |        |              |           |
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| • (1516,1,1717 & 1818) R-9                      |         |        |              |           |
|   |         |        |              | 62695     |



CONDUIT STUB FROM WALL  
12" MIN. (TYPICAL)

CHAIN LINK FENCE WITH GATE

RETAINING WALL (TYPICAL)

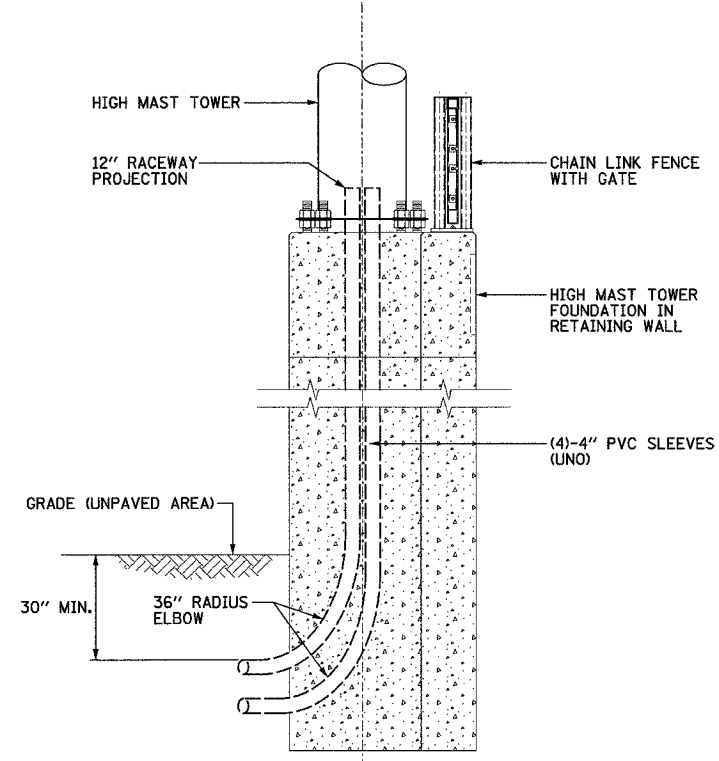
HIGH MAST TOWER

HIGH MAST TOWER FOUNDATION IN RETAINING WALL

CONDUIT STUB FROM EDGE OF FOUNDATION 3" MIN. (TYPICAL)

45° MAX. 45° MAX.

TOP VIEW



GRADE (UNPAVED AREA)

30" MIN.

36" RADIUS ELBOW

HIGH MAST TOWER

12" RACEWAY PROJECTION

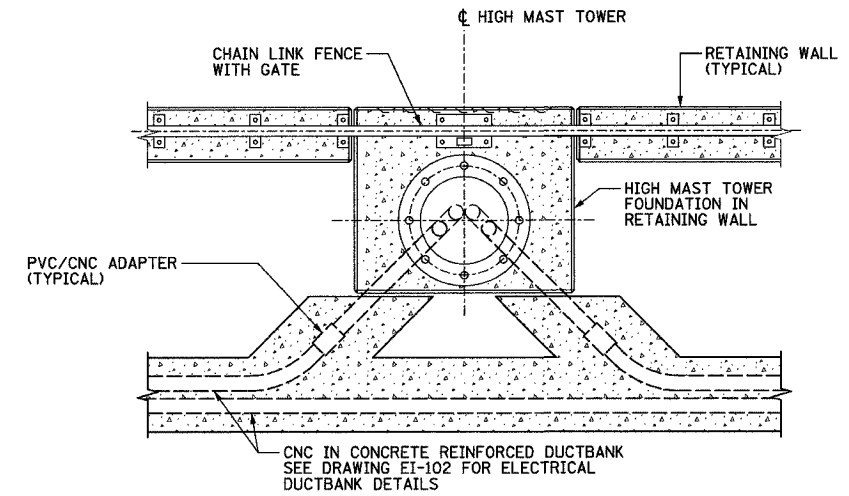
CHAIN LINK FENCE WITH GATE

HIGH MAST TOWER FOUNDATION IN RETAINING WALL

(4)-4" PVC SLEEVES (UNO)

SIDE ELEVATION VIEW

TYPICAL CONDUIT INSTALLATION DETAIL FOR INSTALLING CONDUIT SLEEVES IN FOUNDATION IN RETAINING WALL NOT TO SCALE



PVC/CNC ADAPTER (TYPICAL)

CHAIN LINK FENCE WITH GATE

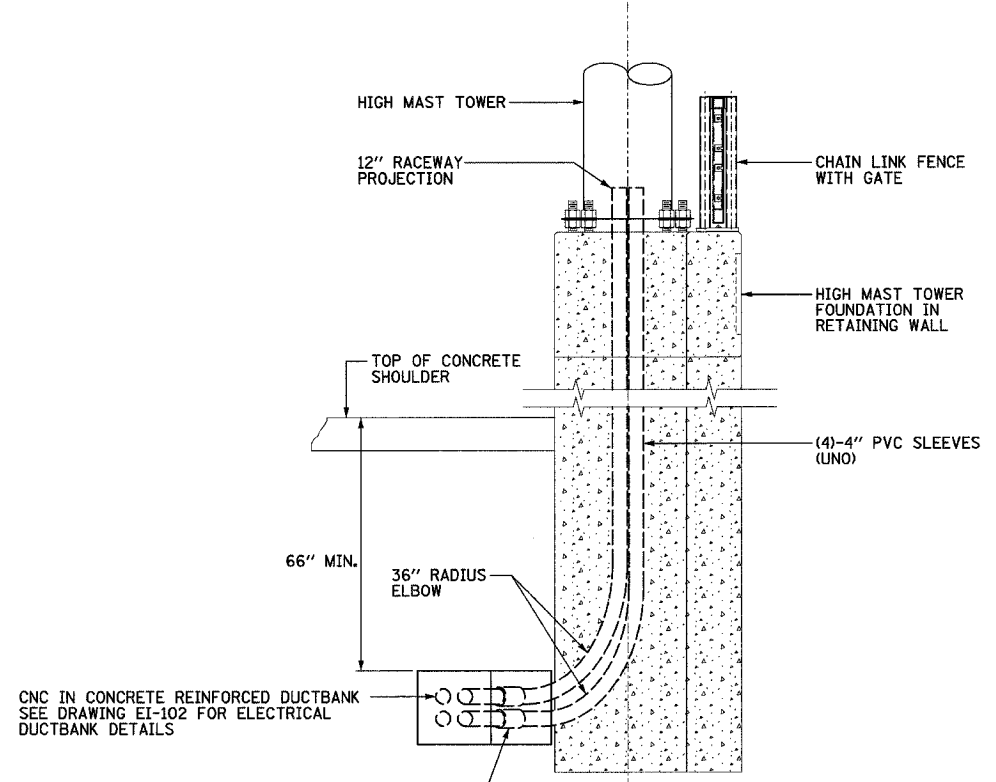
RETAINING WALL (TYPICAL)

HIGH MAST TOWER

HIGH MAST TOWER FOUNDATION IN RETAINING WALL

CNC IN CONCRETE REINFORCED DUCTBANK SEE DRAWING EI-102 FOR ELECTRICAL DUCTBANK DETAILS

TOP VIEW



66" MIN.

36" RADIUS ELBOW

CNC IN CONCRETE REINFORCED DUCTBANK SEE DRAWING EI-102 FOR ELECTRICAL DUCTBANK DETAILS

HIGH MAST TOWER

12" RACEWAY PROJECTION

CHAIN LINK FENCE WITH GATE

HIGH MAST TOWER FOUNDATION IN RETAINING WALL

(4)-4" PVC SLEEVES (UNO)

PVC/CNC ADAPTER

SIDE ELEVATION VIEW

TYPICAL CONDUIT INSTALLATION DETAIL FOR INSTALLING CONCRETE DUCTBANK TO FOUNDATION IN RETAINING WALL NOT TO SCALE

NOTES:

1. SEE DRAWINGS EI-100 AND EI-101 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. SEE PLAN DRAWINGS FOR HIGH MAST LIGHT TOWER FOUNDATION LOCATIONS.

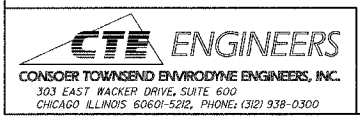
17B/EI-104

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)

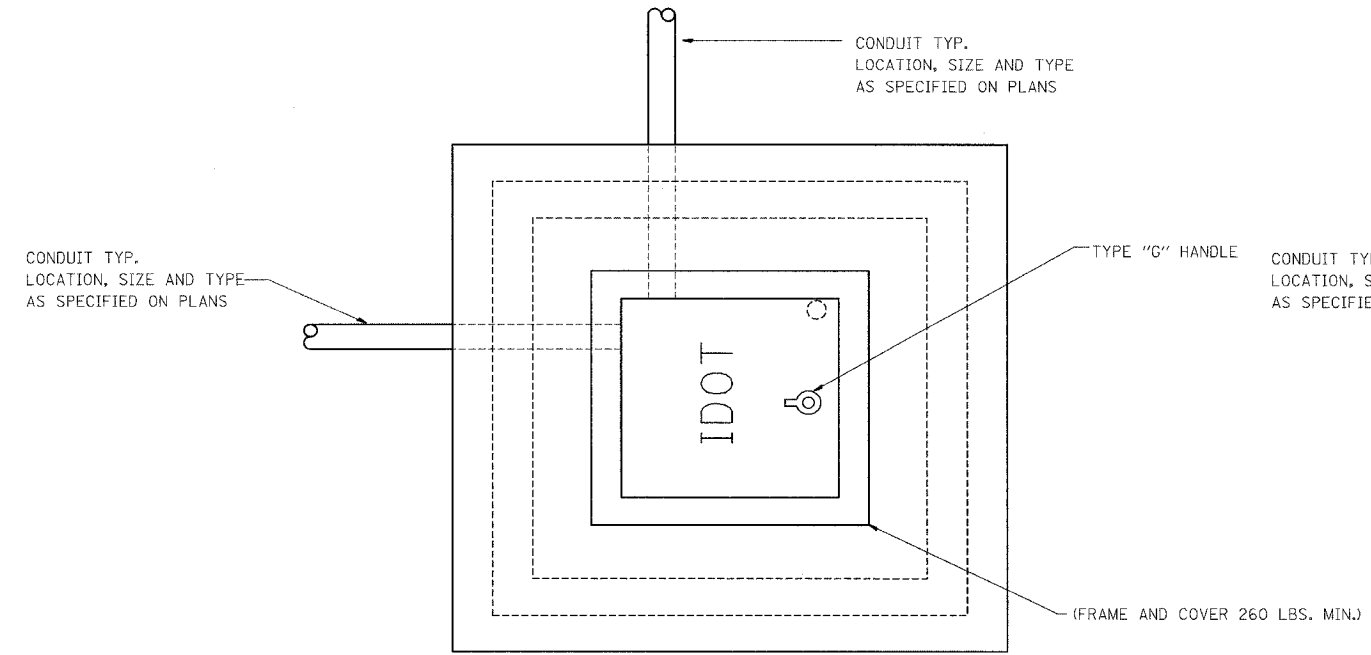
CONDUIT INSTALLATION DETAILS FOR LIGHT TOWER FOUNDATIONS MOUNTED ON RETAINING WALLS

SCALE: NOT TO SCALE DRAWN BY: CJM  
DATE: FEB. 25, 2005 CHECKED BY: BMW

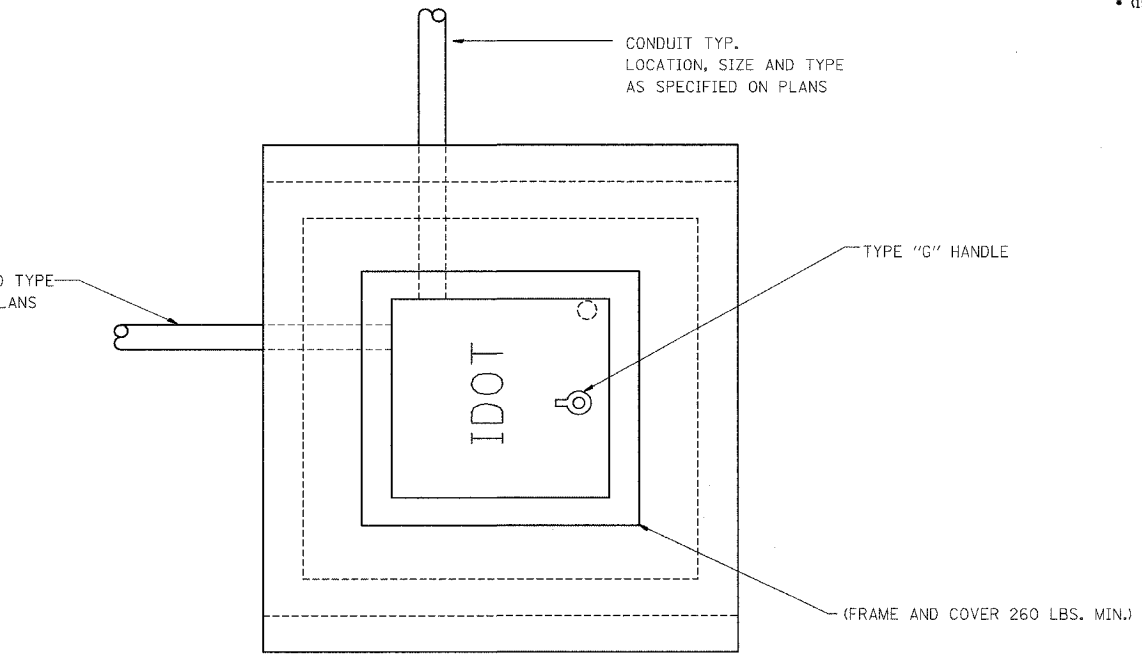


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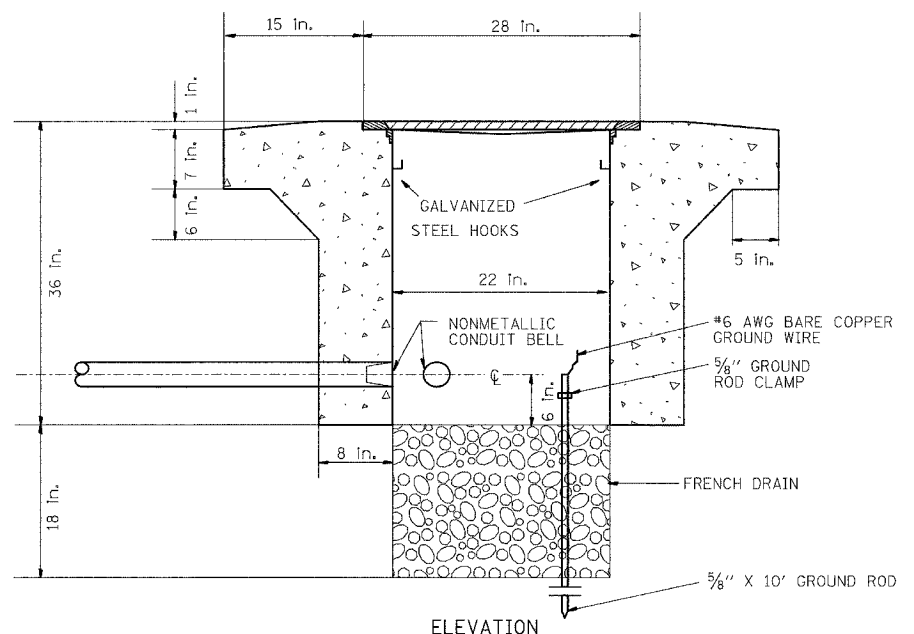
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| F.A.I. RTE.                  | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
| 94                           | *       | COOK  | 407          | 415       |
| STA. --- TO STA. ---         |         | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |              |           |
| • (1516, 1, 1717 & 1818) R-9 |         | 62695   |              |           |



PLAN

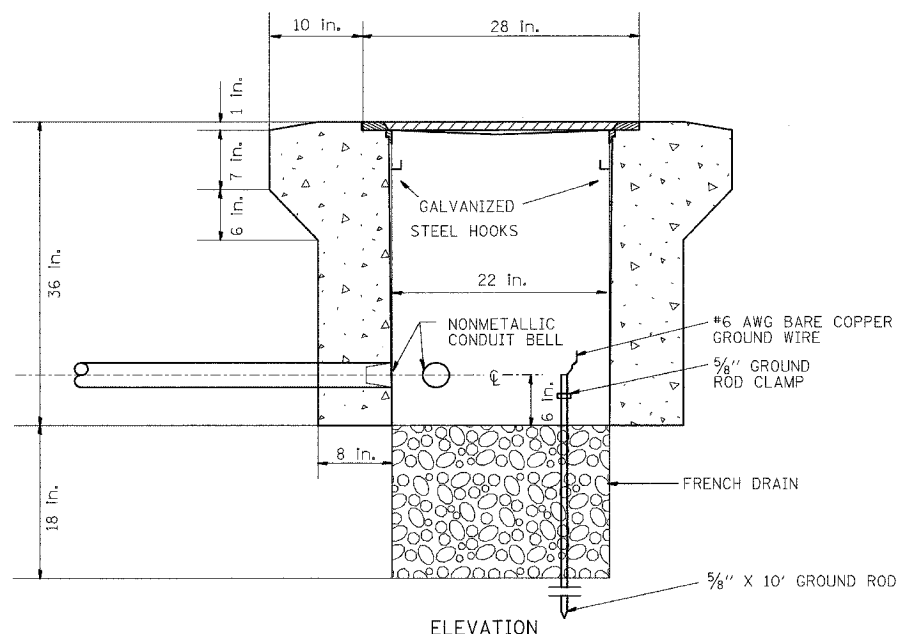


PLAN



ELEVATION

PC CONCRETE - HEAVY DUTY HANDHOLE



ELEVATION

PC CONCRETE - HEAVY DUTY HANDHOLE (SPECIAL)

**NOTE:**  
ALL METALLIC ELEMENTS SHALL BE GROUND IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC), SECTION 250, GROUNDING. METAL COVERS AND OTHER EXPOSED CONDUCTIVE SURFACES SHALL BE BONDED IN ACCORDANCE WITH NEC ARTICLE 250.96 (A).

**Edwards AND Kelcey**  
ONE NORTH FRANKLIN  
CHICAGO, IL 60606  
PHONE: (312) 251-3000  
FAX: (312) 251-3015  
WEB: WWW.EKCORP.COM

| REVISIONS |      |
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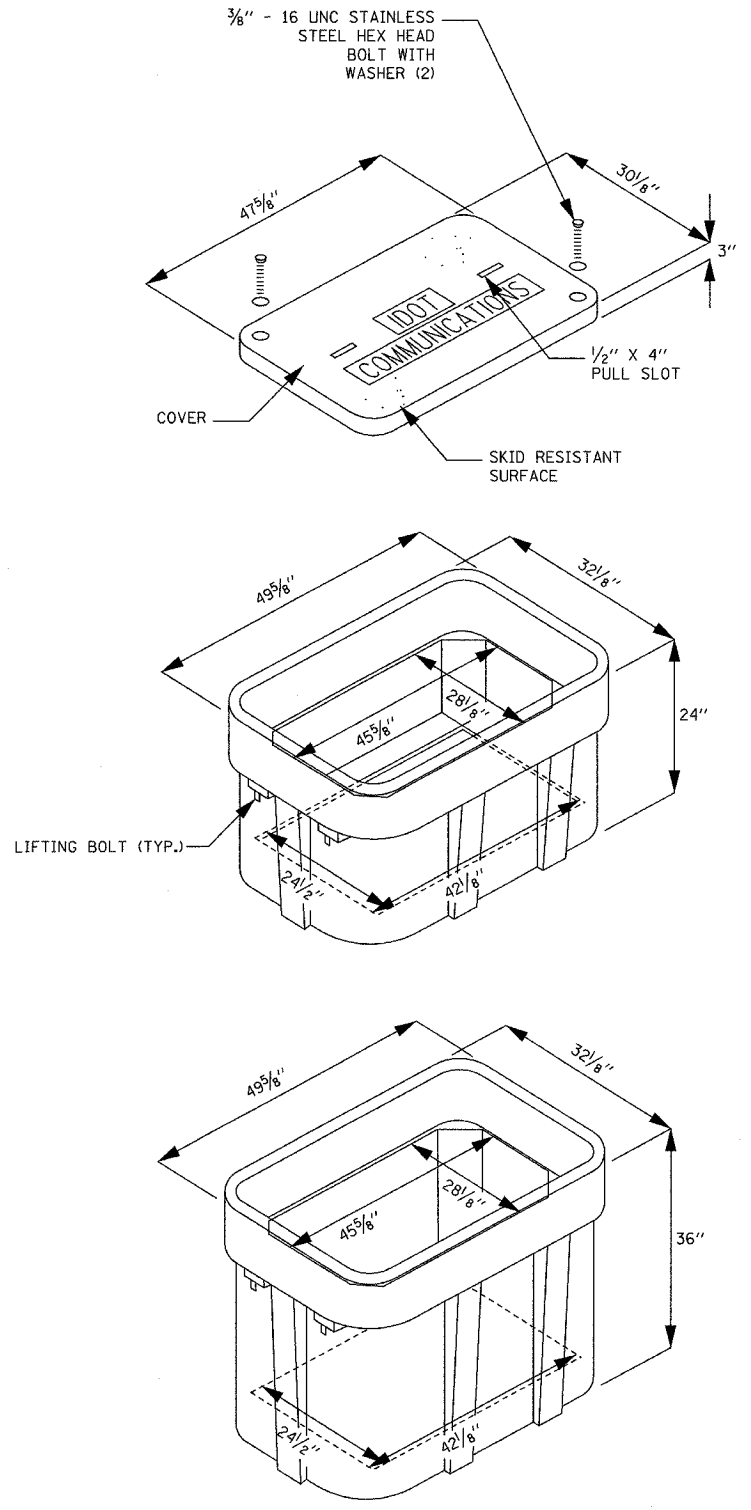
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
PC CONCRETE - HEAVY DUTY HANDHOLE  
DETAIL (TYPE S1)  
SCALE: NTS  
DATE: FEB. 25, 2005  
DRAWN BY: CJH  
CHECKED BY: MJL

17B/EI-106

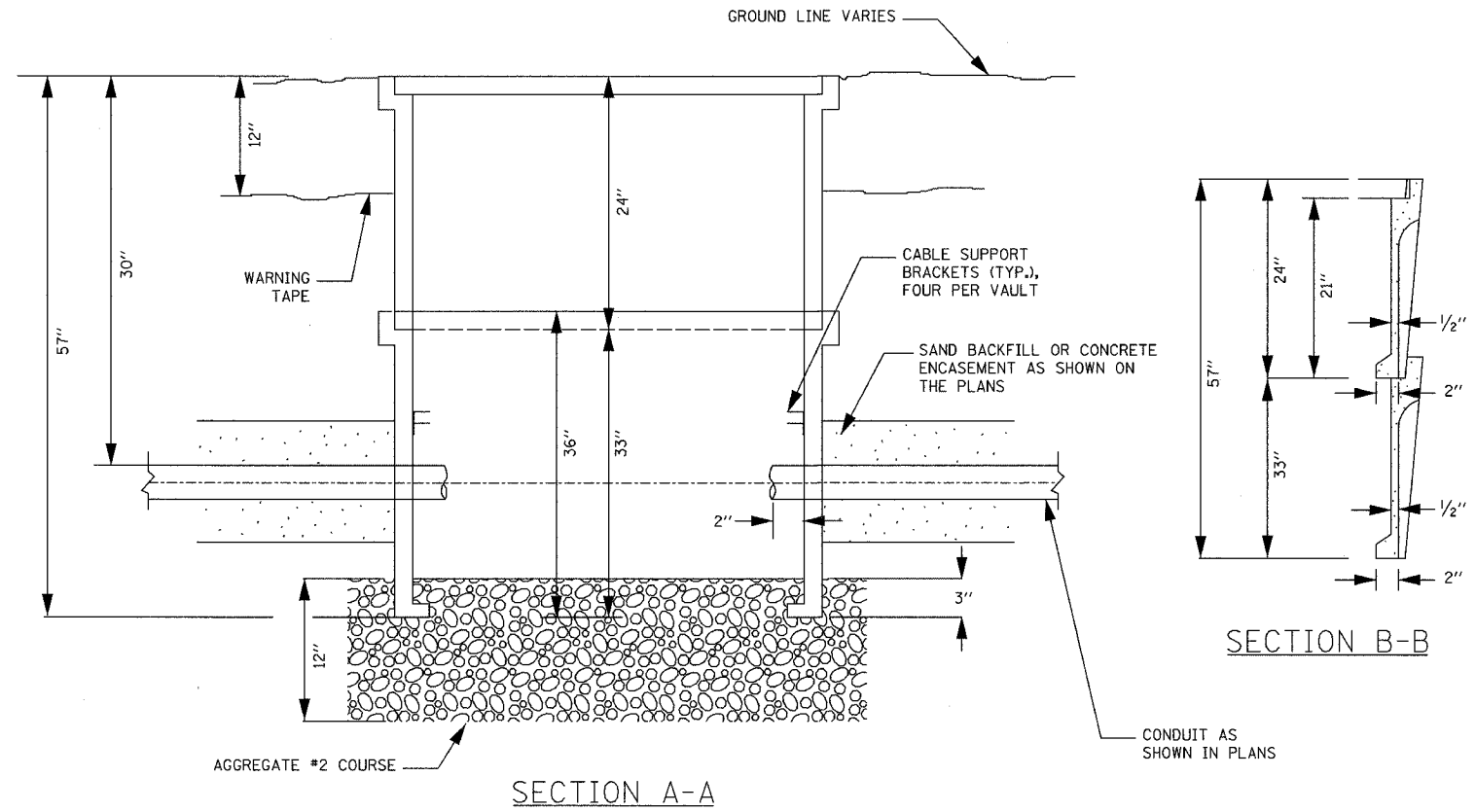
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| 94  | •       | COOK   | 907          | 416       |
| STA. --- TO STA. ---                            |         |        |              |           |
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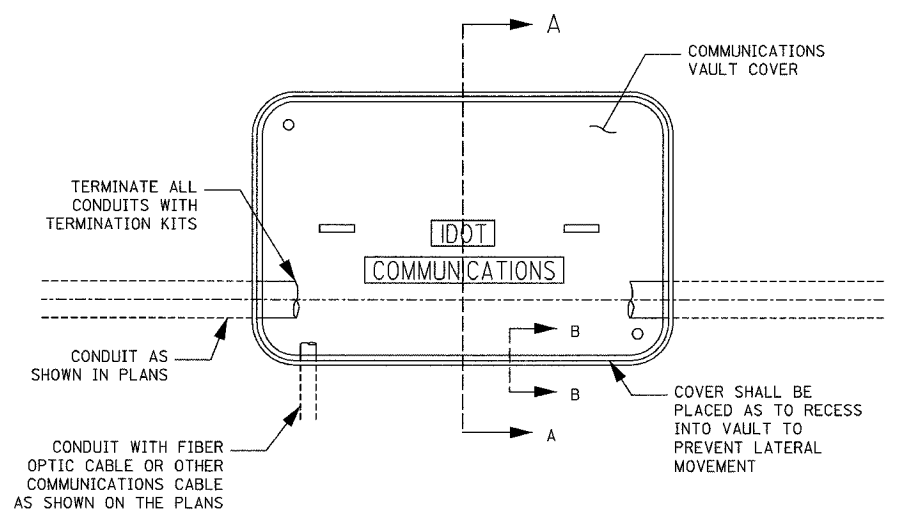


ISOMETRIC



SECTION A-A

SECTION B-B



PLAN

NOTES:

1. BOX SHALL HAVE AN OPEN BASE.
2. COVER SHALL WITHSTAND AASHTO H 20 LOADING AND SHALL LOCK.
3. ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION OR PUNCH DRIVEN AT TIME OF PLACEMENT.
4. FIELD PLACEMENT OF COMMUNICATIONS VAULT SHALL BE AS DIRECTED BY THE ENGINEER.

**Edwards AND Kelcey**  
 ONE NORTH FRANKLIN  
 CHICAGO, IL 60606  
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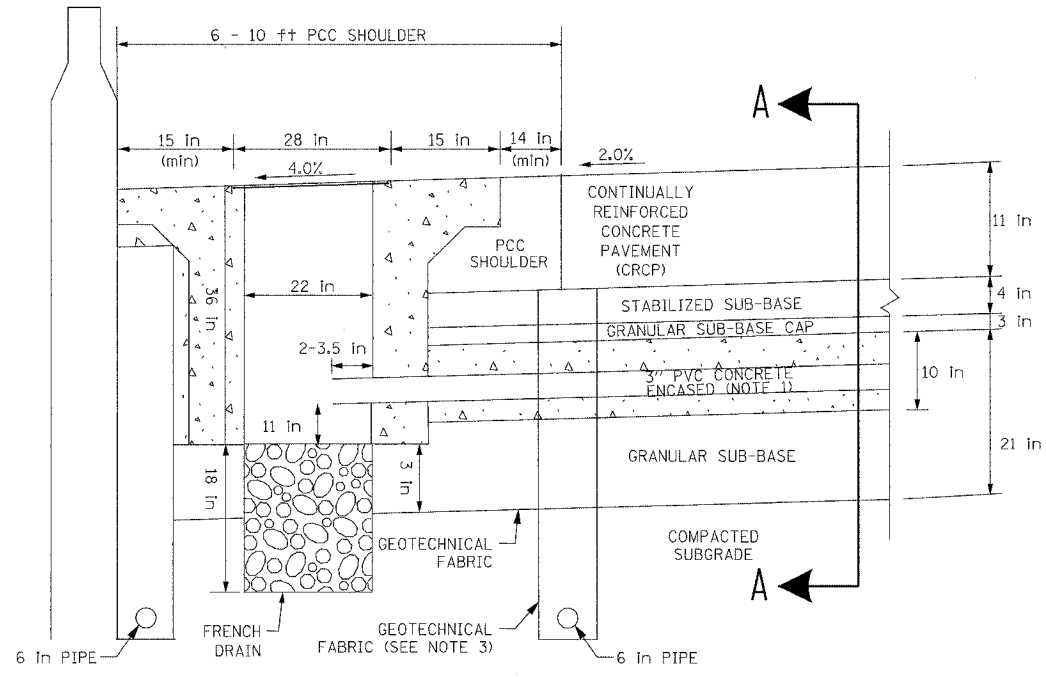
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
 COMMUNICATIONS VAULT DETAILS  
 (HANDHOLE TYPE C1)  
 SCALE: NTS  
 DATE: FEB. 25, 2005  
 DRAWN BY: MJL  
 CHECKED BY: AAP

3/24/2005 11:06:3 AM

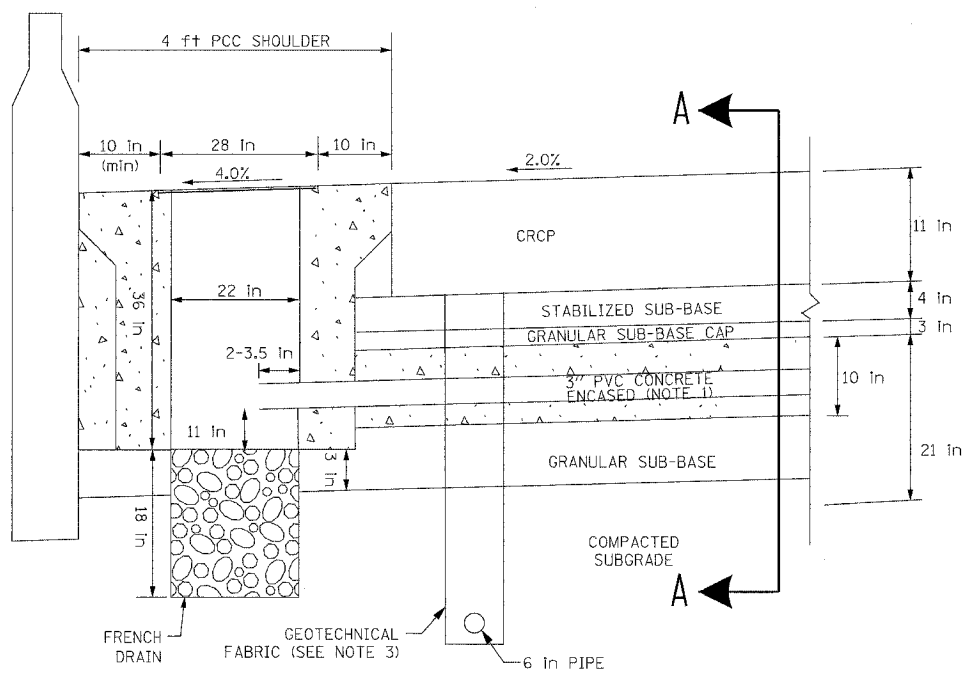


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| F.A.I. RTE.                                     | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 94  | •       | COOK   | 907          | 417       |
| STA.  | TO STA. |        |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |         |        |              |           |
| • (1516, 1, 1717 & 1818) B-9                    |         |        |              |           |

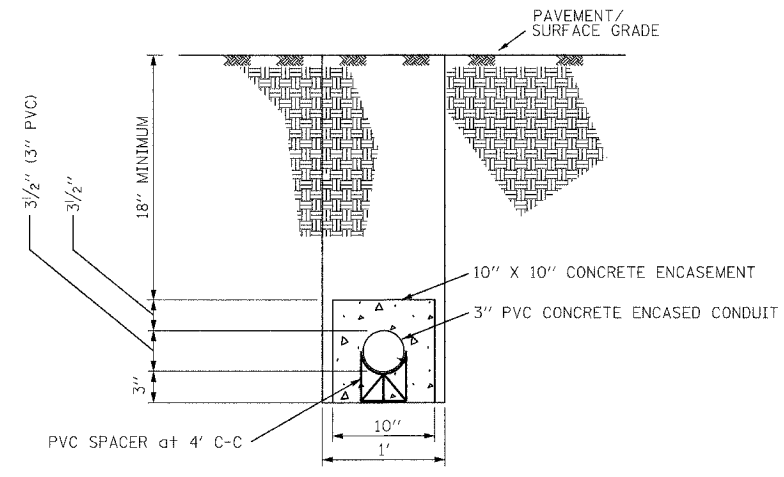
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HEAVY DUTY HANDHOLE IN 4' TO 6' RAMP SHOULDER (TYPICAL)



HEAVY DUTY HANDHOLE (SPECIAL) IN 4' RAMP SHOULDER (TYPICAL)



SECTION A-A  
TYPICAL 3" PVC CONCRETE ENCASED CONDUIT UNDER PAVEMENT DETAIL  
(FOR MICROLOOP INSTALLATION IN PROPOSED RAMP PAVEMENT)

NOTES:

- 3" PVC CONCRETE ENCASED CONDUIT IS REQUIRED ONLY WHERE SHOWN ON THE PLAN DRAWINGS. WHEN INSTALLED, THE CONDUIT MUST MAINTAIN THE SAME ANGLE AS THE PAVEMENT THROUGHOUT ITS ENTIRE LENGTH.
- FOR HANDHOLE DETAIL SEE SHEET EI-106.
- WHEN INSTALLING CONDUIT NEAR OR THROUGH UNDERDRAIN GEOTECHNICAL FABRIC, THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY AND UNIFORMITY OF THE UNDERDRAIN FABRIC THROUGH OVERLAP TO THE SATISFACTION OF THE ENGINEER.

17B/EI-110

**Edwards  
AND  
Kelcey**

ONE NORTH FRANKLIN  
CHICAGO, IL 60606  
PHONE: (312) 251-3000  
FAX: (312) 251-3015  
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)

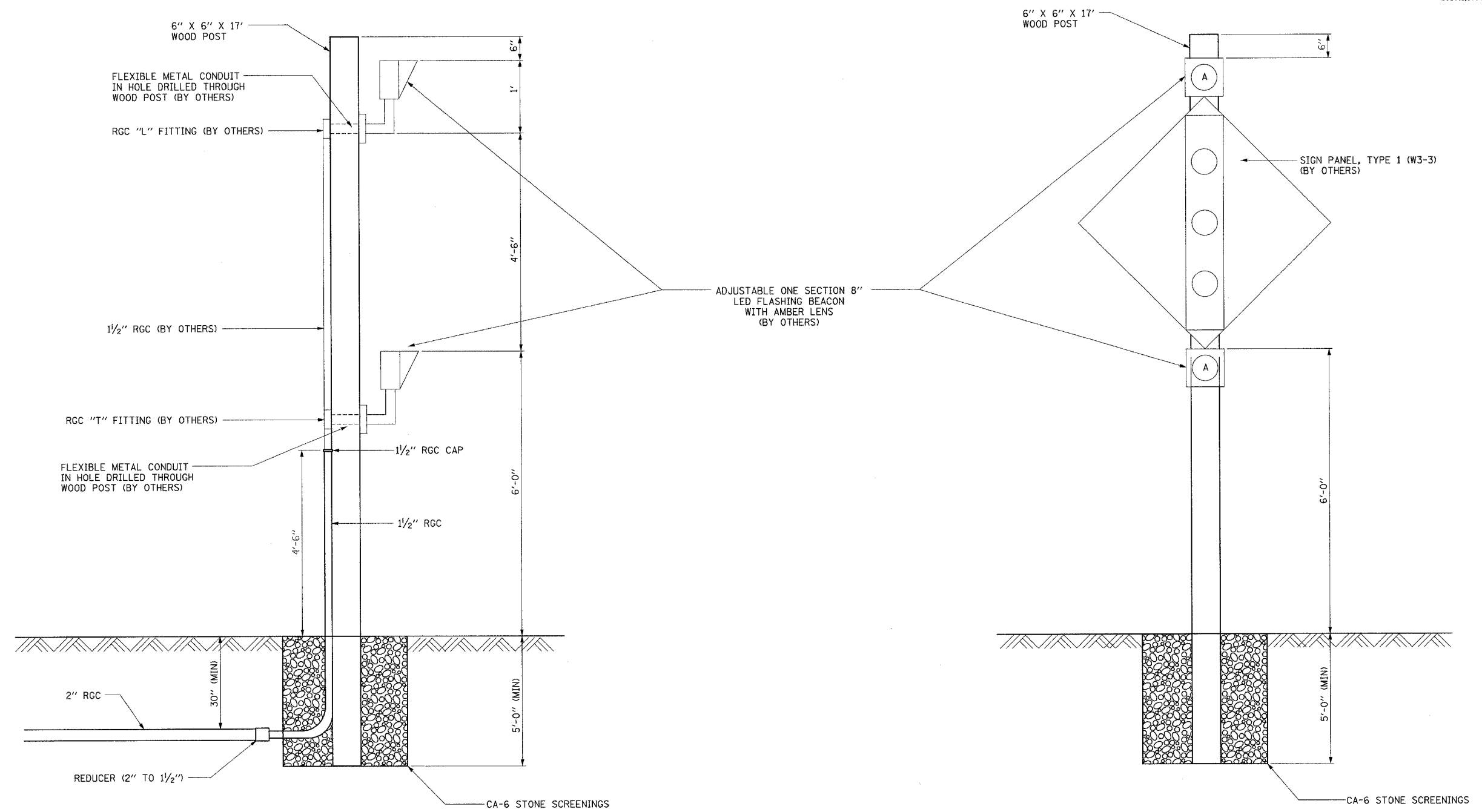
TYPICAL HANDHOLE INSTALLATION  
DETAIL - RAMP SHOULDER

SCALE: NTS  
DATE: FEB. 25, 2005  
DRAWN BY: NB  
CHECKED BY: CTC

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| F.A.I. RTE.                                     | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
| 94  |         | COOK    | 907          | 419       |
| STA.  |         | TO STA. |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |         |         |              |           |
| (1516.1, 1717 & 1818) R-9                       |         |         |              |           |
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- NOTES:
1. FOR WOOD POST INSTALLATION DETAILS, SEE SECTION 730 OF STANDARD SPECIFICATIONS.
  2. ALL ITEMS MARKED BY OTHERS WILL BE INSTALLED UNDER CONTRACT NUMBER 62583.

17B/EI-112

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 90/94 (DAN RYAN EXPRESSWAY)

**WOOD SIGN SUPPORT (SPECIAL)**

SCALE: NTS  
 DATE: FEB. 25, 2005

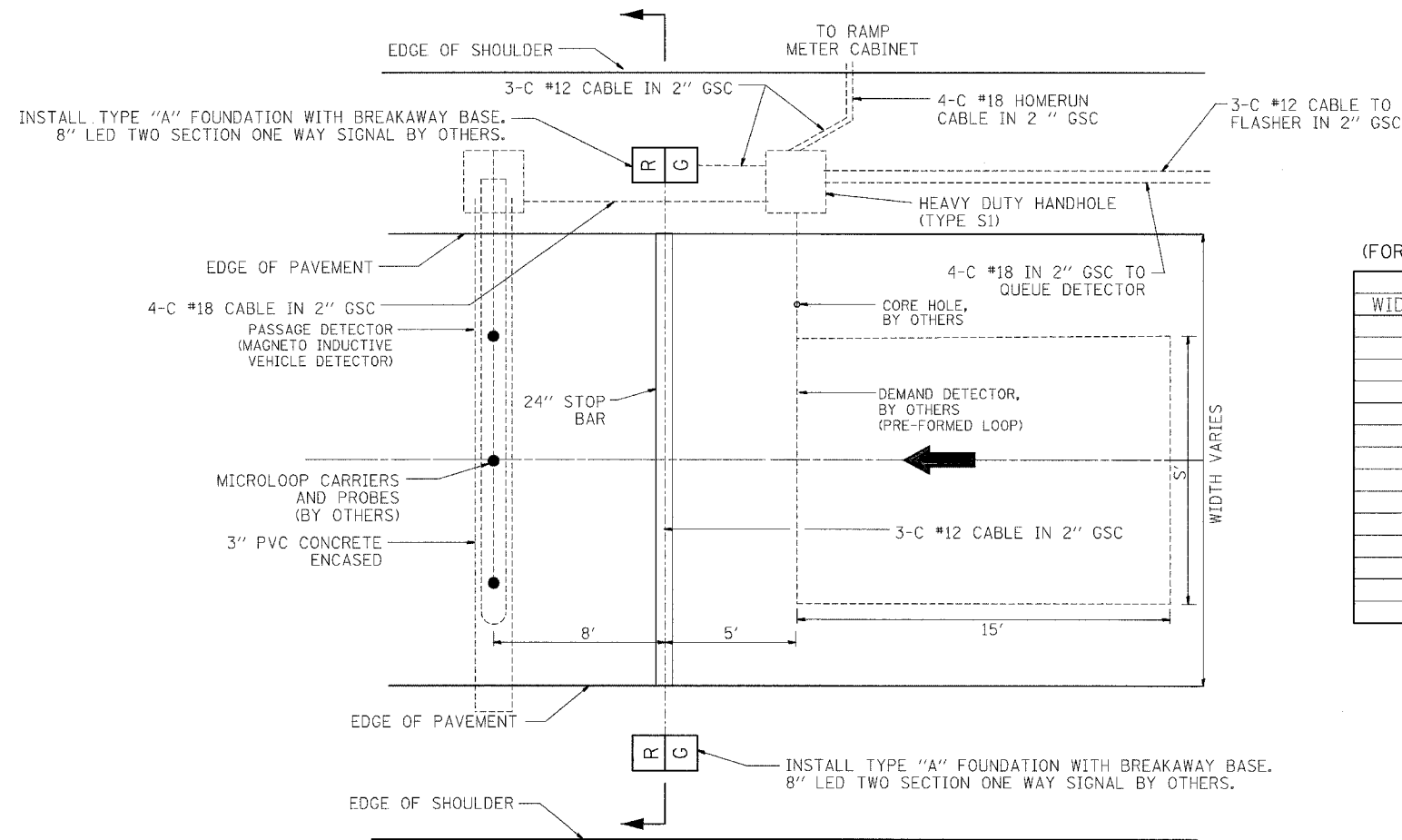
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**Edwards AND Kelcey**  
 ONE NORTH FRANKLIN  
 CHICAGO, IL 60606  
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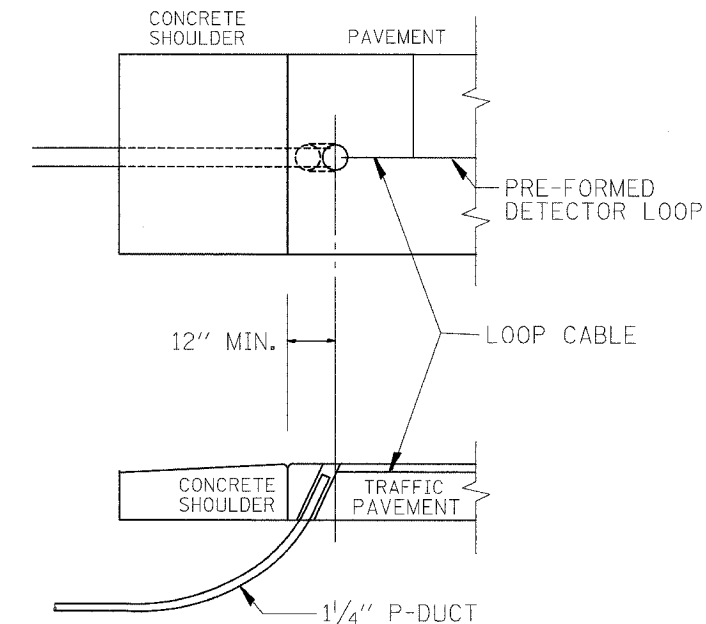
**NOTES:**

1. ALL CABLES SHOWN ON THIS SHEET ARE INSTALLED BY OTHERS.
2. CONTRACTOR MUST COORDINATE PLACEMENT AND SIZE OF ANCHOR BOLTS WITH IDOT CONTRACT NUMBER 62583.



(FOR INFORMATION ONLY)

| WIDTH (W) | WIDTH (S) |
|-----------|-----------|
| 12'       | 8'        |
| 13'       | 9'        |
| 14'       | 10'       |
| 15'       | 11'       |
| 16'       | 12'       |
| 17'       | 13'       |
| 18'       | 14'       |
| 19'       | 15'       |
| 20'       | 16'       |
| 21'       | 17'       |
| 22'       | 18'       |
| 23'       | 19'       |
| 24'       | 20'       |
| 25'       | 21'       |

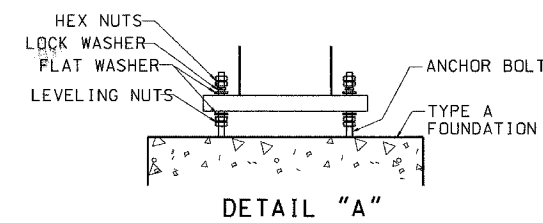
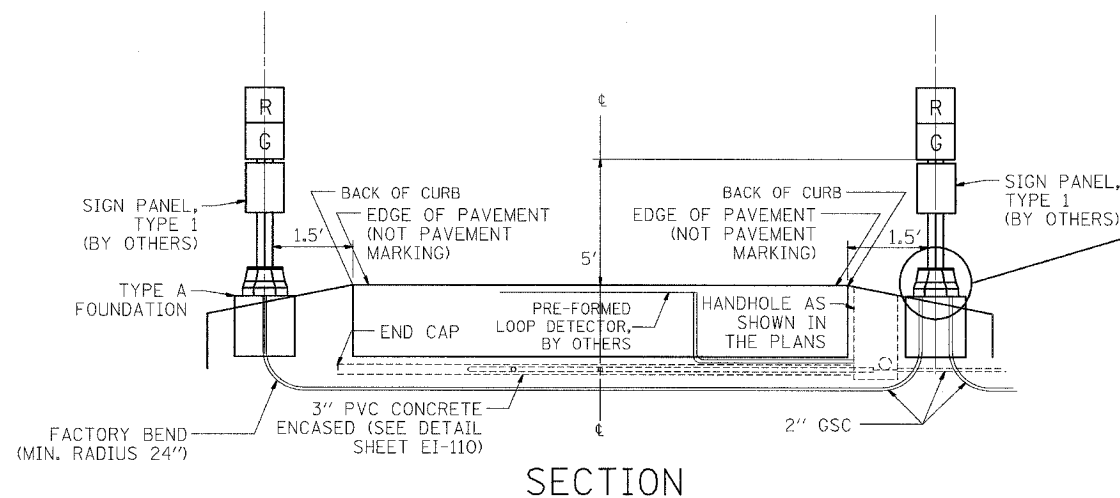


CONCRETE SHOULDER LOOP LEAD-IN

TRANSITION DETAIL

(FOR INFORMATION ONLY)

TYPICAL SIGNAL AND LOOP LAYOUT (TYPE I)



TYPICAL BREAKAWAY POLE BASE

17B/EI-113

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)

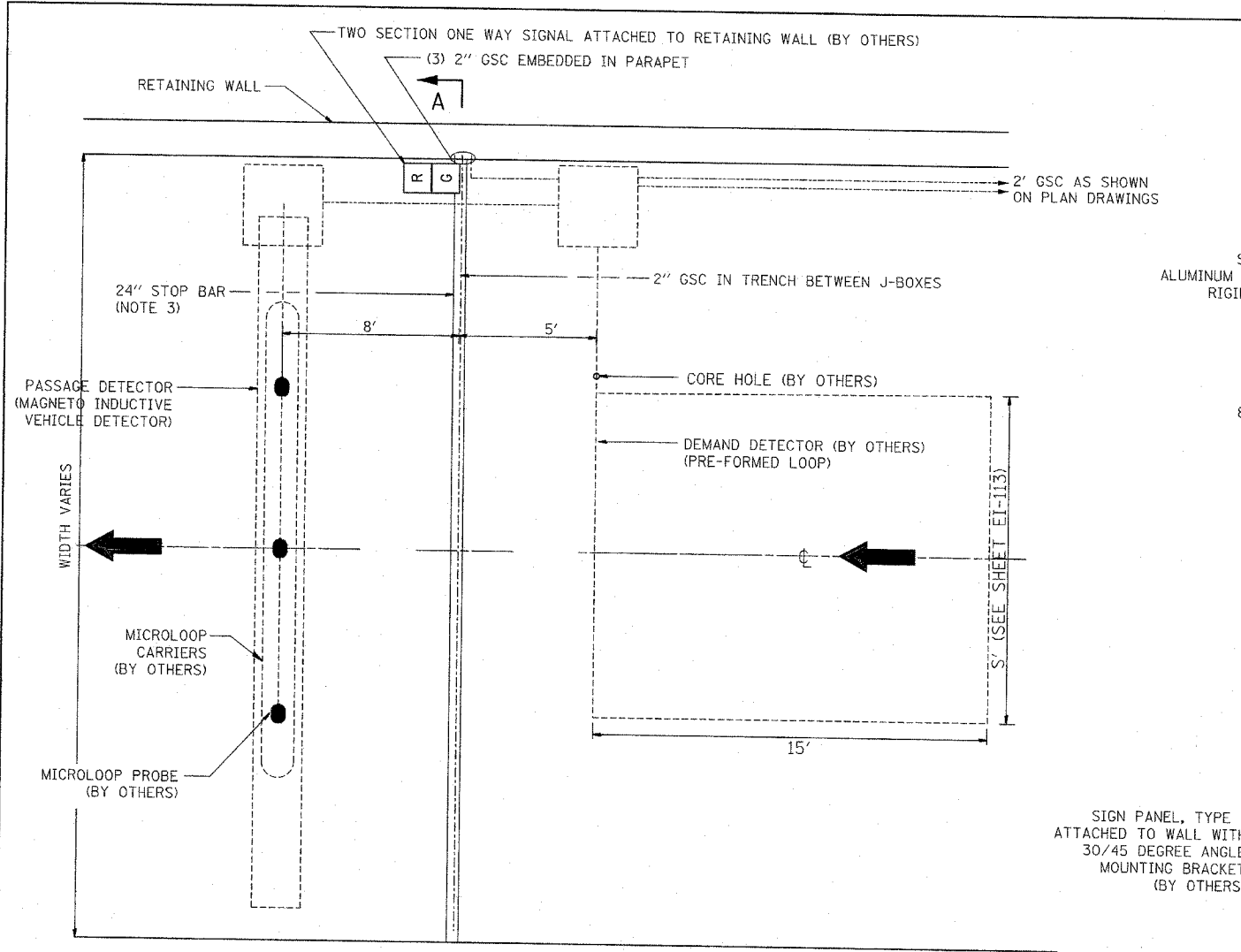
TYPICAL RAMP METERING INSTALLATION  
TYPE I (FOR RAMPS WITHOUT CURBS  
AND CUTTERS)

SCALE: NTS  
DATE: FEB. 25, 2005

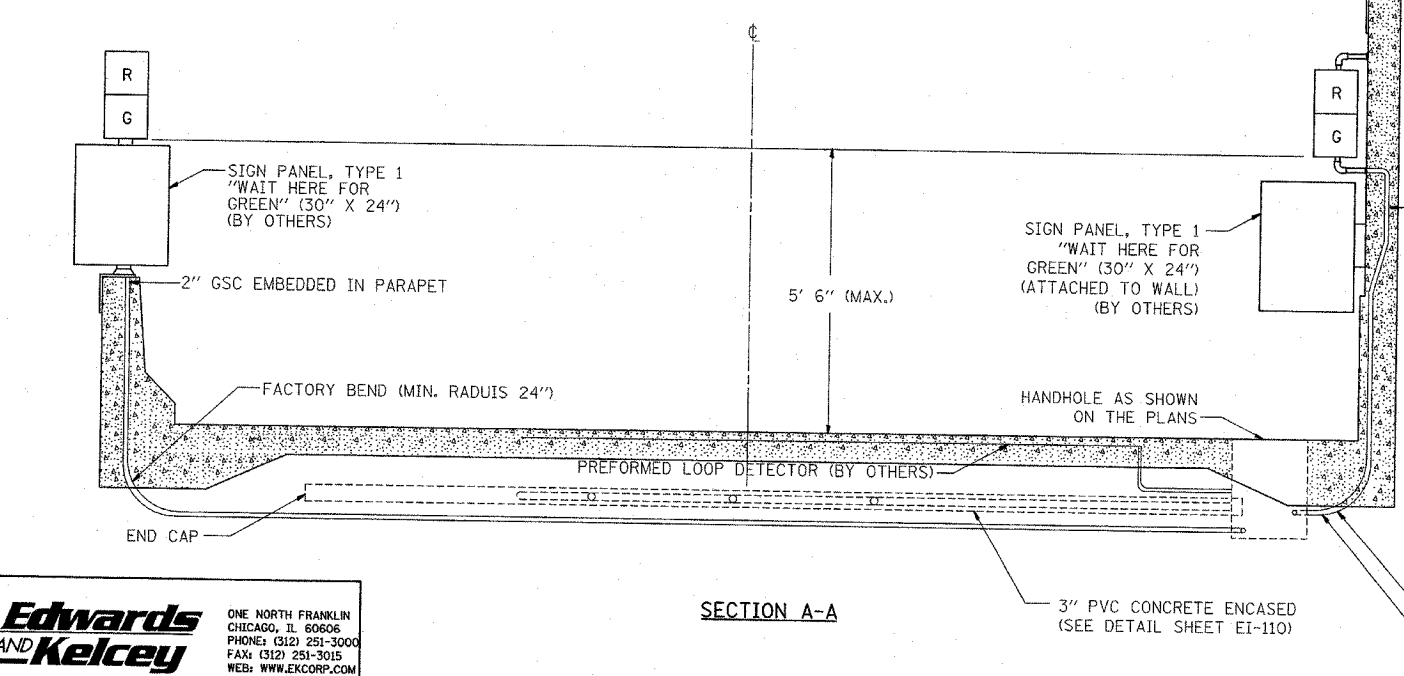
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| F.A.I. RTE.                                     | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 94  |         | COOK   | 907          | 421       |
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| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |         |        |              |           |
| • (1516, 1, 1717 & 1818) R-8                    |         |        |              |           |

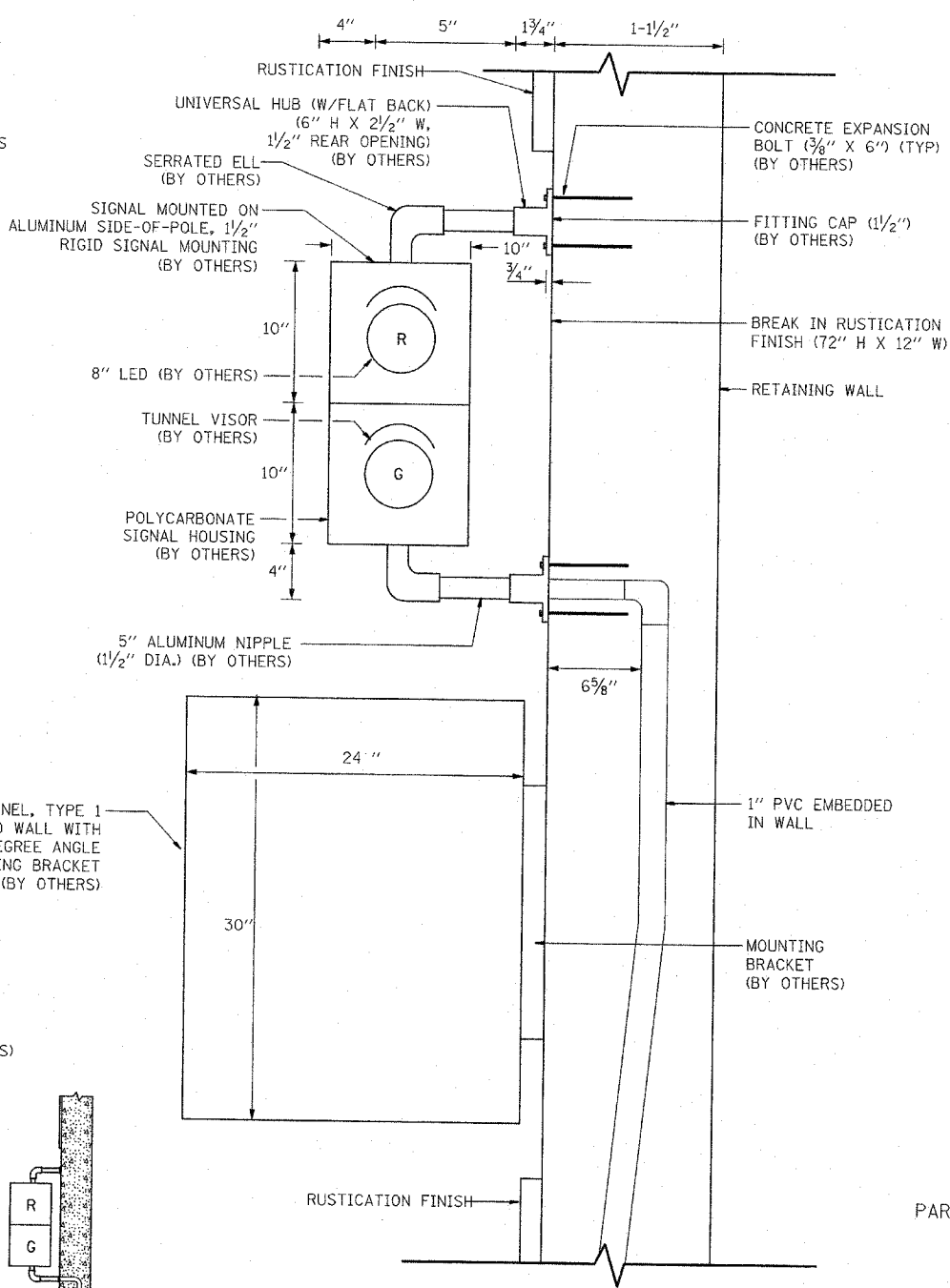
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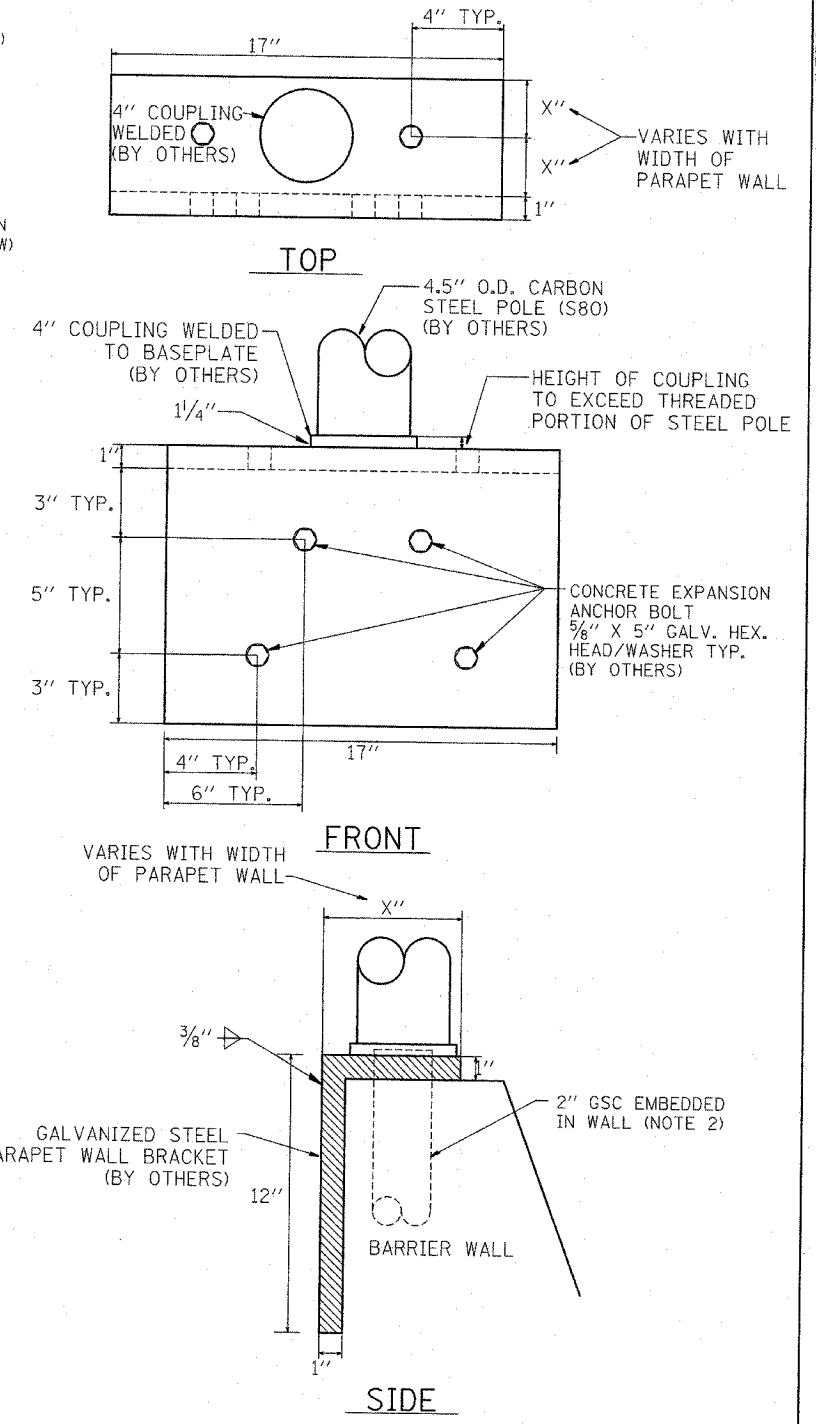
TYPICAL DETECTION LAYOUT



SECTION A-A



SIGNAL & SIGN ATTACHED TO RETAINING WALL



SIGNAL MOUNTED ON PARAPET WALL

- NOTES:
1. CONDUIT AND HANDHOLE MUST BE FURNISHED AND INSTALLED UNDER THIS CONTRACT. ALL CABLES, PROBES, SIGNALS, SIGNS, AND OTHER EQUIPMENT WILL BE FURNISHED AND INSTALLED BY OTHERS UNDER CONTRACT NUMBER 62583.
  2. CONDUIT MUST BE STUBBED OUT OF CONCRETE A MINIMUM OF 3".
  3. CENTERLINE OF STOP BAR AND TRAFFIC SIGNALS SHALL BE LOCATED AT THE STATION SHOWN ON THE PLANS.

17B/EI-114

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)

TYPICAL RAMP METERING  
BARRIER WALL AND  
RETAINING WALL INSTALLATION

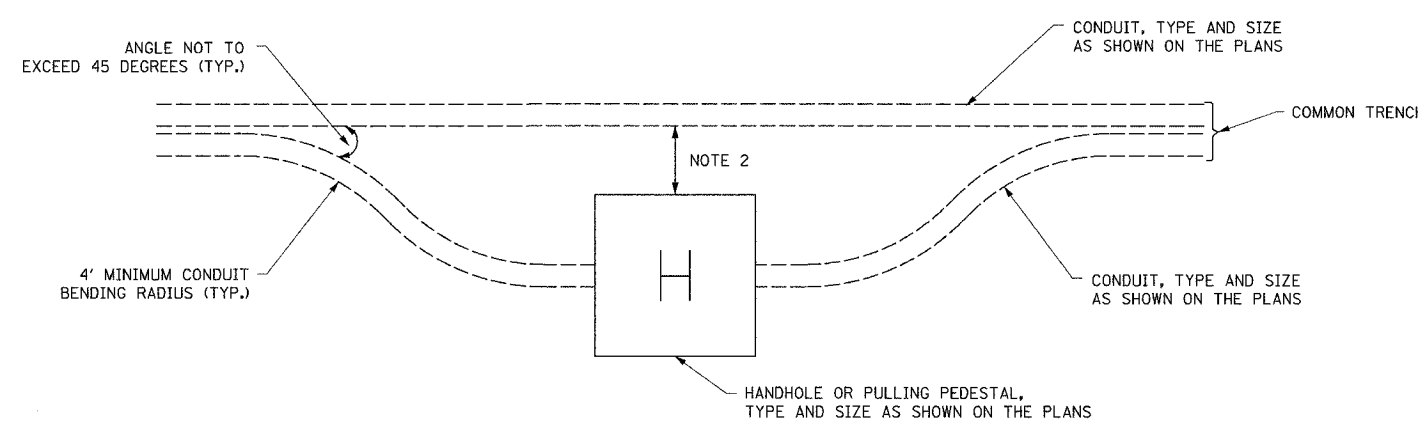
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DATE: MARCH 25, 2005  
DRAWN BY: NB  
CHECKED BY: CTC

**Edwards  
AND Kelcey**  
ONE NORTH FRANKLIN  
CHICAGO, IL 60606  
PHONE: (312) 251-3000  
FAX: (312) 251-3015  
WEB: WWW.EKCORP.COM

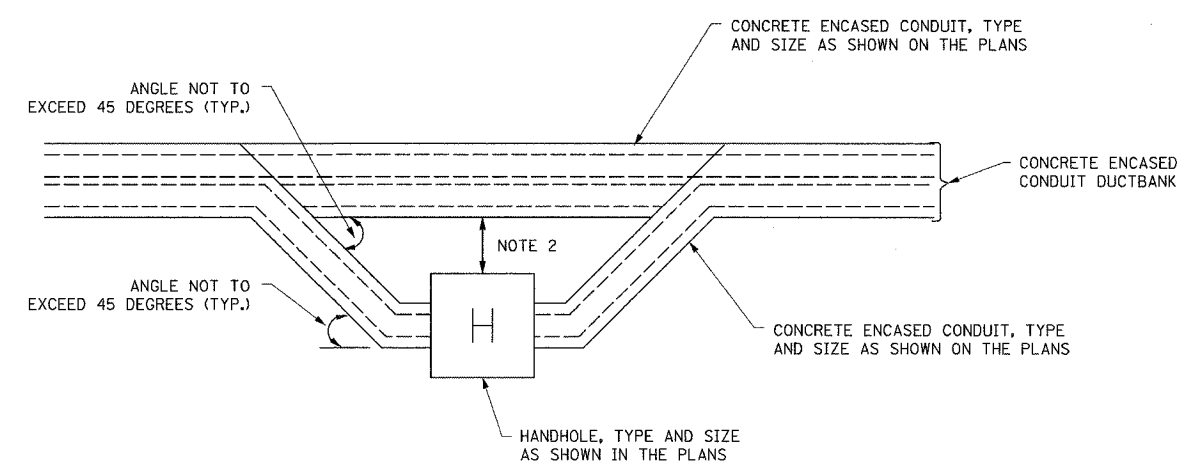
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| F.A.I. RTE.          | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
| 94                   | •       | COOK  | 907          | 422       |
| STA. --- TO STA. --- |         | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |              |           |
|                      |         | • (1516,1,1717 & 1818) R-9                      |              | 62695     |

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CONDUIT (IN TRENCH) ROUTING AROUND HANDHOLE OR PULLING PEDESTAL (TYPICAL)



CONDUIT DUCTBANK ROUTING AROUND HANDHOLE (TYPICAL)

**NOTES:**

1. FOR HANDHOLE DETAIL, SEE DETAIL EI-106.
2. CONDUIT SHALL BE INSTALLED BYPASSING HANDHOLE/PULLING PEDESTAL SO THAT IT DOES NOT COMPROMISE THE STRUCTURAL INTEGRITY OF EITHER THE CONDUIT OR THE HANDHOLE/PULLING PEDESTAL.

17B/EI-116

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 90/94 (DAN RYAN EXPRESSWAY)

COMMUNICATIONS CONDUIT  
 ROUTING DETAIL

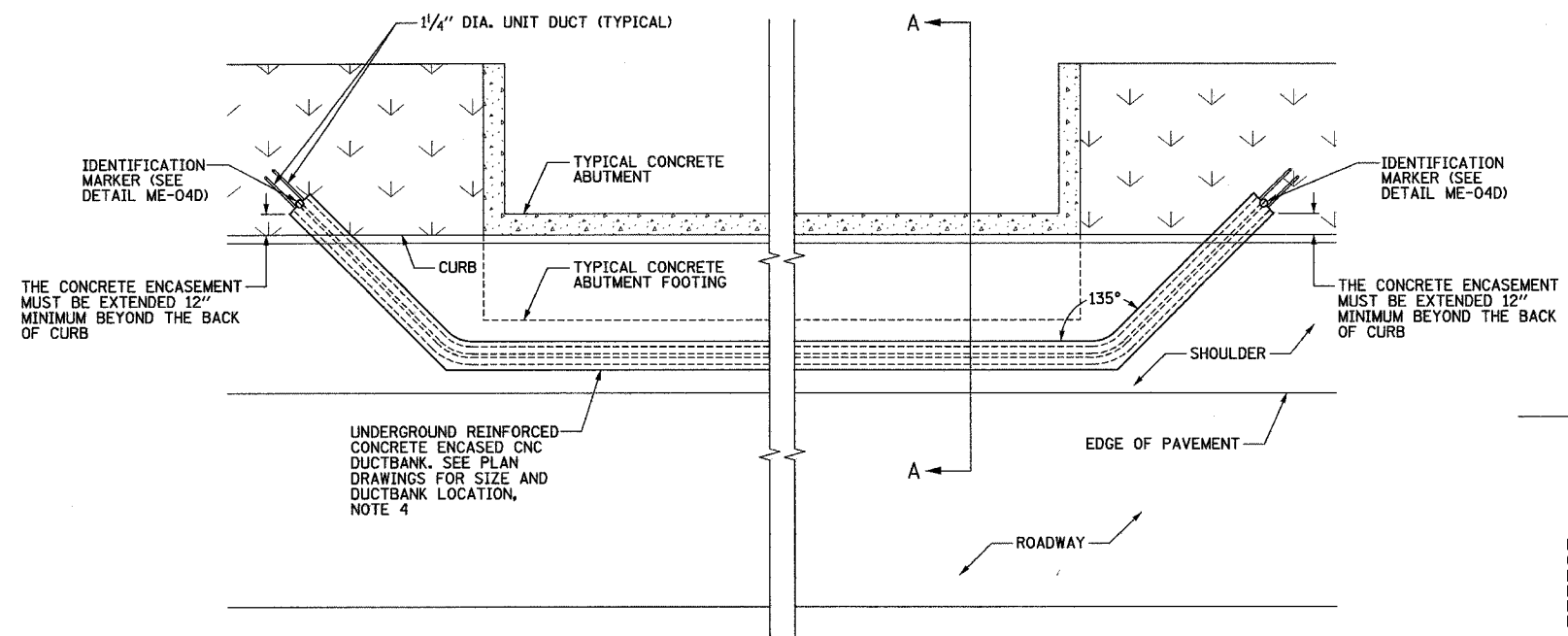
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 DATE: FEB. 25, 2005

DRAWN BY: NB  
 CHECKED BY: CTC

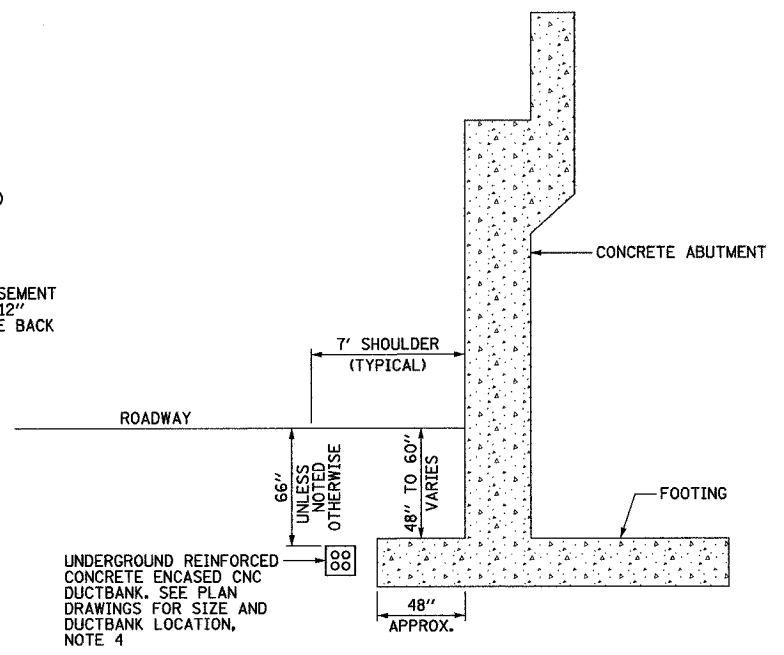
**Edwards  
AND Kelcey**

ONE NORTH FRANKLIN  
 CHICAGO, IL 60606  
 PHONE: (312) 251-3000  
 FAX: (312) 251-3015  
 WEB: WWW.EKCORP.COM

3/24/2005 11:46:16 AM

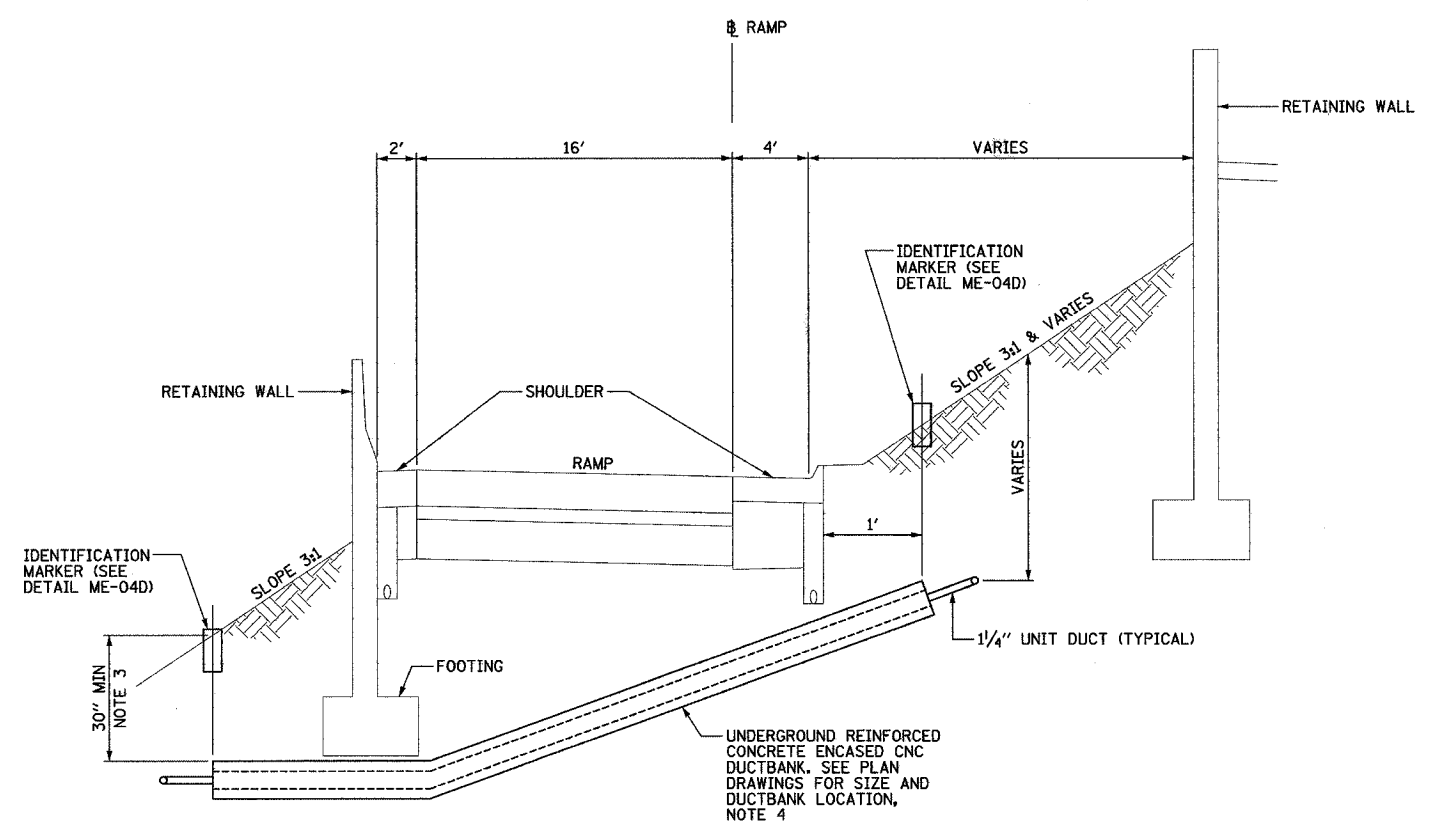


ME-04A DUCTBANK ROUTING AROUND ABUTMENT  
SCALE: 1/4" = 1'-0"  
DETAIL FOR REFERENCE ONLY, NOT INCLUDED IN THIS CONTRACT

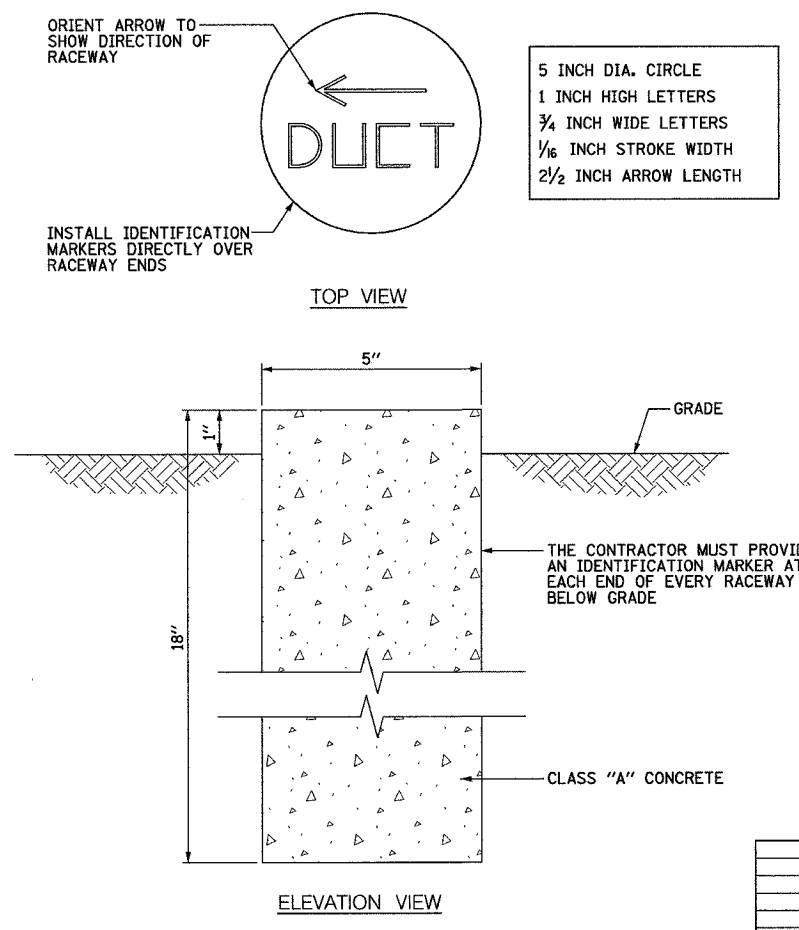


ME-04B DUCTBANK INSTALLATION DETAIL A-A  
SCALE: 1/4" = 1'-0"  
DETAIL FOR REFERENCE ONLY, NOT INCLUDED IN THIS CONTRACT

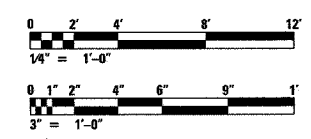
- NOTES:**
- SEE DRAWINGS ME-01 AND ME-02 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
  - SEE PLAN DRAWINGS FOR THE PROPOSED CONDUIT ROUTING.
  - DUCTBANK DEPTH MUST BE ADJUSTED SUCH THAT THE TOP OF CONCRETE ENCASEMENT IS INSTALLED UNDER THE RETAINING WALL FOOTING. THE DUCTBANK DEPTH MUST BE 30 INCHES MINIMUM.
  - SEE DRAWING ME-11 FOR ELECTRICAL CONCRETE DUCTBANK DETAILS.
  - SEE PLAN DRAWINGS FOR ANY DEVIATIONS IN DUCTBANK DEPTH.



ME-04C TYPICAL CONCRETE ENCASED CNC UNDER RAMP INSTALLATION DETAIL  
NOT TO SCALE



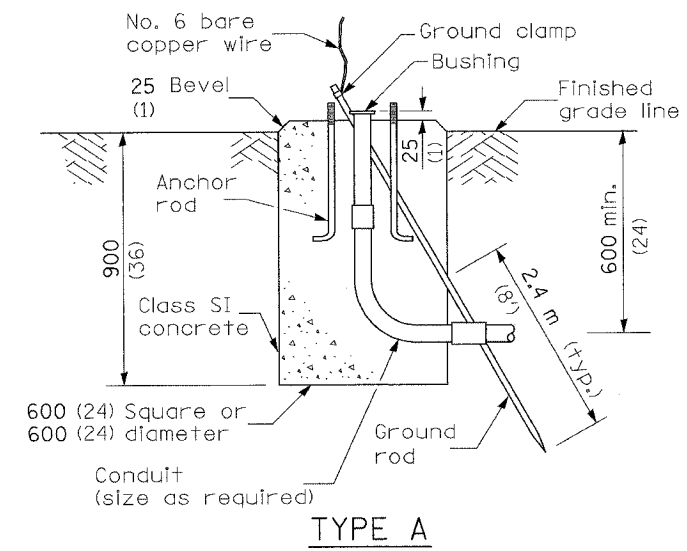
ME-04D IDENTIFICATION MARKER DETAIL  
SCALE: 3" = 1'-0"



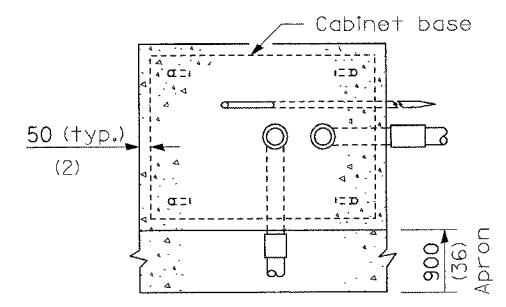
17B/ME-04

| REVISIONS |      | ILLINOIS DEPARTMENT OF TRANSPORTATION<br>F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  |
|-----------|------|--|
| NAME      | DATE |  |
|           |      | DUCTBANK INSTALLATION DETAILS<br>UNDER RAMPS AND AROUND<br>ABUTMENTS<br><br>SCALE: AS SHOWN      DRAWN BY: CJM<br>DATE: FEB. 25, 2005      CHECKED BY: WDS |
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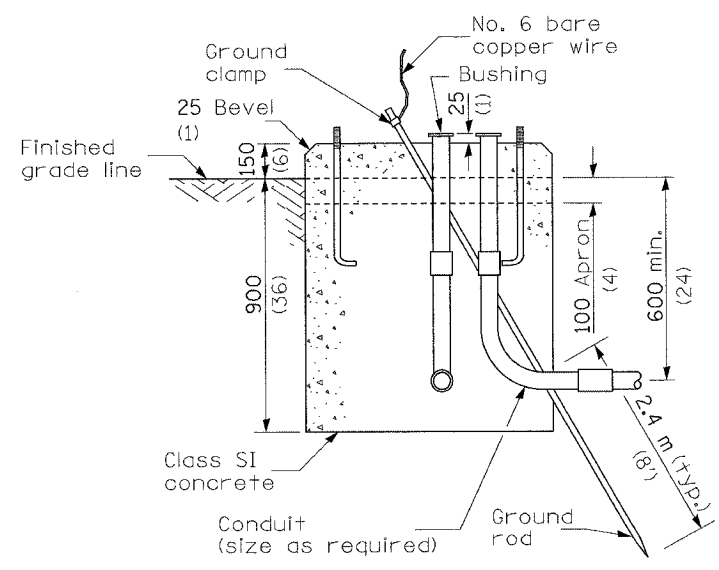
12/17/05 PM



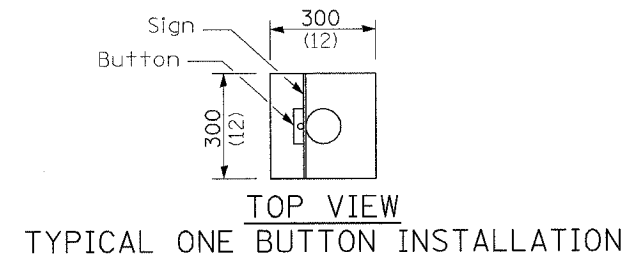
TYPE A



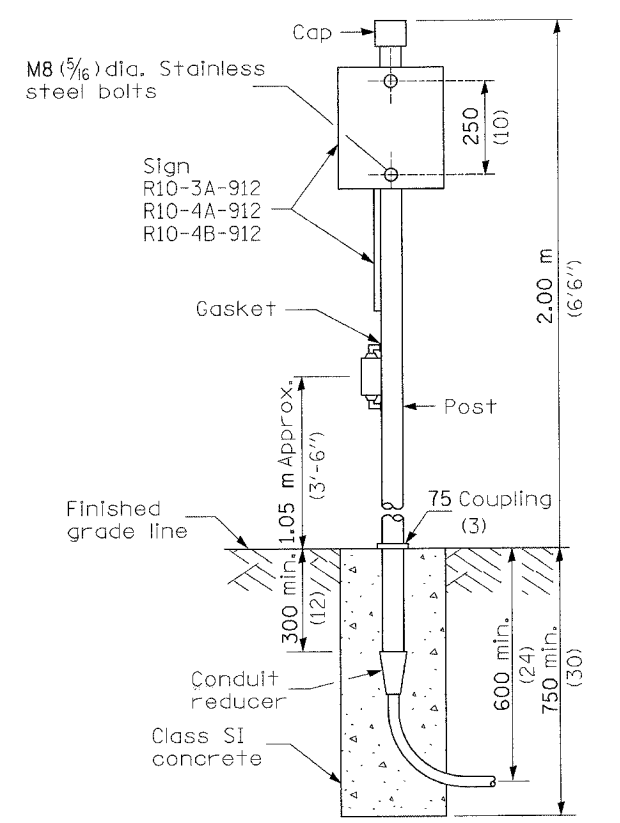
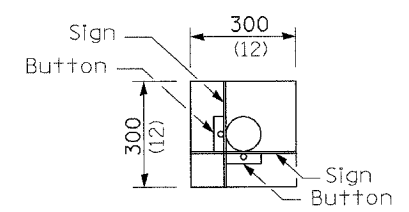
TOP VIEW



TYPE D  
FOR GROUND MOUNTED  
CONTROLLER CABINET



TOP VIEW  
TYPICAL ONE BUTTON INSTALLATION



PEDESTRIAN PUSH BUTTON  
POST INSTALLATION

17B/STANDARD 878001-02  
SHEET 1 OF 2

| REVISIONS |      | ILLINOIS DEPARTMENT OF TRANSPORTATION<br>F.A.I. 90/94 (DAN RYAN EXPRESSWAY) |
|-----------|------|---|
| NAME      | DATE |   |
|           |      | CONCRETE FOUNDATION DETAILS   |
|           |      |   |
|           |      |   |
|           |      |   |
|           |      |   |
|           |      |   |
|           |      | SCALE: _____ DRAWN BY: _____  |
|           |      | DATE: FEB. 25, 2005 CHECKED BY: _____                                       |

JAN 5 contract 17b details standard detail 17B



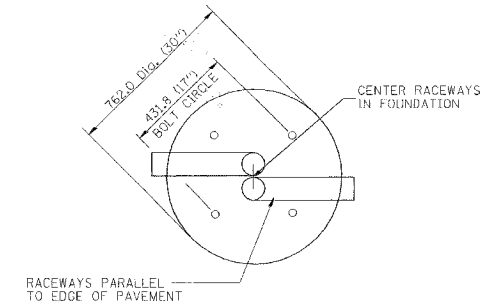
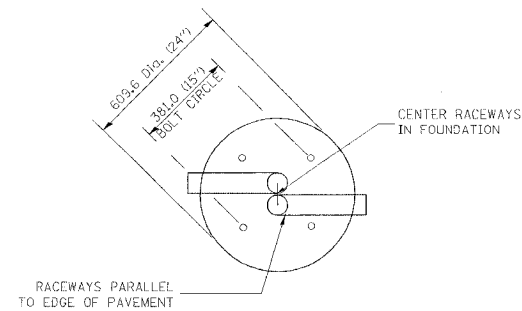


|                       |         |                  |              |           |
|-----------------------|---------|------------------|--------------|-----------|
| F.A. SEC.             | SECTION | COUNTY           | TOTAL SHEETS | SHEET NO. |
|                       |         |                  | 907          | 426       |
| STA.                  | TO STA. |                  |              |           |
| FED. ROAD DIST. NO. 7 | BLANKS  | FED. AID PROJECT |              |           |

62695

LIGHT POLE FOUNDATION DEPTH TABLE  
12.192M (40 FT.) TO 14.478M (47.5 FT.) MOUNTING HEIGHT

| SOIL CONDITIONS                     | DESIGN DEPTH "D" OF FOUNDATION |                   |
|-------------------------------------|--------------------------------|-------------------|
|                                     | SINGLE ARM POLE                | TWIN ARM POLE     |
| SOFT CLAY<br>Qu = 0.375 TON/SQ. FT. | 3.96M<br>(13'-0")              | 4.57M<br>(15'-0") |
| MEDIUM CLAY<br>Qu = 0.75 TON/SQ.FT  | 2.09M<br>(9'-6")               | 3.23M<br>(10'-9") |
| STIFF CLAY<br>Qu = 1.50 TON/SO. FT. | 2.13M<br>(7'-0")               | 2.44M<br>(8'-0")  |
| LOOSE SAND<br>φ = 34°               | 2.74M<br>(9'-0")               | 3.05M<br>(10'-0") |
| MEDIUM SAND<br>φ = 37.5°            | 2.52M<br>(8'-3")               | 2.74M<br>(9'-0")  |
| DENSE SAND<br>φ = 40°               | 2.36M<br>(7'-9")               | 2.74M<br>(9'-0")  |

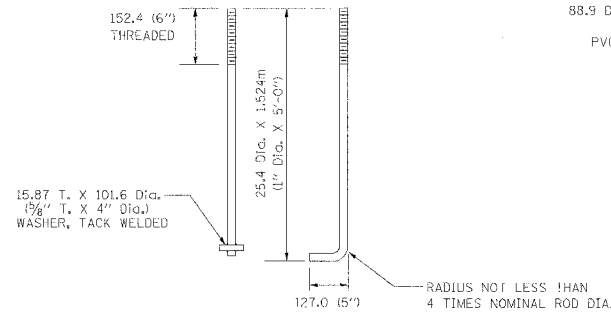


TOP VIEW

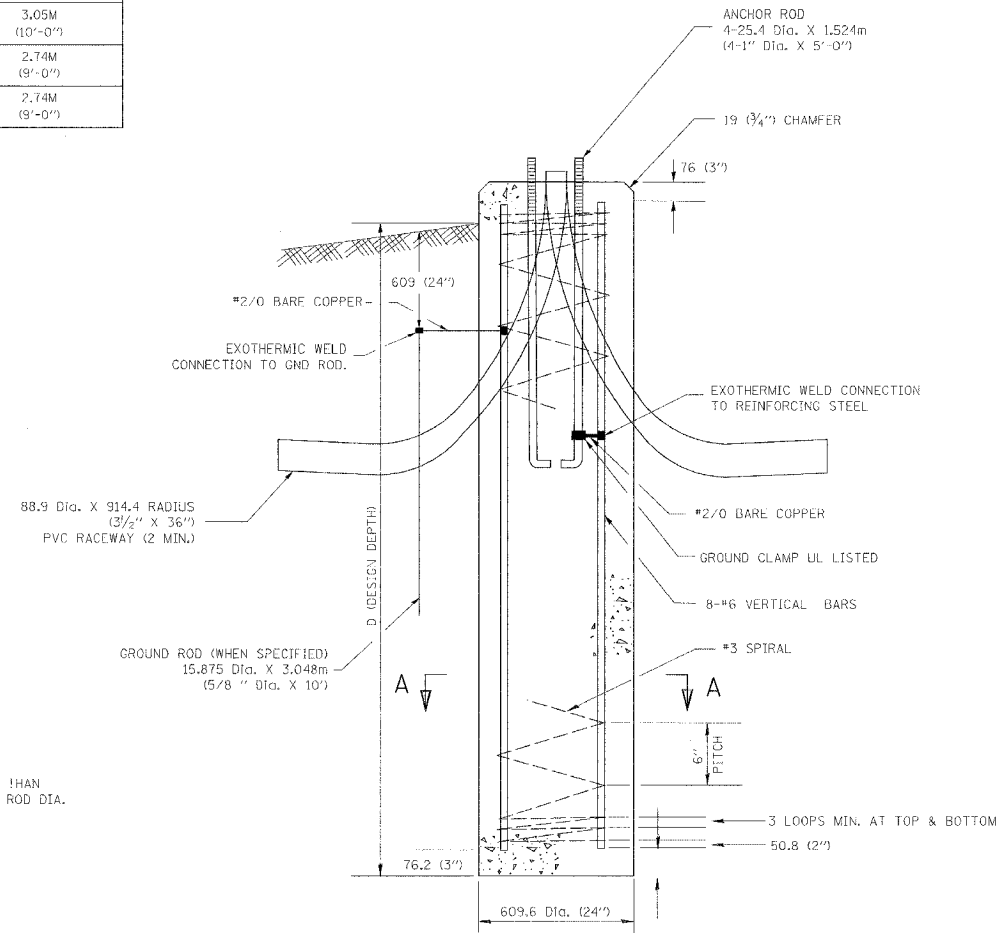
TOP VIEW

NOTES

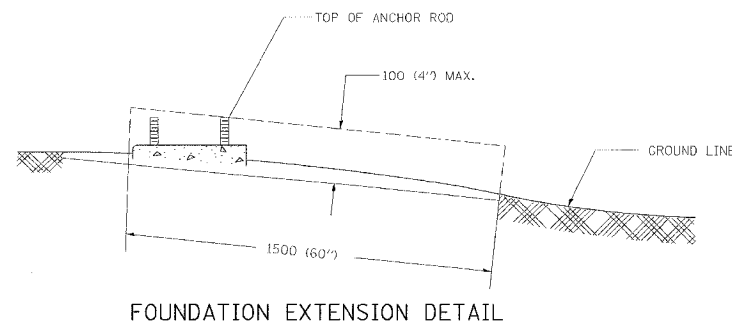
- ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 1.5M (60 IN.) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL, A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 20MM (3/4-IN.).
- THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DI. AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 (6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 150 MM (6 INCHES) WITH A MINIMUM OF 75 MM (3 INCHES) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 69.9MM (2 3/4") ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A #3 SPIRAL AT 152.4MM (6") PITCH OR MAY SUBSTITUTE #3 TIES AT 304.8MM (12") O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- THE RACEWAYS SHALL PROJECT 25.4MM (1") ABOVE THE TOP OF THE FOUNDATION.



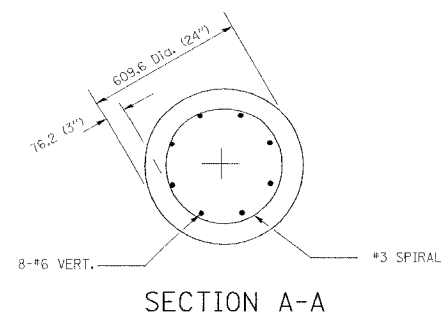
ANCHOR ROD DETAIL



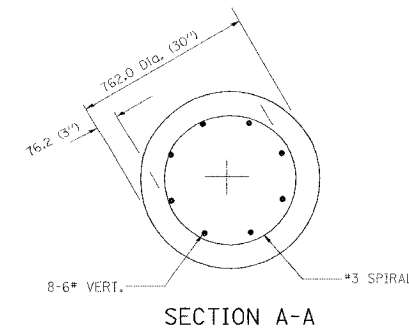
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

| REVISIONS |      |
|-----------|------|
| NAME      | DATE |
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|           |      |
|           |      |
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|           |      |
|           |      |

E-301

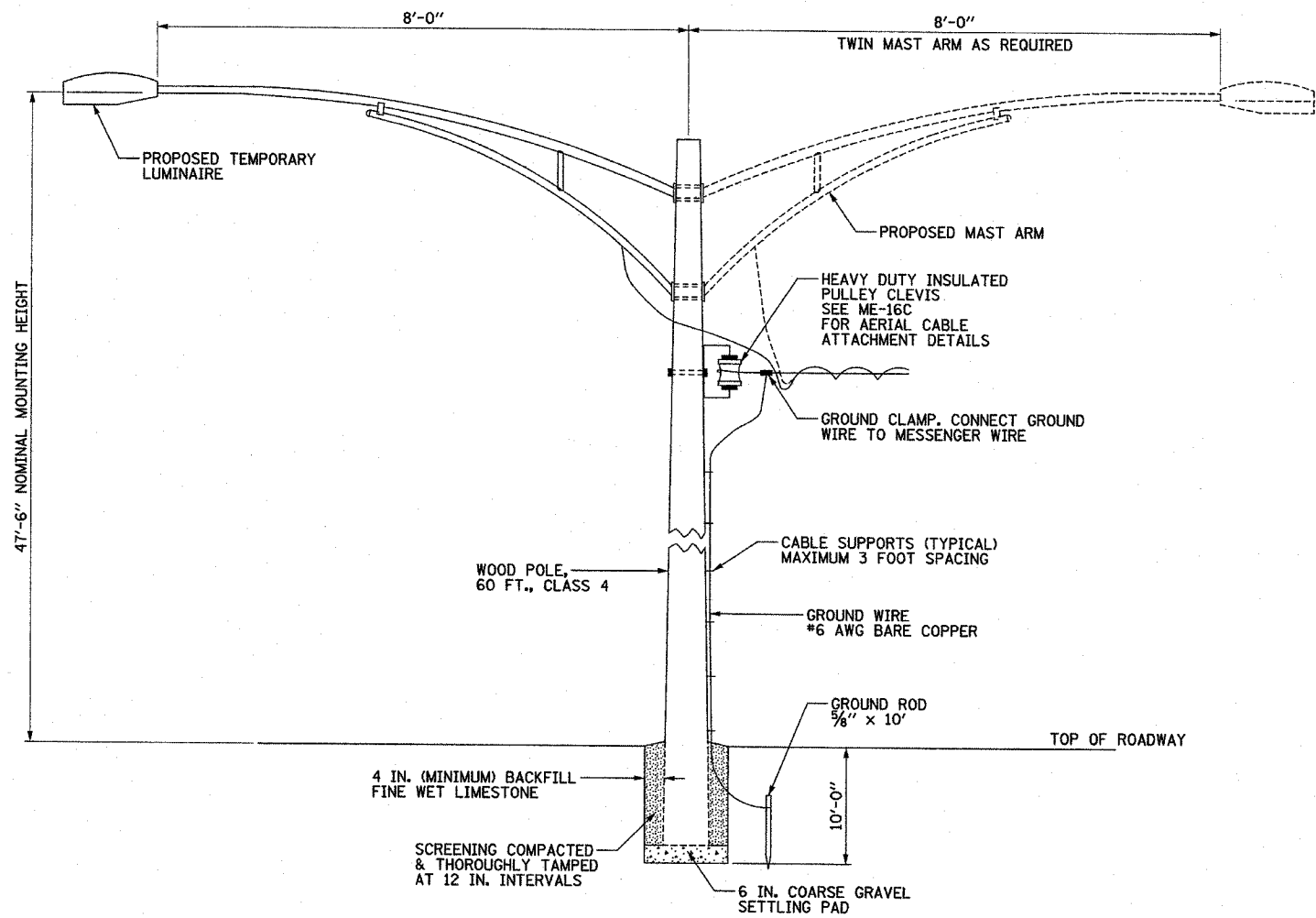
ILLINOIS DEPARTMENT OF TRANSPORTATION

**LIGHT POLE FOUNDATION**  
**12.192M (40') TO 14.478M (47 1/2') M.H.**  
**381 (15") BOLT CIRCLE**

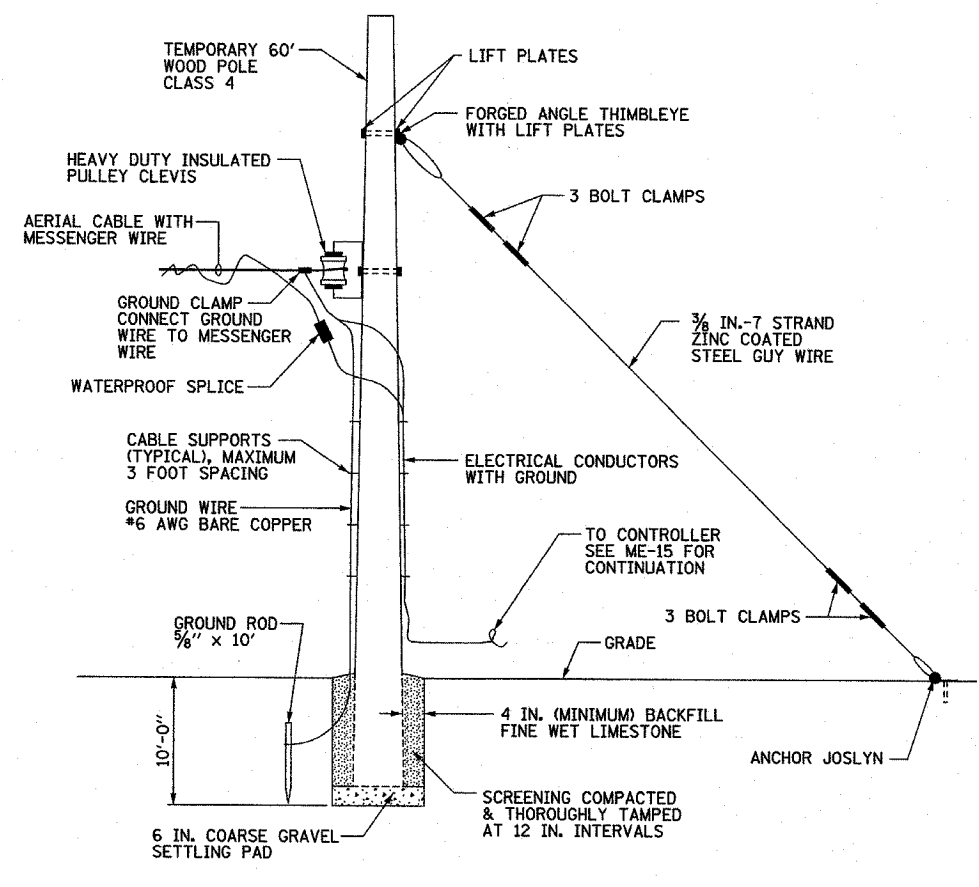
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DATE 10/18/2002

DRAWN BY JKM  
CHECKED BY BE301  
REVISION DATE: 04/22/02

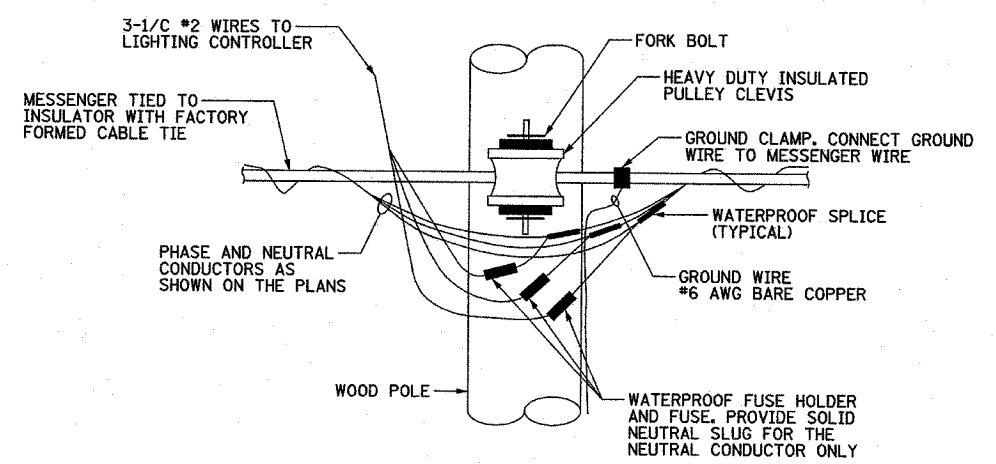
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\*DGN-SPED\*  
VI-BE301



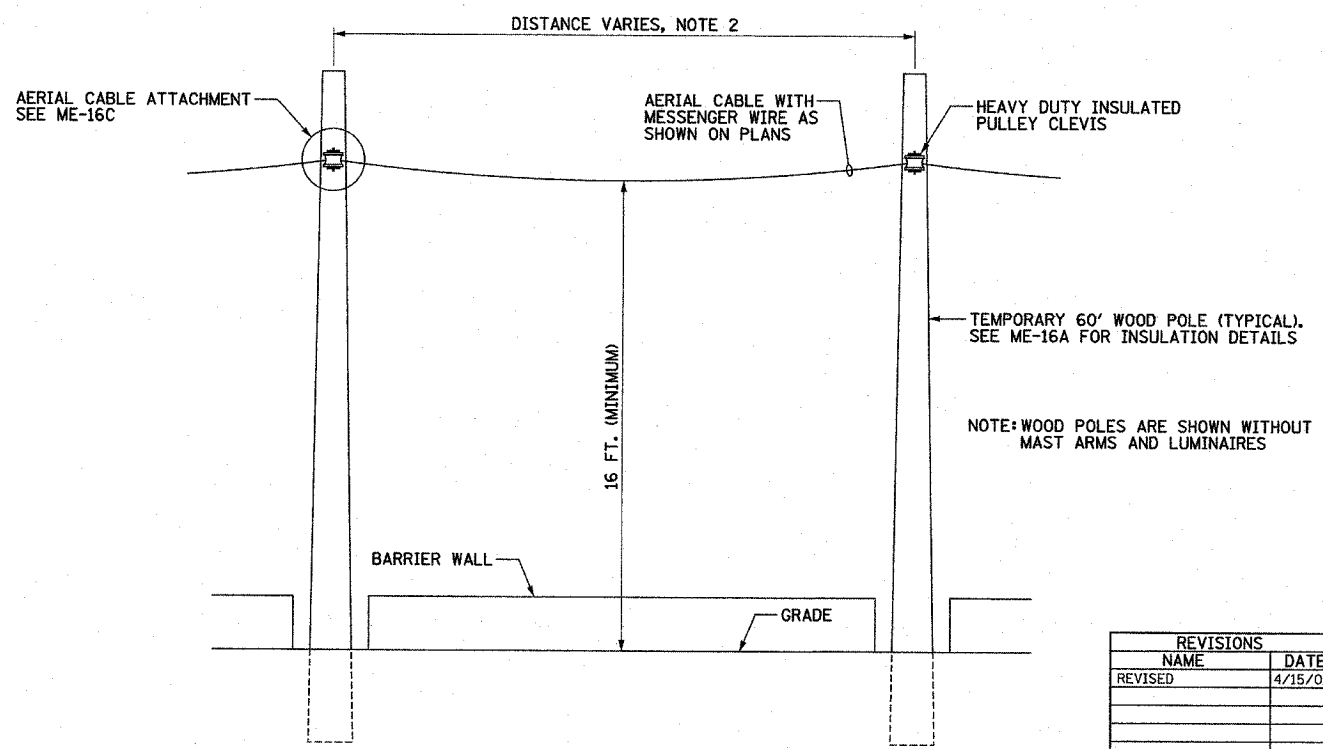
ME-16A TEMPORARY LIGHTING UNIT INSTALLATION DETAIL  
WOOD POLE INSTALLATION IS SIMILAR  
NOT TO SCALE



ME-16B TEMPORARY WOOD END POLE INSTALLATION DETAILS  
NOT TO SCALE



ME-16C TEMPORARY WOOD END POLE  
AERIAL CABLE ATTACHMENT DETAIL  
NOT TO SCALE



ME-16D AERIAL CABLE INSTALLATION DETAIL  
NOT TO SCALE

| REVISIONS |         |
|-----------|---------|
| NAME      | DATE    |
| REVISED   | 4/15/05 |
|           |         |
|           |         |
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|           |         |

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)

TEMPORARY ROADWAY LIGHTING  
WOOD POLE DETAILS

SCALE: NOT TO SCALE      DRAWN BY: CJM  
DATE: MARCH 25, 2005      CHECKED BY: WDS

|                             |         |                           |              |           |
|-----------------------------|---------|---------------------------|--------------|-----------|
| F.A.I. RTE.                 | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 94                          | •       | COOK                      | 907          | 427       |
| STA. 1200+00.00             |         | TO STA. 1365+00           |              |           |
| FED. ROAD DIST. NO.         |         | ILLINOIS FED. AID PROJECT |              |           |
| • (1516.1, 1717 & 1818) R-9 |         |                           |              | 62695     |

**HIGH MAST LIGHT TOWER FOUNDATION SCHEDULE (NOTE 1)**

| HIGH MAST LIGHT TOWER IDENTIFICATION | TOWER LOCATION |            | TOP OF FDN. ELEV. | BOTTOM ELEVATION | DESIGN DEPTH (D) | FOUNDATIONS INSTALLED IN CONTRACT | TOWERS INSTALLED IN CONTRACT | REMARKS                     | CONCRETE CURB, TYPE B |
|--------------------------------------|----------------|------------|-------------------|------------------|------------------|-----------------------------------|------------------------------|-----------------------------|-----------------------|
|                                      | STATION        | OFFSET     |                   |                  |                  |                                   |                              |                             |                       |
| 6 AIJ2                               | 118+20.00      | LT 76.00'  | 7.16              | -14.84           | 22'              | 62583                             | 62583                        | GROUND MOUNTED              | YES                   |
| 6 AIJ1                               | 122+78.00      | LT 75.30'  | 4.40              | -14.60           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 ACD1                               | 127+38.00      | LT 75.80'  | 7.49              | -11.51           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 AMN2                               | 219+89.00      | RT 53.40'  | 3.58              | -15.42           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              | YES                   |
| 6 AMN1                               | 225+01.00      | RT 63.70'  | 8.37              | -14.63           | 23'              | 62583                             | 62583                        | GROUND MOUNTED              | YES                   |
| 6 AGH1                               | 230+00.00      | RT 74.70'  | 11.88             | -11.12           | 23'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 ACD2                               | 132+00.00      | LT 76.00'  | 6.87              | -12.13           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 ACD3                               | 136+63.00      | LT 77.10'  | 7.72              | -10.28           | 18'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 ACD4                               | 141+13.30      | LT 110.07' |                   |                  |                  | 62695                             | 62583                        | GROUND MOUNTED IN KNEE WALL |                       |
| 6 AGH2                               | 235+02.00      | RT 40.20'  | 7.43              | -12.57           | 20'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 AGH3                               | 334+81.40      | RT 48.50'  | 4.13              | -17.87           | 22'              | 62583                             | 62583                        | GROUND MOUNTED              | YES                   |
| 6 AGH4                               | 244+51.00      | RT 40.80'  | 14.92             | -6.08            | 21'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 5 MMN5                               | 415+50.00      | RT 63.60'  | 7.57              | -12.43           | 20'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 MMN4                               | 420+53.00      | LT 66.50'  | 4.96              | -14.04           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 5 MAB1                               | 2031+84.70     | RT 97.10'  | 4.13              | -14.87           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 MAB2                               | 2036+88.40     | RT 80.40'  | 10.87             | -12.13           | 23'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 MIJ3                               | 2027+51.30     | RT 63.90'  | -3.77             | -22.77           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              | YES                   |
| 5 AGH5                               | 330+51.20      | RT 39.00'  | -6.30             | -26.30           | 20'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 MMN3                               | 424+23.00      | RT 59.60'  | 6.22              | -16.78           | 23'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 MIJ2                               | 2022+92.30     | RT 64.30'  | -1.43             | -19.43           | 18'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 MIJ1                               | 2018+51.80     | RT 64.40'  | 3.06              | -14.94           | 18'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 MCD1                               | 2013+46.60     | RT 64.20'  | 8.13              | -11.87           | 20'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 MMN2                               | 1147+05.00     | LT 57.50'  | 5.95              | -15.05           | 21'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 MMN1                               | 1142+55.00     | LT 50.70'  | 6.18              | -12.82           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 MKL1                               | 1137+57.00     | LT 52.80'  | 9.21              | -9.79            | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 5 MKL2                               | 1132+90.00     | LT 52.00'  | 8.83              | -10.17           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 5 MKL3                               | 1128+20.00     | LT 52.00'  | 8.11              | -10.89           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 5 MCD2                               | 2008+53.00     | RT 64.00'  | 8.97              | -10.03           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 5 MCD3                               | 2003+83.00     | RT 64.00'  | 7.79              | -11.21           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 ACD5                               | 145+81.00      | LT 104.73' |                   |                  |                  | 62695                             | 62583                        | GROUND MOUNTED IN KNEE WALL |                       |
| 5 OAB2                               | 150+31.50      | LT 75.30'  | 3.15              | -15.85           | 19'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 OAB1                               | 155+70.00      | LT 60.00'  | 0.66              | -19.34           | 20'              | 62583                             | 62583                        | GROUND MOUNTED              | YES                   |
| 6 MAB3                               | 250+01.00      | RT 39.90'  | 16.71             | -11.29           | 28'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 OEF2                               | 254+56.00      | RT 67.70'  | 14.05             | -8.95            | 23'              | 62583                             | 62583                        | GROUND MOUNTED              |                       |
| 6 OEF1                               | 2205+20.00     | RT 84.00'  | 2.29              | -17.71           | 20'              | 62583                             | 62583                        | GROUND MOUNTED              | YES                   |

- NOTES:**
- SEE IDOT HIGH MAST LIGHT TOWER FOUNDATION STANDARD DETAIL BE501 FOR FOUNDATION DETAILS.
  - CONTRACTOR TO VERIFY SOIL CONDITIONS AT THE TIME OF FOUNDATION EXCAVATION AGAINST THE "SOIL CONDITIONS" TABLE ON STANDARD DETAIL BE501 AND MODIFY THE DESIGN DEPTH "D" AND BOTTOM ELEVATION AS NECESSARY.
  - SEE STRUCTURAL SHEETS UNDER CONTRACT 62594, 62694 AND 62695 FOR WALL MOUNTED HIGH MAST LIGHT TOWER FOUNDATION DETAILS.

ES-01

| REVISIONS |      |
|-----------|------|
| NAME      | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**

**HIGH MAST TOWER FOUNDATION  
SCHEDULE - SOUTH SECTION  
SHEET 1**

SCALE: NONE      DRAWN BY: VG  
DATE:              CHECKED BY: TM

**TYLIN** INTERNATIONAL

03/29/2005 04:42 PM

|                             |          |                  |              |           |
|-----------------------------|----------|------------------|--------------|-----------|
| F.A.I. RTE.                 | SECTION  | COUNTY           | TOTAL SHEETS | SHEET NO. |
| 94                          | *        | COOK             | 907          | 428       |
| STA. 1200+00.00             |          | TO STA. 1365+00  |              |           |
| FED. ROAD DIST. NO.         | ILLINOIS | FED. AID PROJECT |              |           |
| * (1516.1, 1717 & 1818) R-9 |          |                  |              | 62695     |

HIGH MAST LIGHT TOWER FOUNDATION SCHEDULE (NOTE 1)

| HIGH MAST LIGHT TOWER IDENTIFICATION | TOWER LOCATION |            | TOP OF FDN. ELEV. | BOTTOM ELEVATION | DESIGN DEPTH (D) | FOUNDATIONS INSTALLED IN CONTRACT | TOWERS INSTALLED IN CONTRACT | REMARKS                                 | CONCRETE CURB, TYPE B |
|--------------------------------------|----------------|------------|-------------------|------------------|------------------|-----------------------------------|------------------------------|---|-----------------------|
|                                      | STATION        | OFFSET     |                   |                  |                  |                                   |                              |   |                       |
| 6 OMN4                               | 2210+40.00     | RT 84.00'  | 1.72              | -20.28           | 22'              | 62583                             | 62583                        | GROUND MOUNTED                          | YES                   |
| 6 OMN3                               | 2216+89.80     | RT 124.90' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED IN EXISTING RETAINING WALL |                       |
| 6 OIJ4                               | 1210+23.00     | LT 84.00'  | 2.50              | -18.50           | 21'              | 62583                             | 62583                        | GROUND MOUNTED                          | YES                   |
| 6 OIJ3                               | 1216+86.31     | LT 132.13' |                   |                  |                  | 62695                             | 62583                        | WALL MOUNTED                            |                       |
| 6 OIJ2                               | 1221+75.11     | LT 132.18' |                   |                  |                  | 62695                             | 62583                        | WALL MOUNTED                            |                       |
| 6 OIJ1                               | 1226+66.25     | LT 100.24' | 3.69              |                  | 30'              | 62695                             | 62583                        | GROUND MOUNTED                          | YES                   |
| 6 OMN2                               | 2221+99.30     | RT 114.60' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED                            |                       |
| 6 OMN1                               | 2226+79.30     | RT 114.60' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED                            |                       |
| 6 OKL1                               | 1231+80.70     | LT 96.40'  | 2.02              | -20.98           | 23'              | 62583                             | 62583                        | GROUND MOUNTED                          | YES                   |
| 6 OKL2                               | 1236+00.00     | LT 97.70'  | -2.46             | -24.46           | 22'              | 62583                             | 62583                        | GROUND MOUNTED                          |                       |
| 6 OKL3                               | 1240+99.00     | LT 110.80' | 5.66              | -13.34           | 19'              | 62583                             | 62583                        | GROUND MOUNTED                          |                       |
| 6 OOP1                               | 2231+89.30     | RT 114.60' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED                            |                       |
| 6 OOP2                               | 2236+18.00     | RT 95.80'  |                   |                  |                  | 62694                             | 62583                        | GROUND MOUNTED IN KNEE WALL             |                       |
| 6 OOP3                               | 2241+17.80     | RT 116.90' |                   |                  |                  | 62694                             | 62583                        | GROUND MOUNTED IN KNEE WALL             |                       |
| 6 OKL4                               | 1246+01.06     | LT 127.96' |                   |                  |                  | 62695                             | 62583                        | GROUND MOUNTED IN KNEE WALL             |                       |
| 6 OCD1                               | 1250+99.93     | LT 127.96' |                   |                  |                  | 62695                             | 62583                        | WALL MOUNTED                            |                       |
| 6 OOP4                               | 2246+35.80     | RT 123.40' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED                            |                       |
| 6 OGH1                               | 2251+20.00     | RT 106.20' |                   |                  |                  | 62694                             | 62583                        | GROUND MOUNTED IN KNEE WALL             |                       |
| 6 OCD2                               | 1255+99.67     | LT 99.84'  | -7.27             |                  | 30'              | 62695                             | 62583                        | GROUND MOUNTED                          | YES                   |
| 6 PAB4                               | 1260+65.70     | LT 101.00' | 2.33              | -17.67           | 20'              | 62583                             | 62583                        | GROUND MOUNTED                          | YES                   |
| 5 PAB3                               | 1265+14.80     | LT 100.20' | 1.92              | -23.08           | 25'              | 62583                             | 62583                        | GROUND MOUNTED                          | YES                   |
| 6 OGH2                               | 2256+36.50     | RT 104.50' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED IN EXISTING RETAINING WALL |                       |
| 5 OGH3                               | 2260+92.90     | RT 111.70' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED                            |                       |
| 5 PEF5                               | 2265+34.70     | RT 125.80' |                   |                  |                  | 62694                             | 62583                        | GROUND MOUNTED IN KNEE WALL             |                       |
| 5 PAB2                               | 1269+51.88     | LT 133.04' |                   |                  |                  | 62695                             | 62583                        | GROUND MOUNTED IN KNEE WALL             |                       |
| 5 PAB1                               | 1274+15.90     | LT 104.10' | 8.49              | -16.51           | 25'              | 62583                             | 62583                        | GROUND MOUNTED                          |                       |
| 5 PIJ3                               | 1278+64.70     | LT 99.90'  | 3.51              | -15.49           | 19'              | 62583                             | 62583                        | GROUND MOUNTED                          |                       |
| 5 PEF4                               | 2269+84.66     | RT 124.19' |                   |                  |                  | 62694                             | 62583                        | GROUND MOUNTED IN KNEE WALL             |                       |
| 5 PEF3                               | 2274+34.10     | RT 100.70' | 5.07              | -17.93           | 23'              | 62583                             | 62583                        | GROUND MOUNTED                          |                       |
| 5 PEF2                               | 2278+85.30     | RT 102.00' | 3.48              | -15.52           | 19'              | 62583                             | 62583                        | GROUND MOUNTED                          |                       |
| 5 PEF1                               | 2283+34.00     | RT 100.70' | -5.29             | -24.29           | 19'              | 62583                             | 62583                        | GROUND MOUNTED                          | YES                   |
| 6 POP1                               | 2287+40.00     | RT 100.00' | -3.64             |                  |                  | 62594                             | 62583                        | GROUND MOUNTED WITH RETAINING WALL      |                       |
| 6 POP2                               | 2292+38.70     | RT 123.95' |                   |                  |                  | 62594                             | 62594                        | WALL MOUNTED                            |                       |
| 5 PIJ2                               | 1283+15.50     | LT 100.10' | -0.47             | -19.47           | 19'              | 62583                             | 62583                        | GROUND MOUNTED                          | YES                   |
| 6 PIJ1                               | 1287+20.00     | LT 81.00'  | -6.43             |                  |                  | 62594                             | 62583                        | GROUND MOUNTED                          | YES                   |

- NOTES:
- SEE IDOT HIGH MAST LIGHT TOWER FOUNDATION STANDARD DETAIL BE501 FOR FOUNDATION DETAILS.
  - CONTRACTOR TO VERIFY SOIL CONDITIONS AT THE TIME OF FOUNDATION EXCAVATION AGAINST THE "SOIL CONDITIONS" TABLE ON STANDARD DETAIL BE501 AND MODIFY THE DESIGN DEPTH "D" AND BOTTOM ELEVATION AS NECESSARY.
  - SEE STRUCTURAL SHEETS UNDER CONTRACT 62594, 62694 AND 62695 FOR WALL MOUNTED HIGH MAST LIGHT TOWER FOUNDATION DETAILS.

ES-02

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94 (DAN RYAN EXPRESSWAY)

HIGH MAST TOWER FOUNDATION  
SCHEDULE - SOUTH SECTION  
SHEET 2

SCALE: NONE  
DATE: \_\_\_\_\_

DRAWN BY: VG  
CHECKED BY: TM

TYLIN INTERNATIONAL

03/29/2005 04:42 PM

|                             |          |                  |              |           |
|-----------------------------|----------|------------------|--------------|-----------|
| F.A.I. RTE.                 | SECTION  | COUNTY           | TOTAL SHEETS | SHEET NO. |
| 94                          | •        | COOK             | 907          | 429       |
| STA. 1200+00.00             |          | TO STA. 1365+00  |              |           |
| FED. ROAD DIST. NO.         | ILLINOIS | FED. AID PROJECT |              |           |
| • (1516.1, 1717 & 1818) R-9 |          |                  |              | 62695     |

**HIGH MAST LIGHT TOWER FOUNDATION SCHEDULE (NOTE 1)**

| HIGH MAST LIGHT TOWER IDENTIFICATION | TOWER LOCATION |            | TOP OF FDN. ELEV. | BOTTOM ELEVATION | DESIGN DEPTH (D) | FOUNDATIONS INSTALLED IN CONTRACT | TOWERS INSTALLED IN CONTRACT | REMARKS                            | CONCRETE CURB, TYPE B |
|--------------------------------------|----------------|------------|-------------------|------------------|------------------|-----------------------------------|------------------------------|------------------------------------|-----------------------|
|                                      | STATION        | OFFSET     |                   |                  |                  |                                   |                              |                                    |                       |
| 6 PKL1                               | 1292+09.97     | LT 132.42' |                   |                  |                  | 62594                             | 62594                        | WALL MOUNTED                       |                       |
| 6 PKL2                               | 1296+74.27     | LT 124.79' |                   |                  |                  | 62594                             | 62594                        | WALL MOUNTED                       |                       |
| 6 PKL3                               | 1301+54.27     | LT 124.79' |                   |                  |                  | 62594                             | 62594                        | WALL MOUNTED                       |                       |
| 6 PKL4                               | 1306+34.27     | LT 124.79' |                   |                  |                  | 62594                             | 62594                        | WALL MOUNTED                       |                       |
| 6 POP3                               | 2297+18.70     | RT 123.95' |                   |                  |                  | 62594                             | 62594                        | WALL MOUNTED                       |                       |
| 6 POP4                               | 2301+98.70     | RT 123.95' |                   |                  |                  | 62594                             | 62594                        | WALL MOUNTED                       |                       |
| 6 PGH1                               | 2306+48.22     | RT 126.99' |                   |                  |                  | 62594                             | 62594                        | WALL MOUNTED                       |                       |
| 6 PCD1                               | 1311+20.00     | LT 91.00'  | -6.25             |                  |                  | 62594                             | 62583                        | GROUND MOUNTED WITH RETAINING WALL |                       |
| 5 PCD4                               | 1315+10.01     | LT 111.83' |                   |                  |                  | 62695                             | 62583                        | WALL MOUNTED                       |                       |
| 5 RAB3                               | 1319+91.53     | LT 122.14' |                   |                  |                  | 62695                             | 62583                        | WALL MOUNTED                       |                       |
| 6 PGH2                               | 2311+20.20     | RT 103.61' |                   |                  |                  | 62594                             | 62583                        | WALL MOUNTED                       |                       |
| 5 PGH2                               | 2315+19.00     | RT 99.90'  |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED                       |                       |
| 5 REF2                               | 2320+21.30     | RT 129.90' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED                       |                       |
| 5 RAB2                               | 1324+11.13     | LT 140.39' |                   |                  |                  | 62695                             | 62583                        | WALL MOUNTED                       |                       |
| 5 RAB1                               | 1328+85.31     | LT 164.02' |                   |                  |                  | 62695                             | 62583                        | WALL MOUNTED                       |                       |
| 5 RIJ4                               | 1333+40.00     | LT 116.08' | -                 |                  | 30'              | 62695                             | 62583                        | GROUND MOUNTED                     | YES                   |
| 5 REF1                               | 2324+40.50     | RT 154.40' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED                       |                       |
| 5 RMN5                               | 2328+34.00     | RT 174.00' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED                       |                       |
| 5 RMN4                               | 2333+58.11     | RT 107.52' | -                 |                  |                  | 62694                             | 62583                        | GROUND MOUNTED                     | YES                   |
| 5 RIJ3                               | 1337+90.00     | LT 100.50' | -5.04             | -25.04           | 20'              | 62583                             | 62583                        | GROUND MOUNTED                     |                       |
| 6 RIJ2                               | 1342+15.00     | LT 109.70' | -0.20             | -20.20           | 20'              | 62583                             | 62583                        | GROUND MOUNTED                     |                       |
| 6 RIJ1                               | 1346+40.00     | LT 118.20' | 2.91              | -18.09           | 21'              | 62583                             | 62583                        | GROUND MOUNTED                     |                       |
| 5 RMN3                               | 2338+10.00     | RT 99.00'  | -2.99             | -22.99           | 20'              | 62583                             | 62583                        | GROUND MOUNTED                     |                       |
| 6 RMN2                               | 2342+34.70     | RT 104.00' | -0.61             | -21.61           | 21'              | 62583                             | 62583                        | GROUND MOUNTED                     |                       |
| 6 RMN1                               | 2346+60.00     | RT 149.30' | 3.82              | -17.18           | 21'              | 62583                             | 62583                        | GROUND MOUNTED WITH RETAINING WALL |                       |
| 6 RKL1                               | 1350+64.40     | LT 154.60' | 1.47              | -18.53           | 20'              | 62583                             | 62583                        | GROUND MOUNTED                     | YES                   |
| 6 RKL2                               | 1354+90.00     | LT 145.80' | 6.88              | -14.12           | 21'              | 62583                             | 62583                        | GROUND MOUNTED                     |                       |
| 6 RKL3                               | 1359+40.40     | LT 156.10' | 5.33              | -15.67           | 21'              | 62583                             | 62583                        | GROUND MOUNTED                     |                       |
| 6 ROP1                               | 2350+98.70     | RT 154.50' |                   |                  |                  | 62694                             | 62583                        | WALL MOUNTED                       |                       |
| 6 ROP2                               | 2354+93.70     | RT 154.50' |                   |                  |                  | 62694                             | 62583                        | GROUND MOUNTED IN KNEE WALL        |                       |
| 6 ROP3                               | 2359+39.70     | RT 117.40' | 4.83              | -15.17           | 20'              | 62583                             | 62583                        | GROUND MOUNTED                     |                       |
| 6 RCD1                               | 1363+38.00     | LT 111.50' | -1.88             | -20.88           | 19'              | 62583                             | 62583                        | GROUND MOUNTED                     |                       |
| 6 RGH1                               | 2363+59.70     | RT 112.20' | -1.24             | -21.24           | 20'              | 62583                             | 62583                        | GROUND MOUNTED                     |                       |

- NOTES:**
- SEE IDOT HIGH MAST LIGHT TOWER FOUNDATION STANDARD DETAIL BE501 FOR FOUNDATION DETAILS.
  - CONTRACTOR TO VERIFY SOIL CONDITIONS AT THE TIME OF FOUNDATION EXCAVATION AGAINST THE "SOIL CONDITIONS" TABLE ON STANDARD DETAIL BE501 AND MODIFY THE DESIGN DEPTH "D" AND BOTTOM ELEVATION AS NECESSARY.
  - SEE STRUCTURAL SHEETS UNDER CONTRACT 62594, 62694 AND 62695 FOR WALL MOUNTED HIGH MAST LIGHT TOWER FOUNDATION DETAILS.

ES-03

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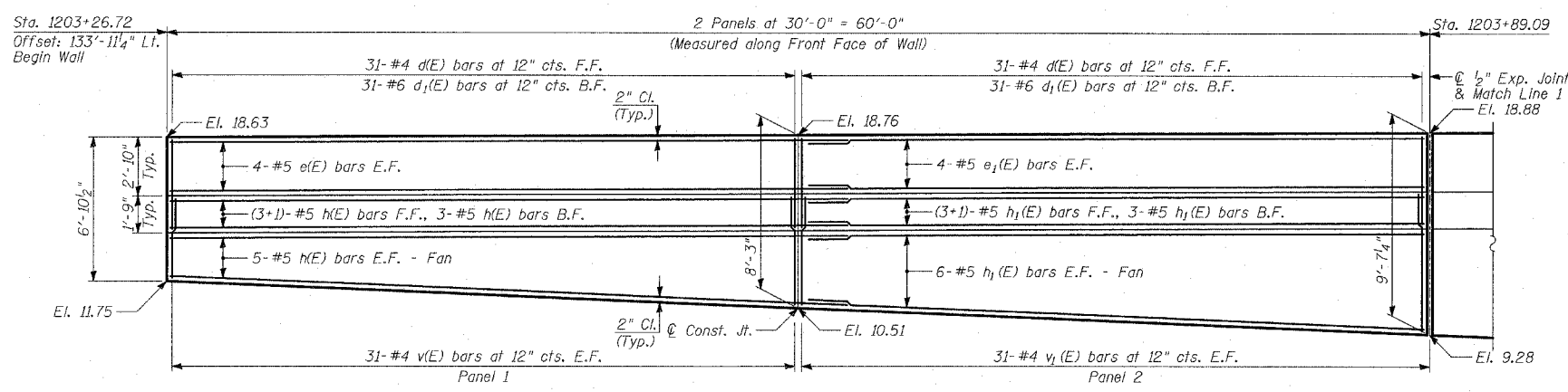
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**

**HIGH MAST TOWER FOUNDATION  
SCHEDULE - SOUTH SECTION  
SHEET 2**

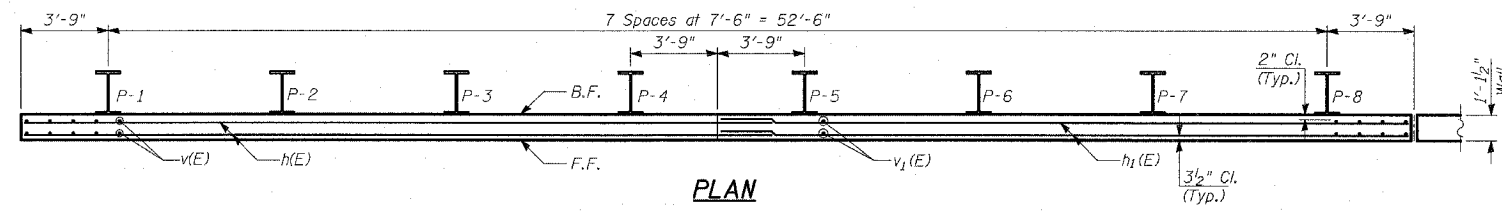
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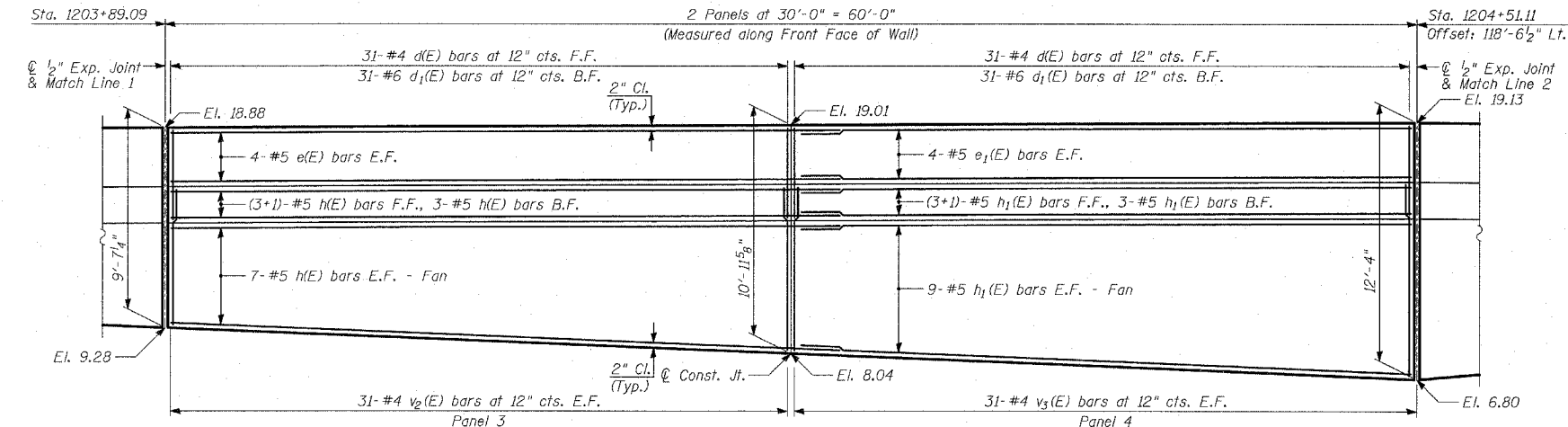




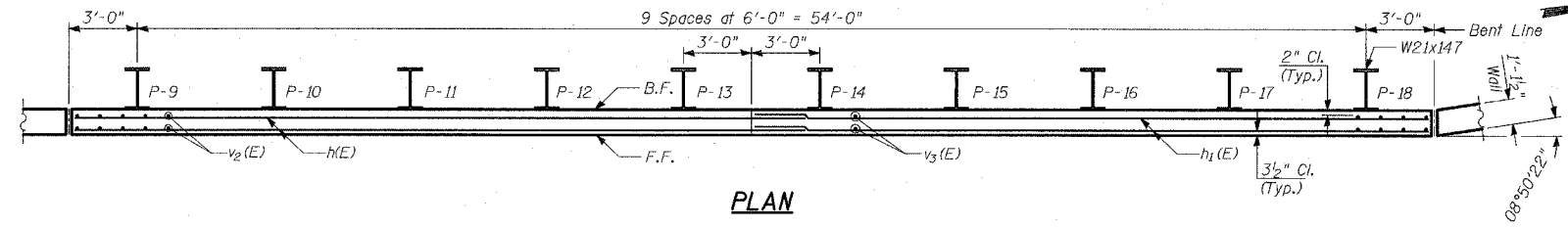
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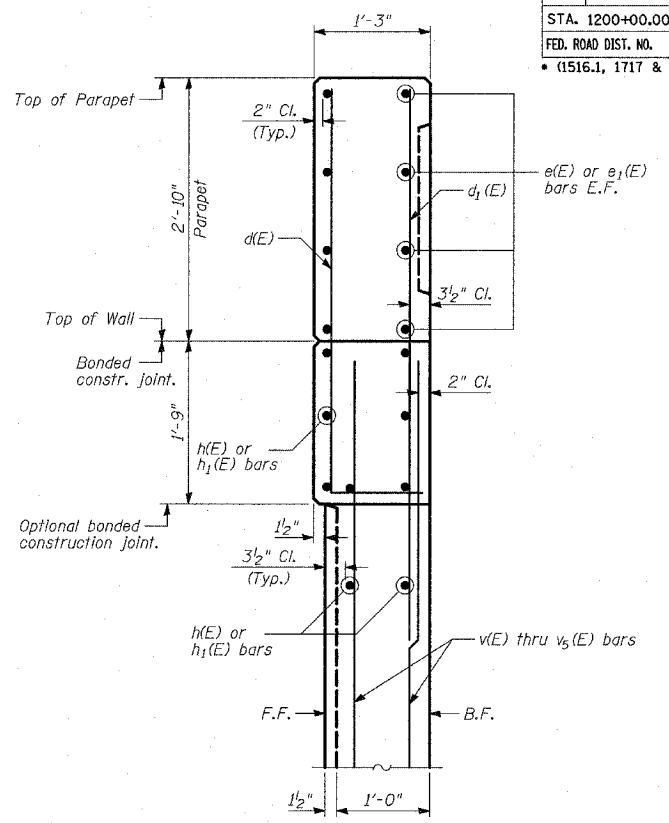
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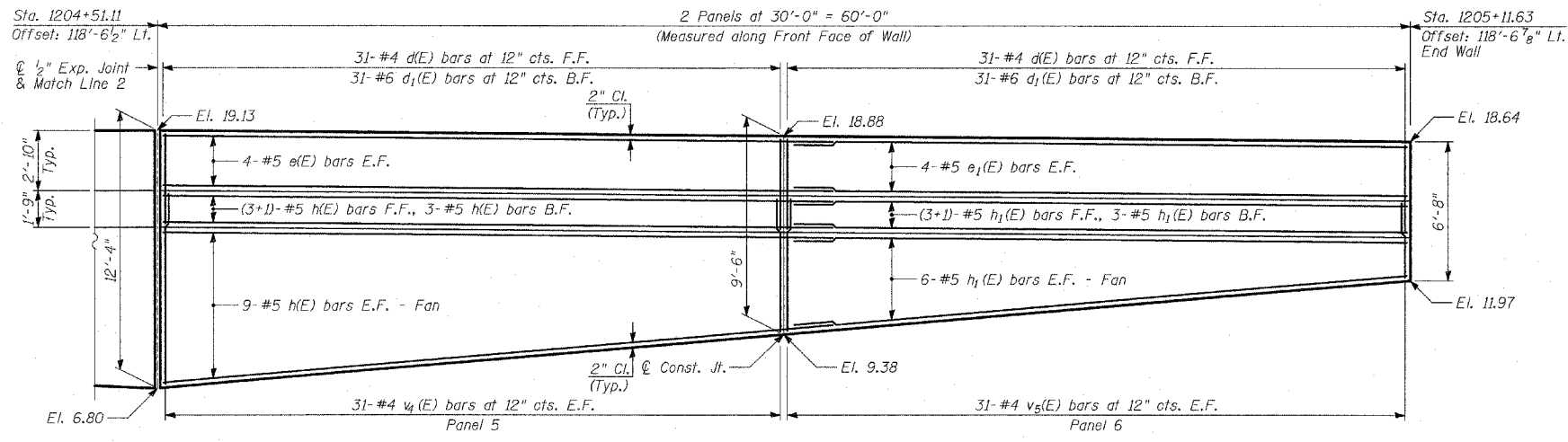
FLUTED PARAPET DETAIL

- NOTES:**
1. B.F. - denotes Back Face.
  2. E.F. - denotes Each Face.
  3. F.F. - denotes Front Face.
  4. Work this Sheet with Sheets 3 thru 8 of 10.
  5. Pile spacing measured along front face of wall.
  6. For Lap Splices, see Sheet 3 of 10.

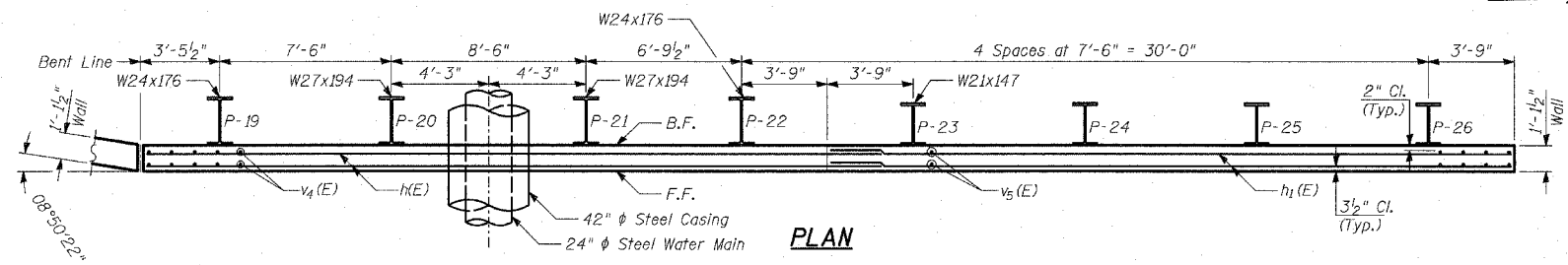
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 AT 95TH ST.  
 WALL 33 - PLAN AND ELEVATION  
 STA. 1203+26.72 TO STA. 1204+51.11  
 S.N. 016-W959 DESIGNED BY: MI, TB  
 SCALE: N.T.S. DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI



**ELEVATION**



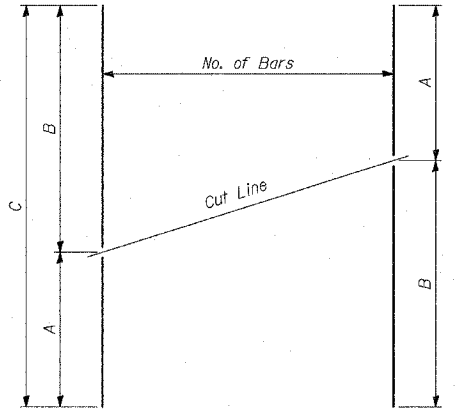
**PLAN**

**BAR TABLE SCHEDULE**

| Bar   | No. of Sets Req'd | No. of Bars Per Set | A      | B      | C      |
|-------|-------------------|---------------------|--------|--------|--------|
| v(E)  | 1                 | 31                  | 3'-9"  | 5'-1"  | 8'-10" |
| v1(E) | 1                 | 31                  | 5'-1"  | 6'-6"  | 11'-7" |
| v2(E) | 1                 | 31                  | 6'-6"  | 7'-10" | 14'-4" |
| v3(E) | 1                 | 31                  | 7'-10" | 9'-2"  | 17'-0" |
| v4(E) | 1                 | 31                  | 9'-2"  | 6'-5"  | 15'-7" |
| v5(E) | 1                 | 31                  | 6'-5"  | 3'-7"  | 10'-0" |

**BILL OF MATERIAL**

| Bar  | No. | Size | Length | Shape |
|--|-----|------|--------|-------|
| d(E)   | 186 | #4   | 5'-3"  | L     |
| d1(E)  | 186 | #6   | 6'-6"  | —     |
| e(E)   | 24  | #5   | 32'-2" | —     |
| e1(E)  | 24  | #5   | 29'-8" | —     |
| h(E)   | 63  | #5   | 32'-2" | —     |
| h1(E)  | 63  | #5   | 29'-8" | —     |
| v(E)   | 31  | #4   | 8'-10" | —     |
| v1(E)  | 31  | #4   | 11'-7" | —     |
| v2(E)  | 31  | #4   | 14'-4" | —     |
| v3(E)  | 31  | #4   | 17'-0" | —     |
| v4(E)  | 31  | #4   | 15'-7" | —     |
| v5(E)  | 31  | #4   | 10'-0" | —     |
| Reinforcement Bars, Epoxy Coated             |     |      | POUND  | 9,690 |
| Concrete Structures                          |     |      | CU YD  | 76    |
| Protective Coat                              |     |      | 50 YD  | 247   |
| Furnishing Soldier Piles (W Section)         |     |      | FOOT   | 983   |
| Drilling and Setting Soldier Piles (In Soil) |     |      | CU FT  | 5,237 |

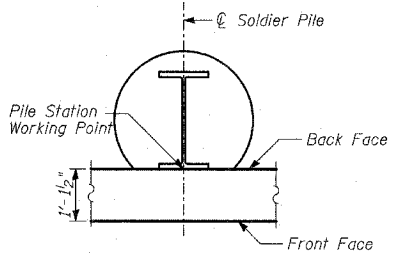


**SERIES OF BAR CUTTING DIAGRAM**  
See table for dimensions. Make all cuts normal to bar axis

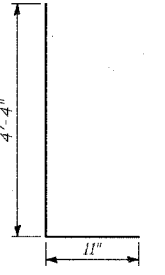
Reinforcement bars designated (E) shall be epoxy coated.

**PILE LAYOUT**

| Pile | Station at Working Point | Top of Parapet El. | Top of Pile El. | Bot. of Wall El. | Section | Pile Tip El. | Pile Length |
|------|--------------------------|--------------------|-----------------|------------------|---------|--------------|-------------|
| P-1  | 1203+30.76               | 18.65              | 14.48           | 11.60            | W21x147 | -20.43       | 34'-11"     |
| P-2  | 1203+38.57               | 18.68              | 14.51           | 11.29            |         | -20.74       | 35'-3"      |
| P-3  | 1203+46.38               | 18.71              | 14.54           | 10.98            |         | -21.04       | 35'-7"      |
| P-4  | 1203+54.18               | 18.74              | 14.58           | 10.67            |         | -21.34       | 35'-11"     |
| P-5  | 1203+61.98               | 18.77              | 14.61           | 10.36            |         | -21.64       | 36'-3"      |
| P-6  | 1203+69.78               | 18.80              | 14.64           | 10.05            |         | -22.03       | 36'-8"      |
| P-7  | 1203+77.57               | 18.84              | 14.67           | 9.74             |         | -22.33       | 37'-0"      |
| P-8  | 1203+85.35               | 18.87              | 14.70           | 9.43             |         | -22.63       | 37'-4"      |
| P-9  | 1203+92.35               | 18.89              | 14.73           | 9.15             |         | -22.86       | 37'-7"      |
| P-10 | 1203+98.57               | 18.92              | 14.75           | 8.90             |         | -23.16       | 37'-11"     |
| P-11 | 1204+04.79               | 18.94              | 14.78           | 8.66             |         | -23.39       | 38'-2"      |
| P-12 | 1204+11.00               | 18.97              | 14.80           | 8.41             |         | -23.62       | 38'-5"      |
| P-13 | 1204+17.21               | 18.99              | 14.83           | 8.16             |         | -23.92       | 38'-9"      |
| P-14 | 1204+23.41               | 19.02              | 14.85           | 7.91             |         | -24.15       | 39'-0"      |
| P-15 | 1204+29.61               | 19.04              | 14.88           | 7.66             |         | -24.37       | 39'-3"      |
| P-16 | 1204+35.81               | 19.07              | 14.90           | 7.42             |         | -24.60       | 39'-6"      |
| P-17 | 1204+42.00               | 19.09              | 14.93           | 7.17             |         | -24.91       | 39'-10"     |
| P-18 | 1204+48.19               | 19.12              | 14.95           | 6.92             | W21x147 | -25.13       | 40'-1"      |
| P-19 | 1204+54.72               | 19.10              | 14.93           | 7.09             | W24x176 | -24.98       | 39'-11"     |
| P-20 | 1204+62.54               | 19.04              | 14.87           | 7.74             | W27x194 | -27.29       | 42'-2"      |
| P-21 | 1204+71.09               | 18.97              | 14.80           | 8.48             | W27x194 | -26.53       | 41'-4"      |
| P-22 | 1204+77.88               | 18.92              | 14.75           | 9.06             | W24x176 | -23.00       | 37'-9"      |
| P-23 | 1204+85.38               | 18.85              | 14.69           | 9.71             | W21x147 | -22.31       | 37'-0"      |
| P-24 | 1204+92.88               | 18.79              | 14.63           | 10.36            |         | -21.71       | 36'-4"      |
| P-25 | 1205+00.38               | 18.73              | 14.56           | 11.00            |         | -21.02       | 35'-7"      |
| P-26 | 1205+07.88               | 18.67              | 14.50           | 11.65            | W21x147 | -20.41       | 34'-11"     |



**SOLDIER PILE WORKING POINT**



**BAR d(E)**

**LAP SPLICES**

| Bar | Lap   |
|-----|-------|
| #4  | 1'-8" |
| #5  | 2'-2" |
| #6  | 2'-7" |
| #8  | 4'-6" |

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**AT 95TH ST. WALL 33 - PLAN & ELEV.**  
**STA. 1204+51.11 TO STA. 1205+11.63,**  
**PILE LAYOUT, DETAILS & BILL OF MATERIAL**  
 S.N. 016-W959  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: MI, TB  
 DRAWN BY: DJR, TB  
 CHECKED BY: TD, MI

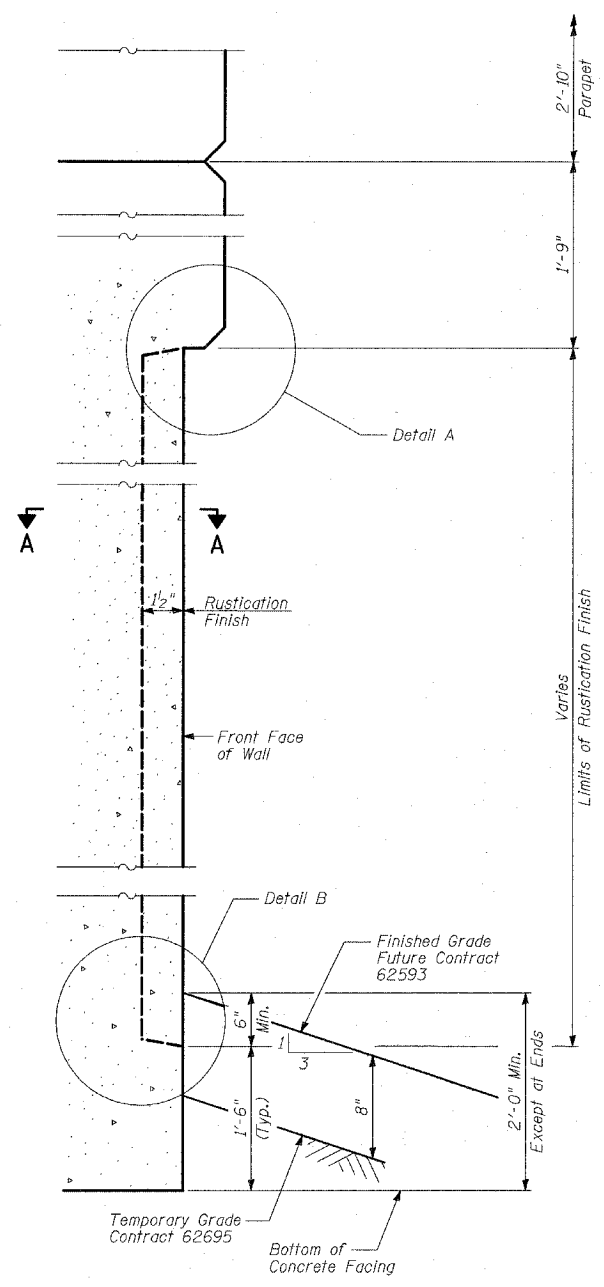
**NOTES:**  
 1. B.F. - denotes Back Face.  
 2. E.F. - denotes Each Face.  
 3. F.F. - denotes Front Face.  
 4. Work this Sheet with Sheets 4 thru 8 of 10.  
 5. Pile spacing measured along front face of wall.



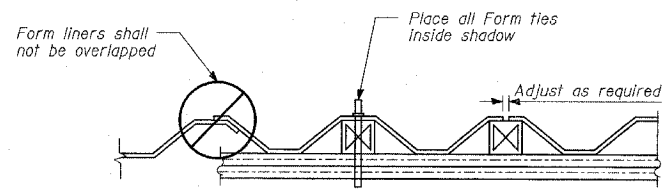




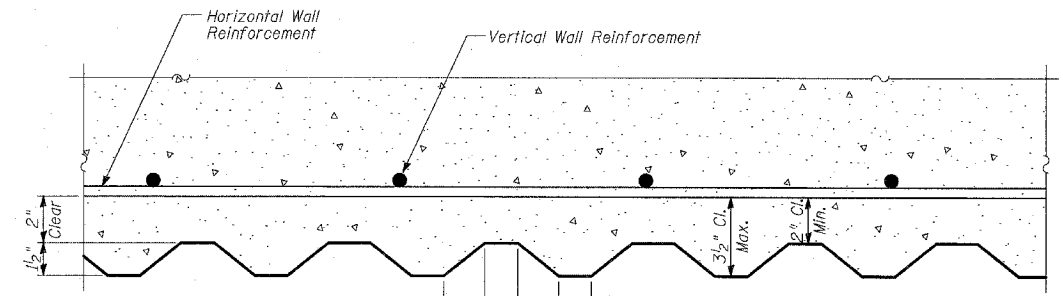




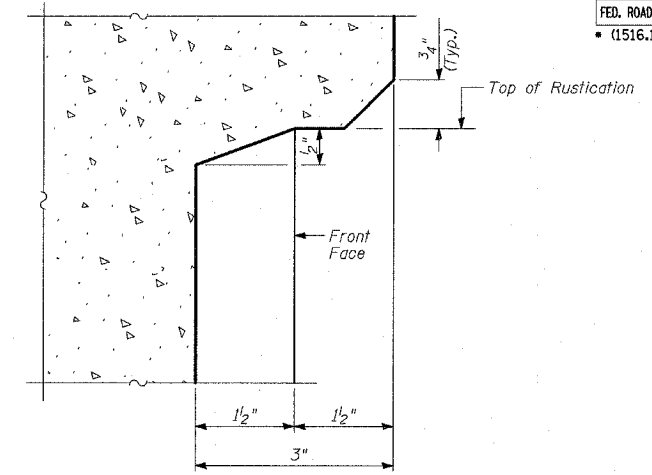
**WALL DETAIL**



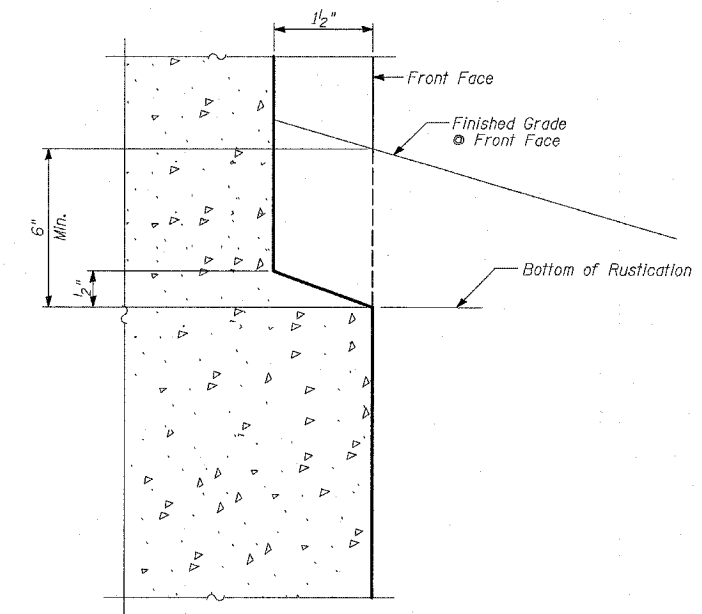
**SUGGESTED FORMWORK DETAIL**



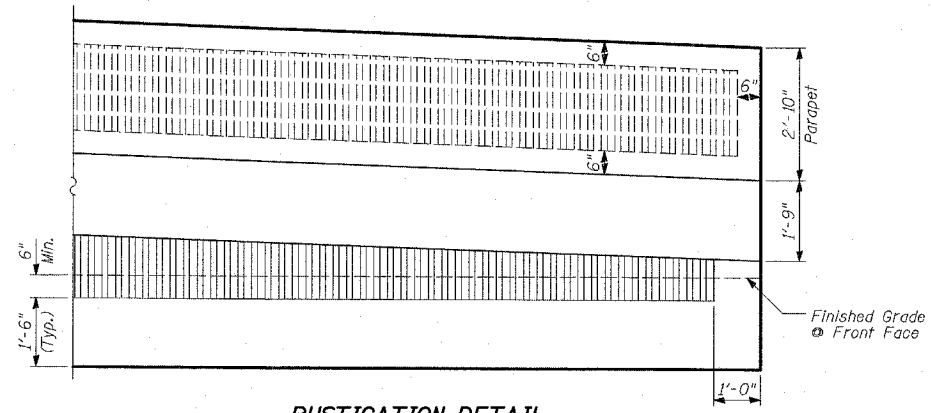
**SECTION A-A**



**DETAIL A**



**DETAIL B**



**RUSTICATION DETAIL**  
(At End Panel with Embankment)

**NOTES**

1. See Sheet 6 of 10 for expansion and construction joint details.

**BILL OF MATERIAL**

| ITEM               | UNIT  | TOTAL |
|--------------------|-------|-------|
| Rustication Finish | SQ FT | 951   |

| REVISIONS |      |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 AT 95TH ST.  
**WALL 33**  
**RUSTICATION DETAILS**  
 S.N. 016-W959 DESIGNED BY: MI, DJR  
 SCALE: N.T.S. DRAWN BY: DJR  
 DATE: MARCH 25, 2005 CHECKED BY: TD



**Wang Engineering, INC.**  
 Consulting Geotechnical and Environmental Engineers  
 wangeng3@wangeng.com  
 1145 Main Street  
 Lombard, IL 60148  
 Telephone: 630 953-9928  
 Fax: 630 953-9938

**BORING LOG SB 33-01** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

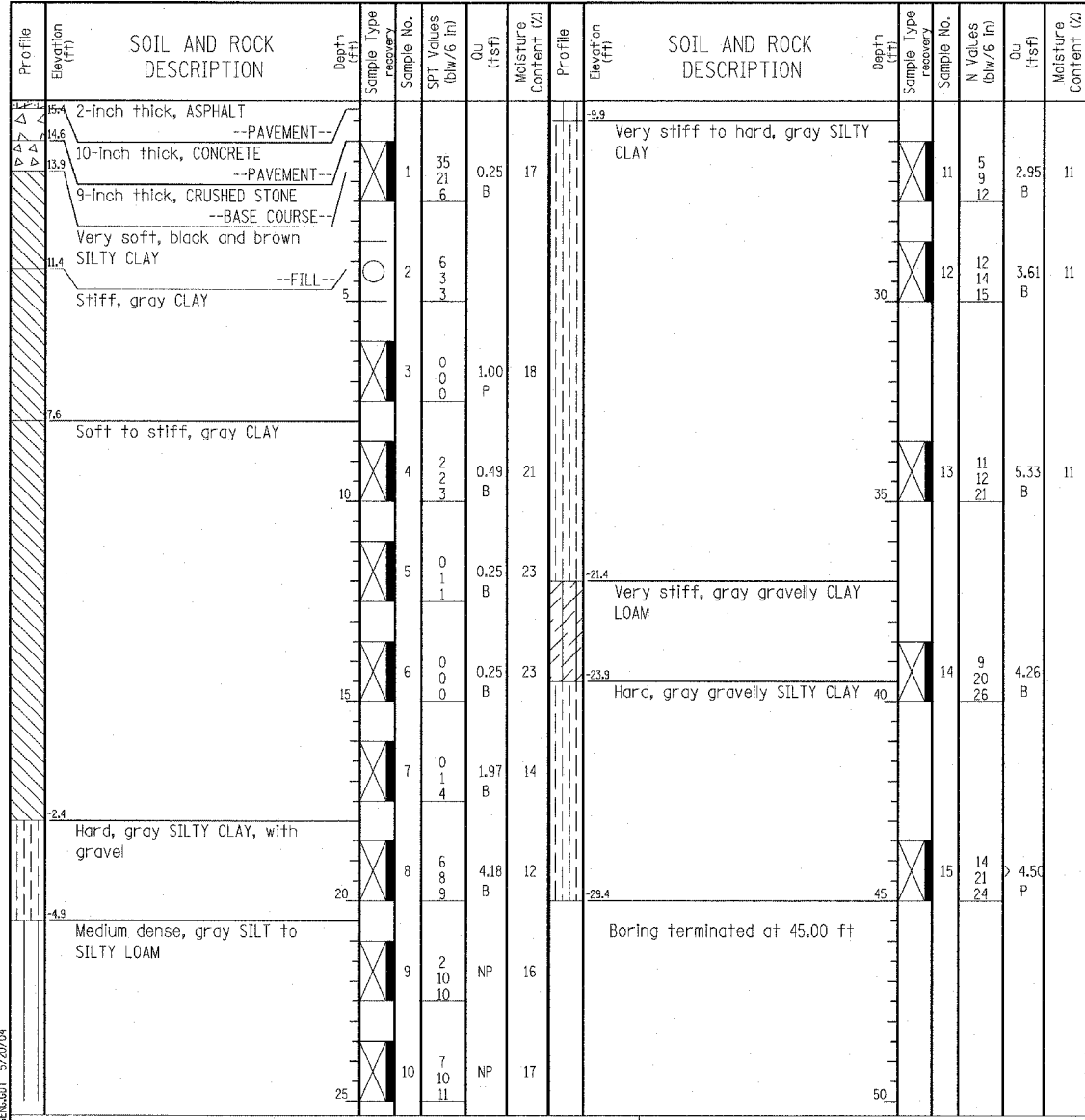
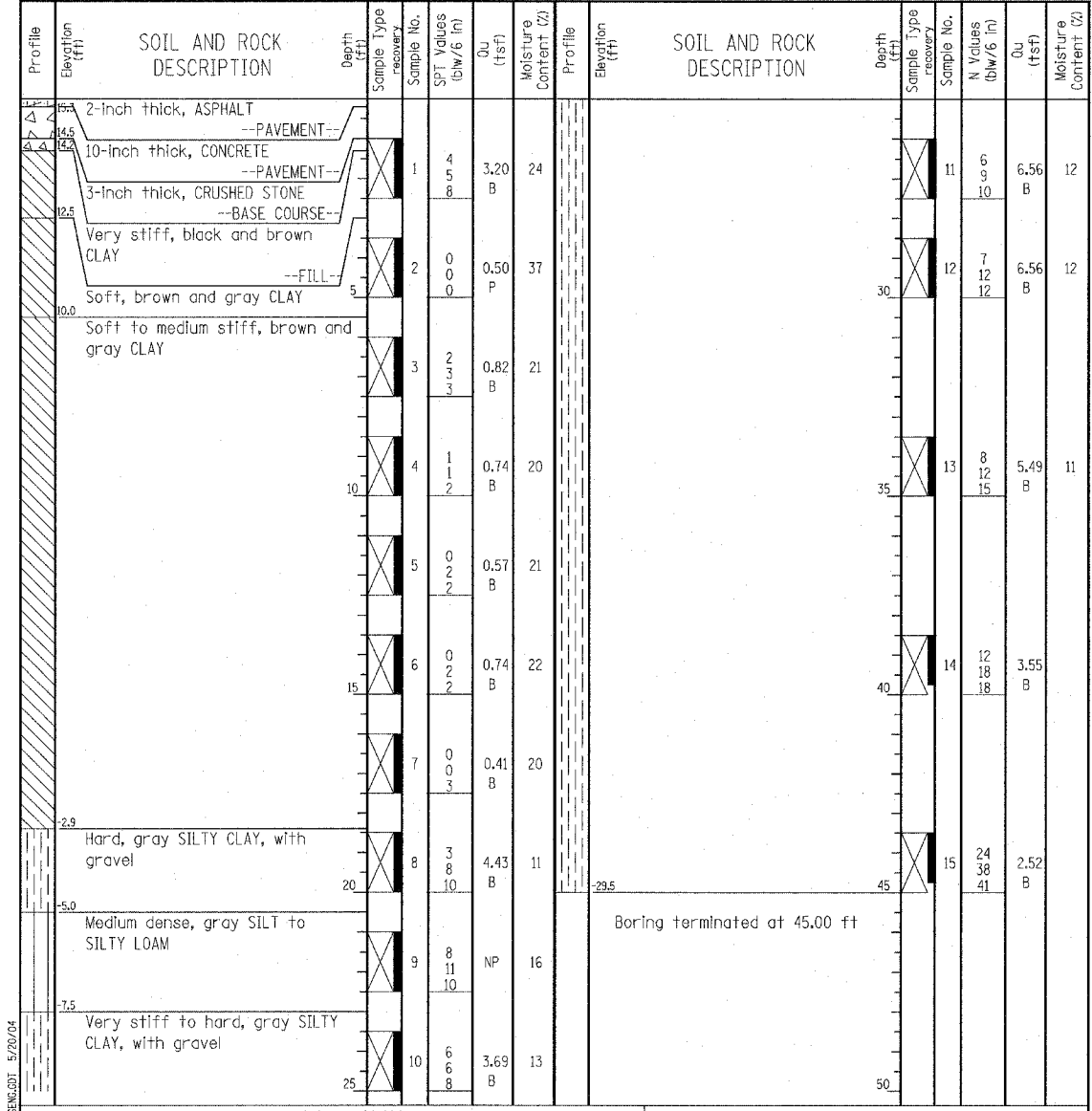
Datum: CCD  
 Elevation: 15.49 ft  
 North: 1841750.27 ft  
 East: 1177626.70 ft  
 Station: 154+39.5  
 Offset: 114.749' LT

**Wang Engineering, INC.**  
 Consulting Geotechnical and Environmental Engineers  
 wangeng3@wangeng.com  
 1145 Main Street  
 Lombard, IL 60148  
 Telephone: 630 953-9928  
 Fax: 630 953-9938

**BORING LOG SB 33-02** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 15.61 ft  
 North: 1841807.35 ft  
 East: 1177629.98 ft  
 Station: 154+98.9  
 Offset: 111.163' LT



| GENERAL NOTES   |   |                   |             | WATER LEVEL DATA          |    |     |  |
|---|---|-------------------|-------------|---------------------------|----|-----|--|
| Begin Drilling  | 02-10-2004  | Complete Drilling | 02-10-2004  | While Drilling            | ☐  | DRY |  |
| Drilling Contractor   | Patrick Drilling  | Drill Rig         | CME 75 TMR  | At Completion of Drilling | ▼  | DRY |  |
| Driller   | J&L   | Logger            | S. Janowski | Time After Drilling       | NA |     |  |
| Drilling Method   | 3.25" ID. HSA; Boring backfilled with bentonite upon completion |                   |             | Depth to Water            | ▼  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |   |                   |             |                           |    |     |  |

| GENERAL NOTES   |   |                   |             | WATER LEVEL DATA          |    |     |  |
|---|---|-------------------|-------------|---------------------------|----|-----|--|
| Begin Drilling  | 02-10-2004  | Complete Drilling | 02-10-2004  | While Drilling            | ☐  | DRY |  |
| Drilling Contractor   | Patrick Drilling  | Drill Rig         | CME 75 TMR  | At Completion of Drilling | ▼  | DRY |  |
| Driller   | J&L   | Logger            | S. Janowski | Time After Drilling       | NA |     |  |
| Drilling Method   | 3.25" ID. HSA; Boring backfilled with bentonite upon completion |                   |             | Depth to Water            | ▼  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |   |                   |             |                           |    |     |  |

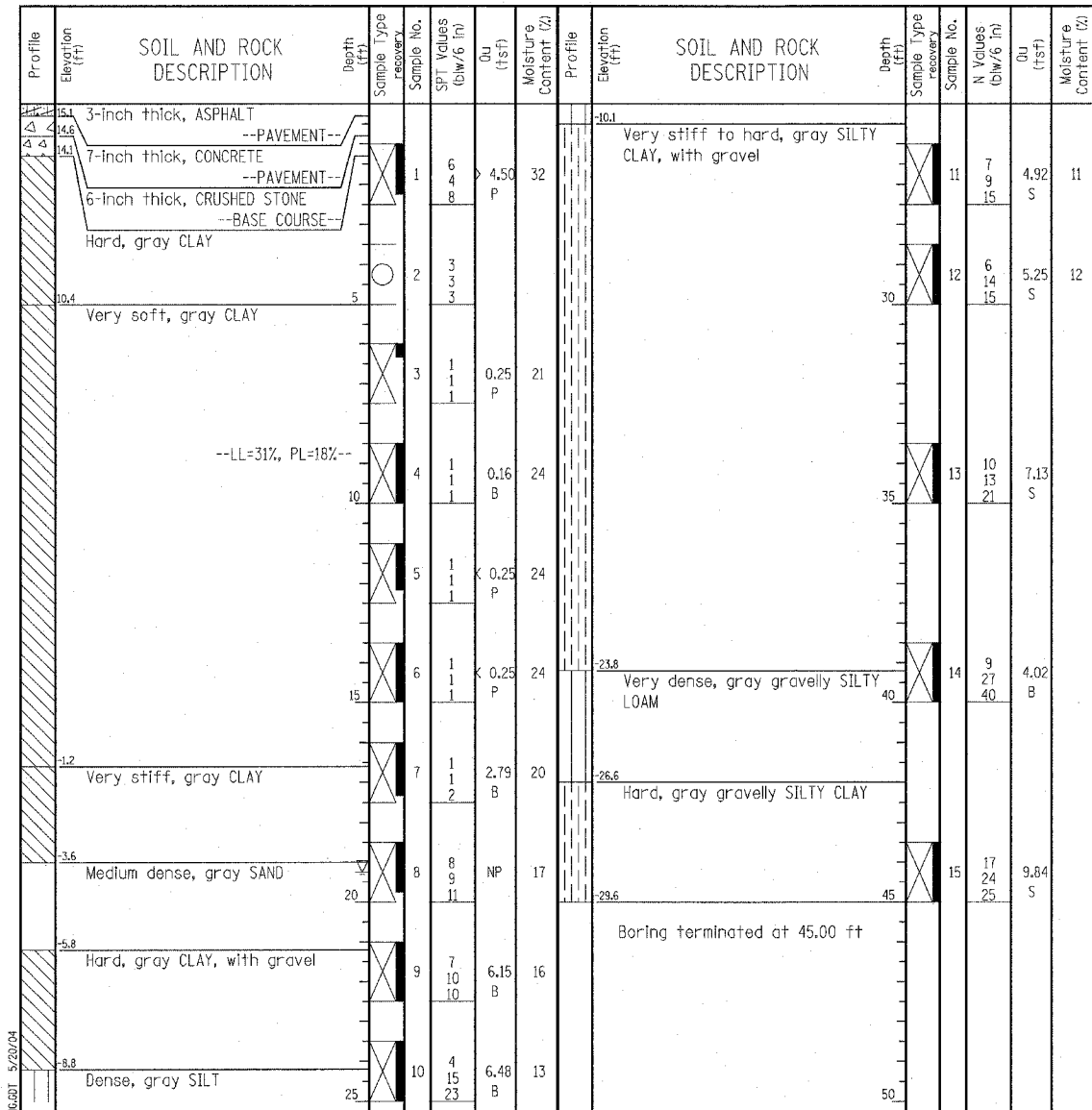
**TYLIN INTERNATIONAL**

| REVISIONS |      |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 AT 95TH ST.  
 WALL 33  
 BORING LOGS SB33-01 & SB33-02  
 S.N. 016-W959  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: DJR  
 DRAWN BY: DJR  
 CHECKED BY: TD

|   |  |                      |                   |
|---|--|----------------------|-------------------|
| <p>Wang Engineering, Inc.<br/>Consulting Geotechnical and Environmental Engineers<br/>wangeng3@wangeng.com<br/>1145 Main Street<br/>Lombard, IL 60148<br/>Telephone: 630 953-9928<br/>Fax: 630 953-9938</p> | <b>BORING LOG SB 33-03</b>                           |                      | Page 1 of 1       |
|   | WEI Job No.: 414-07-01                               |                      | Datum: CCD        |
|   | Client: T. Y. LIN International                      | Elevation: 15.36 ft  |                   |
|   | Project: Dan Ryan Improvements; IDOT No. D-91-421-01 | North: 1841899.95 ft |                   |
| Location: From 95th Street to South of 69th Street  | East: 1177629.03 ft                                  |                      | Station: 155+92.9 |
|   | Offset: 109.712' LT                                  |                      |                   |



| GENERAL NOTES   |  |                   |            | WATER LEVEL DATA          |            |
|---|--|-------------------|------------|---------------------------|------------|
| Begin Drilling  | 02-09-2004   | Complete Drilling | 02-09-2004 | While Drilling            | ▽ 19.25 ft |
| Drilling Contractor   | Patrick Drilling   | Drill Rig         | CME 75 TMR | At Completion of Drilling | ▽ DRY      |
| Driller   | J&L  | Logger            | K. Jacob   | Time After Drilling       | NA         |
| Drilling Method   | 3.25" ID. HSA; Boring backfilled with bentonite upon completion. |                   |            | Depth to Water            | ▽ NA       |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |  |                   |            |                           |            |

TYLIN INTERNATIONAL

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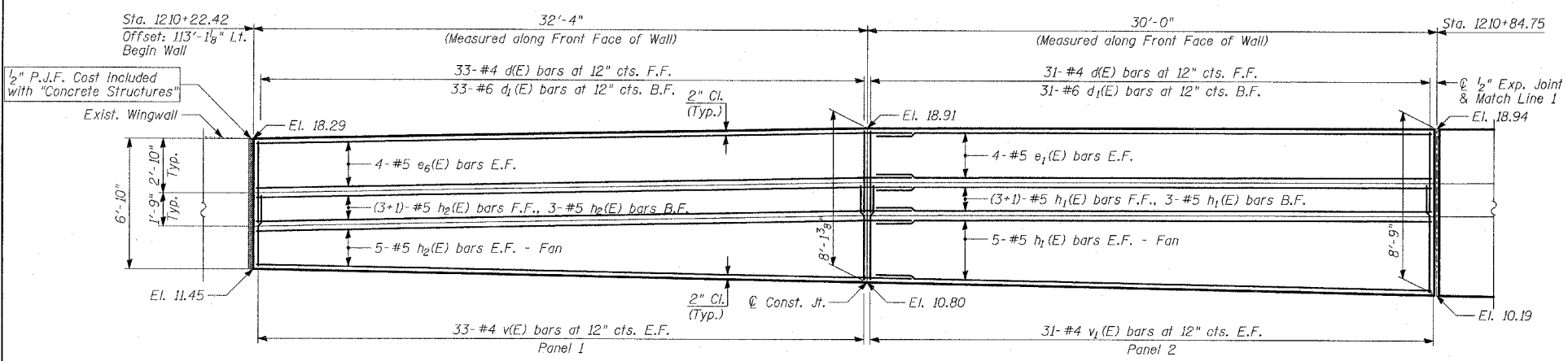
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**AT 95TH ST.**  
**WALL 33**  
**BORING LOG SB33-03**  
 S.N. 016-W959      DESIGNED BY: DJR  
 SCALE: N.T.S.      DRAWN BY: DJR  
 DATE: MARCH 25, 2005      CHECKED BY: TD

A-02-37-3 Structural Wall 33 SB33-03-1-95949

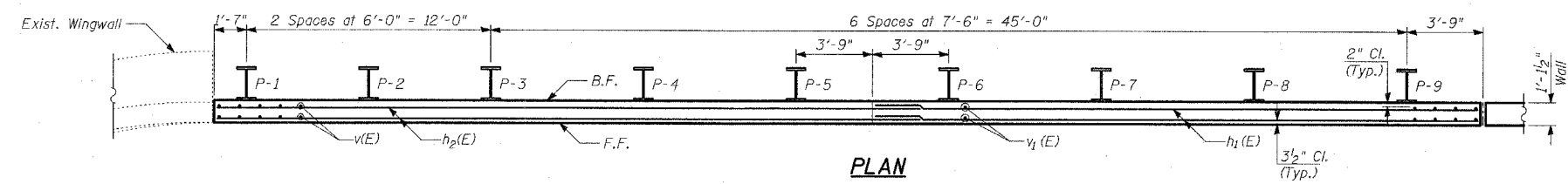




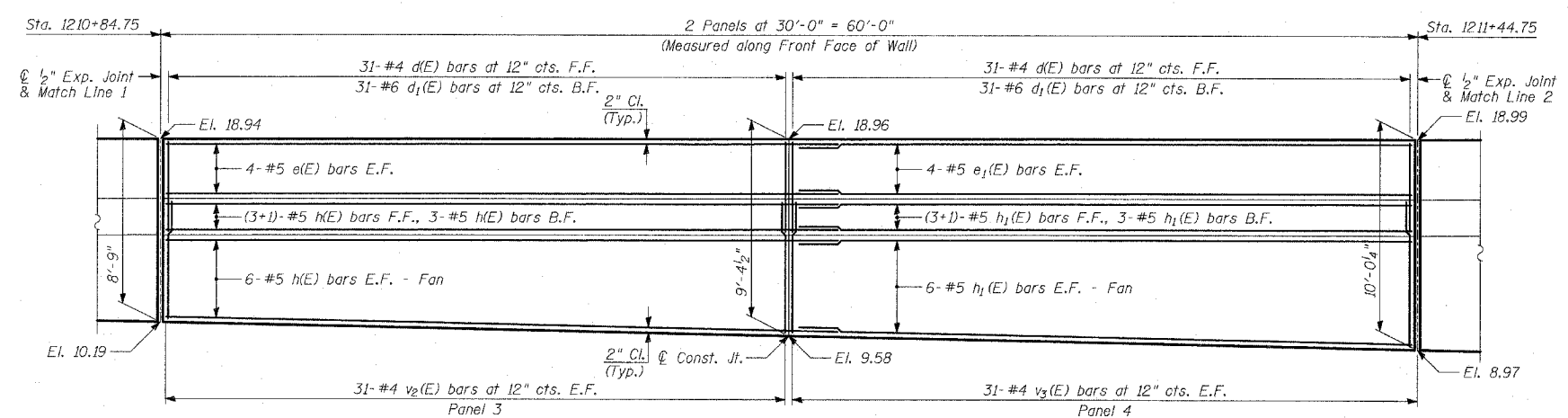




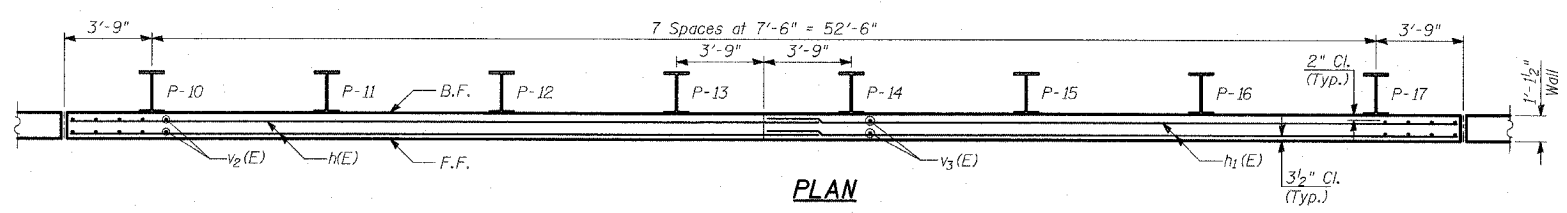
**ELEVATION**



**PLAN**



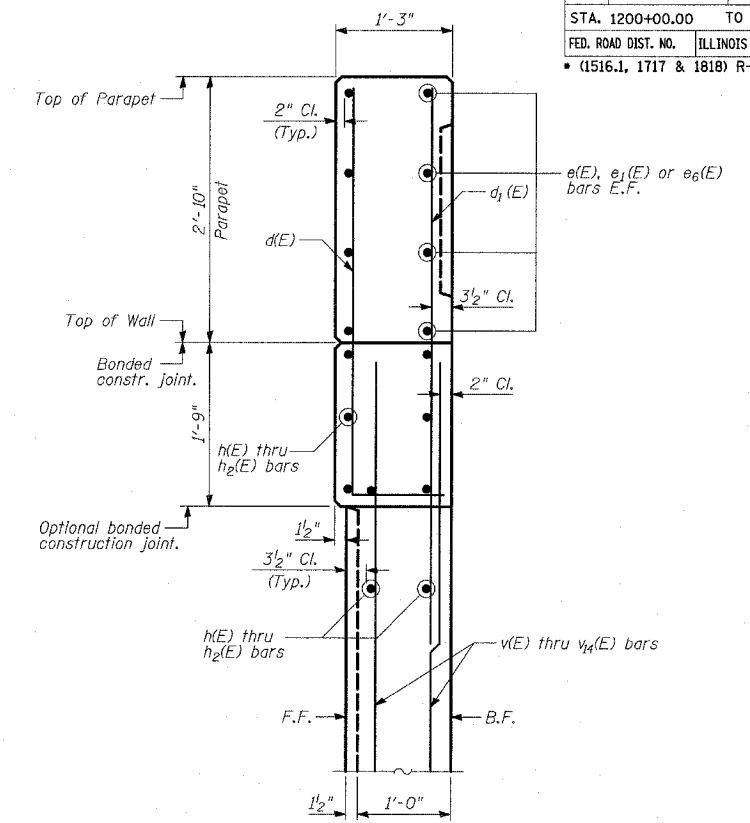
**ELEVATION**



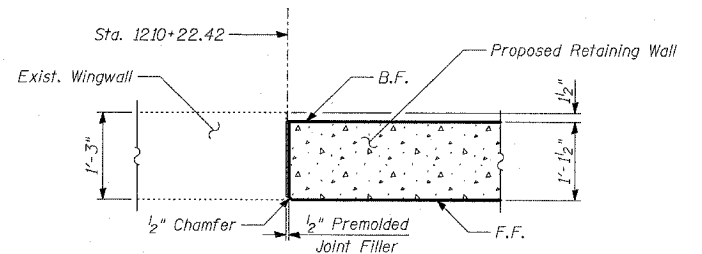
**PLAN**

- NOTES:**
1. B.F. - denotes Back Face.
  2. E.F. - denotes Each Face.
  3. F.F. - denotes Front Face.
  4. Work this Sheet with Sheets 9 thru 13 of 20.
  5. Pile spacing measured along front face of wall.
  6. For Lap Splices, see Sheet 10 of 20.

**TYLIN INTERNATIONAL**



**FLUTED PARAPET DETAIL**  
(Sta. 1210+22.42 to Sta. 1214+74.75)

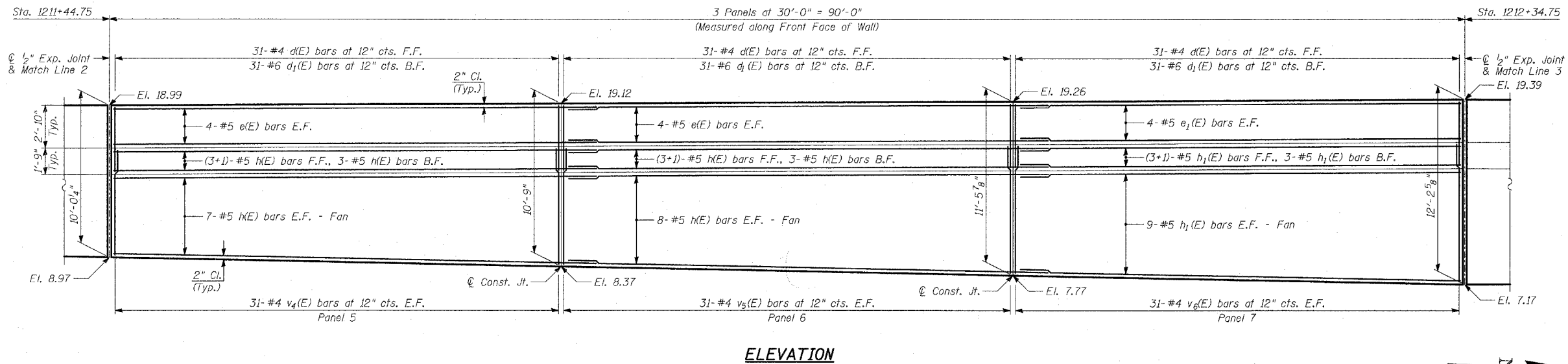


**PLAN**  
**PROPOSED RETAINING WALL AT EXISTING WALL**

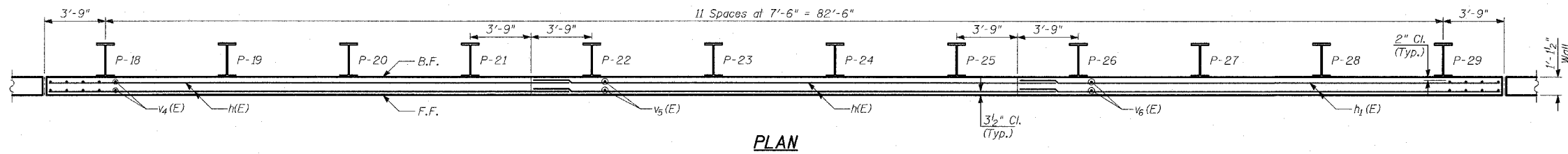
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**EXIT RAMP TO 95TH ST.**  
**WALL 34 - PLAN AND ELEVATION**  
**STA. 1210+22.42 TO STA. 1211+44.75**  
 S.N. 016-W946  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

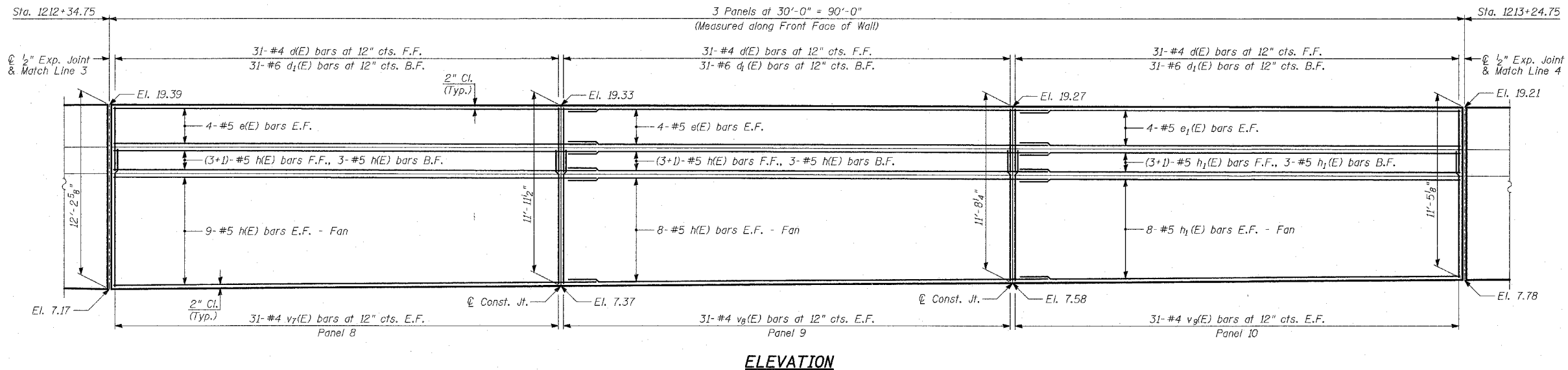
DESIGNED BY: MI, DJR  
 DRAWN BY: DJR, TB  
 CHECKED BY: TD, MI



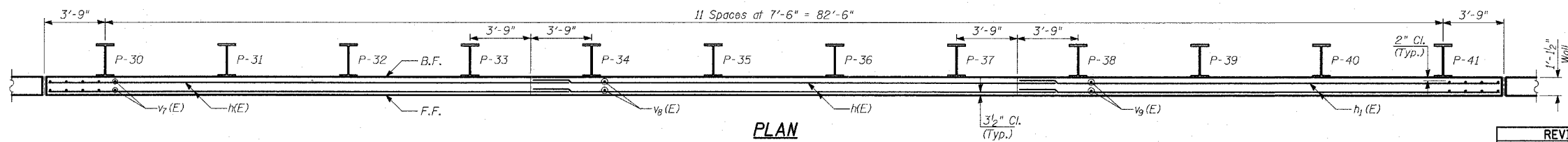
**ELEVATION**



**PLAN**



**ELEVATION**



**PLAN**

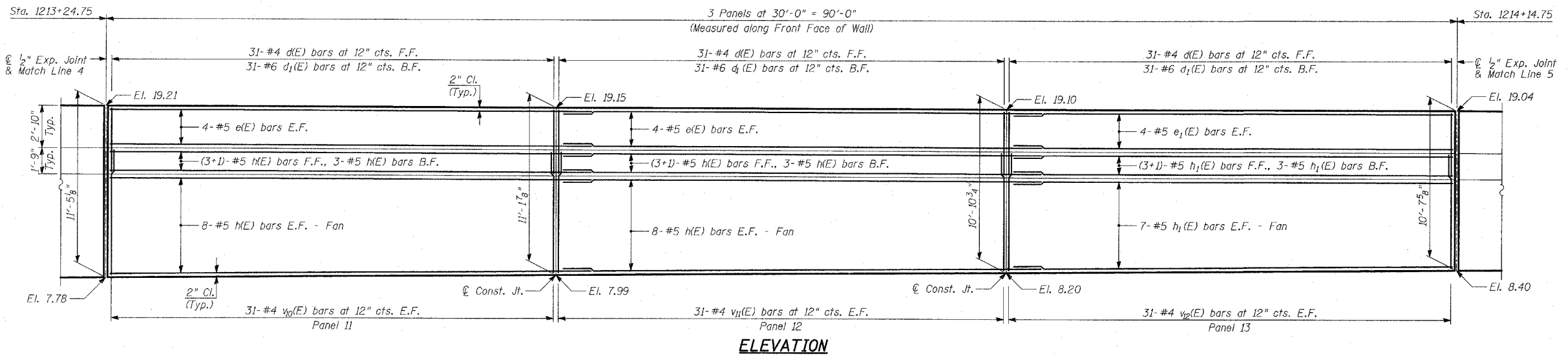
**NOTES:**

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this Sheet with Sheets 9 thru 13 of 20.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 10 of 20.

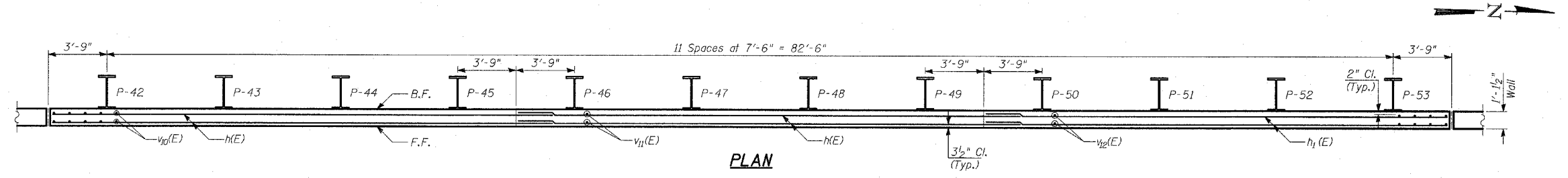
**TYLIN INTERNATIONAL**

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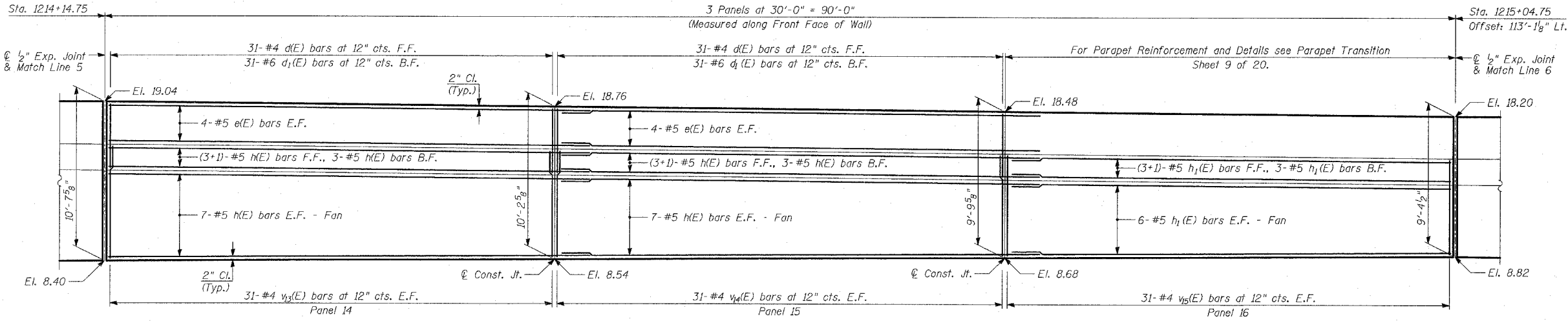
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP TO 95TH ST.  
 WALL 34 - PLAN AND ELEVATION  
 STA. 1211+44.75 TO STA. 1213+24.75  
 S.N. 016-W946 DESIGNED BY: MI, DJR  
 SCALE: N.T.S. DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI



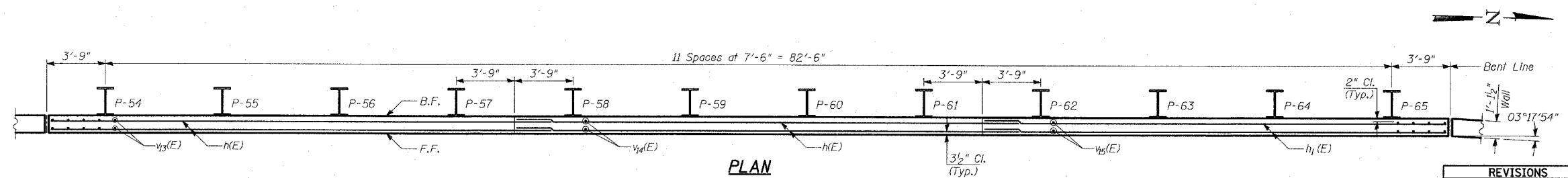
**ELEVATION**



**PLAN**



**ELEVATION**



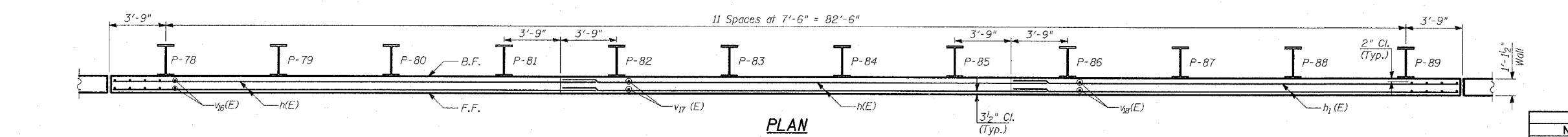
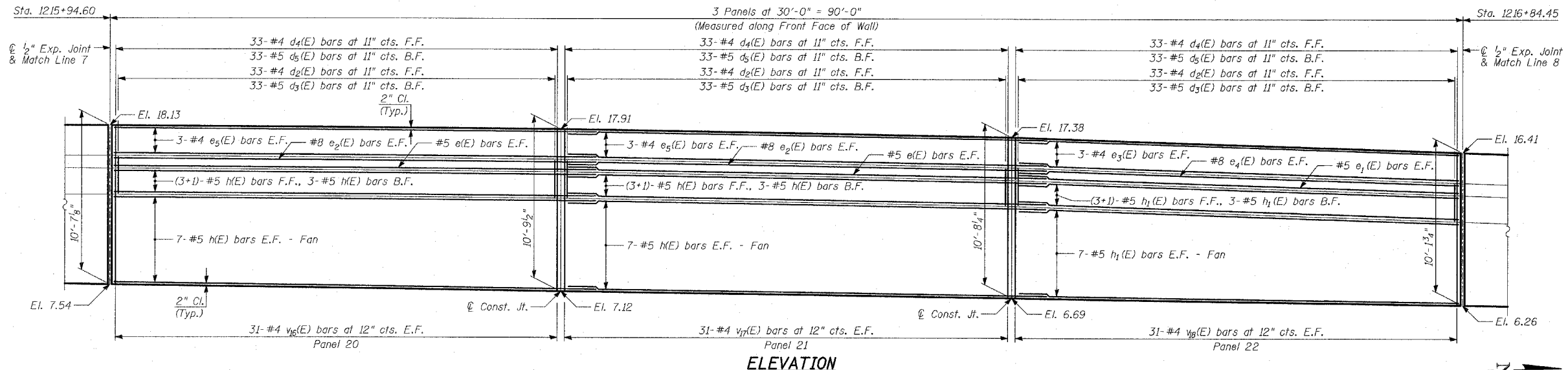
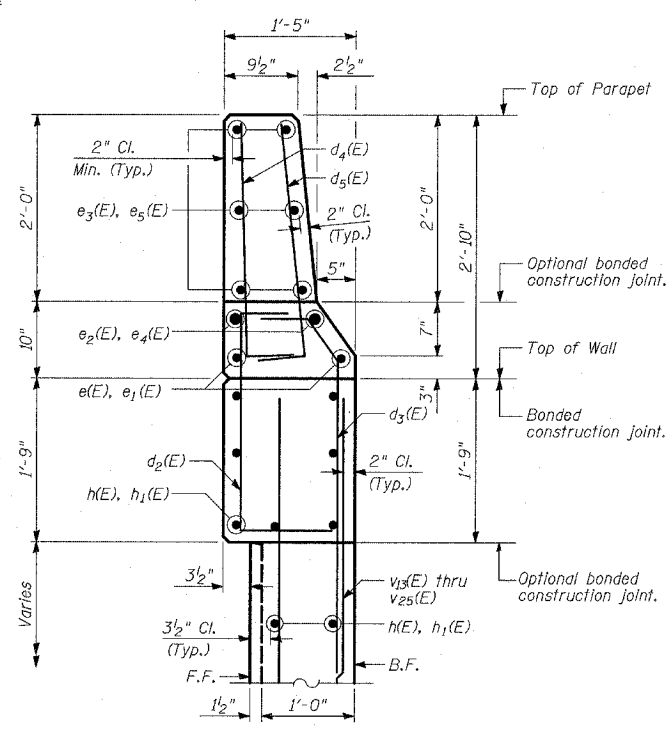
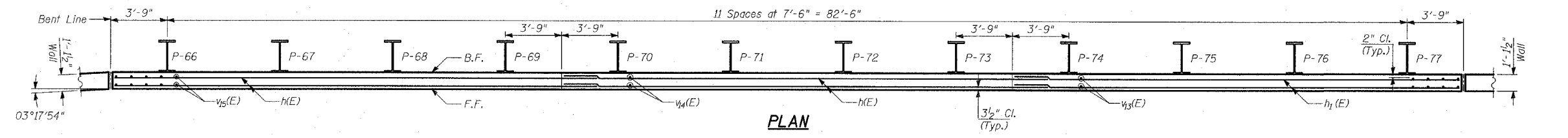
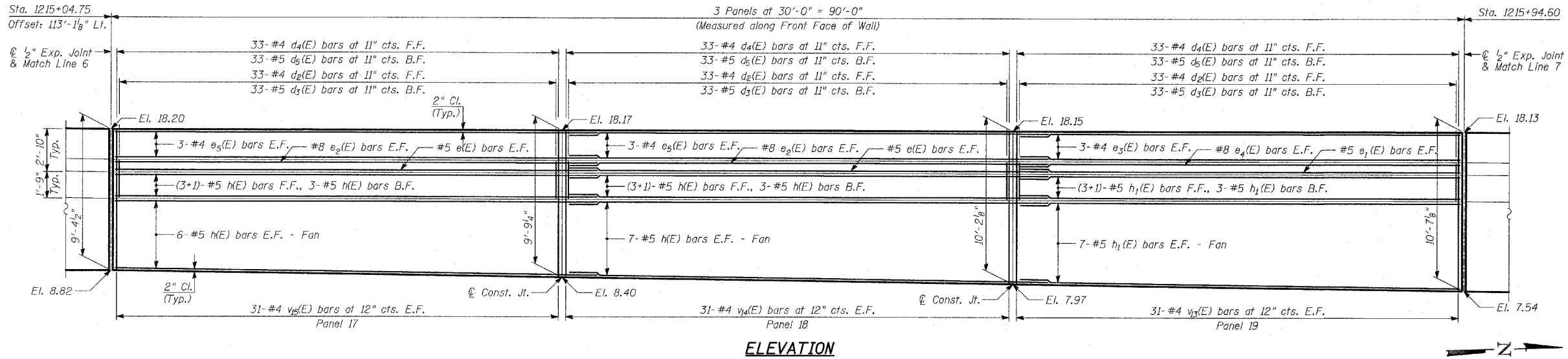
**PLAN**

- NOTES:**
1. B.F. - denotes Back Face.
  2. E.F. - denotes Each Face.
  3. F.F. - denotes Front Face.
  4. Work this Sheet with Sheets 9 thru 13 of 20.
  5. Pile spacing measured along front face of wall.
  6. For Lap Splices, see Sheet 10 of 20.

**TYLIN INTERNATIONAL**

| REVISIONS |      |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**EXIT RAMP TO 95TH ST.**  
**WALL 34 - PLAN AND ELEVATION**  
**STA. 1213+24.75 TO STA. 1215+04.75**  
 S.N. 016-W946      DESIGNED BY: MI, DJR  
 SCALE: N.T.S.      DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005      CHECKED BY: TD, MI



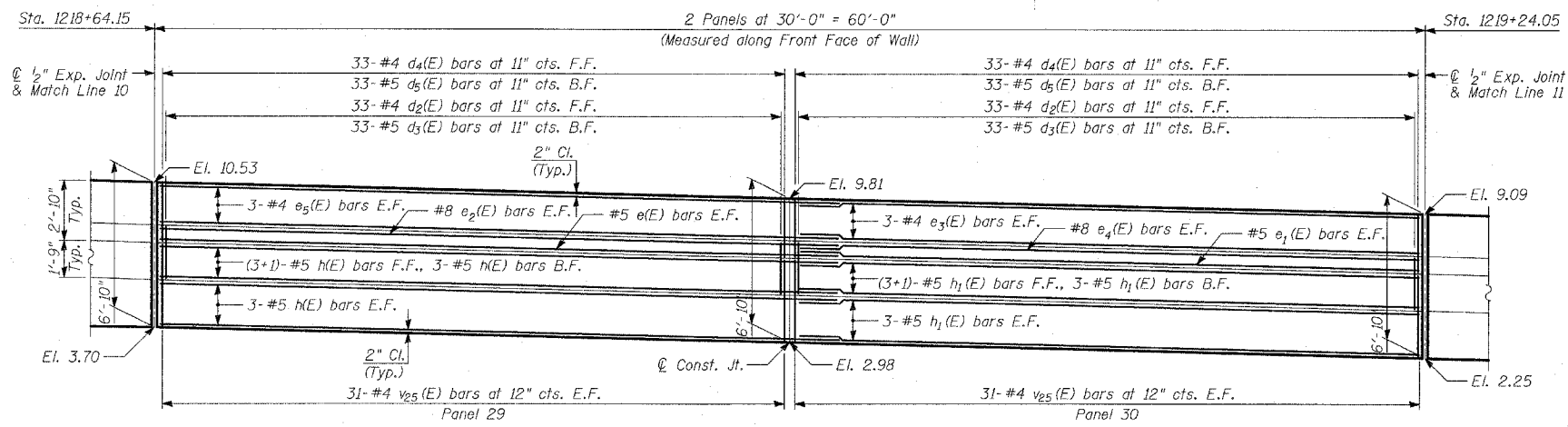
- NOTES:**
1. B.F. - denotes Back Face.
  2. E.F. - denotes Each Face.
  3. F.F. - denotes Front Face.
  4. Work this Sheet with Sheets 9 thru 13 of 20.
  5. Pile spacing measured along front face of wall.
  6. For Lap Splices, see Sheet 10 of 20.

TYL INTERNATIONAL

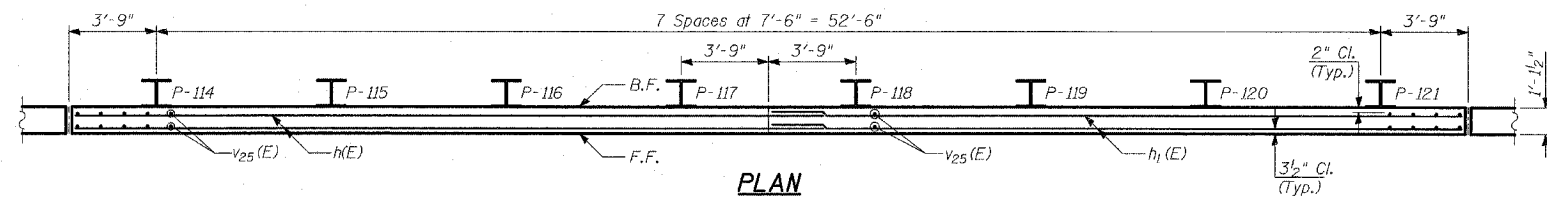
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP TO 95TH ST.  
 WALL 34 - PLAN AND ELEVATION  
 STA. 1215+04.75 TO STA. 1216+84.45  
 S.N. 016-W946 DESIGNED BY: MI, DJR  
 SCALE: N.T.S. DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI

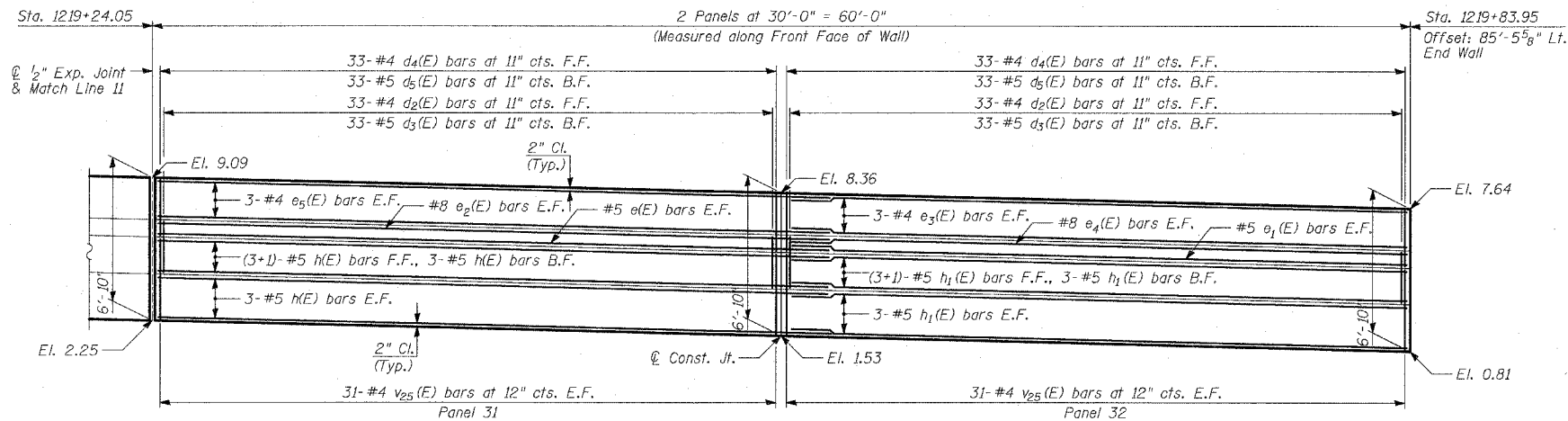




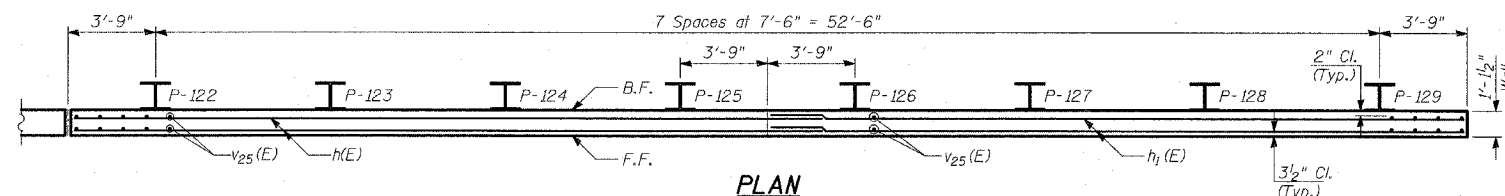
**ELEVATION**



**PLAN**



**ELEVATION**



**PLAN**

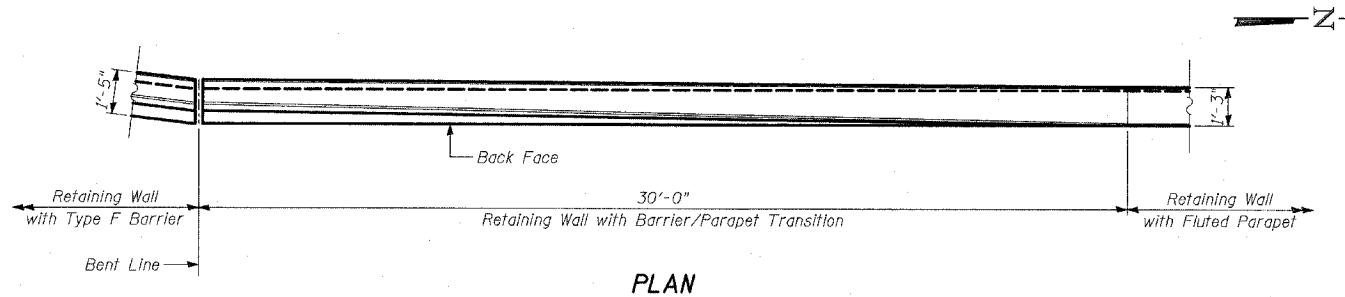
**NOTES:**

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this Sheet with Sheets 9 thru 13 of 20.
5. Pile spacing measured along front face of wall.
6. For Lap Splces, see Sheet 10 of 20.

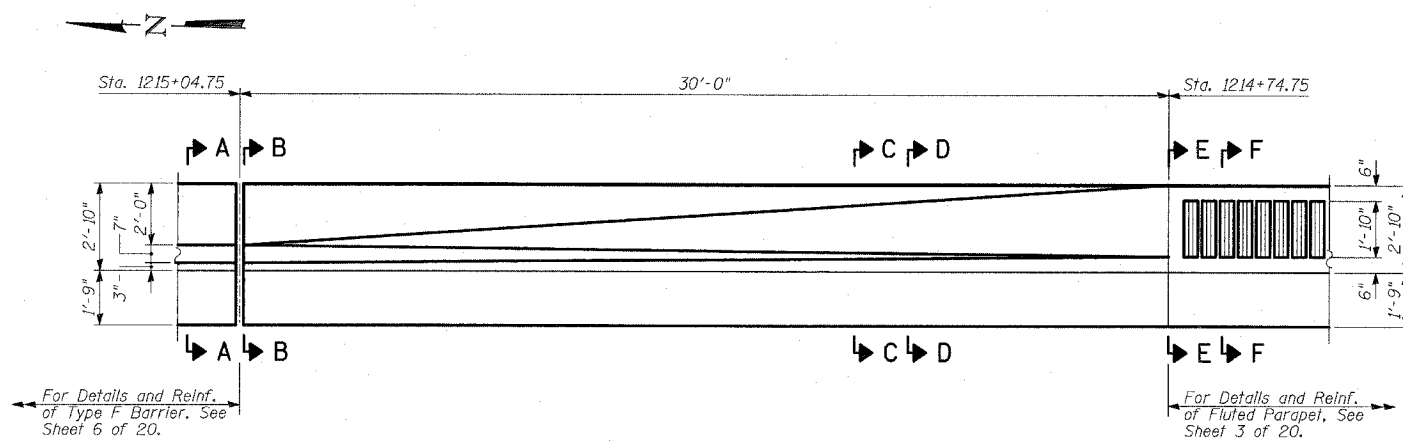
**TYLIN INTERNATIONAL**

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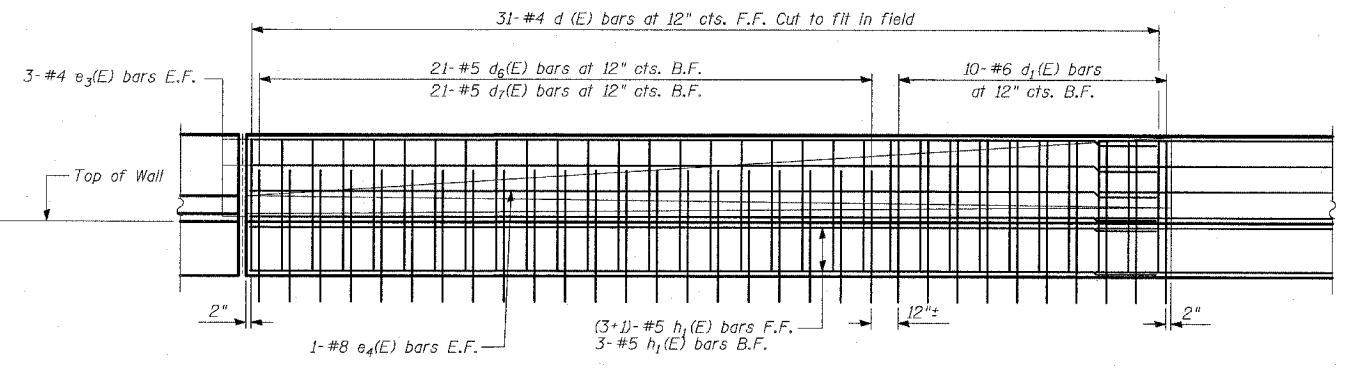
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP TO 95TH ST.  
 WALL 34 - PLAN AND ELEVATION  
 STA. 1218+64.15 TO STA. 1219+83.95  
 S.N. 016-W946 DESIGNED BY: MI, DJR  
 SCALE: N.T.S. DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI



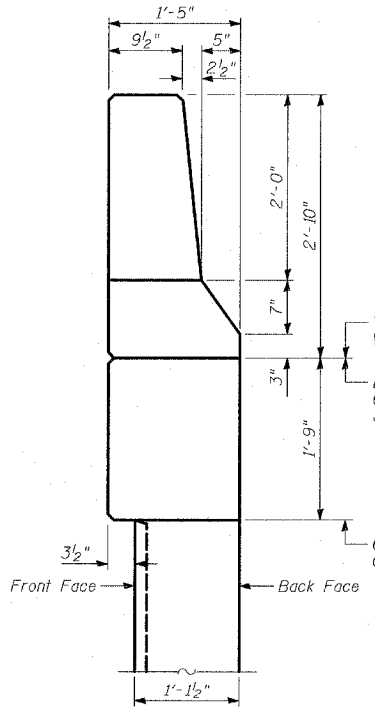
**PLAN**



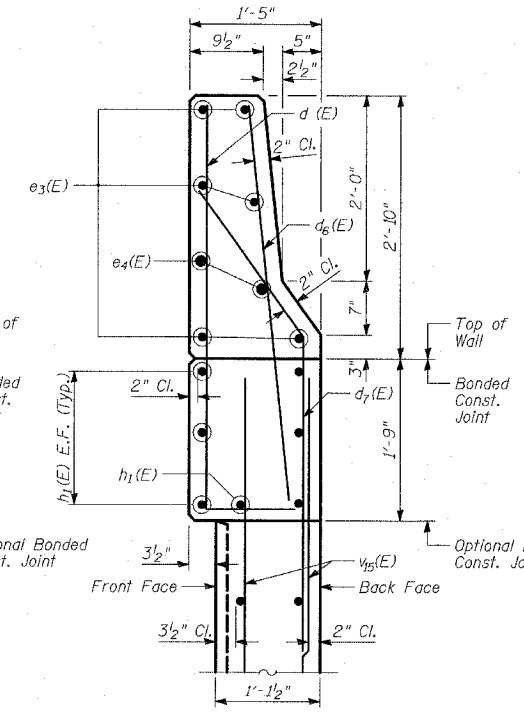
**BACK FACE ELEVATION - TRANSITION - MODIFIED TYPE F BARRIER TO FLUTED PARAPET - CONCRETE DIMENSIONS**  
(From Sta. 1214+74.75 to Sta. 1215+04.75)



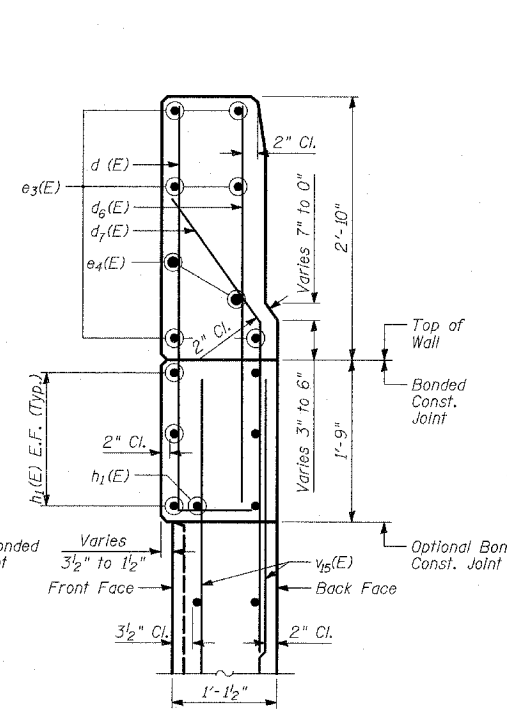
**BACK FACE ELEVATION - TRANSITION - MODIFIED TYPE F BARRIER TO FLUTED PARAPET - REINFORCEMENT**  
(From Sta. 1214+74.75 to Sta. 1215+04.75)



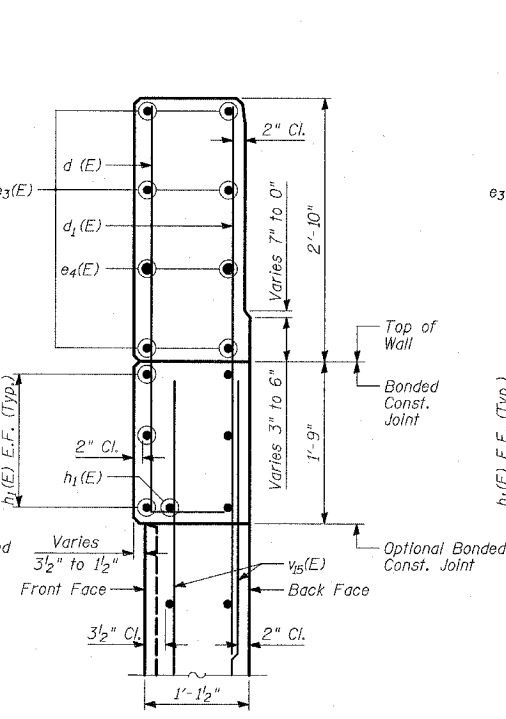
**SECTION A-A**



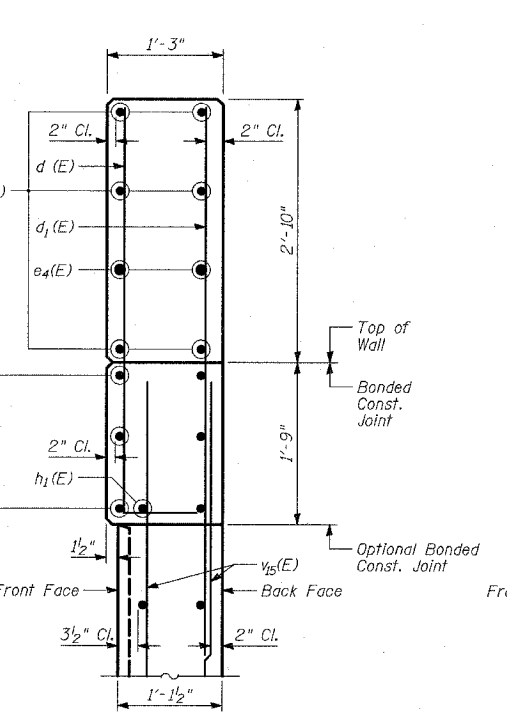
**SECTION B-B**



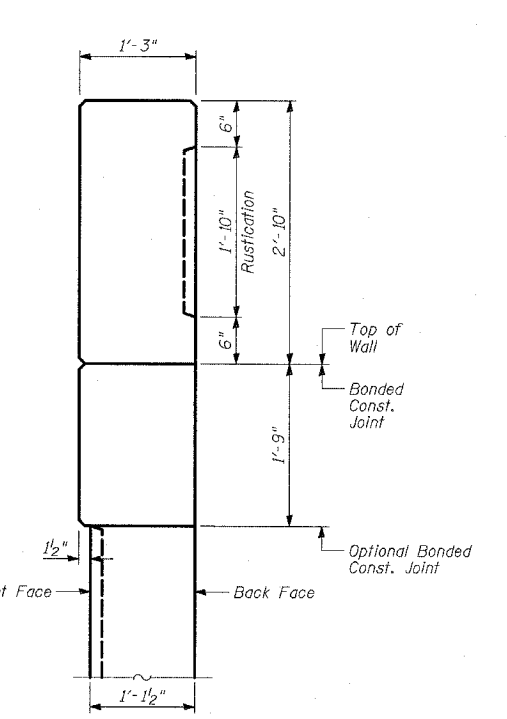
**SECTION C-C**



**SECTION D-D**



**SECTION E-E**



**SECTION F-F**

- NOTES:**
1. B.F. - denotes Back Face.
  2. E.F. - denotes Each Face.
  3. F.F. - denotes Front Face.
  4. Work this sheet with Sheet 5 of 20.
  5. For Lap Splices, see Sheet 10 of 20.

**TYLIN INTERNATIONAL**

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**EXIT RAMP TO 95TH ST.**  
**WALL 34**  
**PARAPET TRANSITION**  
 S.N. 016-W946 DESIGNED BY: MI, MAF  
 SCALE: N.T.S. DRAWN BY: MAF, DJR  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI



**PILE LAYOUT**

| Pile | Station at Working Point | Top of Parapet El. | Top of Pile El. | Bot. of Wall El. | Section | Pile Tip El. | Pile Length |
|------|--------------------------|--------------------|-----------------|------------------|---------|--------------|-------------|
| P-1  | 1210+24.00               | 18.32              | 14.15           | 11.42            | W18x143 | -16.60       | 30'-9"      |
| P-2  | 1210+30.00               | 18.43              | 14.27           | 11.30            |         | -16.73       | 31'-0"      |
| P-3  | 1210+36.00               | 18.55              | 14.38           | 11.18            |         | -16.87       | 31'-3"      |
| P-4  | 1210+43.50               | 18.69              | 14.53           | 11.02            |         | -17.06       | 31'-7"      |
| P-5  | 1210+51.00               | 18.84              | 14.67           | 10.87            |         | -17.16       | 31'-10"     |
| P-6  | 1210+58.50               | 18.91              | 14.75           | 10.72            |         | -17.34       | 32'-1"      |
| P-7  | 1210+66.00               | 18.92              | 14.75           | 10.57            |         | -17.50       | 32'-3"      |
| P-8  | 1210+73.50               | 18.93              | 14.76           | 10.42            |         | -17.66       | 32'-5"      |
| P-9  | 1210+81.00               | 18.93              | 14.77           | 10.26            | W18x143 | -17.82       | 32'-7"      |
| P-10 | 1210+88.50               | 18.94              | 14.77           | 10.11            | W21x147 | -17.89       | 32'-8"      |
| P-11 | 1210+96.00               | 18.95              | 14.78           | 9.96             |         | -18.05       | 32'-10"     |
| P-12 | 1211+03.50               | 18.95              | 14.79           | 9.81             |         | -18.21       | 33'-0"      |
| P-13 | 1211+11.00               | 18.96              | 14.79           | 9.66             |         | -18.37       | 33'-2"      |
| P-14 | 1211+18.50               | 18.97              | 14.80           | 9.50             |         | -18.53       | 33'-4"      |
| P-15 | 1211+26.00               | 18.97              | 14.81           | 9.35             |         | -18.69       | 33'-6"      |
| P-16 | 1211+33.50               | 18.98              | 14.81           | 9.20             |         | -18.85       | 33'-8"      |
| P-17 | 1211+41.00               | 18.99              | 14.82           | 9.05             | W21x147 | -19.01       | 33'-10"     |
| P-18 | 1211+48.50               | 19.01              | 14.84           | 8.90             | W24x176 | -21.16       | 36'-0"      |
| P-19 | 1211+56.00               | 19.04              | 14.87           | 8.75             |         | -21.29       | 36'-2"      |
| P-20 | 1211+63.50               | 19.07              | 14.91           | 8.59             |         | -21.43       | 36'-4"      |
| P-21 | 1211+71.00               | 19.11              | 14.94           | 8.44             |         | -21.56       | 36'-6"      |
| P-22 | 1211+78.50               | 19.14              | 14.97           | 8.29             |         | -21.78       | 36'-9"      |
| P-23 | 1211+86.00               | 19.17              | 15.01           | 8.14             |         | -21.91       | 36'-11"     |
| P-24 | 1211+93.50               | 19.21              | 15.04           | 7.99             |         | -22.04       | 37'-1"      |
| P-25 | 1212+01.00               | 19.24              | 15.07           | 7.84             |         | -22.18       | 37'-3"      |
| P-26 | 1212+08.50               | 19.27              | 15.11           | 7.69             |         | -22.31       | 37'-5"      |
| P-27 | 1212+16.00               | 19.31              | 15.14           | 7.54             |         | -22.53       | 37'-8"      |
| P-28 | 1212+23.50               | 19.34              | 15.17           | 7.39             |         | -22.66       | 37'-10"     |
| P-29 | 1212+31.00               | 19.37              | 15.20           | 7.24             |         | -22.80       | 38'-0"      |
| P-30 | 1212+38.50               | 19.38              | 15.21           | 7.19             |         | -22.87       | 38'-1"      |
| P-31 | 1212+46.00               | 19.37              | 15.20           | 7.24             |         | -22.80       | 38'-0"      |
| P-32 | 1212+53.50               | 19.35              | 15.18           | 7.29             |         | -22.73       | 37'-11"     |
| P-33 | 1212+61.00               | 19.34              | 15.17           | 7.35             |         | -22.66       | 37'-10"     |
| P-34 | 1212+68.50               | 19.32              | 15.16           | 7.40             |         | -22.68       | 37'-10"     |
| P-35 | 1212+76.00               | 19.31              | 15.14           | 7.45             |         | -22.61       | 37'-9"      |
| P-36 | 1212+83.50               | 19.29              | 15.13           | 7.50             |         | -22.54       | 37'-8"      |
| P-37 | 1212+91.00               | 19.28              | 15.11           | 7.55             |         | -22.47       | 37'-7"      |
| P-38 | 1212+98.50               | 19.26              | 15.10           | 7.60             |         | -22.40       | 37'-6"      |
| P-39 | 1213+06.00               | 19.25              | 15.08           | 7.65             |         | -22.42       | 37'-6"      |
| P-40 | 1213+13.50               | 19.23              | 15.07           | 7.71             |         | -22.35       | 37'-5"      |
| P-41 | 1213+21.00               | 19.22              | 15.05           | 7.76             |         | -22.28       | 37'-4"      |
| P-42 | 1213+28.50               | 19.21              | 15.04           | 7.81             |         | -22.21       | 37'-3"      |
| P-43 | 1213+36.00               | 19.19              | 15.02           | 7.86             |         | -22.14       | 37'-2"      |
| P-44 | 1213+43.50               | 19.18              | 15.01           | 7.91             |         | -22.16       | 37'-2"      |
| P-45 | 1213+51.00               | 19.16              | 15.00           | 7.96             |         | -22.09       | 37'-1"      |
| P-46 | 1213+58.50               | 19.15              | 14.98           | 8.02             |         | -22.02       | 37'-0"      |
| P-47 | 1213+66.00               | 19.13              | 14.97           | 8.07             |         | -21.95       | 36'-11"     |
| P-48 | 1213+73.50               | 19.12              | 14.95           | 8.12             |         | -21.97       | 36'-11"     |
| P-49 | 1213+81.00               | 19.10              | 14.94           | 8.17             |         | -21.90       | 36'-10"     |
| P-50 | 1213+88.50               | 19.09              | 14.92           | 8.22             |         | -21.83       | 36'-9"      |
| P-51 | 1213+96.00               | 19.07              | 14.91           | 8.27             |         | -21.76       | 36'-8"      |
| P-52 | 1214+03.50               | 19.06              | 14.89           | 8.32             |         | -21.69       | 36'-7"      |
| P-53 | 1214+11.00               | 19.05              | 14.88           | 8.38             | W24x176 | -21.70       | 36'-7"      |
| P-54 | 1214+18.50               | 19.00              | 14.84           | 8.42             | W21x147 | -19.66       | 34'-6"      |
| P-55 | 1214+26.00               | 18.93              | 14.77           | 8.45             |         | -19.57       | 34'-4"      |
| P-56 | 1214+33.50               | 18.86              | 14.70           | 8.49             |         | -19.55       | 34'-3"      |
| P-57 | 1214+41.00               | 18.79              | 14.63           | 8.52             |         | -19.54       | 34'-2"      |
| P-58 | 1214+48.50               | 18.72              | 14.56           | 8.56             |         | -19.44       | 34'-0"      |
| P-59 | 1214+56.00               | 18.65              | 14.49           | 8.59             |         | -19.43       | 33'-11"     |
| P-60 | 1214+63.50               | 18.58              | 14.42           | 8.63             |         | -19.42       | 33'-10"     |
| P-61 | 1214+71.00               | 18.51              | 14.35           | 8.67             |         | -19.40       | 33'-9"      |
| P-62 | 1214+78.50               | 18.44              | 14.27           | 8.70             |         | -19.31       | 33'-7"      |
| P-63 | 1214+86.00               | 18.37              | 14.20           | 8.74             |         | -19.30       | 33'-6"      |
| P-64 | 1214+93.50               | 18.30              | 14.13           | 8.77             |         | -19.28       | 33'-5"      |
| P-65 | 1215+01.00               | 18.23              | 14.06           | 8.81             | W21x147 | -19.27       | 33'-4"      |

**PILE LAYOUT**

| Pile  | Station at Working Point | Top of Parapet El. | Top of Pile El. | Bot. of Wall El. | Section  | Pile Tip El. | Pile Length |
|-------|--------------------------|--------------------|-----------------|------------------|----------|--------------|-------------|
| P-66  | 1215+08.56               | 18.19              | 14.03           | 8.77             | W18x143  | -19.31       | 33'-4"      |
| P-67  | 1215+16.04               | 18.19              | 14.02           | 8.66             |          | -19.40       | 33'-5"      |
| P-68  | 1215+23.53               | 18.18              | 14.02           | 8.56             |          | -19.48       | 33'-6"      |
| P-69  | 1215+31.02               | 18.18              | 14.01           | 8.45             |          | -19.57       | 33'-7"      |
| P-70  | 1215+38.51               | 18.17              | 14.00           | 8.34             |          | -19.66       | 33'-8"      |
| P-71  | 1215+46.00               | 18.16              | 14.00           | 8.24             |          | -19.84       | 33'-10"     |
| P-72  | 1215+53.48               | 18.16              | 13.99           | 8.13             |          | -19.92       | 33'-11"     |
| P-73  | 1215+60.97               | 18.15              | 13.99           | 8.02             |          | -20.01       | 34'-0"      |
| P-74  | 1215+68.46               | 18.15              | 13.98           | 7.92             |          | -20.10       | 34'-1"      |
| P-75  | 1215+75.95               | 18.15              | 13.98           | 7.81             |          | -20.27       | 34'-3"      |
| P-76  | 1215+83.43               | 18.14              | 13.97           | 7.70             |          | -20.36       | 34'-4"      |
| P-77  | 1215+90.92               | 18.13              | 13.97           | 7.60             |          | -20.45       | 34'-5"      |
| P-78  | 1215+98.41               | 18.10              | 13.93           | 7.49             |          | -20.57       | 34'-6"      |
| P-79  | 1216+05.90               | 18.04              | 13.88           | 7.38             |          | -20.62       | 34'-6"      |
| P-80  | 1216+13.38               | 17.99              | 13.82           | 7.28             |          | -20.76       | 34'-7"      |
| P-81  | 1216+20.87               | 17.93              | 13.77           | 7.17             |          | -20.90       | 34'-8"      |
| P-82  | 1216+28.36               | 17.84              | 13.67           | 7.06             |          | -20.99       | 34'-8"      |
| P-83  | 1216+35.85               | 17.71              | 13.54           | 6.96             |          | -21.12       | 34'-8"      |
| P-84  | 1216+43.33               | 17.58              | 13.41           | 6.85             |          | -21.17       | 34'-7"      |
| P-85  | 1216+50.82               | 17.45              | 13.28           | 6.74             |          | -21.30       | 34'-7"      |
| P-86  | 1216+58.31               | 17.26              | 13.09           | 6.64             |          | -21.41       | 34'-6"      |
| P-87  | 1216+65.80               | 17.02              | 12.85           | 6.53             |          | -21.48       | 34'-4"      |
| P-88  | 1216+73.28               | 16.77              | 12.61           | 6.42             |          | -21.64       | 34'-3"      |
| P-89  | 1216+80.77               | 16.53              | 12.36           | 6.32             |          | -21.72       | 34'-1"      |
| P-90  | 1216+88.26               | 16.28              | 12.12           | 6.21             |          | -21.80       | 33'-11"     |
| P-91  | 1216+95.75               | 16.04              | 11.87           | 6.10             |          | -21.96       | 33'-10"     |
| P-92  | 1217+03.23               | 15.79              | 11.63           | 6.00             |          | -22.04       | 33'-8"      |
| P-93  | 1217+10.72               | 15.55              | 11.38           | 5.89             |          | -22.12       | 33'-6"      |
| P-94  | 1217+18.21               | 15.30              | 11.14           | 5.78             |          | -22.28       | 33'-5"      |
| P-95  | 1217+25.70               | 15.06              | 10.89           | 5.67             |          | -22.36       | 33'-3"      |
| P-96  | 1217+33.19               | 14.81              | 10.65           | 5.57             |          | -22.44       | 33'-1"      |
| P-97  | 1217+40.67               | 14.57              | 10.40           | 5.46             |          | -22.60       | 33'-0"      |
| P-98  | 1217+48.16               | 14.33              | 10.16           | 5.35             |          | -22.67       | 32'-10"     |
| P-99  | 1217+55.65               | 14.08              | 9.91            | 5.25             |          | -22.75       | 32'-8"      |
| P-100 | 1217+63.14               | 13.84              | 9.67            | 5.14             |          | -22.91       | 32'-7"      |
| P-101 | 1217+70.62               | 13.59              | 9.42            | 5.03             |          | -22.99       | 32'-5"      |
| P-102 | 1217+78.11               | 13.35              | 9.18            | 4.93             |          | -23.15       | 32'-4"      |
| P-103 | 1217+85.60               | 13.10              | 8.94            | 4.82             |          | -23.23       | 32'-2"      |
| P-104 | 1217+93.09               | 12.86              | 8.69            | 4.71             |          | -23.31       | 32'-0"      |
| P-105 | 1218+00.57               | 12.61              | 8.45            | 4.61             |          | -23.47       | 31'-11"     |
| P-106 | 1218+08.06               | 12.37              | 8.20            | 4.50             |          | -23.55       | 31'-9"      |
| P-107 | 1218+15.55               | 12.12              | 7.96            | 4.39             |          | -23.63       | 31'-7"      |
| P-108 | 1218+23.04               | 11.88              | 7.71            | 4.29             |          | -23.79       | 31'-6"      |
| P-109 | 1218+30.52               | 11.63              | 7.47            | 4.18             |          | -23.87       | 31'-4"      |
| P-110 | 1218+38.01               | 11.39              | 7.22            | 4.07             |          | -23.94       | 31'-2"      |
| P-111 | 1218+45.50               | 11.14              | 6.98            | 3.97             |          | -24.11       | 31'-1"      |
| P-112 | 1218+52.99               | 10.90              | 6.73            | 3.86             |          | -24.18       | 30'-11"     |
| P-113 | 1218+60.47               | 10.66              | 6.49            | 3.75             | W18x143  | -24.26       | 30'-9"      |
| P-114 | 1218+67.96               | 10.44              | 6.28            | 3.61             | HP14x117 | -17.39       | 23'-8"      |
| P-115 | 1218+75.45               | 10.26              | 6.10            | 3.43             |          | -17.57       | 23'-8"      |
| P-116 | 1218+82.94               | 10.08              | 5.91            | 3.25             |          | -17.75       | 23'-8"      |
| P-117 | 1218+90.42               | 9.90               | 5.73            | 3.07             |          | -17.93       | 23'-8"      |
| P-118 | 1218+97.91               | 9.72               | 5.55            | 2.89             |          | -18.11       | 23'-8"      |
| P-119 | 1219+05.40               | 9.54               | 5.37            | 2.71             |          | -18.29       | 23'-8"      |
| P-120 | 1219+12.89               | 9.36               | 5.19            | 2.52             |          | -18.56       | 23'-9"      |
| P-121 | 1219+20.38               | 9.18               | 5.01            | 2.34             |          | -18.74       | 23'-9"      |
| P-122 | 1219+27.86               | 9.00               | 4.83            | 2.16             |          | -18.92       | 23'-9"      |
| P-123 | 1219+35.35               | 8.82               | 4.65            | 1.98             |          | -19.10       | 23'-9"      |
| P-124 | 1219+42.84               | 8.64               | 4.47            | 1.80             |          | -19.28       | 23'-9"      |
| P-125 | 1219+50.33               | 8.45               | 4.29            | 1.62             |          | -19.46       | 23'-9"      |
| P-126 | 1219+57.81               | 8.27               | 4.11            | 1.44             |          | -19.64       | 23'-9"      |
| P-127 | 1219+65.30               | 8.09               | 3.93            | 1.26             |          | -19.82       | 23'-9"      |
| P-128 | 1219+72.79               | 7.91               | 3.75            | 1.08             |          | -20.00       | 23'-9"      |
| P-129 | 1219+80.28               | 7.73               | 3.56            | 0.90             | HP14x117 | -20.19       | 23'-9"      |

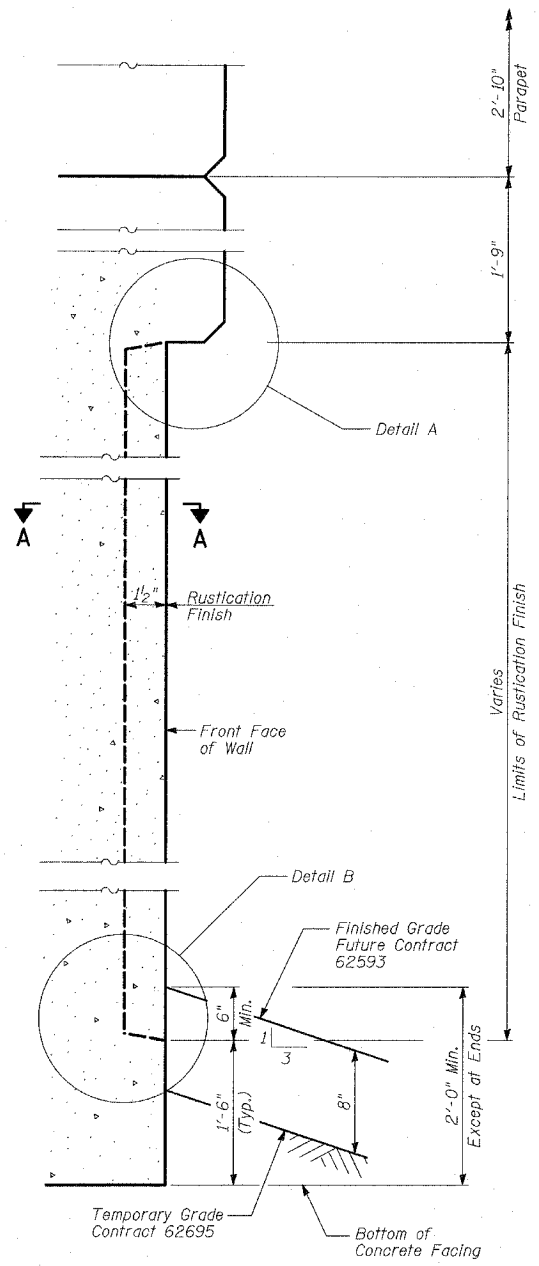
**BILL OF MATERIAL**

| Bar                | No. | Size | Length  | Shape |
|--------------------|-----|------|---------|-------|
| d(E)               | 498 | #4   | 5'-3"   | L     |
| d <sub>1</sub> (E) | 477 | #6   | 6'-6"   | —     |
| d <sub>2</sub> (E) | 528 | #4   | 3'-10"  | L     |
| d <sub>3</sub> (E) | 528 | #5   | 4'-10"  | L     |
| d <sub>4</sub> (E) | 528 | #4   | 3'-0"   | L     |
| d <sub>5</sub> (E) | 528 | #5   | 3'-0"   | L     |
| d <sub>6</sub> (E) | 21  | #5   | 4'-3"   | —     |
| d <sub>7</sub> (E) | 21  | #5   | 5'-4"   | —     |
| e(E)               | 92  | #5   | 32'-2"  | —     |
| e <sub>1</sub> (E) | 52  | #5   | 29'-8"  | —     |
| e <sub>2</sub> (E) | 20  | #8   | 34'-6"  | —     |
| e <sub>3</sub> (E) | 42  | #4   | 29'-8"  | —     |
| e <sub>4</sub> (E) | 14  | #8   | 29'-8"  | —     |
| e <sub>5</sub> (E) | 60  | #4   | 31'-8"  | —     |
| e <sub>6</sub> (E) | 8   | #5   | 34'-6"  | —     |
| h(E)               | 379 | #5   | 32'-2"  | —     |
| h <sub>1</sub> (E) | 224 | #5   | 29'-8"  | —     |
| h <sub>2</sub> (E) | 17  | #5   | 34'-6"  | —     |
| v(E)               | 33  | #4   | 8'-9"   | —     |
| v <sub>1</sub> (E) | 31  | #4   | 10'-7"  | —     |
| v <sub>2</sub> (E) | 31  | #4   | 11'-10" | —     |
| v <sub>3</sub> (E) | 31  | #4   | 13'-2"  | —     |
| v <sub>4</sub> (E) | 31  | #4   | 14'-7"  | —     |
| v <sub>5</sub> (E) | 31  | #4   | 16'-0"  | —     |

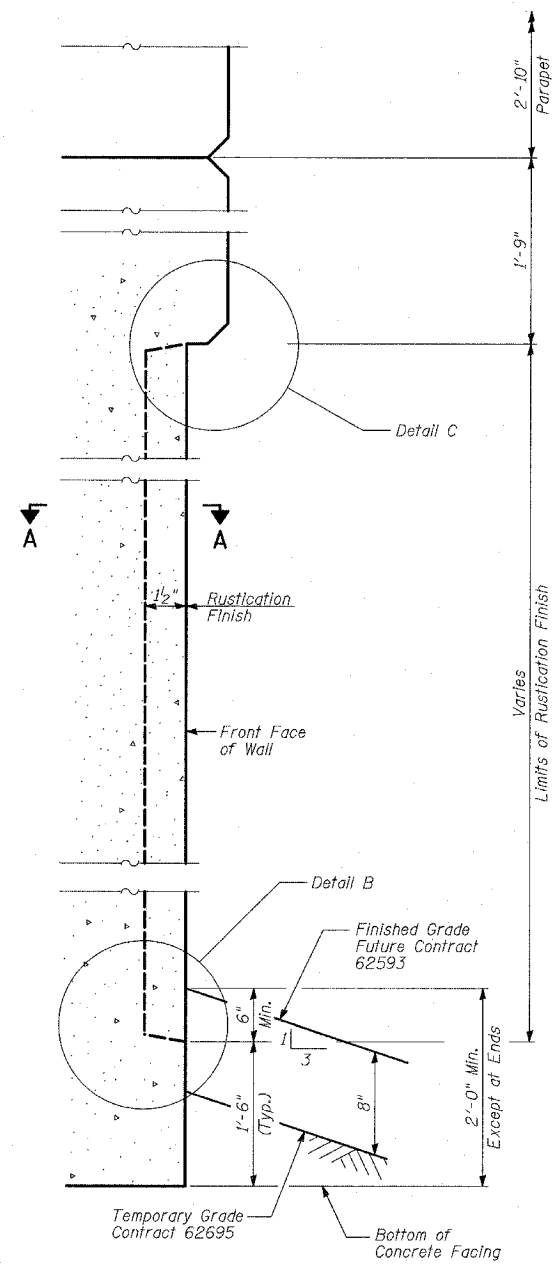
**BILL OF MATERIAL**

| Bar                 | No. | Size | Length  | Shape |
|---------------------|-----|------|---------|-------|
| v <sub>6</sub> (E)  | 31  | #4   | 17'-5"  | —     |
| v <sub>7</sub> (E)  | 31  | #4   | 17'-11" | —     |
| v <sub>8</sub> (E)  | 31  | #4   | 17'-5"  | —     |
| v <sub>9</sub> (E)  | 31  | #4   | 16'-11" | —     |
| v <sub>10</sub> (E) | 31  | #4   | 16'-4"  | —     |
| v <sub>11</sub> (E) | 31  |      |         |       |

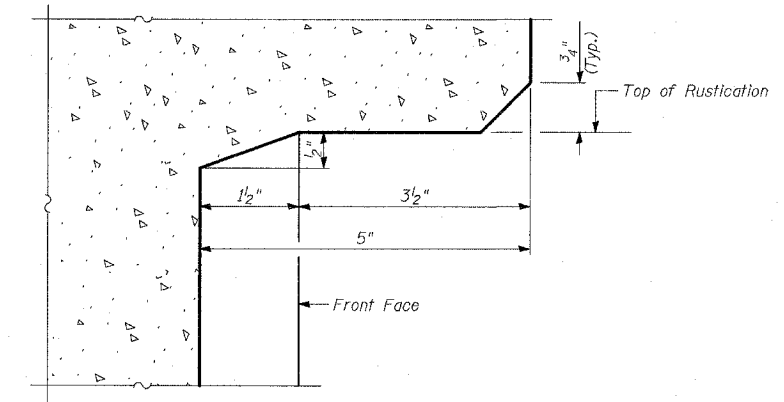




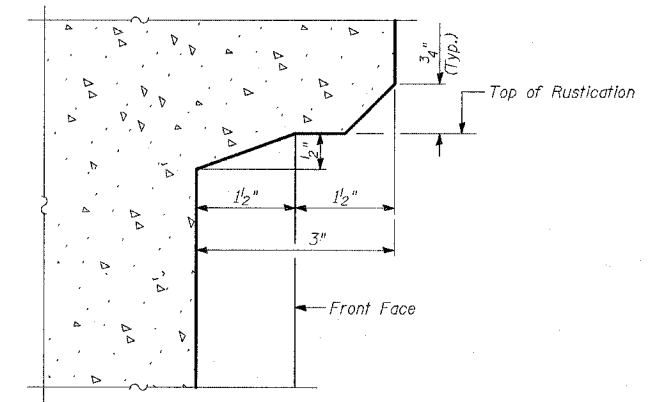
**WALL DETAIL AT TYPE F PARAPET**



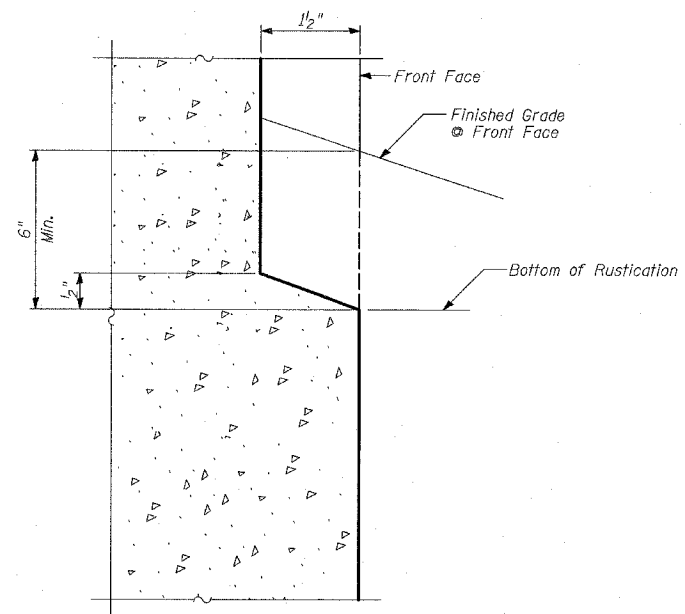
**WALL DETAIL AT FLUTED PARAPET**



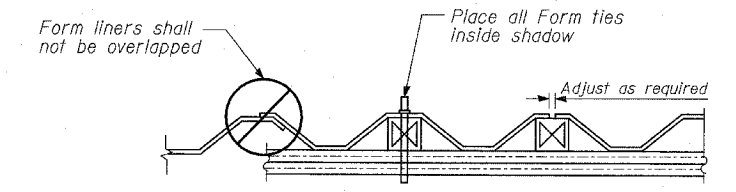
**DETAIL A**



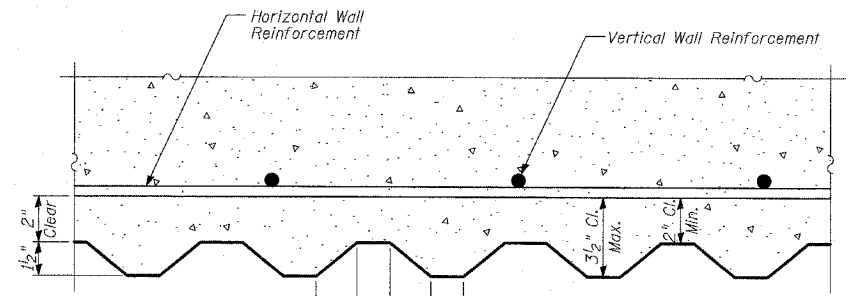
**DETAIL C**



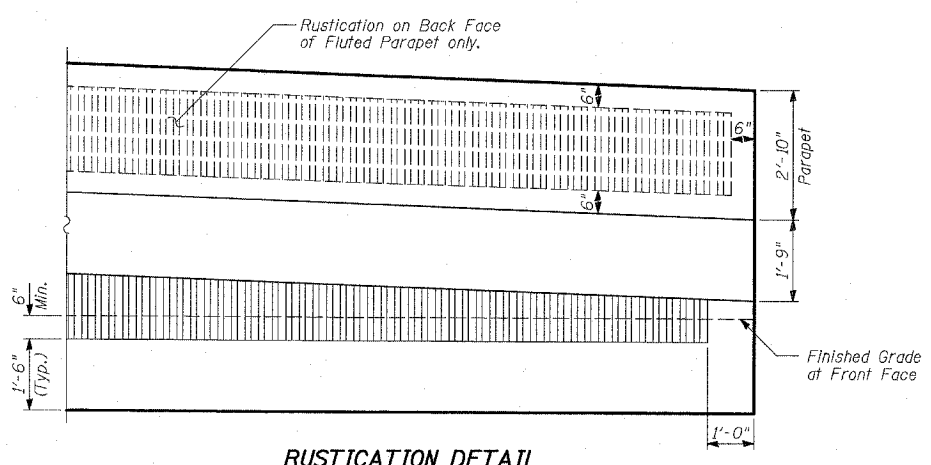
**DETAIL B**



**SUGGESTED FORMWORK DETAIL**



**SECTION A-A**



**RUSTICATION DETAIL**

**NOTES:**  
 1. See Sheet 11 of 20 for expansion and construction joint details.

**BILL OF MATERIAL**

| ITEM               | UNIT  | TOTAL |
|--------------------|-------|-------|
| Rustication Finish | SQ FT | 4,069 |

SHEET 12 OF 20

| REVISIONS |      |
|-----------|------|
| NAME      | DATE |
|           |      |
|           |      |
|           |      |
|           |      |
|           |      |
|           |      |
|           |      |
|           |      |
|           |      |

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP TO 95TH ST.  
 WALL 34  
**RUSTICATION DETAILS**  
 S.N. 016-W946 DESIGNED BY: MI, DJR  
 SCALE: N.T.S. DRAWN BY: DJR  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI



**Wang Engineering, Inc.**  
 Consulting Geotechnical and Environmental Engineers  
 wangeng3@wangeng.com  
 1145 Main Street  
 Lombard, IL 60148  
 Telephone: 630 953-9928  
 Fax: 630 953-9938

**BORING LOG SB 34-01** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

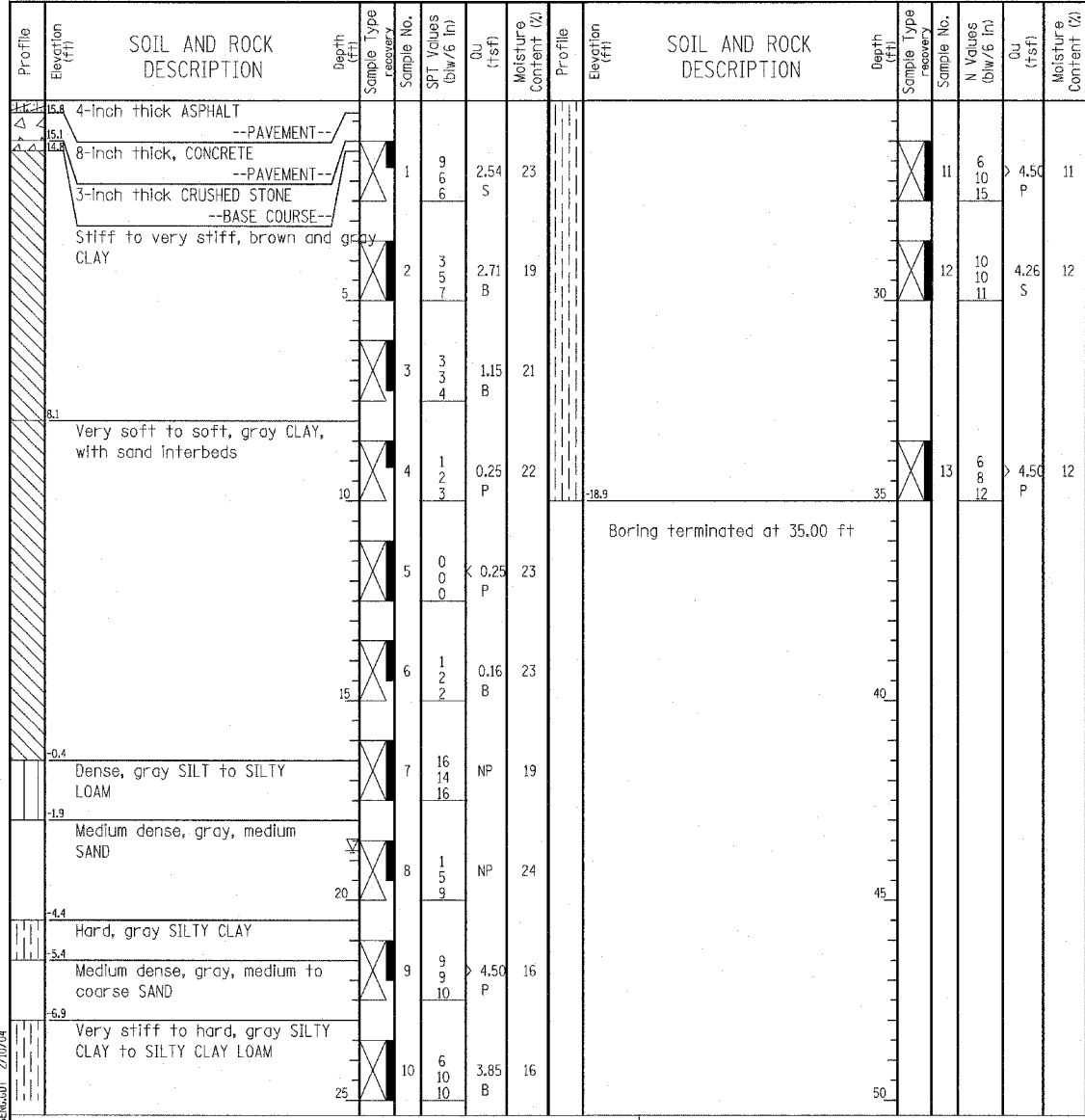
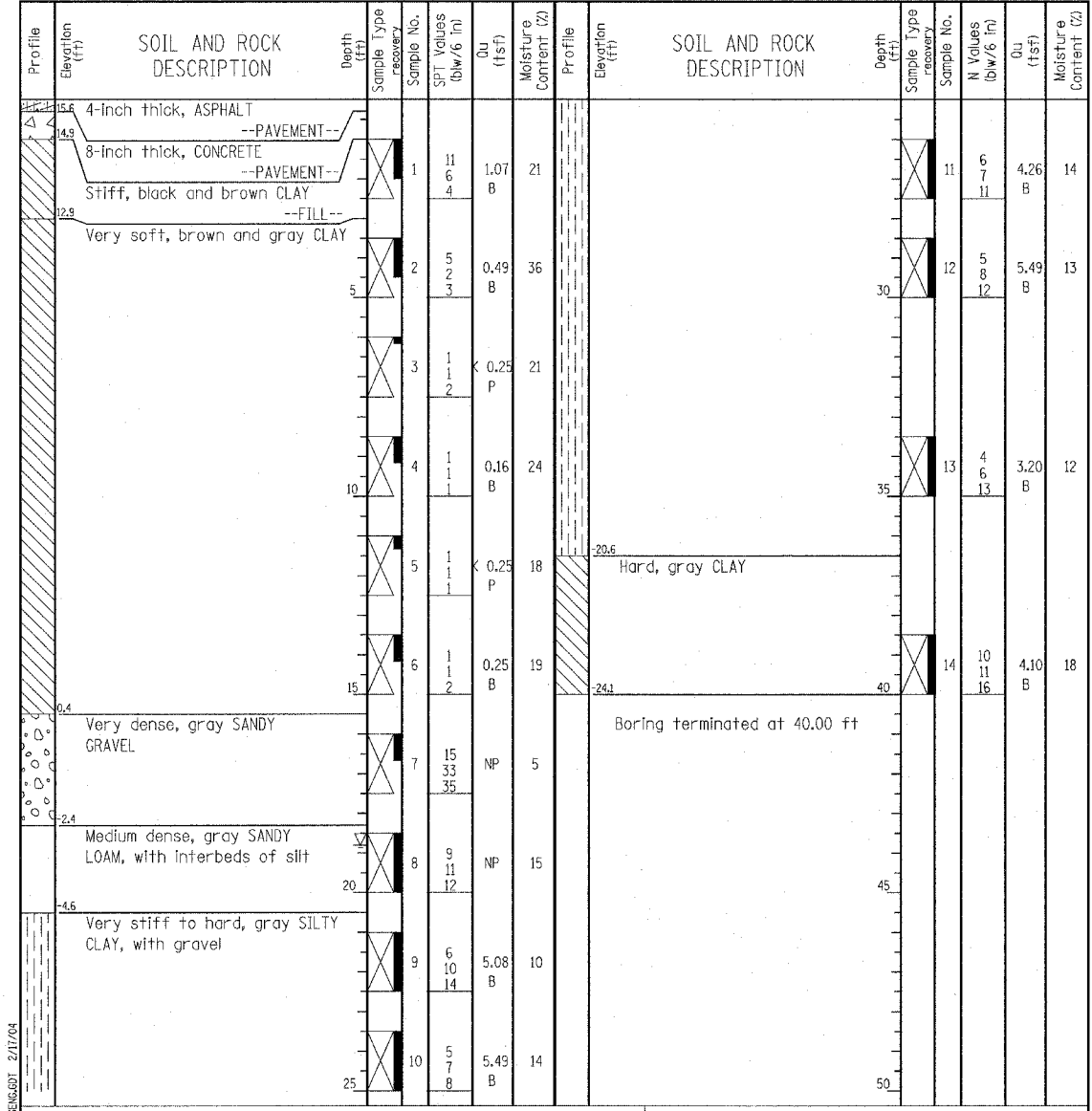
Datum: CCD  
 Elevation: 15.93 ft  
 North: 1842437.11 ft  
 East: 1177613.92 ft  
 Station: 1210+57.1  
 Offset: 133.433' LT

**Wang Engineering, Inc.**  
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**BORING LOG SB 34-02** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 16.09 ft  
 North: 1842509.68 ft  
 East: 1177613.47 ft  
 Station: 1211+29.7  
 Offset: 131.812' LT



| GENERAL NOTES       |   |                   |            | WATER LEVEL DATA          |          |
|---------------------|---|-------------------|------------|---------------------------|----------|
| Begin Drilling      | 02-06-2004  | Complete Drilling | 02-06-2004 | While Drilling            | 18.80 ft |
| Drilling Contractor | Patrick Drilling  | Drill Rig         | CME 75 TMR | At Completion of Drilling | DRY      |
| Driller             | J&L   | Logger            | N. Davis   | Time After Drilling       | NA       |
| Drilling Method     | 3.25" ID. HSA; Boring backfilled with bentonite upon completion |                   |            | Depth to Water            | NA       |

| GENERAL NOTES       |   |                   |            | WATER LEVEL DATA          |          |
|---------------------|---|-------------------|------------|---------------------------|----------|
| Begin Drilling      | 02-02-2004  | Complete Drilling | 02-02-2004 | While Drilling            | 18.75 ft |
| Drilling Contractor | Patrick Drilling  | Drill Rig         | CME 75 TMR | At Completion of Drilling | DRY      |
| Driller             | T&D   | Logger            | Y. Shiu    | Time After Drilling       | NA       |
| Drilling Method     | 3.25" ID. HSA; Boring backfilled with bentonite upon completion |                   |            | Depth to Water            | NA       |



| REVISIONS |      |
|-----------|------|
| NAME      | DATE |
|           |      |
|           |      |
|           |      |
|           |      |
|           |      |

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP TO 95TH ST.  
 WALL 34  
 BORING LOGS SB34-01 & SB34-02  
 S.N. 016-W946  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: DJR  
 DRAWN BY: DJR  
 CHECKED BY: TD



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**BORING LOG SB 34-05** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

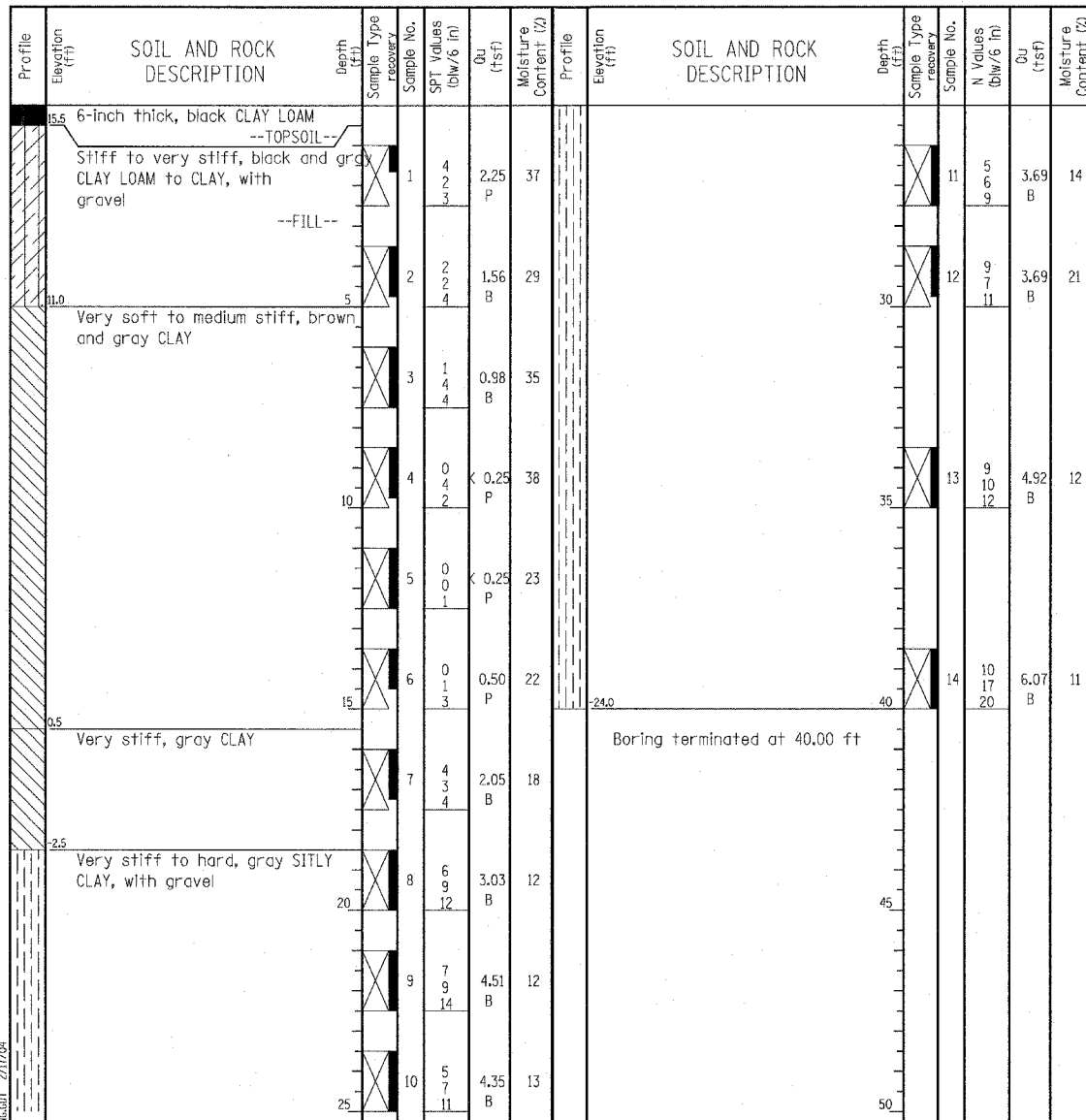
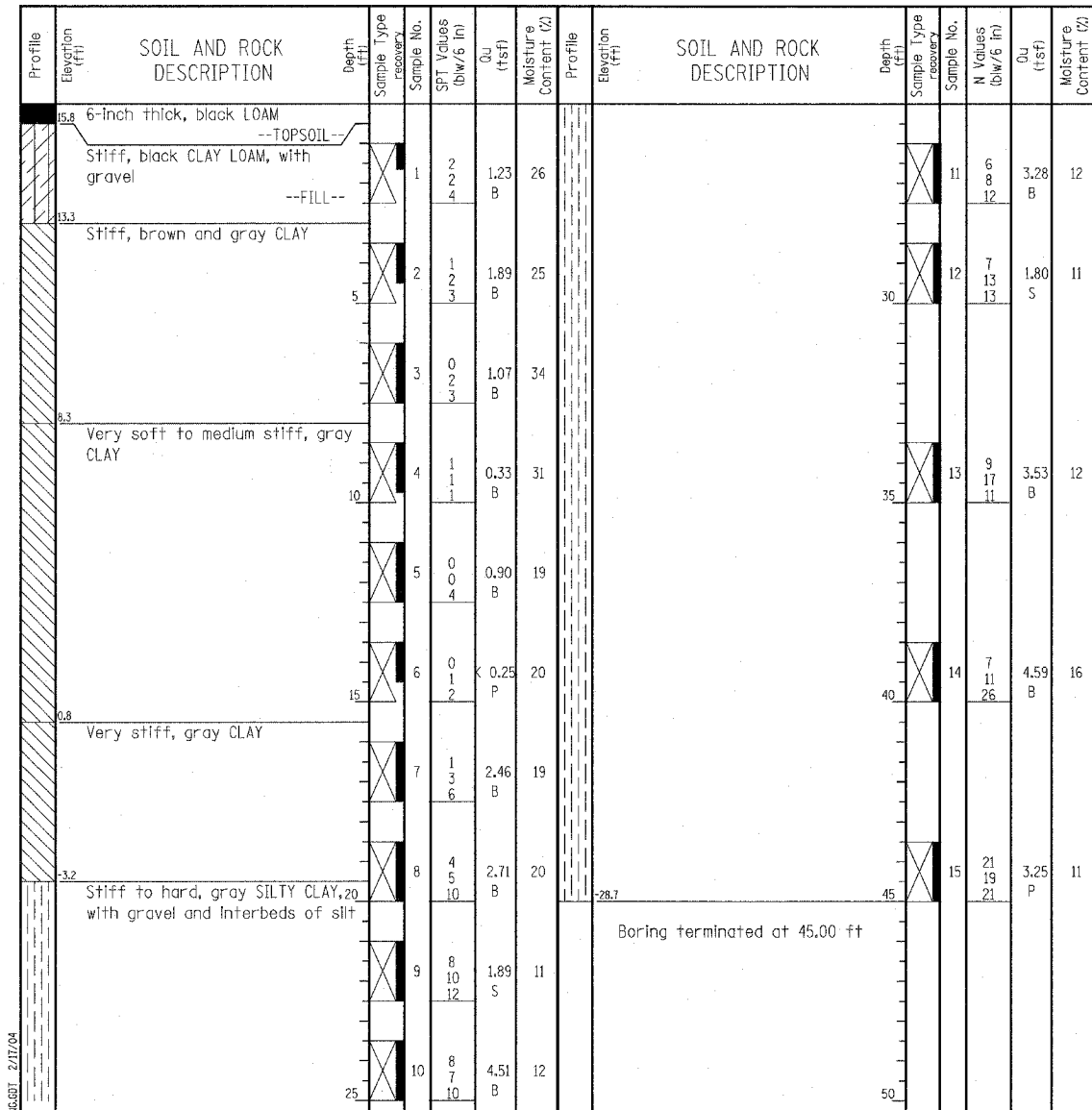
Datum: CCD  
 Elevation: 16.28 ft  
 North: 1842732.75 ft  
 East: 1177620.48 ft  
 Station: 1213+52.4  
 Offset: 118.419' LT

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**BORING LOG SB 34-06** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 15.99 ft  
 North: 1842806.38 ft  
 East: 1177619.85 ft  
 Station: 1214+26.1  
 Offset: 116.344' LT



| GENERAL NOTES             |                  | WATER LEVEL DATA  |   |
|---------------------------|------------------|-------------------|---|
| Begin Drilling            | 02-05-2004       | Complete Drilling | 02-05-2004  |
| Drilling Contractor       | Patrick Drilling | Drill Rig         | CME 75 TMR  |
| Driller                   | T&D              | Logger            | Y. Shiu   |
| Checked by                | N. Davis         | Drilling Method   | 3.25" ID. HSA; Boring backfilled with bentonite upon completion |
| While Drilling            | ☑                | DRY               |   |
| At Completion of Drilling | ☑                | DRY               |   |
| Time After Drilling       | NA               | Depth to Water    | ☑ NA  |

| GENERAL NOTES             |                  | WATER LEVEL DATA  |   |
|---------------------------|------------------|-------------------|---|
| Begin Drilling            | 02-05-2004       | Complete Drilling | 02-05-2004  |
| Drilling Contractor       | Patrick Drilling | Drill Rig         | CME 75 TMR  |
| Driller                   | T&D              | Logger            | Y. Shiu   |
| Checked by                | N. Davis         | Drilling Method   | 3.25" ID. HSA; Boring backfilled with bentonite upon completion |
| While Drilling            | ☑                | DRY               |   |
| At Completion of Drilling | ☑                | DRY               |   |
| Time After Drilling       | NA               | Depth to Water    | ☑ NA  |

**TYLIN INTERNATIONAL**

| REVISIONS |      |
|-----------|------|
| NAME      | DATE |
|           |      |
|           |      |
|           |      |
|           |      |
|           |      |

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP TO 95TH ST.  
 WALL 34  
 BORING LOGS SB34-05 & SB34-06  
 S.N. 016-W946  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: DJR  
 DRAWN BY: DJR  
 CHECKED BY: TD

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**BORING LOG SB 34-07**  
 WEI Job No.: 414-07-01  
 Datum: CCD  
 Elevation: 15.59 ft  
 North: 1842880.89 ft  
 East: 1177616.17 ft  
 Station: 1215+00.7  
 Offset: 118.483' LT

Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION                                      | Depth (ft) | Sample Type | Sample No. | SPT Values (blw/6 in) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample Type | Sample No. | N Values (blw/6 in) | Qu (tsf) | Moisture Content (%) |
|------------------------|--|------------|-------------|------------|-----------------------|----------|----------------------|------------------------|---------------------------|------------|-------------|------------|---------------------|----------|----------------------|
| 15.59                  | 2-inch thick, ASPHALT  | 0.0        |             |            |                       |          |                      | 15.59                  |                           | 0.0        |             |            |                     |          |                      |
| 14.79                  | 8-inch thick, CONCRETE   | 0.8        |             |            |                       |          |                      | 14.79                  |                           | 0.8        |             |            |                     |          |                      |
| 13.99                  | 4-inch thick, CRUSHED STONE                                    | 1.6        |             |            |                       |          |                      | 13.99                  |                           | 1.6        |             |            |                     |          |                      |
| 13.19                  | Hard, black, brown, and gray SILTY CLAY                        | 2.4        |             | 1          | 14                    | 4.50     | 23                   | 13.19                  |                           | 2.4        |             | 11         | 15                  | 3.85     | 17                   |
| 12.39                  | Medium stiff to hard, brown and gray SILTY CLAY to CLAY        | 3.2        |             | 2          | 3                     | 2.30     | 28                   | 12.39                  |                           | 3.2        |             | 12         | 14                  | 2.46     | 13                   |
| 11.59                  |  | 4.0        |             | 3          | 4                     | 1.23     | 29                   | 11.59                  |                           | 4.0        |             | 13         | 17                  | 6.97     | 11                   |
| 10.79                  | Soft, gray CLAY  | 4.8        |             | 4          | 3                     | 0.25     | 33                   | 10.79                  |                           | 4.8        |             | 14         | 22                  | 7.95     | 15                   |
| 9.99                   | Loose, gray SAND   | 5.6        |             | 5          | 1                     | 0.16     | 35                   | 9.99                   |                           | 5.6        |             | 15         | 20                  | 4.1      | 12                   |
| 9.19                   | Very soft to stiff, gray CLAY                                  | 6.4        |             | 6          | 1                     | 0.08     | 23                   | 9.19                   |                           | 6.4        |             | 16         | 15                  | 3.1      | 13                   |
| 8.39                   |  | 7.2        |             | 7          | 1                     | 0.08     | 23                   | 8.39                   |                           | 7.2        |             | 17         | 20                  | 4.1      | 12                   |
| 7.59                   |  | 8.0        |             | 8          | 4                     | 1.23     | 18                   | 7.59                   |                           | 8.0        |             | 18         | 15                  | 3.1      | 13                   |
| 6.79                   |  | 8.8        |             | 9          | 8                     | 2.2      | 10                   | 6.79                   |                           | 8.8        |             | 19         | 10                  | 3.1      | 13                   |
| 5.99                   | Hard, gray SILTY CLAY LOAM                                     | 9.6        |             | 10         | 12                    | 4.50     | 10                   | 5.99                   |                           | 9.6        |             | 20         | 11                  | 3.1      | 13                   |
| 5.19                   | Dense, gray GRAVELLY SAND                                      | 10.4       |             | 11         | 22                    | 4.50     | 10                   | 5.19                   |                           | 10.4       |             | 21         | 11                  | 3.1      | 13                   |
| 4.39                   | Very dense, gray SILT  | 11.2       |             | 12         | 25                    | 4.50     | 12                   | 4.39                   |                           | 11.2       |             | 22         | 11                  | 3.1      | 13                   |
| 3.59                   | Very stiff to hard, SILTY CLAY to SILTY CLAY LOAM, with gravel | 12.0       |             | 13         | 24                    | 4.50     | 12                   | 3.59                   |                           | 12.0       |             | 23         | 11                  | 3.1      | 13                   |
| 2.79                   |  | 12.8       |             | 14         | 30                    | 7.13     | 13                   | 2.79                   |                           | 12.8       |             | 24         | 9                   | 3.1      | 13                   |
| 1.99                   |  | 13.6       |             | 15         | 17                    | 7.13     | 13                   | 1.99                   |                           | 13.6       |             | 25         | 9                   | 3.1      | 13                   |
| 1.19                   |  | 14.4       |             | 16         | 17                    | 7.13     | 13                   | 1.19                   |                           | 14.4       |             | 26         | 9                   | 3.1      | 13                   |
| 0.39                   |  | 15.2       |             | 17         | 17                    | 7.13     | 13                   | 0.39                   |                           | 15.2       |             | 27         | 9                   | 3.1      | 13                   |
| -0.41                  |  | 16.0       |             | 18         | 17                    | 7.13     | 13                   | -0.41                  |                           | 16.0       |             | 28         | 9                   | 3.1      | 13                   |
| -1.21                  |  | 16.8       |             | 19         | 17                    | 7.13     | 13                   | -1.21                  |                           | 16.8       |             | 29         | 9                   | 3.1      | 13                   |
| -2.01                  |  | 17.6       |             | 20         | 17                    | 7.13     | 13                   | -2.01                  |                           | 17.6       |             | 30         | 9                   | 3.1      | 13                   |
| -2.81                  |  | 18.4       |             | 21         | 17                    | 7.13     | 13                   | -2.81                  |                           | 18.4       |             | 31         | 9                   | 3.1      | 13                   |
| -3.61                  |  | 19.2       |             | 22         | 17                    | 7.13     | 13                   | -3.61                  |                           | 19.2       |             | 32         | 9                   | 3.1      | 13                   |
| -4.41                  |  | 20.0       |             | 23         | 17                    | 7.13     | 13                   | -4.41                  |                           | 20.0       |             | 33         | 9                   | 3.1      | 13                   |
| -5.21                  |  | 20.8       |             | 24         | 17                    | 7.13     | 13                   | -5.21                  |                           | 20.8       |             | 34         | 9                   | 3.1      | 13                   |
| -6.01                  |  | 21.6       |             | 25         | 17                    | 7.13     | 13                   | -6.01                  |                           | 21.6       |             | 35         | 9                   | 3.1      | 13                   |
| -6.81                  |  | 22.4       |             | 26         | 17                    | 7.13     | 13                   | -6.81                  |                           | 22.4       |             | 36         | 9                   | 3.1      | 13                   |
| -7.61                  |  | 23.2       |             | 27         | 17                    | 7.13     | 13                   | -7.61                  |                           | 23.2       |             | 37         | 9                   | 3.1      | 13                   |
| -8.41                  |  | 24.0       |             | 28         | 17                    | 7.13     | 13                   | -8.41                  |                           | 24.0       |             | 38         | 9                   | 3.1      | 13                   |
| -9.21                  |  | 24.8       |             | 29         | 17                    | 7.13     | 13                   | -9.21                  |                           | 24.8       |             | 39         | 9                   | 3.1      | 13                   |
| -10.01                 |  | 25.6       |             | 30         | 17                    | 7.13     | 13                   | -10.01                 |                           | 25.6       |             | 40         | 9                   | 3.1      | 13                   |
| -10.81                 |  | 26.4       |             | 31         | 17                    | 7.13     | 13                   | -10.81                 |                           | 26.4       |             | 41         | 9                   | 3.1      | 13                   |
| -11.61                 |  | 27.2       |             | 32         | 17                    | 7.13     | 13                   | -11.61                 |                           | 27.2       |             | 42         | 9                   | 3.1      | 13                   |
| -12.41                 |  | 28.0       |             | 33         | 17                    | 7.13     | 13                   | -12.41                 |                           | 28.0       |             | 43         | 9                   | 3.1      | 13                   |
| -13.21                 |  | 28.8       |             | 34         | 17                    | 7.13     | 13                   | -13.21                 |                           | 28.8       |             | 44         | 9                   | 3.1      | 13                   |
| -14.01                 |  | 29.6       |             | 35         | 17                    | 7.13     | 13                   | -14.01                 |                           | 29.6       |             | 45         | 9                   | 3.1      | 13                   |
| -14.81                 |  | 30.4       |             | 36         | 17                    | 7.13     | 13                   | -14.81                 |                           | 30.4       |             | 46         | 9                   | 3.1      | 13                   |
| -15.61                 |  | 31.2       |             | 37         | 17                    | 7.13     | 13                   | -15.61                 |                           | 31.2       |             | 47         | 9                   | 3.1      | 13                   |
| -16.41                 |  | 32.0       |             | 38         | 17                    | 7.13     | 13                   | -16.41                 |                           | 32.0       |             | 48         | 9                   | 3.1      | 13                   |
| -17.21                 |  | 32.8       |             | 39         | 17                    | 7.13     | 13                   | -17.21                 |                           | 32.8       |             | 49         | 9                   | 3.1      | 13                   |
| -18.01                 |  | 33.6       |             | 40         | 17                    | 7.13     | 13                   | -18.01                 |                           | 33.6       |             | 50         | 9                   | 3.1      | 13                   |
| -18.81                 |  | 34.4       |             | 41         | 17                    | 7.13     | 13                   | -18.81                 |                           | 34.4       |             | 51         | 9                   | 3.1      | 13                   |
| -19.61                 |  | 35.2       |             | 42         | 17                    | 7.13     | 13                   | -19.61                 |                           | 35.2       |             | 52         | 9                   | 3.1      | 13                   |
| -20.41                 |  | 36.0       |             | 43         | 17                    | 7.13     | 13                   | -20.41                 |                           | 36.0       |             | 53         | 9                   | 3.1      | 13                   |
| -21.21                 |  | 36.8       |             | 44         | 17                    | 7.13     | 13                   | -21.21                 |                           | 36.8       |             | 54         | 9                   | 3.1      | 13                   |
| -22.01                 |  | 37.6       |             | 45         | 17                    | 7.13     | 13                   | -22.01                 |                           | 37.6       |             | 55         | 9                   | 3.1      | 13                   |
| -22.81                 |  | 38.4       |             | 46         | 17                    | 7.13     | 13                   | -22.81                 |                           | 38.4       |             | 56         | 9                   | 3.1      | 13                   |
| -23.61                 |  | 39.2       |             | 47         | 17                    | 7.13     | 13                   | -23.61                 |                           | 39.2       |             | 57         | 9                   | 3.1      | 13                   |
| -24.41                 |  | 40.0       |             | 48         | 17                    | 7.13     | 13                   | -24.41                 |                           | 40.0       |             | 58         | 9                   | 3.1      | 13                   |

| GENERAL NOTES   |              |                   |  | WATER LEVEL DATA          |    |          |  |
|---|--------------|-------------------|--|---------------------------|----|----------|--|
| Begin Drilling  | 02-06-2004   | Complete Drilling | 02-06-2004   | While Drilling            | ▽  | 10.50 ft |  |
| Drilling Contractor   | DLZ Drilling | Drill Rig         | Mobile B-59 TMR  | At Completion of Drilling | ▽  | DRY      |  |
| Driller   | J&E          | Logger            | J. Kasnick   | Time After Drilling       | NA |          |  |
| Checked by  | N. Davis     | Drilling Method   | 3.25" ID HSA; Boring backfilled with bentonite upon completion | Depth to Water            | ▽  | NA       |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |              |                   |  |                           |    |          |  |

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**BORING LOG SB 34-08**  
 WEI Job No.: 414-07-01  
 Datum: CCD  
 Elevation: 15.34 ft  
 North: 1842955.18 ft  
 East: 1177620.87 ft  
 Station: 1215+74.8  
 Offset: 111.663' LT

Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

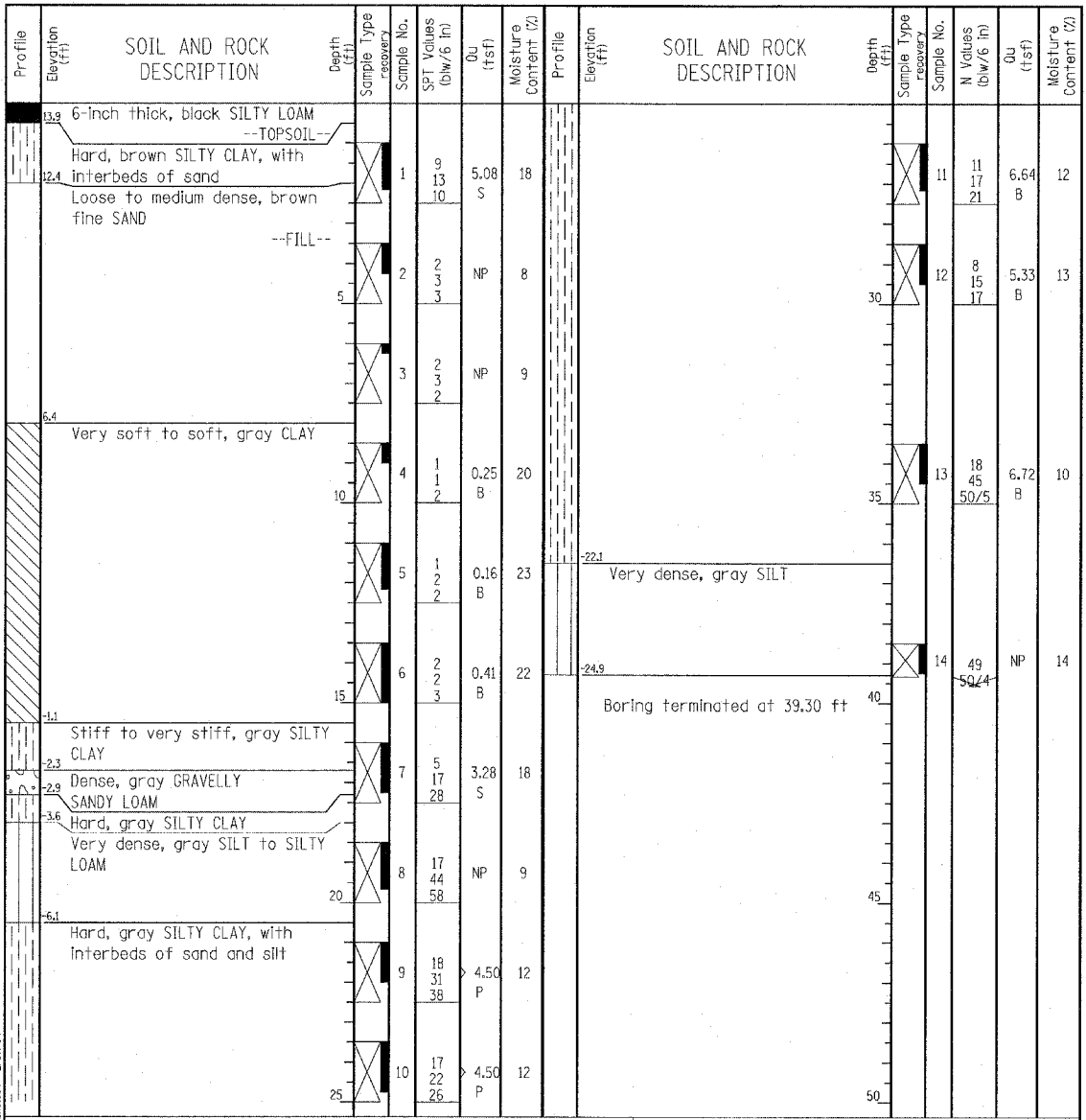
| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION  | Depth (ft) | Sample Type | Sample No. | SPT Values (blw/6 in) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample Type | Sample No. | N Values (blw/6 in) | Qu (tsf) | Moisture Content (%) |
|------------------------|--|------------|-------------|------------|-----------------------|----------|----------------------|------------------------|---------------------------|------------|-------------|------------|---------------------|----------|----------------------|
| 15.34                  | 2-inch thick, ASPHALT  | 0.0        |             |            |                       |          |                      | 15.34                  |                           | 0.0        |             |            |                     |          |                      |
| 14.54                  | 8-inch thick, CONCRETE   | 0.8        |             |            |                       |          |                      | 14.54                  |                           | 0.8        |             |            |                     |          |                      |
| 13.74                  | 4-inch thick, CRUSHED STONE  | 1.6        |             |            |                       |          |                      | 13.74                  |                           | 1.6        |             |            |                     |          |                      |
| 12.94                  | Medium stiff, black and gray CLAY                                      | 2.4        |             | 1          | 15                    | 0.75     | 26                   | 12.94                  |                           | 2.4        |             | 11         | 6                   | 4.43     | 12                   |
| 12.14                  | Stiff, gray CLAY   | 3.2        |             | 2          | 6                     | 2.3      | 13                   | 12.14                  |                           | 3.2        |             | 12         | 6                   | 3.61     | 13                   |
| 11.34                  |  | 4.0        |             | 3          | 2                     | 0.66     | 22                   | 11.34                  |                           | 4.0        |             | 13         | 7                   | 4.18     | 12                   |
| 10.54                  | Very soft to medium stiff, gray CLAY                                   | 4.8        |             | 4          | 2                     | 0.33     | 21                   | 10.54                  |                           | 4.8        |             | 14         | 11                  | 4.18     | 12                   |
| 9.74                   |  | 5.6        |             | 5          | 0                     | 0.33     | 22                   | 9.74                   |                           | 5.6        |             | 15         | 11                  | 4.18     | 12                   |
| 8.94                   | Loose, gray SAND   | 6.4        |             | 6          | 0                     | 0.08     | 24                   | 8.94                   |                           | 6.4        |             | 16         | 10                  | NP       | 12                   |
| 8.14                   | Very soft, gray CLAY   | 7.2        |             | 7          | 0                     | 0.08     | 24                   | 8.14                   |                           | 7.2        |             | 17         | 10                  | NP       | 12                   |
| 7.34                   |  | 8.0        |             | 8          | 2                     | NP       | 19                   | 7.34                   |                           | 8.0        |             | 18         | 7                   | NP       | 12                   |
| 6.54                   | Medium dense, gray SILT  | 8.8        |             | 9          | 8                     | 4.50     | 11                   | 6.54                   |                           | 8.8        |             | 19         | 11                  | 3.1      | 13                   |
| 5.74                   | Very stiff to hard, gray SILTY CLAY, with gravel and interbeds of sand | 9.6        |             | 10         | 6                     | 4.50     | 11                   | 5.74                   |                           | 9.6        |             | 20         | 11                  | 3.1      | 13                   |
| 4.94                   |  | 10.4       |             | 11         | 7                     | 4.50     | 9                    | 4.94                   |                           | 10.4       |             | 21         | 11                  | 3.1      | 13                   |
| 4.14                   |  | 11.2       |             | 12         | 7                     | 4.50     | 9                    | 4.14                   |                           | 11.2       |             | 22         | 11                  | 3.1      | 13                   |
| 3.34                   |  | 12.0       |             | 13         | 7                     | 4.50     | 9                    | 3.34                   |                           | 12.0       |             | 23         | 11                  | 3.1      | 13                   |
| 2.54                   |  | 12.8       |             | 14         | 7                     | 4.50     | 9                    | 2.54                   |                           | 12.8       |             | 24         | 11                  | 3.1      | 13                   |
| 1.74                   |  | 13.6       |             | 15         | 7                     | 4.50     | 9                    | 1.74                   |                           | 13.6       |             | 25         | 11                  | 3.1      | 13                   |
| 0.94                   |  | 14.4       |             | 16         | 7                     | 4.50     | 9                    | 0.94                   |                           | 14.4       |             | 26         | 11                  | 3.1      | 13                   |
| 0.14                   |  | 15.2       |             | 17         | 7                     | 4.50     | 9                    | 0.14                   |                           | 15.2       |             | 27         | 11                  | 3.1      | 13                   |
| -0.66                  |  | 16.0       |             | 18         | 7                     | 4.50     | 9                    | -0.66                  |                           | 16.0       |             | 28         | 11                  | 3.1      | 13                   |
| -1.46                  |  | 16.8       |             | 19         | 7                     | 4.50     | 9                    | -1.46                  |                           | 16.8       |             | 29         | 11                  | 3.1      | 13                   |
| -2.26                  |  | 17.6       |             | 20         | 7                     | 4.50     | 9                    | -2.26                  |                           | 17.6       |             | 30         | 11                  | 3.1      | 13                   |
| -3.06                  |  | 18.4       |             | 21         | 7                     | 4.50     | 9                    | -3.06                  |                           | 18.4       |             | 31         | 11                  | 3.1      | 13                   |
| -3.86                  |  | 19.2       |             | 22         | 7                     | 4.50     | 9                    | -3.86                  |                           | 19.2       |             | 32         | 11                  | 3.1      | 13                   |
| -4.66                  |  | 20.0       |             | 23         | 7                     | 4.50     | 9                    | -4.66                  |                           | 20.0       |             | 33         | 11                  | 3.1      | 13                   |
| -5.46                  |  | 20.8       |             | 24         | 7                     | 4.50     | 9                    | -5.46                  |                           | 20.8       |             | 34         | 11                  | 3.1      | 13                   |
| -6.26                  |  | 21.6       |             | 25         | 7                     | 4.50     | 9                    | -6.26                  |                           | 21.6       |             | 35         | 11                  | 3.1      | 13                   |
| -7.06                  |  | 22.4       |             |            |                       |          |                      |                        |                           |            |             |            |                     |          |                      |



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**BORING LOG SB 34-09**  
 WEI Job No.: 414-07-01  
 Datum: CCD  
 Elevation: 14.40 ft  
 North: 1843033.52 ft  
 East: 1177629.74 ft  
 Station: 1216+52.8  
 Offset: 100.553' LT

Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

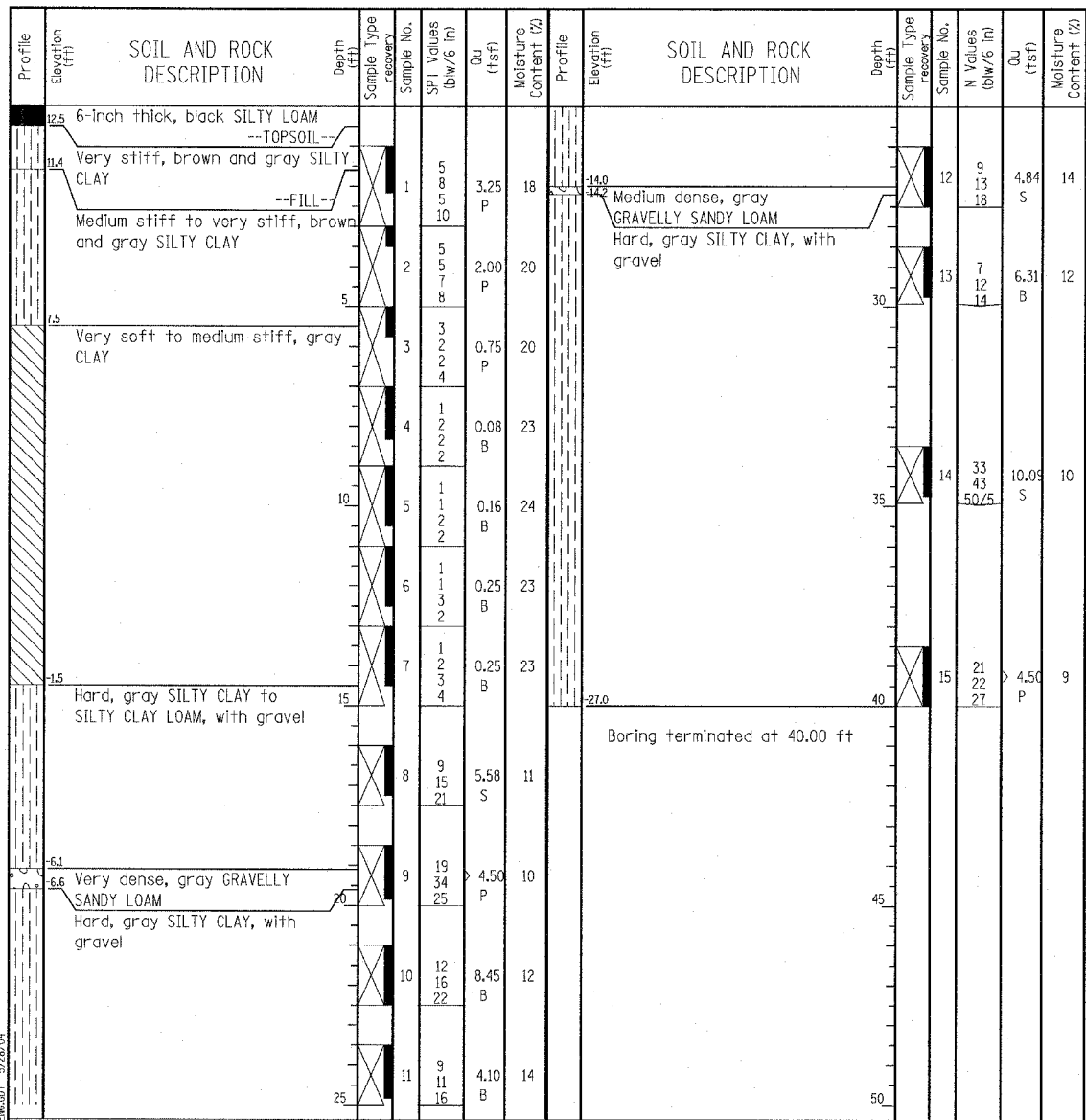


| GENERAL NOTES   |  |                   |                 | WATER LEVEL DATA          |    |     |  |
|---|--|-------------------|-----------------|---------------------------|----|-----|--|
| Begin Drilling  | 02-06-2004   | Complete Drilling | 02-06-2004      | While Drilling            | ▽  | DRY |  |
| Drilling Contractor   | DLZ Drilling   | Drill Rig         | Mobile B-59 TMR | At Completion of Drilling | ▽  | DRY |  |
| Driller   | J&E  | Logger            | J. Kasnick      | Time After Drilling       | NA |     |  |
| Drilling Method   | 3.25" ID HSA; Boring backfilled with bentonite upon completion |                   |                 | Depth to Water            | ▽  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |  |                   |                 |                           |    |     |  |

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**BORING LOG SB 34-10**  
 WEI Job No.: 414-07-01  
 Datum: CCD  
 Elevation: 13.04 ft  
 North: 1843104.19 ft  
 East: 1177632.46 ft  
 Station: 1217+23.4  
 Offset: 95.815' LT

Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street



| GENERAL NOTES   |  |                   |                 | WATER LEVEL DATA          |    |     |  |
|---|--|-------------------|-----------------|---------------------------|----|-----|--|
| Begin Drilling  | 02-06-2004   | Complete Drilling | 02-06-2004      | While Drilling            | ▽  | DRY |  |
| Drilling Contractor   | DLZ Drilling   | Drill Rig         | Mobile B-59 TMR | At Completion of Drilling | ▽  | DRY |  |
| Driller   | J&E  | Logger            | J. Kasnick      | Time After Drilling       | NA |     |  |
| Drilling Method   | 3.25" ID HSA; Boring backfilled with bentonite upon completion |                   |                 | Depth to Water            | ▽  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |  |                   |                 |                           |    |     |  |



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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP TO 95TH ST.  
 WALL 34  
 BORING LOGS SB34-09 & SB34-10  
 S.N. 016-W946  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: DJR  
 DRAWN BY: DJR  
 CHECKED BY: TD

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**BORING LOG SB 34-11** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 11.10 ft  
 North: 1843179.60 ft  
 East: 1177636.76 ft  
 Station: 1217+98.6  
 Offset: 89.355' LT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION  | Depth (ft) | Sample Type | Sample No. | SPT Values (blows/6 in) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION     | Depth (ft) | Sample Type | Sample No. | N Values (blows/6 in) | Qu (tsf) | Moisture Content (%) |
|------------------------|--|------------|-------------|------------|-------------------------|----------|----------------------|------------------------|-------------------------------|------------|-------------|------------|-----------------------|----------|----------------------|
| 10.6                   | 6-inch thick, black LOAM<br>--TOPSOIL--<br>Stiff to hard, black and gray SILTY CLAY to CLAY, with gravel | 1          | 1           | 22         | 18                      | 7.38     | 15                   | 11.1                   |                               | 11         | 1           | 10         | 15                    | 8.36     | 12                   |
| 7.1                    | Very stiff, gray CLAY  | 2          | 2           | 7          | 6                       | 8.45     | 13                   | 18.9                   |                               | 12         | 2           | 11         | 17                    | 7.22     | 12                   |
| 5.6                    | Very soft to soft, gray CLAY   | 3          | 3           | 3          | 4                       | 0.25     | 23                   |                        | Boring terminated at 30.00 ft |            |             |            |                       |          |                      |
|                        |  | 4          | 4           | 1          | 2                       | 0.16     | 23                   |                        |                               |            |             |            |                       |          |                      |
|                        |  | 5          | 5           | 2          | 2                       | 0.25     | 23                   |                        |                               |            |             |            |                       |          |                      |
| -1.9                   | Stiff, gray CLAY LOAM, with gravel   | 6          | 6           | 12         | 20                      | 1.31     | 9                    |                        |                               |            |             |            |                       |          |                      |
| -3.4                   | Dense, gray GRAVELLY SAND  | 15         | 15          | 12         | 20                      | 26       |                      |                        |                               |            |             |            |                       |          |                      |
| -5.4                   | Hard, gray SILTY CLAY, with gravel   | 7          | 7           | 13         | 19                      | 7.54     | 11                   |                        |                               |            |             |            |                       |          |                      |
|                        |  | 8          | 8           | 12         | 21                      | 4.50     | 11                   |                        |                               |            |             |            |                       |          |                      |
|                        |  | 9          | 9           | 15         | 22                      | 7.22     | 12                   |                        |                               |            |             |            |                       |          |                      |
|                        |  | 10         | 10          | 12         | 20                      | 7.30     | 14                   |                        |                               |            |             |            |                       |          |                      |

| GENERAL NOTES   |   |                   |                 | WATER LEVEL DATA          |    |     |  |
|---|---|-------------------|-----------------|---------------------------|----|-----|--|
| Begin Drilling  | 02-05-2004  | Complete Drilling | 02-05-2004      | While Drilling            | ▽  | DRY |  |
| Drilling Contractor   | DLZ Drilling  | Drill Rig         | Mobile B-59 TMR | At Completion of Drilling | ▽  | DRY |  |
| Driller   | J&E   | Logger            | J. Kasnick      | Time After Drilling       | NA |     |  |
| Drilling Method   | 3.25" ID. HSA; Boring backfilled with bentonite upon completion |                   |                 | Depth to Water            | ▽  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |   |                   |                 |                           |    |     |  |

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**BORING LOG SB 34-12** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 9.21 ft  
 North: 1843251.41 ft  
 East: 1177638.50 ft  
 Station: 1218+70.4  
 Offset: 85.561' LT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION   | Depth (ft) | Sample Type | Sample No. | SPT Values (blows/6 in) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION     | Depth (ft) | Sample Type | Sample No. | N Values (blows/6 in) | Qu (tsf) | Moisture Content (%) |
|------------------------|---|------------|-------------|------------|-------------------------|----------|----------------------|------------------------|-------------------------------|------------|-------------|------------|-----------------------|----------|----------------------|
| 9.7                    | 6-inch thick, black LOAM<br>--TOPSOIL--<br>Hard, brown SILTY CLAY, with interbeds of sand | 1          | 1           | 19         | 25                      | 4.50     | 16                   | 20.8                   |                               | 11         | 1           | 14         | 26                    | 8.77     | 12                   |
| 5.5                    | Stiff to hard, brown and gray CLAY  | 2          | 2           | 9          | 16                      | 8.53     | 12                   |                        |                               | 12         | 2           | 27         | 52                    | 10.25    | 10                   |
| 3.7                    | Very soft to soft, gray CLAY  | 3          | 3           | 4          | 3                       | 0.25     | 22                   |                        | Boring terminated at 30.00 ft |            |             |            |                       |          |                      |
|                        |   | 4          | 4           | 2          | 2                       | 0.25     | 23                   |                        |                               |            |             |            |                       |          |                      |
|                        |   | 5          | 5           | 9          | 21                      | 6.97     | 10                   |                        |                               |            |             |            |                       |          |                      |
| -1.3                   | Hard, gray SILTY CLAY, with gravel  | 6          | 6           | 11         | 17                      | NP       | 15                   |                        |                               |            |             |            |                       |          |                      |
| -3.8                   | Medium dense, gray GRAVELLY SAND  | 15         | 15          | 11         | 17                      | 18       |                      |                        |                               |            |             |            |                       |          |                      |
| -6.3                   | Very stiff to hard, gray SILTY CLAY, with interbeds of silt                               | 7          | 7           | 8          | 16                      | 5.74     | 15                   |                        |                               |            |             |            |                       |          |                      |
|                        |   | 8          | 8           | 14         | 36                      | 4.50     | 11                   |                        |                               |            |             |            |                       |          |                      |
|                        |   | 9          | 9           | 24         | 38                      | 4.67     | 11                   |                        |                               |            |             |            |                       |          |                      |
|                        |   | 10         | 10          | 13         | 32                      | 3.85     | 11                   |                        |                               |            |             |            |                       |          |                      |

| GENERAL NOTES   |   |                   |                 | WATER LEVEL DATA          |    |          |  |
|---|---|-------------------|-----------------|---------------------------|----|----------|--|
| Begin Drilling  | 02-05-2004  | Complete Drilling | 02-05-2004      | While Drilling            | ▽  | 13.00 ft |  |
| Drilling Contractor   | DLZ Drilling  | Drill Rig         | Mobile B-59 TMR | At Completion of Drilling | ▽  | DRY      |  |
| Driller   | J&E   | Logger            | J. Kasnick      | Time After Drilling       | NA |          |  |
| Drilling Method   | 3.25" ID. HSA; Boring backfilled with bentonite upon completion |                   |                 | Depth to Water            | ▽  | NA       |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |   |                   |                 |                           |    |          |  |

**TYLIN INTERNATIONAL**

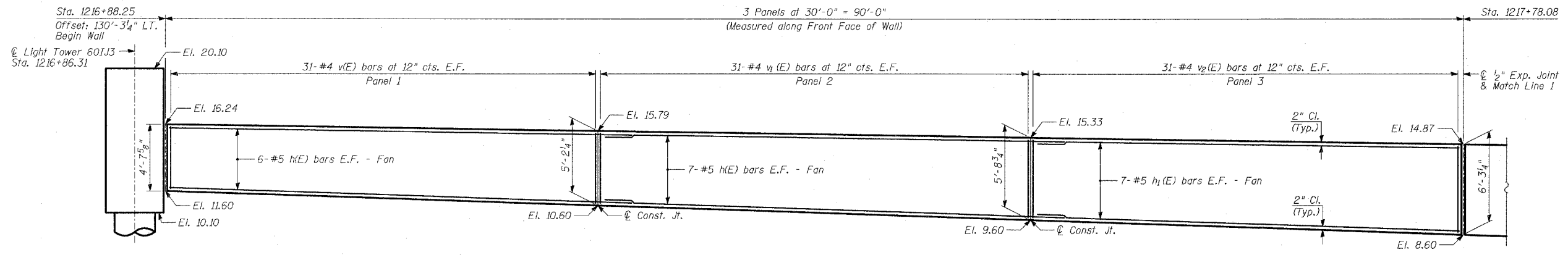
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP TO 95TH ST.  
 WALL 34  
 BORING LOGS SB34-11 & SB34-12  
 S.N. 016-W946  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

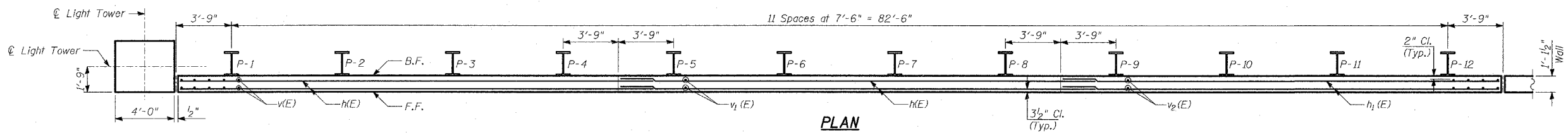
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 DRAWN BY: DJR  
 CHECKED BY: TD



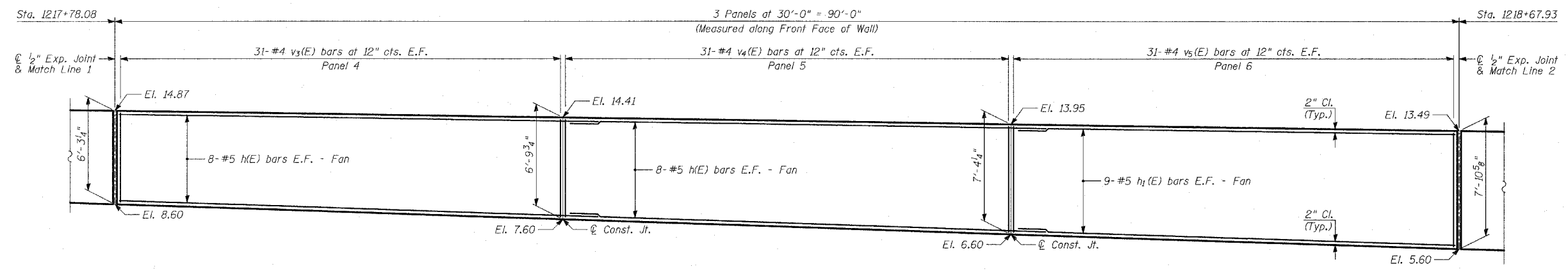




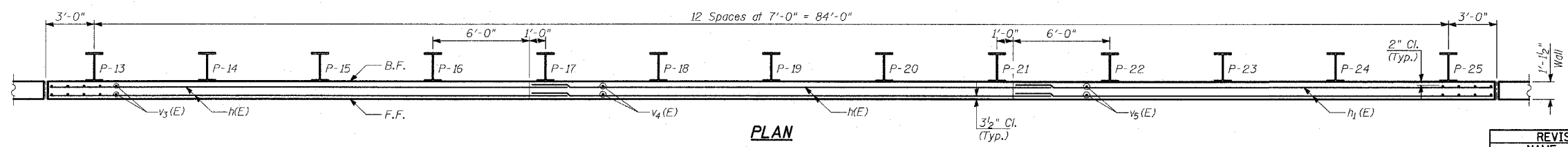
**ELEVATION**



**PLAN**



**ELEVATION**



**PLAN**

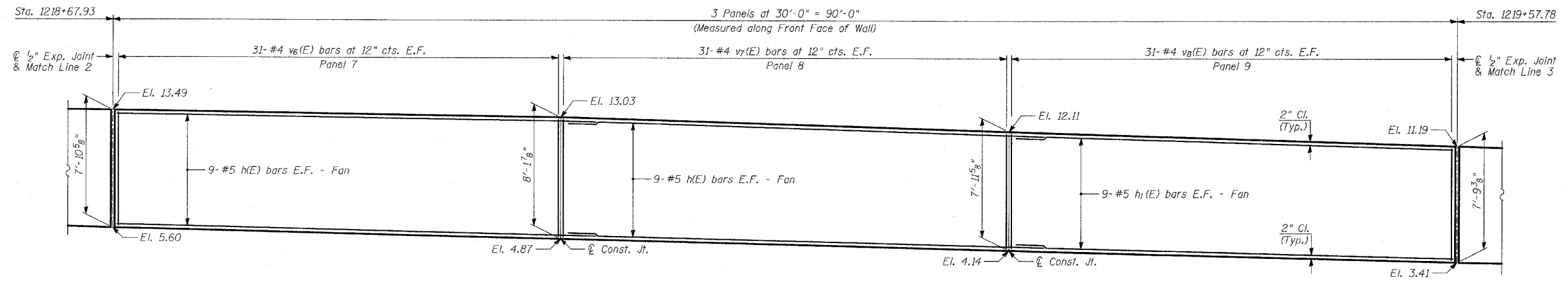
- NOTES:**
1. B.F. - denotes Back Face.
  2. E.F. - denotes Each Face.
  3. F.F. - denotes Front Face.
  4. Work this Sheet with Sheets 4 thru 9 of 13.
  5. Pile spacing measured along front face of wall.
  6. For Lap Splices, see Sheet 4 of 13.

**TYLIN INTERNATIONAL**

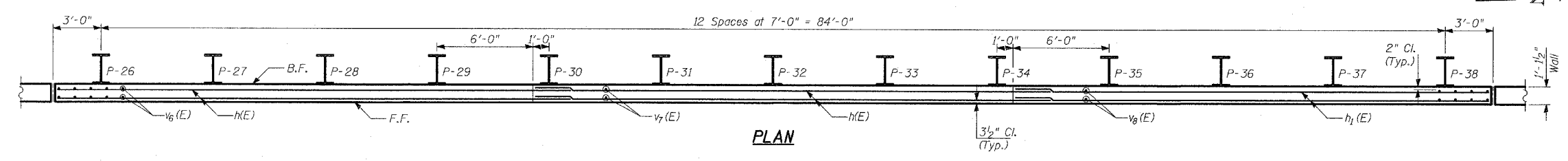
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**EXIT RAMP AT 93RD ST.**  
**WALL 35 - PLAN AND ELEVATION**  
**STA. 1216+88.25 TO STA. 1218+67.93**  
 S.N. 016-W947      DESIGNED BY: MI, MAF  
 SCALE: N.T.S.      DRAWN BY: MAF, TB  
 DATE: MARCH 25, 2005      CHECKED BY: TD, MI

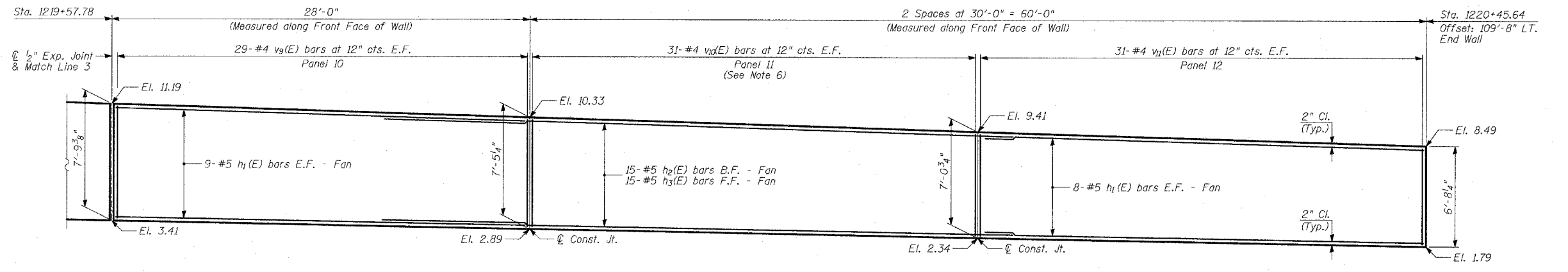
|                                 |         |          |                  |           |
|---------------------------------|---------|----------|------------------|-----------|
| F.A.I. RTE.                     | SECTION | COUNTY   | TOTAL SHEETS     | SHEET NO. |
| 94                              |         | COOK     | 907              | 462       |
| STA. 1200+00.00 TO STA. 1365+00 |         |          |                  |           |
| FED. ROAD DIST. NO.             |         | ILLINOIS | FED. AID PROJECT |           |
| • (1516.1, 1717 & 1818) R-9     |         | 62695    |                  |           |



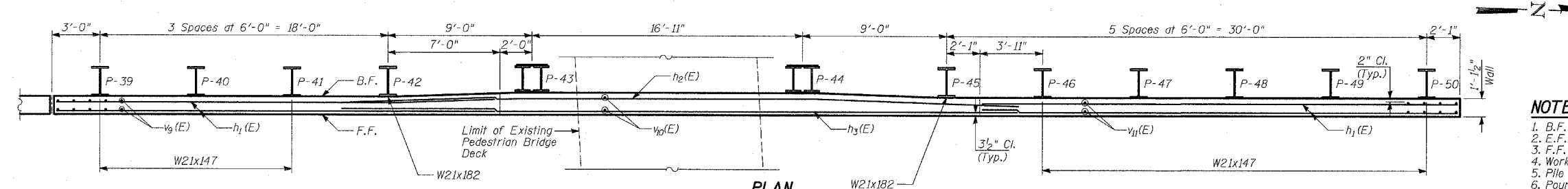
**ELEVATION**



**PLAN**



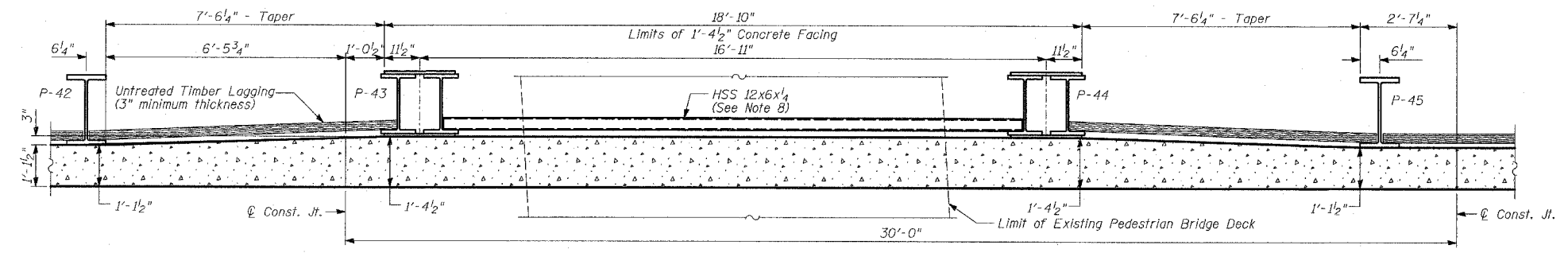
**ELEVATION**



**PLAN**

**NOTES:**

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this Sheet with Sheets 4 and 7 thru 9 of 13.
5. Pile spacing measured along front face of wall.
6. Pour Panel 11 before Panels 10 and 12.
7. For Lap Splices, see Sheet 4 of 13.
8. HSS 12x6x1/4 to serve as lagging for piles P-43 & P-44. Cost of the steel lagging as well as work necessary to place the lagging shall be included with "Furnishing and Erecting Structural Steel".



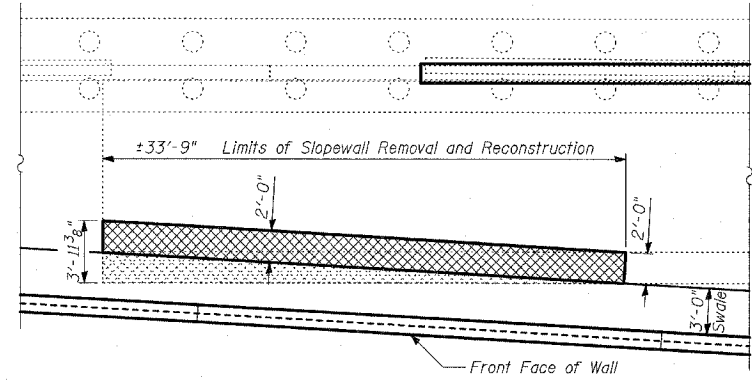
**SECTIONAL PLAN UNDER PEDESTRIAN OVERPASS**

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP AT 93RD ST.  
 WALL 35 - PLAN AND ELEVATION  
 STA. 1218+67.93 TO STA. 1220+45.64  
 S.N. 016-W947 DESIGNED BY: MI, MAF  
 SCALE: N.T.S. DRAWN BY: MAF, TB  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI

**PILE LAYOUT**

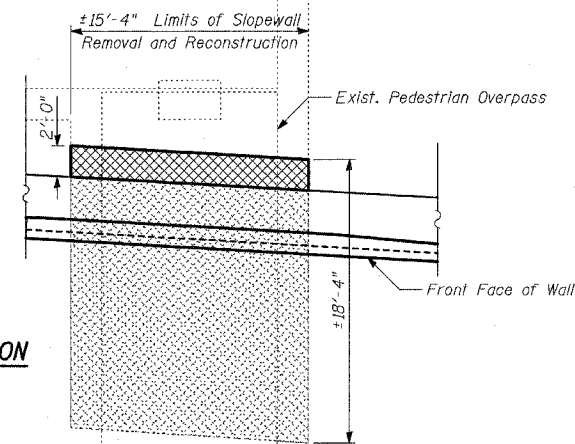
| Pile | Station at Working Point | Top of Wall El. | Top of Pile El. | Bot. of Wall El. | Section  | Pile Tip El. | Pile Length |
|------|--------------------------|-----------------|-----------------|------------------|----------|--------------|-------------|
| P-1  | 1216+92.04               | 16.19           | 14.19           | 11.48            | W18x143  | -18.56       | 32'-9"      |
| P-2  | 1216+99.52               | 16.07           | 14.07           | 11.23            |          | -18.84       | 32'-11"     |
| P-3  | 1217+07.01               | 15.96           | 13.96           | 10.98            |          | -19.04       | 33'-0"      |
| P-4  | 1217+14.50               | 15.84           | 13.84           | 10.73            |          | -19.32       | 33'-2"      |
| P-5  | 1217+21.99               | 15.73           | 13.73           | 10.48            |          | -19.61       | 33'-4"      |
| P-6  | 1217+29.48               | 15.61           | 13.61           | 10.23            |          | -19.80       | 33'-5"      |
| P-7  | 1217+36.96               | 15.50           | 13.50           | 9.98             |          | -20.08       | 33'-7"      |
| P-8  | 1217+44.45               | 15.38           | 13.38           | 9.73             |          | -20.28       | 33'-8"      |
| P-9  | 1217+51.94               | 15.27           | 13.27           | 9.48             |          | -20.56       | 33'-10"     |
| P-10 | 1217+59.43               | 15.15           | 13.15           | 9.23             |          | -20.85       | 34'-0"      |
| P-11 | 1217+66.91               | 15.04           | 13.04           | 8.98             |          | -21.04       | 34'-1"      |
| P-12 | 1217+74.40               | 14.92           | 12.92           | 8.73             | W18x143  | -21.33       | 34'-3"      |
| P-13 | 1217+81.14               | 14.82           | 12.82           | 8.50             | W21x147  | -21.51       | 34'-4"      |
| P-14 | 1217+88.13               | 14.71           | 12.71           | 8.27             |          | -21.79       | 34'-6"      |
| P-15 | 1217+95.12               | 14.61           | 12.61           | 8.04             |          | -21.98       | 34'-7"      |
| P-16 | 1218+02.10               | 14.50           | 12.50           | 7.80             |          | -22.25       | 34'-9"      |
| P-17 | 1218+09.09               | 14.39           | 12.39           | 7.57             |          | -22.44       | 34'-10"     |
| P-18 | 1218+16.08               | 14.29           | 12.29           | 7.34             |          | -22.71       | 35'-0"      |
| P-19 | 1218+23.07               | 14.18           | 12.18           | 7.10             |          | -22.90       | 35'-1"      |
| P-20 | 1218+30.06               | 14.07           | 12.07           | 6.87             |          | -23.18       | 35'-3"      |
| P-21 | 1218+37.05               | 13.97           | 11.97           | 6.64             |          | -23.37       | 35'-4"      |
| P-22 | 1218+44.04               | 13.86           | 11.86           | 6.40             |          | -23.64       | 35'-6"      |
| P-23 | 1218+51.02               | 13.75           | 11.75           | 6.17             |          | -23.83       | 35'-7"      |
| P-24 | 1218+58.01               | 13.64           | 11.64           | 5.94             |          | -24.11       | 35'-9"      |
| P-25 | 1218+65.00               | 13.54           | 11.54           | 5.70             |          | -24.30       | 35'-10"     |
| P-26 | 1218+70.99               | 13.44           | 11.44           | 5.53             |          | -24.47       | 35'-11"     |
| P-27 | 1218+77.98               | 13.34           | 11.34           | 5.36             |          | -24.66       | 36'-0"      |
| P-28 | 1218+84.97               | 13.23           | 11.23           | 5.19             |          | -24.85       | 36'-1"      |
| P-29 | 1218+91.96               | 13.12           | 11.12           | 5.02             |          | -25.04       | 36'-2"      |
| P-30 | 1218+98.94               | 13.00           | 11.00           | 4.85             |          | -25.17       | 36'-2"      |
| P-31 | 1219+05.93               | 12.79           | 10.79           | 4.68             |          | -25.38       | 36'-2"      |
| P-32 | 1219+12.92               | 12.57           | 10.57           | 4.51             |          | -25.51       | 36'-1"      |
| P-33 | 1219+19.91               | 12.36           | 10.36           | 4.33             |          | -25.73       | 36'-1"      |
| P-34 | 1219+26.90               | 12.14           | 10.14           | 4.16             |          | -25.86       | 36'-0"      |
| P-35 | 1219+33.89               | 11.93           | 9.93            | 3.99             |          | -26.07       | 36'-0"      |
| P-36 | 1219+40.87               | 11.71           | 9.71            | 3.82             |          | -26.21       | 35'-11"     |
| P-37 | 1219+47.86               | 11.50           | 9.50            | 3.65             |          | -26.42       | 35'-11"     |
| P-38 | 1219+54.85               | 11.28           | 9.28            | 3.48             |          | -26.55       | 35'-10"     |
| P-39 | 1219+60.84               | 11.10           | 9.10            | 3.35             |          | -26.65       | 35'-9"      |
| P-40 | 1219+66.83               | 10.91           | 8.91            | 3.24             |          | -26.84       | 35'-9"      |
| P-41 | 1219+72.82               | 10.73           | 8.73            | 3.13             | W21x147  | -26.94       | 35'-8"      |
| P-42 | 1219+78.81               | 10.54           | 8.54            | 3.02             | W21x182  | -25.04       | 33'-7"      |
| P-43 | 1219+87.81               | 10.27           | 8.27            | 2.86             | Built-up | -31.15       | 39'-5"      |
| P-44 | 1220+04.70               | 9.75            | 7.75            | 2.55             | Built-up | -31.50       | 39'-3"      |
| P-45 | 1220+13.67               | 9.47            | 7.47            | 2.38             | W21x182  | -25.70       | 33'-2"      |
| P-46 | 1220+19.66               | 9.29            | 7.29            | 2.27             | W21x147  | -27.80       | 35'-1"      |
| P-47 | 1220+25.65               | 9.10            | 7.10            | 2.16             |          | -27.90       | 35'-0"      |
| P-48 | 1220+31.64               | 8.92            | 6.92            | 2.05             |          | -28.00       | 34'-11"     |
| P-49 | 1220+37.63               | 8.73            | 6.73            | 1.94             |          | -28.10       | 34'-10"     |
| P-50 | 1220+43.62               | 8.55            | 6.55            | 1.83             | W21x147  | -28.20       | 34'-9"      |



**SLOPEWALL REMOVAL AND RECONSTRUCTION**

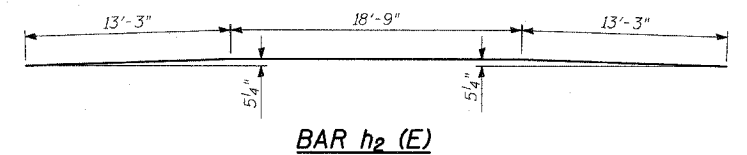
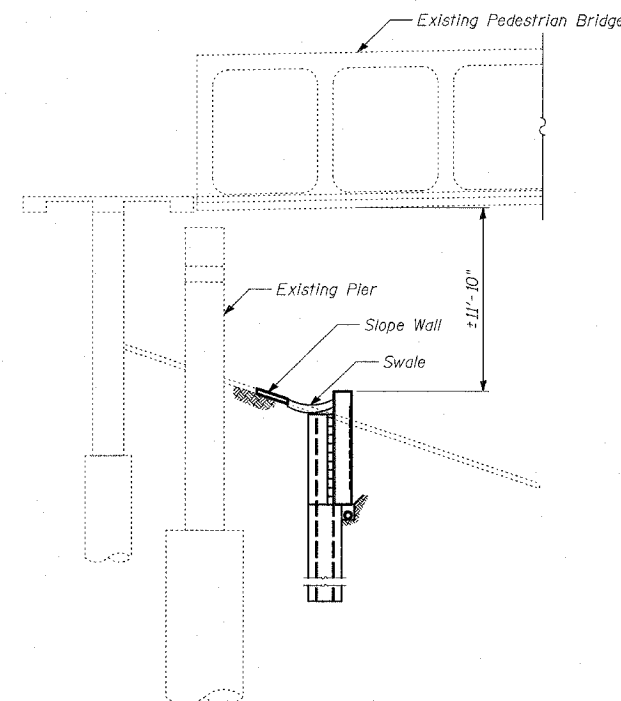
**LEGEND**

- Slopewall Removal and Reconstruction
- Slopewall Removal



**BILL OF MATERIAL**

| Bar  | No. | Size | Length  | Shape |        |
|--|-----|------|---------|-------|--------|
| h(E)   | 94  | #5   | 32'-2"  |       |        |
| h <sub>1</sub> (E)                           | 84  | #5   | 29'-8"  |       |        |
| h <sub>2</sub> (E)                           | 15  | #5   | 43'-5"  |       |        |
| h <sub>3</sub> (E)                           | 15  | #5   | 43'-5"  |       |        |
| v(E)   | 31  | #4   | 9'-3"   |       |        |
| v <sub>1</sub> (E)                           | 31  | #4   | 10'-4"  |       |        |
| v <sub>2</sub> (E)                           | 31  | #4   | 11'-5"  |       |        |
| v <sub>3</sub> (E)                           | 31  | #4   | 12'-6"  |       |        |
| v <sub>4</sub> (E)                           | 31  | #4   | 13'-7"  |       |        |
| v <sub>5</sub> (E)                           | 31  | #4   | 14'-8"  |       |        |
| v <sub>6</sub> (E)                           | 31  | #4   | 15'-5"  |       |        |
| v <sub>7</sub> (E)                           | 62  | #4   | 7'-8"   |       |        |
| v <sub>8</sub> (E)                           | 62  | #4   | 7'-6"   |       |        |
| v <sub>9</sub> (E)                           | 29  | #4   | 14'-8"  |       |        |
| v <sub>10</sub> (E)                          | 31  | #4   | 13'-11" |       |        |
| v <sub>11</sub> (E)                          | 31  | #4   | 13'-2"  |       |        |
| Reinforcement Bars, Epoxy Coated             |     |      |         | POUND | 10,390 |
| Protective Coat                              |     |      |         | SQ YD | 262    |
| Concrete Structures                          |     |      |         | CU YD | 104    |
| Furnishing and Erecting Structural Steel     |     |      |         | POUND | 2,770  |
| Furnishing Soldier Piles (W Section)         |     |      |         | FOOT  | 1,676  |
| Furnishing Soldier Piles (Built-up Section)  |     |      |         | FOOT  | 79     |
| Drilling and Setting Soldier Piles (In Soil) |     |      |         | CU FT | 9,038  |

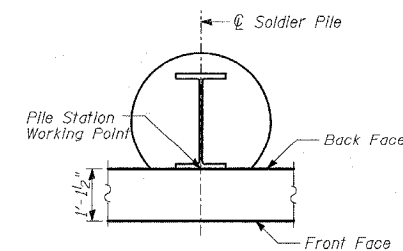


**BAR TABLE SCHEDULE**

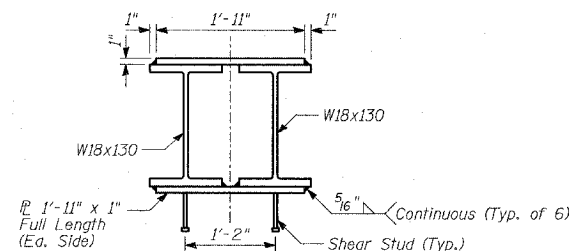
| Bar                 | No. of Sets Req'd | No. of Bars Per Set | A      | B      | C       |
|---------------------|-------------------|---------------------|--------|--------|---------|
| v(E)                | 1                 | 31                  | 4'-4"  | 4'-11" | 9'-3"   |
| v <sub>1</sub> (E)  | 1                 | 31                  | 4'-11" | 5'-5"  | 10'-4"  |
| v <sub>2</sub> (E)  | 1                 | 31                  | 5'-5"  | 6'-0"  | 11'-5"  |
| v <sub>3</sub> (E)  | 1                 | 31                  | 6'-0"  | 6'-6"  | 12'-6"  |
| v <sub>4</sub> (E)  | 1                 | 31                  | 6'-6"  | 7'-1"  | 13'-7"  |
| v <sub>5</sub> (E)  | 1                 | 31                  | 7'-1"  | 7'-7"  | 14'-8"  |
| v <sub>6</sub> (E)  | 1                 | 31                  | 7'-7"  | 7'-10" | 15'-5"  |
| v <sub>9</sub> (E)  | 1                 | 29                  | 7'-6"  | 7'-2"  | 14'-8"  |
| v <sub>10</sub> (E) | 1                 | 31                  | 7'-2"  | 6'-9"  | 13'-11" |
| v <sub>11</sub> (E) | 1                 | 31                  | 6'-9"  | 6'-5"  | 13'-2"  |

**LAP SPLICES**

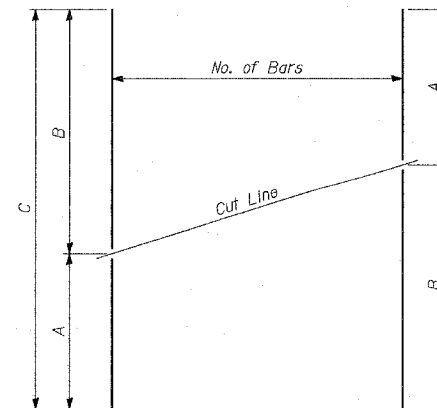
| Bar | Lap   |
|-----|-------|
| #4  | 1'-8" |
| #5  | 2'-2" |
| #6  | 2'-7" |
| #8  | 4'-6" |



**SOLDIER PILE WORKING POINT**



**BUILT-UP SECTION**



**SERIES OF BAR CUTTING DIAGRAM**

See table for dimensions. Make all cuts normal to bar axis

| REVISIONS |      |
|-----------|------|
| NAME      | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP AT 93RD ST.  
 WALL 35  
 PILE LAYOUT, DETAILS & BILL OF MATERIAL  
 S.N. 016-W947  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: MI, MAF  
 DRAWN BY: MAF, DJR  
 CHECKED BY: TD, MI

TYLIN INTERNATIONAL

**NOTES:**

1. For Section Thru Slopewall, see Sheet 7 of 13.

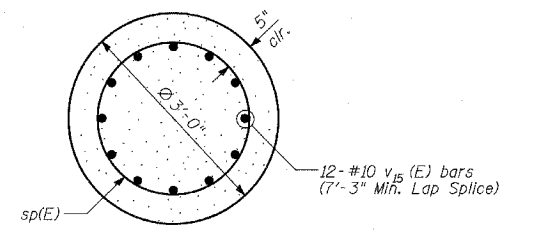
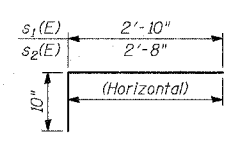
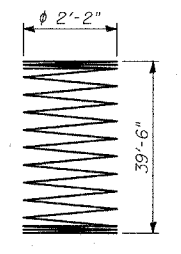
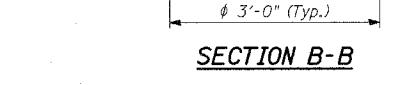
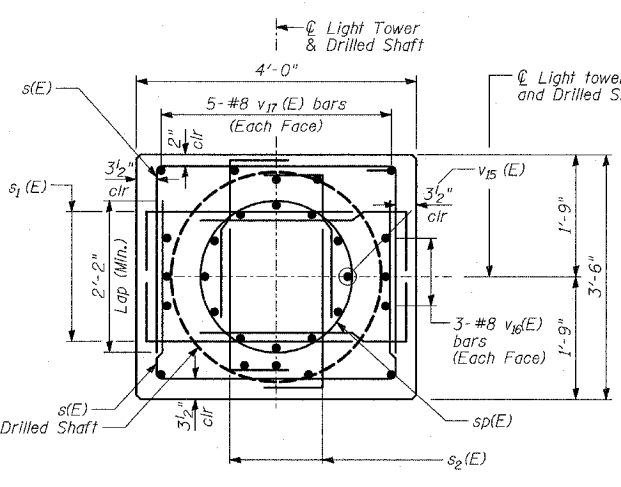
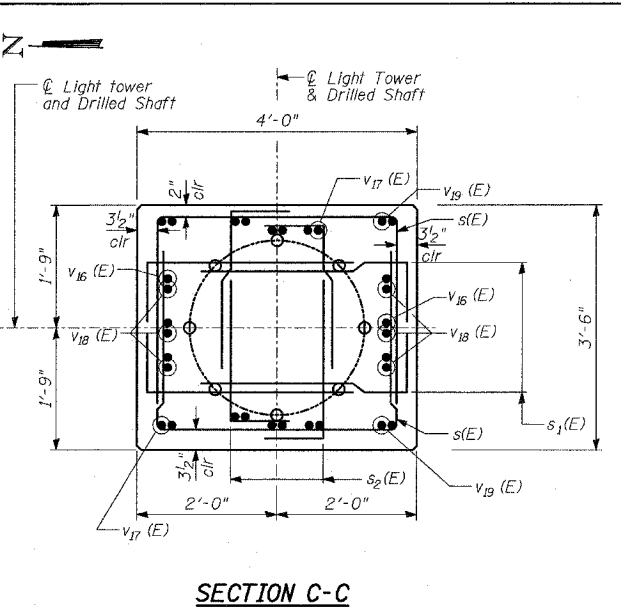
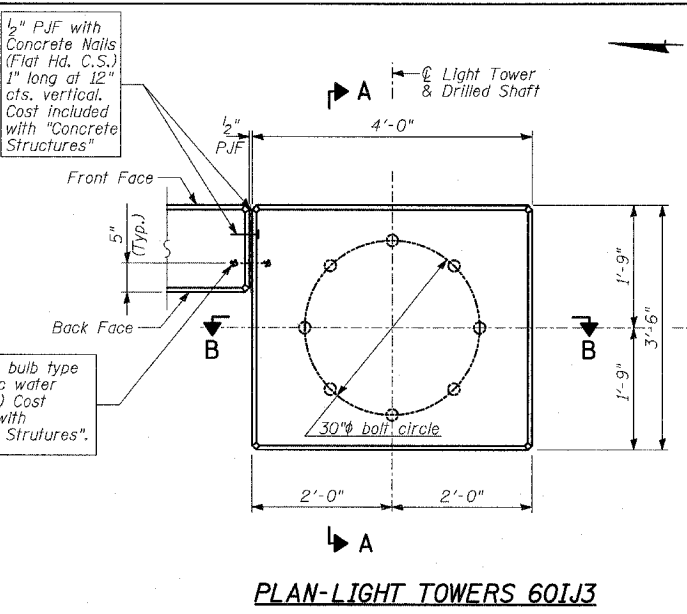
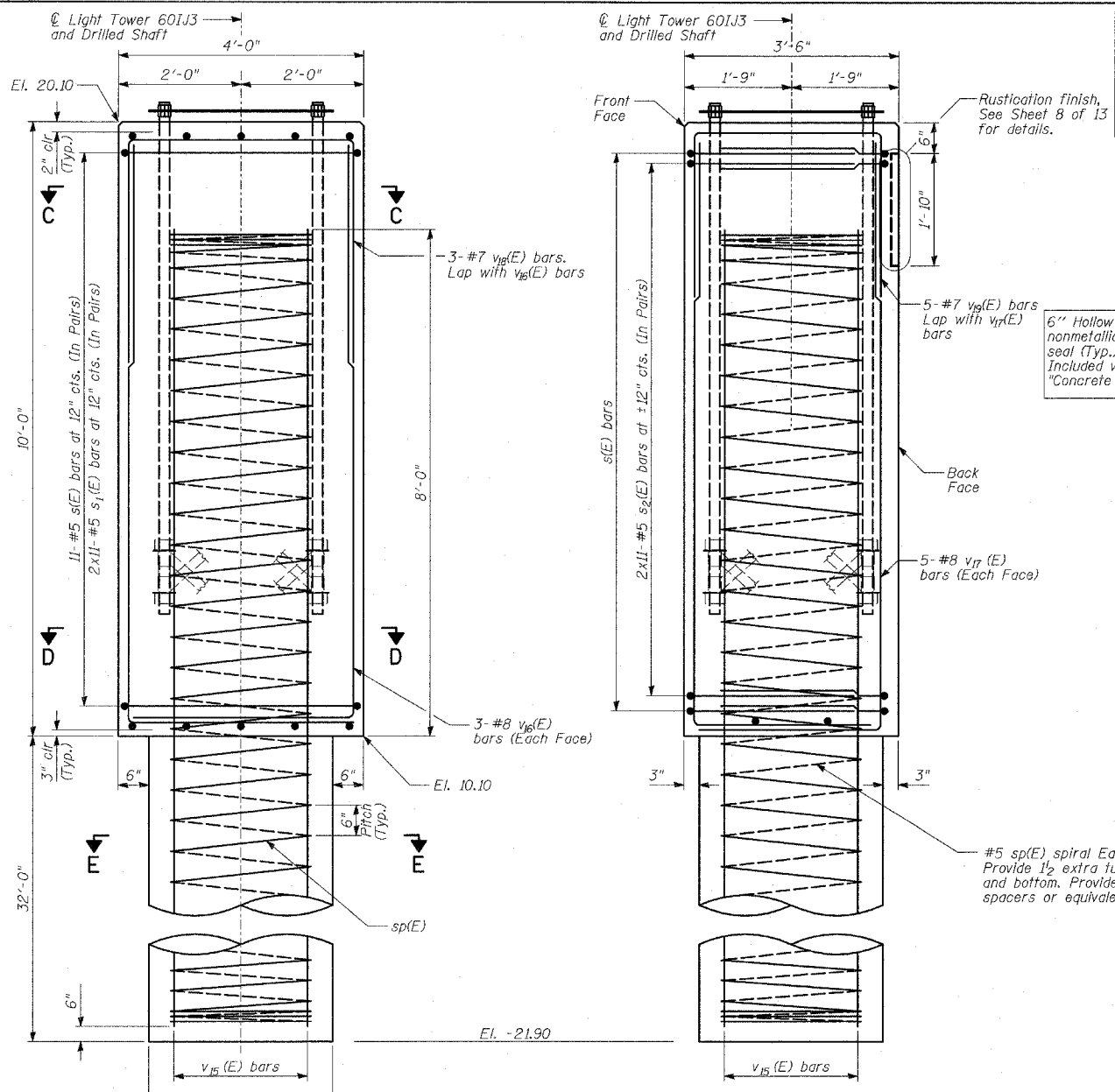
**BILL OF MATERIAL**

| Bar                              | No. | Size  | Length  | Shape |
|----------------------------------|-----|-------|---------|-------|
| s (E)                            | 22  | #5    | 8'-9"   | ┌     |
| s <sub>1</sub> (E)               | 44  | #5    | 3'-8"   | ┌     |
| s <sub>2</sub> (E)               | 44  | #5    | 3'-6"   | ┌     |
| sp (E)                           | 1   | #5    | 39'-6"  |       |
| v <sub>15</sub> (E)              | 12  | #10   | 39'-6"  | —     |
| v <sub>16</sub> (E)              | 6   | #8    | 12'-10" | L     |
| v <sub>17</sub> (E)              | 10  | #8    | 12'-5"  | L     |
| v <sub>18</sub> (E)              | 3   | #7    | 10'-2"  | ┌     |
| v <sub>19</sub> (E)              | 5   | #7    | 9'-10"  | ┌     |
| Reinforcement Bars, Epoxy Coated |     | POUND | 3,860   |       |
| Structure Excavation             |     | SQ YD | 7       |       |
| Concrete Structures              |     | CU YD | 6       |       |
| Protective Coat                  |     | SQ YD | 10      |       |
| Rustication Finish               |     | SQ FT | 6       |       |
| Drilled Shaft in Soil 36"        |     | FOOT  | 32      |       |

Reinforcement bars designated (E) shall be epoxy coated.

**NOTES:**

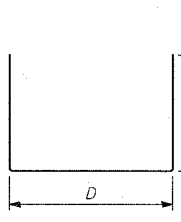
- The design loads are based on AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals-2001.
- Drilled shafts shall be installed according to IDOT special provisions for "Drilled Shafts".
- Concrete: f'c = 3,500 psi  
Reinforcing: fy = 60,000 psi
- At all locations where reinforcement bar laps are not in direct contact, the Contractor shall provide sufficient spacing between the vertical bars, equal to the size of the largest concrete aggregate plus 1/2 inch.
- For location of drilled shaft, see Sheet 2 of 13.
- Conduit is not shown for clarity. For location of conduit, see Sheet 6 of 13.
- Cost of anchor rod assembly, conduit and wires for grounding are included with "Concrete Structures".
- For Expansion Joint Details, see Sheet 7 of 13.
- Minimum lap for spirals = 2'-6"



BAR sp(E)

BARS s<sub>1</sub>(E) & s<sub>2</sub>(E)

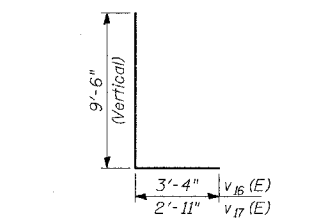
SECTION E-E



BARS s(E), v<sub>18</sub>(E) & v<sub>19</sub>(E)

**MARK TABLE**

| Bar                 | D     |
|---------------------|-------|
| s (E)               | 3'-5" |
| v <sub>18</sub> (E) | 3'-4" |
| v <sub>19</sub> (E) | 3'-0" |



BARS v<sub>16</sub>(E) & v<sub>17</sub>(E)

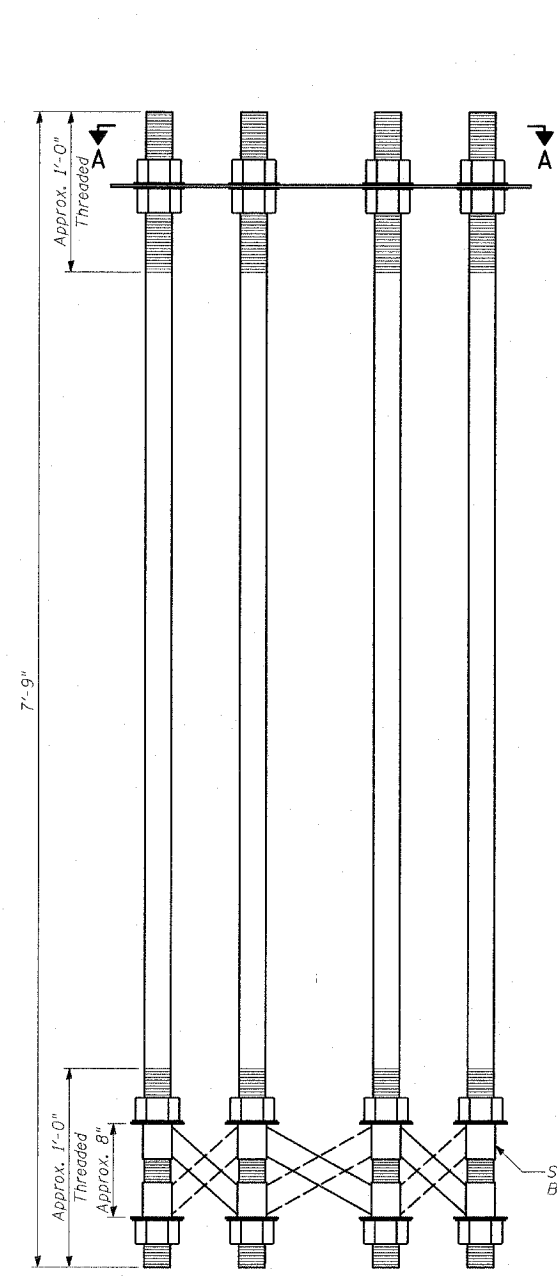
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP AT 93RD ST.  
 WALL 35  
 LIGHT TOWER 60IJ3 FOUNDATION DETAILS  
 S.N. 016-W947  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

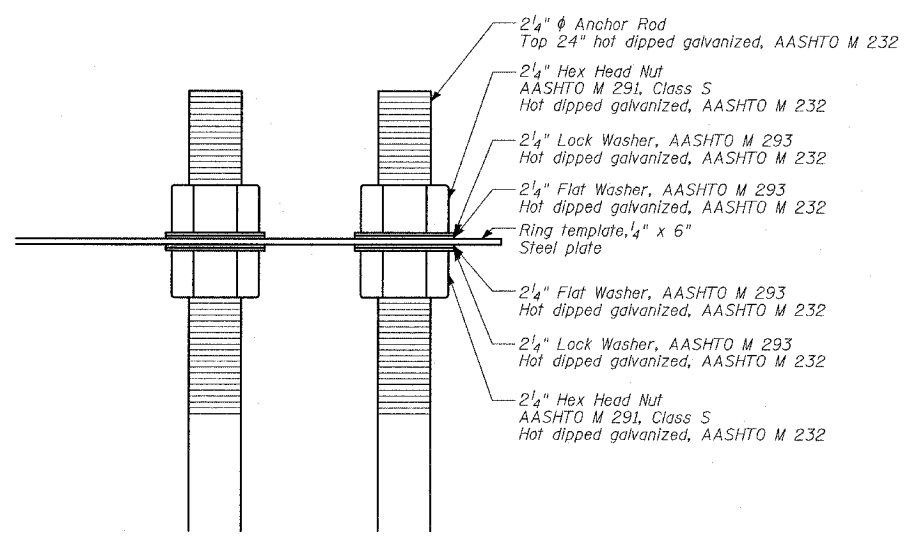
DESIGNED BY: TD, MAF  
 DRAWN BY: MAF  
 CHECKED BY: MI, TD



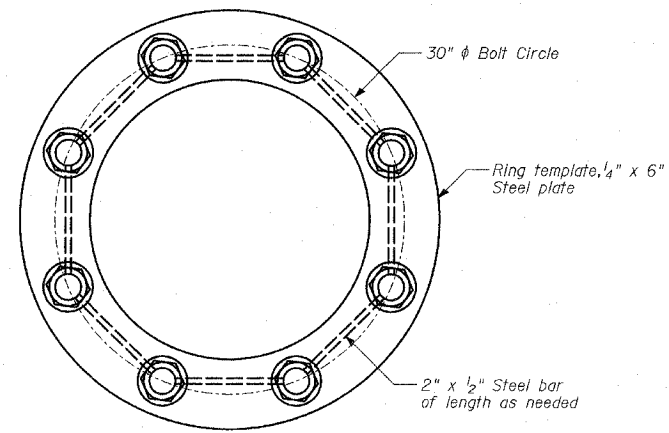
|                           |         |                           |              |           |
|---------------------------|---------|---------------------------|--------------|-----------|
| F.A.I. RTE.               | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 94                        |         | COOK                      | 907          | 465       |
| STA. 1200+00.00           |         | TO STA. 1365+00           |              |           |
| FED. ROAD DIST. NO.       |         | ILLINOIS FED. AID PROJECT |              |           |
| (1516.1, 1717 & 1818) R-9 |         | 62695                     |              |           |



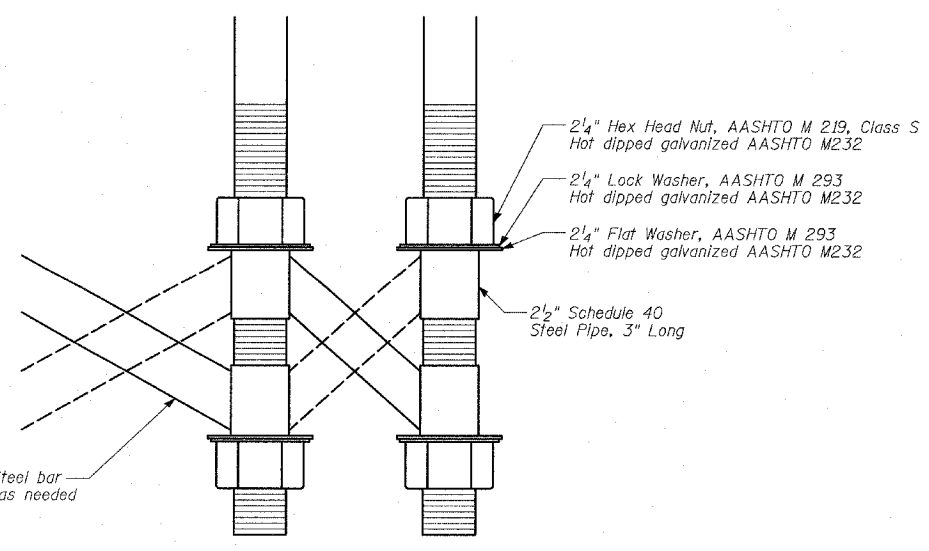
**ANCHOR BOLT CAGE**



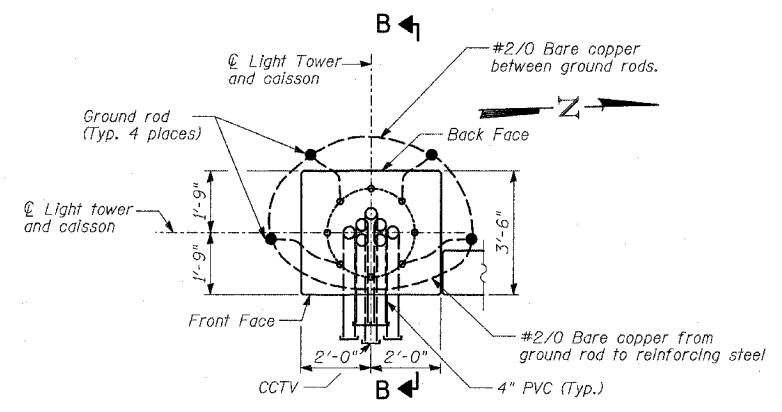
**BOLT CAGE TOP**



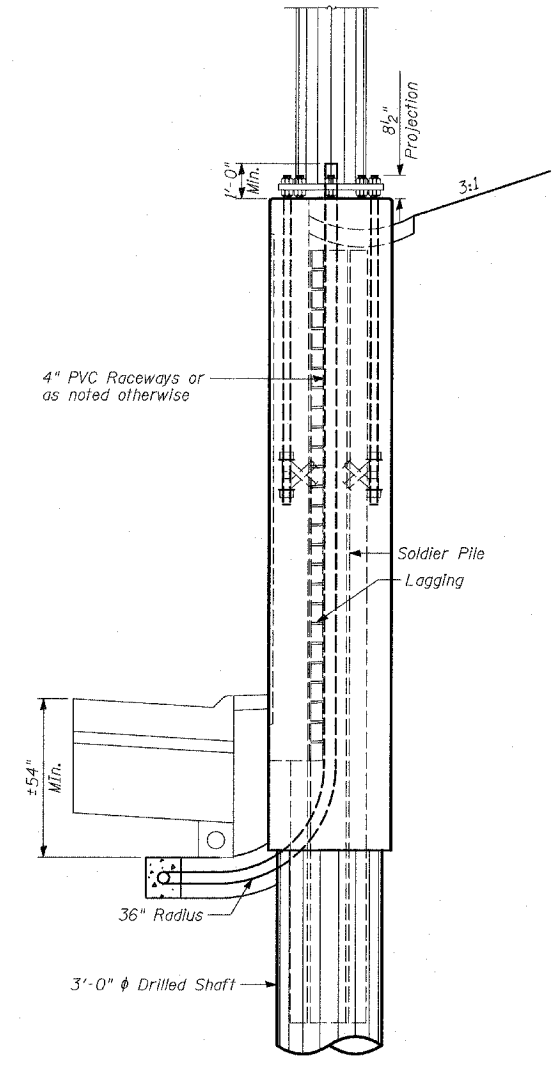
**SECTION A-A**



**BOLT CAGE BOTTOM**



**PLAN - CONDUIT PLACEMENT**



**SECTION B-B**

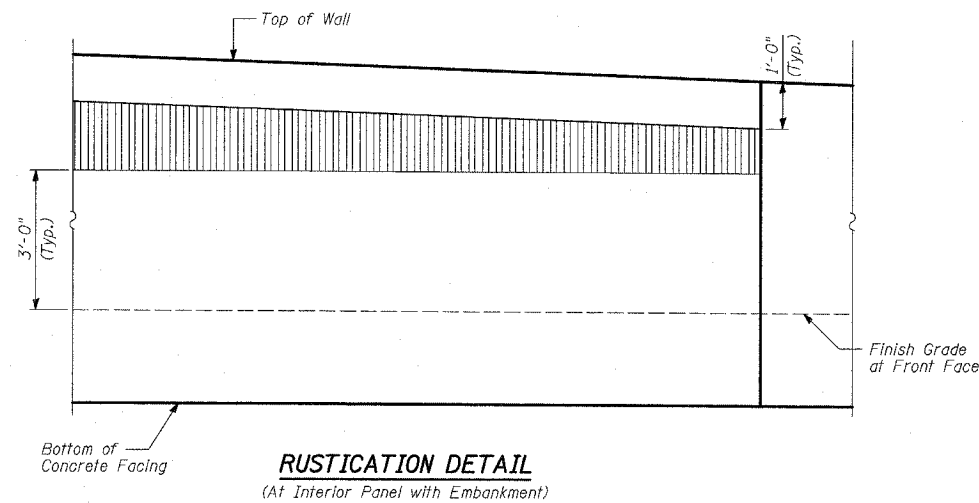
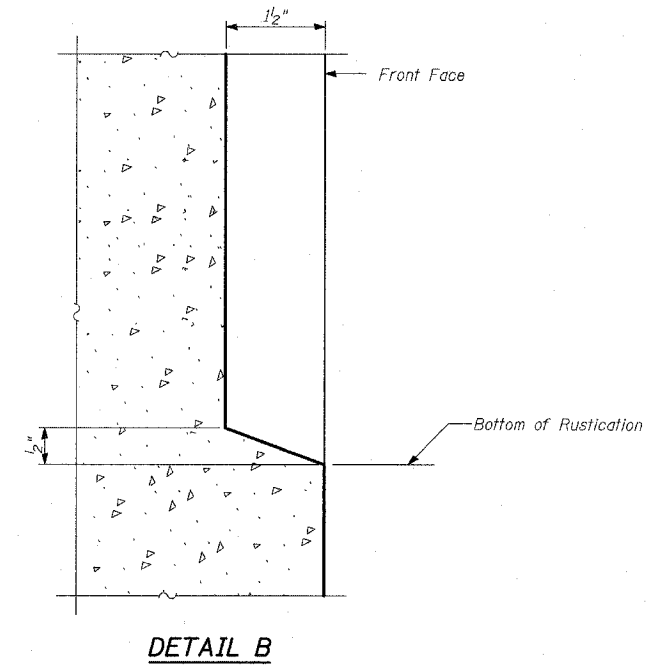
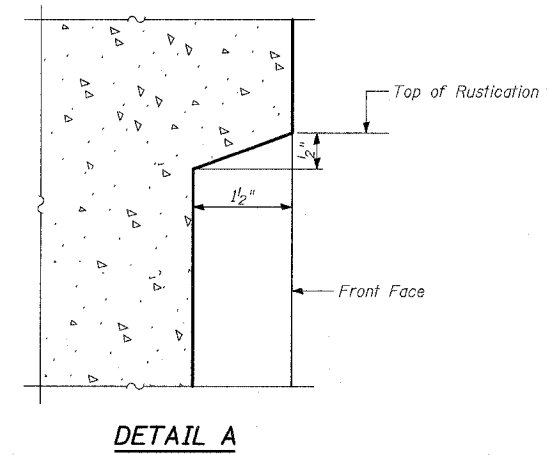
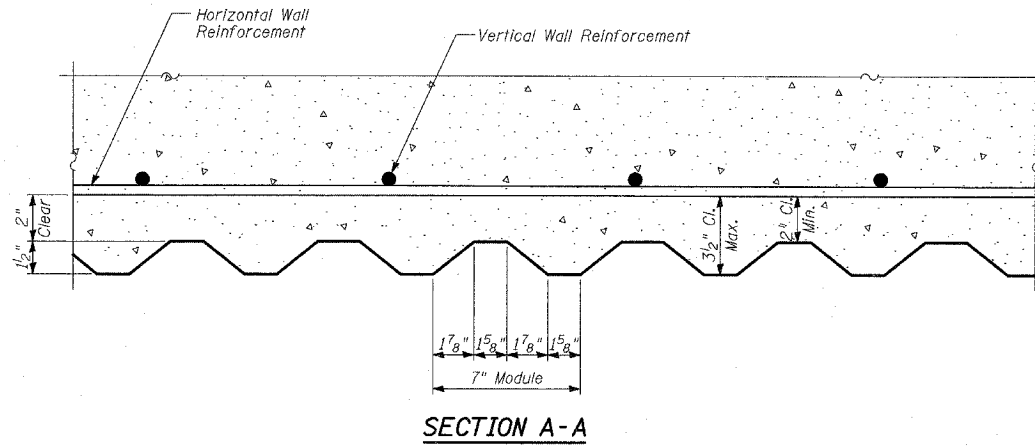
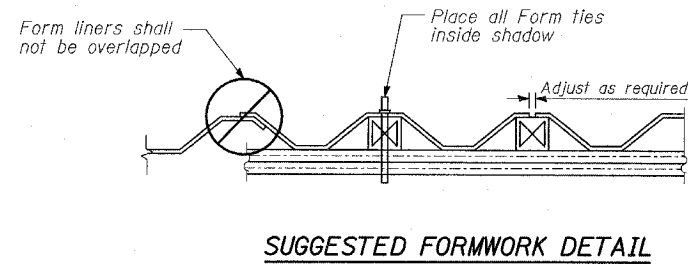
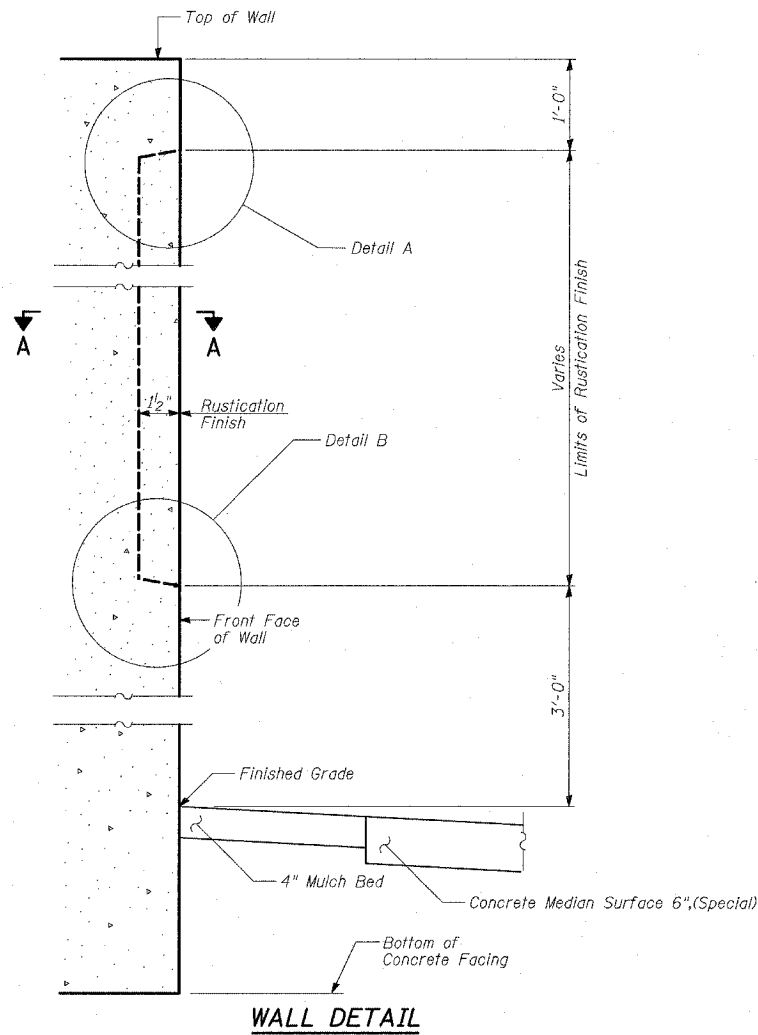
- NOTES:**
- Anchor rods shall be straight and shall be according to AASHTO M 314 or ASTM F1554, Grade 105 and galvanized according to article 1006.09.
  - Anchor rod information shall be submitted for approval and shall be fully coordinated with tower manufacturer's requirements.
  - The Anchor Rods shall be vertical. No adjustment shall be allowed after the foundation is placed.
  - The gap between the foundation and the base plate shall be enclosed with a stainless steel screen fastened with a stainless steel band. Cost included with "Light Tower" in Contract 62583.
  - The Light Tower shall not be erected until after the concrete has been cured according to Article 1020.13.
  - Two anchor rods opposite each other shall have the anchor rod threads peened after nuts are installed.
  - Refer to BE501 for details.

**TYLIN INTERNATIONAL**

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**EXIT RAMP AT 93RD ST.**  
**WALL 35**  
**LIGHT TOWER DETAILS**  
 S.N. 016-W947      DESIGNED BY: TD, DJR  
 SCALE: N.T.S.      DRAWN BY: DJR  
 DATE: MARCH 25, 2005      CHECKED BY: MI, TD





**BILL OF MATERIAL**

| ITEM               | UNIT  | TOTAL |
|--------------------|-------|-------|
| Rustication Finish | SQ FT | 228   |

| REVISIONS |      |
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| NAME      | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**EXIT RAMP AT 93RD ST.**  
**WALL 35**  
**RUSTICATION DETAILS**  
 S.N. 016-W947 DESIGNED BY: MI, MAF  
 SCALE: N.T.S. DRAWN BY: MAF, DJR  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI

**NOTES:**

- See Sheet 7 of 13 for expansion and construction joint details.



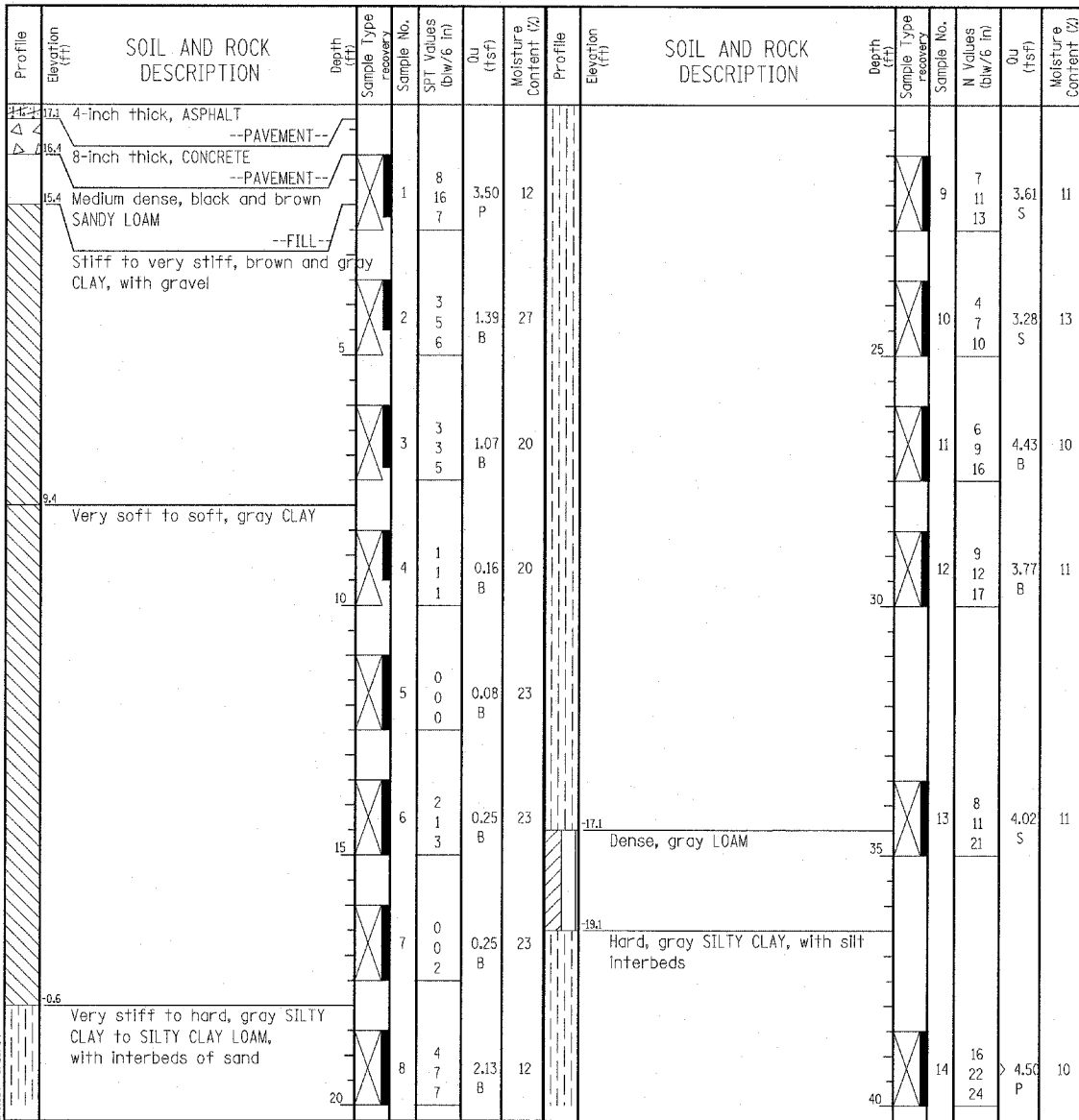


**Wang Engineering, INC.**  
 Consulting Geotechnical and Environmental Engineers  
 wangeng3@wangeng.com  
 1145 Main Street  
 Lombard, IL 60148  
 Telephone: 630 953-9928  
 Fax: 630 953-9938

**BORING LOG SB 35-03** Page 1 of 2

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 17.41 ft  
 North: 1843244.00 ft  
 East: 1177580.76 ft  
 Station: 1218+64.6  
 Offset: 143.487' LT



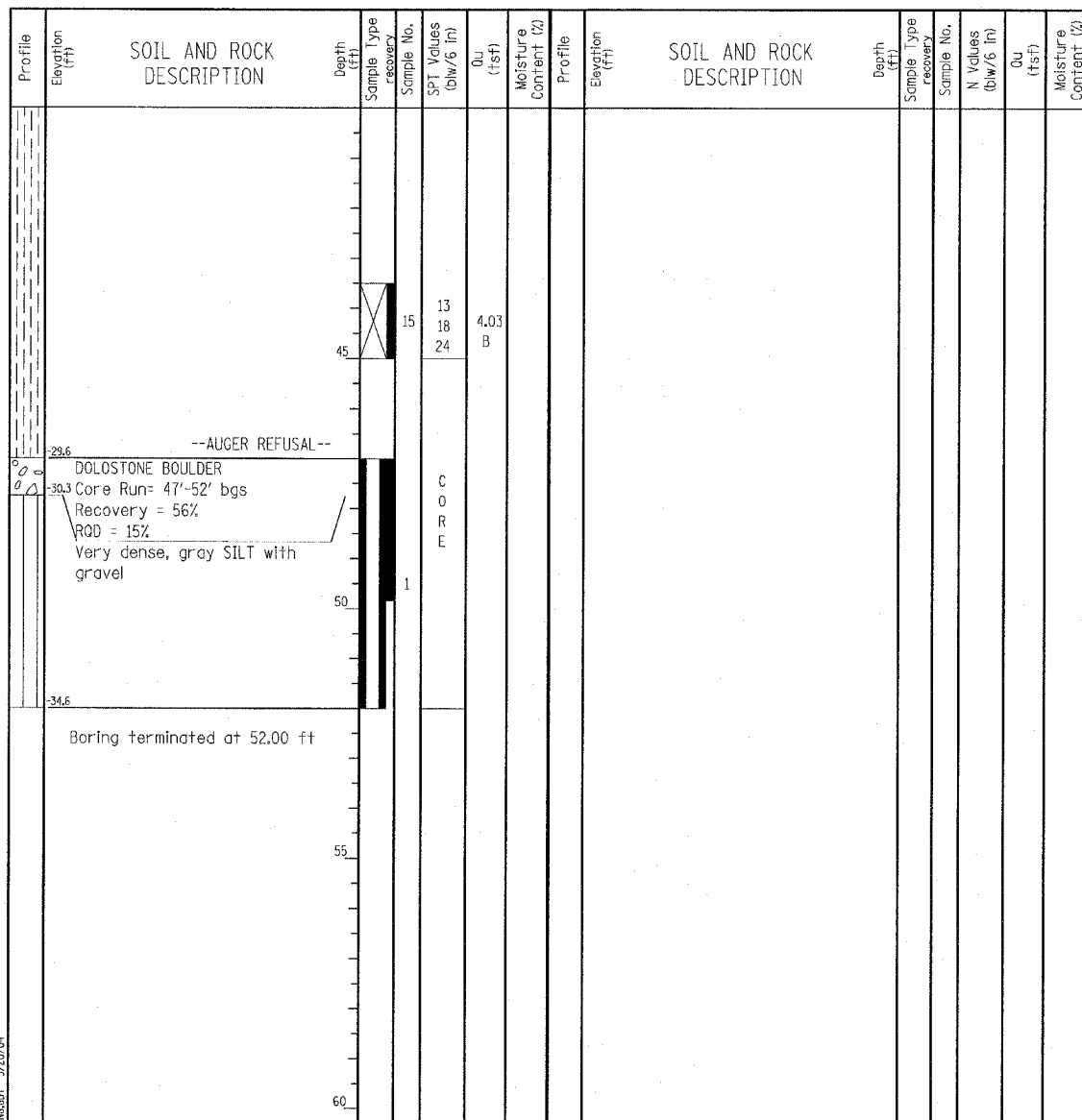
| GENERAL NOTES   |                  |                   |  | WATER LEVEL DATA          |    |     |  |
|---|------------------|-------------------|--|---------------------------|----|-----|--|
| Begin Drilling  | 02-09-2004       | Complete Drilling | 02-09-2004   | While Drilling            | ▽  | DRY |  |
| Drilling Contractor   | Patrick Drilling | Drill Rig         | CME 75 TMR   | At Completion of Drilling | ▽  | DRY |  |
| Driller   | T&D              | Logger            | J, Kasnick   | Time After Drilling       | NA |     |  |
| Checked by  | N. Davis         | Drilling Method   | 3.25" ID HSA; Boring backfilled with bentonite upon completion | Depth to Water            | ▽  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |                  |                   |  |                           |    |     |  |

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 1145 Main Street  
 Lombard, IL 60148  
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**BORING LOG SB 35-03** Page 2 of 2

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 17.41 ft  
 North: 1843244.00 ft  
 East: 1177580.76 ft  
 Station: 1218+64.6  
 Offset: 143.487' LT



| GENERAL NOTES   |                  |                   |  | WATER LEVEL DATA          |    |     |  |
|---|------------------|-------------------|--|---------------------------|----|-----|--|
| Begin Drilling  | 02-09-2004       | Complete Drilling | 02-09-2004   | While Drilling            | ▽  | DRY |  |
| Drilling Contractor   | Patrick Drilling | Drill Rig         | CME 75 TMR   | At Completion of Drilling | ▽  | DRY |  |
| Driller   | T&D              | Logger            | J, Kasnick   | Time After Drilling       | NA |     |  |
| Checked by  | N. Davis         | Drilling Method   | 3.25" ID HSA; Boring backfilled with bentonite upon completion | Depth to Water            | ▽  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |                  |                   |  |                           |    |     |  |

**TYLIN INTERNATIONAL**

| REVISIONS |      |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP AT 93RD ST.  
 WALL 35**  
**BORING LOG SB35-03**  
 S.N. 016-W947  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: DJR  
 DRAWN BY: DJR  
 CHECKED BY: TD

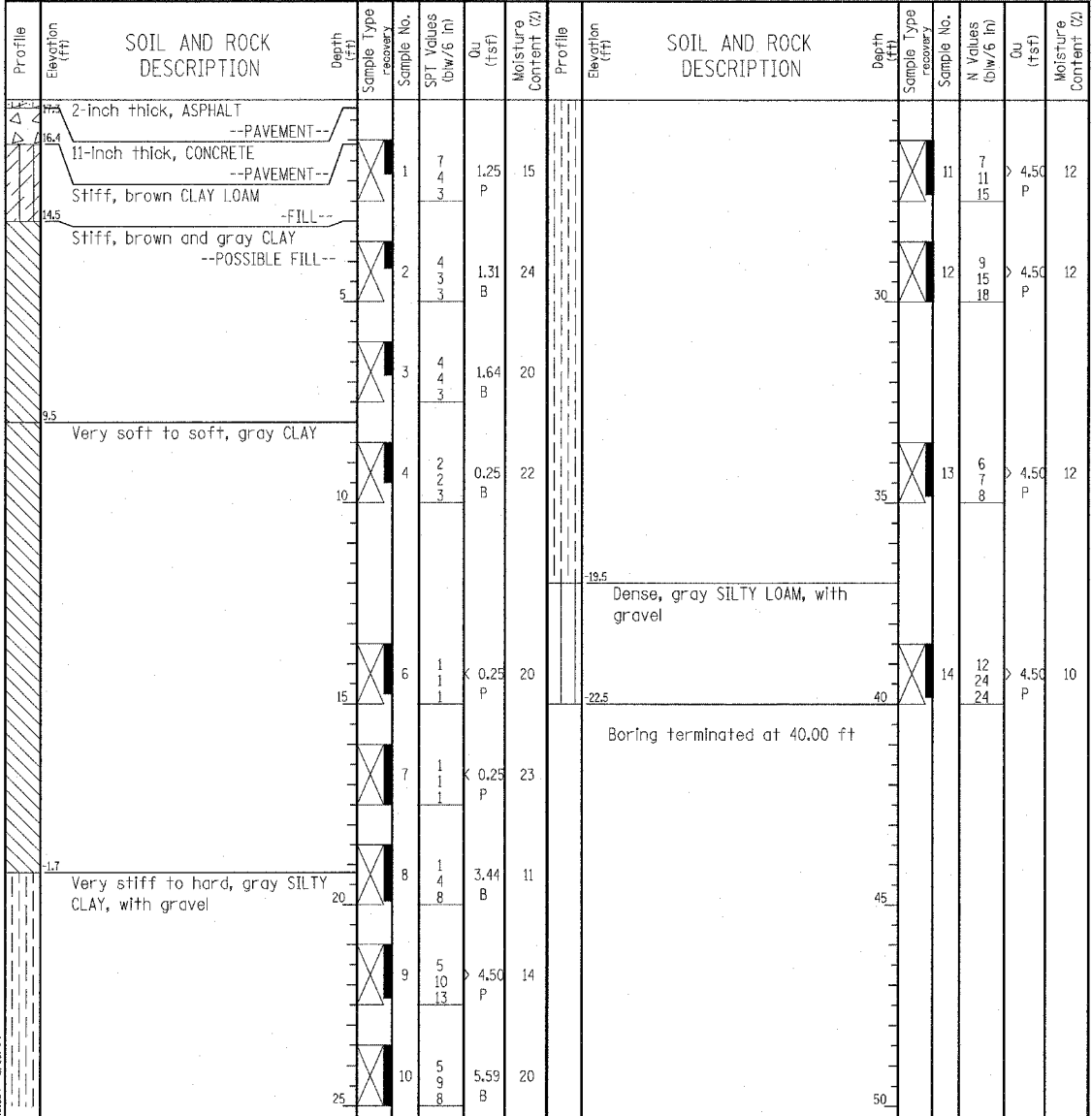
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 03/29/2005 03:31:44 PM

**Wang Engineering, Inc.**  
 Consulting Geotechnical and Environmental Engineers  
 wangeng3@wangeng.com  
 1145 Main Street  
 Lombard, IL 60148  
 Telephone: 630 953-9928  
 Fax: 630 953-9938

**BORING LOG SB 35-04**  
 WEI Job No.: 414-07-01  
 Datum: CCD  
 Elevation: 17.54 ft  
 North: 1843315.25 ft  
 East: 1177578.04 ft  
 Station: 1219+35.9  
 Offset: 144.163' LT

Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Page 1 of 1



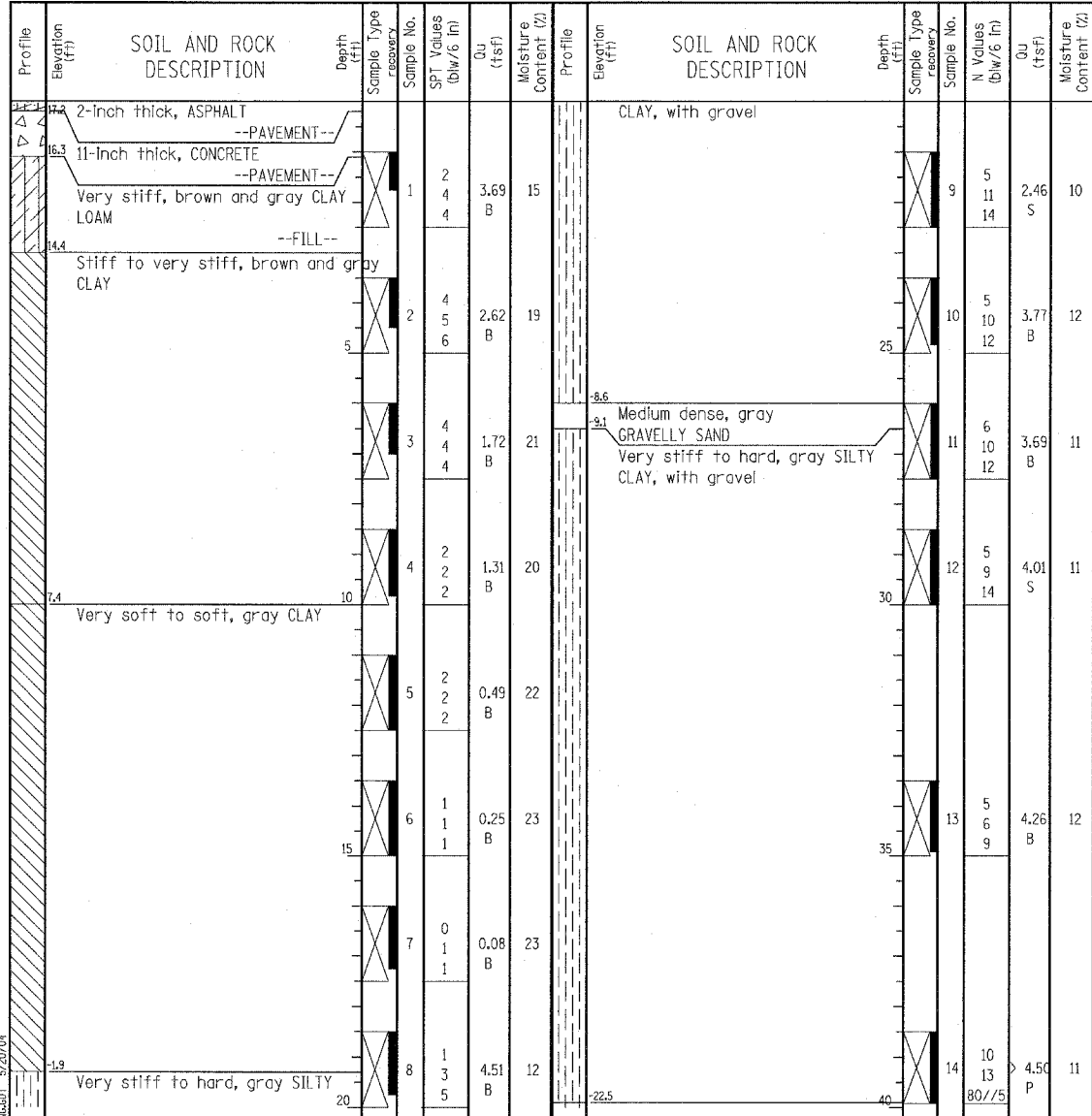
| GENERAL NOTES   |  |                   |            | WATER LEVEL DATA          |    |     |  |
|---|--|-------------------|------------|---------------------------|----|-----|--|
| Begin Drilling  | 01-07-2004   | Complete Drilling | 01-07-2004 | While Drilling            | ☐  | DRY |  |
| Drilling Contractor   | Patrick Drilling   | Drill Rig         | CME 75 TMR | At Completion of Drilling | ▼  | DRY |  |
| Driller   | J&L  | Logger            | K. Jacob   | Time After Drilling       | NA |     |  |
| Drilling Method   | 3.25" ID HSA; Boring backfilled with bentonite upon completion |                   |            | Depth to Water            | ▼  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |  |                   |            |                           |    |     |  |

**Wang Engineering, Inc.**  
 Consulting Geotechnical and Environmental Engineers  
 wangeng3@wangeng.com  
 1145 Main Street  
 Lombard, IL 60148  
 Telephone: 630 953-9928  
 Fax: 630 953-9938

**BORING LOG SB 35-06**  
 WEI Job No.: 414-07-01  
 Datum: CCD  
 Elevation: 17.43 ft  
 North: 1843464.66 ft  
 East: 1177574.33 ft  
 Station: 1220+85.4  
 Offset: 143.599' LT

Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Page 1 of 2




| GENERAL NOTES   |  |                   |            | WATER LEVEL DATA          |    |     |  |
|---|--|-------------------|------------|---------------------------|----|-----|--|
| Begin Drilling  | 01-07-2004   | Complete Drilling | 01-07-2004 | While Drilling            | ☐  | DRY |  |
| Drilling Contractor   | Patrick Drilling   | Drill Rig         | CME 75 TMR | At Completion of Drilling | ▼  | DRY |  |
| Driller   | J&L  | Logger            | K. Jacob   | Time After Drilling       | NA |     |  |
| Drilling Method   | 3.25" ID HSA; Boring backfilled with bentonite upon completion |                   |            | Depth to Water            | ▼  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |  |                   |            |                           |    |     |  |

**TYLIN INTERNATIONAL**

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP AT 93RD ST.  
 WALL 35  
 BORING LOGS SB35-04 & SB35-06  
 S.N. 016-W947  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: DJR  
 DRAWN BY: DJR  
 CHECKED BY: TD



Wang Engineering, Inc.  
Consulting Geotechnical and  
Environmental Engineers  
wangeng3@wangeng.com  
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Telephones: 630 953-9928  
Fax: 630 953-9938

## BORING LOG SB 35-06

WEI Job No.: 414-07-01

Client: T. Y. LIN International

Project: Dan Ryan Improvements; IDOT No. D-91-421-01

Location: From 95th Street to South of 69th Street

Datum: CCD  
Elevation: 17.43 ft  
North: 1843464.66 ft  
East: 1177574.33 ft  
Station: 1220+85.4  
Offset: 143.539' LT

Page 2 of 2

| Profile | Elevation (ft) | SOIL AND ROCK DESCRIPTION          | Depth (ft) | Sample Type recovery | Sample No. | SPT Values (blw/6 in) | Cu (tsf) | Moisture Content (%) | Profile | Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample Type recovery | Sample No. | SPT Values (blw/6 in) | Cu (tsf) | Moisture Content (%) |  |
|---------|----------------|------------------------------------|------------|----------------------|------------|-----------------------|----------|----------------------|---------|----------------|---------------------------|------------|----------------------|------------|-----------------------|----------|----------------------|--|
|         |                | Very dense, gray SILT, with gravel |            |                      |            |                       |          |                      |         |                |                           |            |                      |            |                       |          |                      |  |
|         |                |                                    | 45         |                      | 15         | 50/5                  | NP       |                      |         |                |                           |            |                      |            |                       |          |                      |  |
|         |                |                                    |            |                      | 16         | 36                    | NP       |                      |         |                |                           |            |                      |            |                       |          |                      |  |
|         | -31.9          | Boring terminated at 49.33 ft      | 50         |                      |            | 50/4                  |          |                      |         |                |                           |            |                      |            |                       |          |                      |  |

| GENERAL NOTES  | WATER LEVEL DATA   |
|--|--|
| Begin Drilling 01-07-2004 Complete Drilling 01-07-2004<br>Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR<br>Driller J&L Logger K. Jacob Checked by N. Davis<br>Drilling Method 3.25" ID. HSA; Boring backfilled with bentonite upon completion. | While Drilling <input checked="" type="checkbox"/> DRY<br>At Completion of Drilling <input checked="" type="checkbox"/> DRY<br>Time After Drilling NA<br>Depth to Water <input checked="" type="checkbox"/> NA<br><small>The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.</small> |

WANGENG INC. 4140701.01 WANGENGDOT 5/20/04

**TYLIN** INTERNATIONAL

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 EXIT RAMP AT 93RD ST.  
 WALL 35  
**BORING LOG SB35-06**

S.N. 016-W947      DESIGNED BY: DJR  
 SCALE: N.T.S.      DRAWN BY: DJR  
 DATE: MARCH 25, 2005      CHECKED BY: TD

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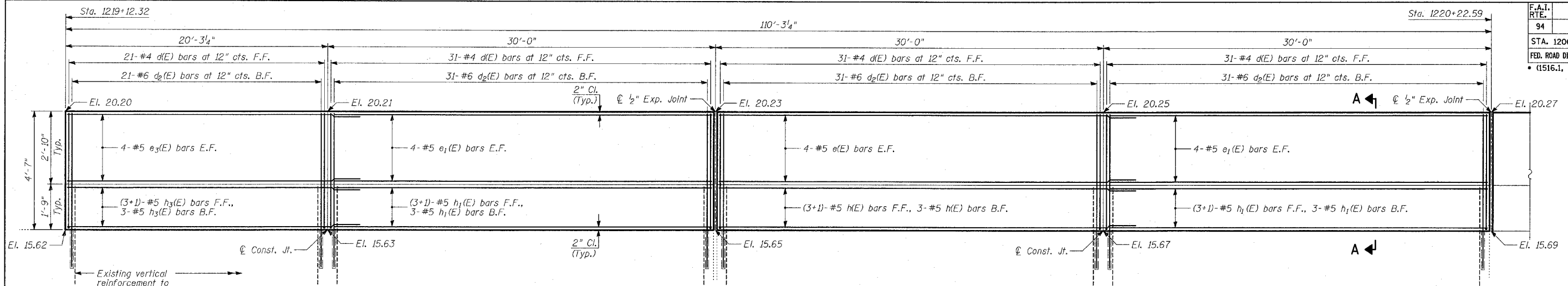




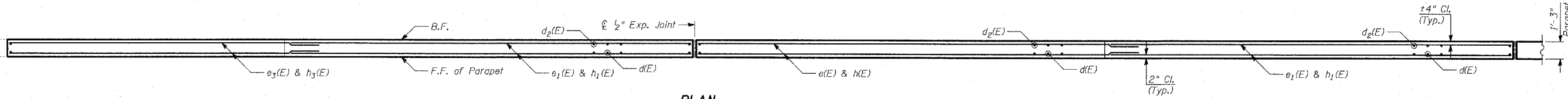




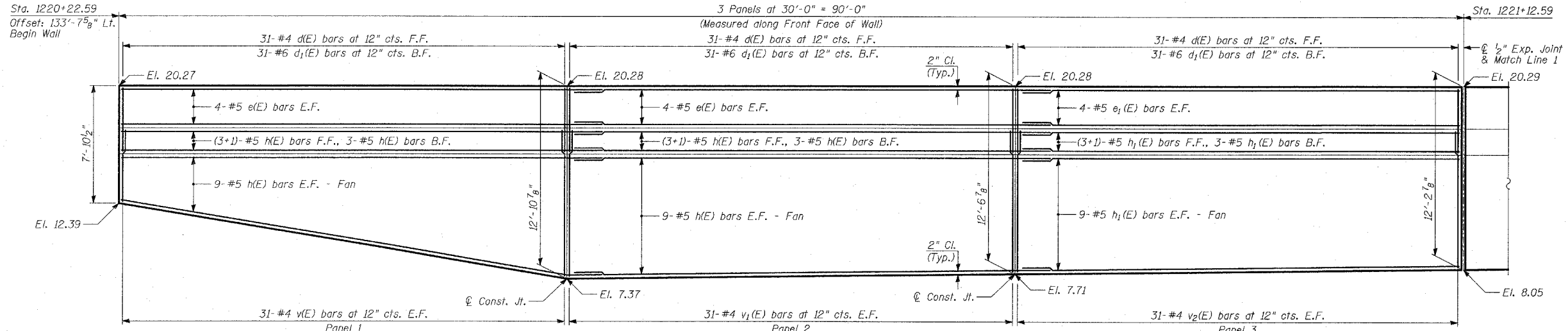
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| F.A.I. RTE.                     | SECTION | COUNTY   | TOTAL SHEETS     | SHEET NO. |
| 94                              |         | COOK     | 907              | 476       |
| STA. 1200+00.00 TO STA. 1365+00 |         |          |                  |           |
| FED. ROAD DIST. NO.             |         | ILLINOIS | FED. AID PROJECT |           |
| (1516.1, 1717 & 1818) R-9       |         | 62695    |                  |           |



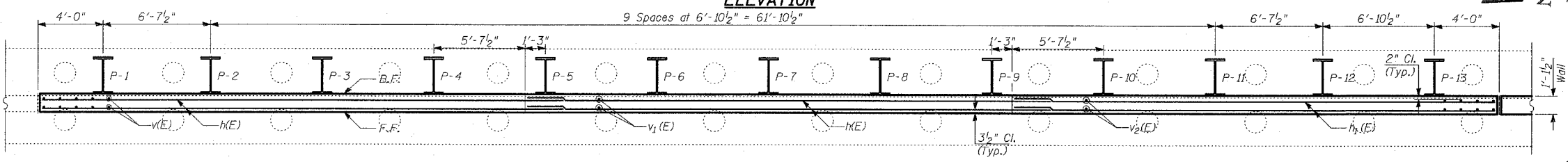
**FRONT FACE ELEVATION - FLUTED PARAPET**



**PLAN**  
(At Parapet Level)



**ELEVATION**



**PLAN**

- NOTES:**
1. B.F. - denotes Back Face.
  2. E.F. - denotes Each Face.
  3. F.F. - denotes Front Face.
  4. Work this sheet with Sheets 12 thru 22 of 34.
  5. Pile spacing measured along Front Face of wall.
  6. Place new piles to miss existing piles.
  7. Existing wall footing and pile layout is shown for conflicting areas between existing and proposed piles.
  8. For section A-A, see sheet 11 of 34.
  9. For Lap Splices, see Sheet 12 of 34.

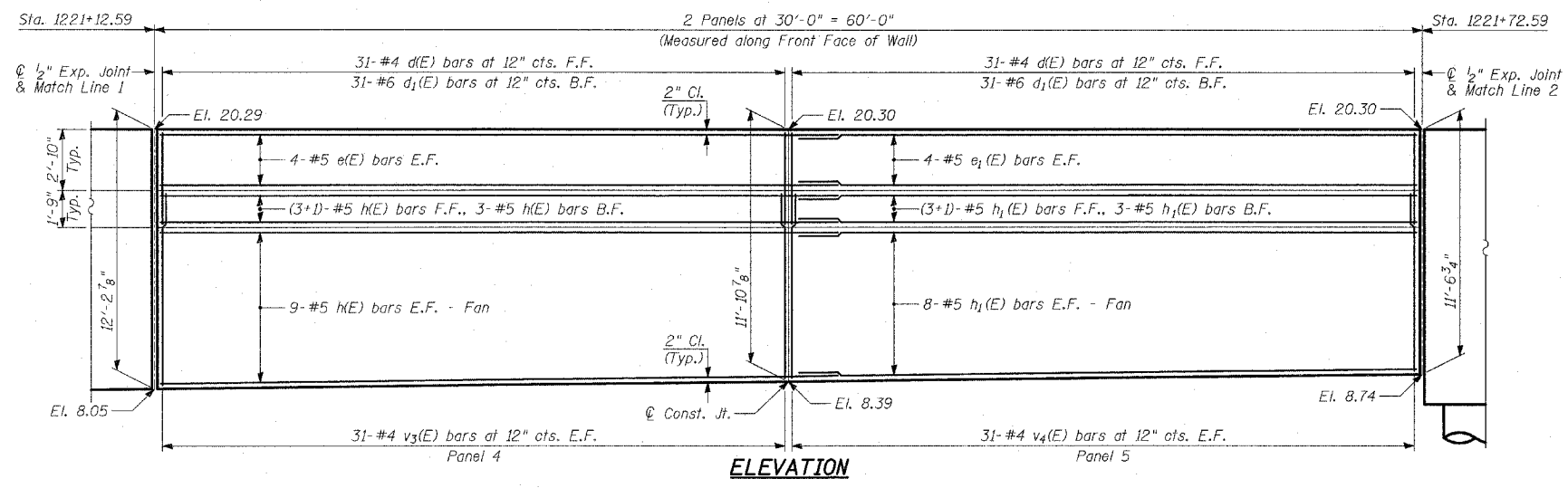
**TYLIN INTERNATIONAL**

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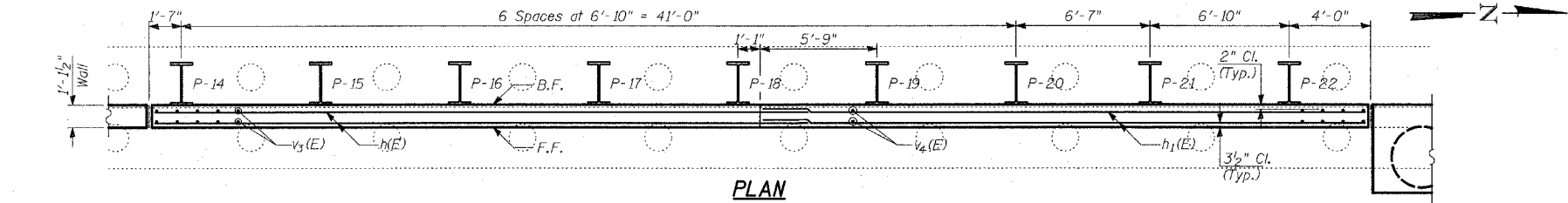
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**93RD ST. TO 91ST ST.**  
**WALL 36 - PLAN AND ELEVATION**  
**STA. 1219+12.32 TO STA. 1221+12.59**  
 S.N. 016-W948  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: MI, DJR  
 DRAWN BY: DJR, TB  
 CHECKED BY: TD, MI

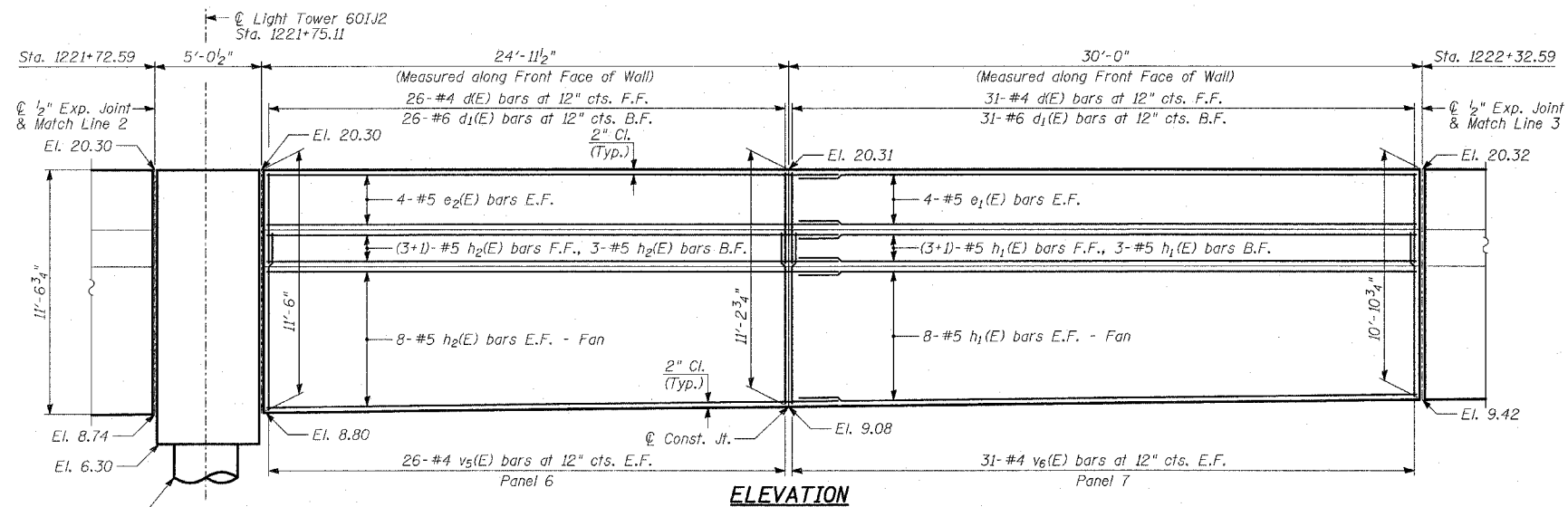
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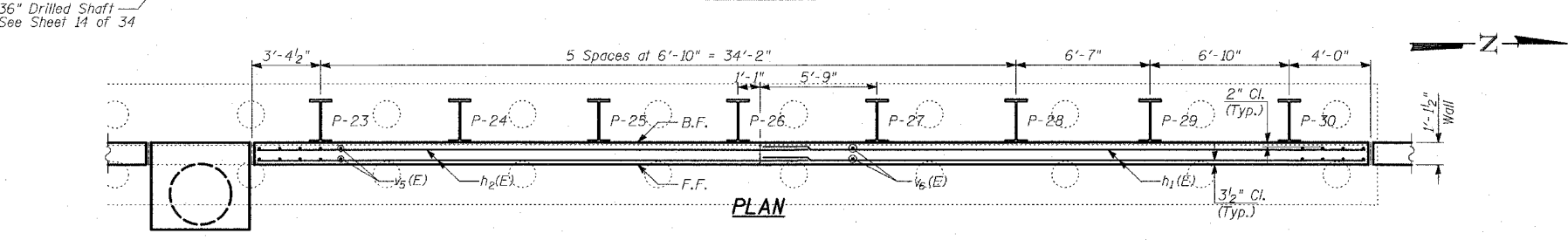
**ELEVATION**



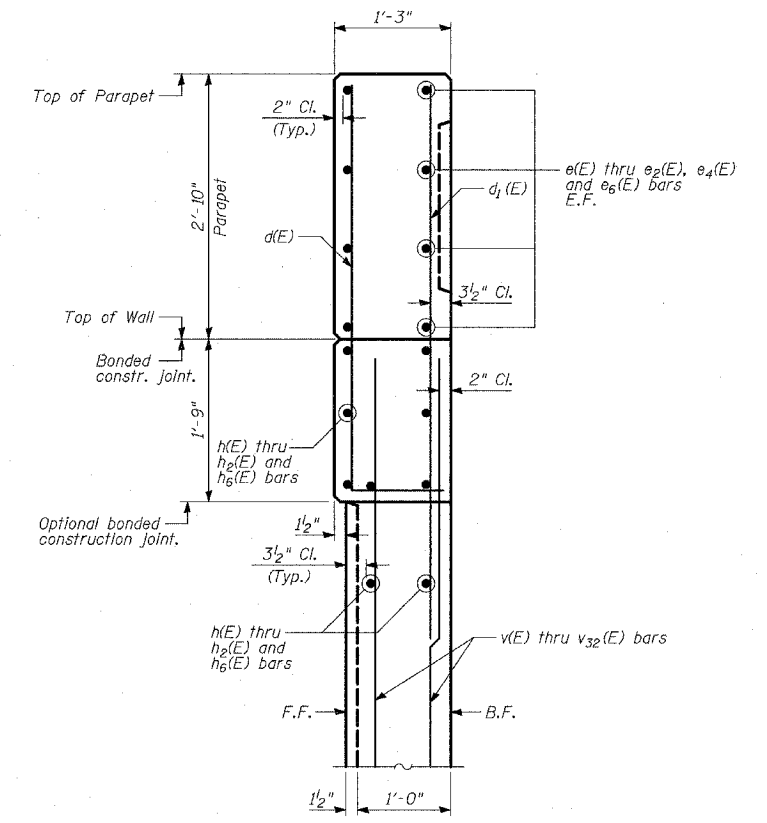
**PLAN**



**ELEVATION**



**PLAN**



**PARAPET DETAIL**  
(Sta. 1220+22.59 to Sta. 1231+63.49)

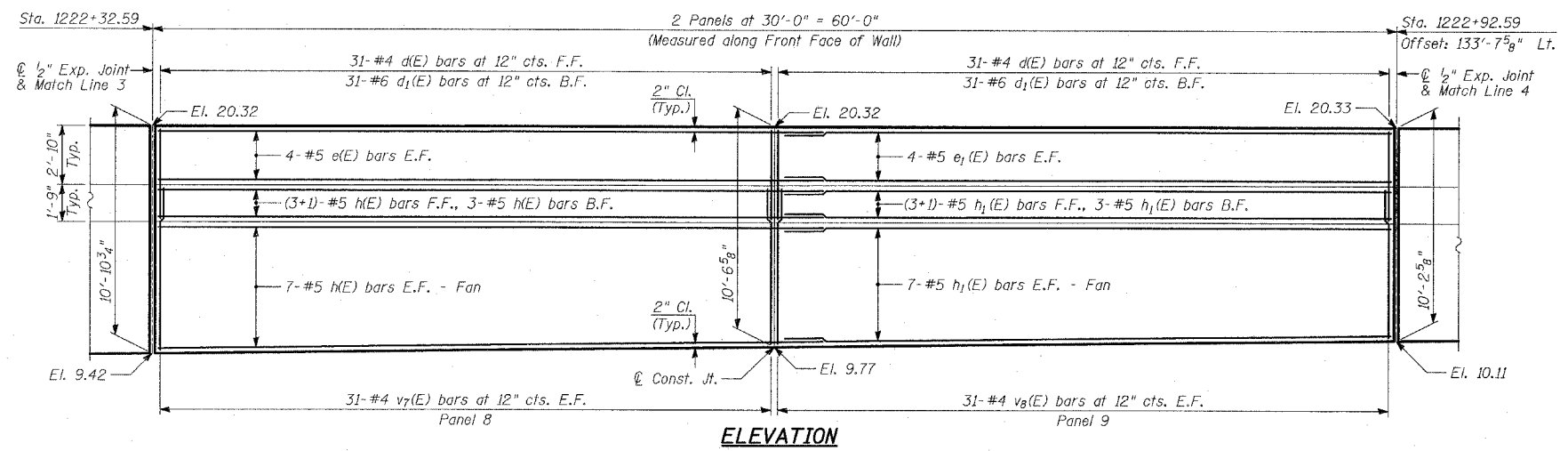
- NOTES:**
1. B.F. - denotes Back Face.
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  4. Work this sheet with Sheets 12 thru 22 of 34.
  5. Pile spacing measured along Front Face of wall.
  6. Place new piles to miss existing piles.
  7. Existing wall footing and pile layout is shown for conflicting areas between existing and proposed piles.
  8. For Lap Splices, see Sheet 12 of 34.

**TYLIN INTERNATIONAL**

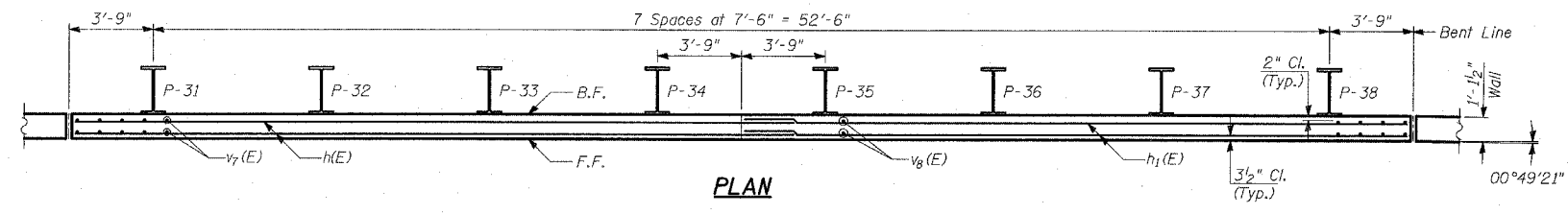
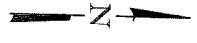
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
 93RD ST. TO 91ST ST.  
**WALL 36 - PLAN AND ELEVATION**  
**STA. 1221+12.59 TO STA. 1222+32.59**  
 S.N. 016-W948      DESIGNED BY: MI, DJR  
 SCALE: N.T.S.      DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005      CHECKED BY: TD, MI

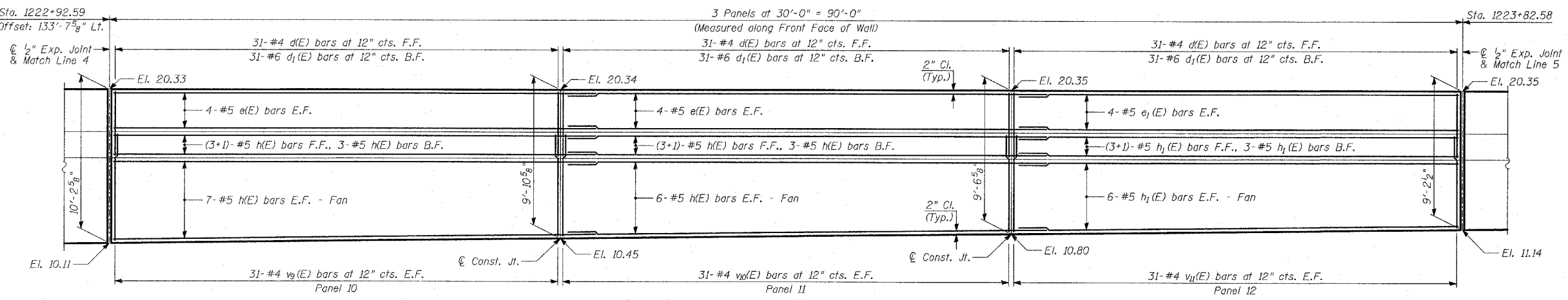
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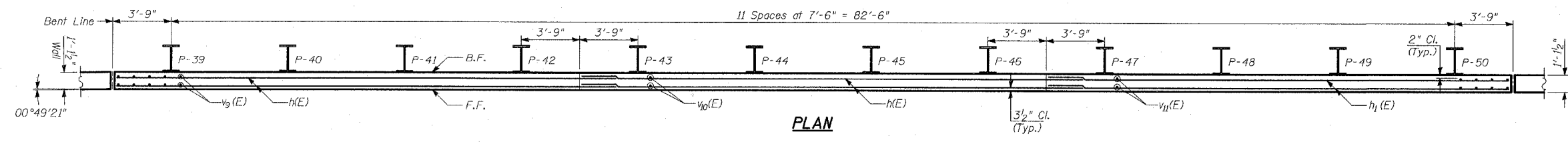
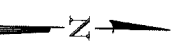
**ELEVATION**



**PLAN**



**ELEVATION**



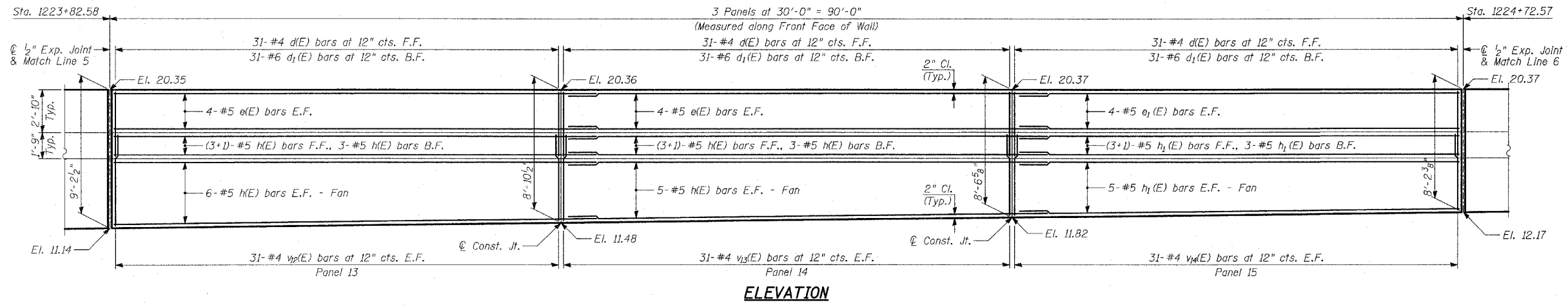
**PLAN**

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  8. For Lap Splices, see Sheet 12 of 34.

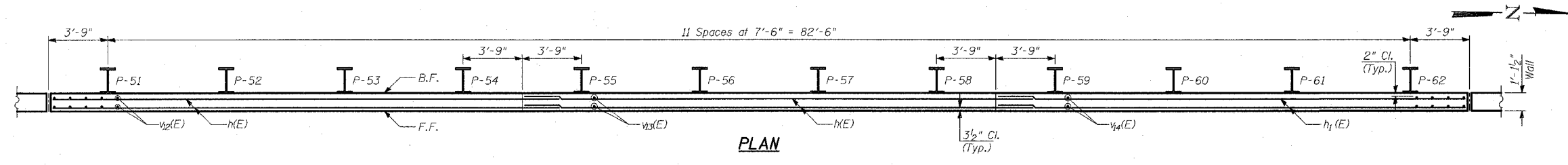
**TYLIN INTERNATIONAL**

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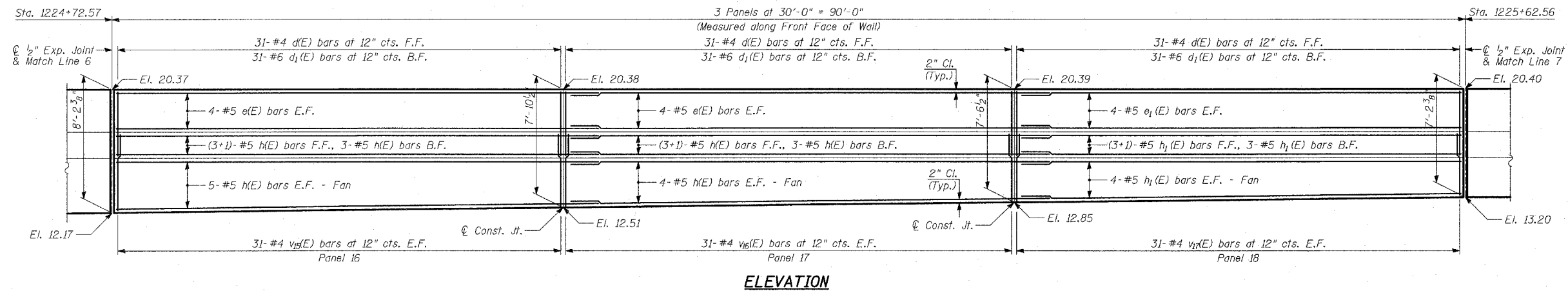
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**93RD ST. TO 91ST ST.**  
**WALL 36 - PLAN AND ELEVATION**  
**STA. 1222+32.59 TO STA. 1223+82.58**  
 S.N. 016-W948 DESIGNED BY: MI, DJR  
 SCALE: N.T.S. DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI



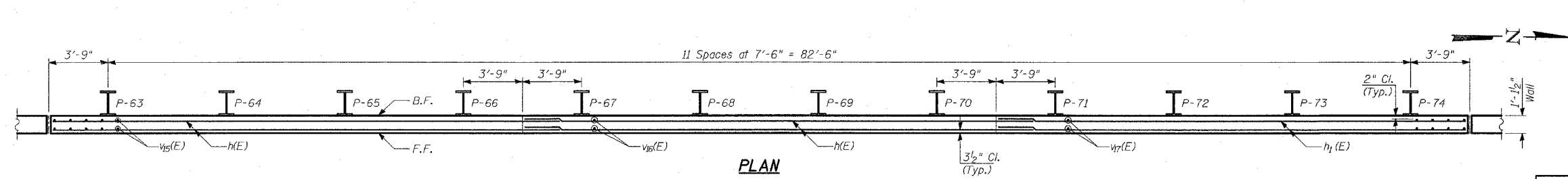
**ELEVATION**



**PLAN**



**ELEVATION**



**PLAN**

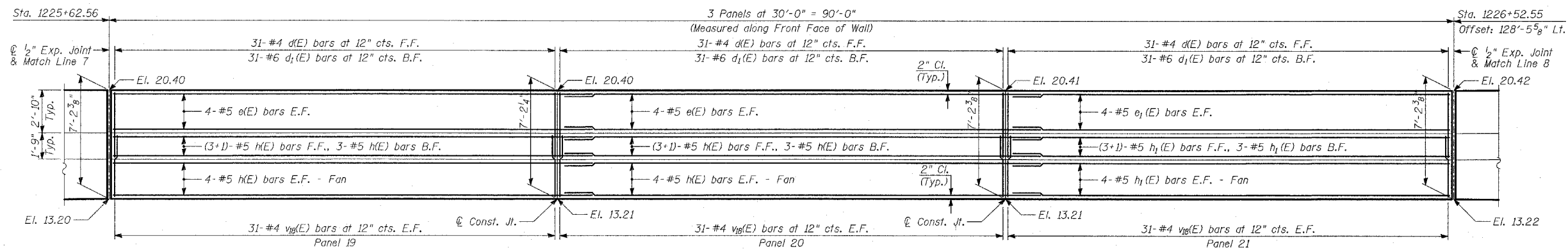
- NOTES:**
1. B.F. - denotes Back Face.
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**TYLIN INTERNATIONAL**

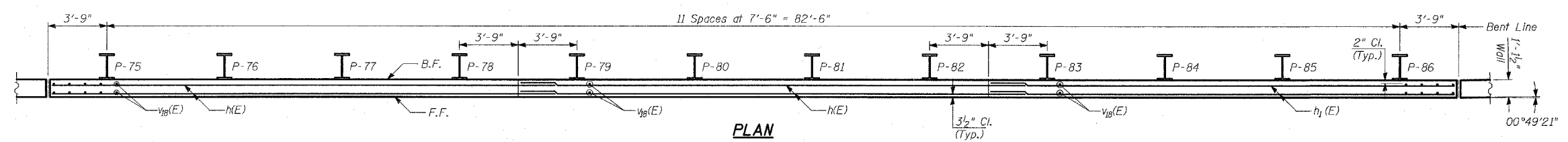
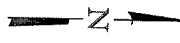
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**93RD ST. TO 91ST ST.**  
**WALL 36 - PLAN AND ELEVATION**  
**STA. 1223+82.58 TO STA. 1225+62.56**  
 S.N. 016-W948  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

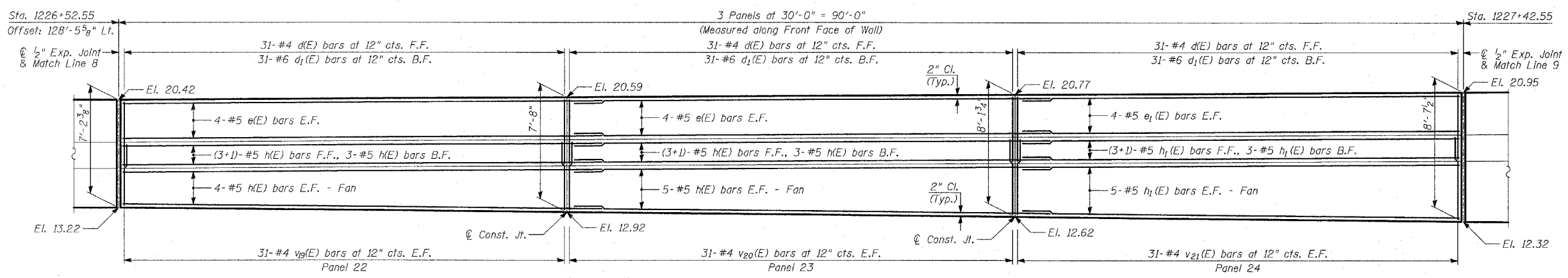
DESIGNED BY: MI, DJR  
 DRAWN BY: DJR, TB  
 CHECKED BY: TD, MI



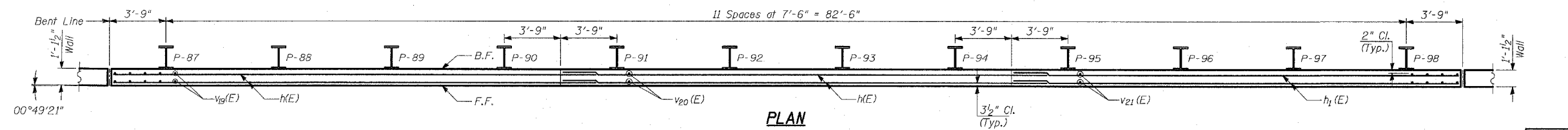
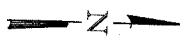
**ELEVATION**



**PLAN**



**ELEVATION**



**PLAN**

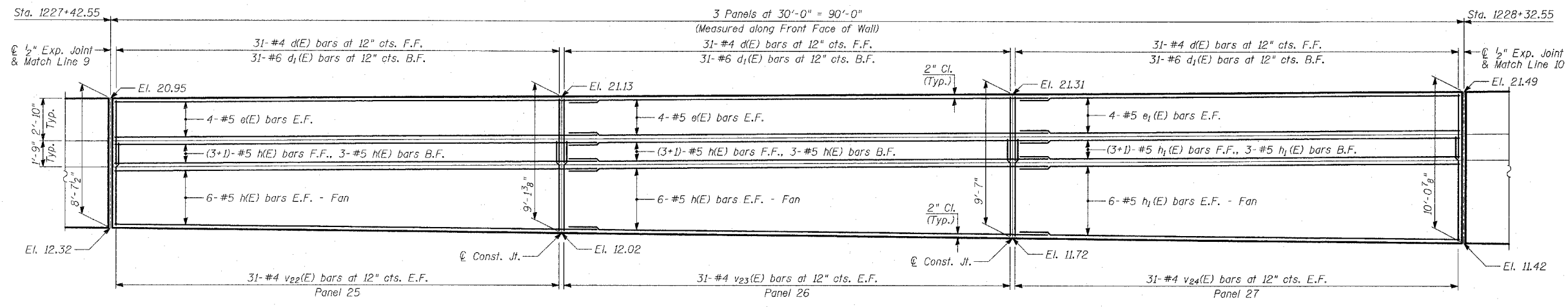
- NOTES:**
1. B.F. - denotes Back Face.
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  8. For Lap Splices, see Sheet 12 of 34.

**TYLIN INTERNATIONAL**

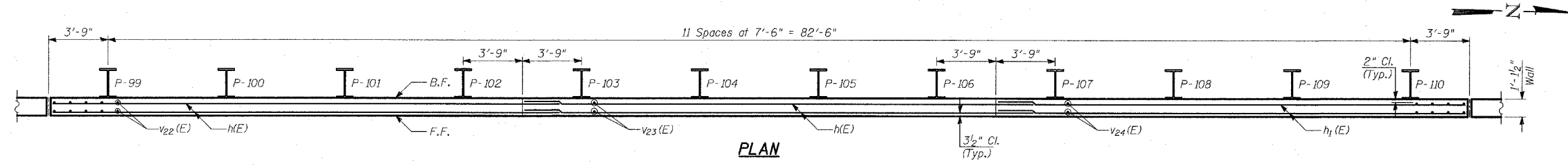
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**93RD ST. TO 91ST ST.**  
**WALL 36 - PLAN AND ELEVATION**  
**STA. 1225+62.56 TO STA. 1227+42.55**  
 S.N. 016-W948      DESIGNED BY: MI, DJR  
 SCALE: N.T.S.      DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005      CHECKED BY: TD, MI

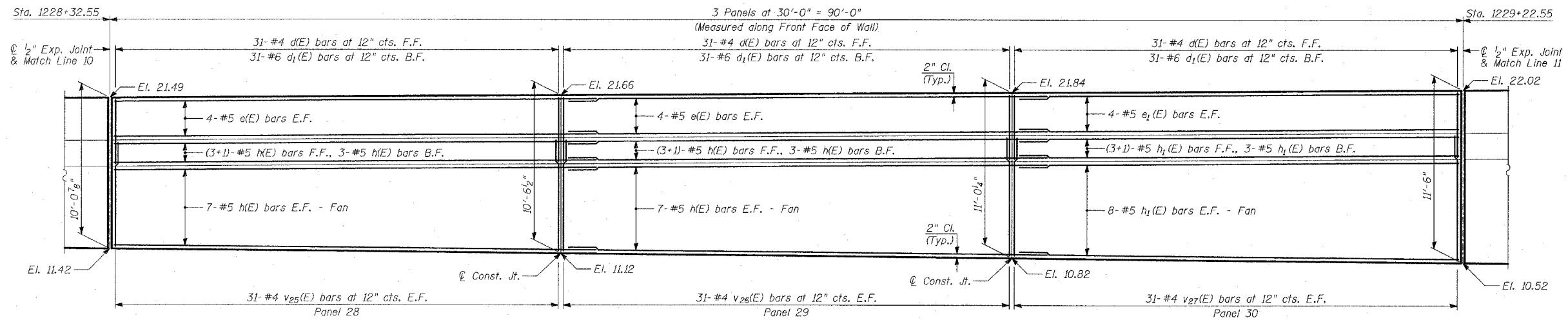




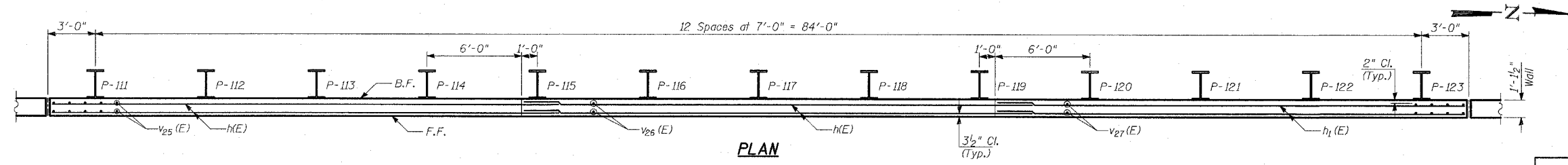
**ELEVATION**



**PLAN**



**ELEVATION**



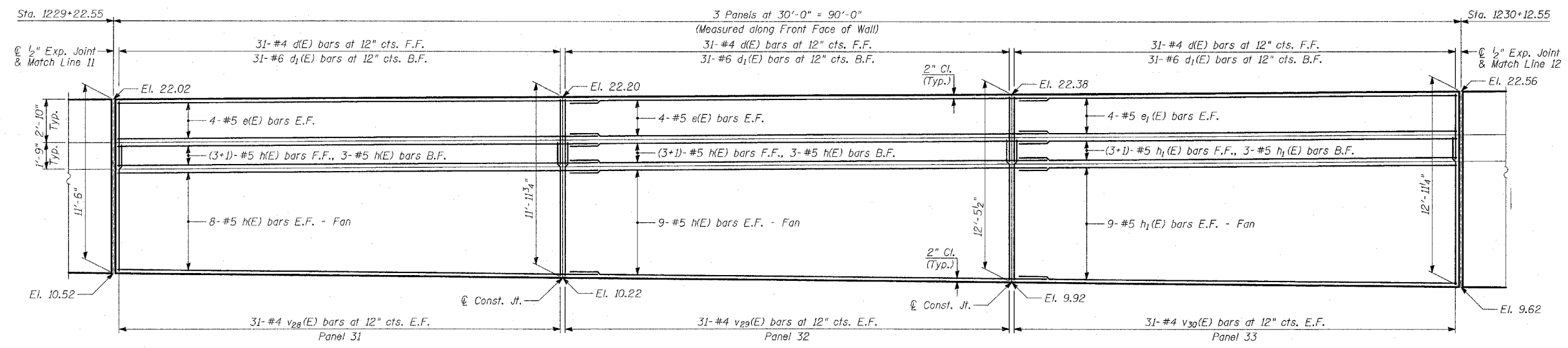
**PLAN**

- NOTES:**
1. B.F. - denotes Back Face.
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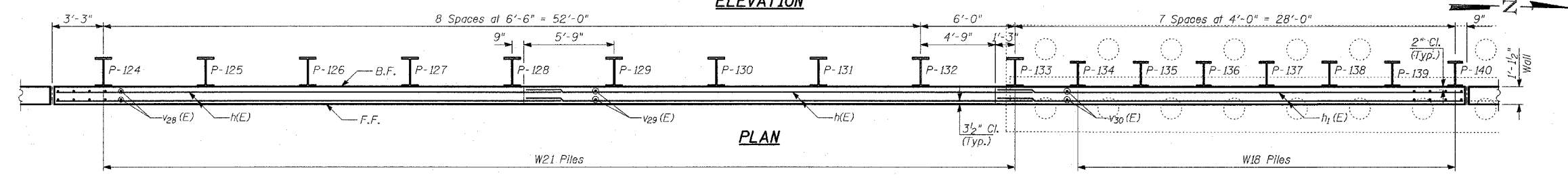
**TYLIN INTERNATIONAL**

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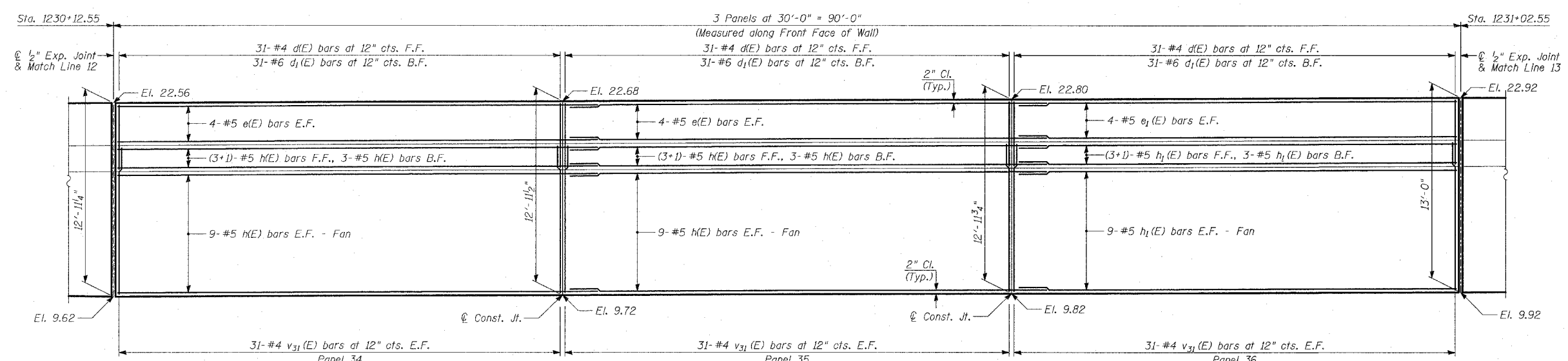
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
 93RD ST. TO 91ST ST.  
**WALL 36 - PLAN AND ELEVATION**  
**STA. 1227+42.55 TO STA. 1229+22.55**  
 S.N. 016-W948 DESIGNED BY: MI, DJR  
 SCALE: N.T.S. DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI



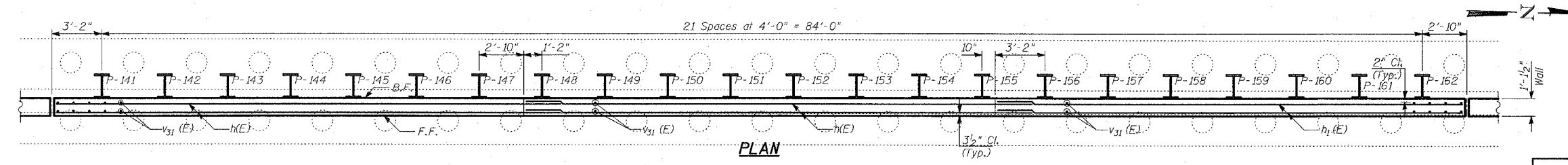
**ELEVATION**



**PLAN**



**ELEVATION**



**PLAN**

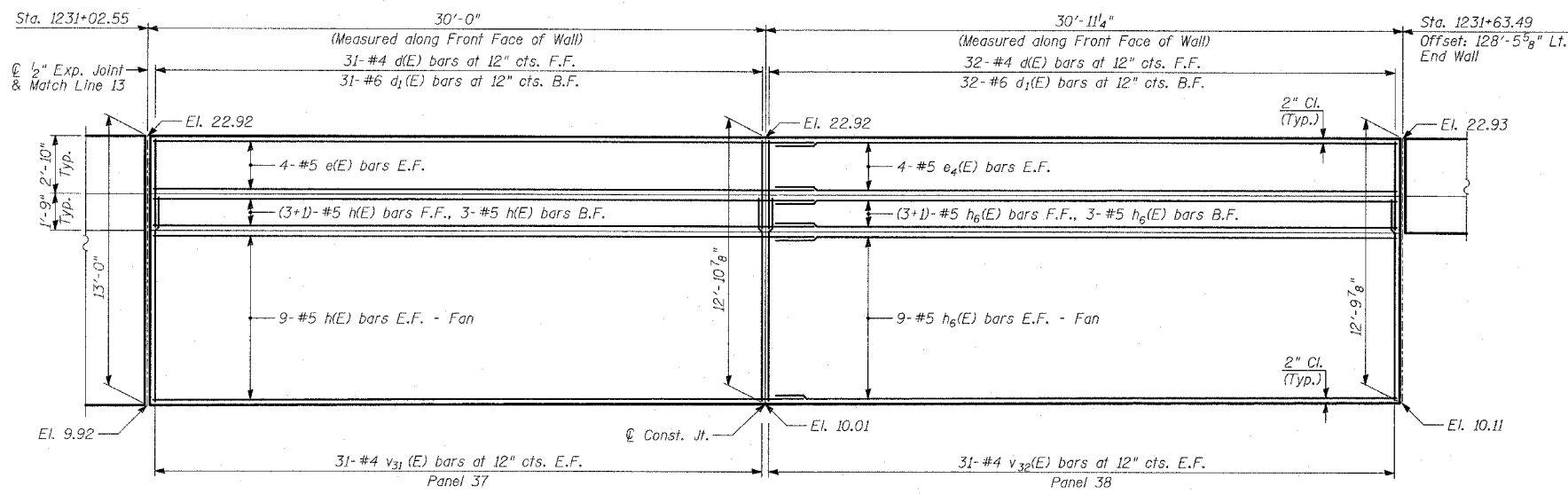
- NOTES:**
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  8. For Lap Splices, see Sheet 12 of 34.

**TYLIN INTERNATIONAL**

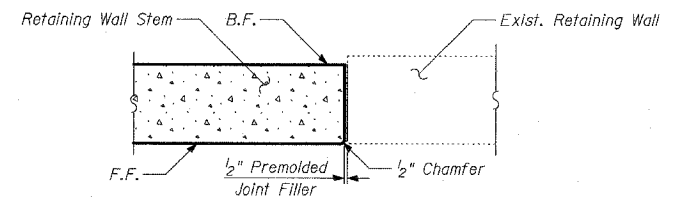
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**93RD ST. TO 91ST ST.**  
**WALL 36 - PLAN AND ELEVATION**  
**STA. 1229+22.55 TO STA. 1231+02.55**  
 S.N. 016-W948      DESIGNED BY: MI, DJR  
 SCALE: N.T.S.      DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005      CHECKED BY: TD, MI

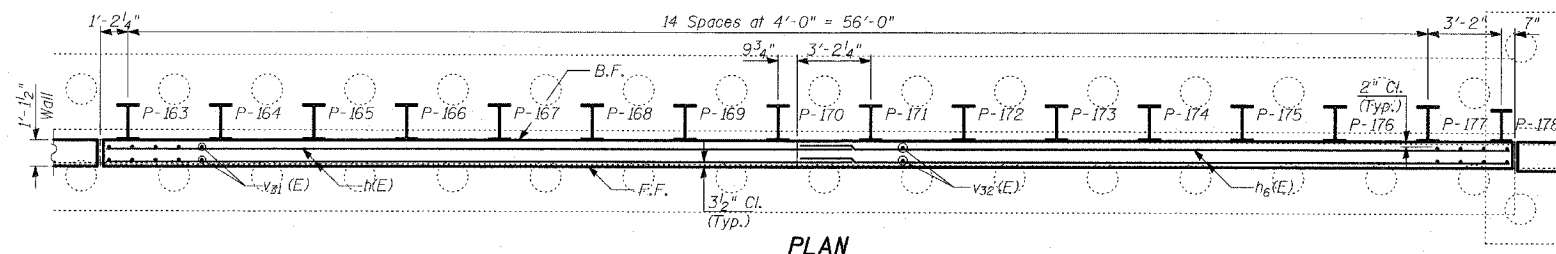
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|-----------------------------|----------|------------------|--------------|-----------|
| F.A.I. RTE.                 | SECTION  | COUNTY           | TOTAL SHEETS | SHEET NO. |
| 94                          | *        | COOK             | 907          | 483       |
| STA. 1200+00.00             |          | TO STA. 1365+00  |              |           |
| FED. ROAD DIST. NO.         | ILLINOIS | FED. AID PROJECT |              |           |
| * (1516.1, 1717 & 1818) R-9 |          | 62695            |              |           |



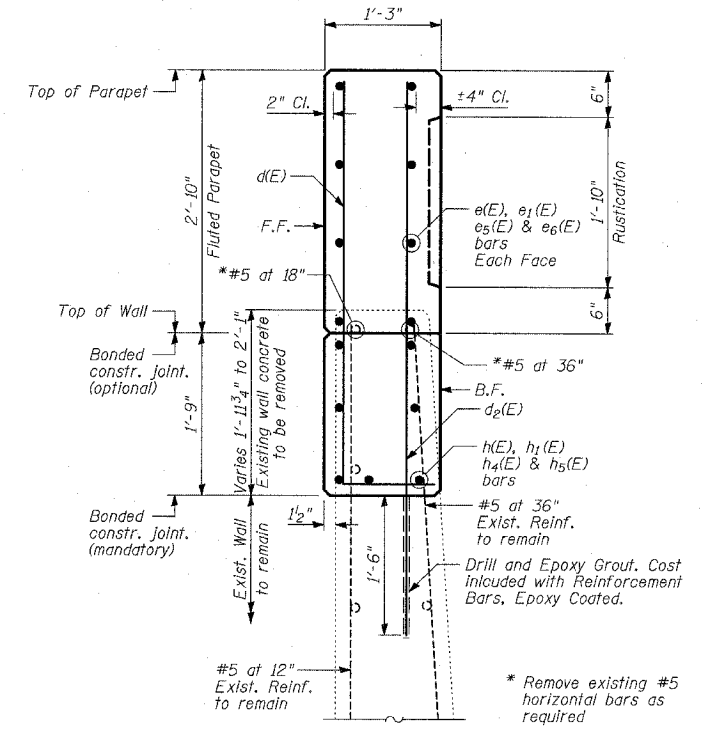
**ELEVATION**



**NEW RETAINING WALL AT EXISTING RETAINING WALL**

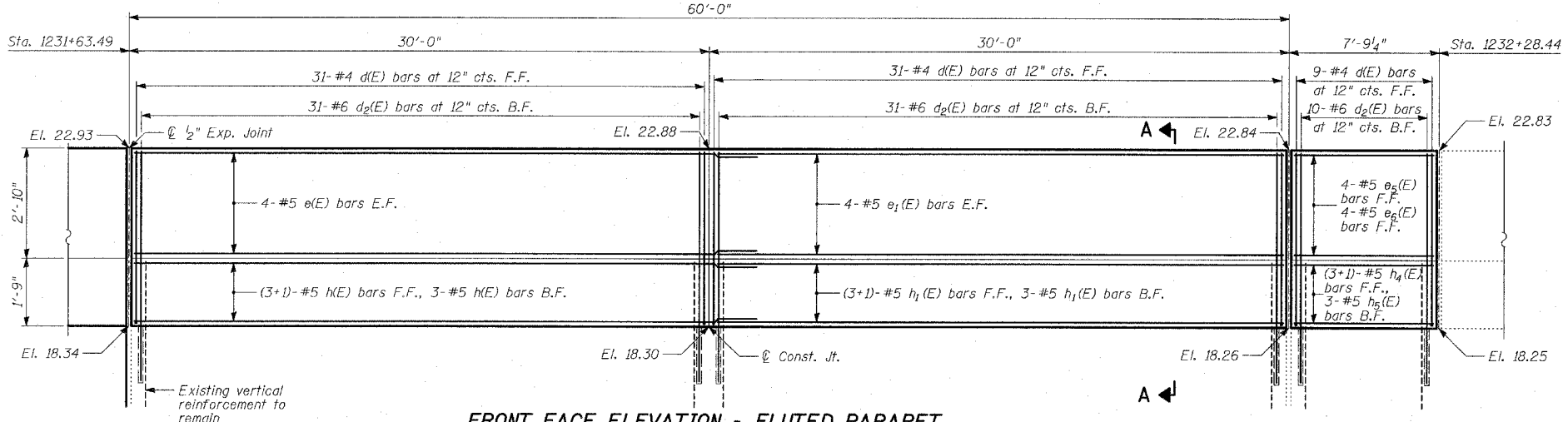


**PLAN**

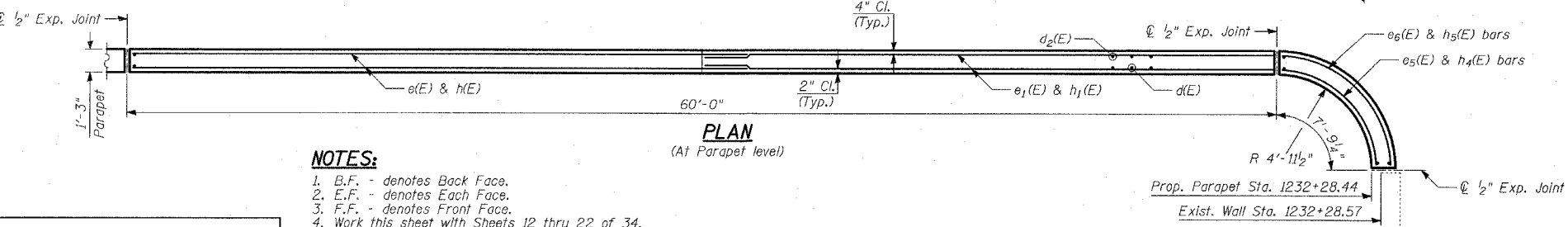


**SECTION A-A**

(Sta. 1219+12.32 to Sta. 1220+22.59 & Sta. 1231+63.49 to Sta. 1232+28.57)



**FRONT FACE ELEVATION - FLUTED PARAPET**



**PLAN**

(At Parapet level)

**NOTES:**

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 12 thru 22 of 34.
5. Pile spacing measured along Front Face of wall.
6. Place new piles to miss existing piles.
7. Existing wall footing and pile layout is shown for conflicting areas between existing and proposed piles.
8. For Lap Splices, see Sheet 12 of 34.

**TYLIN INTERNATIONAL**

| REVISIONS |      |
|-----------|------|
| NAME      | DATE |
|           |      |
|           |      |
|           |      |
|           |      |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94 (DAN RYAN EXPRESSWAY)**  
**RETAINING WALL ALONG LAFAYETTE AVE.**  
**93RD ST. TO 91ST ST.**  
**WALL 36 - PLAN AND ELEVATION**  
**STA. 1231+02.55 TO STA. 1232+28.44**  
 S.N. 016-W948 DESIGNED BY: MI, DJR  
 SCALE: N.T.S. DRAWN BY: DJR, TB  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI

03/29/2005 03:34:10 PM

**PILE LAYOUT**

| Pile | Station at Working Point | Top of Parapet El. | Top of Pile El. | Bot. of Wall El. | Section | Pile Tip El. | Pile Length |
|------|--------------------------|--------------------|-----------------|------------------|---------|--------------|-------------|
| P-1  | 1220+26.59               | 20.27              | 16.10           | 11.72            | W27x194 | -22.31       | 38'-5"      |
| P-2  | 1220+33.21               | 20.27              | 16.10           | 10.61            |         | -23.40       | 39'-6"      |
| P-3  | 1220+40.09               | 20.27              | 16.11           | 9.46             |         | -24.56       | 40'-8"      |
| P-4  | 1220+46.96               | 20.27              | 16.11           | 8.31             |         | -25.73       | 41'-10"     |
| P-5  | 1220+53.84               | 20.28              | 16.11           | 7.38             |         | -26.64       | 42'-9"      |
| P-6  | 1220+60.71               | 20.28              | 16.11           | 7.46             |         | -26.56       | 42'-8"      |
| P-7  | 1220+67.59               | 20.28              | 16.11           | 7.54             |         | -26.47       | 42'-7"      |
| P-8  | 1220+74.46               | 20.28              | 16.11           | 7.62             |         | -26.39       | 42'-6"      |
| P-9  | 1220+81.34               | 20.28              | 16.12           | 7.69             |         | -26.38       | 42'-6"      |
| P-10 | 1220+88.21               | 20.28              | 16.12           | 7.77             |         | -26.30       | 42'-5"      |
| P-11 | 1220+95.09               | 20.29              | 16.12           | 7.85             |         | -26.21       | 42'-4"      |
| P-12 | 1221+01.71               | 20.29              | 16.12           | 7.93             |         | -26.13       | 42'-3"      |
| P-13 | 1221+08.59               | 20.29              | 16.12           | 8.01             | W27x194 | -26.05       | 42'-2"      |
| P-14 | 1221+14.17               | 20.29              | 16.12           | 8.07             | W24x176 | -21.96       | 38'-1"      |
| P-15 | 1221+21.00               | 20.29              | 16.12           | 8.15             |         | -21.88       | 38'-0"      |
| P-16 | 1221+27.84               | 20.29              | 16.13           | 8.23             |         | -21.79       | 37'-11"     |
| P-17 | 1221+34.67               | 20.29              | 16.13           | 8.30             |         | -21.71       | 37'-10"     |
| P-18 | 1221+41.50               | 20.30              | 16.13           | 8.38             |         | -21.62       | 37'-9"      |
| P-19 | 1221+48.34               | 20.30              | 16.13           | 8.46             |         | -21.62       | 37'-9"      |
| P-20 | 1221+55.17               | 20.30              | 16.13           | 8.54             |         | -21.53       | 37'-8"      |
| P-21 | 1221+61.75               | 20.30              | 16.13           | 8.61             |         | -21.45       | 37'-7"      |
| P-22 | 1221+68.59               | 20.30              | 16.14           | 8.69             |         | -21.36       | 37'-6"      |
| P-23 | 1221+81.00               | 20.31              | 16.14           | 8.83             |         | -21.19       | 37'-4"      |
| P-24 | 1221+87.84               | 20.31              | 16.14           | 8.91             |         | -21.11       | 37'-3"      |
| P-25 | 1221+94.67               | 20.31              | 16.14           | 8.99             |         | -21.02       | 37'-2"      |
| P-26 | 1222+01.50               | 20.31              | 16.14           | 9.07             |         | -20.94       | 37'-1"      |
| P-27 | 1222+08.34               | 20.31              | 16.15           | 9.15             |         | -20.85       | 37'-0"      |
| P-28 | 1222+15.17               | 20.31              | 16.15           | 9.22             |         | -20.85       | 37'-0"      |
| P-29 | 1222+21.75               | 20.32              | 16.15           | 9.30             |         | -20.77       | 36'-11"     |
| P-30 | 1222+28.59               | 20.32              | 16.15           | 9.38             |         | -20.68       | 36'-10"     |
| P-31 | 1222+36.34               | 20.32              | 16.15           | 9.47             |         | -20.60       | 36'-9"      |
| P-32 | 1222+43.84               | 20.32              | 16.15           | 9.55             |         | -20.51       | 36'-8"      |
| P-33 | 1222+51.34               | 20.32              | 16.16           | 9.64             |         | -20.43       | 36'-7"      |
| P-34 | 1222+58.84               | 20.32              | 16.16           | 9.72             |         | -20.34       | 36'-6"      |
| P-35 | 1222+66.34               | 20.33              | 16.16           | 9.81             |         | -20.26       | 36'-5"      |
| P-36 | 1222+73.84               | 20.33              | 16.16           | 9.90             |         | -20.17       | 36'-4"      |
| P-37 | 1222+81.34               | 20.33              | 16.16           | 9.98             |         | -20.09       | 36'-3"      |
| P-38 | 1222+88.84               | 20.33              | 16.16           | 10.07            | W24x176 | -20.00       | 36'-2"      |
| P-39 | 1222+96.35               | 20.33              | 16.17           | 10.15            | W21x147 | -19.92       | 36'-1"      |
| P-40 | 1223+03.85               | 20.33              | 16.17           | 10.24            |         | -19.83       | 36'-0"      |
| P-41 | 1223+11.35               | 20.34              | 16.17           | 10.32            |         | -19.75       | 35'-11"     |
| P-42 | 1223+18.85               | 20.34              | 16.17           | 10.41            |         | -19.66       | 35'-10"     |
| P-43 | 1223+26.35               | 20.34              | 16.17           | 10.50            |         | -19.58       | 35'-9"      |
| P-44 | 1223+33.85               | 20.34              | 16.17           | 10.58            |         | -19.49       | 35'-8"      |
| P-45 | 1223+41.35               | 20.34              | 16.18           | 10.67            |         | -19.41       | 35'-7"      |
| P-46 | 1223+48.85               | 20.35              | 16.18           | 10.75            |         | -19.32       | 35'-6"      |
| P-47 | 1223+56.35               | 20.35              | 16.18           | 10.84            |         | -19.24       | 35'-5"      |
| P-48 | 1223+63.84               | 20.35              | 16.18           | 10.92            |         | -19.15       | 35'-4"      |
| P-49 | 1223+71.34               | 20.35              | 16.18           | 11.01            |         | -19.07       | 35'-3"      |
| P-50 | 1223+78.84               | 20.35              | 16.19           | 11.10            | W21x147 | -18.98       | 35'-2"      |
| P-51 | 1223+86.34               | 20.35              | 16.19           | 11.18            | W18x143 | -17.90       | 34'-1"      |
| P-52 | 1223+93.84               | 20.36              | 16.19           | 11.27            |         | -17.81       | 34'-0"      |
| P-53 | 1224+01.34               | 20.36              | 16.19           | 11.35            |         | -17.73       | 33'-11"     |
| P-54 | 1224+08.84               | 20.36              | 16.19           | 11.44            |         | -17.64       | 33'-10"     |
| P-55 | 1224+16.34               | 20.36              | 16.19           | 11.52            |         | -17.56       | 33'-9"      |
| P-56 | 1224+23.84               | 20.36              | 16.20           | 11.61            |         | -17.47       | 33'-8"      |
| P-57 | 1224+31.34               | 20.36              | 16.20           | 11.70            |         | -17.39       | 33'-7"      |
| P-58 | 1224+38.84               | 20.37              | 16.20           | 11.78            |         | -17.30       | 33'-6"      |
| P-59 | 1224+46.34               | 20.37              | 16.20           | 11.87            |         | -17.22       | 33'-5"      |
| P-60 | 1224+53.83               | 20.37              | 16.20           | 11.95            |         | -17.13       | 33'-4"      |
| P-61 | 1224+61.33               | 20.37              | 16.21           | 12.04            |         | -16.96       | 33'-2"      |
| P-62 | 1224+68.83               | 20.37              | 16.21           | 12.12            |         | -16.88       | 33'-1"      |
| P-63 | 1224+76.33               | 20.38              | 16.21           | 12.21            |         | -16.79       | 33'-0"      |
| P-64 | 1224+83.83               | 20.38              | 16.21           | 12.30            |         | -16.71       | 32'-11"     |
| P-65 | 1224+91.33               | 20.38              | 16.21           | 12.38            | W18x143 | -16.62       | 32'-10"     |

**PILE LAYOUT**

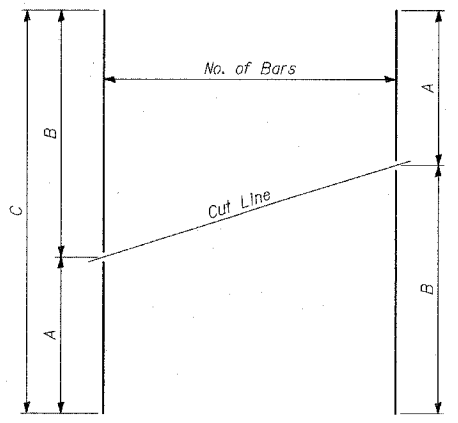
| Pile  | Station at Working Point | Top of Parapet El. | Top of Pile El. | Bot. of Wall El. | Section | Pile Tip El. | Pile Length |
|-------|--------------------------|--------------------|-----------------|------------------|---------|--------------|-------------|
| P-66  | 1224+98.83               | 20.38              | 16.21           | 12.47            | W18x143 | -16.54       | 32'-9"      |
| P-67  | 1225+06.33               | 20.38              | 16.22           | 12.55            |         | -16.45       | 32'-8"      |
| P-68  | 1225+13.83               | 20.38              | 16.22           | 12.64            |         | -16.37       | 32'-7"      |
| P-69  | 1225+21.33               | 20.39              | 16.22           | 12.72            |         | -16.28       | 32'-6"      |
| P-70  | 1225+28.83               | 20.39              | 16.22           | 12.81            |         | -16.20       | 32'-5"      |
| P-71  | 1225+36.33               | 20.39              | 16.22           | 12.90            |         | -16.11       | 32'-4"      |
| P-72  | 1225+43.83               | 20.39              | 16.22           | 12.98            |         | -16.03       | 32'-3"      |
| P-73  | 1225+51.32               | 20.39              | 16.23           | 13.07            |         | -15.94       | 32'-2"      |
| P-74  | 1225+58.82               | 20.39              | 16.23           | 13.15            |         | -15.86       | 32'-1"      |
| P-75  | 1225+66.32               | 20.40              | 16.23           | 13.20            |         | -16.85       | 33'-1"      |
| P-76  | 1225+73.82               | 20.40              | 16.23           | 13.20            |         | -16.85       | 33'-1"      |
| P-77  | 1225+81.32               | 20.40              | 16.23           | 13.20            |         | -16.85       | 33'-1"      |
| P-78  | 1225+88.82               | 20.40              | 16.24           | 13.20            |         | -16.85       | 33'-1"      |
| P-79  | 1225+96.32               | 20.40              | 16.24           | 13.21            |         | -16.85       | 33'-1"      |
| P-80  | 1226+03.82               | 20.41              | 16.24           | 13.21            |         | -16.84       | 33'-1"      |
| P-81  | 1226+11.32               | 20.41              | 16.24           | 13.21            |         | -16.84       | 33'-1"      |
| P-82  | 1226+18.82               | 20.41              | 16.24           | 13.21            |         | -16.84       | 33'-1"      |
| P-83  | 1226+26.32               | 20.41              | 16.24           | 13.22            |         | -16.84       | 33'-1"      |
| P-84  | 1226+33.82               | 20.41              | 16.24           | 13.22            |         | -16.84       | 33'-1"      |
| P-85  | 1226+41.31               | 20.41              | 16.25           | 13.22            |         | -16.84       | 33'-1"      |
| P-86  | 1226+48.81               | 20.42              | 16.25           | 13.22            |         | -16.83       | 33'-1"      |
| P-87  | 1226+56.30               | 20.44              | 16.27           | 13.19            |         | -15.89       | 32'-2"      |
| P-88  | 1226+63.80               | 20.48              | 16.32           | 13.11            |         | -15.93       | 32'-3"      |
| P-89  | 1226+71.30               | 20.53              | 16.36           | 13.04            |         | -15.97       | 32'-4"      |
| P-90  | 1226+78.80               | 20.57              | 16.40           | 12.96            |         | -16.10       | 32'-6"      |
| P-91  | 1226+86.30               | 20.62              | 16.45           | 12.89            |         | -16.13       | 32'-7"      |
| P-92  | 1226+93.80               | 20.66              | 16.49           | 12.81            |         | -16.26       | 32'-9"      |
| P-93  | 1227+01.30               | 20.70              | 16.54           | 12.74            |         | -16.30       | 32'-10"     |
| P-94  | 1227+08.80               | 20.75              | 16.58           | 12.66            |         | -16.42       | 33'-0"      |
| P-95  | 1227+16.30               | 20.79              | 16.63           | 12.59            |         | -16.46       | 33'-1"      |
| P-96  | 1227+23.80               | 20.84              | 16.67           | 12.51            |         | -16.50       | 33'-2"      |
| P-97  | 1227+31.30               | 20.88              | 16.71           | 12.44            |         | -16.62       | 33'-4"      |
| P-98  | 1227+38.80               | 20.92              | 16.76           | 12.36            | W18x143 | -16.66       | 33'-5"      |
| P-99  | 1227+46.30               | 20.97              | 16.80           | 12.29            | W21x147 | -17.78       | 34'-7"      |
| P-100 | 1227+53.80               | 21.01              | 16.85           | 12.21            |         | -17.82       | 34'-8"      |
| P-101 | 1227+61.30               | 21.06              | 16.89           | 12.14            |         | -17.94       | 34'-10"     |
| P-102 | 1227+68.80               | 21.10              | 16.94           | 12.06            |         | -17.98       | 34'-11"     |
| P-103 | 1227+76.30               | 21.15              | 16.98           | 11.99            |         | -18.02       | 35'-0"      |
| P-104 | 1227+83.80               | 21.19              | 17.03           | 11.91            |         | -18.14       | 35'-2"      |
| P-105 | 1227+91.30               | 21.24              | 17.07           | 11.84            |         | -18.18       | 35'-3"      |
| P-106 | 1227+98.80               | 21.28              | 17.12           | 11.76            |         | -18.30       | 35'-5"      |
| P-107 | 1228+06.30               | 21.33              | 17.16           | 11.69            |         | -18.34       | 35'-6"      |
| P-108 | 1228+13.80               | 21.37              | 17.21           | 11.61            |         | -18.46       | 35'-8"      |
| P-109 | 1228+21.30               | 21.42              | 17.25           | 11.54            |         | -18.50       | 35'-9"      |
| P-110 | 1228+28.80               | 21.46              | 17.30           | 11.46            |         | -18.62       | 35'-11"     |
| P-111 | 1228+35.55               | 21.51              | 17.34           | 11.39            |         | -18.66       | 36'-0"      |
| P-112 | 1228+42.55               | 21.55              | 17.38           | 11.32            |         | -18.70       | 36'-1"      |
| P-113 | 1228+49.55               | 21.59              | 17.42           | 11.25            |         | -18.83       | 36'-3"      |
| P-114 | 1228+56.55               | 21.63              | 17.47           | 11.18            |         | -18.87       | 36'-4"      |
| P-115 | 1228+63.55               | 21.67              | 17.51           | 11.11            |         | -18.91       | 36'-5"      |
| P-116 | 1228+70.55               | 21.72              | 17.55           | 11.04            |         | -19.03       | 36'-7"      |
| P-117 | 1228+77.55               | 21.76              | 17.59           | 10.97            |         | -19.07       | 36'-8"      |
| P-118 | 1228+84.55               | 21.80              | 17.63           | 10.90            |         | -19.12       | 36'-9"      |
| P-119 | 1228+91.55               | 21.84              | 17.68           | 10.83            |         | -19.24       | 36'-11"     |
| P-120 | 1228+98.55               | 21.88              | 17.72           | 10.76            |         | -19.28       | 37'-0"      |
| P-121 | 1229+05.55               | 21.93              | 17.76           | 10.69            |         | -19.32       | 37'-1"      |
| P-122 | 1229+12.55               | 21.97              | 17.80           | 10.62            |         | -19.45       | 37'-3"      |
| P-123 | 1229+19.55               | 22.01              | 17.84           | 10.55            |         | -19.49       | 37'-4"      |
| P-124 | 1229+25.80               | 22.04              | 17.88           | 10.49            |         | -17.54       | 35'-5"      |
| P-125 | 1229+32.30               | 22.08              | 17.91           | 10.43            |         | -17.59       | 35'-6"      |
| P-126 | 1229+38.80               | 22.12              | 17.95           | 10.36            |         | -17.71       | 35'-8"      |
| P-127 | 1229+45.30               | 22.16              | 17.99           | 10.30            |         | -17.76       | 35'-9"      |
| P-128 | 1229+51.80               | 22.20              | 18.03           | 10.23            |         | -17.80       | 35'-10"     |
| P-129 | 1229+58.30               | 22.24              | 18.07           | 10.17            |         | -17.85       | 35'-11"     |
| P-130 | 1229+64.80               | 22.28              | 18.11           | 10.10            | W21x147 | -17.97       | 36'-1"      |

**PILE LAYOUT**

| Pile  | Station at Working Point | Top of Parapet El. | Top of Pile El. | Bot. of Wall El. | Section | Pile Tip El. | Pile Length |
|-------|--------------------------|--------------------|-----------------|------------------|---------|--------------|-------------|
| P-131 | 1229+71.30               | 22.31              | 18.15           | 10.04            | W21x147 | -18.02       | 36'-2"      |
| P-132 | 1229+77.80               | 22.35              | 18.19           | 9.97             | W21x147 | -18.06       | 36'-3"      |
| P-133 | 1229+83.80               | 22.39              | 18.22           | 9.91             | W21x147 | -18.11       | 36'-4"      |
| P-134 | 1229+87.80               | 22.41              | 18.25           | 9.87             | W18x130 | -16.17       | 34'-5"      |
| P-135 | 1229+91.80               | 22.44              | 18.27           | 9.83             |         | -16.23       | 34'-6"      |
| P-136 | 1229+95.80               | 22.46              | 18.29           | 9.79             |         | -16.29       | 34'-7"      |
| P-137 | 1229+99.80               | 22.48              | 18.32           | 9.75             |         | -16.27       | 34'-7"      |
| P-138 | 1230+03.80               | 22.51              | 18.34           | 9.71             |         | -16.32       | 34'-8"      |
| P-139 | 1230+07.80               | 22.53              | 18.37           | 9.67             |         | -16.38       | 34'-9"      |
| P-140 | 1230+11.80               | 22.56              | 18.39           | 9.63             |         | -16.44       | 34'-10"     |
| P-141 | 1230+15.71               | 22.57              | 18.41           | 9.63             |         | -16.43       | 34'-10"     |
| P-142 | 1230+19.71               | 22.59              | 18.42           | 9.65             |         | -16.41       | 34'-10"     |
| P-143 | 1230+23.71               | 22.61              | 18.44           | 9.66             |         | -16.39       | 34'-10"     |
| P-144 | 1230+27.71               | 22.62              | 18.45           | 9.67             |         | -16.38       | 34'-10"     |
| P-145 | 1230+31.71               | 22.64              | 18.47           | 9.               |         |              |             |

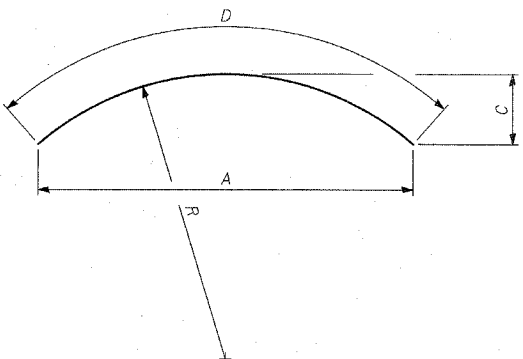
**BAR TABLE SCHEDULE**

| Bar                 | No. of Sets Req'd | No. of Bars Per Set | A      | B      | C       |
|---------------------|-------------------|---------------------|--------|--------|---------|
| v(E)                | 1                 | 31                  | 4'-9"  | 9'-9"  | 14'-6"  |
| v <sub>1</sub> (E)  | 1                 | 31                  | 9'-9"  | 9'-5"  | 19'-2"  |
| v <sub>2</sub> (E)  | 1                 | 31                  | 9'-5"  | 9'-1"  | 18'-6"  |
| v <sub>3</sub> (E)  | 1                 | 31                  | 9'-1"  | 8'-9"  | 17'-10" |
| v <sub>4</sub> (E)  | 1                 | 31                  | 8'-9"  | 8'-5"  | 17'-2"  |
| v <sub>5</sub> (E)  | 1                 | 26                  | 8'-5"  | 8'-1"  | 16'-6"  |
| v <sub>6</sub> (E)  | 1                 | 31                  | 8'-1"  | 7'-9"  | 15'-10" |
| v <sub>7</sub> (E)  | 1                 | 31                  | 7'-9"  | 7'-5"  | 15'-2"  |
| v <sub>8</sub> (E)  | 1                 | 31                  | 7'-5"  | 7'-1"  | 14'-6"  |
| v <sub>9</sub> (E)  | 1                 | 31                  | 7'-1"  | 6'-9"  | 13'-10" |
| v <sub>10</sub> (E) | 1                 | 31                  | 6'-9"  | 6'-5"  | 13'-2"  |
| v <sub>11</sub> (E) | 1                 | 31                  | 6'-5"  | 6'-1"  | 12'-6"  |
| v <sub>12</sub> (E) | 1                 | 31                  | 6'-1"  | 5'-9"  | 11'-10" |
| v <sub>13</sub> (E) | 1                 | 31                  | 5'-9"  | 5'-5"  | 11'-2"  |
| v <sub>14</sub> (E) | 1                 | 31                  | 5'-5"  | 5'-1"  | 10'-6"  |
| v <sub>15</sub> (E) | 1                 | 31                  | 5'-1"  | 4'-9"  | 9'-10"  |
| v <sub>16</sub> (E) | 1                 | 31                  | 4'-9"  | 4'-5"  | 9'-2"   |
| v <sub>17</sub> (E) | 1                 | 31                  | 4'-5"  | 4'-1"  | 8'-6"   |
| v <sub>18</sub> (E) | 1                 | 31                  | 4'-1"  | 4'-7"  | 8'-8"   |
| v <sub>20</sub> (E) | 1                 | 31                  | 4'-7"  | 5'-0"  | 9'-7"   |
| v <sub>21</sub> (E) | 1                 | 31                  | 5'-0"  | 5'-6"  | 10'-6"  |
| v <sub>22</sub> (E) | 1                 | 31                  | 5'-6"  | 6'-0"  | 11'-6"  |
| v <sub>23</sub> (E) | 1                 | 31                  | 6'-0"  | 6'-5"  | 12'-5"  |
| v <sub>24</sub> (E) | 1                 | 31                  | 6'-5"  | 6'-11" | 13'-4"  |
| v <sub>25</sub> (E) | 1                 | 31                  | 6'-11" | 7'-5"  | 14'-4"  |
| v <sub>26</sub> (E) | 1                 | 31                  | 7'-5"  | 7'-11" | 15'-4"  |
| v <sub>27</sub> (E) | 1                 | 31                  | 7'-11" | 8'-4"  | 16'-3"  |
| v <sub>28</sub> (E) | 1                 | 31                  | 8'-4"  | 8'-10" | 17'-2"  |
| v <sub>29</sub> (E) | 1                 | 31                  | 8'-10" | 9'-4"  | 18'-2"  |
| v <sub>30</sub> (E) | 1                 | 31                  | 9'-4"  | 9'-10" | 19'-2"  |



**SERIES OF BAR CUTTING DIAGRAM**

See table for dimensions. Make all cuts normal to bar axis



| Bar                                    | A                                   | C                                  | D     | R     |
|--|-------------------------------------|------------------------------------|-------|-------|
| e <sub>5</sub> (E), h <sub>4</sub> (E) | 6'-11 <sup>3</sup> / <sub>4</sub> " | 1'-4 <sup>1</sup> / <sub>4</sub> " | 7'-8" | 5'-2" |
| e <sub>6</sub> (E), h <sub>5</sub> (E) | 8'-2 <sup>7</sup> / <sub>8</sub> "  | 1'-7 <sup>5</sup> / <sub>8</sub> " | 9'-1" | 6'-0" |

**BARS e<sub>5</sub>(E), e<sub>6</sub>(E), h<sub>4</sub>(E) & h<sub>5</sub>(E)**

**BILL OF MATERIAL**

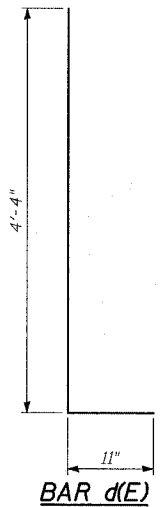
| Bar                 | No.   | Size | Length  | Shape |
|---------------------|-------|------|---------|-------|
| d(E)                | 1,359 | #4   | 5'-3"   | L     |
| d <sub>1</sub> (E)  | 1,174 | #6   | 6'-6"   | —     |
| d <sub>2</sub> (E)  | 186   | #6   | 5'-11"  | —     |
| e(E)                | 200   | #5   | 32'-2"  | —     |
| e <sub>1</sub> (E)  | 128   | #5   | 29'-8"  | —     |
| e <sub>2</sub> (E)  | 8     | #5   | 27'-2"  | —     |
| e <sub>3</sub> (E)  | 8     | #5   | 22'-6"  | —     |
| e <sub>4</sub> (E)  | 8     | #5   | 30'-8"  | —     |
| e <sub>5</sub> (E)  | 4     | #5   | 7'-8"   | —     |
| e <sub>6</sub> (E)  | 4     | #5   | 9'-1"   | —     |
| h(E)                | 483   | #5   | 32'-2"  | —     |
| h <sub>1</sub> (E)  | 288   | #5   | 29'-8"  | —     |
| h <sub>2</sub> (E)  | 23    | #5   | 27'-2"  | —     |
| h <sub>3</sub> (E)  | 7     | #5   | 22'-6"  | —     |
| h <sub>4</sub> (E)  | 4     | #5   | 7'-8"   | —     |
| h <sub>5</sub> (E)  | 3     | #5   | 9'-1"   | —     |
| h <sub>6</sub> (E)  | 25    | #5   | 30'-8"  | —     |
| v(E)                | 31    | #4   | 14'-6"  | —     |
| v <sub>1</sub> (E)  | 31    | #4   | 19'-2"  | —     |
| v <sub>2</sub> (E)  | 31    | #4   | 18'-6"  | —     |
| v <sub>3</sub> (E)  | 31    | #4   | 17'-10" | —     |
| v <sub>4</sub> (E)  | 31    | #4   | 17'-2"  | —     |
| v <sub>5</sub> (E)  | 26    | #4   | 16'-6"  | —     |
| v <sub>6</sub> (E)  | 31    | #4   | 15'-10" | —     |
| v <sub>7</sub> (E)  | 31    | #4   | 15'-2"  | —     |
| v <sub>8</sub> (E)  | 31    | #4   | 14'-6"  | —     |
| v <sub>9</sub> (E)  | 31    | #4   | 13'-10" | —     |
| v <sub>10</sub> (E) | 31    | #4   | 13'-2"  | —     |
| v <sub>11</sub> (E) | 31    | #4   | 12'-6"  | —     |
| v <sub>12</sub> (E) | 31    | #4   | 11'-10" | —     |
| v <sub>13</sub> (E) | 31    | #4   | 11'-2"  | —     |

**BILL OF MATERIAL**

| Bar                 | No. | Size | Length | Shape |
|---------------------|-----|------|--------|-------|
| v <sub>24</sub> (E) | 31  | #4   | 10'-6" | —     |
| v <sub>25</sub> (E) | 31  | #4   | 9'-10" | —     |
| v <sub>26</sub> (E) | 31  | #4   | 9'-2"  | —     |
| v <sub>27</sub> (E) | 31  | #4   | 8'-6"  | —     |
| v <sub>28</sub> (E) | 186 | #4   | 4'-1"  | —     |
| v <sub>29</sub> (E) | 31  | #4   | 8'-8"  | —     |
| v <sub>20</sub> (E) | 31  | #4   | 9'-7"  | —     |
| v <sub>21</sub> (E) | 31  | #4   | 10'-6" | —     |
| v <sub>22</sub> (E) | 31  | #4   | 11'-6" | —     |
| v <sub>23</sub> (E) | 31  | #4   | 12'-5" | —     |
| v <sub>24</sub> (E) | 31  | #4   | 13'-4" | —     |
| v <sub>25</sub> (E) | 31  | #4   | 14'-4" | —     |
| v <sub>26</sub> (E) | 31  | #4   | 15'-4" | —     |
| v <sub>27</sub> (E) | 31  | #4   | 16'-3" | —     |
| v <sub>28</sub> (E) | 31  | #4   | 17'-2" | —     |
| v <sub>29</sub> (E) | 31  | #4   | 18'-2" | —     |
| v <sub>30</sub> (E) | 31  | #4   | 19'-2" | —     |
| v <sub>31</sub> (E) | 248 | #4   | 9'-10" | —     |
| v <sub>32</sub> (E) | 62  | #4   | 9'-9"  | —     |

|  |       |        |
|--|-------|--------|
| Reinforcement Bars, Epoxy Coated             | POUND | 67,190 |
| Protective Coat                              | SQ YD | 1,783  |
| Concrete Structures                          | CU YD | 546    |
| Furnishing Soldier Piles (W Section)         | FOOT  | 6,298  |
| Drilling and Setting Soldier Piles (In Soil) | CU FT | 31,831 |

Reinforcement bars designated (E) shall be epoxy coated.



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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 93RD ST. TO 91ST ST.  
 WALL 36  
 BILL OF MATERIAL  
 S.N. 016-W948 DESIGNED BY: MI, DJR  
 SCALE: N.T.S. DRAWN BY: DJR  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI

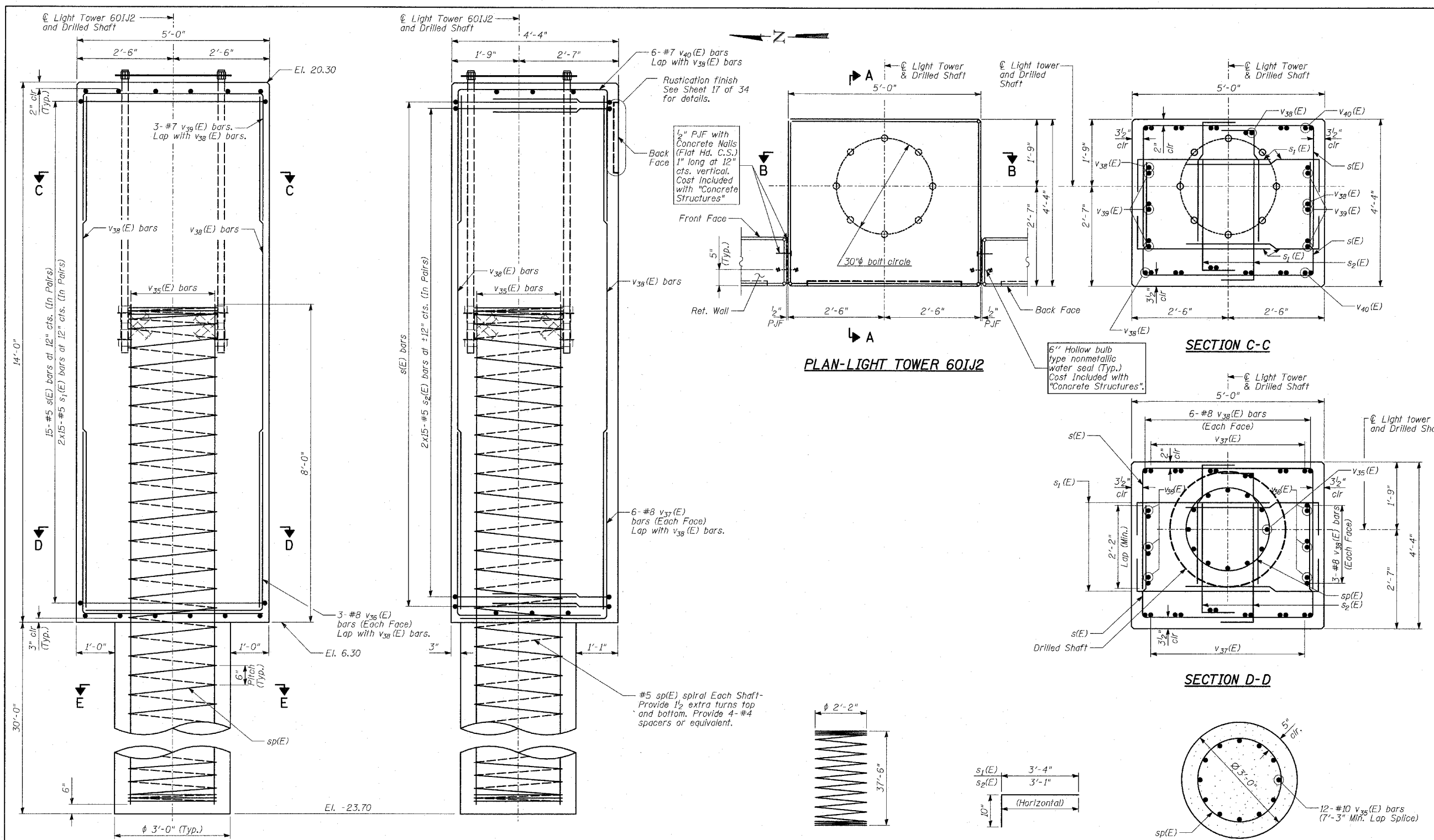
**BILL OF MATERIAL**  
(For Each Light Tower Foundation)

| Bar                              | No. | Size  | Length | Shape |
|----------------------------------|-----|-------|--------|-------|
| s (E)                            | 30  | #5    | 10'-7" | ┌     |
| s <sub>1</sub> (E)               | 60  | #5    | 4'-2"  | ┌     |
| s <sub>2</sub> (E)               | 60  | #5    | 3'-11" | ┌     |
| sp (E)                           | 1   | #5    | 37'-6" |       |
| v <sub>35</sub> (E)              | 12  | #10   | 37'-6" | —     |
| v <sub>36</sub> (E)              | 6   | #8    | 8'-11" | ┌     |
| v <sub>37</sub> (E)              | 12  | #8    | 8'-4"  | ┌     |
| v <sub>38</sub> (E)              | 18  | #8    | 13'-6" | —     |
| v <sub>39</sub> (E)              | 3   | #7    | 11'-2" | ┌     |
| v <sub>40</sub> (E)              | 6   | #7    | 10'-8" | ┌     |
| Reinforcement Bars, Epoxy Coated |     | POUND | 4,590  |       |
| Structure Excavation             |     | CU YD | 6      |       |
| Concrete Structures              |     | CU YD | 12     |       |
| Protective Coat                  |     | SQ YD | 17     |       |
| Rustication Finish               |     | SQ FT | 8      |       |
| Drilled Shaft in Soil 36"        |     | FOOT  | 30     |       |

Reinforcement bars designated (E) shall be epoxy coated.

**NOTES:**

- The design loads are based on AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminares and Traffic Signals-2001.
- Drilled shafts shall be installed according to the special provisions for "Drilled Shafts".
- Concrete: f'c = 3,500 psi  
Reinforcing: fy = 60,000 psi
- At all locations where reinforcement bar laps are not in direct contact, the Contractor shall provide sufficient spacing between the vertical bars, equal to the size of the largest concrete aggregate plus 1/2 inch.
- For location of drilled shaft, see Sheet 5 of 34.
- Conduit is not shown for clarity. For location of conduit, see Sheet 15 of 34.
- Cost of anchor rod assembly, conduit and wires for grounding are included with "Concrete Structures".
- For Expansion Joint Details, see Sheet 16 of 34.
- Minimum lap for spirals = 2'-6"



BAR sp(E)

BARS s<sub>1</sub>(E) & s<sub>2</sub>(E)

SECTION E-E

**MARK TABLE**

| Bar                 | D      |
|---------------------|--------|
| s (E)               | 4'-5"  |
| v <sub>39</sub> (E) | 4'-4"  |
| v <sub>40</sub> (E) | 3'-10" |

BARS s(E), v<sub>39</sub>(E) & v<sub>40</sub>(E)

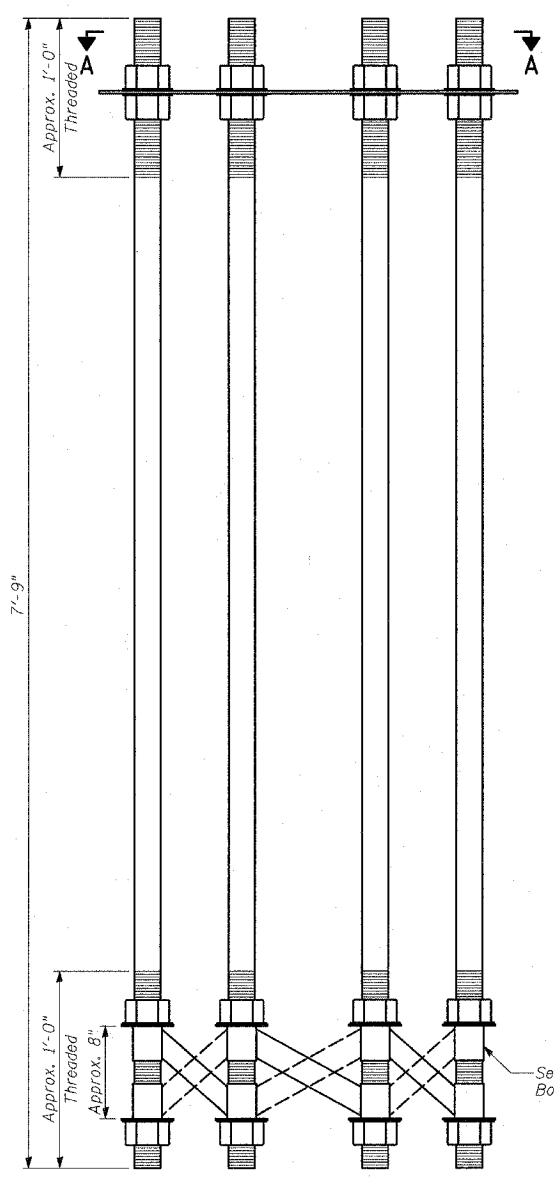
BARS v<sub>36</sub>(E) & v<sub>37</sub>(E)

TYLIN INTERNATIONAL

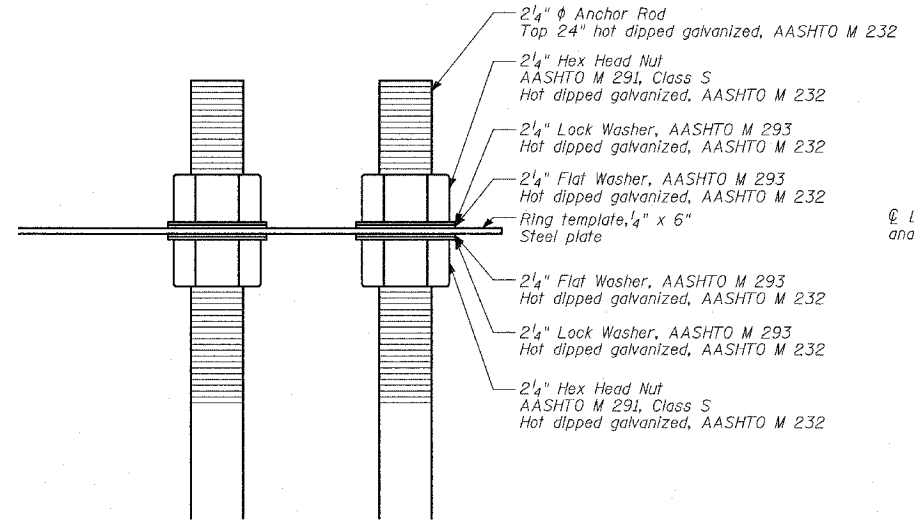
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94 (DAN RYAN EXPRESSWAY)  
RETAINING WALL ALONG LAFAYETTE AVE.  
93RD ST. TO 91ST ST.  
WALL 36  
LIGHT TOWER 60IJ2 FOUNDATION DETAILS  
S.N. 016-W948  
SCALE: N.T.S.  
DATE: MARCH 25, 2005

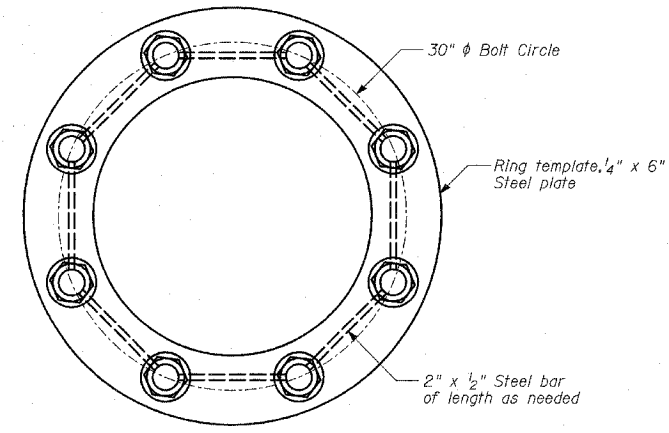
DESIGNED BY: TD, MAF  
DRAWN BY: MAF, DJR  
CHECKED BY: TD, MI



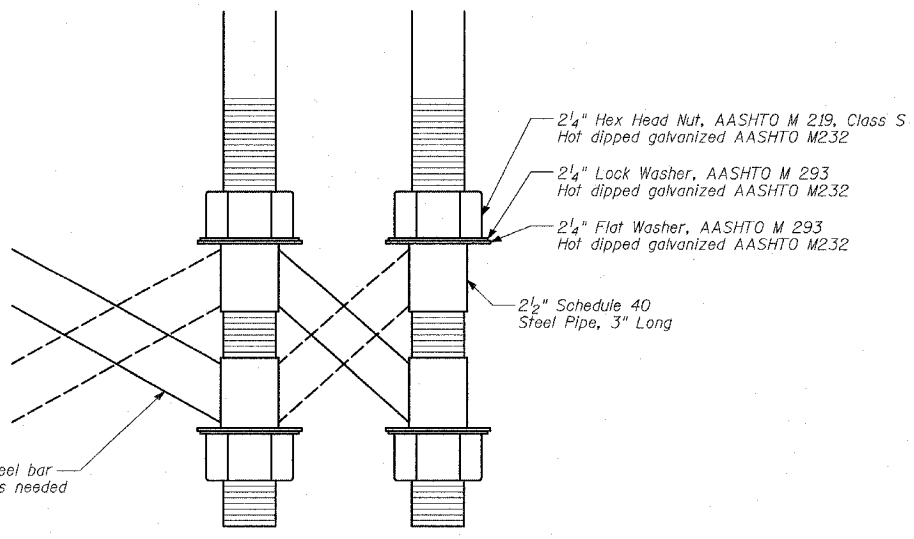
**ANCHOR BOLT CAGE**



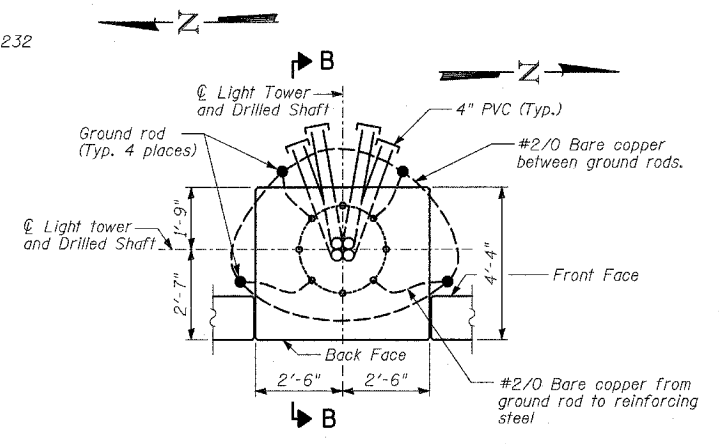
**BOLT CAGE TOP**



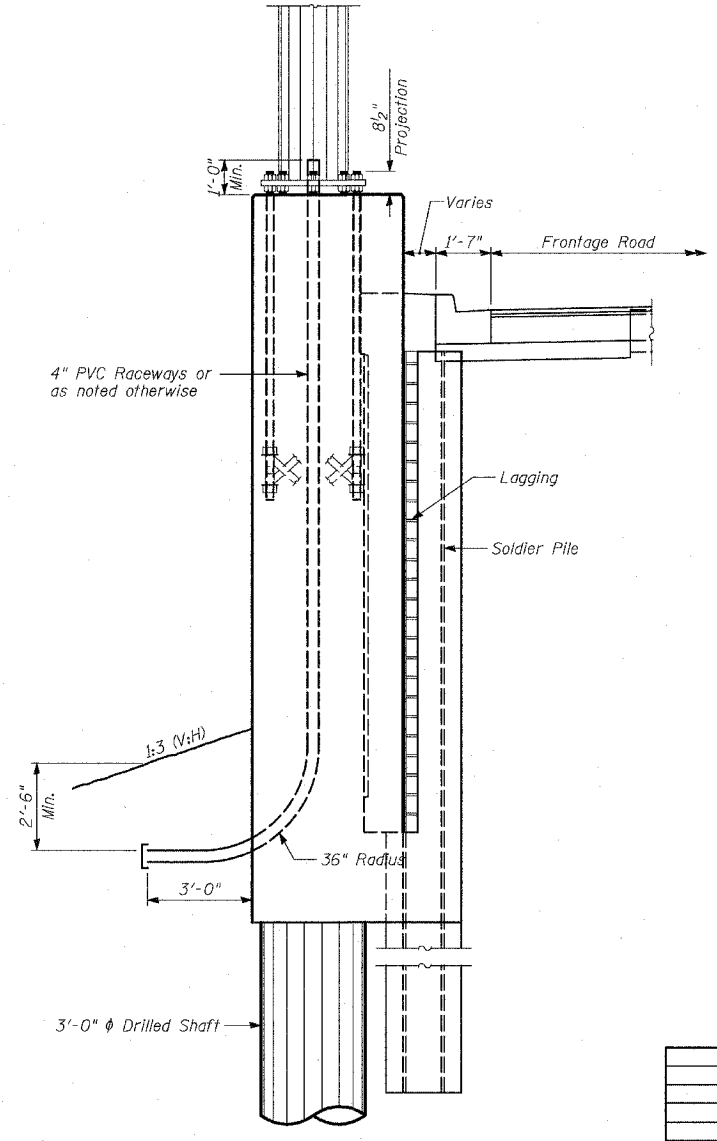
**SECTION A-A**



**BOLT CAGE BOTTOM**



**PLAN - 60MN2 CONDUIT PLACEMENT**



**SECTION B-B**

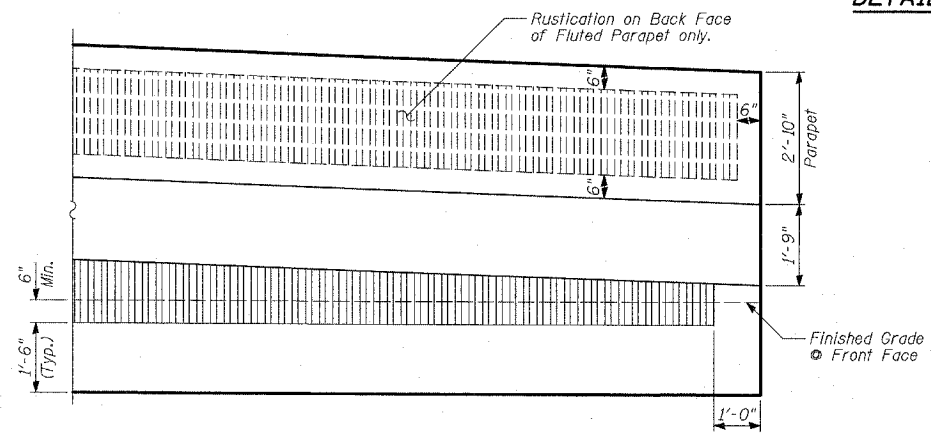
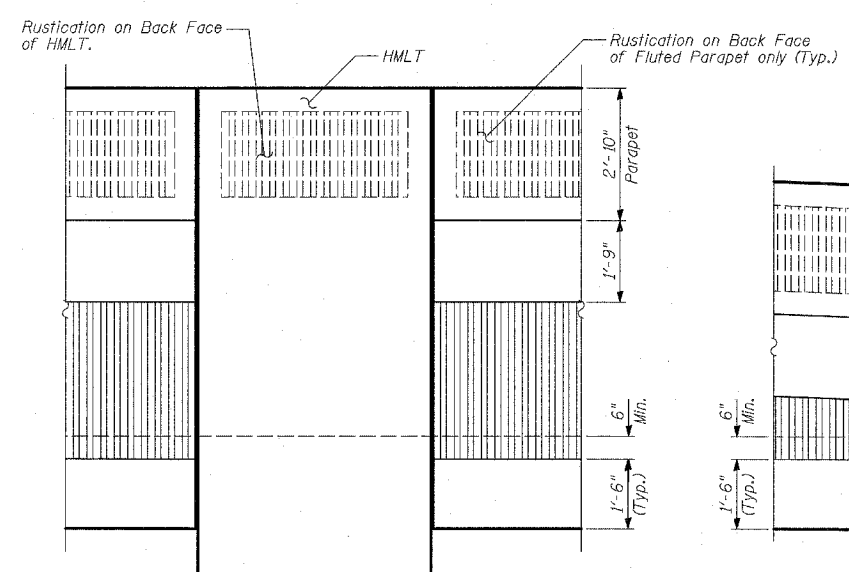
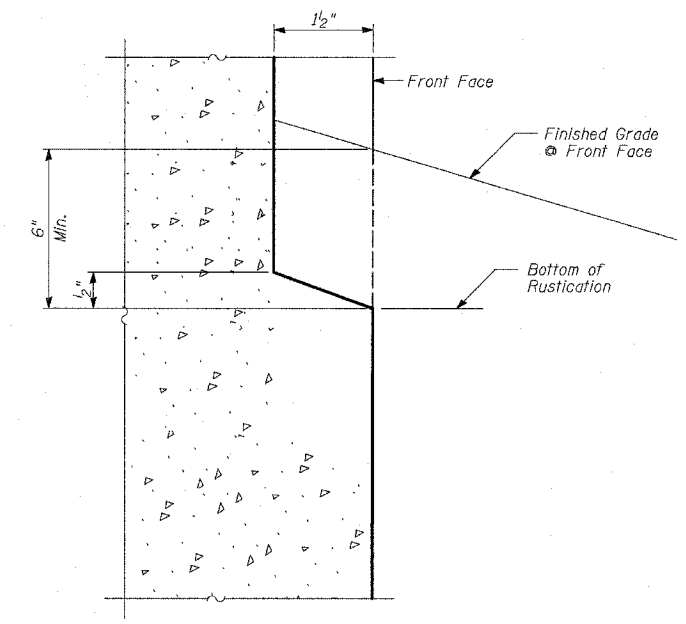
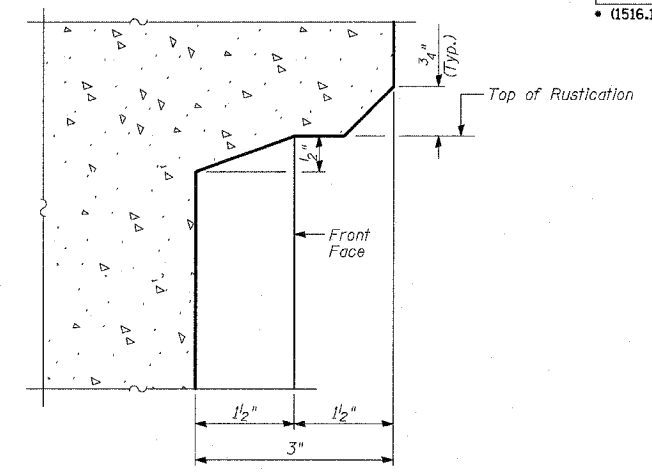
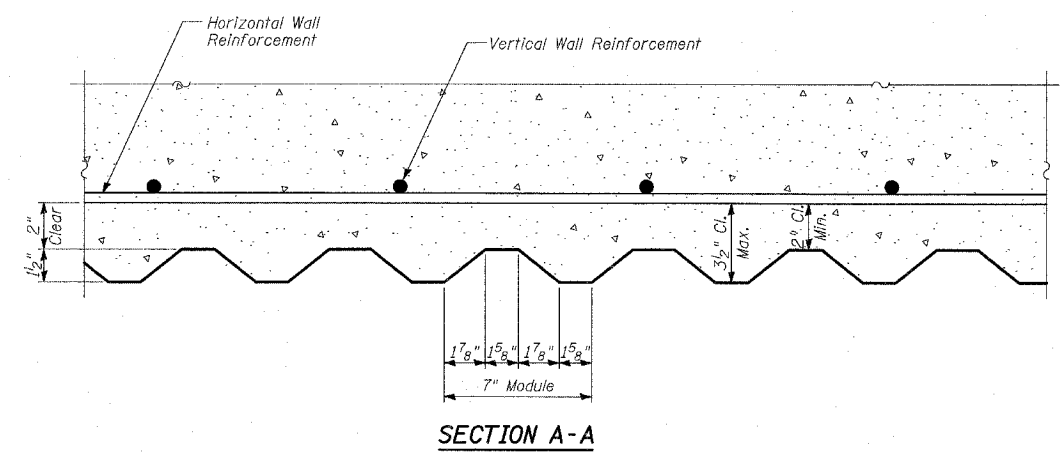
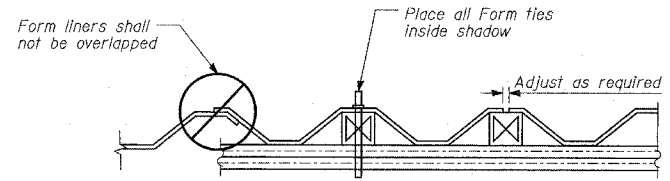
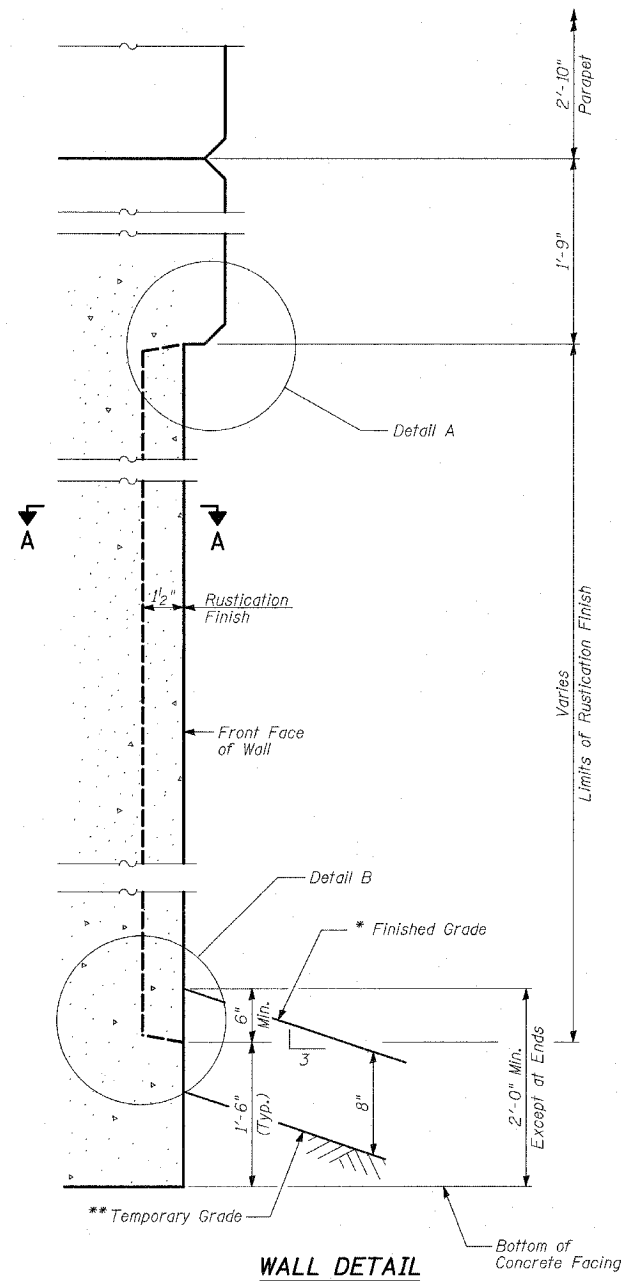
**NOTES:**

- Anchor rods shall be straight and shall be according to AASHTO M 314 or ASTM F1554, Grade 105 and galvanized according to Article 1006.09.
- Anchor rod information shall be submitted for approval and shall be fully coordinated with tower manufacturer's requirements.
- The Anchor Rods shall be vertical. No adjustment shall be allowed after the foundation is placed.
- The gap between the foundation and the base plate shall be enclosed with a stainless steel screen fastened with a stainless steel band. Cost included with "Light Tower" in Contract 62583.
- The Light Tower shall not be erected until after the concrete has been cured according to Article 1020.13.
- Two anchor rods opposite each other shall have the anchor rod threads peened after nuts are installed.
- Refer to BE501 for details.

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\* Contract 62593 - Sta. 1223+70.00+ to Sta. 1231+63.49  
 Contract 62695 - Sta. 1220+22.59 to Sta. 1223+70.00+  
 \*\* Contract 62695 - Sta. 1223+70+ to Sta. 1231+63.49

**BILL OF MATERIAL**

| ITEM               | UNIT  | TOTAL |
|--------------------|-------|-------|
| Rustication Finish | SQ FT | 7,093 |

**NOTES**

1. See Sheet 16 of 34 for expansion and construction joint details.

| REVISIONS |      |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 93RD ST. TO 91ST ST.  
 WALL 36  
**RUSTICATION DETAILS**  
 S.N. 016-W948 DESIGNED BY: MI, DJR  
 SCALE: N.T.S. DRAWN BY: DJR  
 DATE: MARCH 25, 2005 CHECKED BY: TD, MI













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 Fax: 630 953-9938

**BORING LOG SB 35-06** Page 2 of 2

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 17.43 ft  
 North: 1843464.66 ft  
 East: 1177574.33 ft  
 Station: 1220+85.4  
 Offset: 143.599' LT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION          | Depth (ft) | Sample Type | Sample No. | SPT Values (blw/6 in) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample Type | Sample No. | N Values (blw/6 in) | Qu (tsf) | Moisture Content (%) |
|------------------------|------------------------------------|------------|-------------|------------|-----------------------|----------|----------------------|------------------------|---------------------------|------------|-------------|------------|---------------------|----------|----------------------|
| 31.9                   | Very dense, gray SILT, with gravel | 15         |             | 15         | 50/45                 | NP       |                      |                        |                           |            |             |            |                     |          |                      |
| 31.9                   | Boring terminated at 49.33 ft      | 16         |             | 16         | 36                    | NP       |                      |                        |                           |            |             |            |                     |          |                      |

| GENERAL NOTES       |  |                   |            | WATER LEVEL DATA          |          |     |  |
|---------------------|--|-------------------|------------|---------------------------|----------|-----|--|
| Begin Drilling      | 01-07-2004   | Complete Drilling | 01-07-2004 | While Drilling            | ∇        | DRY |  |
| Drilling Contractor | Patrick Drilling   | Drill Rig         | CME 75 TMR | At Completion of Drilling | ∇        | DRY |  |
| Driller             | J&L  | Logger            | K. Jacob   | Checked by                | N. Davis |     |  |
| Drilling Method     | 3.25" ID HSA; Boring backfilled with bentonite upon completion |                   |            | Time After Drilling       | NA       |     |  |
|                     |  |                   |            | Depth to Water            | ∇        | NA  |  |

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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**BORING LOG SB 35-07** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 17.28 ft  
 North: 1843541.06 ft  
 East: 1177573.21 ft  
 Station: 1221+61.8  
 Offset: 142.531' LT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION                           | Depth (ft) | Sample Type | Sample No. | SPT Values (blw/6 in) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION                | Depth (ft) | Sample Type | Sample No. | N Values (blw/6 in) | Qu (tsf) | Moisture Content (%) |
|------------------------|---|------------|-------------|------------|-----------------------|----------|----------------------|------------------------|--|------------|-------------|------------|---------------------|----------|----------------------|
| 17.0                   | 3-inch thick, ASPHALT                               |            |             |            |                       |          |                      |                        |  |            |             |            |                     |          |                      |
| 15.7                   | 11-inch thick, CONCRETE                             |            |             |            |                       |          |                      |                        |  |            |             |            |                     |          |                      |
| 15.7                   | 4-inch thick, CRUSHED STONE                         |            |             |            |                       |          |                      |                        |  |            |             |            |                     |          |                      |
| 13.3                   | Medium dense, brown SAND                            |            |             |            |                       |          |                      |                        |  |            |             |            |                     |          |                      |
| 13.3                   | Stiff, brown CLAY                                   | 5          |             | 2          | 6/6/9                 | 1.89 B   |                      | 30                     | Hard, gray SILTY CLAY, with gravel       | 11         |             | 7/9/11     | 6.48 B              |          | 12                   |
|                        |   |            |             | 3          | 4/4/4                 | 1.80 B   |                      |                        |  |            |             |            |                     |          |                      |
|                        |   |            |             | 4          | 3/2/3                 | 1.15 B   |                      |                        |  |            |             |            |                     |          |                      |
| 6.8                    | Very soft to soft, gray CLAY                        |            |             | 5          | 2/1/1                 | 0.49 B   |                      |                        |  |            |             |            |                     |          |                      |
|                        |   |            |             | 6          | 1/1/1                 | 0.41 B   |                      |                        |  |            |             |            |                     |          |                      |
|                        |   |            |             | 7          | 1/0/0                 | 0.16 B   |                      |                        |  |            |             |            |                     |          |                      |
| 2.2                    | Stiff to hard, gray CLAY to SILTY CLAY, with gravel | 20         |             | 8          | 1/3/5                 | 1.56 B   |                      |                        |  |            |             |            |                     |          |                      |
|                        |   |            |             | 9          | 5/6/8                 | 6.31 B   |                      |                        |  |            |             |            |                     |          |                      |
|                        |   |            |             | 10         | 9/10/11               | 3.69 S   |                      |                        |  |            |             |            |                     |          |                      |
|                        |   |            |             |            |                       |          |                      | 22.2                   | Very dense, gray SILTY LOAM, with gravel | 14         |             | 9/12/38    | 4.50 P              |          | 15                   |
|                        |   |            |             |            |                       |          |                      |                        |  |            |             |            |                     |          |                      |

| GENERAL NOTES       |  |                   |            | WATER LEVEL DATA          |          |     |  |
|---------------------|--|-------------------|------------|---------------------------|----------|-----|--|
| Begin Drilling      | 02-09-2004   | Complete Drilling | 02-09-2004 | While Drilling            | ∇        | DRY |  |
| Drilling Contractor | Patrick Drilling   | Drill Rig         | CME 75 TMR | At Completion of Drilling | ∇        | DRY |  |
| Driller             | J&L  | Logger            | K. Jacob   | Checked by                | N. Davis |     |  |
| Drilling Method     | 3.25" ID HSA; Boring backfilled with bentonite upon completion |                   |            | Time After Drilling       | NA       |     |  |
|                     |  |                   |            | Depth to Water            | ∇        | NA  |  |

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.


**TYLIN INTERNATIONAL**

| REVISIONS |      |
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94 (DAN RYAN EXPRESSWAY)  
 RETAINING WALL ALONG LAFAYETTE AVE.  
 93RD ST. TO 91ST ST.  
 WALL 36  
 BORING LOGS SB35-06 & SB35-07  
 S.N. 016-W948  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: DJR  
 DRAWN BY: DJR  
 CHECKED BY: TD





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### BORING LOG SB 35-08

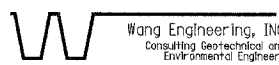
WEI Job No.: 414-07-01

Client: T. Y. LIN International

Project: Dan Ryan Improvements; IDOT No. D-91-421-01

Location: From 95th Street to South of 69th Street

Datum: CCD  
Elevation: 17.15 ft  
North: 1843615.87 ft  
East: 1177571.72 ft  
Station: 1222+36.6  
Offset: 141.885' LT



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### BORING LOG SB 35-09

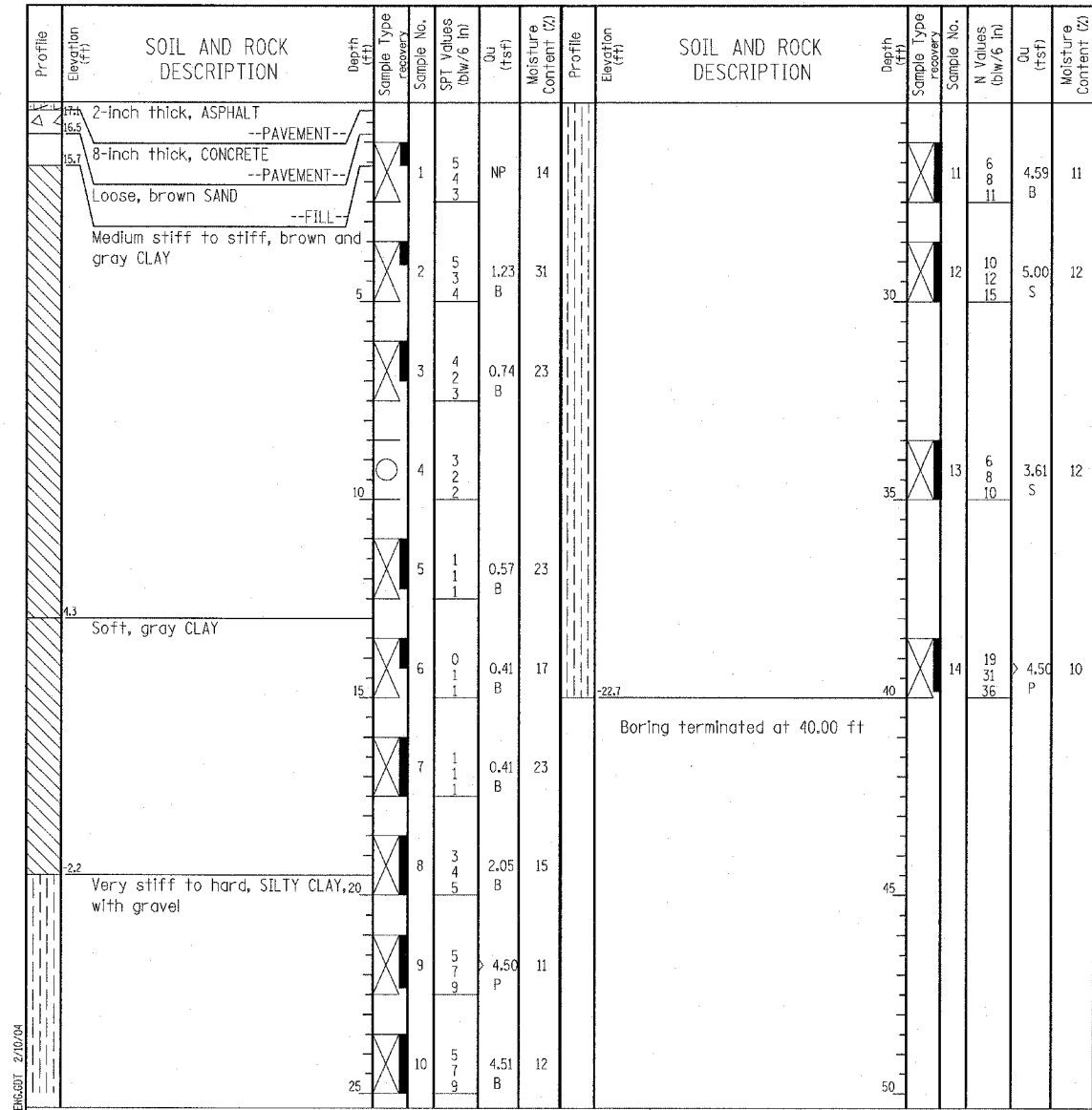
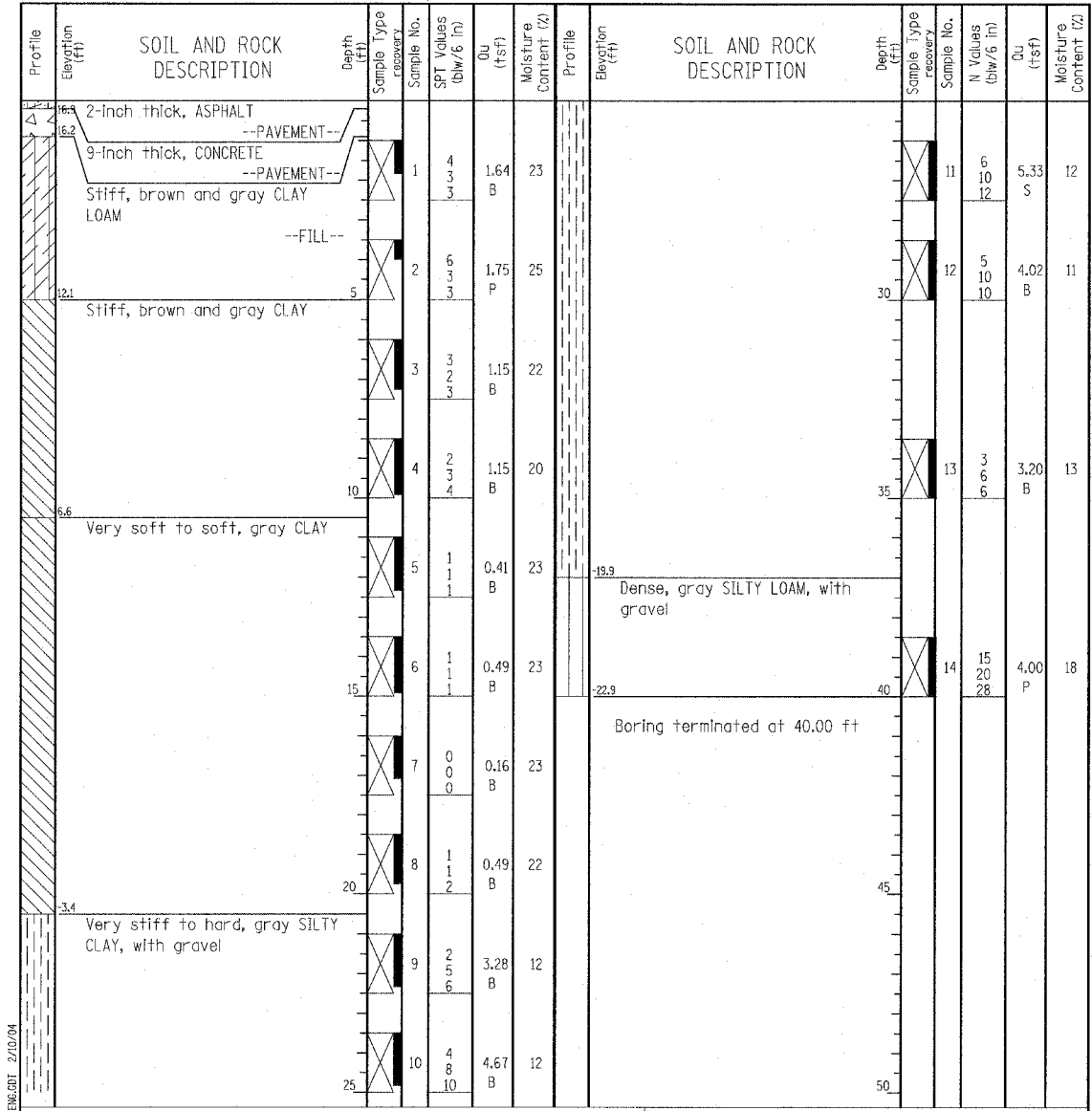
WEI Job No.: 414-07-01

Client: T. Y. LIN International

Project: Dan Ryan Improvements; IDOT No. D-91-421-01

Location: From 95th Street to South of 69th Street

Datum: CCD  
Elevation: 17.32 ft  
North: 1843689.89 ft  
East: 1177570.04 ft  
Station: 1223+10.6  
Offset: 141.441' LT



| GENERAL NOTES       |  |                   |            | WATER LEVEL DATA          |     |
|---------------------|--|-------------------|------------|---------------------------|-----|
| Begin Drilling      | 01-07-2004   | Complete Drilling | 01-07-2004 | While Drilling            | DRY |
| Drilling Contractor | Patrick Drilling   | Drill Rig         | CME 75 TMR | At Completion of Drilling | DRY |
| Driller             | J&L  | Logger            | K. Jacob   | Time After Drilling       | NA  |
| Drilling Method     | 3.25" ID HSA; Boring backfilled with bentonite upon completion |                   |            |                           |     |

| GENERAL NOTES       |  |                   |            | WATER LEVEL DATA          |     |
|---------------------|--|-------------------|------------|---------------------------|-----|
| Begin Drilling      | 01-06-2004   | Complete Drilling | 01-06-2004 | While Drilling            | DRY |
| Drilling Contractor | Patrick Drilling   | Drill Rig         | CME 75 TMR | At Completion of Drilling | DRY |
| Driller             | J&L  | Logger            | K. Jacob   | Time After Drilling       | NA  |
| Drilling Method     | 3.25" ID HSA; Boring backfilled with bentonite upon completion |                   |            |                           |     |

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
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 RETAINING WALL ALONG LAFAYETTE AVE.  
 93RD ST. TO 91ST ST.  
 WALL 36  
 BORING LOGS SB35-08 & SB35-09  
 S.N. 016-W948  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

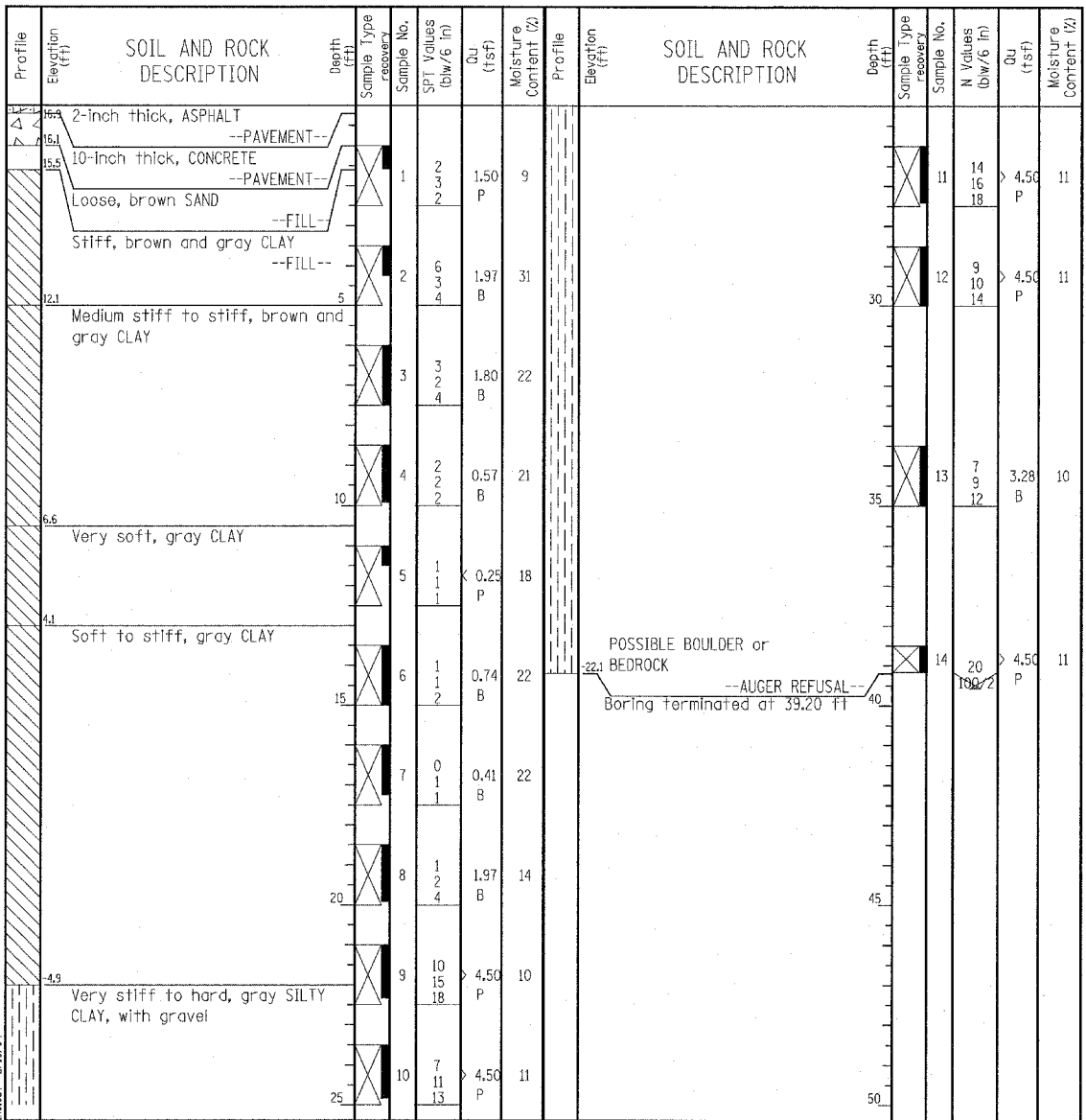
DESIGNED BY: DJR  
 DRAWN BY: DJR  
 CHECKED BY: TD

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**BORING LOG SB 35-10** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 17.07 ft  
 North: 1843758.75 ft  
 East: 1177569.00 ft  
 Station: 1223+79.5  
 Offset: 140.505' LT



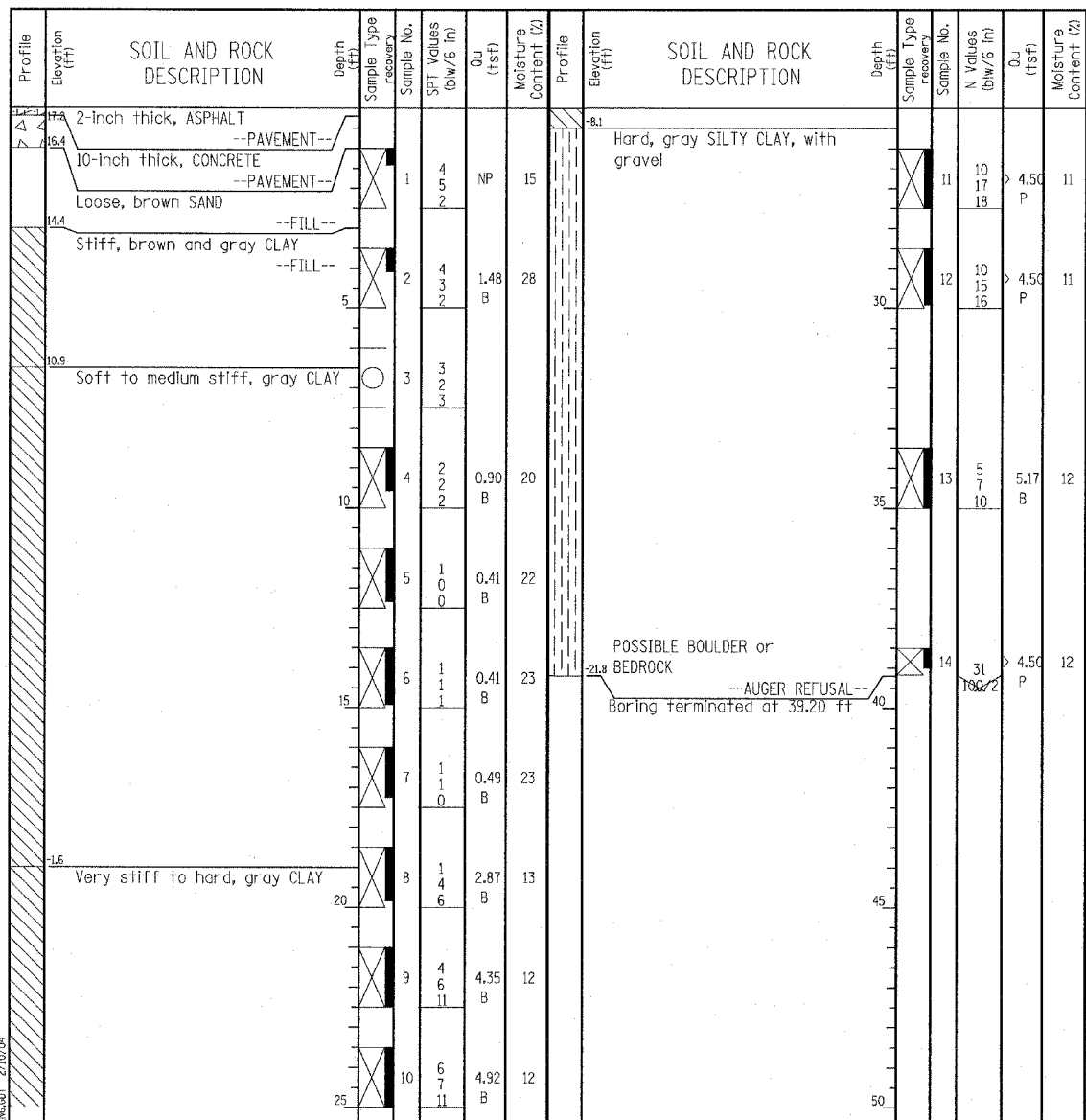
| GENERAL NOTES   |   |                   |            | WATER LEVEL DATA          |    |     |  |
|---|---|-------------------|------------|---------------------------|----|-----|--|
| Begin Drilling  | 01-06-2004  | Complete Drilling | 01-06-2004 | While Drilling            | ▽  | DRY |  |
| Drilling Contractor   | Patrick Drilling  | Drill Rig         | CME 75 TMR | At Completion of Drilling | ▽  | DRY |  |
| Driller   | J&L   | Logger            | K. Jacob   | Time After Drilling       | NA |     |  |
| Drilling Method   | 3.25" ID. HSA; Boring backfilled with bentonite upon completion |                   |            | Depth to Water            | ▽  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |   |                   |            |                           |    |     |  |

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**BORING LOG SB 35-11** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 17.40 ft  
 North: 1843839.27 ft  
 East: 1177567.35 ft  
 Station: 1224+60.00  
 Offset: 139.856' LT



| GENERAL NOTES   |   |                   |            | WATER LEVEL DATA          |    |     |  |
|---|---|-------------------|------------|---------------------------|----|-----|--|
| Begin Drilling  | 01-05-2003  | Complete Drilling | 01-05-2003 | While Drilling            | ▽  | DRY |  |
| Drilling Contractor   | Patrick Drilling  | Drill Rig         | CME 75 TMR | At Completion of Drilling | ▽  | DRY |  |
| Driller   | J&L   | Logger            | K. Jacob   | Time After Drilling       | NA |     |  |
| Drilling Method   | 3.25" ID. HSA; Boring backfilled with bentonite upon completion |                   |            | Depth to Water            | ▽  | NA  |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |   |                   |            |                           |    |     |  |

**TYLIN INTERNATIONAL**

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
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 RETAINING WALL ALONG LAFAYETTE AVE.  
 93RD ST. TO 91ST ST.  
 WALL 36  
 BORING LOGS SB35-10 & SB35-11  
 S.N. 016-W948  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: DJR  
 DRAWN BY: DJR  
 CHECKED BY: TD

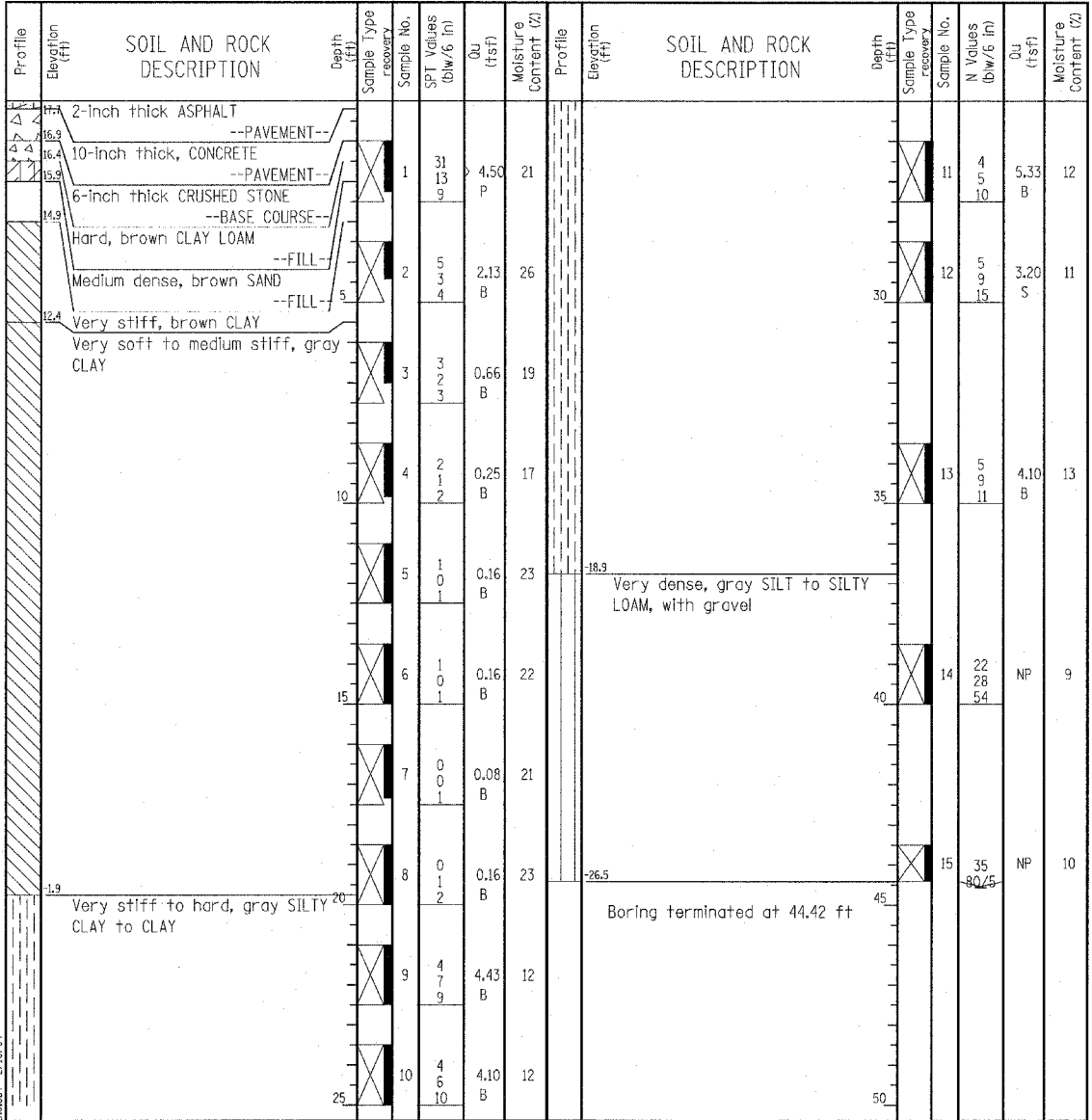
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**BORING LOG SB 36-01** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: NGVD  
 Elevation: 17.89 ft  
 North: 1843966.08 ft  
 East: 1177564.65 ft  
 Station: 1225+86.9  
 Offset: 138.921' LT



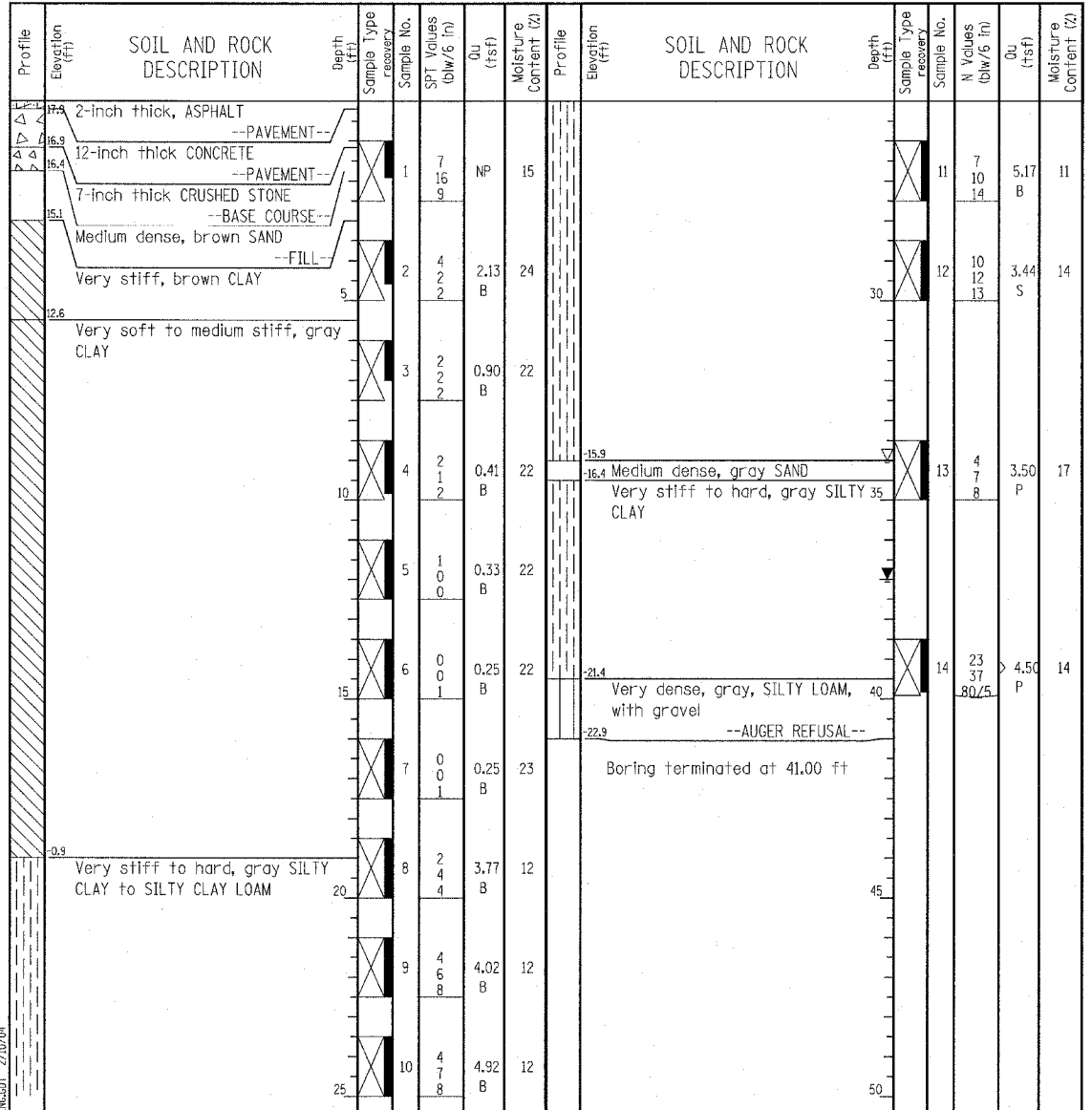
| GENERAL NOTES   |                  |                   |            | WATER LEVEL DATA          |    |     |  |
|---|------------------|-------------------|------------|---------------------------|----|-----|--|
| Begin Drilling  | 02-02-2004       | Complete Drilling | 02-02-2004 | While Drilling            | ▽  | DRY |  |
| Drilling Contractor   | Patrick Drilling | Drill Rig         | CME 75 TMR | At Completion of Drilling | ▽  | DRY |  |
| Driller   | J&L              | Logger            | K. Jacob   | Time After Drilling       | NA |     |  |
| Checked by  | S. Janowski      | Depth to Water    | ▽          | NA                        |    |     |  |
| Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion  |                  |                   |            |                           |    |     |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |                  |                   |            |                           |    |     |  |

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**BORING LOG SB 36-02** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: NGVD  
 Elevation: 18.12 ft  
 North: 1844037.82 ft  
 East: 1177562.90 ft  
 Station: 1226+58.6  
 Offset: 138.623' LT



| GENERAL NOTES   |                  |                   |            | WATER LEVEL DATA          |    |          |  |
|---|------------------|-------------------|------------|---------------------------|----|----------|--|
| Begin Drilling  | 02-02-2004       | Complete Drilling | 02-02-2004 | While Drilling            | ▽  | 34.00 ft |  |
| Drilling Contractor   | Patrick Drilling | Drill Rig         | CME 75 TMR | At Completion of Drilling | ▽  | 37.00 ft |  |
| Driller   | J&L              | Logger            | K. Jacob   | Time After Drilling       | NA |          |  |
| Checked by  | S. Janowski      | Depth to Water    | ▽          | NA                        |    |          |  |
| Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion  |                  |                   |            |                           |    |          |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |                  |                   |            |                           |    |          |  |

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 WALL 36  
 BORING LOGS SB36-01 & SB36-02  
 S.N. 016-W948  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

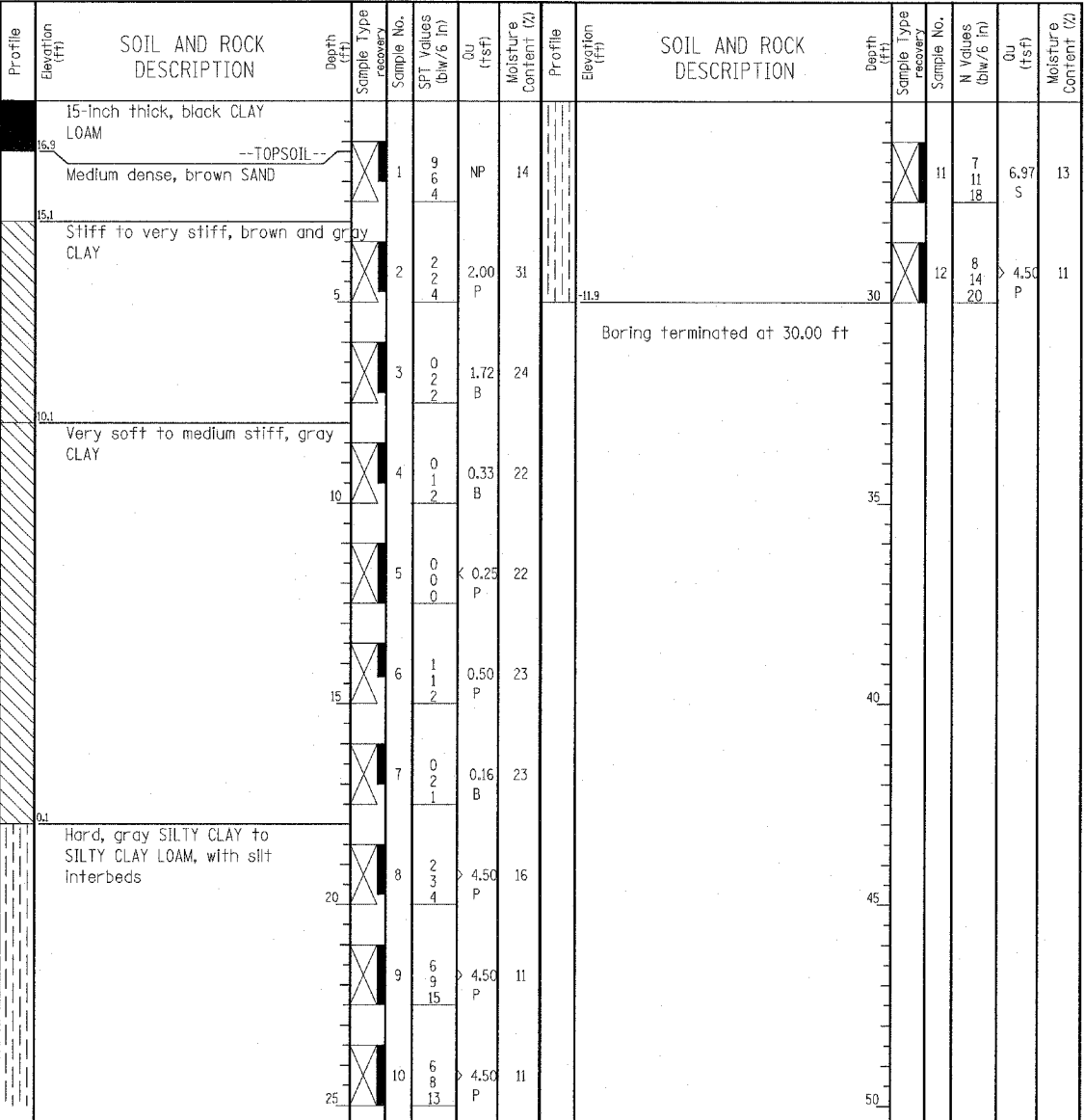
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 DRAWN BY: DJR  
 CHECKED BY: TD

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**BORING LOG SB 36-03** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 18.15 ft  
 North: 1844112.66 ft  
 East: 1177560.78 ft  
 Station: 1227+433.5  
 Offset: 138.598' LT



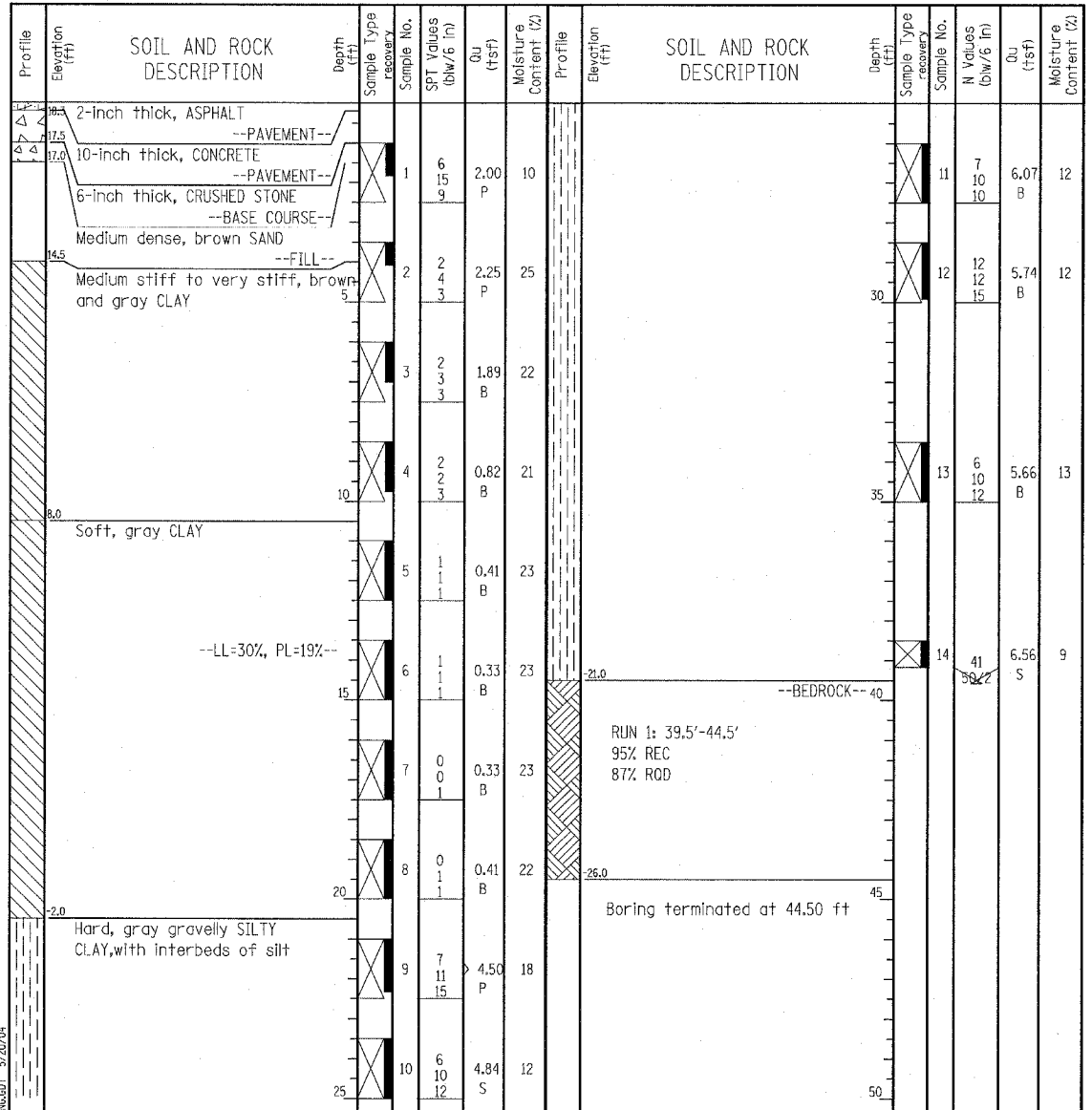
| GENERAL NOTES   |                  |                   |            | WATER LEVEL DATA          |    |     |  |
|---|------------------|-------------------|------------|---------------------------|----|-----|--|
| Begin Drilling  | 02-02-2004       | Complete Drilling | 02-02-2004 | While Drilling            | ∇  | DRY |  |
| Drilling Contractor   | Patrick Drilling | Drill Rig         | CME 75 TMR | At Completion of Drilling | ∇  | DRY |  |
| Driller   | T&D              | Logger            | Y. Shiu    | Time After Drilling       | NA |     |  |
| Checked by  | S. Janowski      | Depth to Water    | ∇          | NA                        |    |     |  |
| Drilling Method: 3.25" ID HSA; Boring backfilled with bentonite upon completion                                       |                  |                   |            |                           |    |     |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |                  |                   |            |                           |    |     |  |

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**BORING LOG SB 36-04** Page 1 of 1

WEI Job No.: 414-07-01  
 Client: T. Y. LIN International  
 Project: Dan Ryan Improvements; IDOT No. D-91-421-01  
 Location: From 95th Street to South of 69th Street

Datum: CCD  
 Elevation: 18.46 ft  
 North: 1844186.03 ft  
 East: 1177558.96 ft  
 Station: 1228+06.9  
 Offset: 138.315' LT



| GENERAL NOTES   |                  |                   |            | WATER LEVEL DATA          |    |     |  |
|---|------------------|-------------------|------------|---------------------------|----|-----|--|
| Begin Drilling  | 01-26-2004       | Complete Drilling | 01-26-2004 | While Drilling            | ∇  | DRY |  |
| Drilling Contractor   | Patrick Drilling | Drill Rig         | CME 75 TMR | At Completion of Drilling | ∇  | DRY |  |
| Driller   | J&L              | Logger            | K. Jacob   | Time After Drilling       | NA |     |  |
| Checked by  | N. Davis         | Depth to Water    | ∇          | NA                        |    |     |  |
| Drilling Method: 3.25" ID HSA; Boring backfilled with bentonite upon completion                                       |                  |                   |            |                           |    |     |  |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |                  |                   |            |                           |    |     |  |

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
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 WALL 36  
 BORING LOGS SB36-03 & SB36-04  
 S.N. 016-W948  
 SCALE: N.T.S.  
 DATE: MARCH 25, 2005

DESIGNED BY: DJR  
 DRAWN BY: DJR  
 CHECKED BY: TD